

PROOF OF PUBLICATION

STATE OF IDAHO, County of Owyhee, s.s.

I, MICK HODGES, being first duly sworn, on oath says that he is the Publisher of the OWYHEE NUGGET, a newspaper of general circulation, published weekly by MICK HODGES, publisher and printer thereof, at Marsing, County of Owyhee, State of Idaho;

That the annexed notice was published in said newspaper once a week and every week for 2 consecutive weeks, the first publication being on the 13 day of July, 1983, and the last publication being on the 20 day of July, 1983;

That the said newspaper has been published continuously and uninterruptedly in said county during a period of more than seventy - eight consecutive weeks prior to the first publication of the attached notice.

Mick Hodges
PUBLISHER

Subscribed and sworn to before me this 20 day of

July, 1983.

Kyle L. Hodges
NOTARY PUBLIC

My commission expires 3-86

(SEAL)

RECEIVED

NOTICE OF APPLICATION FOR WATER RIGHT

The following application(s) have been filed to appropriate the public waters of the State of Idaho:

02-7387

BLACKSTOCK, TED K.
STAR RT., MELBA, ID 83641
Source: SNAKE RIVER trib to
COLUMBIA RIVER
Date Filed: 06/27/1983
Diversion Pt: SWSE Sec 26 T
02N R 04W
Use: IRRIGATION (3.20 CFS)
In: NESE NWSE SWSE SESE
Sec 03 T 01N R 04W FOR 160
ACRES

02-7388

BLACKSTOCK, TED K. &/
or ADAM H.
STAR RT., MELBA, ID 83641
Source: SNAKE RIVER trib.
to COLUMBIA RIVER
Date Filed: 06/27/1983
Diversion Pt: SWSE Sec 26 T
02N R 04W
Use: IRRIGATION (2.86 CFS)
In: NESE SESE Sec 34 T 02N R
04W SWSW Sec 35 T 02N R
04W NENW SWSW Sec 02 T
01N R 04W NENE NWNE
SWNE SENE Sec 03 T 01N R
04W FOR 143 ACRES

57-7380

DOSTER, DAVE &/or DORA
RT. 1, MARSING, ID 83639
Source: GROUNDWATER
Date Filed: 06/23/1983
Diversion Pt: SENE Sec 24 T
03N R 05W
Use: IRRIGATION (0.08 CFS)
In: SENE Sec 24 T 03N R 05W
FOR 3 ACRES

The permit(s) will be subject to all prior water rights. Protests must be filed with the Director, Dept. of Water Resources, Western Region, Statehouse, Boise, Idaho 83720 on or before AUGUST 1, 1983.

KEN DUNN,

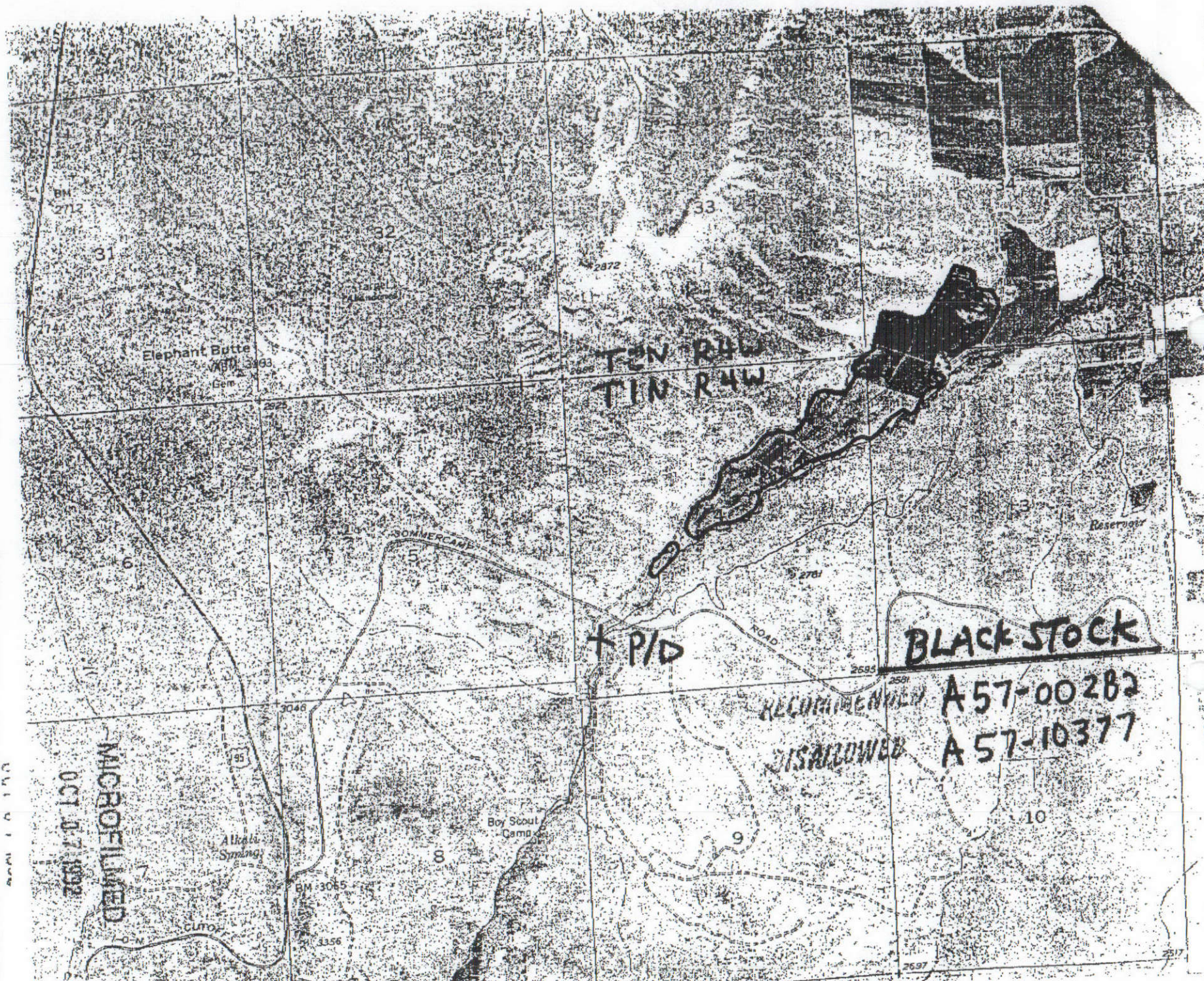
Director

Published in the Owyhee
Nugget, Marsing, Owyhee
County, Idaho 7/13 & 7/20/83.

RECEIVED

JUL 21 1983

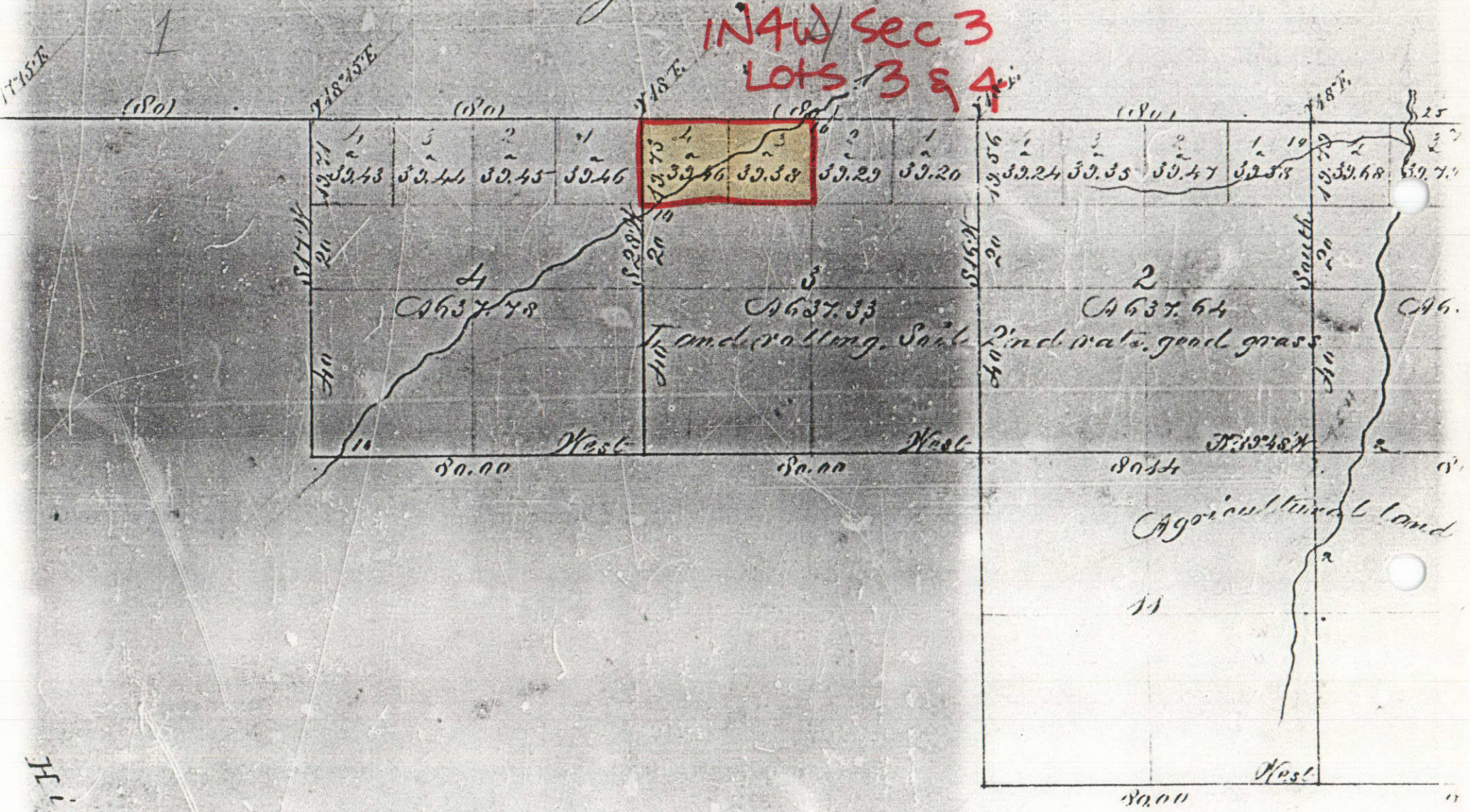
Department of Water Resources
Western Regional Office



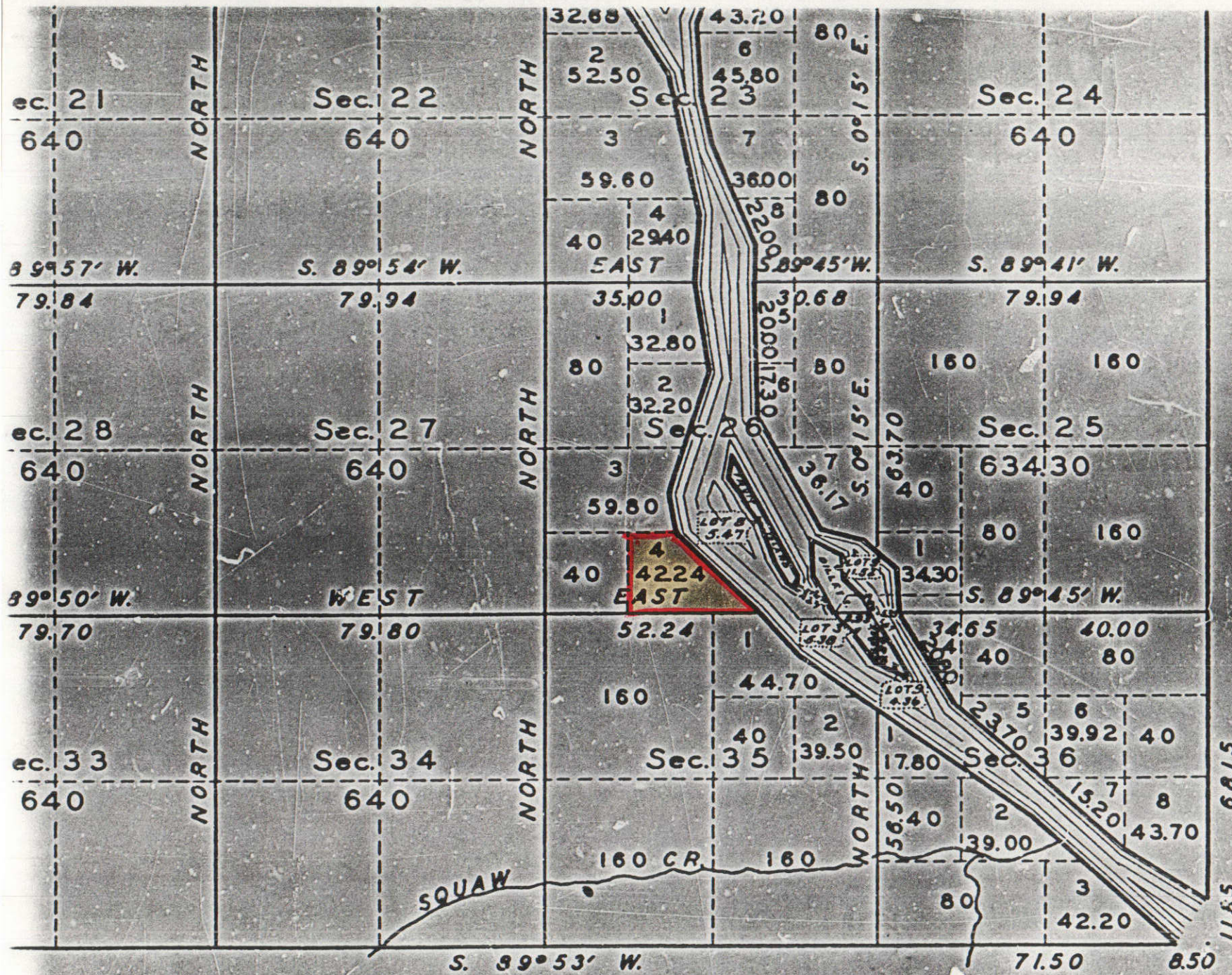
MICROFILMED

OCT 10 7 1992

No 1 North Range No 4 West Boise Meri



High
bank



2N4W
Sec 26
L4

2N, 4W

LATITUDE 4
LONGITUDE

02-7388

Valves/Mainlines(16")

Pump Plant



Trapezoidal Flume
(pumps not at
capacity)

02-7388



West Relift Station
SESW S34



P/h, SW S34

Sec 34
Delivery & Headgate



02-7388

From 2nd
Measurement:



Upstream (H1)
Staff



Downstream
(H4) Staff

For Office Use Only
Fee Received 125.00
Date 7/28/88
Receipt # 109201
Receipt by JP
Reviewed by _____
Sent to region _____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

PROOF OF BENEFICIAL USE

The Idaho Department of Water Resources will consider this form as a statement that the permit holder(s) has completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee or a completed field examination report prepared by a certified water right examiner who has been appointed by the department.

Permit No. 02-7388

Name(s) of Permit Holder: Blackstock, Ted K. & Adam H.

Post Office Address: HC 79 Box 119

Melba, Idaho Telephone No. 896-4508

Source of Water: Snake River

Extent of Use:

Domestic _____ (number of households) Stockwater _____ (number and type of stock)

Irrigation 79.8 (acres) Other/Remark _____

Total rate and/or volume for which proof is submitted 1.6 cfs 400 acre-feet

Show the date water was first diverted and beneficially used under this permit: _____

Measuring Device: Required? ☐ Yes ☒ No
Installed? ☐ Yes ☒ No

Fee enclosed \$ 125.00
(See License Examination Fee Schedule)

Flow Measurement Port: Required? ☒ Yes ☐ No
Installed? ☐ Yes ☒ No

Person to contact to accompany the Department representative during the field examination:

Ted K. Blackstock 896-4508
(Name) (Telephone Number)

HC 79 Box 119 Melba Idaho
(Address)

The above information is my true statement of the extent to which the above numbered permit has been developed and I relinquish any undeveloped portion of the permit to the state of Idaho.

27 July 1988
Date

Ted K. Blackstock
Signature of Permit Holder (and title, if appropriate)

SEP 20 1988

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

APPROVED

To appropriate the public waters of the State of Idaho

1. Name of applicant Ted K. and/or Adam H. Blackstock Phone 896-4508

Post office address Star Route, Melba, ID 83641

2. Source of water supply Snake River which is a tributary of Columbia River

3. Location of point of diversion is SW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Section 26 Township 2N

Range 4W B.M. Owyhee County, additional points of diversion if any: _____

4. Water will be used for the following purposes:

Amount 2.86 for irrigation purposes from 3/15 to 11/15 (both dates inclusive)
(cfs or acre-feet per annum)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)

Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)

5. Total quantity to be appropriated:

a. 2.86 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. Existing pump and pipeline
and ditch

b. Height of storage dam _____ feet, active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet, materials used in storage dam: _____

Period of year when water will be diverted to storage _____ to _____ inclusive.
(Month/Day) (Month/Day)

c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.

7. Time required for the completion of the works and application of the water to the proposed beneficial use is 5 years (minimum 1 year — maximum 5 years).

8. Description of proposed uses:

a. If water is not for irrigation:

(1) Give the place of use of water: _____ $\frac{1}{4}$ of _____ $\frac{1}{4}$ of Section _____ Township _____
Range _____ B.M.

(2) Amount of power to be generated: _____ horsepower under _____ feet of head.

(3) List number of each kind of livestock to be watered _____

(4) Name of municipality to be served _____, or number of families to be supplied with domestic water _____.

(5) If water is to be used for other purposes describe: _____

b. If water is for irrigation, indicate acreage in each subdivision in the tabulation below:

TWP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
2N	4W	34													9			9	18
		35											20						20
1N	4W	2					25						20						45
		3	10	20	20	10													60

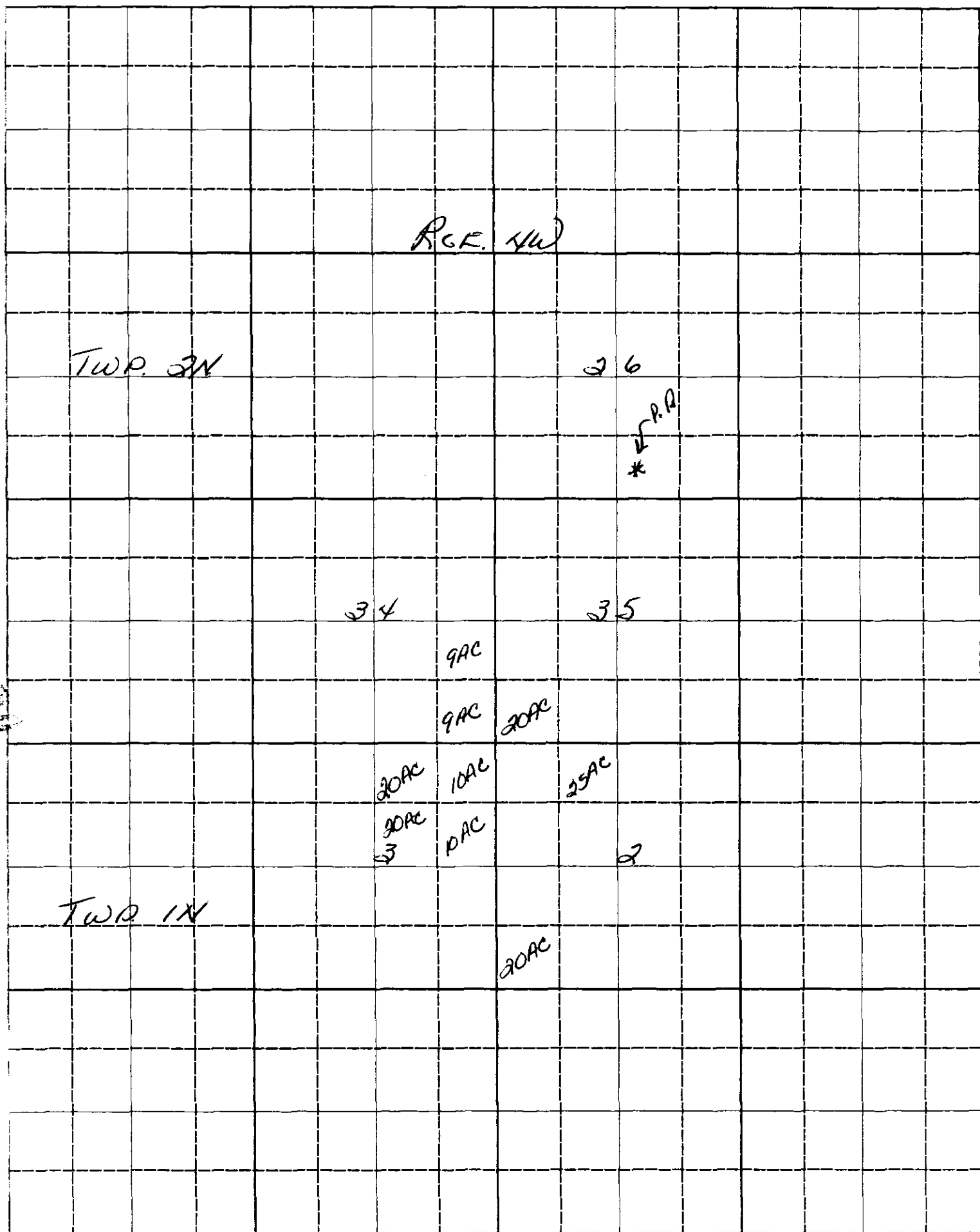
Total number of acres to be irrigated 143

c. Describe any other water rights used for the same purposes as described above.
License No. 02-2383 for 8.22 cfs; this app. is additional lands.

9. a. Who owns the property at the point of diversion Ken Witt
- b. Who owns the land to be irrigated or place of use Ted and Adam Blackstock
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing Easement granted from Ken Witt

10. Remarks

11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



Scale: 2 inches equal 1 mile.

BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

Ed R. Blackford
(Applicant)

Proposed Priority 6/27/1983

Received by JG Date 6/27/83 Time 8:45 AM
Preliminary check by JP Fee \$ 85.00
Receipted by JG Date 6/27/83 # 31172
Publication prepared by JP Date 7/1/83
Published in Snake River
Publication dates 7/1 & 7/21/83
Publication approved mp Date 7-21-83
Protests filed by: None

Copies of protests forwarded by _____
Hearing held by _____ Date _____
Recommended for approval denial by DBS

RECORDED

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. 02-7388, and said application is hereby APPROVED.

1. Approval of said application is subject to the following limitations and conditions:

a. SUBJECT TO ALL PRIOR WATER RIGHTS.

b. Proof of construction of works and application of water to beneficial use shall be submitted on or before August 1, 19 88.

c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.

d. Other:

Permit holder shall commence the excavation or construction of diverting works within one year of the date this permit is issued and shall proceed diligently until the project is complete.

The issuance of this permit in no way grants any right-of-way or easement across the land of another.

An access port or other device as specified by the Department shall be installed by the permit holder to provide for the installation of measuring equipment and the determination of the rate of diversion by the Department.

Water shall not be diverted under this permit unless the flow of the Snake River at the U.S. Geological Survey stream gaging station at Murphy exceeds 3,300 cfs and at Weiser exceeds 4,750 cfs.

Witness my hand this 22nd day of August, 1983.

J. Glen Saxton
Chief, Operations Bureau

PROOF OF PUBLICATION

STATE OF IDAHO, County of Owyhee, s.s.

I, MICK HODGES, being first duly sworn, on oath says that he is the Publisher of the OWYHEE NUGGET, a newspaper of general circulation, published weekly by MICK HODGES, publisher and printer thereof, at Marsing, County of Owyhee, State of Idaho;

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Mick Hodges
PUBLISHER

Subscribed and sworn to before me this 20 day of

July, 1983

Kyle L. Hodges
NOTARY PUBLIC

My commission expires 3-86

(SEAL)

NOTICE OF PUBLIC
APPLICATION FOR
WATER RIGHT
The following application(s)
have been filed to appropriate
the public waters of the State
of Idaho:

62-7987
BLACKSTOCK, TED K.
STAR RT., MELBA, ID 83641
Source: SNAKE RIVER trib
to COLUMBIA RIVER
Date Filed: 06/27/1983
Diversion Pt: SWSE Sec 26 T
02N R 04W
Use: IRRIGATION (2.86 CFS)
In: NESE SENE Sec 34 T 02N R
04W SWSW Sec 35 T 02N R
04W NENW SWSW Sec 02 T
01N R 04W NENE NWNE
SWNE SENE Sec 03 T 01N R
04W FOR 143 ACRES

62-7988
BLACKSTOCK, TED K. &
or ADAM H.
STAR RT., MELBA, ID 83641
Source: SNAKE RIVER trib
to COLUMBIA RIVER
Date Filed: 06/27/1983
Diversion Pt: SWSE Sec 26 T
02N R 04W
Use: IRRIGATION (2.86 CFS)
In: NESE SENE Sec 34 T 02N R
04W SWSW Sec 35 T 02N R
04W NENW SWSW Sec 02 T
01N R 04W NENE NWNE
SWNE SENE Sec 03 T 01N R
04W FOR 143 ACRES

57-77300
DOSTER, DAVE &/or DONA
RT. 1, MARSH, ID 83699
Source: GROUNDWATER
Date Filed: 06/27/1983
Diversion Pt: SENE Sec 24 T
03N R 04SE
Use: IRRIGATION (0.08 CFS)
In: SENE Sec 24 T 03N R 04SE
FOR 3 ACRES

The applicant(s) shall be
responsible for the cost of
the survey and the cost of
the water right. The
applicant(s) shall also be
responsible for the cost of
the water right. The
applicant(s) shall also be
responsible for the cost of
the water right.

KEN DUBIN,
Director
Published in the Owyhee
Nugget, Marsing, Owyhee
County, Idaho, on 7/20/83
100 W. W.



IDAHO DEPARTMENT OF WATER RESOURCES
WESTERN REGION
2735 AIRPORT WAY
BOISE ID 83705
(208) 334-2190

PHILLIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

FAX COVER SHEET

January 22, 1998

TO: SHELLEY KEEN (WATER ALLOCATIONS)
FAX: 327-7866

FROM: RON HOWERTON
IDWR-WESTERN REGION
FAX: 334-2348
PH: 334-2190

DOCUMENT DESCRIPTION: 57-00282 TWO MAPS OF POU & R
FILE

TOTAL PAGES SENT:
3 PLUS COVER SHEET

AJ0749NP
No. R57-00282

IDAHO DEPARTMENT OF WATER RESOURCES
ADJUDICATION CLAIM PROFILE REPORT
(REGIONAL)

DATE: 11/10/97
PAGE: 1

OWNER CODE	NAME & ADDRESS	PRIORITY DATE	WATER USE	USE PERIOD FROM TO	DIVERSION RATE	DIVERSION VOLUME
C	MARY L BLACKSTOCK	03/15/1892	IRRIGATION	03-15 11-15	2.00 CFS	
C	TED K BLACKSTOCK MC 79 BOX 119 MELBA ID 83641 (208) 896-4508					
TOTAL DIVERSION:					2.00 CFS	

Water Source: SQUAM CREEK

Tributary to: SHAKE RIVER

Stage: DECREED

Point(s) of Diversion:

T01N R04W S04

SWSWSW

ONYHEE 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
01N	04W	3	:					03-.2	04-31	.1	:									31.3
01N	04W	4	:	18		25	12	:			05	:	06				.2			66.5
02N	04W	34	:					:				:		16	24	:				40.3
TOTAL ACRES																			138.1	

POU County: ONYHEE

Other Water Rights with Same Point(s) of Diversion with Stage (Includes All Sources):
57-00282 A57-00282 A57-10377

Other Water Rights Listing Overlapping Place(s) of Use:
57-00282 57-10377 A02-02383 A57-00282 A57-10377

Conditions of Approval:

C05 - RIGHT INCLUDES ACCOMPLISHED CHANGE IN PLACE OF USE PURSUANT TO
SECTION 42-1425, IDAHO CODE.

Remarks: POU THIS RIGHT IS LIMITED TO THE IRRIGATION OF 100 ACRES WITHIN
THE PLACE OF USE DESCRIBED ABOVE IN A SINGLE IRRIGATION SEASON.

Dates: Exam Made Date: Verified Date: 11/10/1997 Objection Filed Date:

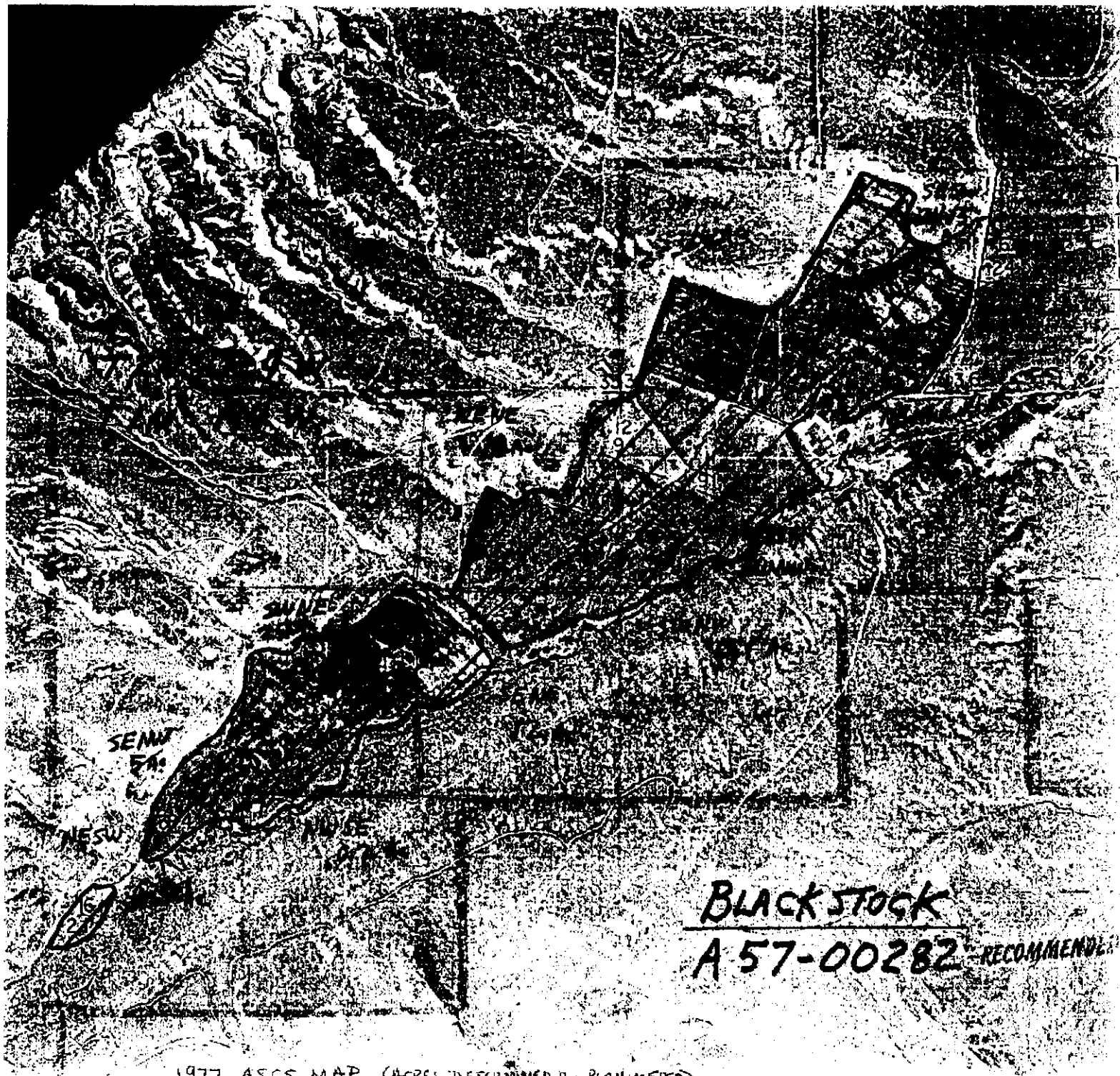
Misc: Water District Number: 57E Field Inspection Flag: Y
Presumption Flag: D

Comments: Date: 08/19/1991 User-ID: HOWERTON Subject: EXPANSION OF POU

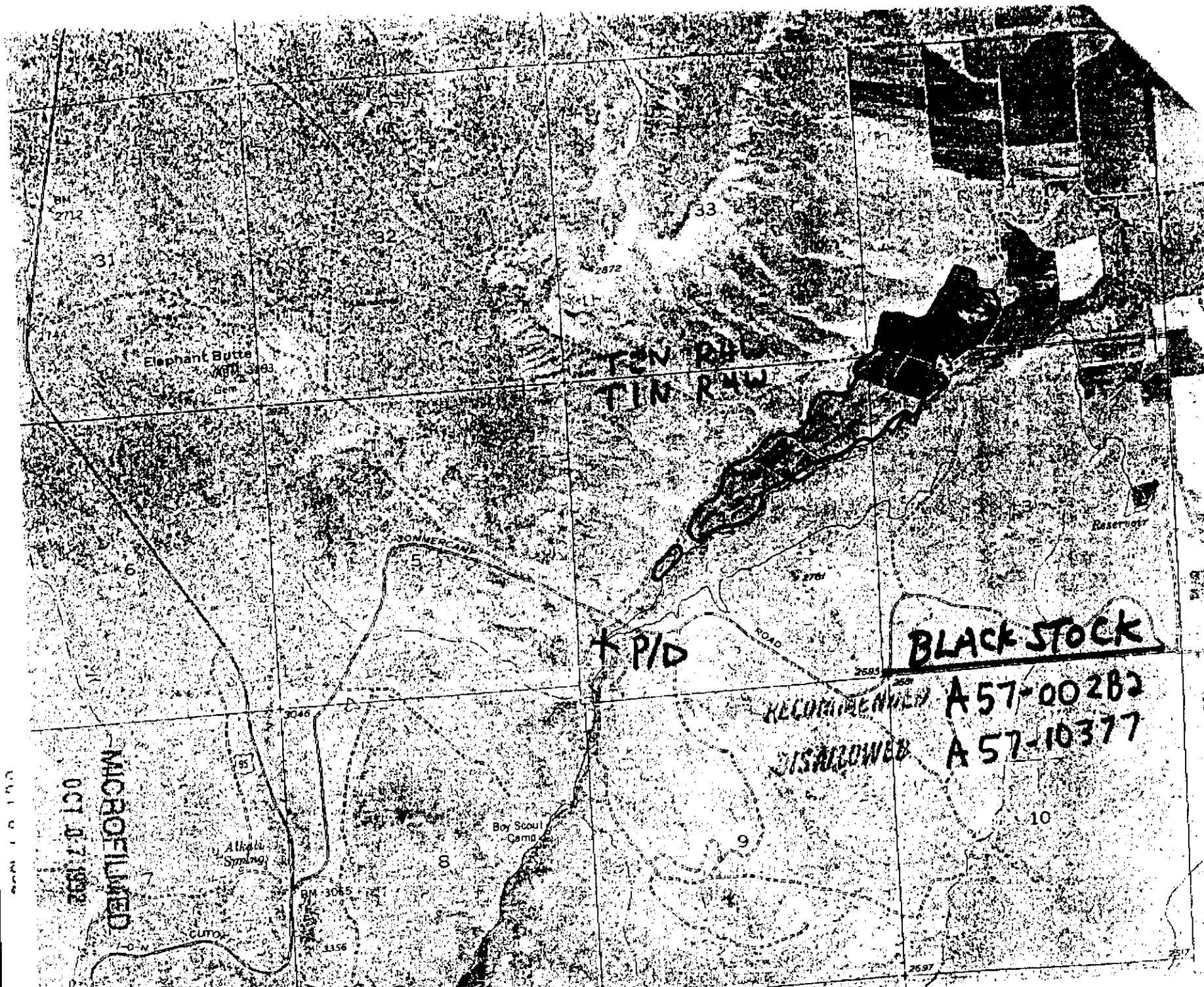
01/22/1998 12:55 2083342348

IDWR WESTERN

PAGE 02



BLACK STOCK
A 57-00282 RECOMMENDED



MEMORANDUM

DATE: August 13, 1997

TO: Water Right File 02-07388

FROM: Shelley W. Keen *SWK*

RE: Place of Use description

The field examiner's place of use recommendations for water right 02-07388 differ slightly from what was recommended in the SRBA for the overlapping Squaw Creek rights, which appear to be delivered via the same ditches as the Snake River water. In my opinion the place of use recommendations for this right and the SRBA rights ought to be reviewed for consistency. Therefore, I recommend that this right not be licensed until the SRBA staff have completed their review of the place of use using GIS technology. Ron Howerton informed me yesterday the place of use review for the Squaw Creek rights should occur this fall.

Also, we should consider listing the points of injection and redirection from Squaw Creek on the license for 02-07388 when it is issued.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

OCT 25 1995

Department of Water Resources

A. GENERAL INFORMATION

Permit No. 02-07388

1. Owner: TED K. BLACKSTOCK

Phone No. 896-4508

Current Address: HC 79 Bx 119 MELBA ID 83641

2. Accompanied by: TED BLACKSTOCK & TED, JR.

EXAM. DATE: 10-17-91

Address: _____

Phone No. _____

Relationship to Permit Holder: OWNER & SON

3. Source: SNAKE RIVER tributary to COLUMBIA RIVER

B. OVERLAP REVIEW

1. Other water rights with same place of use: 02-2383, 57-0282

☒ Copies Attached

2. Other water rights with same point of diversion: 02-2383 ~~02-45~~ 02-7258

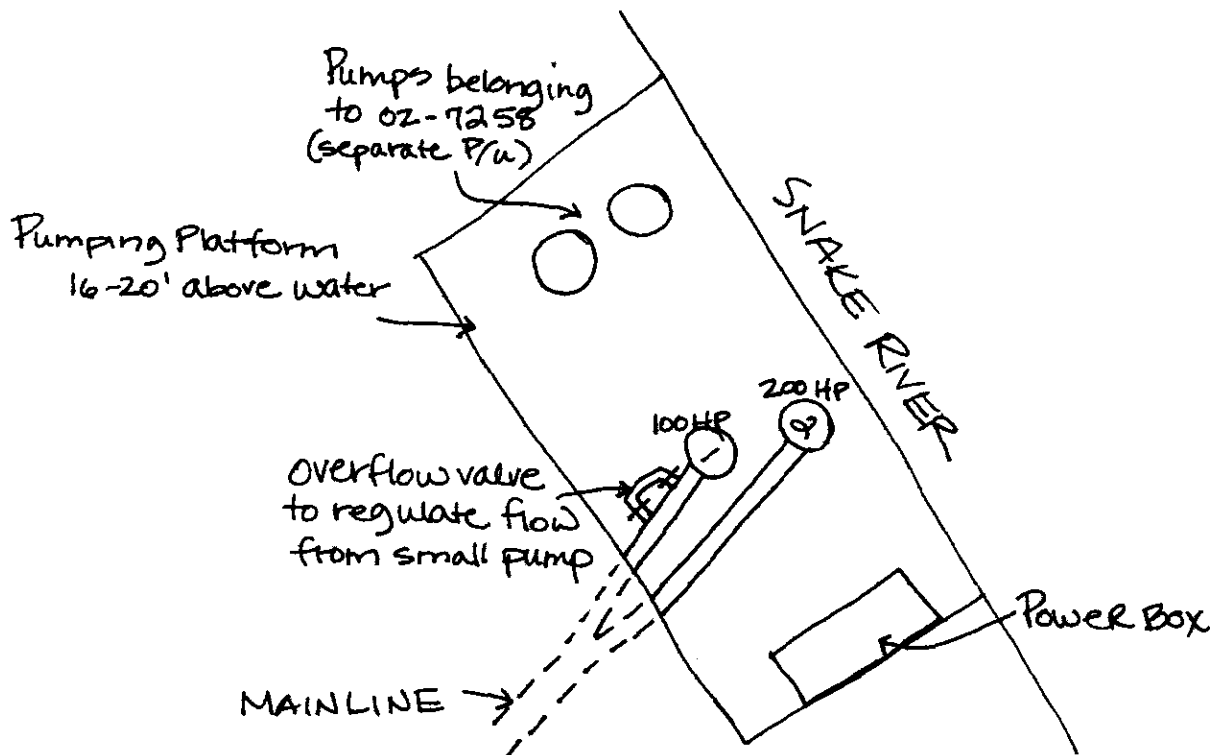
☒ Copies Attached

☒ Copies of Field Exam's Attached

(2383 ONLY)

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



Scale: 1" = None

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).

System Description (continued)

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

Two pumps (100 & 200 HP) deliver water through a buried mainline approximately 1 mile, over a lift of ~210 feet, to a concrete user box which empties into a concrete ditch. Water is measured through a trapezoidal flume. Water is delivered to all lands under this permit and license 02-2383 through an existing system of ditches which includes 2 points of injection & re-diversion from Squaw Creek. (see map/diagram) Most of the ^{water} ~~uses~~ under this permit is re-lifted into sprinklers; the balance of acreage is gravity flow irrigation. Any ☒ 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
Pump 1	GE	100	BDJ228125		16"
Pump 2	GE	200	GLJ716106		16"

*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
	4	SW	SE		26	2N	4W	Owyhee	Orthophoto, Govt Plat

6. Place(s) of Use:

Indicate Method of Determination Same as above

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	
1N	4W	3					.7	26											26.7
							L.3	L.4											~~26.0~~
		4							5										26.0
2N	4W	34									.5	17	26	12				25	80.5
																			100.2

133.2

Changes - Cyt 10/95

Do not use this space

D. FLOW MEASUREMENTS

☐ Additional Data Sheets Attached

1.

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

2. Measurements:

A measurement was made over the trapezoidal flume in 1980 during a previous field exam. No measurement taken this date. System is same as in 1980 (see old exam pg 4 for matching pump ID #'s)

→ Remeasure 10/1/93

E. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

1. Measured Method:

See Attachment

2. Alternate Method for Checking Purposes:

$$Q = \frac{300 \times 8.8 \times .7}{212} = 8.7 \text{ cfs}$$

See attachment 1.24' vertical depth in 2' (bottom width) trapezoidal flume.

Allow 1.6 cfs - see attachment from discharge table: 9.0 cfs

F. PUMP EFFICIENCY DATA (Optional)

(from topo maps plus depth to water from platform)

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

allow 2.20 cfs per P/D overlap analysis (attached)

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \frac{133.2}{100.2} \times 5 = 501.666$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 = \frac{1.76}{2.2} \times 246 \times 1.9835 = 780.7$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 501.666$$

2. Volume Calculations for Other Uses:

See P/D overlap analysis

all changes - Oct 10/95

H. REMARKS AND OVERLAP REVIEW ANALYSIS

(cont) excess water is taken to a reservoir located in SENE/NESE Sec 3.
(see claim A02-10036 for storage rights) #

OVERLAPS: 02-2383 is pumped from the same system but applied to different acres (see map). A02-10036 is a stored flow claim. Acres do not overlap with this permit, point of diversion is the same. 57-0282 are rights from Squaw Creek.

Condition of approval: This right in combination with right #02-2383 shall not exceed ~~8.22~~ cfs 9.0 cfs

Remark: Points of injection into Squaw Creek at (NENENW) LOT 3, Sec 3, T1N R4W, & NWSESE Sec 34, T2N R4W. Points of Rediversion from Squaw Creek at: SWSWSE Sec 34 & NESESE Sec 34, T2N R4W.

I. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
Irrigation	3/15	11/15	1.60 / 2.20	501.0666

Totals: 1.60 / 2.20 501.0666
See r/o overlap analysis

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 C. J. HODGES
Signature Cynthia Hodges
Certification Date _____
Field Report Preparation Date 10-31-91 & 1/13/94

CONSULTANT SEAL

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

all changes - cjt 10/95

MEMORANDUM

October 20, 1995

TO: File 02-07388

FROM: Cindy Hodges *cyh*

RE: System Measurement and Re-evaluation

Two turbine pumps discharge into 3500 feet of 16" steel mainline, which lifts water approximately 200 feet into open concrete ditch. Flows are measured just downstream in the concrete ditch through a concrete in-line trapezoidal flume with 1' throat width. During my initial exam for this permit in October 1991, the system was not being operated at full capacity, so a measurement was not attempted. A previous measurement on the identical system showed system capacity of 11.51 cfs, but I felt this was artificially high (discussion, page 2), so I first entered a recommendation based on a conservative theoretical system capacity of 8.22 cfs. The permit holder disagreed, believing that the system was capable of producing approximately 10 cfs. A re-measure of the system was conducted in the fall of 1993.

The re-measure was conducted with both pumps operating. The head reading from the sloped sidewall staff at position A was 1.76'. A vertical head reading of 1.24' was also obtained. The flume was not operating under submerged conditions. When the two head readings are taken to standard discharge tables, there is a rather large discrepancy in resulting rates of flow (sloped=7.52 cfs, vertical=9.8 cfs). Rates of flow should match; rate of flow from vertical head readings only has been the basis for the permit holder's assessment of 10 cfs system capacity. Permit holder has suggested that the sidewall staff gage must be in an incorrect position and thus giving a faulty reading.

Unfortunately, neither rated discharge is correct, for this flume was not constructed to specification. Trapezoidal flumes with 2' entry and 1' throat widths are designed with uniform sidewall slopes of 1.25:1. This flume was constructed with sidewall slopes of 1:1 (Derived from trigonometric comparison of the two 1993 head measurements; see attached diagram). Incorrect sidewall slope will significantly alter discharge with respect to head reading. **Standard discharge tables may not be used with this flume.**

I obtained from Tom Trout, ARS Kimberly, a modified discharge table for trapezoidal flumes with 1' throat and 1:1 sidewall slope. For both 1.24' vertical or 1.76' sloped head readings, discharge is rated at around 9.0 cfs. (Attachment A)

A second physical measurement was made 4/22/94 with only the small pump operating. A vertical head reading of .75', taken to the modified discharge table, yields 3.34 cfs. A rough field check using the "float method" in the ditch generated a flow of 3.3 cfs (see attached notes). Fig. 2.

The previously assessed system capacity must be set aside, given the present field data. The 1980 field exam for 02-02383 incorrectly assessed this system capacity to be 11.51 cfs by taking two flume measurements and summing them. This indicates that each pump was operated independently to obtain separate measurements. The discovery of a non-specification flume notwithstanding, this method would still be faulty for this system because in fact the two pumps are routinely operated together into a common pipeline. Due to increased pipeline friction, pumps operated in tandem do not usually discharge the equivalent of the separate, added flows.

To demonstrate: A Lotus spreadsheet program, routinely used at Western, was used to produce theoretical flow calculations for each pump operating independently in the above system (see attached pages). Then, the effective horsepowers were combined under the same pumping conditions. The combined theoretical flow is about 8% less than the added flows, but equal to the actual flows obtained from the field measurements. The results are summarized as follows:

	<u>Vertical head</u>	<u>ARS Table</u>	<u>HP equation</u>
Pump #1	0.79'	3.34 cfs	3.41 cfs
Pump #2	1.07' (1980)	6.75 cfs	6.3 cfs
Summed flow		10.09 cfs	9.71 cfs
Combined flow	1.24	9.0 cfs	8.95 cfs

Note that in the pump station computations, the effective horsepower used is 115% of rated horsepower. Permit holder has evidenced with Idaho Power billing demand that the system can operate at 115% of rated horsepower. This evidence is weak alone, and does not confirm that the system always operates at this level, but field data seems to support it.

Based on actual measurement and supporting theoretical calculations, the capacity of this system is and has been around 9.0 cfs. The pumping plant has not been modified since 1980, and had been recently maintained before the 1993 measurement so there is no reason to believe that the representative plant capacity was diminished.

Trig. comparison of 1993 measurements:

$$\sin B = \frac{b}{c} = .7045$$

$$\angle B = 44.79 = 45^\circ$$

$$\angle A = 90 - \angle B \text{ or } 90 - 45$$

$$\angle A = 45^\circ$$

where b = vertical head meas
 c = Sloped head meas

If $\angle A$ is 45° , slope of c is 1:1

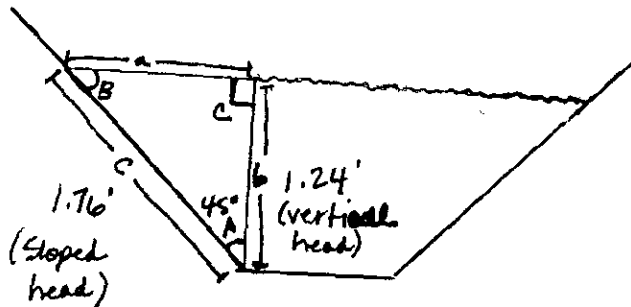
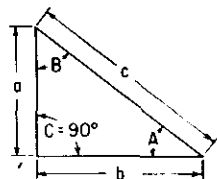


Figure 1.

Solution of Right-angled Triangles

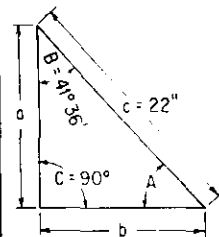


As shown in the illustration, the sides of the right-angled triangle are designated a and b and the hypotenuse, c . The angles opposite each of these sides are designated A and B respectively.

Angle C , opposite the hypotenuse c is the right angle, and is therefore always one of the known quantities.

Sides and Angles Known	Formulas for Sides and Angles to be Found		
Side a ; side b	$c = \sqrt{a^2 + b^2}$	$\tan A = \frac{a}{b}$	$B = 90^\circ - A$
Side a ; hypotenuse c ...	$b = \sqrt{c^2 - a^2}$	$\sin A = \frac{a}{c}$	$B = 90^\circ - A$
Side b ; hypotenuse c ...	$a = \sqrt{c^2 - b^2}$	$\sin B = \frac{b}{c}$	$A = 90^\circ - B$
Hypotenuse c ; angle B ...	$b = c \times \sin B$	$a = c \times \cos B$	$A = 90^\circ - B$
Hypotenuse c ; angle A ...	$b = c \times \cos A$	$a = c \times \sin A$	$B = 90^\circ - A$
Side b ; angle B	$c = \frac{b}{\sin B}$	$a = b \times \cot B$	$A = 90^\circ - B$
Side b ; angle A	$c = \frac{b}{\cos A}$	$a = b \times \tan A$	$B = 90^\circ - A$
Side a ; angle B	$c = \frac{a}{\cos B}$	$b = a \times \tan B$	$A = 90^\circ - B$
Side a ; angle A	$c = \frac{a}{\sin A}$	$b = a \times \cot A$	$B = 90^\circ - A$

Example. the Solution of Right-angled Triangles



Hypotenuse and one angle known:

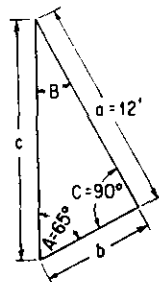
$$c = 22 \text{ inches; } B = 41^\circ 36'.$$

Then, by the formulas given on the preceding page:

$$a = c \times \cos B = 22 \times \cos 41^\circ 36' = 22 \times 0.74780 = 16.4516 \text{ inches.}$$

$$b = c \times \sin B = 22 \times \sin 41^\circ 36' = 22 \times 0.66393 = 14.6065 \text{ inches.}$$

$$A = 90^\circ - B = 90^\circ - 41^\circ 36' = 48^\circ 24'.$$



One side and one angle known:

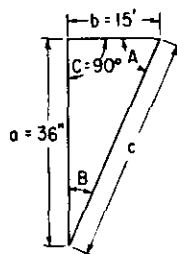
$$a = 12 \text{ feet; } A = 65^\circ.$$

Then, by the formulas given on the preceding page:

$$c = \frac{a}{\sin A} = \frac{12}{\sin 65^\circ} = \frac{12}{0.90631} = 13.2405 \text{ feet.}$$

$$b = a \times \cot A = 12 \times \cot 65^\circ = 12 \times 0.46631 = 5.5957 \text{ feet.}$$

$$B = 90^\circ - A = 90^\circ - 65^\circ = 25^\circ.$$



Two sides known:

$$a = 36 \text{ inches; } b = 15 \text{ inches.}$$

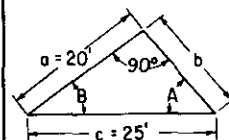
Then, by the formulas given on the preceding page:

$$c = \sqrt{a^2 + b^2} = \sqrt{36^2 + 15^2} = \sqrt{1296 + 225} = \sqrt{1521} = 39 \text{ inches.}$$

$$\tan A = \frac{a}{b} = \frac{36}{15} = 2.4$$

$$\text{Hence, } A = 67^\circ 23'.$$

$$B = 90^\circ - A = 90^\circ - 67^\circ 23' = 22^\circ 37'.$$



Hypotenuse and one side known:

$$c = 25 \text{ feet; } a = 20 \text{ feet.}$$

From the formulas on the preceding page:

$$b = \sqrt{c^2 - a^2} = \sqrt{25^2 - 20^2} = \sqrt{625 - 400} = \sqrt{225} = 15 \text{ feet.}$$

$$\sin A = \frac{a}{c} = \frac{20}{25} = 0.8$$

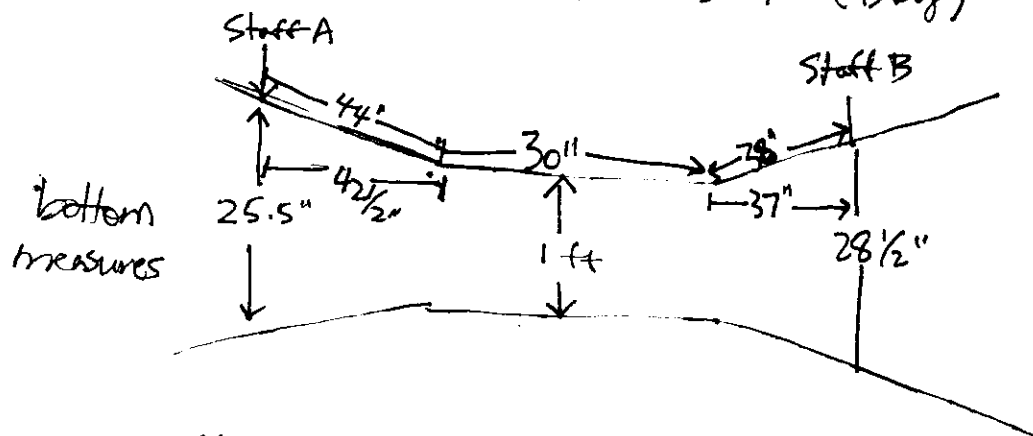
$$\text{Hence, } A = 53^\circ 8'.$$

$$B = 90^\circ - A = 90^\circ - 53^\circ 8' = 36^\circ 52'.$$

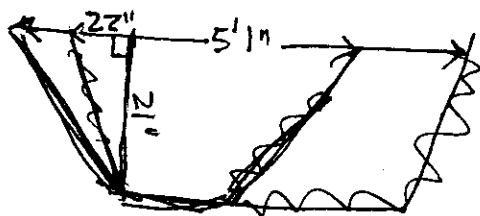
~~Blackstock flume 10-5-95 (Dry)~~

10-5-95

Blackstock flume 10-5-95 (Dry)

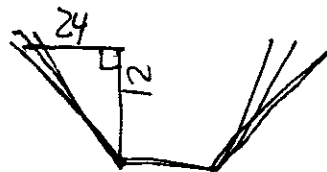


at Staff A: end



1.05 : 1

throat



Note: Dry measurements done w/o level. Estimates support 1:1 slope.

1.14 : 1

4/22/94 Blackstock flume

GY (small pump running)

Physical measurements

upstream entry $(B_1) = 2'$
throat $(B_2) = 1'$

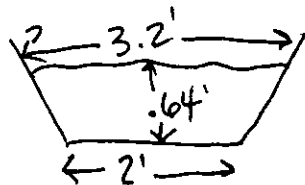
vertical staff = .75'

Slope staff = 1.10'

fr. modified table

3.34
(OK) ~~3.34~~ ~~3.58~~

flow check, float method
trapezoidal ditch



$$(3.2 + 2) / 2 \times .64$$

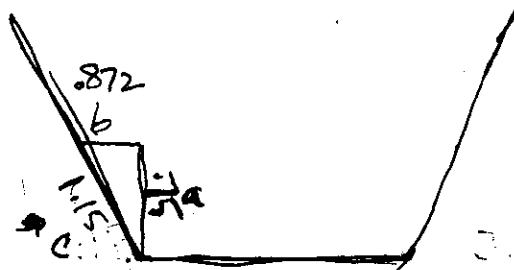
$$A = 1.664$$

Velocity 24 ft / 12 sec

$$V = 2 \text{ ft/sec}$$

$$Q = 3.328$$

also see theoretical
for small pump.
(3.41 cfs)

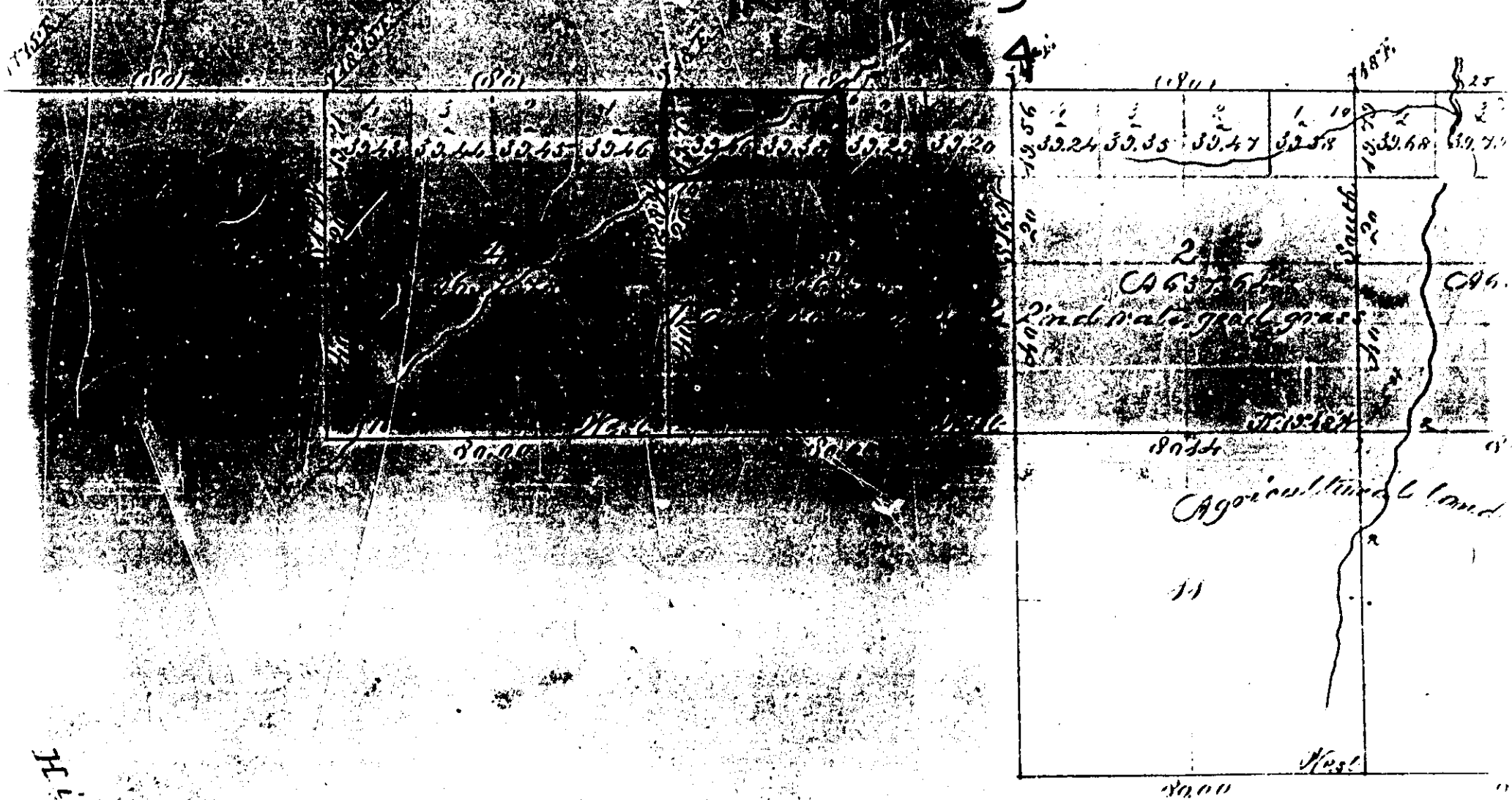


$$\begin{aligned}
 (.75)^2 + b^2 &= (1.15)^2 \\
 .5625 + b^2 &= 1.3225 \\
 b^2 &= .76 \\
 b &= .872
 \end{aligned}$$

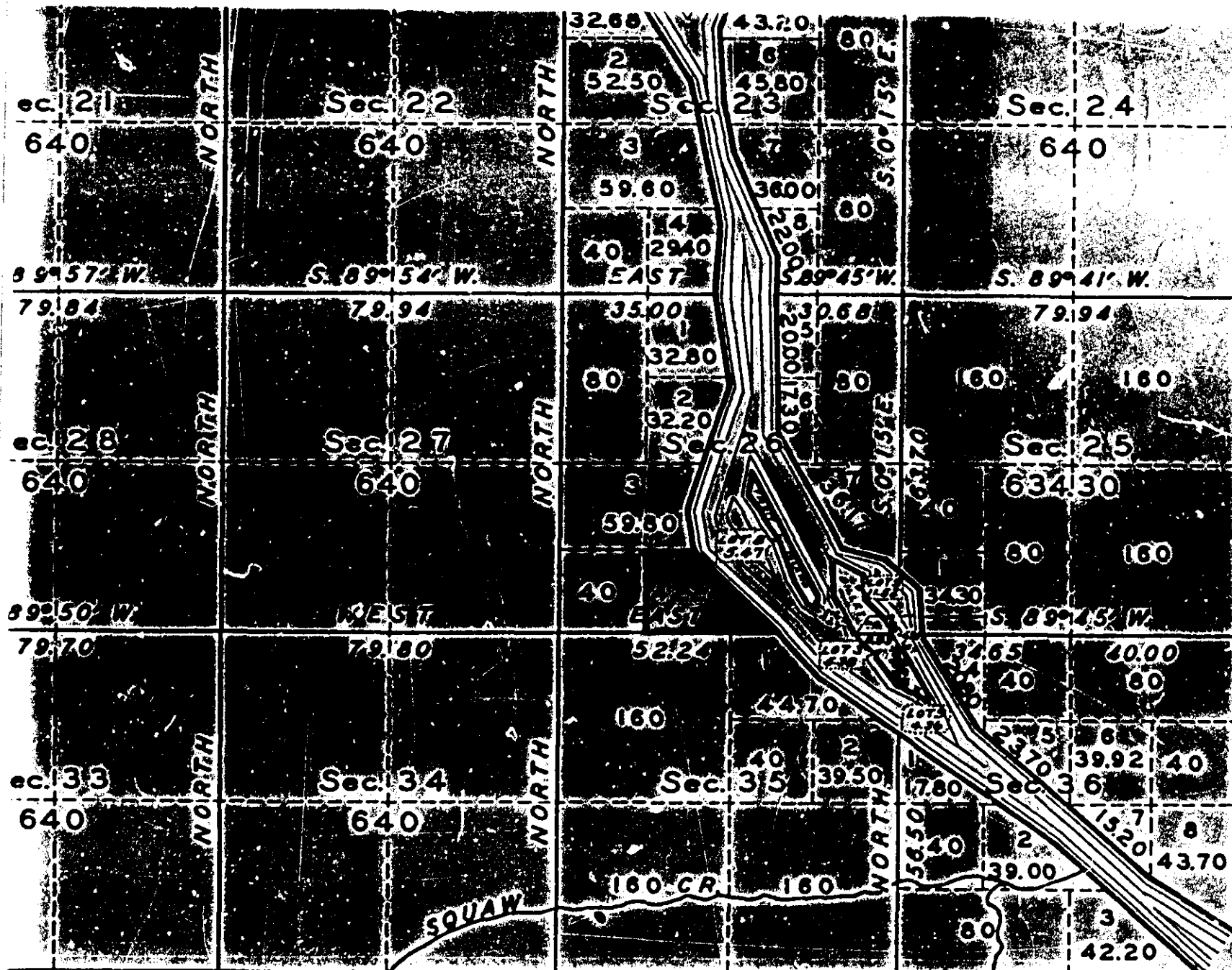
$$\frac{.75}{.872} = .86$$

$$\begin{aligned}
 (.72)^2 + b^2 &= (1.15)^2 \\
 b &= .8967
 \end{aligned}$$

North Range No 4 West Boise Meri



High Rock



LATITUDE & LONGITUDE

COMPILED FROM THE OFFICIAL RECORDS OF THE PUBLIC SURVEY OFFICE, BOISE, IDAHO

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Discharge Table for a 1 ft 1:1 Trapezoidal Long Throated Flume

WATER RESOURCES
WESTERN REGIONGenerated From
 $Q (cfs) = 5.02 (H - .075)^{2.115}$ $H = \text{depth (ft)}$

Vertical Flow Rate		Sloped Flow Rate	
Depth		Gauge	
(ft)	(cfs)	(ft)	(cfs)
0.20	0.33	0.20	0.20
0.25	0.46	0.25	0.27
0.30	0.63	0.30	0.36
0.35	0.82	0.35	0.46
0.40	1.04	0.40	0.57
0.45	1.28	0.45	0.70
0.50	1.56	0.50	0.83
0.55	1.86	0.55	0.99
0.60	2.18	0.60	1.15
0.65	2.54	0.65	1.33
0.70	2.93	0.70	1.53
0.75	3.34	0.75	1.73
0.80	3.78	0.80	1.95
0.85	4.26	0.85	2.19
0.90	4.76	0.90	2.44
0.95	5.29	0.95	2.70
1.00	5.85	1.00	2.98
1.05	6.44	1.05	3.28
1.10	7.07	1.10	3.58
1.15	7.72	1.15	3.90
1.20	8.40	1.20	4.24
1.25	9.11	1.25	4.59
1.30	9.86	1.30	4.96
1.35	10.63	1.35	5.34
1.40	11.44	1.40	5.74
1.45	12.27	1.45	6.15
1.50	13.14	1.50	6.57
1.55	14.04	1.55	7.01
1.60	14.97	1.60	7.47
1.65	15.93	1.65	7.94
1.70	16.93	1.70	8.43
1.75	17.95	1.75	8.93
1.80	19.01	1.80	9.44
		1.85	9.98
		1.90	10.53
		1.95	11.09
		2.00	11.67
		2.05	12.26
		2.10	12.87
		2.15	13.50
		2.20	14.14
		2.25	14.80
		2.30	15.47
		2.35	16.16
		2.40	16.86
		2.45	17.58
		2.50	18.32

Derived by Tom Trout, USDA-ARS, Kimberly, ID
 from "FLUME", a computer model for long-throated flumes
 11/21/93

ATTACHMENT A

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WATER RESOURCES
WESTERN REGION

1 ft trapezoidal

TIME - 17: 1

DATE -11/23/1993

FLUME VERSION 2.3

Computer Model Output

CROSS SECTION DATA

APPROACH CHANNEL
SIMPLE TRAPEZOID

BOTTOM WIDTH B1 = 2.000 FT
SIDE SLOPE Z1 = 1.000 : 1

THROAT SECTION
SIMPLE TRAPEZOID

BOTTOM WIDTH BC = 1.000 FT
SIDE SLOPE ZC = 1.000 : 1

TAILWATER CHANNEL
SIMPLE TRAPEZOID

BOTTOM WIDTH B2 = 2.000 FT
SIDE SLOPE Z2 = 1.000 : 1

PROFILE DATA

STATIONARY WEIR

LENGTH TO GAUGE AL = .500 FT
CON RAMP LENGTH BL = 3.000 FT
THROAT LENGTH TL = 2.500 FT
DIV RAMP LENGTH *DL = .000 FT
LENGTH TO SEC 2 *EL = 12.500 FT
CON SILL HEIGHT P1 = .000 FT
CON RAMP SLOPE *EN = 99.999 : 1
DIV SILL HEIGHT P2 = .000 FT
DIV RAMP SLOPE EM = .000 : 1

MATERIAL ROUGHNESS RK = .0001000 FT

WARNING IWARN = 10

GAUGE MAY BE TOO CLOSE TO RAMP

RATING TABLE

1 ft trapezoidal

SILL REFER. HEAD	FLOW RATE Q CFS	FROUDE NO. FR1	DISH. COEFF. H1/TL CD	VELOC. COEFF. CV	REQ'D HEAD LOSS DH FT	MAX. T-WATER DEPTH Y2 FT	MODULAR LIMIT	
.200	.3204	.300	.083	.9504	1.070	.029	.167	.860
.250	.4660	.308	.104	.9571	1.074	.035	.211	.868
.300	.6358	.315	.125	.9621	1.078	.039	.255	.874
.350	.8300	.322	.147	.9660	1.081	.044	.300	.880
.400	1.0490	.329	.168	.9691	1.085	.048	.345	.886
.450	1.2932	.335	.189	.9717	1.088	.052	.390	.890
.500	1.5632	.342	.210	.9737	1.091	.055	.436	.894
.550	1.8594	.348	.231	.9756	1.094	.059	.482	.898
.600	2.1825	.353	.253	.9773	1.097	.062	.528	.902
.650	2.5332	.359	.274	.9788	1.100	.065	.574	.905

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WESTERN REGION

.700	2.9119	.364	.5	.9801	1.103	.068	.21	.908
.750	3.3194	.370	.517	.9813	1.106	.070	.667	.911
.800	3.7564	.375	.338	.9824	1.109	.073	.714	.914
.850	4.2233	.380	.360	.9834	1.112	.075	.761	.916
.900	4.7209	.385	.381	.9843	1.115	.078	.808	.919
.950	5.2498	.390	.403	.9853	1.118	.080	.855	.921
1.000	5.8096	.394	.424	.9858	1.120	.082	.902	.923
1.050	6.4041	.399	.446	.9867	1.123	.084	.950	.925
1.100	7.0307	.403	.467	.9873	1.126	.085	.997	.927
1.150	7.6900	.408	.489	.9878	1.129	.087	1.044	.929
1.200	8.3848	.412	.511	.9884	1.131	.089	1.092	.930
1.250	9.1147	.416	.533	.9890	1.134	.091	1.140	.932
1.300	9.8803	.421	.554	.9896	1.136	.092	1.187	.934
1.350	10.6821	.425	.576	.9902	1.139	.094	1.235	.935
1.400	11.5209	.429	.598	.9907	1.141	.095	1.283	.936
1.450	12.3971	.432	.620	.9913	1.144	.096	1.331	.938
1.500	13.3114	.436	.642	.9918	1.146	.098	1.379	.939

WALL GAUGE DATA 1 ft trapezoidal

FLOW RATE Q CFS	SILL REFER. HEAD SH1 FT	WALL GAUGE DIST. SHS FT
.50	.261	.368
1.00	.389	.550
1.50	.489	.691
2.00	.572	.809
2.50	.645	.913
3.00	.711	1.006
3.50	.771	1.090
4.00	.826	1.169
4.50	.878	1.242
5.00	.927	1.311
5.50	.973	1.376
6.00	1.016	1.437
6.50	1.058	1.496
7.00	1.098	1.552
7.50	1.136	1.606
8.00	1.173	1.658
8.50	1.208	1.708
9.00	1.242	1.757
9.50	1.275	1.804
10.00	1.308	1.849
10.50	1.339	1.893
11.00	1.369	1.936
11.50	1.399	1.978
12.00	1.428	2.019
12.50	1.456	2.059
13.00	1.483	2.098

(trap3

) WAS CREATED FOR GAUGE PLOT DATA

DISCHARGE EQUATION 1 ft triangular

$$EQUATION \quad Q = A * (SH1 + B)^{*}U$$

Q IN CFS SH1 IN FT

COEFFICIENT VALUES

A = 5.021
B = .7500E-01
U = 2.1178

GOODNESS OF FIT

COEFFICIENT OF DETERMINATION (LN) R2 = 1.000

DATA

SH1 FT	Q CFS	Q(CALC) CFS	ERROR CFS	*ERROR
.200	.3204	.3262	.0057	1.793
.250	.4660	.4646	-.0014	-.294
.300	.6358	.6291	-.0067	-1.054
.350	.8300	.8201	-.0100	-1.201
.400	1.0490	1.0379	-.0111	-1.063
.450	1.2932	1.2829	-.0103	-.798
.500	1.5632	1.5555	-.0077	-.492
.550	1.8594	1.8559	-.0035	-.188
.600	2.1825	2.1844	.0019	.087
.650	2.5332	2.5413	.0082	.322
.700	2.9119	2.9268	.0149	.512
.750	3.3194	3.3412	.0217	.655
.800	3.7564	3.7846	.0282	.752
.850	4.2233	4.2572	.0339	.804
.900	4.7209	4.7593	.0384	.814
.950	5.2498	5.2910	.0412	.786
1.000	5.8096	5.8526	.0430	.739
1.050	6.4041	6.4441	.0400	.625
1.100	7.0307	7.0657	.0350	.498
1.150	7.6900	7.7176	.0276	.359
1.200	8.3848	8.3999	.0151	.180
1.250	9.1147	9.1128	-.0019	-.020
1.300	9.8803	9.8565	-.0238	-.241
1.350	10.6821	10.6310	-.0512	-.479
1.400	11.5209	11.4364	-.0844	-.733
1.450	12.3971	12.2730	-.1241	-1.001
1.500	13.3114	13.1408	-.1706	-1.281

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WATER RESOURCES
WESTERN REGION

X-SECTION SKETCH SHOWING DIFFERENCE IN AREA
CAUSED BY NON-STANDARD CONSTRUCTION IN TRAPEZOIDAL
FLUME

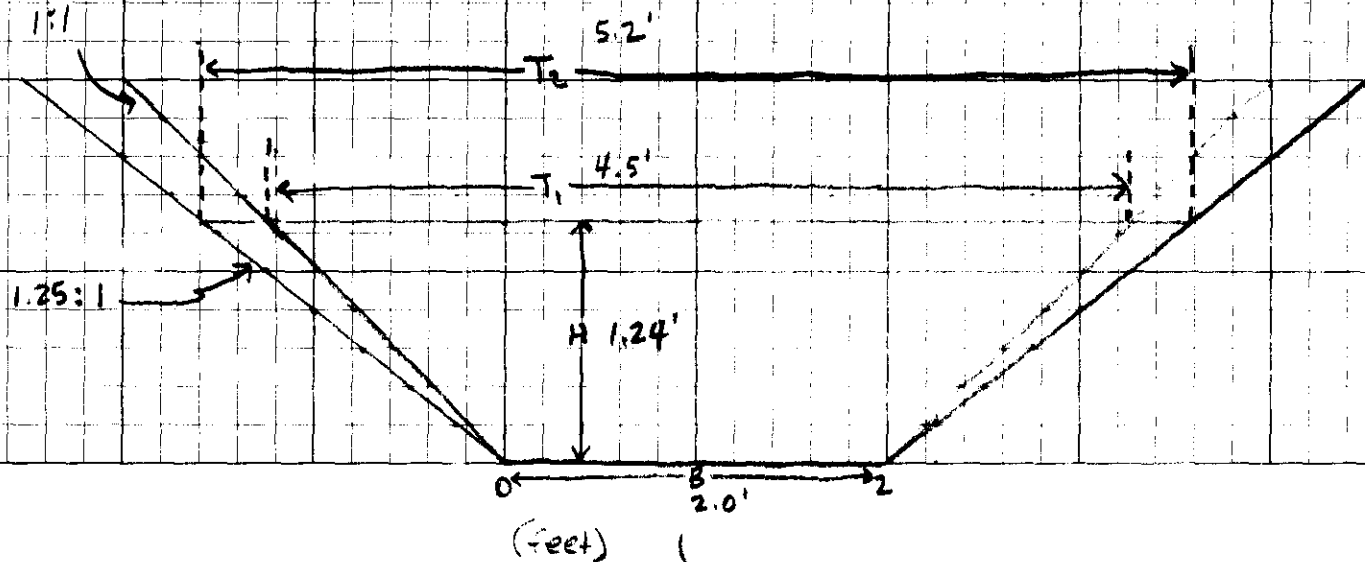
TRAPEZOIDAL AREA: $\frac{(B+T)H}{2}$

AREA #1 (1:1) : $\frac{(2+4.5)1.24}{2} = 4.03$

10% less area at given depth; actual
flows approx 10% less

AREA #2 (1.25:1) : $\frac{(2+5.2)1.24}{2} = 4.464$

$10.2 \text{ CFS} - 1.02 = 9.18 \text{ CFS}$
(rating table)



Pumpback Computation Spreadsheet (DRT 1/24/1995)

Data Entered By: Cindy Hodges
8-9-95

Project: Flow Computation for 02-07388
small pump

Given: See Data Table

Compute head losses with the Williams and Hazen Formula:

$$f = 0.2083 * (100 / \text{roughness})^{1.85} * ((\text{cfs} * 448.8)^{1.852} / \text{ID}^{4.8655} * \text{Length} / 100)$$

To Find: Compute Rate of Flow for a Pumpback System

Data Table

Vertical Lift: 200.00 feet

Pressure Req'd: 0.00 psi

Required Head: 200.00 feet

Pump Horsepower: 115.00 horsepower

Pipe Roughness: 100.00 Note: pvc = 150, smooth and straight pipe = 140
aluminum - joint length 20' = 125, joint length
30' = 130, joint length 40' = 132, joint length
50' = 134, new riveted steel = 100
old riveted steel = 100, old cast iron = 95,
old pipes in poor condition = 60 to 80

Inside Diameter in Inches	Equivalent Length in Feet	Unit Head Loss	Total Friction Head Loss from Pipe Friction
16.00	3500.00	7.99	
1.00	0.00	0.00	
1.00	0.00	0.00	
			7.99

Initial Estimate of Rate of Flow: 3.410 CFS

Computation of Rate of Flow: 3.41

Solution is shown in the Computation of Rate of Flow.
Solution is obtained by entering an initial estimate of rate of flow,
and by changing this factor until it approximates as closely as possible
the Computation of Rate of Flow.

Pumpback Computation Spreadsheet (DRT 1/24/1995)

Data Entered By: Cindy Hodges
8-9-95

Project: Flow Computation for 02-07388
large pump

Given: See Data Table

Compute head losses with the Williams and Hazen Formula:

$$f = 0.2083 * (100 / \text{roughness})^{1.85} * (\text{cfs} * 448.8)^{1.852} / \text{ID}^{4.8655} * \text{Length} / 100$$

To Find: Compute Rate of Flow for a Pumpback System

Data Table

Vertical Lift: 200.00 feet

Pressure Req'd: 0.00 psi

Required Head: 200.00 feet

Pump Horsepower: 230.00 horsepower

Pipe Roughness: 100.00 Note: pvc = 150, smooth and straight pipe = 140
aluminum - joint length 20' = 125, joint length
30' = 130, joint length 40' = 132, joint length
50' = 134, new riveted steel = 100
old riveted steel = 100, old cast iron = 95,
old pipes in poor condition = 60 to 80

Inside Diameter in Inches	Equivalent Length in Feet	Unit Head Loss	Total Friction Head Loss from Pipe Friction
16.00	3500.00	24.89	
1.00	0.00	0.00	
1.00	0.00	0.00	
			24.89

Initial Estimate of Rate of Flow: 6.300 CFS

Computation of Rate of Flow: 6.30

Solution is shown in the Computation of Rate of Flow.
Solution is obtained by entering an initial estimate of rate of flow,
and by changing this factor until it approximates as closely as possible
the Computation of Rate of Flow.

Pumpback Computation Spreadsheet (DRT 1/24/1995)

Data Entered By: Cindy Hodges
8-9-95

Project: Flow Computation for 02-07388
both pumps

Given: See Data Table

Compute head losses with the Williams and Hazen Formula:

$$f = 0.2083 \cdot (100 / \text{roughness})^{1.85} \cdot ((\text{cfs} \cdot 448.8)^{1.852} / \text{ID}^4 \cdot \text{Length} / 100)$$

To Find: Compute Rate of Flow for a Pumpback System

Data Table

Vertical Lift: 200.00 feet

Pressure Req'd: 0.00 psi

Required Head: 200.00 feet

Pump Horsepower: 360.00 horsepower

Pipe Roughness: 100.00 Note: pvc = 150, smooth and straight pipe = 140
aluminum - joint length 20' = 125, joint length
30' = 130, joint length 40' = 132, joint length
50' = 134, new riveted steel = 100
old riveted steel = 100, old cast iron = 95,
old pipes in poor condition = 60 to 80

Inside Diameter in Inches	Equivalent Length in Feet	Unit Head Loss	Total Friction Head Loss from Pipe Friction
16.00	3500.00	47.70	
1.00	0.00	0.00	
1.00	0.00	0.00	

47.70

Initial Estimate of Rate of Flow: 8.950 CFS

Computation of Rate of Flow: 8.95

Solution is shown in the Computation of Rate of Flow.
Solution is obtained by entering an initial estimate of rate of flow,
and by changing this factor until it approximates as closely as possible
the Computation of Rate of Flow.



PLEASE BRING ENTIRE BILL WHEN PAYING IN PERSON
FOR ACCOUNT INQUIRIES CALL OR CONTACT YOUR LOCAL OFFICE AT
337-4631 126 W IDAHO, HOMEDALE

CUSTOMER IDENTIFICATION									
CUSTOMER NAME TED K BLACKSTOCK					SERVICE LOCATION #929 HWY 78				
CUSTOMER NUMBER 1212-001549-8					TYPE OF SERVICE IRRIGATION				
ACCOUNT INFORMATION AS OF JUNE 15, 1992									
BALANCE FORWARD ▶									
METER NUMBER OR NUMBER OF LAMPS	R A T E	SERVICE FROM TO		D A Y S	METER READING PREVIOUS PRESENT		METER CONSTANT	BILLING DEMAND	BILLING ENERGY KILOWATT HOURS
64545390624	5/12	6/11		00	579107906		80	270	169200
**** ACCOUNT ACTIVITY SINCE LAST BILLING ****									
3454.65CR TOTAL PAYMENTS THANK-YOU									
ACCOUNT BALANCE									5511.70

270 x 1.34 = 361.8
from "Energy Efficient
Irrigation Practices Handbook"
Pg II-22
(IDW/P)

COMPARE YOUR AVERAGE DAILY USE WITH LAST YEAR			
DAYS	BILLING PERIOD	KWH BILLED	KWH PER DAY
	THIS MONTH THIS YEAR		
	THIS MONTH LAST YEAR		

LEVEL PAY AMOUNT

PLEASE PAY THIS AMOUNT
5511.70

PLEASE ADD \$1, \$5 OR \$10 TO AID PROJECT SHARE'S ASSISTANCE PLAN



RECYCLABLE

*O- REGULAR READING
CR- CREDIT

1- CUSTOMER READING
AV- AVERAGE

2 OR 3- ESTIMATED READING
MN- MINIMUM

SEE REVERSE SIDE FOR ADDITIONAL INFORMATION

02-7388 P/D OVERLAP Analysis

OLD RATE: Under 02-2383

8.22 for 411 acres = .02 cfs/ac

~~OLD~~ CURRENT RATE Under 02-2383 & 02-7388

9.00 for ~~511.2~~ acres = ~~.0176~~ cfs/ac
* 544.2 .0165

NEW RATE for 02-7388

~~100.2~~ ac x ~~.0176~~ cfs/ac = ~~1.76~~ cfs
133.2 .0165 2.20 cfs

* acreage adjusted upon further review of map
G4 10/95



02-7388

Valves/Mainlines (16")

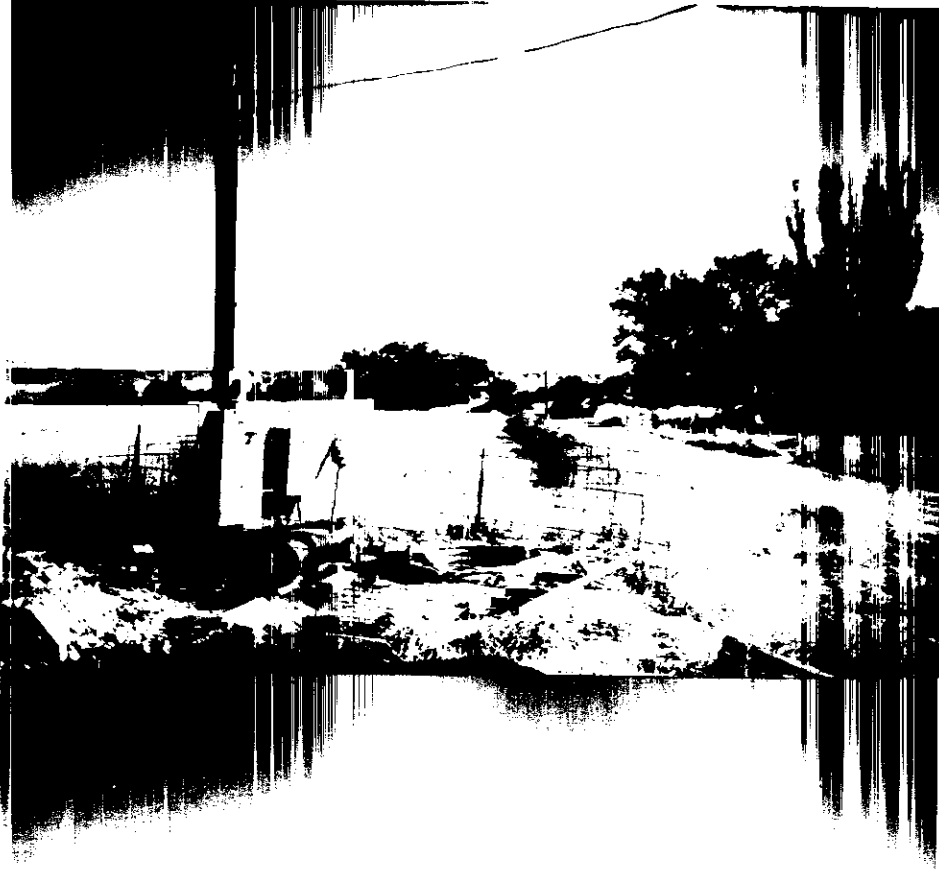
Pump Plant



Trapezoidal Flume
(pumps not at
capacity)



02-7388



West Relift Station
SESW S34

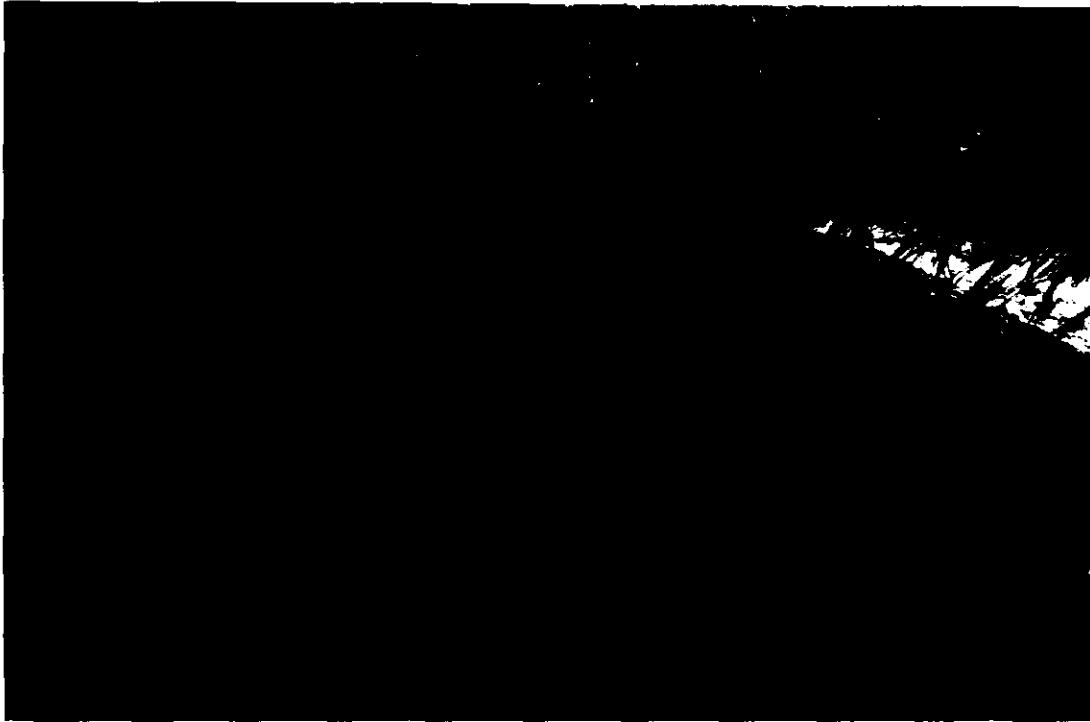


Sec 34
Delivery & Headgate



02-7388

From 2nd
Measurement:



Upstream (H1)
Staff



Downstream
(H4) Staff

June 8, 1992

ADAM H. BLACKSTOCK
TED K. BLACKSTOCK
HC 79 BOX 119
MELBA ID 83641

RE: Water Right No. 02-07388

Dear Water Right Holder(s):

On May 19, 1992, the department sent you a letter advising that you might be required to temporarily cease diverting water from the Snake River or its tributaries if the established minimum stream flow of the Snake River in the amount of 4,750 cubic feet per second measured near Weiser is not satisfied or likely will not be satisfied.

The flow of the Snake River at Weiser is now less than 4,750 cfs. You are, therefore, directed to immediately cease diverting water under the above referenced water right and to not resume use until authorized by the department.

Past flow records show that the duration of seasonal low flow periods typically last several days to a week. Since your use of water is extremely important to you and since mail notification includes a delay associated with mail delivery time, feel free to call the toll-free telephone number 1-800-451-4129 to determine when you are again authorized to divert and use water under your water right. Please use this phone number only in connection with resumption of use.

You need to be aware that Section 42-351, Idaho Code, provides for penalties of up to \$100 per day for unauthorized diversion.

Thank you for your cooperation in this matter. Please feel free to contact L. Glen Saxton (phone: 208-327-7955) or Gary Spackman (phone: 208-327-7946) of my staff if you have questions.

Sincerely,

R. KEITH HIGGINSON
Director

June 12, 1992

ADAM H. BLACKSTOCK
TED K. BLACKSTOCK
HC 79 BOX 119
MELBA ID 83641

RE: Water Right No. 02-07388

Dear Water Right Holder(s):

On June 8, 1992, the department sent you a letter which directed you to immediately cease diverting water under the above referenced water right, since the minimum stream flow of the Snake River in the amount of 4,750 cubic feet per second (cfs) measured near Weiser was not being satisfied.

The flow of the Snake River at Weiser is now above 4,750 cfs. You are, therefore, authorized to again divert water under your water right. If the minimum stream flow is not met later this year, however, the department will again notify you to temporarily cease diversion.

Thank you for your cooperation in this matter. Please feel free to contact L. Glen Saxton (phone: 208-327-7955) or Gary Spackman (phone: 208-327-7946) of my staff if you have questions.

Sincerely,

R. KEITH HIGGINSON
Director

May 19, 1992

ADAM H. BLACKSTOCK
TED K. BLACKSTOCK
HC 79 BOX 119
MELBA ID 83641

RE: Water Right No. 02-07388

Dear Water Right Holder(s):

Department water right records show that you divert water from the Snake River or its tributaries under a water right that has a priority date later than December 29, 1976. This is the priority of the established minimum stream flow of the Snake River at the Weiser Gage (Weiser) in the amount of 4,750 cubic feet per second.

Because of the continuing drought conditions in the Snake River Basin, department hydrologists project that during 1992, there could be periods when the required minimum flow will not be satisfied due to low flows of the Snake River. The department urges you to not divert at a higher rate than authorized by your water right and to not use your right in any manner different than authorized. In addition, when the minimum flow will not be satisfied or is not being satisfied, you are required to cease diverting water under your water right, because your right is of later priority than the minimum stream flow at Weiser.

If the department determines the minimum flow will not be satisfied, the department will advise you and will provide as much lead time as possible in requiring that you temporarily cease your diversion of water. The greatest likelihood for this to occur is during a period from mid-June to late June.

While the department expects good cooperation from junior water right holders, water users should be aware that Section 42-352, Idaho Code, provides for penalties of up to \$100 per day for unauthorized diversions of water.

The department has contacted both the Idaho Power Company and the U.S. Bureau of Reclamation with respect to the timing of storage releases from upstream reservoirs for flow enhancement

purposes. This type of coordination could minimize the impact on existing water users and reduce the need to curtail diversions.

The department has scheduled public information meetings relative to this potential regulation as follows:

Mountain Home - June 4, 1992 - 10:00 a.m. - gymnasium at
North Elementary School, 290 E. 12th N.

Caldwell - June 4, 1992 - 7:00 p.m. - Ballroom in the
Student Union Building, Albertson College of Idaho,
2112 Cleveland

If you have questions concerning this letter or wish to provide the name of a different contact person or address to receive department correspondence, please contact the department.

Sincerely,

L. GLEN SAXTON
Chief, Water Allocation Bureau

LGS:klg

1/88

PROOF OF BENEFICIAL USE

ANALYSIS SHEET

Permit No. 02-7388

Date: 7-28-88

General Considerations:

y Name same as permit
y Signature the same as permit holder
→ y Address change _____ If yes, prepare a data entry
y Proof received timely _____
_____ Reinstated

Source of Water:

y Surface water
y Groundwater
N 1 1. well log in file
2 2. drilling permit
_____ A. amount of drilling fee paid for proposed uses

Extent of Use and Rate of Diversion:

y Rate of diversion appropriate for uses
y Is rate or volume and fee appropriate?
y Has permit holder indicated when water was first put to a beneficial use?

Measuring Device:

y Is a measuring device or access port required?
N Has one been installed?
N Waiver or modification of measuring device requested

Remarks:

Proof acceptable

N/A Priority Calculation:

Date proof received	_____	_____
Date proof due	_____	+
No. of days late	_____	=
Priority date	_____	+
NEW PRIORITY DATE	_____	=

SEND FILES TO DATA ENTRY AND THEN TO MICROFILM

138637
CERTIFIED MAIL
May 31, 1988

BLACKSTOCK, TED K. & ADAM H.
STAR RT.
MELBA, ID 83641

PROOF DUE NOTICE

RE: Permit No. 02-7388

Dear Permit Holder:

One of the conditions of approval of the above referenced water permit was that proof of the extent of your beneficial use must be submitted to this office on or before August 1, 1988. (See last page of your approved permit or your last approved extension request.) Enclosed is a form which when accompanied by the license examination fee or a completed field examination report prepared by a certified water right examiner may be used to submit the required proof.

If you have not fully completed your project, and you or a previous owner of this permit have not received a prior extension of time, you may request an extension of time if the delay is for reasonable cause as provided in Section 42-204, Idaho Code. If you have been prevented from proceeding by a governmental agency or by litigation which might bring title to the water in question, more than one extension of time can be granted. An extension of time request form is enclosed for your convenience.

Either an acceptable proof of beneficial use submittal or an acceptable request for an extension of time must be received by this Department on or before the above described proof due date, or the permit will no longer be of any force nor effect.

Sincerely,

RITA FLECK
Secretary/Records Manager

Enclosures

FILED

SEP 20 1988

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

STATEHOUSE
BOISE, IDAHO 83720
(208) 334-4440

BLACKSTOCK, TED K. & ADAM H.
STAR RT.
MELBA, ID 83641

AUGUST 30, 1983

RE: PERMIT NO. 02-7388

DEAR PERMIT HOLDER:

ENCLOSED IS A COPY OF YOUR APPROVED APPLICATION FOR PERMIT. WE DIRECT YOUR ATTENTION TO THE CONDITIONS OF APPROVAL ON THE FOURTH PAGE.

NOTE ALSO THAT WATER SHALL NOT BE DIVERTED UNDER THIS PERMIT UNLESS A BASE FLOW OF THE SNAKE RIVER AT THE U.S. GEOLOGICAL SURVEY STREAM GAGING STATION AT MURPHY EXCEEDS 3,300 C.F.S. AND AT WEISER EXCEEDS 4,750 C.F.S. IN ADDITION, THERE ARE MANY APPLICATIONS FOR PERMIT FOR THE USE OF SNAKE RIVER WATER THAT ARE PRIOR TO YOUR PERMIT. THESE APPLICATIONS HAVE BEEN FILED FOR THE IRRIGATION OF LANDS THAT THE APPLICANTS ARE ATTEMPTING TO OBTAIN UNDER THE FEDERAL LAND LAWS SUCH AS DESERT ENTRY AND CAREY ACT. IF THESE LANDS ARE DEVELOPED, AND IF THE BASE FLOW IS MAINTAINED, THEN NO WATER WOULD BE AVAILABLE FOR THIS PERMIT. THEREFORE, YOU SHOULD CAREFULLY CONSIDER THESE FACTS BEFORE MAKING ANY EXPENDITURES FOR THE CONSTRUCTION OF YOUR SYSTEM.

BE SURE TO NOTE THE SPECIAL CONDITION REQUIRING YOU TO INSTALL A MEASURING DEVICE, OR AN ACCESS PORT TO PROVIDE FOR THE INSTALLATION OF MEASURING EQUIPMENT BY THE DEPARTMENT. ENCLOSED PLEASE FIND A LIST OF MEASURING DEVICE OPTIONS, AND SPECIFICATIONS FOR THE INSTALLATION OF THE ACCESS PORT.

PLEASE BE ADVISED THAT NUMEROUS PRIOR APPLICATIONS FOR PERMIT HAVE BEEN FILED TO APPROPRIATE WATER FROM YOUR SOURCE, TO BE USED ON DESERT LAND ENTRY AND/OR CAREY ACT LANDS. DEVELOPMENT OF THESE WATER RIGHTS IS CURRENTLY PREVENTED BY THE U.S. BUREAU OF LAND MANAGEMENT. HOWEVER, IF THE LANDS ARE RELEASED FOR DEVELOPMENT, THE ASSOCIATED WATER RIGHTS WILL RECEIVE WATER PRIOR TO YOUR WATER RIGHT ENCLOSED. THEREFORE BE SURE TO ANALYZE THE FUTURE IMPACT OF THESE RIGHTS BEFORE MAKING A MAJOR INVESTMENT IN A WATER SUPPLY SYSTEM.

RE: PERMIT 02-7388

PAGE 03
AUGUST 30, 1983

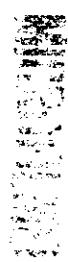
THE 1982 IDAHO LEGISLATURE ADDED A REQUIREMENT THAT AS A PERMIT HOLDER YOU MUST COMMENCE THE EXCAVATION OR CONSTRUCTION OF DIVERTING WORKS WITHIN ONE YEAR OF THE DATE THE PERMIT WAS ISSUED, AND YOU MUST PROCEED DILIGENTLY UNTIL THE PROJECT IS COMPLETED. THE ENCLOSED BLUE CARD MUST BE COMPLETED AND RETURNED TO THIS OFFICE AS SOON AS YOU COMMENCE CONSTRUCTION, NO LATER THAN ONE YEAR FROM THE DATE THE PERMIT WAS APPROVED.

WE HAVE ENCLOSED INSTRUCTIONS ENTITLED "MAKING PROOF OF BENEFICIAL USE". PLEASE READ THE INSTRUCTIONS CAREFULLY SINCE YOU MUST TAKE FURTHER ACTION TO DEVELOP THIS PERMIT INTO A LICENSE.

SINCERELY,

DAVID R. TUFHILL, JR., P.E.
SUPERVISOR, WATER ALLOCATION SECTION

ENCLOSURE



02-7388

BLACKSTOCK, TED K. &/or ADAM H.

STAR RT., MELBA, ID 83641

Source: SNAKE RIVER trib. to COLUMBIA RIVER

Date Filed: 06/27/1983

Diversion Pt: SWSE Sec 26 T 02N R 04W

Use: IRRIGATION (2.86 CFS)

In: NESE SESE Sec 34 T 02N R 04W SWSW Sec 35 T 02N R 04W NENW SWSW
Sec 02 T 01N R 04W NENE NWNE SWNE SENE Sec 03 T 01N R 04W
FOR 143 ACRES