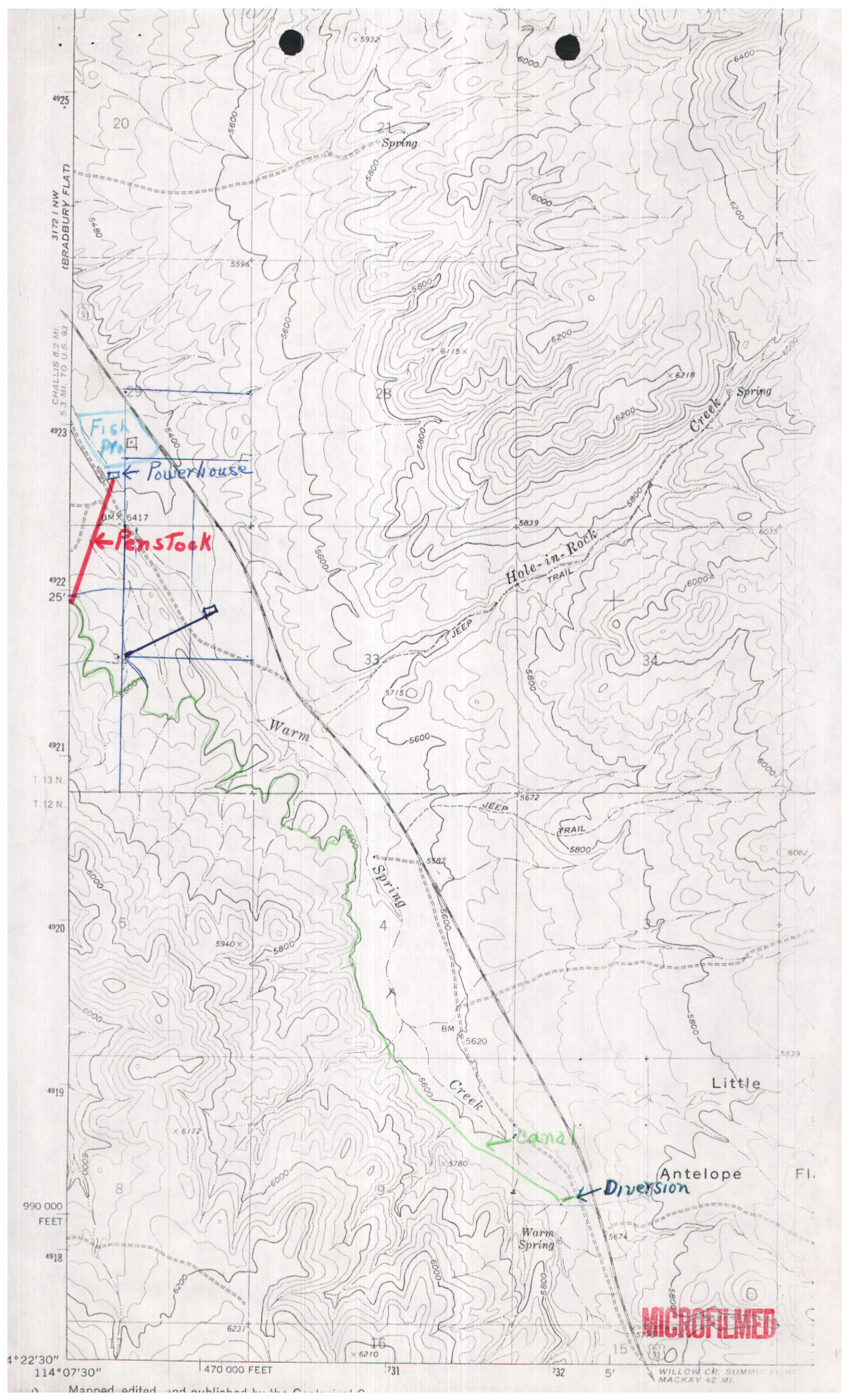
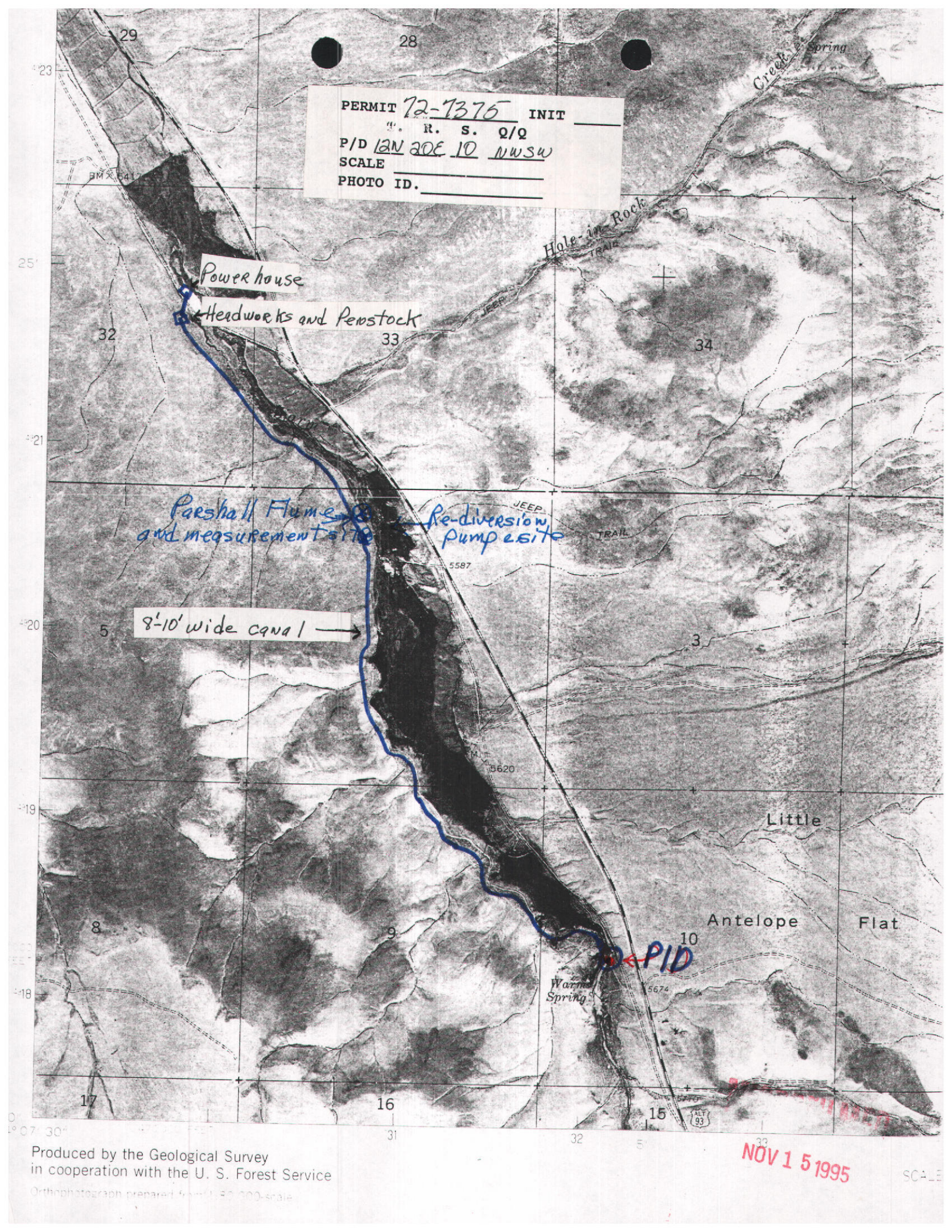


MICROFILMED


PERMIT 72-7376 INIT
T. R. S. Q/Q
P/D 12N 20E 10 NWSW
SCALE
PHOTO ID.
Power house
Headworks and Penstock
Parshall Flume and measurement site
Re-diversion pumpsite
8'-10' wide canal
PID
Hole-in-Rock TRAIL
JEEP TRAIL
Little Antelope Flat
Warm Spring
Spring Creek
5587
5620
5674
29
28
32
33
34
5
3
8
9
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17
16
15
31
32
33
Produced by the Geological Survey
in cooperation with the U. S. Forest Service
NOV 15 1995

72-07375



#7
Re-Diversion
Pump



#8
Parshall
flume

MICROFILMED
NOV 15 1995

72-07375



#9
Parshall
flume

MICROFILMED
NOV 15 1995

72-07375



#5
Culvert returning water that has seeped from canal into creek. A pump in the creek is used to recapture the seepage water and return it to the diversion canal.



#6.
Headworks and penstock to the powerhouse.

NOV 15 1995

12-07375



#3
Powerhouse containing turbine and generator



#4.
Overflow headgate to allow diversion from canal into Worms Spring Creek Channel.

NOV 15 1995

72-07375



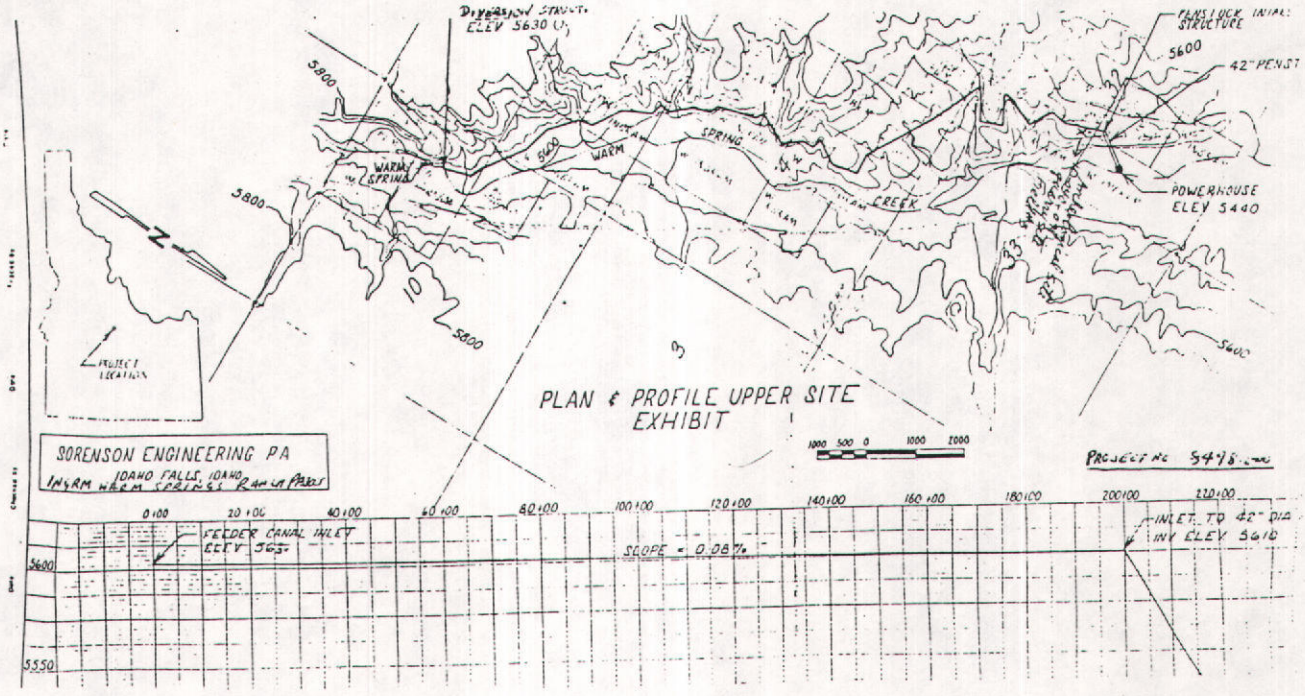
#1
P/D -
Warm Springs Creek

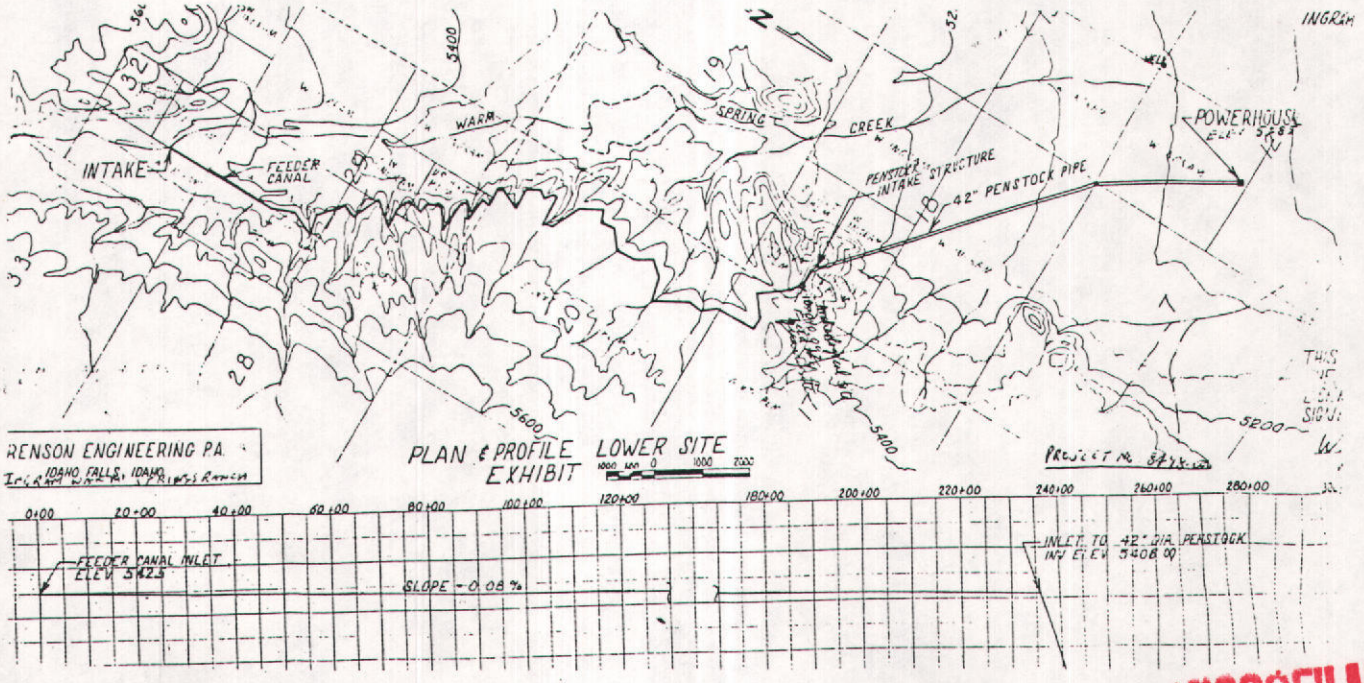
← Excavated Creek channel



#2
Measurement site above Parshall flume in diversion canal. This site is about 1½ miles downstream from the P/D

NOV 15 1995





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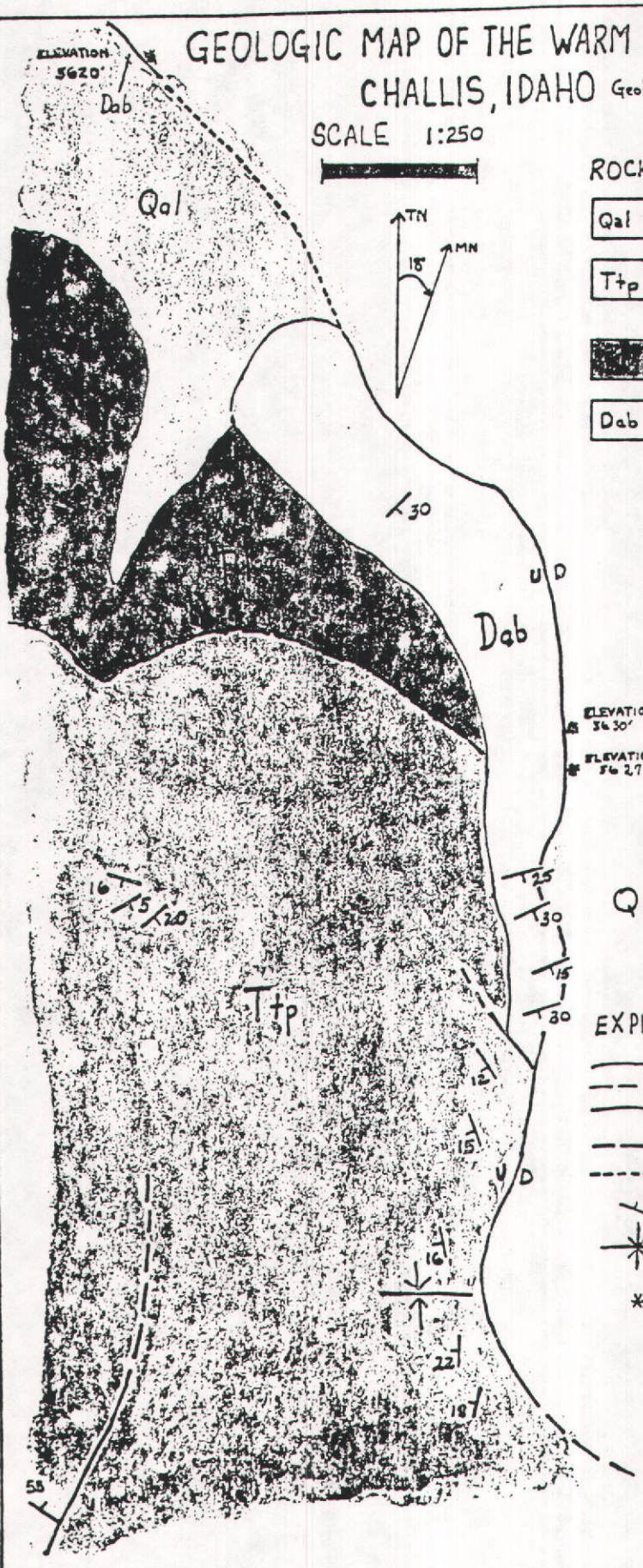
72-7375

GEOLOGIC MAP OF THE WARM SPRINGS CREEK AREA, CHALLIS, IDAHO

Geology by M. Staken and D. Tetorica

SCALE 1:250





ROCK UNITS

Qal	ALLUVIUM - GRAVEL, SAND, SILT ASSOCIATED WITH PRESENT DRAINAGE
Ttp	SILICIC TUFF AND SEDIMENTARY ROCKS - CHIEFLY THIN BEDDED BROWN, YELLOWISH-BROWN AND GREY ALTERED VITRIC TUFF AND PUMICE LAPILLI TUFF.
	LAVAS - INTERMEDIATE TO MAFIC - DARK BROWN WEATHERED ALSO DARK-GREY AND GREENISH GREY ROCKS
Dab	QUARTZITE AND SILTITE - MEDIUM GREY TO NEAR WHITE VARIABLY DOLOMITIC. MEDIUM TO THICK BEDDED

EXPLANATION OF SYMBOLS

- CONTACT
- CONTACT, LOCATED APPROXIMATELY, VERY APPROXIMATELY
- U / D — FAULT, SHOWING RELATIVE MOVEMENT
- FAULT, LOCATED APPROXIMATELY, VERY APPROXIMATELY
- FAULT, CONCEALED
- 40 — STRIKE AND DIP OF BEDDING
- SYNCLINE, SHOWING APPROXIMATE AXIS
- * WARM SPRINGS

FIGURE 7 November 4th, seven days after earthquake. View is south, this main springs is completely dry.

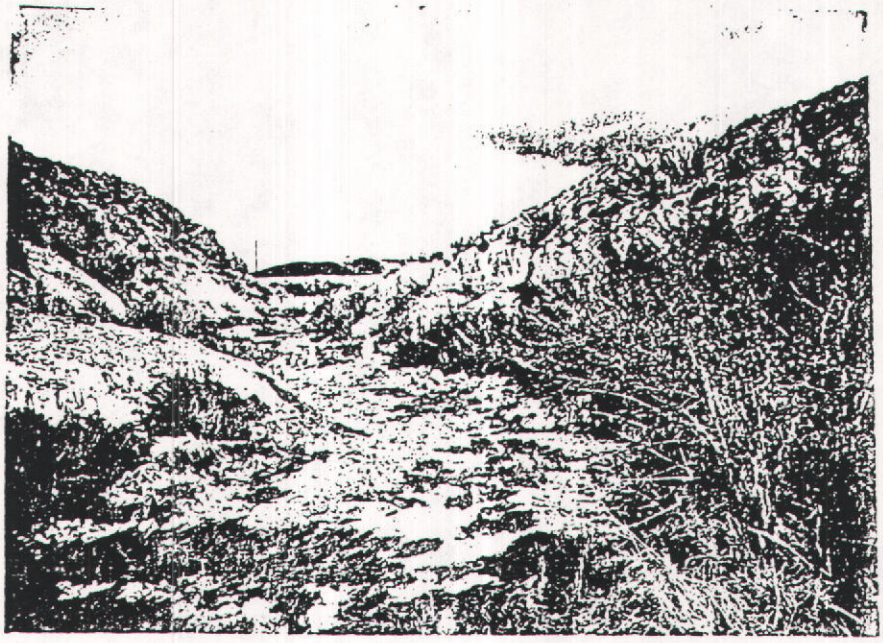
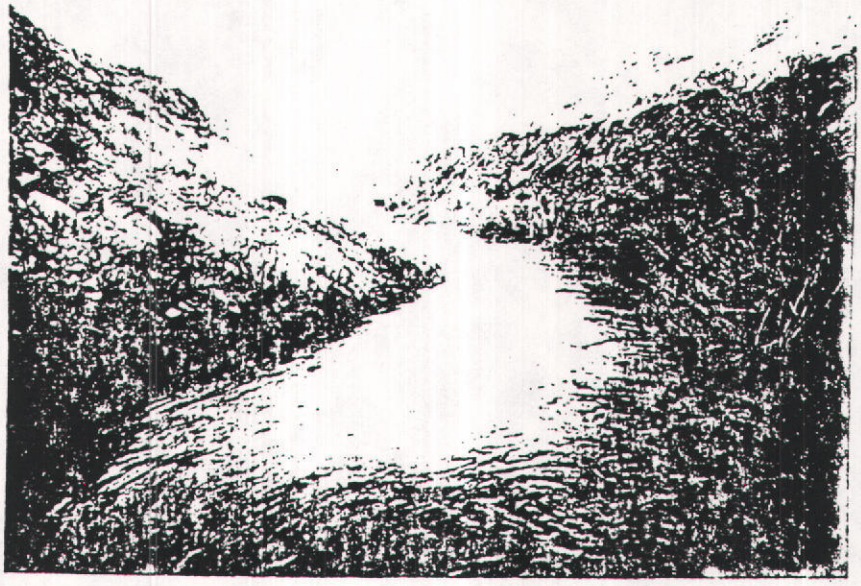
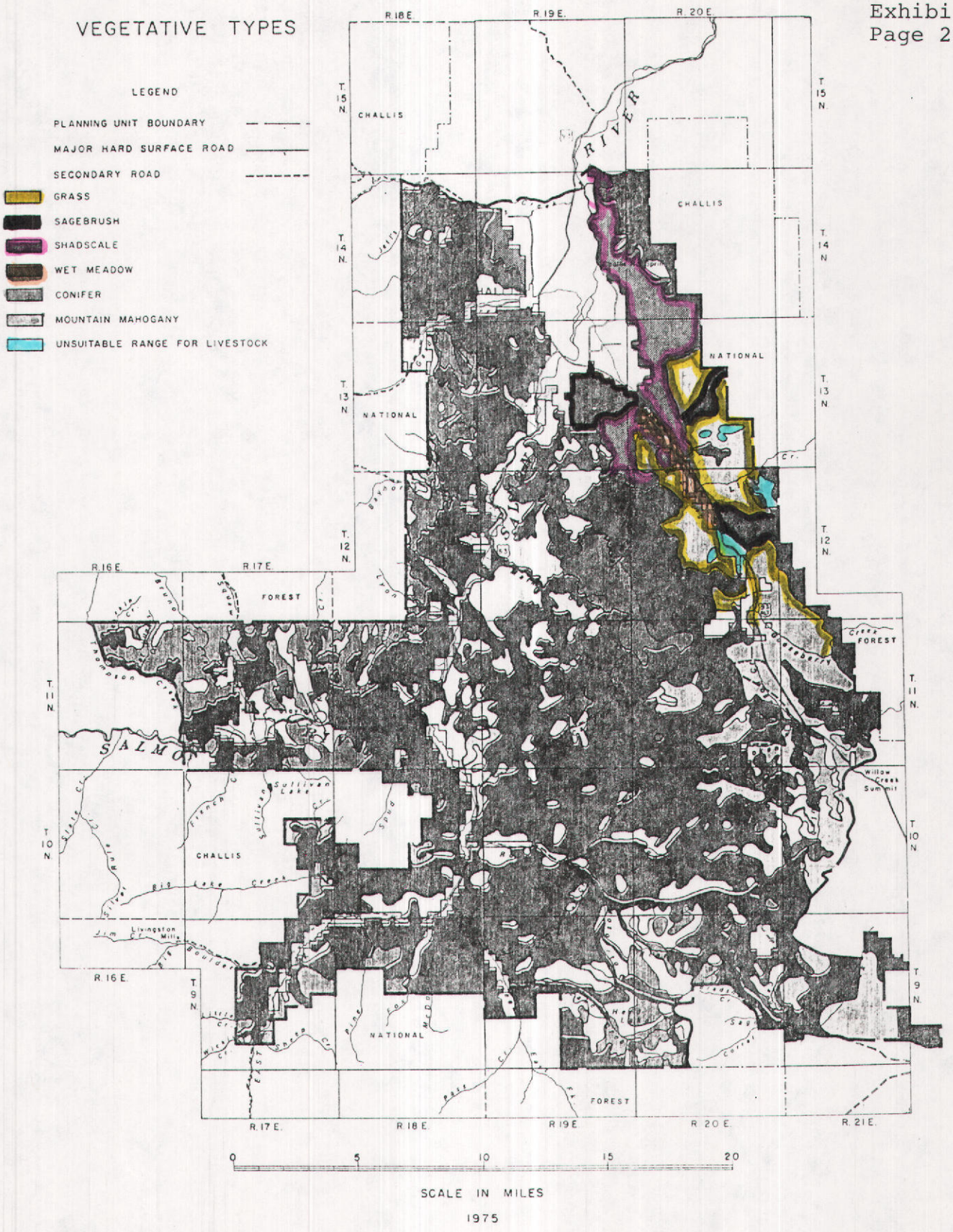
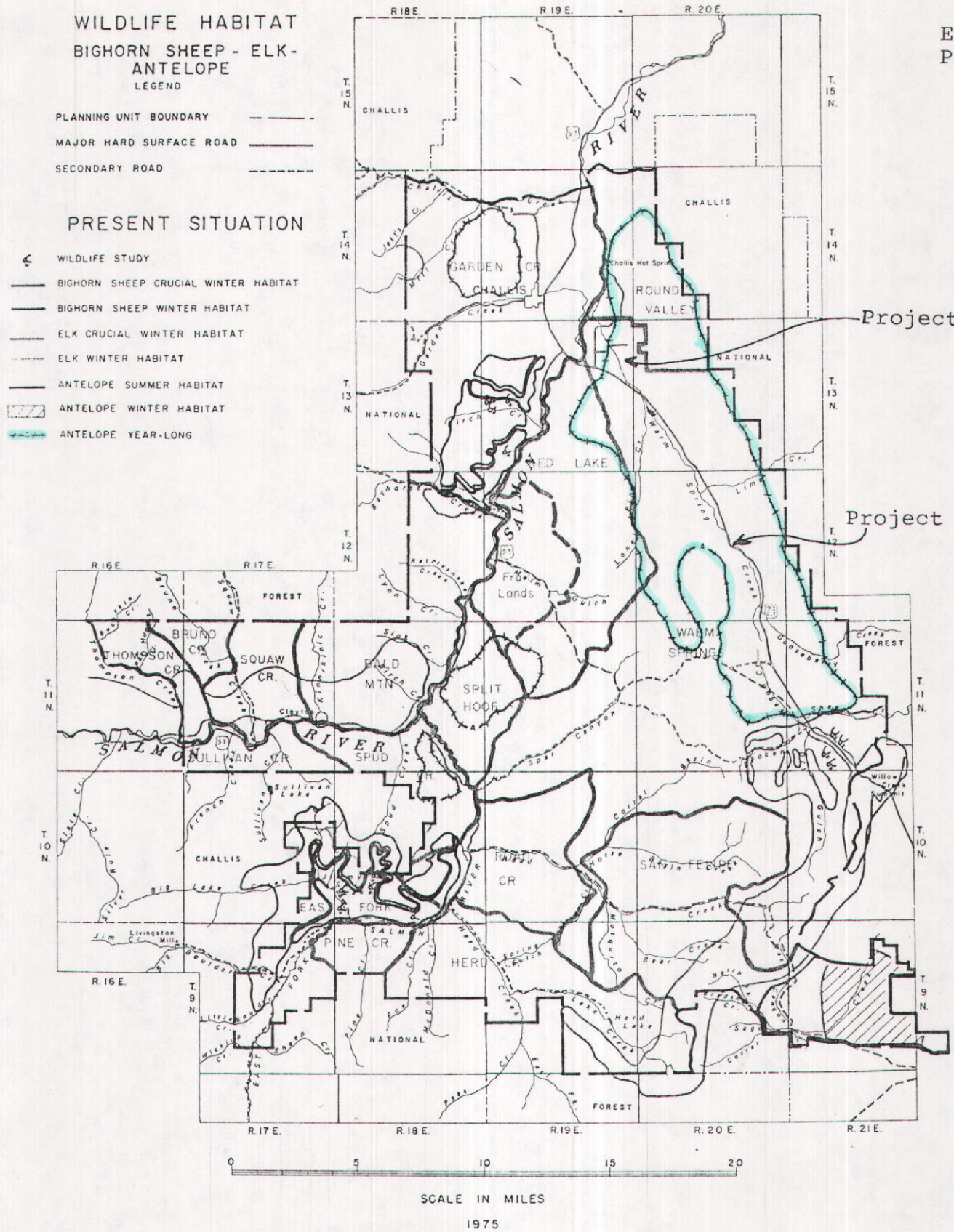


FIGURE 8 November 26th, twenty nine days after earthquake. Flow rate approximately 30 cfs.





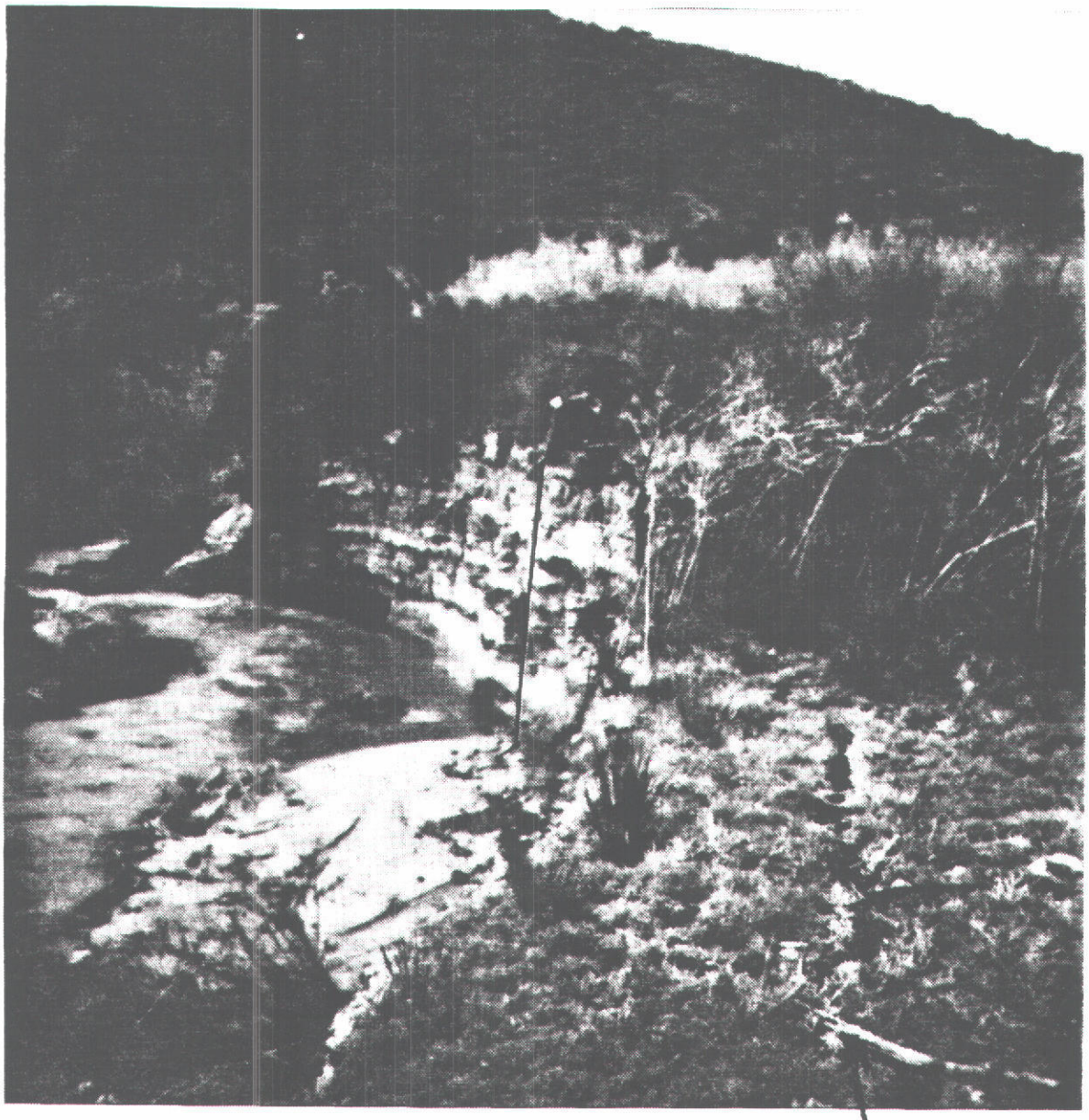
MAP 2-10 MAJOR VEGETATIVE TYPES WITHIN THE CHALLIS PLANNING UNIT



MAP 2-14 IMPORTANT WINTER RANGES OF BIGHORN SHEEP AND ELK AND YEAR-LONG RANGES FOR ANTELOPE IN THE CHALLIS UNIT

WARM SPRINGS CREEK MAY, 1984





Typical area of streambank ready to slough into Warm Springs Creek.

Man holding 13 foot road showing new depth of stream channel.

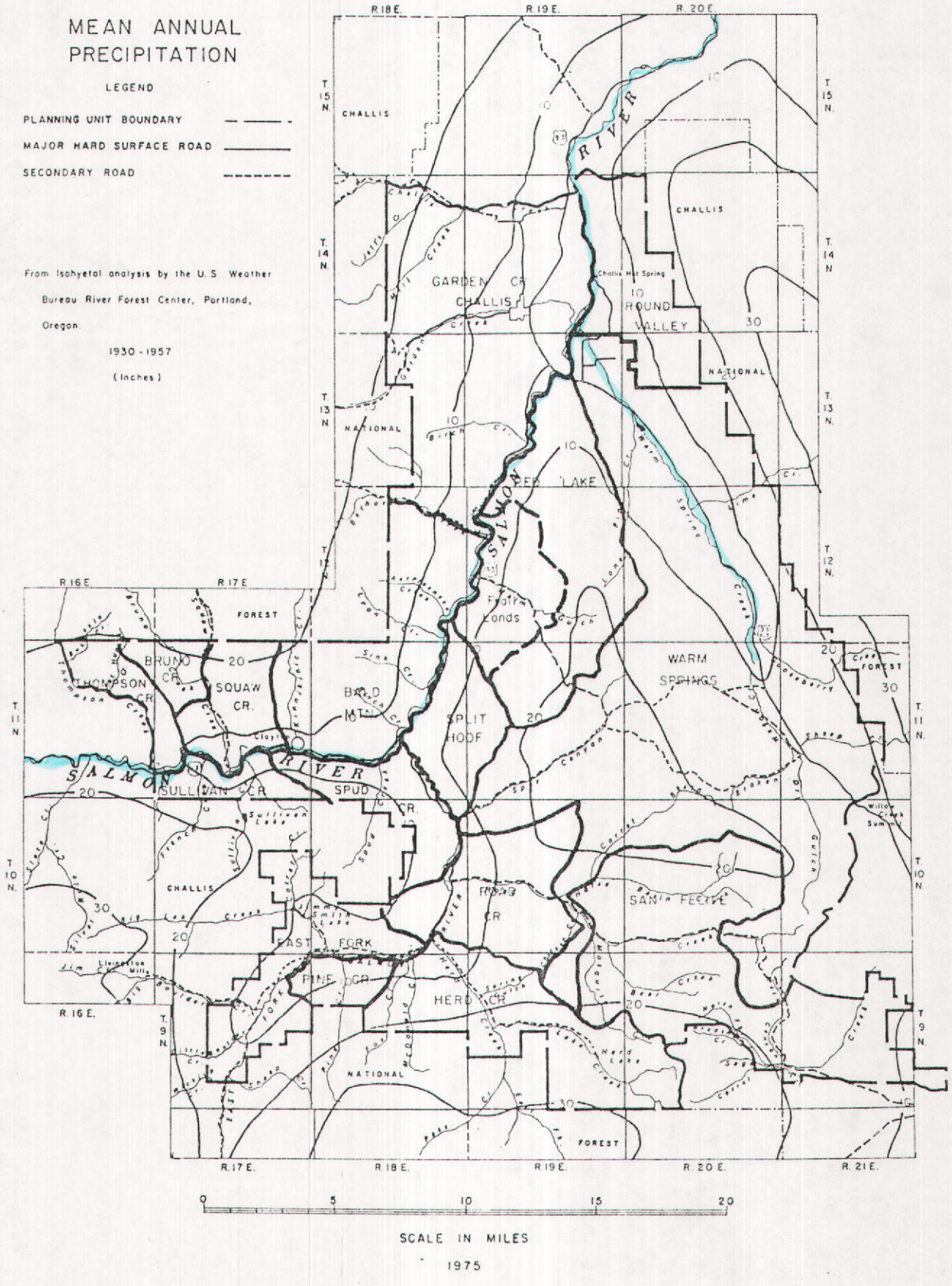
Man holding stick on
original Warm Springs stream channel
with new channel cut to left
in this picture.



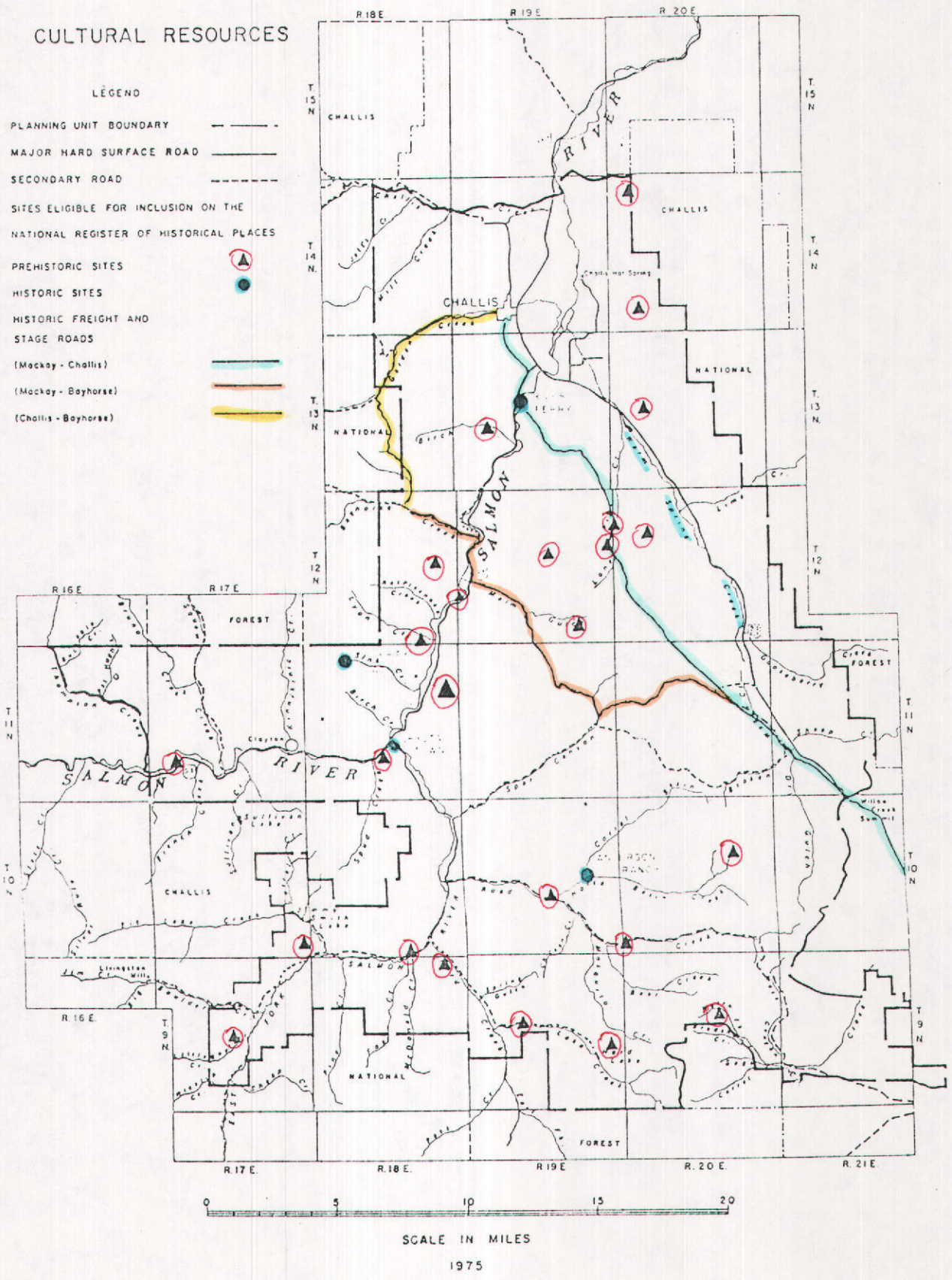
View of new stream channel

looking upstream in a southeasterly direction.





MAP 2-1 ISOHYETAL MAP OF CHALLIS UNIT. Lines connect areas of equal precipitation.



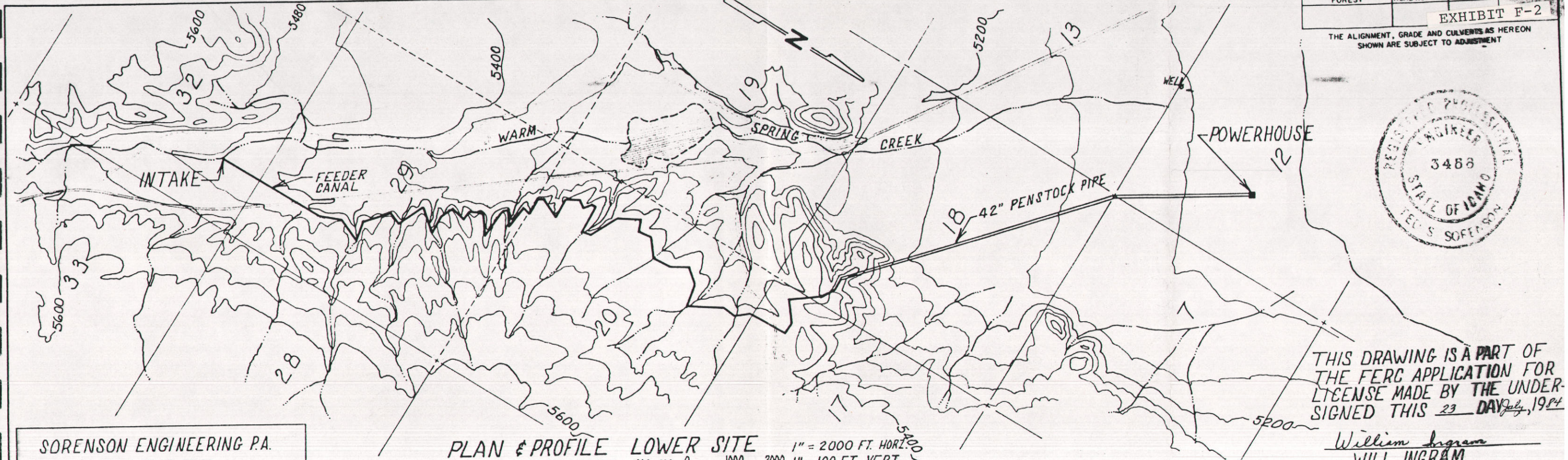
LOCATION OF ELIGIBLE SITES FOR INCLUSION ON THE NATIONAL REGISTER OF HISTORIC PLACES.

US DEPARTMENT OF			
FOREST	ROAD NUMBER	MILE POSTS	SHEETS

EXHIBIT F-2

THE ALIGNMENT, GRADE AND CULVERTS AS HEREON SHOWN ARE SUBJECT TO ADJUSTMENT

REGISTERED PROFESSIONAL ENGINEER 3486 STATE OF IDAHO FELIX SORENSON



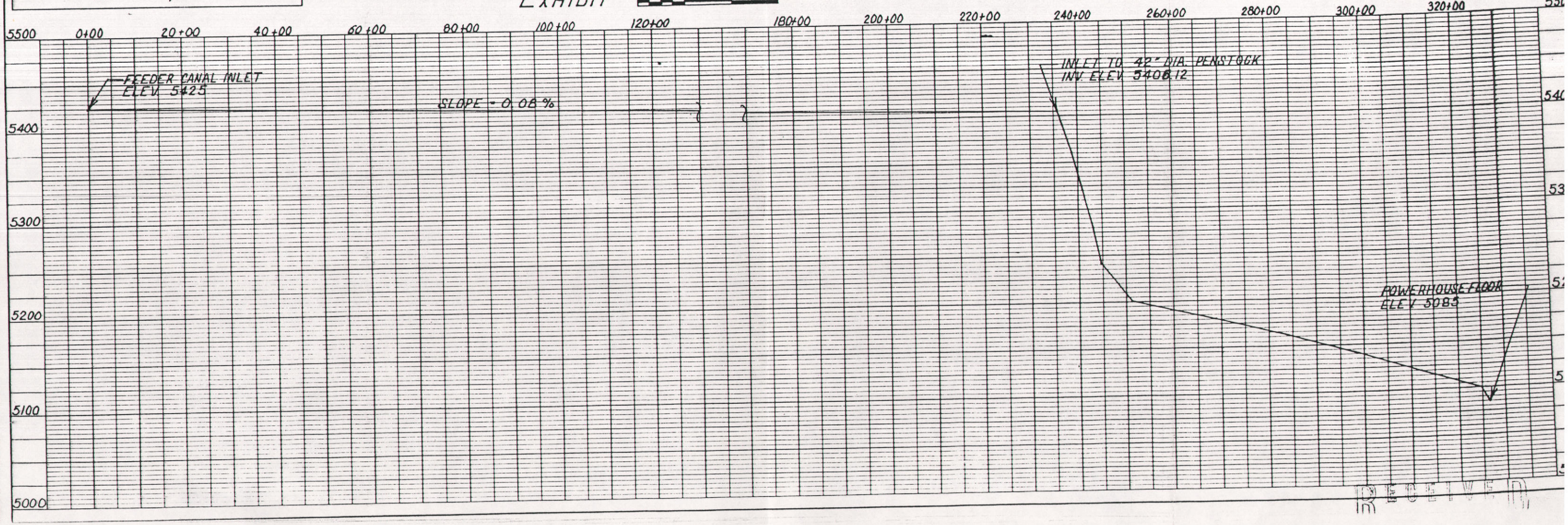
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 23 DAY July, 1984

William Ingram
WILL INGRAM

SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO

PLAN & PROFILE LOWER SITE
EXHIBIT

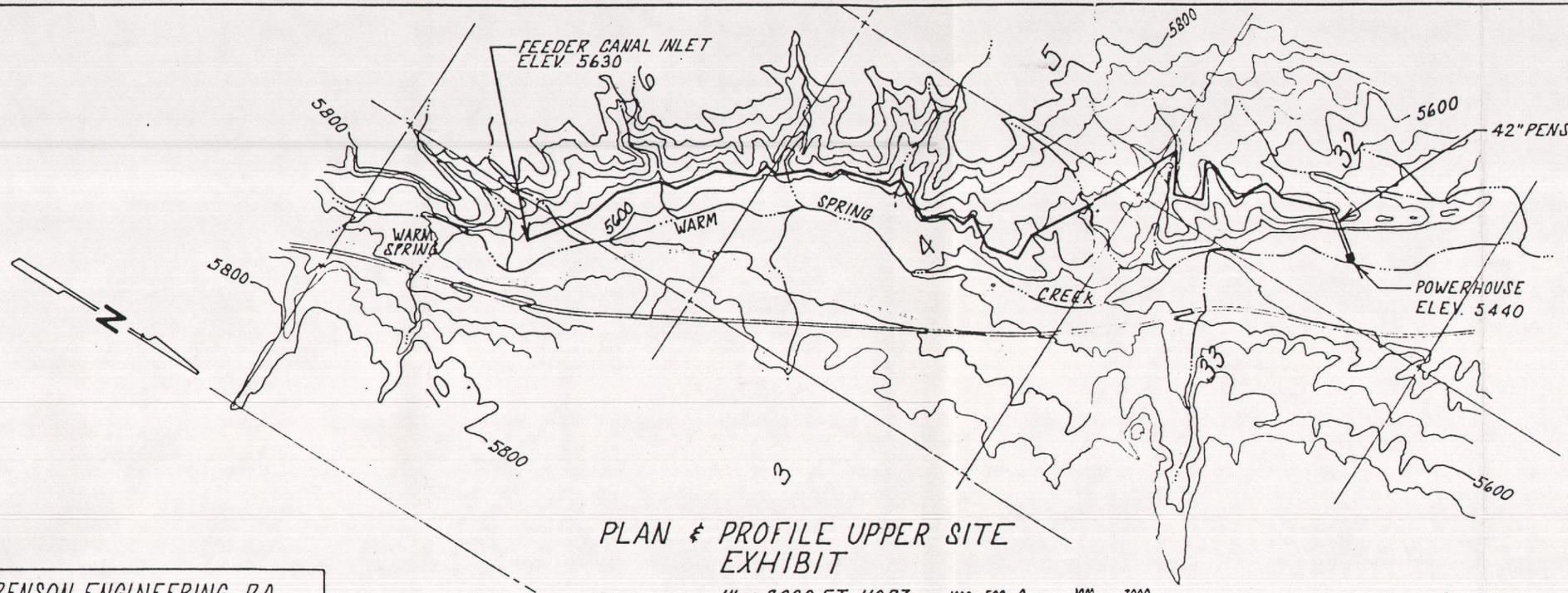
1000 500 0 1000 2000
1" = 2000 FT. HORIZ.
1" = 100 FT. VERT.



RECEIVED

US DEPARTMENT of AGRICULTURE - FOREST SERVICE			
FOREST	ROAD NUMBER	MILE POSTS	SHEETS
			EXHIBIT F-1

THE ALIGNMENT, GRADE AND CULVERTS AS HEREON SHOWN ARE SUBJECT TO ADJUSTMENT



PLAN & PROFILE UPPER SITE EXHIBIT

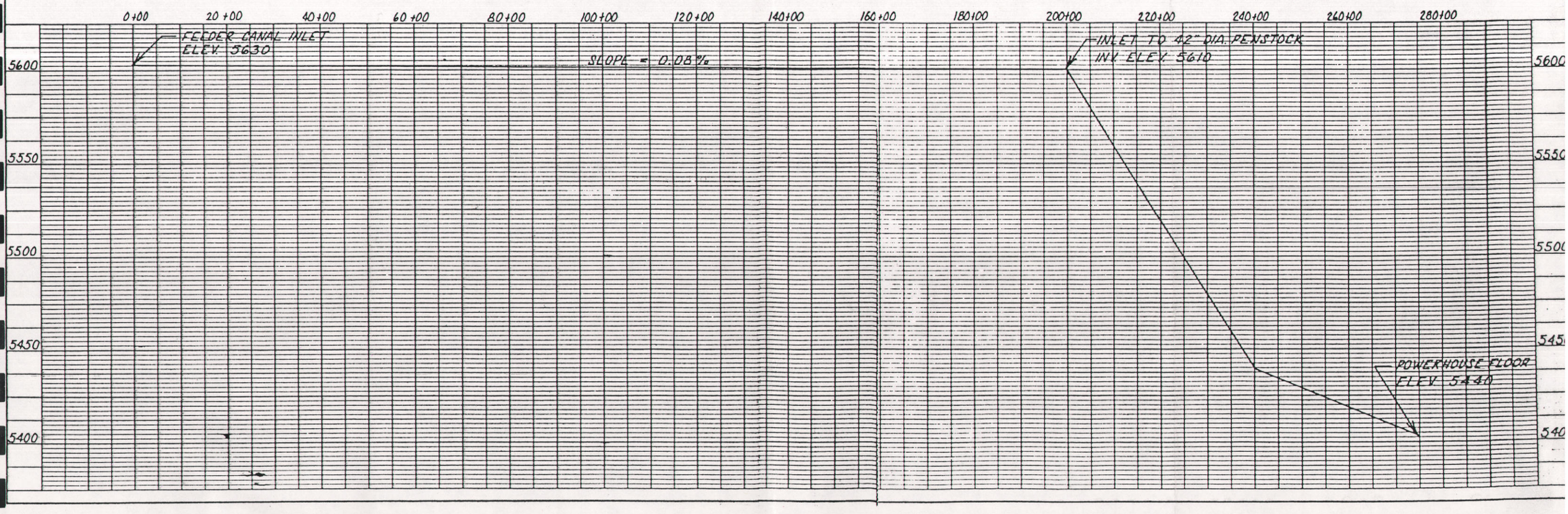
1" = 2000 FT HORZ.
1" = 50 FT. VERT.

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SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 23 DAY July, 1984

William Ingram
WILL INGRAM



Date
Traced by
Date
Checked by
Date
Designed by
Date
Surveyed by

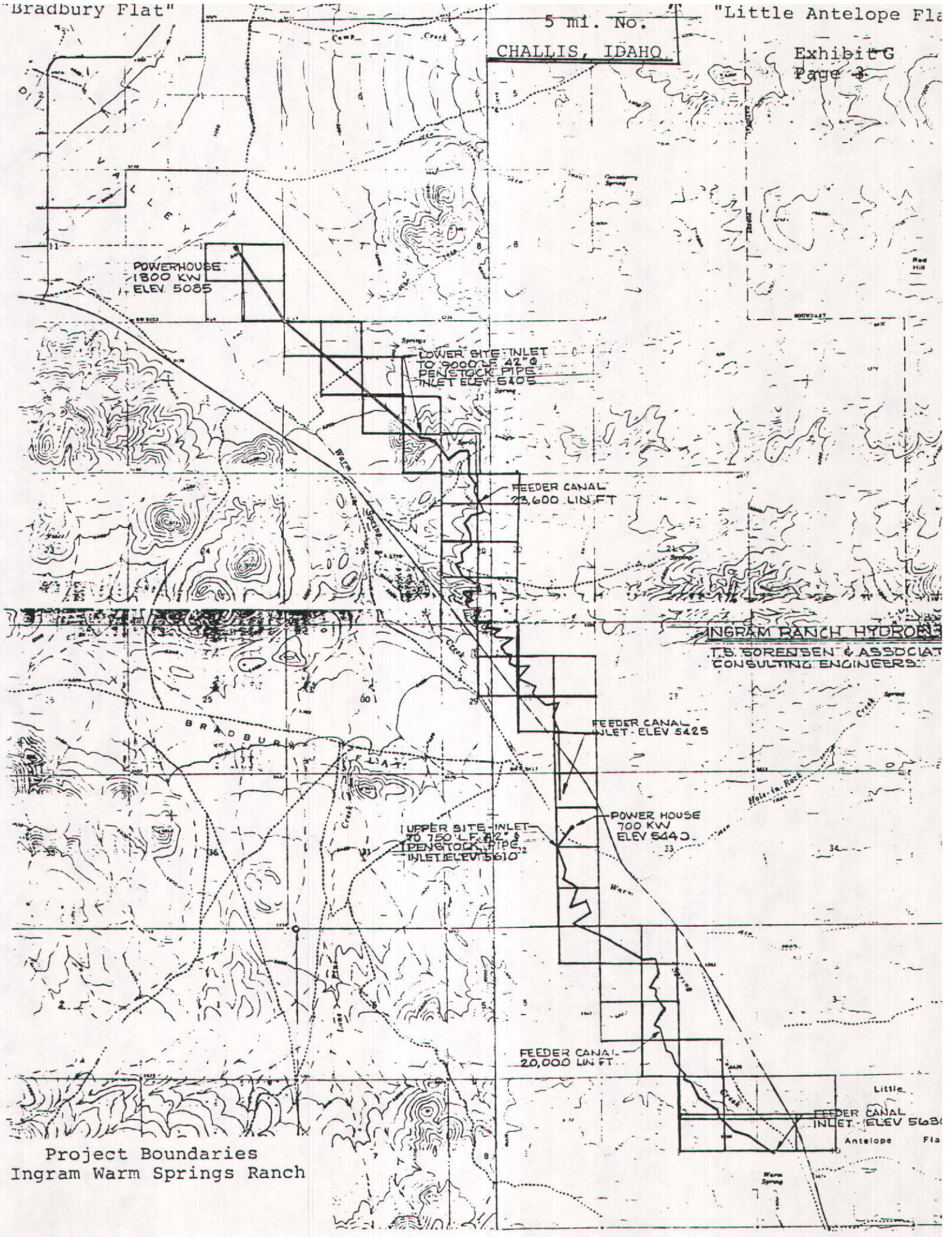
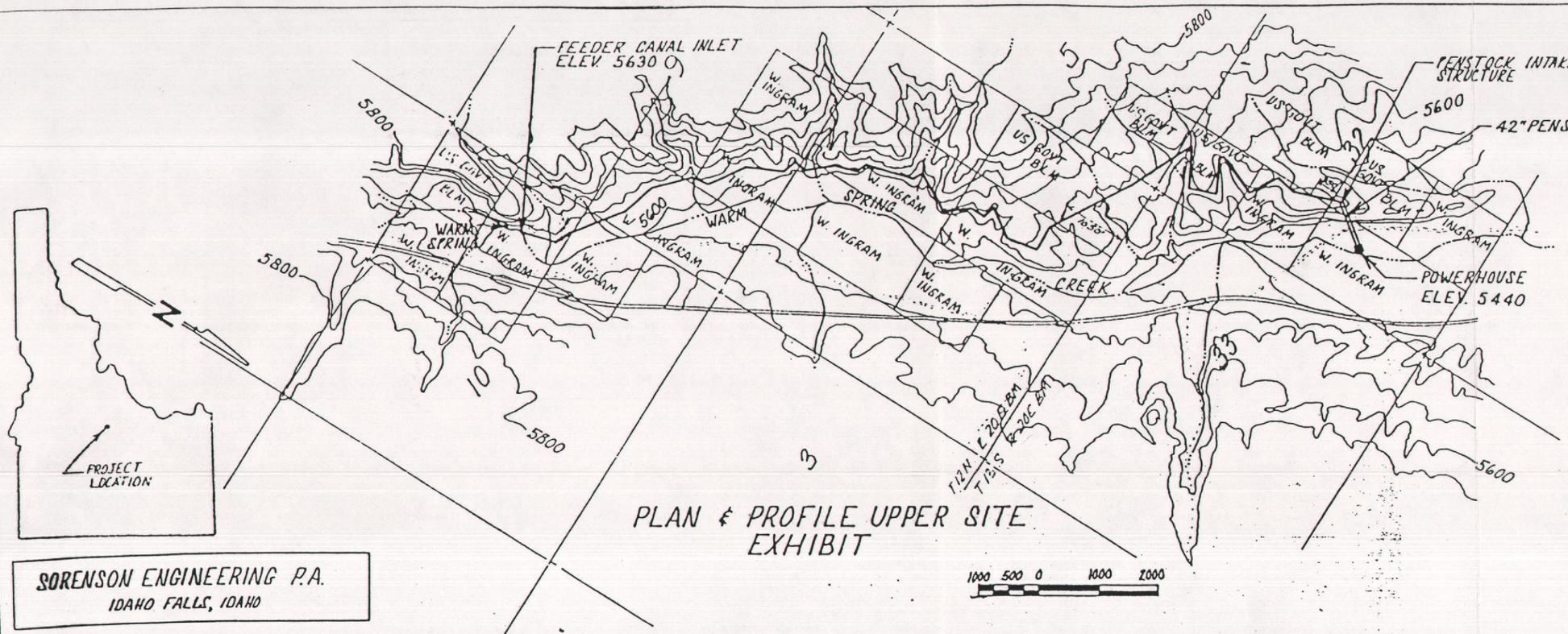

Bradbury Flat"
5 mi. No.
CHALLIS, IDAHO
"Little Antelope Fla
Exhibit G
Page 3
POWERHOUSE
1800 KW
ELEV. 5085
LOWER SITE INLET
TO 9000 L.F. 42" Ø
PENSTOCK PIPE
INLET ELEV. 5405
FEEDER CANAL
23,600 LIN FT
INGRAM RANCH HYDROEL
T.S. SORENSEN & ASSOCIAT
CONSULTING ENGINEERS
FEEDER CANAL
INLET - ELEV 5425
POWER HOUSE
700 KW
ELEV 5440
UPPER SITE - INLET
TO 7501 L.F. 42" Ø
PENSTOCK PIPE
INLET ELEV. 5610
FEEDER CANAL
20,000 LIN FT
FEEDER CANAL
INLET - ELEV 563
Project Boundaries
Ingram Warm Springs Ranch

EXHIBIT G-5

FERC #
INGRAM RANCH HYDROELECTRIC
PLAN & PROFILE
UPPER SITE

REGISTERED PROFESSIONAL ENGINEER
Ted S. Sorenson
7/24/84
STATE OF IDAHO
TED S. SORENSON



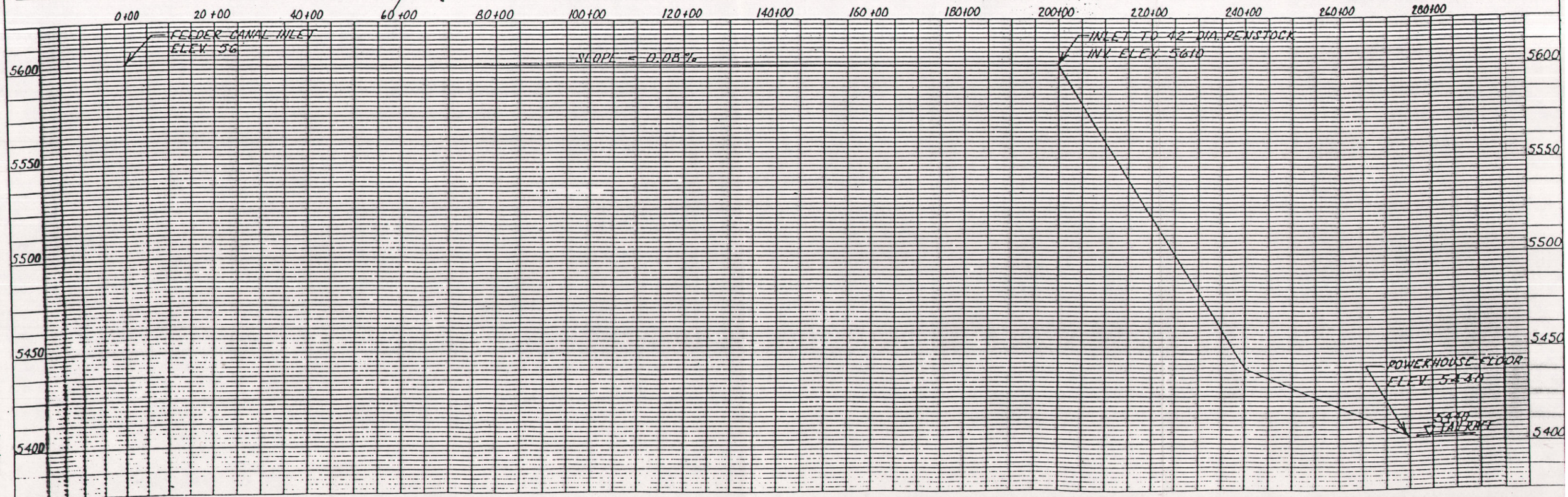
PLAN & PROFILE UPPER SITE
EXHIBIT

1000 500 0 1000 2000

SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDER SIGNED THIS 24th DAY July, 1984.

Will Ingram
WILL INGRAM



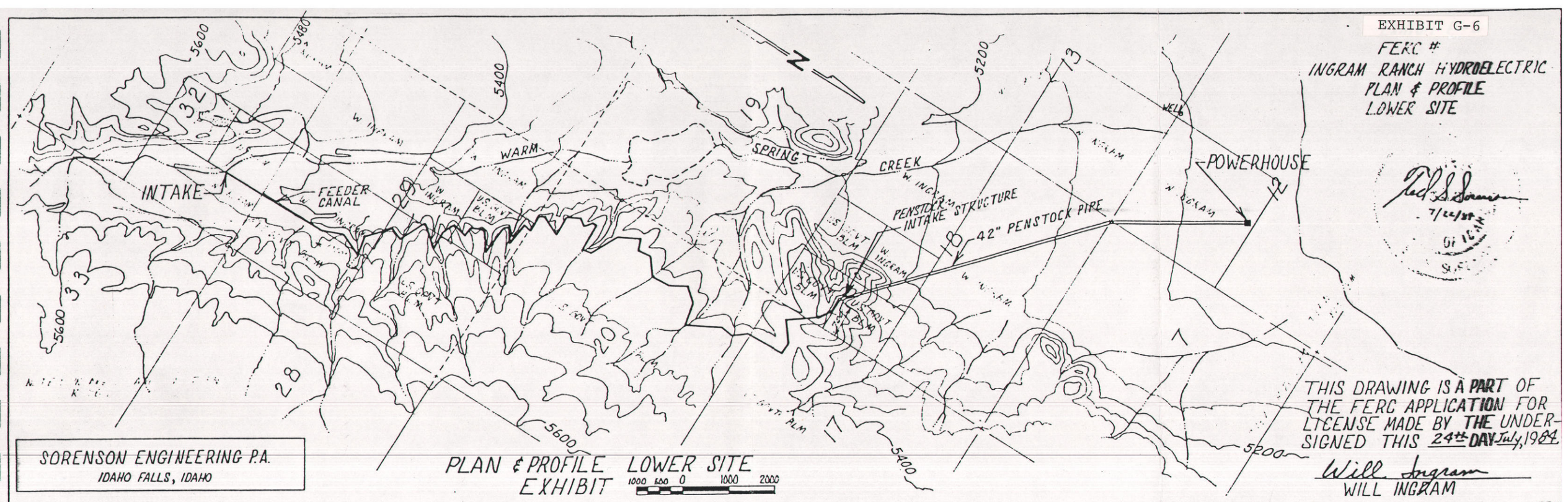
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Designed by
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Surveyed by

EXHIBIT G-6

FERC #

INGRAM RANCH HYDROELECTRIC
PLAN & PROFILE
LOWER SITE

Ted S. Sorenson
7/24/84
ID 12
SURVEYOR



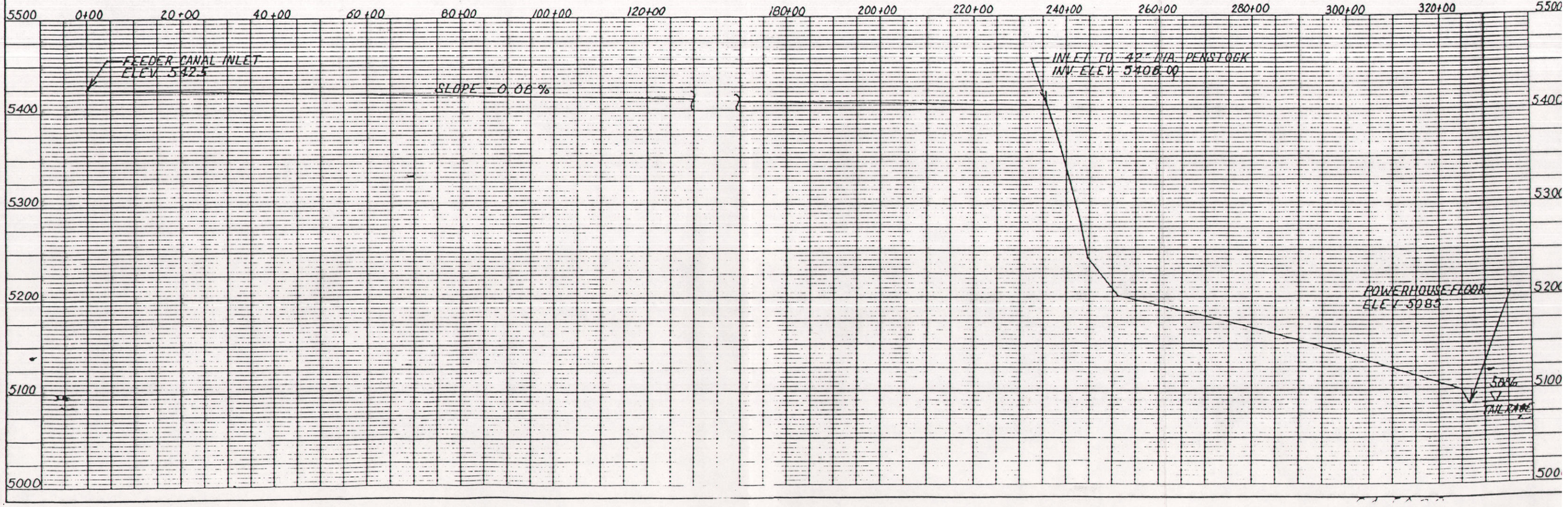
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 24th DAY July, 1984

Will Ingram
WILL INGRAM

SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO

PLAN & PROFILE LOWER SITE
EXHIBIT

1000 500 0 1000 2000



Form 42-248/42-1407(6) 7/29/96

RECEIVED
AUG 31 1998
Department of Water Resources
NOV 21 1996
DEPARTMENT OF WATER RESOURCES

STATE OF IDAHO

IDAHO DEPARTMENT OF WATER RESOURCES

NOTICE OF CHANGE OF WATER RIGHT OWNERSHIP

Please print or type. Attach pages with additional information. Instructions are on the back of this page. Incomplete forms will be returned.

1. **Water Right Number(s)** 72-07375, 72-07372, 72-07054A, 72-04096, 72-07059 — Sent 8/25/98
   A72-04096
   Adjudication Claim Number(s) A72-07359, A72-10142, A72-10141, A72-10143, A72-10144, A72-07054B (combined into)

2. The following **REQUIRED** information must be submitted with this form.

✓ A. A copy of the most recent DEED, TITLE POLICY, CONTRACT OF SALE, or other also: A72-10153 g your ownership of the property and water rights or claims in question, WITH ATTACI ION.

AND

✓ AS MAPS B. PLAT OF PROPERTY or SURVEY MAP for parcel of ten acres or less. (These are (in S. 18 NE¼) ounty.)

OR

C. For water rights or adjudication claims involving ten or more irrigated acres, a USDA ASCS) AERIAL PHOTO with irrigated acres outlined and point(s) of diversion clear ormerly — Sent 8/25/98

3. **Name and Address of Former Owner/Claimant(s)** INGRAM WARM SPRINGS RANCH
   HC 61 BOX 3020
   CHALLIS, IDAHO 83226

4. **New Owner/Claimant(s)** LOIS VON MORGANROTH
   Name connector (Check one): [ ] AND, [ ] OR, [ ] AND/OR
   New Mailing Address 1223 MONTANA AVENUE
   City, State and ZIP Code SANTA MONICA, CALIFORNIA 90403
   New Telephone Number (310) 451-[illegible]8531

5. Date you acquired the property _____

6. If you have acquired only a portion of the former owner's property, IDWR may need to split the water right(s) or adjudication claim(s). If this applies, describe in detail your portion of each water right or adjudication claim in the spaces below. If necessary, attach additional pages. *See attached sheet.

   Number of acres actually irrigated _____ Number and type of stock _____

   Diversion rate in CFS _____ (cubic feet per second) Number of homes _____ Other uses _____

   If a water right or adjudication claim is being split and you are not sure how to identify your portion of the original right or claim, please contact the nearest IDWR office for assistance.

7. **Signature of New Owner/Claimant(s)** X Lois von Morganroth Date X 9-20-96

   _____ Date _____

   MICROFILMED AUG 1 1 1999

   (Corporations or other organizations must submit list of directors/officers demonstrating authority to sign form.)

8. For Snake River Basin Adjudication Claims: If you are represented by an attorney and you want IDWR to correspond directly with your attorney for all matters related to your claims, please attach a Notice of Appearance completed by your attorney.

ATTACHMENT TO NOTICE OF CHANGE OF WATER RIGHT OWNERSHIP
(INGRAM TO VON MORGANROTH)

A portion of the rights are to be split. Portions of those rights apply to lands in SW¼, Section 18, Township 13 North, Range 20 East, Boise Meridian, Custer County, Idaho, lying West of U.S. 93 which are not included in this transfer. The Water Right numbers involved are:

A72-07359
A72-10141
A72-10144
72-04096
A72-04096

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Department of Water Resource
MICROFILMED
AUG 1 1 1999

0212080

WARRANTY DEED

FOR VALUE RECEIVED, INGRAM WARM SPRINGS RANCH, A LIMITED PARTNERSHIP, the Grantor, does hereby Sell and Convey unto LOIS VON MORGANROTH, dealing with her sole and separate property, the Grantee, whose current address is 1223 Montana Avenue, Santa Monica, California 90403, the following described premises, in Custer County, Idaho, to-wit:

See Exhibit "A" attached hereto and made a part hereof.

TO HAVE AND TO HOLD the said premises, with their appurtenances, unto the said Grantee, her successors and assigns forever. And the said Grantor does hereby covenant to and with the said Grantee, that it is the owner in fee simple of said premises; that they are free from all encumbrances save and excepting therefrom all covenants, conditions and restrictions of record and all easements of sight and of record as recorded in the records of Custer County, Idaho, and that it will warrant and defend the same from all lawful claims whatsoever.

Dated: 9-20-96

INGRAM WARM SPRINGS RANCH,
a Limited Partnership

x William E. Ingram
William E. Ingram, General Partner

x Alice E. Ingram
Alice E. Ingram, General Partner

x Gary William Ingram General Partner
Gary William Ingram General Partner

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NOV 21 1996
Department of Water Resources

MICROFILMED
AUG 11 1999

STATE OF IDAHO)
: ss.
County of Custer)

On this 20 day of Sept., 1996, before me, a Notary Public, personally appeared WILLIAM E. INGRAM, ALICE E. INGRAM and GARY WILLIAM INGRAM, known to me to be the General Partners of INGRAM WARM SPRINGS RANCH, a Limited Partnership, that executed this instrument, or the persons who executed this instrument on behalf of said Limited Partnership, and acknowledged to me that such Partnership executed the same.

Linda J. Hoggan
Notary Public for Idaho
Residing at Challis
Commission Expires 1/27/98

STATE OF IDAHO, COUNTY OF CUSTER
I hereby certify that this instrument was filed for record at the request of Custer County Title at 26 minutes past 03 o'clock P .M., this 27 day of Sept., 1996, in my office, and duly recorded in Book _____ of Deeds at page _____.

Ethel M. Peck
Ex-Officio Recorder

BY Caroline Rogers
Deputy

Fee: $ 9.00
Mail to:

RECEIVED
NOV 21 1996
Department of Water Resource

WARRANTY DEED
Ingram/Morganroth
Page 2

MICROFILMED
AUG 11 1999

EXHIBIT "A"

The land referred to in this Exhibit is situated in the State of Idaho, County of Custer and is described as follows:

PARCEL I:

TOWNSHIP 13 NORTH, RANGE 20 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO
SECTION 32: SE¼NE¼, NE¼SE¼, N½NE¼, LESS highway right of way
SECTION 33: W½SW¼, SE¼SW¼, LESS Highway right of way

TOWNSHIP 12 NORTH, RANGE 20 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO
SECTION 4: LOT 3, SE¼NW¼, E½SW¼, SW¼NE¼, W½SE¼
SECTION 9: NE¼NW¼, N½NE¼, SE¼NE¼
SECTION 10: SW¼NW¼, N½SW¼, SE¼SW¼
SECTION 15: LOT 3, SE¼NW¼, SW¼NE¼

PARCEL II:

TOWNSHIP 13 NORTH, RANGE 20 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO
SECTION 19: SE¼ LESS Highway right of way
SECTION 30: N½NE¼

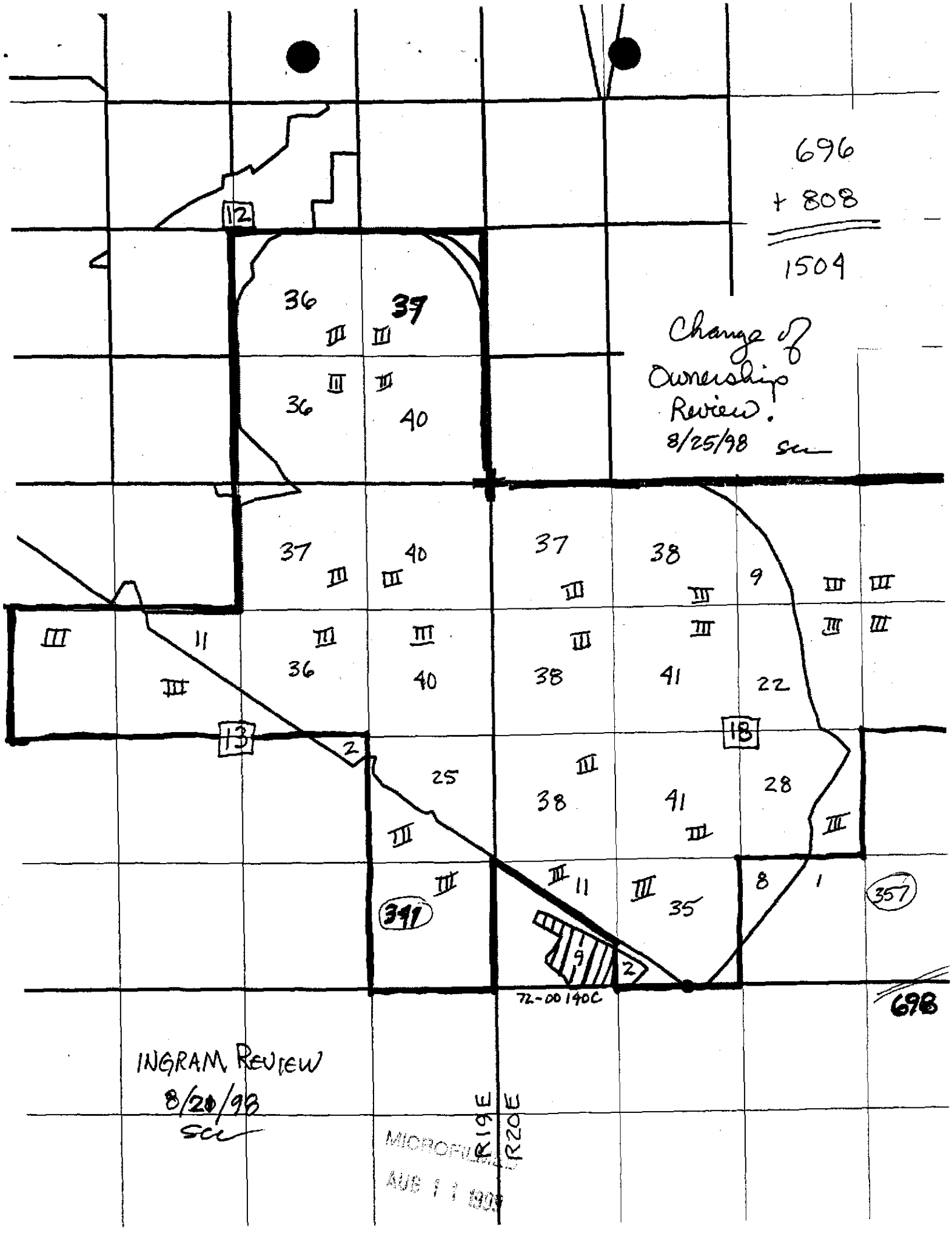
PARCEL III:

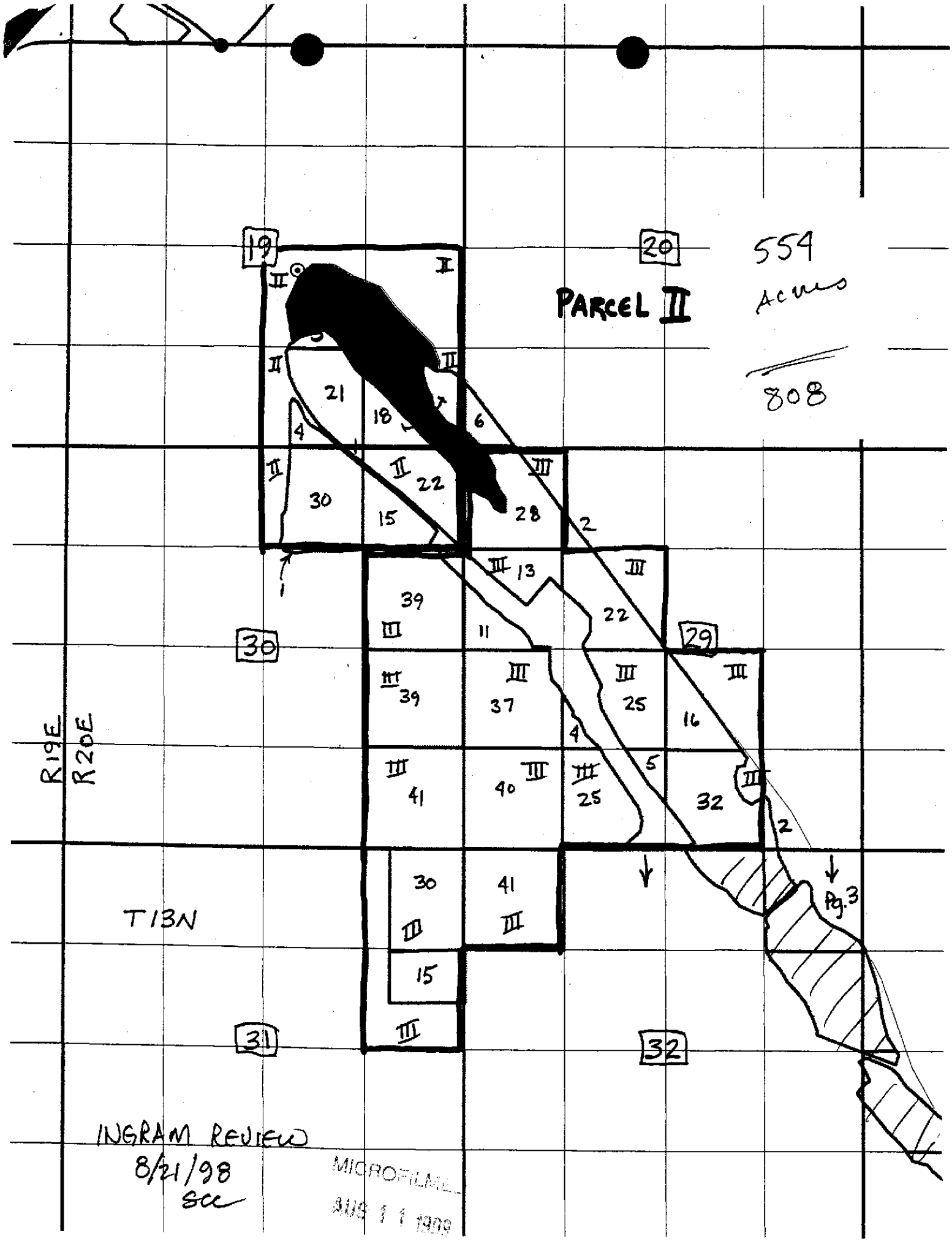
TOWNSHIP 13 NORTH, RANGE 19 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO
SECTION 12: SE¼
SECTION 13: SE¼NW¼, SW¼NE¼, N½SE¼, EXCEPTING highway right of way, N½NE¼, SE¼NE¼, SW¼NW¼

TOWNSHIP 13 NORTH, RANGE 20 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO
SECTION 18: LOTS 1, 2 3, 4, LESS that part lying South and West of Highway U.S. 93, and SE¼SW¼, LESS Highway right of way NE¼, E½NW¼, NW¼SE¼, NE¼SW¼
SECTION 29: W½SE¼, LESS highway right of way, S½NW¼, NE¼SW¼, LESS Highway right of way, NW¼NW¼ LESS Highway right of way, NW¼SW¼, S½SW¼
SECTION 30: SE¼NE¼, E½SE¼
SECTION 31: E½NE¼
SECTION 32: NW¼NW¼

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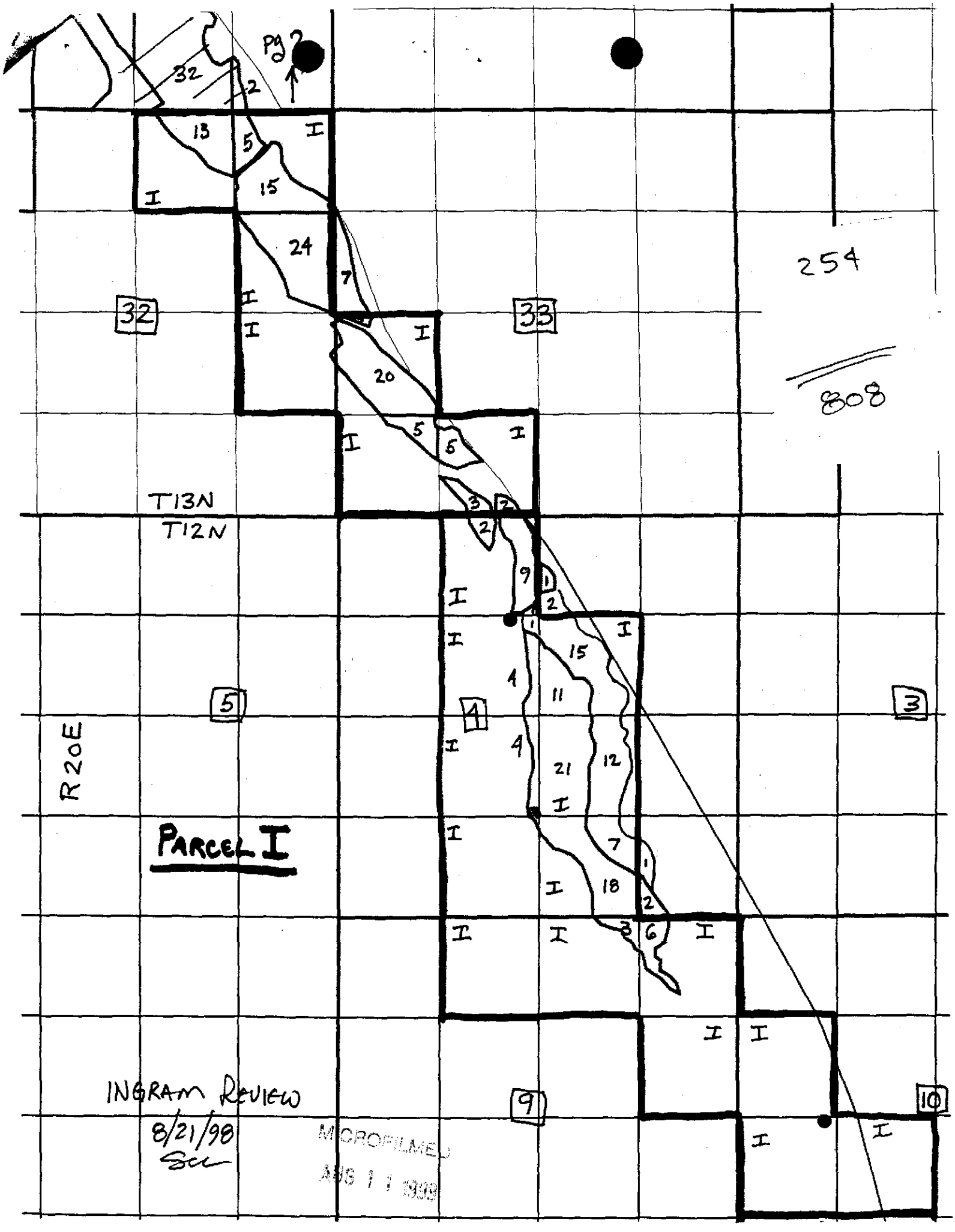
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NOV 2 1 1996
Department of Water Resources


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Change of Ownership Review. 8/25/98 sc
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R20E
MICROFILMED
AUG 1 1 1998



INGRAM REVIEW
8/21/98
SCC

MICROFILMED
AUG 11 1999


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8/21/98
SCL
MICROFILMED
AUG 11 1998

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE

WATER RIGHT NO. 72-07375

Priority: April 19, 1984

Maximum Diversion Rate: 25.00 CFS
Maximum Diversion Volume: 18099.4 AF

This is to certify, that INGRAM WARM SPRINGS RANCH
HC 61 BOX 3020
CHALLIS ID 83226 has complied with the terms and conditions of the permit, issued pursuant to Application for Permit dated April 19, 1984; and has submitted Proof of Beneficial Use on January 10, 1989. An examination indicates that the works have a diversion capacity of 25.000 cfs of water from:

WARM SPRINGS CREEK tributary to **SALMON RIVER**

source, and a water right has been established as follows:

BENEFICIAL USE	PERIOD OF USE	RATE OF DIVERSION	ANNUAL VOLUME
POWER	01/01 to 12/31	25.00 CFS	18099.4 AF

LOCATION OF POINT(S) OF DIVERSION: NWSW , Sec. 10, Township 12N, Range 20E
CUSTER County

PLACE OF USE: POWER

TWN	RGE	SEC	
13N	20E	32	SENE

CONDITIONS OF APPROVAL AND REMARKS

1. The maximum diversion volume is defined as the maximum allowable volume of water that may be diverted annually from the source under this right. The use of water confirmed by this right is limited to the amount which can actually be beneficially used. The maximum diversion volume may be adjusted to more accurately describe the beneficial use or to implement accepted standards of diversion and use efficiency.
2. This water right is appurtenant to the described place of use.
3. This right is subject to all prior water rights and may be forfeited by five years of non-use.
4. Modifications to or variance from this license must be made within the limits of Section 42-222, Idaho Code, or the applicable Idaho law.
5. The rights for the use of water confirmed in this license shall be junior and subordinate to all rights for the use of water other than hydropower, within the State of Idaho that are initiated later in time than the priority of this right and shall not give rise to any right or claim against any future rights for the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this right.

RECORDED
NOV 15 1995

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE

WATER RIGHT NO. 72-07375

CONDITIONS OF APPROVAL AND REMARKS

6. Water used under this right if discharged into a natural channel shall meet Idaho Water Quality Standards.
7. This right does not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.
8. Use of water under this right shall be non-consumptive.
9. The following rights are also diverted through the point of diversion described above: 72-07054B, 72-07059, 72-07209 and 72-07120.
10. Use of this right with the rights listed below is limited to a total combined diversion rate of 25.0 cfs. The combined rights include: 72-07054B, 72-07059, 72-07209 and 72-07120.
11. The diversion and use of water under this license is subject to review by the Director after the date of expiration of license 8498 issued by the Federal Energy Regulatory Commission. Upon appropriate findings relative to the interest of the public, the Director may cancel all or any part of the use authorized herein and may revise, delete or add conditions under which the right may be exercised.

This license is issued pursuant to the provisions of Section 42-219, Idaho Code. Witness the seal and signature of the Director, affixed at Boise, this 27th day of October, 1995.

Acting for KARL J. DREHER, Director

RECEIVED
OCT 20 1995
Department of Water Resources

State of Idaho
Department of Water Resources

APPLICATION FOR AMENDMENT
(For Licensing Purposes)
WATER RIGHT NO. 72-07375

Date of Priority: April 19, 1984

Maximum Diversion Rate: 25.00 CFS
Maximum Diversion Volume: 18099.4 AF

Comes now INGRAM WARM SPRINGS RANCH
HC 61 BOX 3020
CHALLIS ID 83226 and represents to the Director of the

Idaho Department of Water Resources:

That he is the owner and holder of Permit to Appropriate the Public Waters of the State of Idaho No. 72-07375, and requests that the permit be changed as follows:

Source: **WARM SPRINGS CREEK** tributary to **SALMON RIVER**

BENEFICIAL USE	PERIOD OF USE	RATE OF DIVERSION	ANNUAL VOLUME
POWER	01/01 to 12/31	25.00 CFS	18099.4 AF

LOCATION OF POINT(S) OF DIVERSION: NWSW , Sec. 10, Township 12N, Range 20E
CUSTER County

PLACE OF USE: POWER

TWN	RGE	SEC	
13N	20E	32	SENE

Permit holder asserts that no one will be injured by such change and that such change will be made at permit holder's own risk.

Signed at Challis, Id., this 17 day of October, 1995.

Will Ingram
(Signature)

NOV 15 1995

State of Idaho
Department of Water Resources

RECEIVED
OCT 20 1995
Department of Water Resources

APPLICATION FOR AMENDMENT
(For Licensing Purposes)
WATER RIGHT NO. 72-07375

****

FOR DEPARTMENT USE ONLY

Preliminary check by ____ Fee = 50.00 Receipted by JW # 0033757 Date 10-20-95

ACTION OF THE DEPARTMENT OF WATER RESOURCES

I, Karl J. Dreher, of the Department of Water Resources hereby approve the above Application for Amendment for Permit No. 72-07375 with the following;

CONDITIONS OF APPROVAL AND REMARKS

1. The maximum diversion volume is defined as the maximum allowable volume of water that may be diverted annually from the source under this right. The use of water confirmed by this right is limited to the amount which can actually be beneficially used. The maximum diversion volume may be adjusted to more accurately describe the beneficial use or to implement accepted standards of diversion and use efficiency.
2. This water right is appurtenant to the described place of use.
3. This right is subject to all prior water rights and may be forfeited by five years of non-use.
4. Modifications to or variance from this license must be made within the limits of Section 42-222, Idaho Code, or the applicable Idaho law.
5. The rights for the use of water confirmed in this license shall be junior and subordinate to all rights for the use of water other than hydropower, within the State of Idaho that are initiated later in time than the priority of this right and shall not give rise to any right or claim against any future rights for the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this right.
6. Water used under this right if discharged into a natural channel shall meet Idaho Water Quality Standards.
7. This right does not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.
8. Use of water under this right shall be non-consumptive.

NOV 15 1995

RECEIVED
OCT 20 1995
Department of Water Resources

State of Idaho
Department of Water Resources

APPLICATION FOR AMENDMENT
(For Licensing Purposes)
WATER RIGHT NO. 72-07375

CONDITIONS OF APPROVAL AND REMARKS

9. The following rights are also diverted through the point of diversion described above: 72-07054B, 72-07059, 72-07209 and 72-07120.
10. Use of this right with the rights listed below is limited to a total combined diversion rate of 25.0 cfs. The combined rights include: 72-07054B, 72-07059, 72-07209 and 72-07120.
11. The diversion and use of water under this license is subject to review by the Director after the date of expiration of license 8498 issued by the Federal Energy Regulatory Commission. Upon appropriate findings relative to the interest of the public, the Director may cancel all or any part of the use authorized herein and may revise, delete or add conditions under which the right may be exercised.

Witness my hand this 27th day of OCTOBER, 1995.

Acting for KARL J. DREHER, Director

NOV 15 1995

Form 217
03/86

RECEIVED
JAN 10 1989

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

For Office Use Only
Fee Received $600.00
Date 1/12/89
Receipt # C005070
Receipt by CP
Reviewed by GS
Sent to region ___

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. 72-7375

Name(s) of Permit Holder: Ingram Warm Springs Ranch

Post Office Address: HC61 Box 3020

Challis, Idaho 83226 Telephone No. 879-4457

Source of Water: Warm Springs Creek

Extent of Use:

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

Irrigation _____ (acres) Other/Remark Hydro-power - 80 CFS 700 KWH

Total rate and/or volume for which proof is submitted 80 cfs _____ acre-feet

Show the date water was first diverted and beneficially used under this permit: March 6, 1986

Measuring Device: Required? X Yes ___ No Fee enclosed $ 600.00
Installed? X Yes ___ No (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:

Will Ingram (Name) 879-4457 (Telephone Number)

HC 61 Box 3020 Challis, Id. 83226 (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.

MICROFILMED
FEB 09 1989

Jan. 7, 1989 Will Ingram owner
Date Signature of Permit Holder (and title, if appropriate)

Form 202
3/79

RECEIVED
MAY 31 1984
Department of Water Resources
Southern District Office

Ident. No. 72-7375

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

RECEIVED
MAY 29 1985
Department of Water Resources
Southern District Office

APPROVED

To appropriate the public waters of the State of Idaho

1. Name of applicant Ingram Warm Springs Ranch Phone 208-879-4457

   Post office address HC 61 Box 3020 Challis, Id 83226

2. Source of water supply Warm Springs Creek which is a tributary of Salmon River

3. Location of point of diversion is NW ¼ of SW ¼ of Section 10 Township 12 N

   Range 20E B.M. Custer County, additional points of diversion if any: ____

4. Water will be used for the following purposes:

   Allow 80.0 cfs**
   Amount ~~100~~* cfs for Hydropower purposes from Jan 1 to Dec 31 (both dates inclusive)
   (cfs ~~or acre-feet per annum~~)

   Amount ~~100 CFS~~ for ~~Fish production~~ purposes from ~~Jan 1~~ to ~~Dec 31~~ (both dates inclusive) Deleted Per letter 10/29/84 LJH
   (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:

   Allow 80.0 cfs**
   a. ~~100~~-* cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:

   a. Description of ditches, flumes, pumps, headgates, etc. Headgate - 20,000 ft canal - 750 ft 42" Penstock - ~~Cement Fish Raceways~~ Per letter 10/29/84 LJH

   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 _____ (Month/Day) to _____ (Month/Day) inclusive.

   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 3 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: N½ of NE ¼ of Section 32 Township 13N

   Range 20E B.M. 90% Efficiency = 1159 kilowatts* 700 KWH
   (90% plant factor) 6,248,385 KWH/yr. or

   (2) Amount of power to be generated: _____ horsepower under 190 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: _____

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*kw 1/3/1986
** per phone conversation with Ted Sorensen 12/9/1985 - LGS

MICROFILMED

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	

Total number of acres to be irrigated _____

c. Describe any other water rights used for the same purposes as described above. _____

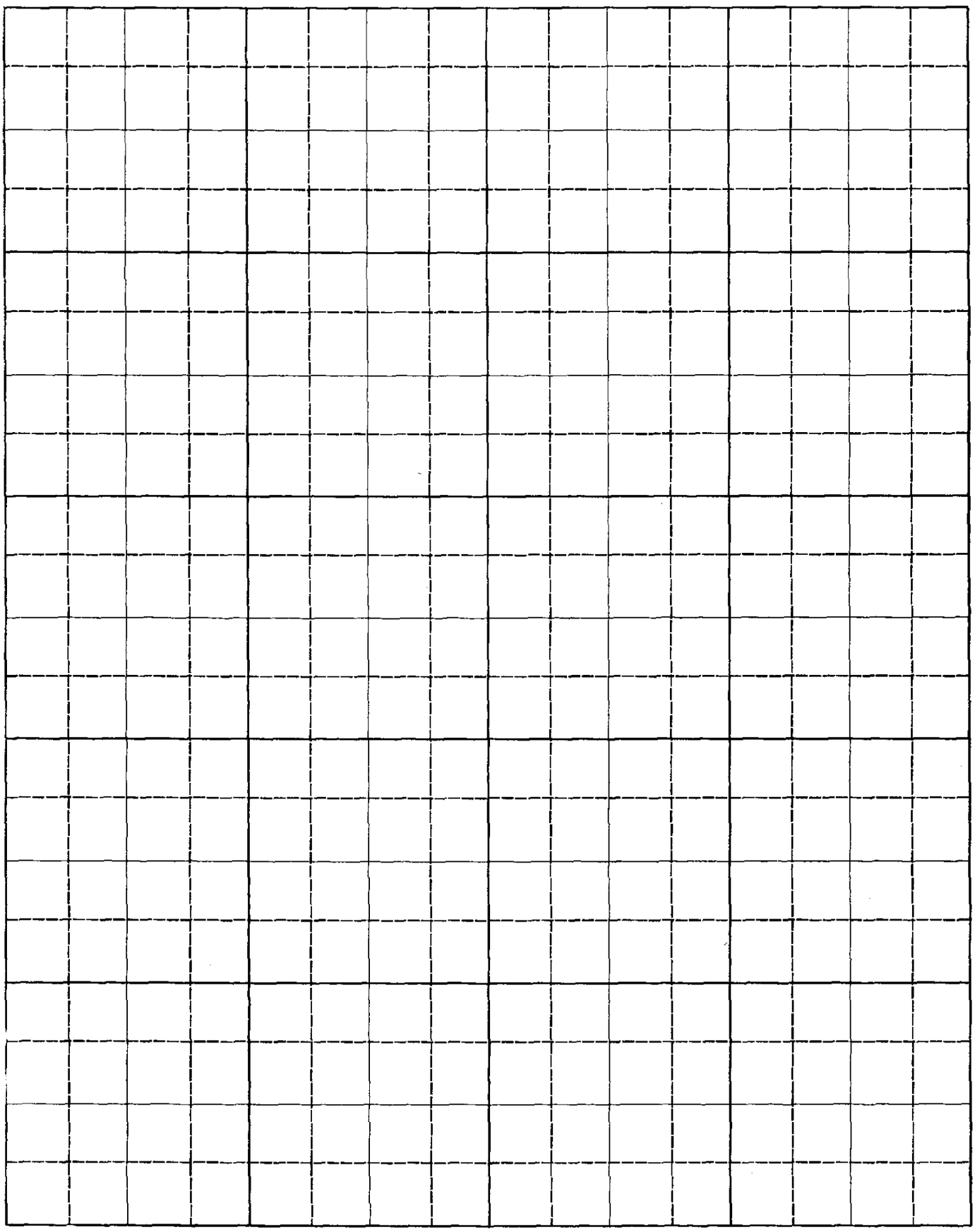
9. a. Who owns the property at the point of diversion Applicant

b. Who owns the land to be irrigated or place of use Applicant

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing _____

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.

Ingram Warm Springs Ranch

by Will Ingram

(Applicant)

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MICROFILMED

Proposed Priority 4/19/84

Received by Manya Date 4-19-84 Time 11:30

Preliminary check by TB Fee $ 1225.00 # 33058

Receipted by Manya Date 4/19/84

Publication prepared by manya Date 7/11/84

Published in Custer Publishing Co Times-News, Lewiston Morning Trib., The Idaho Statesman, Post Register, Challis Messenger

Publication dates 7/19 & 7/26/84 1/23 & 1/30/1986

Publication approved manya Date 7/30/84

Protests filed by: none

Copies of protests forwarded by

Hearing held by Date

Recommended for (approval) denial by LK tw

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. 72-7375, 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 March 1, 19 89.

   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.

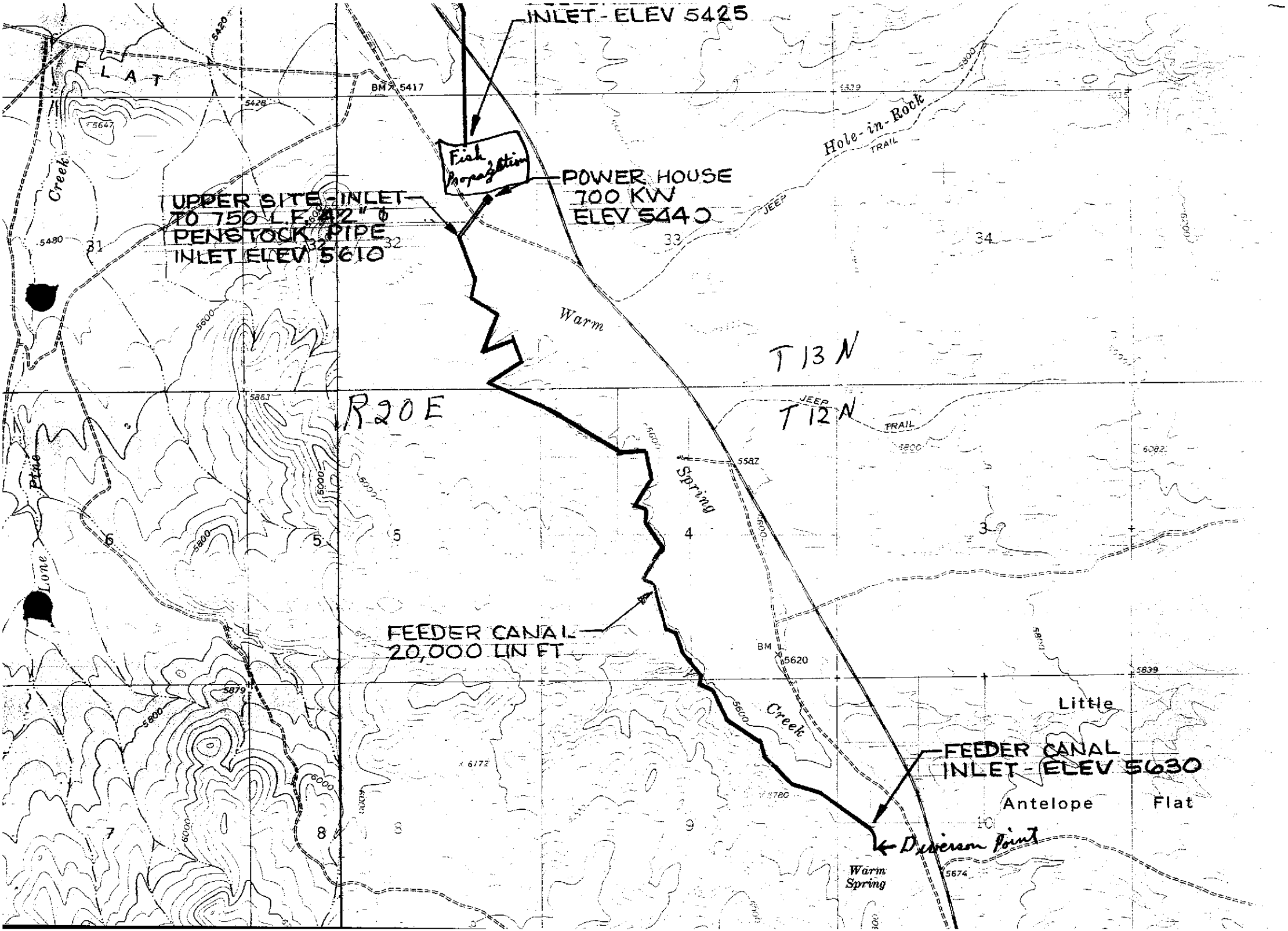
   d. Other:

SEE ATTACHED SHEET FOR CONDITIONS d thru k.

Witness my hand this 11th day of February, 1986.

L. Glen Saxton

Chief, Operations Bureau


INLET - ELEV 5425
Fish Propagation
POWER HOUSE
700 KW
ELEV 5440
UPPER SITE - INLET
TO 750 L.F. 42" ϕ
PENSTOCK PIPE
INLET ELEV 5610
FEEDER CANAL
20,000 LIN FT
FEEDER CANAL
INLET - ELEV 5630
Diversion Point
T 13 N
R 20 E
T 12 N
Warm
Spring
Creek
Hole-in-Rock
TRAIL
JEEP
Little
Antelope
Flat
Lone
Pine
BM 5417
BM 5620
Warm Spring

ATTACHMENT TO CONDITIONS OF APPROVAL

For Permit No. 72-7375

d. The permit holder shall either install a measuring device or a flow measurement port or provide a certified measurement or computation of flow based upon system design to be prepared by a professional engineer.

e. This permit is subject to the provisions of Sections 42-205 through 42-210, Idaho Code, restricting the sale, transfer, assignment, or mortgage of this permit. Failure to comply with these provisions is cause for immediate cancellation of this permit.

f. Water used under this permit if discharged into a natural channel shall meet Idaho Water Quality Standards.

g. The Director retains jurisdiction of this permit in order to limit the use of water for hydropower generation purposes to a specific term of years as required by Section 42-203B(7), Idaho Code.

h. The water right acquired under this permit for hydropower purposes shall be junior and subordinate to all rights to the use of water, other than hydropower, within the State of Idaho that are initiated later in time than the priority of this permit and shall not give rise to any right or claim against future rights to the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this permit.

i. This permit does not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.

j. Use of water under this permit shall be non-consumptive.

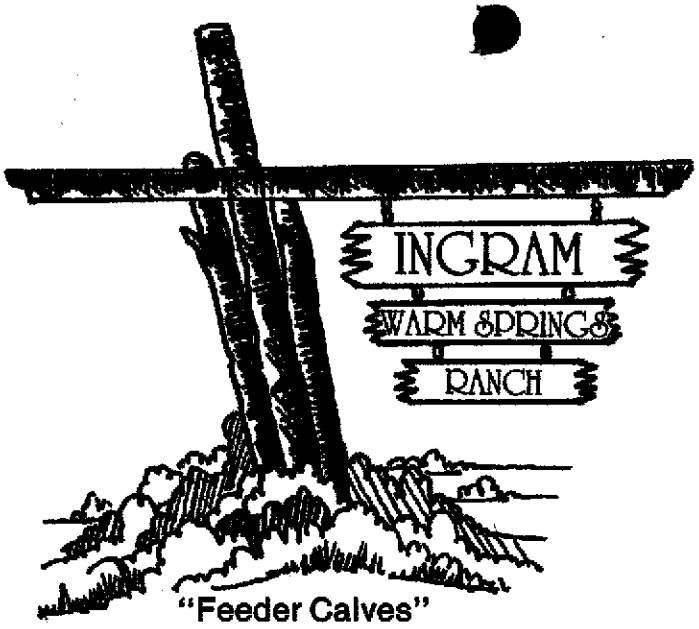
k. The maximum rate of diversion for power purposes under this permit shall not exceed 80.0 cfs.

Witness my hand this 11th day of February, 1986.

L. Glen Saxton

Chief, Operations Bureau

MICROFILMED



"Feeder Calves"

RECEIVED
OCT 2[illegible] 1984
Department of Water Resources
Southern District Office

Will & Vangie Ingram
HC61 Box 3020
Challis, Id. 83226
(208) 879-4457

Gary & Jackie Ingram
HC68 Box 320
Clayton, Id. 83227
(208) 838-2369

Tim Ingram
HC61 Box 3020
Challis, Id. 83226
(208) 879-4721

Dave Ingram
Box 2584
Dillon, Colo. 80435
(303) 468-0067

Holly & Deb Houfburg
HC61 Box 3020
Challis, Id. 83226
(208) 879-4371

Idaho Dept. of Water Resources
1041 Blue Lakes Blvd North
Twin Falls, Id. 83301

Re: Application 72-7375

Gentlemen:

I am not going to proceed with the fish production at this time - Would you please delete this portion of the application and proceed with the processing of same.

Thank you,

Will Ingram

Ingram Warm Springs Ranch

MICROFILMED

1181 Ident. No._____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
AFFIDAVIT FOR WATER RIGHTS TO BE USED
FOR POWER PURPOSES

A. Establishment of Residency: (Complete either 1, or 2).

1. Individual Applicant or Individual Members of a Partnership:

I, Ingram Wayn Spring Ranch / Joy William & Ingram (name) Managing Partner of Challis (city),

county of Custer, State of Idaho, being duly sworn, do hereby certify that I am a bona fide resident of the State of Idaho.

2. Corporation:

I,_____ (name) of_____ (city),

County of_____, State of Idaho, being duly sworn, depose and say: That I am the designated registered agent of the_____ (name of corporation): that as such I am in charge of the registered office of the said corporation as required by Section 30-1-12, Idaho Code, at _____ (city) Idaho, wherein are kept the corporate records required by Section 30-1-52, Idaho Code: and that_____ (name of corporation) is a corporation qualified to do business in the State of Idaho under the laws of the State of Idaho.

3. Ownership of Facilities: (To be completed for hydropower projects only)

The hydropower facility to be developed pursuant to the attached Application for Permit:

☒ Will not utilize existing man-made irrigation facilities such as a dam or a canal.

☐ Will utilize existing man-made irrigation facilities such as a dam or a canal, and permission of the owner is documented in an affidavit attached hereto.

☐ Will utilize existing man-made irrigation facilities such as a dam or a canal and the owner of the facilities is the signee of this affidavit.

William & Ingram
Applicant

State of Idaho)
County of Custer) ss.

On this 21st day of June, 1984, personally appeared before me the signer(s) of the above instrument, who duly acknowledged to me that he ~~(she)~~ ~~(they)~~ executed the same.

Dian M. Lacy
Notary Public residing at Challis, Idaho

seal

My commission expires:
Lifetime

MICROFILMED

162933

WARRANTY DEED

For Value Received GARY WILLIAM INGRAM and JACQUELINE J. INGRAM, husband and wife,

the grantors, do hereby grant, bargain, sell and convey unto INGRAM WARM SPRINGS RANCH, a Partnership, with WILLIAM E. INGRAM, Managing Partner, and/or ALICE E. INGRAM, Managing Partner,
the grantee, whose current address is Star Route,
Challis, Idaho 83226,
the following described premises, in Custer County Idaho, to-wit:

TOWNSHIP 13 NORTH, RANGE 20 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO.

Section 32: SE1/4NE1/4, NE1/4SE1/4, N1/2NE1/4, LESS Highway Right-of-Way.

Section 33: W1/2SW1/4, SE1/4SW1/4, LESS Highway Right-of-Way.

TOWNSHIP 12 NORTH, RANGE 20 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO.

Section 4: Lot 3, SE1/4NW1/4, E1/2SW1/4, SW1/4NE1/4, W1/2SE1/4.

Section 9: NE1/4NW1/4, N1/2NE1/4, SE1/4NE1/4.

Section 10: SW1/4NW1/4, N1/2SW1/4, SE1/4SW1/4.

Section 15: Lot 3, SE1/4NW1/4, SW1/4NE1/4.

SUBJECT TO All easements of sight and record.

TO HAVE AND TO HOLD the said premises, with their appurtenances unto the said Grantee, its heirs and assigns forever. And the said Grantors do hereby covenant to and with the said Grantee, that they are the owners in fee simple of said premises; that they are free from all incumbrances

except as of record

and that they will warrant and defend the same from all lawful claims whatsoever.

Dated: April 1, 1982

Gary William Ingram

Jacqueline J. Ingram

STATE OF IDAHO, COUNTY OF CUSTER
On this 1st day of April, 1982, before me, a notary public in and for the said State, personally appeared GARY WILLIAM INGRAM and JACQUELINE J. INGRAM, husband and wife,

known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

Notary Public
Residing at Challis, Idaho
Comm. Expires Life

STATE OF IDAHO, COUNTY OF
I hereby certify that this instrument was filed for record at the request of

at 28 minutes past 2 o'clock P M., this 2nd day of April, 1982, in my office, and duly recorded in Book of Deeds at Page

Howard A. Baxter
Ex-Officio Recorder

By Joyce D. Black
Deputy.

Fee $2.00
Mail to: CCT

INSTRUMENT No. 162933

MICROFILMED

Form 202
3/78

Void - see corrected app.

Ident. No. _____

RECEIVED
APR 19 1984
Department of Water Resources
Southern District Office

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

1. Name of applicant Ingram Warm Springs Ranch Phone 879-4457

   Post office address HC 61 Box 3020 Challis, Id. 83226

2. Source of water supply Warm Springs Creek which is a tributary of Salmon River

3. Location of point of diversion is NW ¼ of SW ¼ of Section 10 Township 12 N
   chg/phone Con. w/ William Ingram 5

   Range 20 E B.M. Custer County, additional points of diversion if any: ____

4. Water will be used for the following purposes:

   Amount 100 CFS (cfs or acre-feet per annum) for Hydropower purposes from Jan 1 to Dec. 31 (both dates inclusive)

   Amount 100 CFS (cfs or acre-feet per annum) for Fish Production purposes from Jan 1 to Dec. 31 (both dates inclusive)

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

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

5. Total quantity to be appropriated:

   a. 100 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:

   a. Description of ditches, flumes, pumps, headgates, etc. Headgate - 12,000' Canal - 2600' Penstock - Headgates - cement Fish Raceways

   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 _____ (Month/Day) to _____ (Month/Day) inclusive.

   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 3 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: SE ¼ of SW ¼ of Section 29 Township 13 N

      Range 20 E B.M.

      (2) Amount of power to be generated: 1589 horsepower under 200 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: _____

MICROFILMED

MICROFILMED

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	

Total number of acres to be irrigated _____

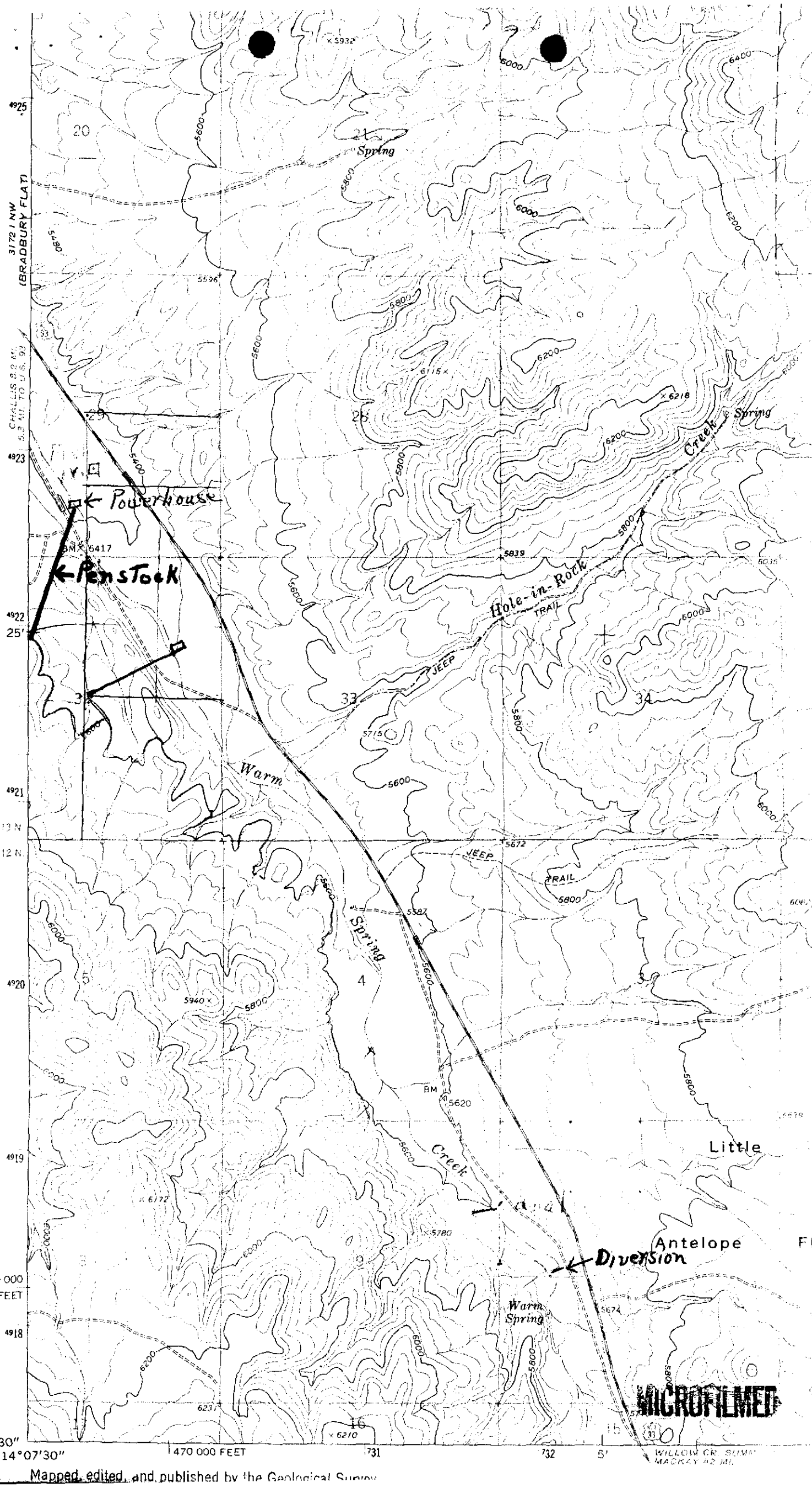
c. Describe any other water rights used for the same purposes as described above. _____

9. a. Who owns the property at the point of diversion Applicant

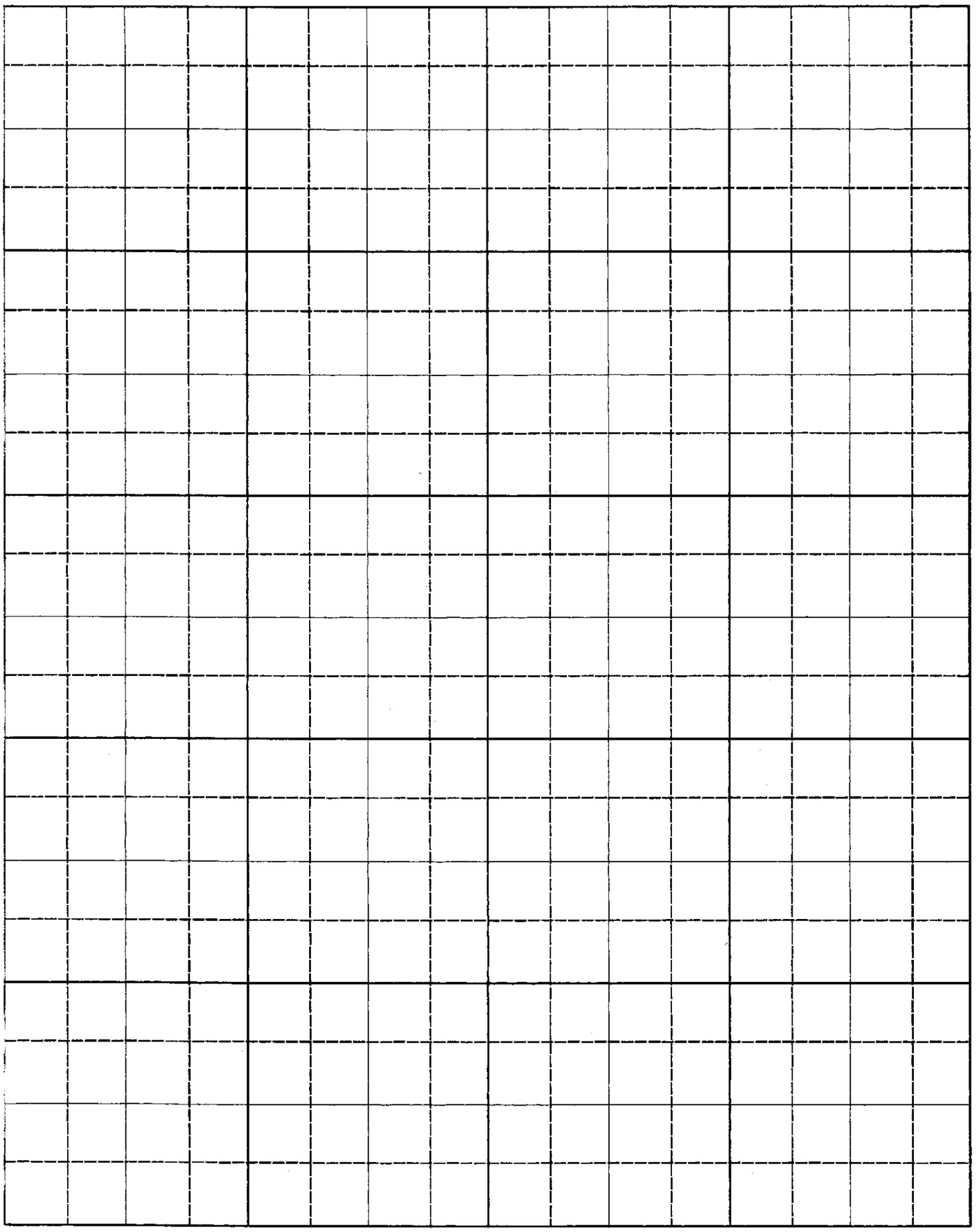
b. Who owns the land to be irrigated or place of use Applicant

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing _____

10. Remarks _____


3172 I NW
(BRADBURY FLAT)
CHALLIS 8.2 MI.
5.3 MI. TO U.S. 93
4925
4923
4922
4921
4920
4919
4918
990 000
FEET
T. 13 N.
T. 12 N.
20
21
28
29
25
33
34
4
5
16
Spring
Powerhouse
BM 5417
Penstock
Hole-in-Rock
TRAIL
JEEP
Creek
Warm
Spring
Warm Spring
Creek
Little
Antelope
Diversion
BM 5620
5839
5672
5587
5940
6115
6218
6172
6237
6210
5715
5780
MICROFILMED
22'30"
114°07'30"
470 000 FEET
731
732
5'
WILLOW CR. SUMM
MACKAY 42 MI.
Mapped, edited, and published by the Geological Survey

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.

Ingram Warm Springs Ranch
(Applicant)
by William E. Ingram

MICROFILMED

MICROFILMED

Received by marya Date 4/19/84 Time 11:30 a

Preliminary check by _____ Fee $ 1225.00 # 33058

Receipted by marya Date 4/19/84

Publication prepared by _____ Date _____

Published in _____

Publication dates _____

Publication approved _____ Date _____

Protests filed by: _____

_____

_____

Copies of protests forwarded by _____

Hearing held by _____ Date _____

Recommended for approval denial by _____

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. _____ , and said application is hereby _____ .

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 _____ , 19 ____ .

   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:

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

June 28, 1999

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

LOIS VON MORGANROTH
1223 MONTANA AVENUE
SANTA MONICA CA 90403

RE: Water Rights 72-07372/72-07375

Dear Ms. Von Morganroth:

The department acknowledges receipt of correspondence changing ownership of the above referenced water rights to you. The department has modified its records to reflect the changes in ownership and has enclosed computer-generated reports for your records.

Please note that as of July 1, 1996, water right owners are required to report any change of water right ownership and any change of mailing address of the owner of a water right to the department. Notice of the change must be provided to the department within 120 days of the change. Change reporting forms are available from any office of the department.

Please feel free to contact the department if you have questions.

Sincerely,

for L. GLEN SAXTON, Chief
Water Allocations Bureau

LGS:klt

Enclosure

cc: IDWR-Southern Region

MICROFILMED
AUG 11 1999

78 FERC ¶ 62,025

72-7372
72-7375

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Ingram Warm Springs Ranch Partnership)
Lois Von Morganroth)

Project No. 8498-017

ORDER APPROVING TRANSFER OF LICENSE

(Issued January 16, 1997)

On September 30, 1996, Ingram Warm Springs Ranch Partnership (Ingram) and Lois Von Morganroth (Morganroth), jointly filed an application for approval of the transfer of the license 1/ for the Ingram Warm Springs Ranch Hydroelectric Project from Ingram to Morganroth. The 860-kW project is located on Warm Springs Creek, a tributary to the Salmon River, near Challis, in Custer County, Idaho. The purpose of the transfer is to reflect the sale of the project to Morganroth.

Ingram has fully complied with the terms of the license and agrees to pay charges that accrue to the date of the transfer. We've reviewed the terms and conditions of the license and have determined that there are no outstanding compliance matters and no significant expenditures anticipated under the license.

Morganroth is not a licensee of the Commission. Therefore, Morganroth has no compliance record with the Commission. Morganroth will be required to hold the license and operate the property under license and agree to all the terms and conditions of the license and to be bound by the license as if she were the original licensee.

No comments, protests, or motions to intervene were filed in response to the public notice of the application to transfer the license. Transfer of the license for this project is consistent with the Commission's regulations and is in the public interest.

By letter dated January 7, 1997, Morganroth requested that upon approval of the transfer of the license the project name be changed to the L & M Angus Ranch Project so that it matches the legal description on the ownership of the land. The request to change the project name also will be granted.

The Director orders:

(A) Transfer of the license for this project is approved.

(B) Ingram shall pay all annual charges that accrue up to the effective date of the transfer.

1/ The Commission issued the license on November 21, 1985. The license expires October 31, 2035 (33 FERC ¶ 62,248).

DC-A-4

MICROFILMED
AUG 1 1 1997

(C) Approval of the transfer is contingent upon transfer of title of the properties under license and delivery of all license instruments to Morganroth, which shall be subject to all terms and conditions of the license as if she were the original licensee. Morganroth shall submit certified copies of all instruments of conveyance within 60 days from the date of this order.

(D) Morganroth shall acknowledge acceptance of this order and its terms and conditions by signing and returning the attached acceptance sheet within 60 days from the date of this order.

(E) Ordering Paragraph (A) of the license for this project is revised to change the project name from the Ingram Warm Springs Ranch Hydroelectric Project to the L & M Angus Ranch Project.

(F) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. § 385.713.

J. Mark Robinson
Director, Division of
Licensing and Compliance

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JAN 2 8 1997
Department of Water Resources

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

October 27, 1995

INGRAM WARM SPRINGS RANCH
HC 61 BOX 3020
CHALLIS ID 83226

RE: WATER RIGHT NO. 72-07375

Dear Water Right Holder(s):

Enclosed is a copy of the Water Right License issued on the above referenced permit along with a copy of your approved Application for Amendment.

Should you have any questions regarding these documents, please contact me.

Sincerely,

Shelley Watten Keen

Shelley W. Keen
Water Rights Supervisor

SK:rl

Enclosure

NOV 15 1995

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

October 10, 1995

INGRAM WARM SPRINGS RANCH
HC 61 BOX 3020
CHALLIS ID 83226

RE: WATER RIGHT NO. 72-07375

Dear Water Right Holder(s):

The above referenced water right is in the process of being licensed. However, before a license can be issued, your permit must be amended to depict your water right as it has actually been developed.

The enclosed Application for Amendment contains information that will be included on the license when it is issued. The amendment reflects a change in the location of the place(s) of use description. Please review carefully and if you concur, sign the amendment and return with the $50.00 filing fee within 14 days.

The last page of the Application for Amendment form contains a list of CONDITIONS/REMARKS proposed for the license when it is issued. These conditions/remarks may be modified upon further administrative review.

If you do not concur, or if you have any questions about this information, please contact me as soon as possible. My telephone number is (208) 327-7946.

Sincerely,

Shelley W. Keen
Water Rights Supervisor

SK:rl

Enclosure

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LICENSE REVIEW CHECKLIST

BRENDA

PERMIT NO. 72-07375 DATE 8-11-95

	Change	OK	
NAME	___	✓	Or Address Change?
PRIORITY DATE	___	✓	Advance? ___ Advanced to: _____ Order to reinstate needed? _____ Incorrect fee for rate recommended? NO
SOURCE	___	✓	Changes or just clarification of originally intended source? _____ Notice of Intent to Void necessary? _____
POINT OF DIV	___	✓	Amendment needed? 1982 weir measurements (① P/O FROM 7209)
	✓	___	Overlaps? 72-07054B, 07059, 07209, 07120 (07359 is a permit)
PLACE OF USE	✓	___	Amendment needed? CHANGE to SENE 1/4 1/4
	___	✓	Overlaps? _____
DIV RATE	___	✓	Permit/fee limits: (SUPPOSED TO BE .80CFS NOT 100) Meas Q = _____ Theo Q = _____ Recommend: 25 SEE Narrative on various measurements. Combined rates exceed capacity YES - CONDITION (special in tandem use condition)
ANNUAL VOLUME	✓	___	Volume Limit: _____ Season: _____ Calculations: _____ Flow limit: 25 cfs x 365 x 1.9835 = 18099.4 Combined volumes exceed capacity/allowable _____
USES	___	✓	Change in Nature of Use or additional uses? _____ Amendment necessary? _____
ADDITIONAL INFO			Supplemental Groundwater ____ PPU Scenario ____ Irr/Dom Combination ____ Shared G/W System ____
NEW REMARKS	___		Multiple p/d(s) in ¼ ¼? _____
	YES		Other w36(4), w43
NEW CONDITIONS	___		Watermaster control - District _____
	___		Measuring/Locking Devices
	___		Irrigation Overlap
	YES		Other R22
	___		Water Quality 090 Heat/Cool/Fish verified ____

Uses in TANDEM - Not to exceed 25 CFS

COMMENTS: ① FERC license # 8498 ② Permit application MAP included the SENE 1/4 1/4 but the app itself didn't + neither did the approved permit. ③ Other rights are licenses with various capacity measurements depending on year examined. ④ Total CAPACITY-25CFS-FOR COMBINED RIGHTS

RECOMMENDATION	CFS	VOLUME
Power	25	18099.4

SRBA Claim Filed NO
Adjustment Memo Needed YES

LICENSE AMEND P/U ___

1ST AMEND LETTER P41 + P38
2ND AMEND LETTER P47

Form 219
6/92

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

BENEFICIAL USE FIELD REPORT

RECEIVED
JUN 23 1995
Department of Water Resources

A. GENERAL INFORMATION

Permit No. 72-7375

1. Owner: Ingram Warm Springs Ranch Phone No. 879-4457

Current Address: HC61, Box 3020, Challis, ID 83226

2. Accompanied by: Will Ingram EXAM DATE: 9-2-92

Address: same Phone No. same

Relationship to Permit Holder: owner

3. Source: Warm Springs Creek tributary to Salmon River

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None

2. Other water rights with the same point of diversion: 72-07054B, 07059, 07209, 07359 07120

C. DIVERSION AND DELIVERY SYSTEM

1. **Point(s) of Diversion:**

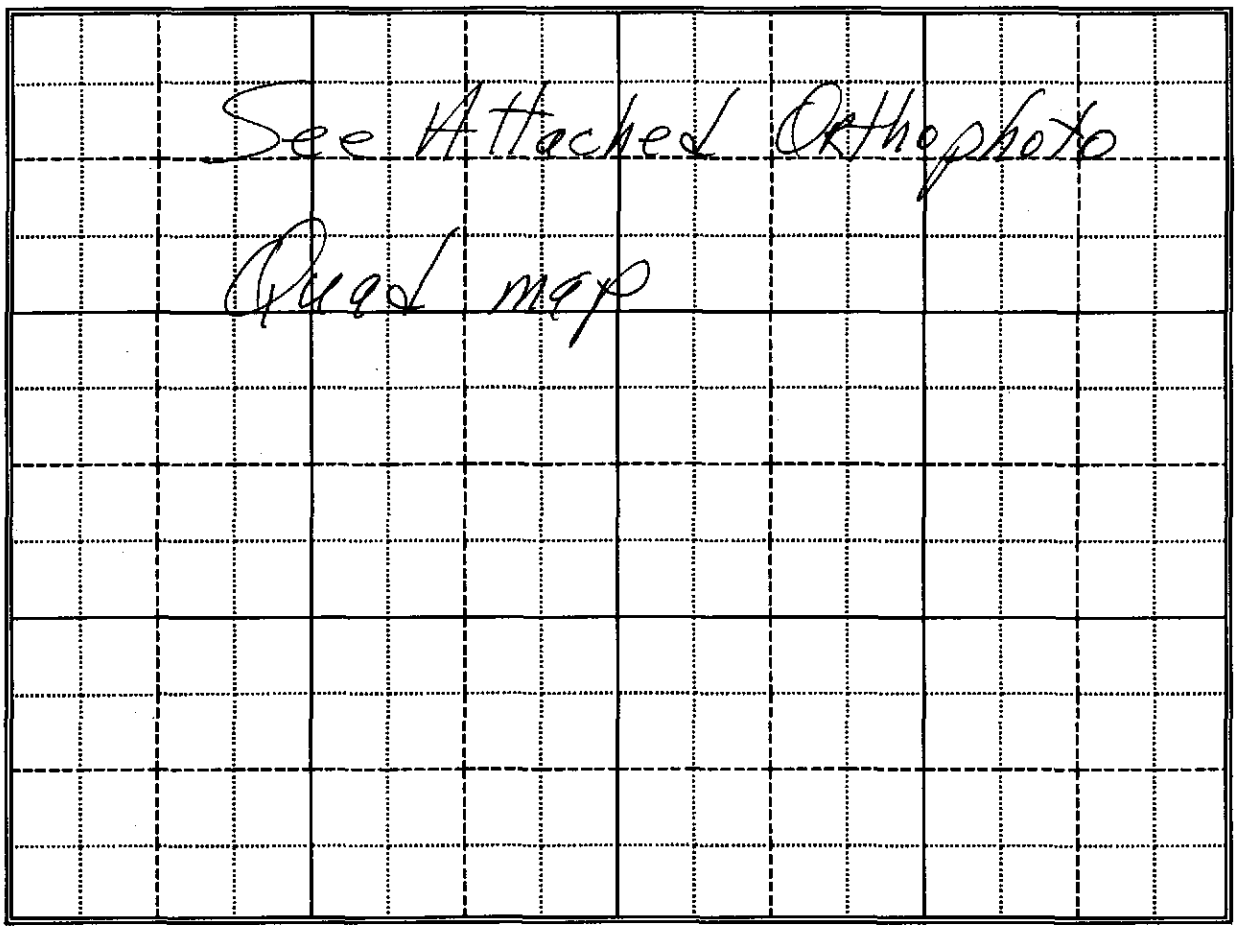
Ident No.	Gov't Lot	¼	¼	¼	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
		NE	NW	SW	10	12N	20E	Custer	Ortho-photo quad map

2. **Place(s) of Use:** Indicate Method of Determination

TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
13N	20E	32				P													
																NOV 15 1995			

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NOV 15 1995

3. **Delivery System Diagram**: Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable.



Scale: 1" = _____.

_____ Copy of USGS Quadrange Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

_____ Aerial Photo Attached (required for irrigation of 10+ acres)

_____ Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size

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

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Current meter +	AA			090141		
stopwatch						

2. **Measurements:** Current meter measurements were made in the Fall 1992 and Spring 1993 at several sites along the power diversion canal.

NOV 1 5 1995

E. NARRATIVE/REMARKS/COMMENTS

See Attached

The fish propagation component was developed under separate permits by Tim Ingram.

Have conditions of permit approval been met? ___ yes ___ no

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F. FLOW CALCULATIONS X Additional Computation Sheets Attached

Measured Method:

See attached

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = _____

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

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

2. Volume Calculations for Other Uses: NA

*

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use From	Period of Use To	Rate of Diversion Q (cfs)	Annual Volume V (afa)
* Power	1-1	12-31	25 cfs	NA
		Totals:	25 cfs	

2. Recommended Amendments

___ Change P.D. as reflected above ___ Add P.D. as reflected above ___ None

___ Change P.U. as reflected above ___ Add P.U. as reflected above ___ Other

I. AUTHENTICATION

Field Examiner's Name Mel Schultz Date 6-23-95

Reviewer _____ Date _____ SEAL

* See adjustment memo. BE

NOV 15 1995

MEMORANDUM

TO: File 72-07375 / Ingram Warm Springs Ranch

FROM: Brenda Chapman

DATE: August 14, 1995

RE: Recommendation Adjustment(s)

==========

The final licensing recommendations for the above referenced water right are based on the information below:

G. VOLUME CALCULATIONS

According to Rule 5,1,10. of the Beneficial Use Rules and Regulations, power is not one of the uses exempt from having to list an annual diversion volume on the licensing recommendation.

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use	Rate of Div	Annual Vol
Power	1-01 to 12-31	25.0	18099.4

NOV 1 5 1995

NARRATIVE/REMARKS/COMMENTS
BENEFICIAL USE FIELD REPORT---72-07375

The delivery system consists of the following: The spring known as Warm Spring surfaces on property owned by the applicants. They have dug a channel at the spring to collect the water and to divert it directly into a canal rather than in the natural creek channel. To divert overflow or excess water they constructed a headgate in the canal that diverts back into the creek.

The canal flows to the Northwest parallel to the creek channel for about three miles. It then enters a concrete head works and penstock that delivers water to a powerhouse containing the turbine and generator. The turbine data is as follows: Orenco brand rated for 25 cfs; type=HL110-WJ-50 @ 311Kw--S = 900 R/min, Head = 54.86'.

A 25 hp pump in Warm Springs Creek about one mile upstream from the canal head works is used to re-divert water that seeps from the canal and water that enters the creek from a small tributary stream. The re-diversion pipe is a short distance upstream from a four foot Parshall flume the owners installed during the original construction to serve as a measuring device for the system.

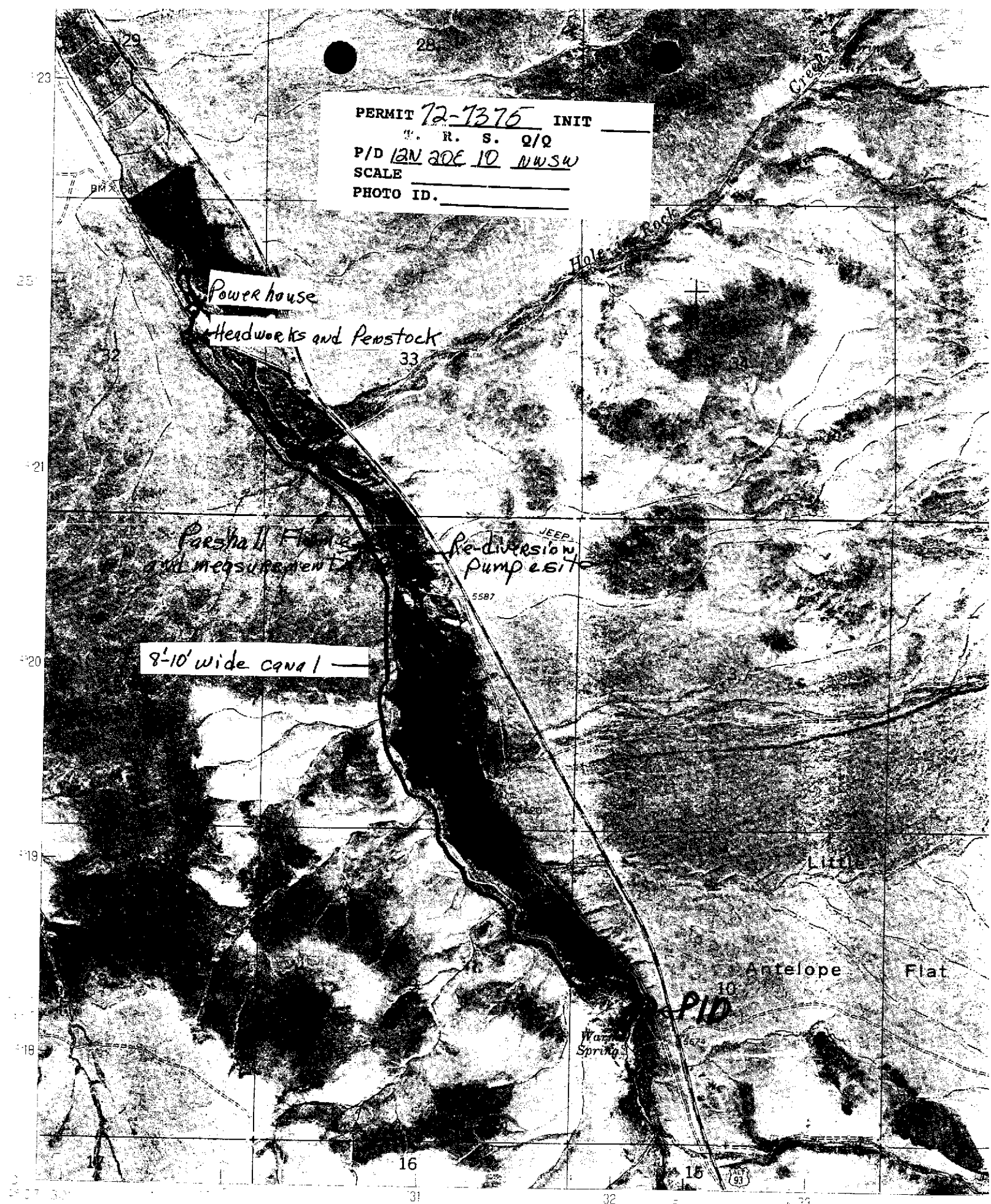
The flow in the power canal was measured with a AA current meter in October 1992 at 20.2 cfs and again in May 1993 at 18.46 cfs. at a site near the Parshall flume but below the re-diversion site. Based on the gage in the flume the flows were 28.5 cfs and 30.08 cfs. The owner measured 25.4 cfs at the flume in February 1994. The accuracy of the flume measurements is considered questionable and we consider the current meter measurements to be more accurate.

We think the timing of our measurements can be challenged on the basis that the area had been impacted by 5 to 6 years of drought conditions. The drought most likely impacted the spring flows and also the small tributary stream to Warm Springs Creek that normally flows year around but was almost dry when we conducted our measurements. This small stream was supposedly measured at almost 7 cfs at one time by the former Southern Region manager, Loren Holmes, but no records could be found of the measurement data.

Based on the probable impact of drought on the flows of Warm Spring Creek and the obvious fact that the power canal and generation system can handle 25 cfs, it is recommended the license be issued for the permitted amount of 25 cfs.

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NOV 15 1995

25 CFS
FEB 94



Produced by the Geological Survey
in cooperation with the U. S. Forest Service

NOV 15 1996

RECEIVED
MAR 4 1994
Department of Water Resources
Southern Region Office

2/24/94
HC 61 Box 3020
Challis, Id 83226

Mel;

I measured the depth of water flow through our flume yesterday, and it was just alittle over 16". If it is right, there should be about 95½ c/s.

I'm sending you the chart for our flume.

Sincerely,

Will

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NOV 15 1995

Table 7 (Continued). Free flow through Parshall measuring flumes in cubic feet per second.

Head		Throat width							
Feet	Inches (approx.)	3"	6"	9"	1'	1.5'	2'	3'	4'
		(Flow in cubic feet per second)							
1.10	13-3/16		2.40	3.55	4.62	6.95	9.27	13.9	18.6
1.11	13-5/16		2.43	3.60	4.68	7.04	9.40	14.1	18.9
1.12	13-7/16		2.46	3.65	4.75	7.14	9.54	14.3	19.1
1.13	13-9/16		2.50	3.70	4.82	7.24	9.67	14.5	19.4
1.14	13-11/16		2.53	3.75	4.88	7.34	9.80	14.7	19.7
1.15	13-13/16		2.57	3.80	4.94	7.44	9.94	14.9	19.9
1.16	13-15/16		2.60	3.85	5.01	7.54	10.1	15.1	20.2
1.17	14-1/16		2.64	3.90	5.08	7.64	10.2	15.3	20.5
1.18	14-3/16		2.68	3.95	5.15	7.74	10.3	15.6	20.8
1.19	14-1/4		2.71	4.01	5.21	7.84	10.5	15.8	21.1
1.20	14-3/8		2.75	4.06	5.28	7.94	10.6	16.0	21.3
1.21	14-1/2		2.78	4.11	5.34	8.05	10.8	16.2	21.6
1.22	14-5/8		2.82	4.16	5.41	8.15	10.9	16.4	21.9
1.23	14-3/4		2.86	4.22	5.48	8.25	11.0	16.6	22.2
1.24	14-7/8		2.89	4.27	5.55	8.36	11.2	16.8	22.5
1.25	15			4.32	5.62	8.46	11.3	17.0	22.8
1.26	15-1/8			4.37	5.69	8.56	11.5	17.2	23.0
1.27	15-1/4			4.43	5.76	8.67	11.6	17.4	23.3
1.28	15-3/8			4.48	5.82	8.77	11.7	17.7	23.6
1.29	15-1/2			4.53	5.89	8.88	11.9	17.9	23.9
1.30	15-5/8			4.59	5.96	8.99	12.0	18.1	24.2
1.31	15-3/4			4.64	6.03	9.09	12.2	18.3	24.5
1.32	15-13/16			4.69	6.10	9.20	12.3	18.5	24.8
1.33	15-15/16			4.75	6.18	9.30	12.4	18.8	25.1
1.34	16-1/16			4.80	6.25	9.41	12.6	19.0	25.4
1.35	16-3/16			4.86	6.32	9.52	12.7	19.2	25.7
1.36	16-5/16			4.92	6.39	9.63	12.9	19.4	26.0
1.37	16-7/16			4.97	6.46	9.74	13.0	19.6	26.3
1.38	16-9/16			5.03	6.53	9.85	13.2	19.9	26.6
1.39	16-11/16			5.08	6.60	9.95	13.3	20.1	26.9
1.40	16-13/16				6.68	10.1	13.5	20.3	27.2
1.41	16-15/16				6.75	10.2	13.6	20.6	27.5
1.42	17-1/16				6.82	10.3	13.8	20.8	27.8
1.43	17-3/16				6.89	10.4	13.9	21.0	28.1
1.44	17-1/4				6.97	10.5	14.1	21.2	28.5
1.45	17-3/8				7.04	10.6	14.2	21.3	28.8
1.46	17-1/2				7.12	10.7	14.4	21.7	29.1
1.47	17-5/8				7.19	10.8	14.5	21.9	29.4
1.48	17-3/4				7.26	11.0	14.7	22.2	29.7
1.49	17-7/8				7.34	11.1	14.9	22.4	30.0
1.50	18				7.41	11.2	15.0	22.6	30.3

2/23/94

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MAR 4 1994
Department of Water Resources
Southern Region Office

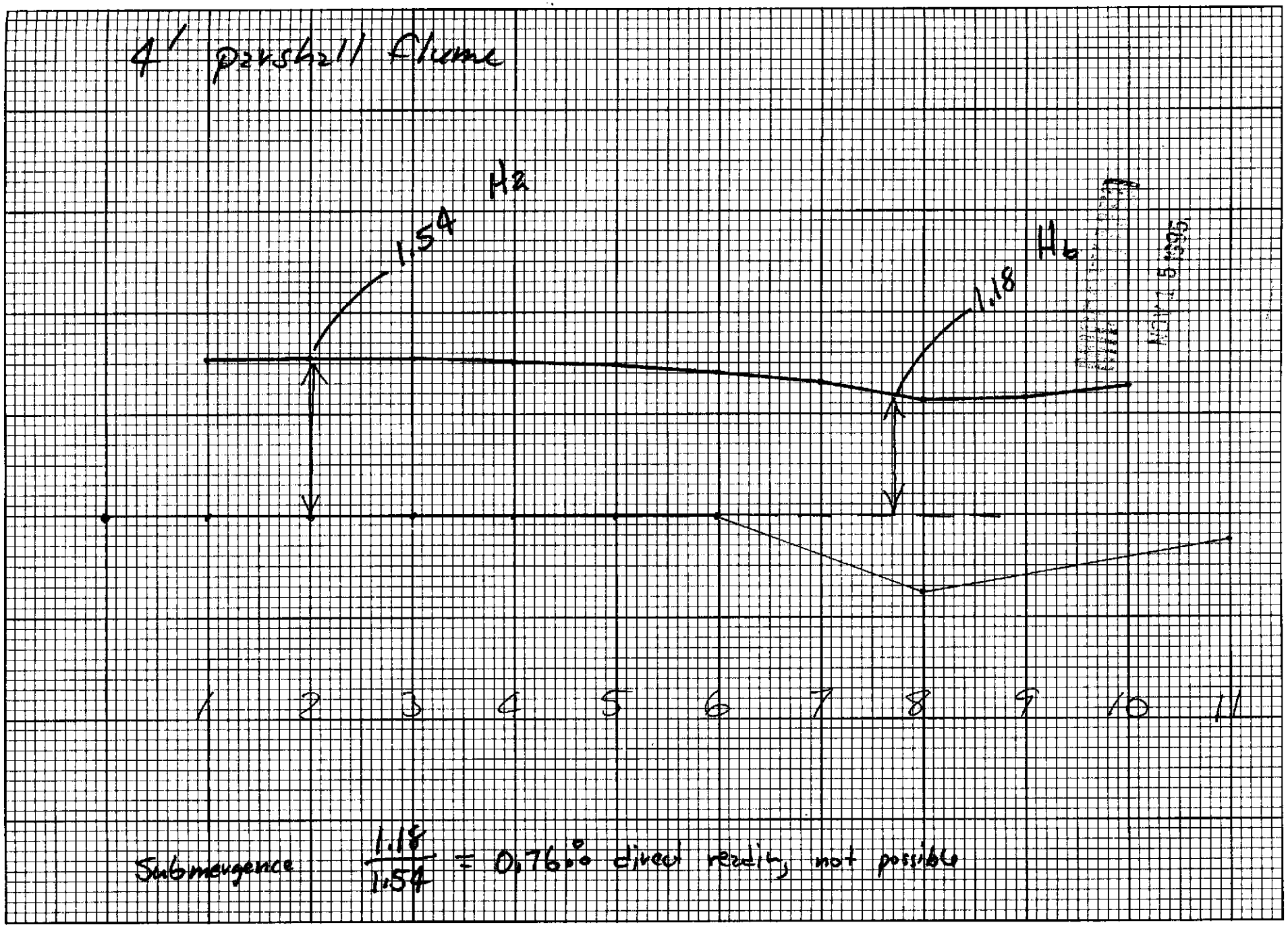
Table 8. Free flow through trapezoidal measuring flumes in cubic feet per second.

NOV 15 1995

Head		Flume No. 1 (1 foot bottom width)		Flume No. (2 foot bottom v
Feet	Inches	Measured along sloping sidewall	Measured in vertical direction	Measured along sloping sidewall
0.20	2-3/8		0.16	
0.21	2-1/2		0.18	
0.22	2-5/8		0.19	
0.23	2-3/4		0.20	
0.24	2-7/8		0.22	
0.25	3		0.23	
0.26	3-1/8		0.24	
0.27	3-1/4		0.26	
0.28	3-3/8		0.28	
0.29	3-1/2		0.30	
0.30	3-5/8	0.18	0.31	
0.31	3-3/4	0.19	0.33	
0.32	3-13/16	0.20	0.35	
0.33	3-15-16	0.21	0.37	
0.34	4-1/16	0.22	0.39	
0.35	4-3/16	0.23	0.42	
0.36	4-5/16	0.24	0.44	
0.37	4-7/16	0.25	0.46	
0.38	4-9/16	0.26	0.48	
0.39	4-11/16	0.27	0.51	
0.40	4-13/16	0.28	0.54	
0.41	4-15/16	0.29	0.56	
0.42	5-1/16	0.31	0.59	
0.43	5-3/16	0.32	0.62	
0.44	5-1/4	0.33	0.65	
0.45	5-3/8	0.35	0.68	
0.46	5-1/2	0.36	0.71	
0.47	5-5/8	0.38	0.74	
0.48	5-3/4	0.39	0.78	
0.49	5-7/8	0.41	0.81	
0.50	6	0.42	0.84	0.71
0.51	6-1/8	0.44	0.88	0.73
0.52	6-1/4	0.46	0.92	0.75
0.53	6-3/8	0.47	0.95	0.77
0.54	6-1/2	0.49	0.99	0.80
0.55	6-5/8	0.51	1.03	0.82
0.56	6-3/4	0.52	1.07	0.84
0.57	6-13/16	0.54	1.11	0.86
0.58	6-15/16	0.56	1.16	0.89
0.59	7-1/16	0.58	1.20	0.91
0.60	7-3/16	0.60	1.24	0.94
0.61	7-5/16	0.62	1.29	0.96
0.62	7-7/16	0.64	1.34	0.99
0.63	7-9/16	0.66	1.38	1.01
0.64	7-11/16	0.69	1.43	1.04
0.65	7-13/16	0.71	1.48	1.07
0.66	7-15/16	0.73	1.53	1.09
0.67	8-1/16	0.76	1.58	1.12
0.68	8-3/16	0.78	1.64	1.15
0.69	8-1/4	0.80	1.69	1.18

HPBooks—GRAPH PAPER From Your COPIER

2 millimeters/Division—5th, 10th Accent



Direct reading for free flow = 31.63 cfs

correction (76%) $\Rightarrow 0.5 \times 3.1$; Chart 28 = 1.55

30.08 cfs

* To obtain accurate measurements in flume one must use stilling basins; if not measurement is only approximate.

.0 .10 .20 .30 .40 .50 .60 .70 .75 .80 .85

Form 219-N
7/86

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

Water Right No. (if applicable)

Open Channel Discharge Measurement Notes

.90

A. GENERAL INFORMATION

1. Name of stream or ditch: Warm Springs Ranch upper power canal .92
2. Location: 40' downstream from Parshall flume
3. Person conducting measurement: Mel Schulte .94
4. Date and time of measurement: 05-19-1993 12:40 PM
5. Accompanied by: Frank Pitchcock .96
6. Measuring device size and ID no.: Price AA Ser. # 090141
7. Spin test before measurement OK? yes after measurement OK? yes .97
8. Purpose of measurement: Permits 72-7359, 7372, 7376 .98

B. MEASUREMENT DATA

13 measurements - .6 depth at measuring points - all cells 1' wide - Initial point = 0 .99

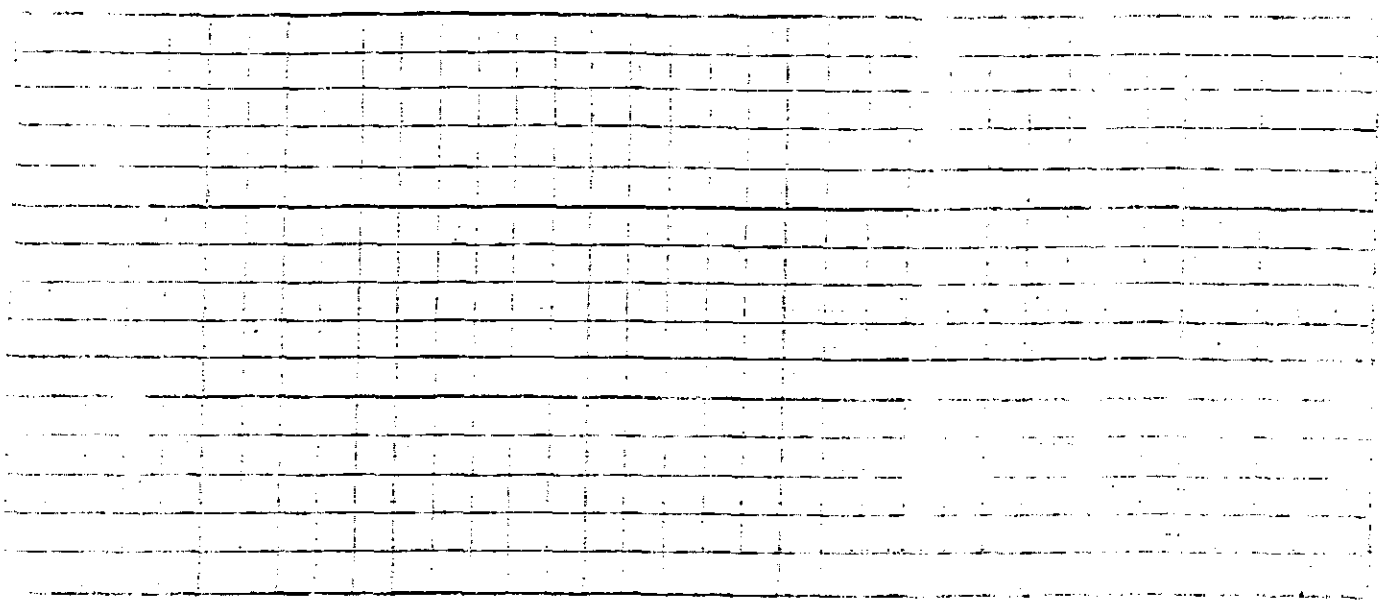
Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY: At point FPS	VELOCITY: Mean in vertical	Adjusted for hor. angle or ____	Area W x D	Discharge
0	LEW =	1	.	.6							
	1.5	1	.6		7	30	.528			.6	.317
	2.5	1	.7		16	60	.602			.7	.421
	3.5	1	1.1		19	60	.711			1.1	.782
	4.5	1	1.5		22	60	.820			1.5	1.23
	5.5	1	1.75		29	60	1.073			1.75	1.878
	6.5	1	2.00		35	60	1.291			2.0	2.582
	7.5	1	2.15		33	60	1.219			2.15	2.621
	8.5	1	2.15		25	60	.929			2.15	1.997
	9.5	1	2.10		24	60	.892			2.10	1.873
	10.5	1	1.90		29	60	1.073			1.9	2.039
	11.5	1	1.60		22	60	.82			1.6	1.312
	12.5	1	1.25		9	30	.674			1.25	.843
	13.5	1	.80		5	30	.384			.8	.307
	REW = 14										
											18.2
									NOV 15 1993		

.90 .92 .94 .96 .97 .98 .99 1.00 .99 .98 .97 .96 .94 .92 .90 .85

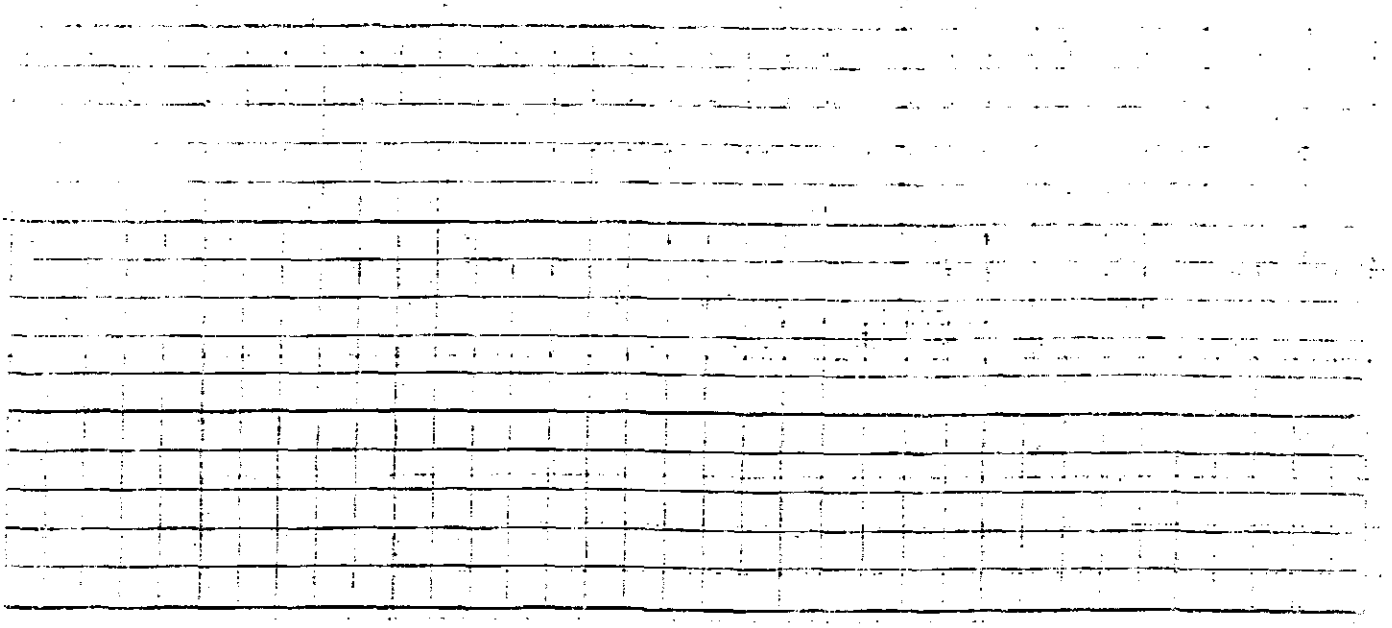
.10 .20 .30 .40 .50 .60 .70 .75 .80

C. DIAGRAMS

1. Measurement Location
   Scale: _____ = _____



2. Cross-Section of Measurement
   Scale _____ = _____



D. SUMMARY INFORMATION

1. Measurement rated ____ excellent ✓ good ____ fair ____ poor
2. Remarks: easy access to measuring point - 10% of canal bottom covered with moss - 90% gravel
3. Width: 13' Area: 19.6 ft Discharge in cubic feet per second: 18.2 cfs

DATE

SIGNATURE OF PERSON CONDUCTING MEASUREMENT

NOV 15 19

.0 .10 .20 .30 .40 .50 .60 .70 .75 .80 .85

Form 219-N
7/86

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

Water Right No. (if applicable)

Open Channel Discharge Measurement Notes

.90

A. GENERAL INFORMATION

1. Name of stream or ditch: Warm Springs Ranch upper power canal .92
2. Location: 30' upstream from Parshall flume
3. Person conducting measurement: Mel Schulte .94
4. Date and time of measurement: 5-19-93 11:20 am
5. Accompanied by: Frank Hitchcock .96
6. Measuring device size and ID no.: Price AA Ser. # 090141
7. Spin test before measurement OK? yes after measurement OK? yes .97
8. Purpose of measurement: Permits 72-7359, 7372, 7375 .98

B. MEASUREMENT DATA

.6 depth at measuring points - 1' wide cells except #16 = 1.25'
16 measurements - Initial point = 0 .99

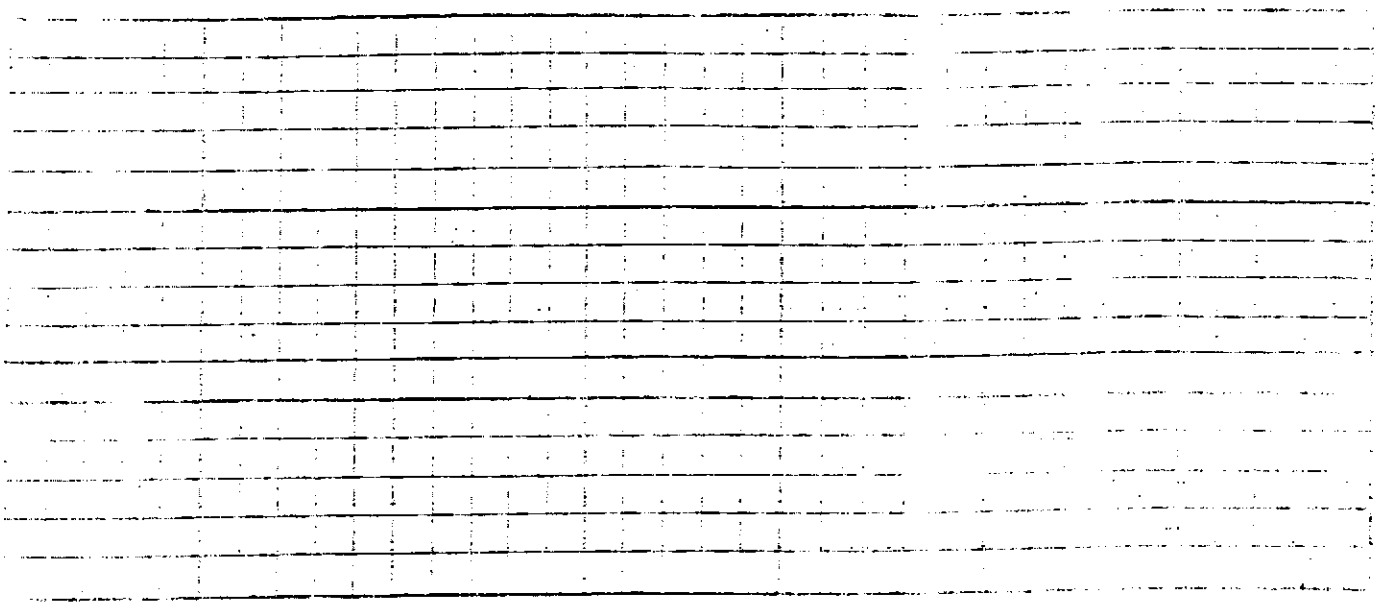
Angle co-efficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY: At point FPS	VELOCITY: Mean in vertical	Adjusted for hor. angle or ____	Area	Discharge
0	LEW = 2'			.6							
	2.5	1ft	.6		4	60	.166			.7	.116
	3.5	1'	.85		16	"	.602			.85	.512
	4.5	1'	1.1		32	"	1.182			1.1	1.3
	5.5	1'	1.35		27	"	1.001			1.35	1.351
	6.5	1'	1.35		17	"	.637			1.35	.86
	7.5	1'	1.35		13	"	.493			1.35	.666
	8.5	"	1.6		16	"	.602			1.6	.963
	9.5	"	1.5		18	"	.674			1.5	1.011
	10.5	"	1.7		20	"	.746			1.7	1.268
	11.5	"	1.75		20	"	.746			1.75	1.306
	12.5	"	1.9		18	"	.674			1.9	1.281
	13.5	"	1.7		26	"	.964			1.7	1.639
	14.5	"	1.7		30	"	1.11			1.7	1.887
	15.5	"	1.8		42	"	1.546			1.6	2.474
	16.5	"	1.1		30	"	1.11			1.1	1.221
	17.25	1.25'	.8		16	"	.602			1.0	.602
	REW = 18.25										
											18.46 cfs

1.00 .99 .98 .97 .96 .94 .92 .90 .85

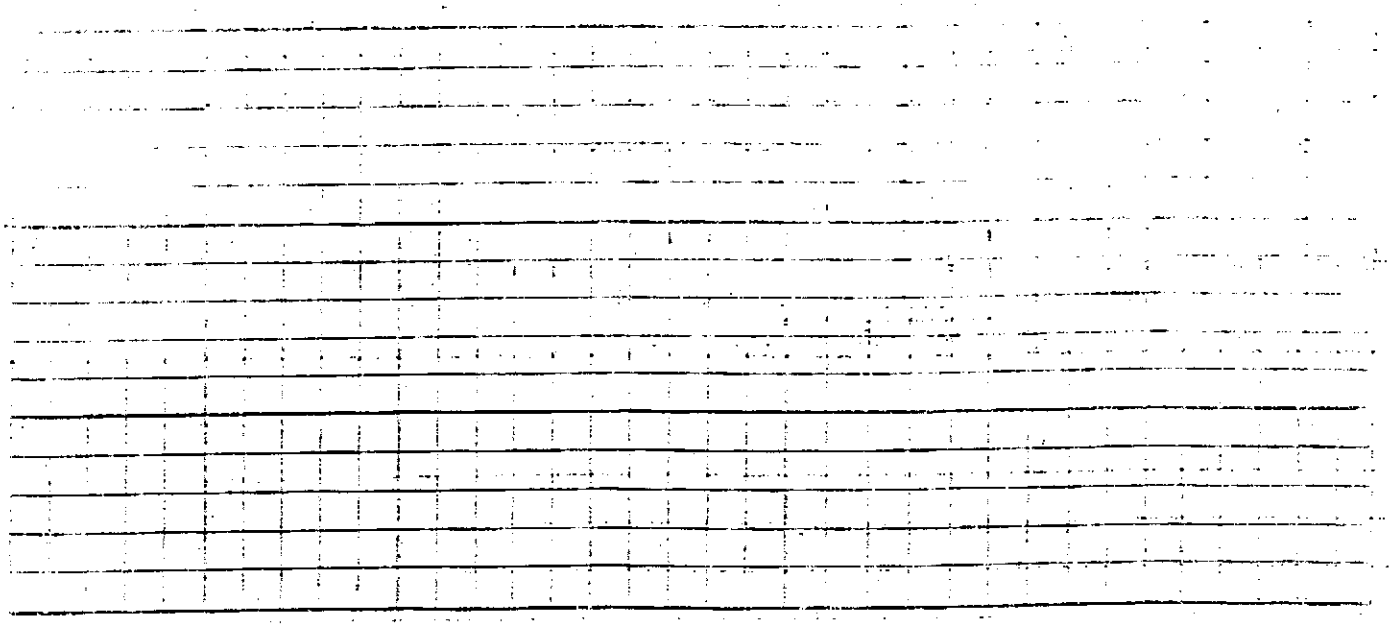
.10 .20 .30 .40 .50 .60 .70 .75 .80

C. DIAGRAMS

1. Measurement Location
   Scale: _____ = _____



2. Cross-Section of Measurement
   Scale _____ = _____



D. SUMMARY INFORMATION

1. Measurement rated ____ excellent ✓ good ____ fair ____ poor
2. Remarks: easy access to measuring point – 60% of canal bottom covered with moss – 40% gravel.
3. Width: 16.25' Area: 22.25 ☒ Discharge in cubic feet per second: 18.46 cfs

DATE

SIGNATURE OF PERSON CONDUCTING MEASUREMENT

NOV

.0 .10 .20 .30 .40 .50 .60 .70 .75 .80 .85

Form 219-N
7/86

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

72-07375
Water Right No.
(If applicable)

Open Channel Discharge Measurement Notes

.90

A. GENERAL INFORMATION

1. Name of stream or ditch: Ingram upper power canal .92
2. Location: 30' upstream from Parshall flume
3. Person conducting measurement: Mel Schultz .94
4. Date and time of measurement: 9:00 am 10-8-92
5. Accompanied by: .96
6. Measuring device size and ID no.: Price AA - # 090141
7. Spin test before measurement OK? yes after measurement OK? yes .97
8. Purpose of measurement: Licensing measurement .98

B. MEASUREMENT DATA

* < 40 rev R/T x 2.18 + .02 > 40 rev R/T x 2.17 + .03 .99

Angle co-efficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY * At point	VELOCITY Mean in vertical	Adjusted for hor. angle or ____	Area W x D	Discharge
	LEW = 0			.6							
1)	.5	1.0	.6	.36	9	60	.347			.6	.208
2)	1.5	1.0	.95	.57	40	103	.873			.95	.829
3)	2.5	1.0	1.4	.84	40	75	1.187			1.4	1.662
4)	3.5	1.0	1.65	.99	40	54	1.637			1.65	2.701
5)	4.5	1.0	2.0	1.2	40	78	1.016			2.0	2.032
6)	5.5	1.0	2.0	1.2	40	81	1.102			2.0	2.204
7)	6.5	1.0	2.1	1.26	40	74	1.203			2.1	2.526
8)	7.5	1.0	2.1	1.26	40	100	.898			2.1	1.886
9)	8.5	1.0	1.95	1.17	40	76	1.172			1.95	2.285
10)	9.5	1.0	1.7	1.02	40	113	.798			1.7	1.357
11)	10.5	1.0	1.25	.75	40	93	.873			1.25	1.091
12)	11.5	1.0	1.0	.6	20	80	.565			1.0	.565
13)	12.5	1.0	.75	.45	20	63	.712			.75	.534
14)	13.5	1.0	.7	.42	10	60	.456			.7	.319
											20.20

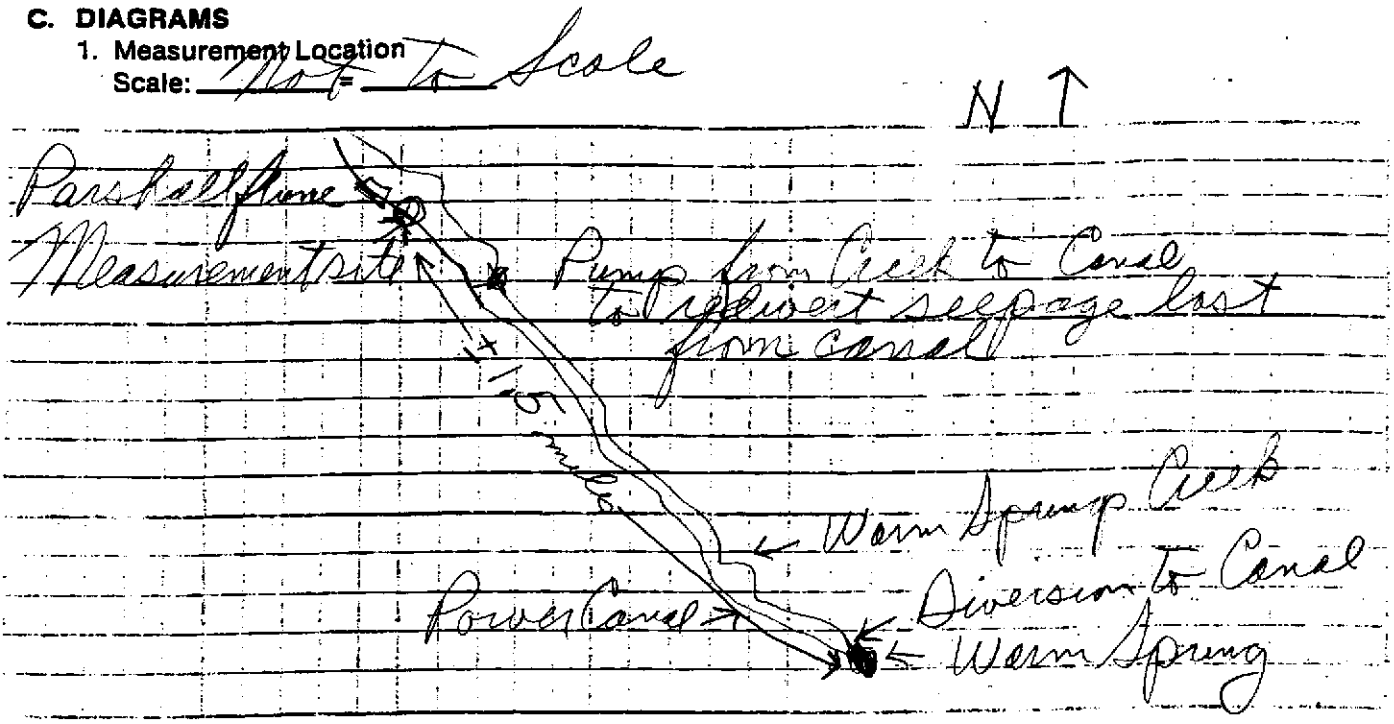
RECEIVED
NOV 5 1992

1.00 .99 .98 .97 .96 .94 .92 .90 .85

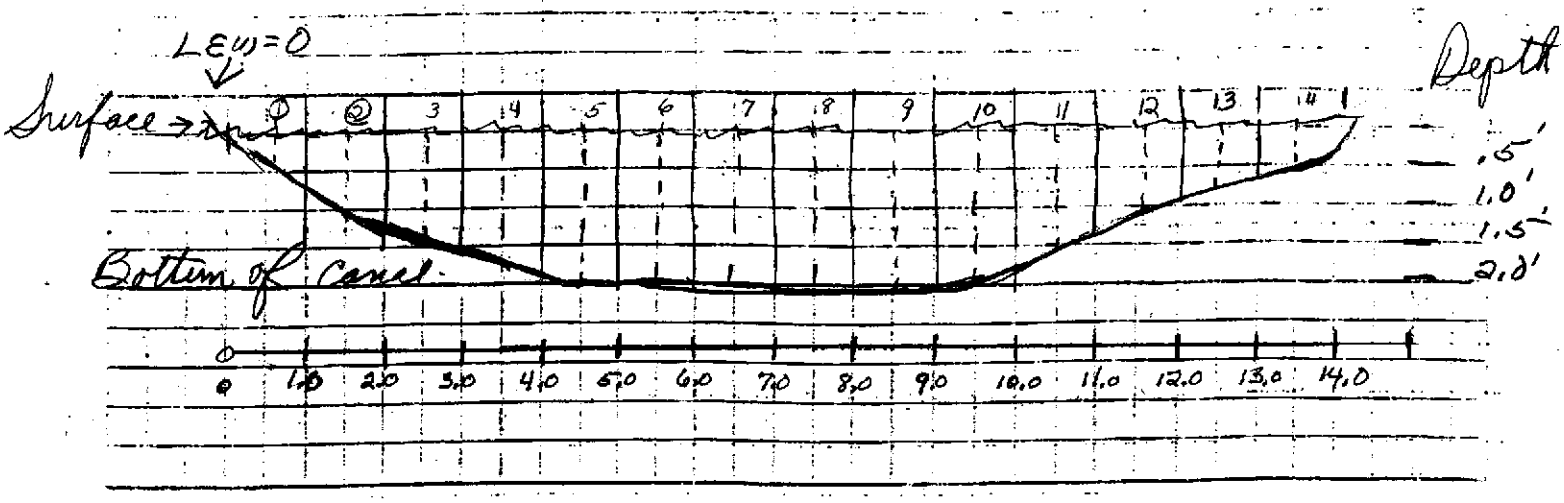
.10 .20 .30 .40 .50 .60 .70 .75 .80

C. DIAGRAMS

1. Measurement Location
Scale: Not to Scale



2. Cross-Section of Measurement
Scale _____ = _____



D. SUMMARY INFORMATION

1. Measurement rated ____ excellent X good ____ fair ____ poor
2. Remarks: Sunny clear day
3. Width: 14' Area: _____ Discharge in cubic feet per second: 20.02

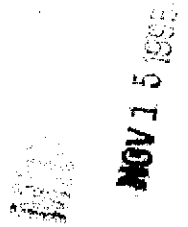
Mac Schuette
SIGNATURE OF PERSON CONDUCTING MEASUREMENT

DATE

NOV 1 5

NAME OF STREAM OR DITCH INGRAM UPPER POWER CANAL
LOCATION ---------- 30' UPSTREAM FROM FLUME
PURPOSE OF MEASUREMENT -- LICENSING EXAM
BASIS OF VELOCITY CALULATIONS
IF YOU ARE USING A PYGMY METER ENTER --------- 1
IF YOU ARE USING A AA METER ENTER ------------ 2
ENTRY ---- = 2
FOLLOWING THE LAST ENTRY IN:
"DISTANCE FROM INIT PT" ENTRY MUST = "END"

WATER RIGHT NUMBER IF APPLICABLE ----- 72-07375
AGENT CONDUCTING MEASUREMENT & DATE -- MTS 10-08-1992
ACCOMPANIED BY ---------- STEVE CLELLAND
PREMEASUREMENT SPIN TEST (MIN/SEC) --- OK
POST MEASUREMENT SPIN TEST (MIN/SEC) - OK/PPR



	ANGLE OF COEFFICIENT	DISTANCE FROM INIT PT	DEPTH IN FEET	CALC DEPTH END PTS	VELOCITY DATA 1ST MEASUREMENT REVS	1ST MEASUREMENT TIME/SEC	2ND MEASUREMENT REVS	2ND MEASUREMENT TIME/SEC	CALC WIDTH	AREA IN SQ FT	CALCULATED VELOCITY 1ST POINT VELOCITY	2ND POINT VELOCITY	MEAN VELOCITY	DISCHARGE IN CFS
INITIAL POINT		0.00		0.30					0.25	0.075			0.17	0.01
		0.50	0.60		9	60.0			0.75	0.450	0.35		0.35	0.16
		1.50	0.95		40	103.0			1.00	0.950	0.87		0.87	0.82
		2.50	1.40		40	75.0			1.00	1.400	1.18		1.18	1.66
		3.50	1.65		40	54.0			1.00	1.650	1.63		1.63	2.70
		4.50	2.00		40	88.0			1.00	2.000	1.01		1.01	2.02
		5.50	2.00		40	81.0			1.00	2.000	1.10		1.10	2.19
		6.50	2.10		40	74.0			1.00	2.100	1.20		1.20	2.52
		7.50	2.10		40	100.0			1.00	2.100	0.89		0.89	1.87
		8.50	1.95		40	76.0			1.00	1.950	1.17		1.17	2.28
		9.50	1.70		40	113.0			1.00	1.700	0.79		0.79	1.35
		10.50	1.25		40	103.0			1.00	1.250	0.87		0.87	1.08
		11.50	1.00		20	80.0			1.00	1.000	0.57		0.57	0.57
		12.50	0.75		20	63.0			1.00	0.750	0.71		0.71	0.53
		13.50	0.70		12	60.0			0.50	0.000	0.46		0.36	0.00
		END												19.75

72-07375



#7
Re-Diversion
Pump



#8
Parshall
flume

72-07375



#9
Parshall
flume

72-07375

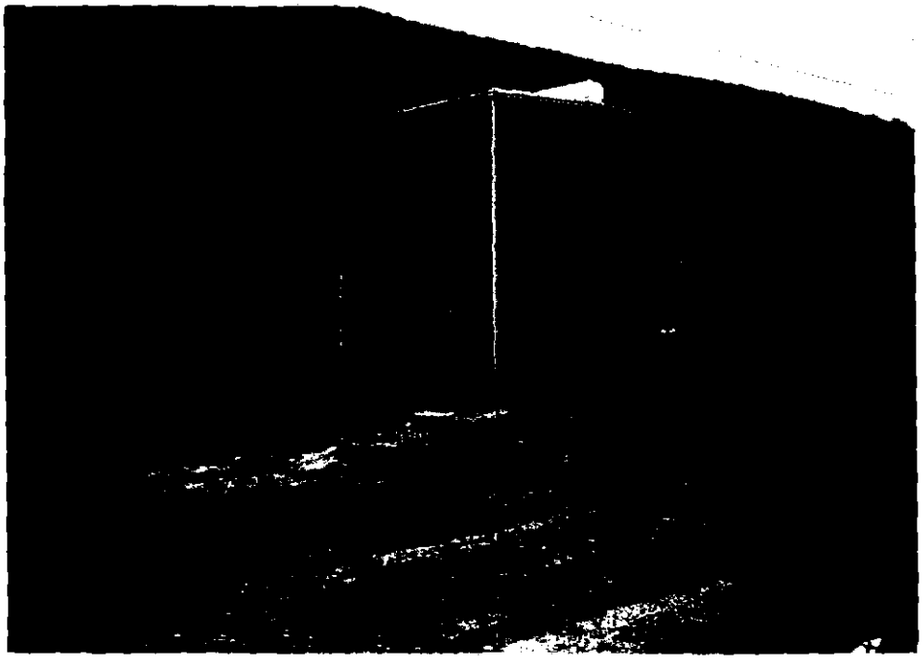


#5
Culvert returning water that has seeped from canal into creek. A pump in the creek is used to recapture the seepage water and return it to the diversion canal.

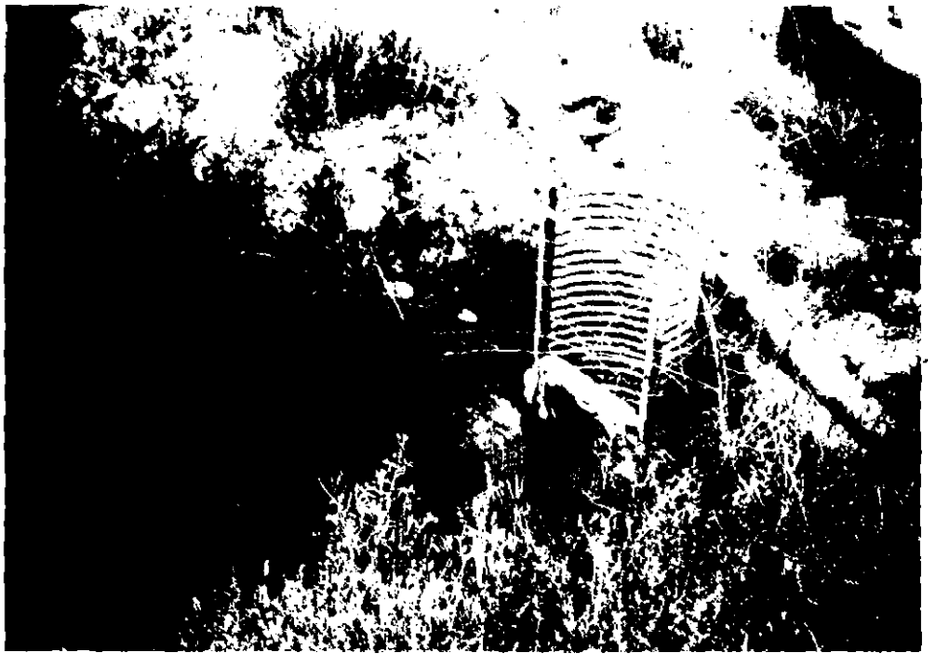


#6.
Headworks and penstock to the powerhouse.

12-07375



#3
Powerhouse containing turbine and generator



#4.
Overflow headgate to allow diversion from canal into Worms Spring Creek Channel.

72-07375

#1
P/D -
Warm Springs Creek



← Excavated Creek channel



#2
Measurement site above Parshall flume in diversion canal. This site is about 1½ miles downstream from the P/D

MEMORANDUM

TO: File No. 72-7419
FROM: Gary Spackman
DATE: October 11, 1990

RE: Correspondence of September 4, 1990

In response to my letter to Will Ingram dated September 4, 1990, Mr. Ingram called me, and discussed my concerns. First, he stated that, following the earthquake of 1984, that the flows from Warm Springs increased dramatically. The increase in the flow from the springs was the cause of the complaints of flooding downstream. Since that time, the springs have diminished to approximately their normal flow. He does not believe that the flooding question will be a problem.

The well proposed by application no. 72-7419 has already been drilled. It tapped the source of spring water. Mr. Ingram represents that when the warm water was encountered, the waters flowing from the spring became muddy. To date, Ingram's have not diverted water from the well itself, but may desire to do so in the future.

With respect to the question about use of the hot water for its heat value prior to using it for any other purpose, Mr. Ingram agreed that this well should not authorize diversion of water for irrigation in excess of the previous irrigation rights. As a result, the application should be conditioned, along with the conditions already recommended in the staff analysis sheet:

> Diversion of water pursuant to this permit does not authorize diversion of any more water than is collectively authorized for diversion pursuant to water right filings 72-7054A, 72-7054B, 72-7059, 72-7359, and 72-7375.

RECEIVED
NOV 15 1990

Bert WR2. 72-1372 72-7375

RECEIVED
NOV 28 1989
Department of Water Resources

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Ingram Warm Springs Ranch Partnership

Project No. 8498-007
Idaho

ORDER GRANTING EXTENSION OF TIME

(Issued November 22, 1989)

On October 28, 1989, Ingram Warm Springs Ranch Partnershi licensee for the Ingram Warm Springs Ranch Hydroelectric Proje requested a 60-day extension of October 17, 1989, deadline for submission of as-built exhibits A, F, and G in compliance with article 39. The reasons advanced by the licensee in support o the requested extension of time are reasonable and justify the extension.

The Director orders:

(A) The deadline for submission of as-built exhibits A, and G in compliance with article 39 of the license is extended December 18, 1989.

(B) This order is issued under authority delegated to th Director and is final unless appealed to the Commission under Rule 1902 within 30 days from the date of this order.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

DC-A-1

MICROFILMED
NOV 1 5 1989

December 31, 1988

138853

INGRAM WARM SPRINGS RANCH
H/C 61, BOX 3020
CHALLIS, ID 83226

PROOF DUE NOTICE

RE: PERMIT NO. 72-07375

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 March 1, 1989. (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 complete field examination report prepared by a certified water right examiner may be used to submit the required proof.

If you have not fully compeleted 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. If neither is received, the department will send you a lapse notice. Within sixty (60) days of the mailing of the lapse notice, the permit will no longer be of any force nor effect.

SINCERELY,

Rita Fleck
Secretary/Records Manager

Enclosures

MICROFILMED

FEB 09 1989

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

STATEHOUSE
BOISE, IDAHO 83720
(208) 334-4440
FEBRUARY 12, 1986

INGRAM WARM SPRINGS RANCH
H/C 61, BOX 3020
CHALLIS, ID 83226

PERMIT APPROVAL NOTICE

RE: PERMIT NO. 72-7375

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.

PLEASE BE ADVISED THAT PRIOR APPLICATIONS FOR PERMIT HAVE BEEN FILED TO APPROPRIATE WATER FROM YOUR SOURCE WHICH MAY IMPACT THE AVAILABILITY OF WATER TO BE USED UNDER THIS PERMIT. THEREFORE, YOU SHOULD BE SURE TO ANALYZE THE IMPACT OF THESE RIGHTS BEFORE MAKING A MAJOR INVESTMENT IN YOUR WATER USE PROJECT.

BE SURE TO NOTE THE SPECIAL CONDITION REQUIRING YOU TO INSTALL A MEASURING DEVICE, OR A FLOW MEASUREMENT PORT, OR TO PROVIDE A CERTIFIED MEASUREMENT OR COMPUTATION OF FLOW BASED UPON THE DESIGN OF THE SYSTEM TO BE PREPARED BY A PROFESSIONAL ENGINEER.

SINCERELY,

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

ORT: SC
ENCLOSURES

MICROFILMED

POWER CALCULATIONS FOR APPLICATION NO. 72-7375

proposed

P = Kilowatts .74 X hp

Q = cfs 100 cfs

H = feet 190'

e = efficiency

- ✓ 1.) Affidavit of Residency
- ✓ 2.) Ownership of Facilities
- ✓ 3.)*Financial Ability (see letter of 10/23/A)
- ✓ 4.) Feasibility of Project
  - a. Plans, drawings
  - b. Economic analysis
- App. for License Submitted - Lic. Issued 5.)*Compliance w/FERC

*only for projects of more than 25 cfs or more than 500 horsepower.

$P = \frac{QHe}{11.8} = \frac{80 \times 190 \times 90}{11.8} = \frac{13680}{11.8} = 1159.32 \approx 1159$ kilowatts at 90% e.

1/3/86 kw

$e = \frac{P(11.8)}{QH} = \frac{700\ (11.8)}{100 \times 190} = \frac{8260}{19{,}000} = 0.43$

$P = \frac{QHe}{11.8} = \frac{100 \times 190 \times 80\%}{11.8} = \frac{15200}{11.8} = 1288.135$ kW

$P = \frac{100 \times 190 \times 90\%}{11.8} = 1449.15$ kW

Based on the above calculations the proposed project must have an 90 % efficiency. ↗ per permit

****

OVERLAP REVIEW per terminal 11/9/84:

(P/D Sec) 72-7120 irr. - BLM
72-7209 fish } see for Dogsam
72-7359 irr. }
72-7365 irr. }

(P/U Sec) 72-2008 irr.
72-7054 irr.
72-0140A irr.
72-7359 irr.

BYPASSED AREA

MICROFILMED

Recommend L14 for overlapping rights.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

SOUTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

January 13, 1986

Ingram Warm Springs Ranch
H/C 61 - Box 3020
Challis, Idaho 83226

Re: Application(s) for Permit No. 72-7375

Gentlemen:

This letter is to advise you that we are proceeding with re-advertising of the above application(s) to advise the public that protests may be filed with respect to the public interest identified in Section 42-203C, of the IDAHO CODE, which became effective July 1, 1985.

The application(s) are otherwise in form for final action by the Department.

If no protests are received, final processing of the application(s) will proceed after this additional advertising step is completed.

If you have questions concerning this matter, please feel free to contact this office.

Very truly yours,

Loren O. Holmes
Southern Region Supervisor

LOH:marya

MICROFILMED

APPLICATION FOR WATER RIGHT

The following application(s) is (are) being advertised to allow all parties affected by the addition of the public interest criteria Sec. 42-203C, Idaho Code the opportunity to protest:

72-7375

INGRAM WARM SPRINGS RANCH
H/C 61, Box 3020, Challis, ID 83226
Source: WARM SPRINGS CREEK trib. to SALMON RIVER
Date Filed: 04/19/1984
Diversion Pt: NWSW Sec 10 T 12N R 20E
Use: Fish Prop. (100.00 CFS)
Power (100.00 CFS)
In: NENE NWNE Sec 32 T 13N R 20E

37-8198

RAVENSCROFT, VERNON F.
P.O. Box 893, Boise, ID 83701
Source: UNNAMED STREAM (SHOE-STRING DR) trib. to MALAD RIVER
Date Filed: 10/31/1984
Diversion Pt: SWNE NWNE Sec 32 T 06S R14E
Use: WILDLIFE STORAGE (150.0 AF)
In: NWNE SWNE SENE Sec 32 T 06S R 14E

36-7967

BLIND CANYON AQUA RANCH INC.
P.O. Box 218, Hagerman, ID 83332
Source: UNNAMED STREAM tributary to SNAKE RIVER
Date Filed: 02/24/1981
Amount: 25.00 CFS
Diversion Point: NWNE Sec 17 T 08S R 14E, Gooding, Ca.
Use: POWER (25.00 CFS) from 01/01 to 12/31
Place of Use: Lot 04 Sec 08 T 08S R 14E
Diversion Means: CHECK DAM, PENSTOCK & GENERATOR

Protests must be filed with the Director, Department of Water Resources, Southern Region, 1041 Blue Lakes Blvd. North, Twin Falls, Idaho 83301 on or before February 10, 1986.

A. KENNETH DUNN
Director

PUBLISH: **Thursdays,** January 23, and 30, 1986.

Affidavit of Publication

STATE OF IDAHO, }
COUNTY OF TWIN FALLS } ss.

№ 15890

I, Belinda Jean Capps being first duly sworn upon oath, depose and say that I am Legal Clerk of the TIMES-NEWS, published daily, at Twin Falls, Idaho, and do solemnly swear that a copy of the notice of advertisement, as per clipping attached, was published in the regular and entire issue of said newspaper, and not in any supplement thereof, for Two consecutive Weeks, commencing with the issue dated January 23, 1986, and ending with the issue dated January 30, 1986.

And I do further certify that said newspaper is a consolidation, effective February 16, 1942, of the Idaho Evening Times, published theretofore daily except Sunday, and the Twin Falls News, published theretofore daily except Monday, both of which newspapers prior to consolidation had been published under said names in said city and county continuously and uninterruptedly during a period of more than twelve consecutive months, and said TIMES-NEWS, since such consolidation, has been published as a daily newspaper except Saturday, until July 31, 1978, at which time said newspaper began daily publication under said name in said city and county continuously and uninterruptedly.

And I further certify that pursuant to Section 60-108 Idaho Code, Thursday of each week has been designated as the day on which legal notice by law or by order of any court of competent jurisdiction within the state of Idaho, to be published weekly, will be published; and that at the head of the editorial column of said combined newspapers, and in each issue thereof, Thursday is announced as the day on which said legal notices will be published.

Belinda Jean Capps

Subscribed and sworn to before me on this 30th day of January, 1986.

Notary Public in and for the County of Twin Falls, State of Idaho, residing at Twin Falls, Idaho

Proof of Publication
The Post-Register

State of Idaho,
County of Bonneville } ss.

I, J. Robb Brady, first being duly sworn, depose and say: That I am the Principal Clerk of The Post Company, a corporation of Idaho Falls, Bonneville County, Idaho, publishers of The Post-Register, a newspaper of general circulation, published daily, except Saturday, at Idaho Falls, Idaho; said Post-Register being a consolidation of the Idaho Falls Times, established in the year 1890, The Idaho Register, established in the year 1880 and the Idaho Falls Post, established in 1903, such consolidation being made on the 1st day of November, 1931, and each of said newspapers having been published continuously and uninterruptedly, prior to consolidation, for more than seventy-eighty (78) weeks and said Post-Register having been published continuously and uninterruptedly from the date of such consolidation, up to and including the last publication of notice hereinafter referred to.

That the notice, of which a copy is hereto attached and made a part of this affidavit, was published in said Post-Register for two consecutive weeks, first publication having been made on the 23rd day of January, 19 86, last publication having been made on the 30th day of January, 19 86, and that the said notice was published in the regular and entire issue of said paper on the respective dates of publication, and that such notice was published in the newspaper and not in a supplement.

J. Robb Brady

Subscribed and sworn to before me, this 31st day of January, 19 86

Notary Public

My commission expires September 30, , 19 88

B10, 1M,

NOTICE OF APPLICATION FOR WATER RIGHT

The following application(s) is (are) being advertised to allow all parties affected by the addition of the public interest criteria Sec. 42-203C, Idaho Code the opportunity to protest:

72-7375
INGRAM WARM SPRINGS RANCH
H/C 61, BOX 3020, CHALLIS, ID 83226
Source: WARM SPRINGS CREEK trib. to SALMON RIVER
Date Filed: 04/19/1984
Diversion Pt: NWSW Sec 10 T 12N R 20E
Use: FISH PROP. (100.00 CFS); POWER (100.00 CFS)
In: NENE NWNE Sec 32 T 13N R 20E

37-8198
RAVENSCROFT, VERNON F.
P.O. BOX 893, BOISE, ID 83701
Source: UNNAMED STREAM(SHOE-STRING DR) trib. to MALAD RIVER
Date Filed: 10/31/1984
Diversion Pt: SWNE NWNE Sec 32 T 06S R 14E
Use: WILDLIFE STORAGE (150.0 AF)
In: NWNE SWNE SENE Sec 32 T 06S R 14E

36-7967
BLIND CANYON AQUA RANCH INC.
P.O. BOX 218, HAGERMAN, ID 83332
Source: UNNAMED STREAM tributary to SNAKE RIVER
Date Filed: 02/24/1981
Amount: 25.00 CFS
Diversion Point: NWNE Sec 17 T 08S R 14E,
Use: POWER (25.00 CFS) from 01/01 to 12/31
Place of Use: LOT 04 Sec 08 T 08S R 14E
Diversion Means: CHECK DAM, PENSTOCK & GENERATOR.

Protests must be filed with the Director, Department of Water Resources, Southern Region, 1041 Blue Lakes Blvd. North, Twin Falls, Idaho 83301 on or before February 10, 1986.

A. KENNETH DUNN
Director

Published: January 23, 30, 1986

RECEIVED
FEB 4 1986
Department of Water Resources
Southern District Office

AFFIDAVIT OF PUBLICATION

State of Idaho. County of Custer. ss:

I. Margaret Parks

Publisher of the Challis Messenger. a weekly newspaper. published at Challis. Idaho. do solemnly swear that the notice hereto attached and made a part hereof. was published in the regular and entire issue of the Challis Messenger for 2 consecutive weeks. commencing with the issue dated January 23. 19 86 and ending with the issued dated January 30. 19 86

Margaret Parks

Subscribed and sworn to before me this 31 day of January 19 86

Ethel M. Peck

Notary Public. residing at Challis. Idaho. My commission expires on

Life

NOTICE OF APPLICATION FOR WATER RIGHT

The following application(s) is (are) being advertised to allow all parties affected by the addition of the public interest criteria Sec. 42-203C, Idaho Code the opportunity to protest:

72-7375

INGRAM WARM SPRINGS RANCH

H/C 61, BOX 3020, CHALLIS, ID 83226

Source: WARM SPRINGS CREEK trib. to SALMON RIVER

Date Filed: 04/19/1984

Diversion Pt.: NWSW Sec. 10 T 12N R 20E

Use: FISH PROP. (100.00 CFS) POWER (100.00 CFS)

In: NENE NWNE Sec. 32 T 13N R 20E

Protests must be filed with the Director, Department of Water Resources, Southern Region, 1041 Blue Lakes Blvd. North, Twin Falls, Idaho 83301 on or before February 10, 1986.

A. KENNETH DUNN
Director

Published: January 23 & 30. 1986.

RECEIVED
FEB 4 1986
Department of Water Resources
Southern District Office

RIBUNE PUBLISHING COMPANY, INC.
The Lewiston Morning Tribune
505 C St., P.O. Box 957
Lewiston, Idaho 83501
(208) 743-9411

Date 013086 INVOICE NO. LUUU66611

Account No. 44662

Description 66611NOTIC

LEGAL ADVERTISING
INVOICE

Times 2 Lines 60

Tab Lines

LD TO: STATE OF IDAHO
DEPART OF WATER RESOURCES
1041 BLUE LAKES BLVD.NO.
TWIN FALLS
ID 833001

$ 52.50

RECEIVED
FEB 3 1986
Department of Water Resources

NOTICE:This is an invoice of Purchase made by you. Statement will be rendered the first of the month unless Cash
Please Retain This Invoice as Your Statement Will Refer To Invoice by No. Only.

66611

NOTICE OF APPLICATION FOR WATER RIGHT

The following application(s) is (are) being advertised to allow all parties affected by the addition of the public interest criteria Sec. 42-203C, Idaho Code the opportunity to protest:

36-7967
BLIND CANYON AQUA RANCH INC.
P.O. BOX 218, HAGERMAN, ID 83332
Source: UNNAMED STREAM tributary to SNAKE RIVER
Date Filed: 02/24/1981
Amount: 25.00 CFS
Diversion Point: NWNE Sec 17 T 08S R 14E, GOODING Co.
Use: POWER (25.00 CFS) from 01/01 to 12/31
Place of Use: LOT 04 Sec 08 T 08S R 14E
Diversion Means: CHECK DAM, PENSTOCK & GENERATOR

37-8298
RAVENSCROFT, VERNON F.
P.O. BOX 893, BOISE, ID 83701
Source: UNNAMED STREAM (SHOE-STRING DR.) trib. to MALAD RIVER
Dated Filed: 10/31/1984
Diversion Pt: SWNE NWNE Sec 32 T 06S R 14E
Use: WILDLIFE STORAGE (150.0 AF)
In: NWNE SWNE SENE Sec 32 T 06S R 14E

72-7375
INGRAM WARM SPRINGS RANCH
H/C 61, BOX 3020, CHALLIS, ID 83226
Source: WARM SPRINGS CREEK trib. to SALMON RIVER
Date Filed: 04/19/1984
Diversion Pt: NWSW Sec 10 T 12N R 20E
Use: FISH PROP. (100.00 CFS)
POWER (100.00 CFS)
In: NENE NWNE Sec 32 T 13 N R 20E

Protests must be filed with the Director, Department of Water Resources, Southern Region, 1041 Blue Lakes Blvd. North, Twin Falls, Idaho 83301 on or before February 10, 1986.

A. KENNETH DUNN
Director

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO, ss.
County of Nez Perce

S. L. Stone, being duly sworn, deposes and says, I am the Legal Clerk of the Tribune Publishing Company, a corporation organized and existing under and by virtue of the laws of the State of Idaho, publishers of the LEWISTON MORNING TRIBUNE, a newspaper of general circulation published at Lewiston, Nez Perce County, Idaho; That the said Lewiston Morning Tribune is an established paper and has been published regularly and issued regularly at least once a day for more than 21 consecutive years next immediately preceding the first publication of this notice, and has been so published uninterrupted for said period; that the

NOTICE OF APPLICATION FOR WATER RIGHT

attached hereto and which is made a part of this affidavit was published in the said Lewiston Morning Tribune, 2 time(s). Publication being on 012386, or once a week for two consecutive weeks, the first publication thereof being on the 012386, and the last publication thereof being on the 013086, and said NOTICE OF APPLICATION FOR WATER RIGHT was so published in the regular and entire issue of said newspaper and not in a supplement thereof and was so published in every issue and number of the said paper, during the period and times of publication as set forth above.

S. L. Stone

SUBSCRIBED AND SWORN BEFORE ME THIS THE 31 day of January 1986

Notary Public in and for the State of Idaho, residing at Lewiston, therein.

The Idaho Statesman

P.O. BOX 40, BOISE, IDAHO 83707

LEGAL ADVERTISING INVOICE

Amount Due
57.51

Account Name	Account Number
ID Dept. Water Resources - Southern Region	#100632

Address	City/State	Zip
1041 Blue Lakes Blvd. North	Twin Falls, ID	83301

Ordered By	P.O. Number	Rate	Run Dates
Mary A. Newby		nt	Jan. 23, 30, 1986

Identification	Legal Number
Application 36-7967	#1128

1 Number of Affidavits Requested

RECEIVED
JAN 30 1986
Department of Water Resources
Southern District Office

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

Laura Gay Barnes being duly sworn, deposes and says: That she is the Principal Clerk of The Idaho Statesman, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto; that said notice was published in The Idaho Statesman in conformity with Section 60-108, Idaho Code as amended, for Two (2) ☒ consecutive weekly ☐ consecutive daily ☐ single ☐ odd skip insertion(s) beginning with the issue of January 23, 1986, and ending with the issue of January 30, 1986.

Laura Gay Barnes

Subscribed and sworn to before me this 30th day of January 1986

Jeanne M Hawke
Notary Public for Idaho, Residing at Boise, Idaho.

affected by the addition of the public interest criteria Sec. 42-203C, Idaho Code, the opportunity to protest:

36-7967

Blind Canyon Aqua Ranch Inc.
P.O. Box 218
Hagerman, ID 83332
Source: Unnamed Stream Tributary to Snake River
Date Filed: 2/24/1981
Amount: 25.00 CFS
Diversion Pt: NWNE Sec. 17 T 08S R 14E, Gooding Co.
Use: Power (25.00 CFS) From 01/01 to 12/31
Place of Use: Lot 04 Sec. 08 T 08S R 14E
Diversion Means: Check Dam, Penstock & Generator

37-8193

Ravenscroft, Vernon F.
P.O. Box 693
Boise, ID 83701
Source: Unnamed Stream (Shoe-String Drive) trib. to Malad River
Date Filed: 10/31/1984
Diversion Pt: SWNE NWNE Sec. 32 T 06S R 14E
Use: Wildlife Storage (150.0 AF) In: NWNE,SWNE SENE Sec. 32 T 06S R 14E

72-7375

Ingram Warm Springs Ranch
H/C 61, Box 3020
Challis, ID 83226
Source: Warm Springs Creek trib. to Salmon River
Date Filed: 04/19/1984
Diversion Pt: NWSW Sec. 10 T 12N R 20E
Use: Fish Prop. (100.00 CFS)
Use: Power (100.00 CFS)
In: NENE NWNE Sec. 32 T 13N R 20E

Protests must be filed with the Director, Department of Water Resources, Southern Region, 1041 Blue Lakes Blvd. North, Twin Falls, Idaho 83301, on or before February 10, 1986.

A. KENNETH DUNN
Director

Pub. Jan. 23, 30, 1986 1128

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

SOUTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

January 6, 1986

Custer Publishing Co.
P. O. Box 405
Challis, Idaho 83226

Gentlemen:

Enclosed you will find a legal notice which we wish to have published once a week for two consecutive weekly issues of your newspaper. We have inserted the publication dates allowing ample time for you to submit us a galley proof for review before publication.

After sending us a galley proof, proceed with the publication on the dates we have inserted, assuming the notice is correct. If we have any corrections, we will notify you before the first publication. If you cannot publish the notice on the proposed dates, please contact us immediately.

In order to receive payment, an affidavit of publication must be submitted to the Department along with the publication bill.

Very truly yours,

Mary A. Newby
Sec/Office Coord.

Encl:

MICROFILMED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
SOUTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

January 6, 1986

Post Register
P. O. Box 1800
Idaho Falls, Idaho 83402

Gentlemen:

Enclosed you will find a legal notice which we wish to have published once a week for two consecutive weekly issues of your newspaper. We have inserted the publication dates allowing ample time for you to submit us a galley proof for review before publication.

After sending us a galley proof, proceed with the publication on the dates we have inserted, assuming the notice is correct. If we have any corrections, we will notify you before the first publication. If you cannot publish the notice on the proposed dates, please contact us immediately.

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Sec/Office Coord.

Encl:

MICROFILMED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

SOUTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

January 6, 1986

Lewiston Morning Tribune
505 C Street
Lewiston, Idaho 83501

Gentlemen:

Enclosed you will find a legal notice which we wish to have published once a week for two consecutive weekly issues of your newspaper. We have inserted the publication dates allowing ample time for you to submit us a galley proof for review before publication.

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Encl:

MICROFILMED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
SOUTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

January 6, 1986

Idaho Statesman
Box 40S
Boise, Idaho 83707

Gentlemen:

Enclosed you will find a legal notice which we wish to have published once a week for two consecutive weekly issues of your newspaper. We have inserted the publication dates allowing ample time for you to submit us a galley proof for review before publication.

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Encl:

MICROFILMED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

SOUTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

January 6, 1986

Times News
P. O. Box 548
Twin Falls, Idaho 83301

Gentlemen:

Enclosed you will find a legal notice which we wish to have published once a week for two consecutive weekly issues of your newspaper. We have inserted the publication dates allowing ample time for you to submit us a galley proof for review before publication.

After sending us a galley proof, proceed with the publication on the dates we have inserted, assuming the notice is correct. If we have any corrections, we will notify you before the first publication. If you cannot publish the notice on the proposed dates, please contact us immediately.

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Very truly yours,

Mary A. Newby
Sec/Office Coord.

Encl:

MICROFILMED

NOTICE OF APPLICATION FOR WATER RIGHT

The following application(s) is (are) being advertised to allow all parties affected by the addition of the public interest criteria Sec. 42-203C, Idaho Code the opportunity to protest:

22-2325

INGRAM WARM SPRINGS RANCH

H/C 61, BOX 3020, CHALLIS, ID 83226

Source: WARM SPRINGS CREEK trib. to SALMON RIVER

Date Filed: 04/19/1984

Diversion Pt: NWSW Sec 10 T 12N R 20E

Use: FISH PROP. (100.00 CFS)
POWER (100.00 CFS)

In: NENE NWNE Sec 32 T 13N R 20E

Protests must be filed with the Director, Department of Water Resources, Southern Region, 1041 Blue Lakes Blvd. North, Twin Falls, Idaho 83301 on or before Februrary 10, 1986.

A.KENNETH DUNN
Director

Published: Idaho Statesman on Jan 23 and 30, 1986
Lewiston Morning Tribune Jan 23 and 30, 1986
Post Register Jan 23 and 30, 1986 called 2/3/86
Times News Jan 23 and 30, 1986
Custer Publishing Co. Jan 23 and 30, 1986

MICROFILMED

72-7375
INGRAM WARM SPRINGS RANCH
H/C 61, BOX 3020, CHALLIS, ID 83226
Source: WARM SPRINGS CREEK trib. to SALMON RIVER
Date Filed: 04/19/1984
Diversion Pt: NWSW Sec 10 T 12N R 20E
Use: FISH PROP. (100.00 CFS)
POWER (100.00 CFS)
In: NENE NWNE Sec 32 T 13 N R 20E
Protests must be filed with the Director, Department of Water Resources, Southern Region, 1041 Blue Lakes Blvd. North, Twin Falls, Idaho 83301 on or before February 10, 1986.

A. KENNETH DUNN
Director

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Source: WARM SPRINGS CREEK trib. to SALMON RIVER
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Diversion Pt.: NWSW Sec. 10 T 12N R 20E
Use: FISH PROP. (100.00 CFS)
POWER (100.00 CFS)
In: NENE NWNE Sec. 32 T 13N R 20E
Protests must be filed with the Director, Department of Water Resources, Southern Region, 1041 Blue Lakes Blvd. North, Twin Falls, Idaho 83301 on or before February 10, 1986.

A. KENNETH DUNN
Director

Published: January 23 & 30, 1986.

¾3540 LEGL XX Slug
010.2 IN 01¾

legal for thurs. PROOF TO STORE!

NOTICE OF APPLICATION FOR WATER RIGHT

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INGRAM WARM SPRINGS RANCH
H/C 61, Box 3020, Challis, ID 83226
Source: WARM SPRINGS CREEK trib. to SALMON RIVER
Date Filed: 04/19/1984
Diversion Pt: NWSW Sec 10 T 12N R 20E
Use: Fish Prop. (100.00 CFS)
Power (100.00 CFS)
In: NENE NWNE Sec 32 T 13N R 20E

MEMO

Date: 12-9-85
TO: File 72-7375
FROM: L. Glen Saxton
Re: Capacity determination of permit.

I called Ted Sorensen today relative to the rate of div for the proposed upper hydro site (72-7375). He advised that the rate of div for the upper site should be 80 cfs rather than the 100 cfs applied for. This appears reasonable since this issued permit for the lower site (72-7372) is for 80 cfs rather than the 100 cfs applied for.

app 72-7375 should be approved allowing a rate of div of 80 cfs.

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72-7372 permit
72-7375 app

33 FERC ¶ 62,248

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Ingram Warm Springs Ranch Partnership) Project No. 8498-000

ORDER ISSUING LICENSE (MAJOR)
(Issued November 21, 1985)

On August 6, 1984, the Ingram Warm Springs Ranch Partnership (Applicant), a general partnership formed under the laws of the State of Idaho, filed an application for a license to construct, operate and maintain the proposed Ingram Warm Springs Ranch Hydroelectric Project No. 8498. The project would be located on Warm Springs Creek, a tributary to the Salmon River, near Challis, in Custer County, Idaho. The project would occupy U.S. lands administered by the Bureau of Land Management, Department of the Interior.

Public notice of the application has been given, and comments have been received from interested Federal, state and local agencies. On April 8, 1985, the Nez Perce Tribe (Tribe) petitioned to intervene on the project but withdrew its objections on July 17, 1985. On April 8, 1984, Mr. G. C. Westergard filed a protest to the issuance of the license. The significant concerns raised in the various letters of comments and protest are discussed below.

PROJECT DESCRIPTION

The proposed project would involve two power developments. The upper development would consist of a 6-foot-high earthern diversion structure, a 20,000-foot-long earthern canal, a 750-foot-long steel penstock, a concrete stilling basin, a powerhouse containing a single generating unit with an installed capacity of 1,100 kW, a tailrace discharging water into the lower development and a 550-foot-long transmission line. The lower development would consist of a 23,600-foot-long earthern canal, a concrete stilling basin, a 9,000-foot-long steel penstock, a powerhouse containing a single generating unit with an installed capacity of 1,845 kW and a 50-foot-long transmission line. The total installed capacity of the project would be 2,945 kW. The project would be operated run-of-river. Ordering paragraph B contains a more detailed description of the proposed project.

ENVIRONMENTAL CONSIDERATIONS

Cumulative Environmental Analysis

The Commission staff is in the process of evaluating the environmental consequences of multiple hydropower developments on the environmental resources in the Salmon River Basin using the

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DEC 2 1985
Department of Water Resources

Cluster Impact Assessment Procedure (CIAP). 1/ As part of the Geographic Sort Phase of the Salmon River Basin CIAP, Commission staff examined the Ingram Warm Springs Ranch Project to determine if it should be included in a cumulative environmental analysis of multiple hydropower development in the river basin.

The Ingram Warm Springs Ranch Project is located in the extreme eastern portion of the Salmon River Basin, more than 100 miles from any other proposed project in the basin. The project is located on a creek deriving from natural thermal springs that, before October 1983, had a flow averaging less than 15 cubic feet per second (cfs). After an earthquake in October 1983, flow increased to approximately 70 cfs. This increased flow has caused severe channel erosion and an increased sediment load to the Salmon River.

Because the Salmon River is an important salmon and steelhead trout spawning and rearing area, this increased sediment load is likely to have adverse effects on salmon and steelhead production in the Salmon River. The records for the Ingram Warm Springs Ranch Project have been reviewed, and it has been established that construction of the diversion structure for the proposed hydropower development would greatly alleviate the existing sedimentation problem. The pertinent state and Federal resource agencies agree with this conclusion.

There are no important fish resources in Warm Springs Creek due to the naturally high water temperatures (up to 95 degrees Fahrenheit). It is believed that the project would have no other impacts on important fish species occurring downstream on the Salmon River. Written testimony has been received from the U.S. Fish and Wildlife Service (FWS), the Idaho Department of Fish and Game (IDFG) and the National Marine Fisheries Service (NMFS), who are unanimous in their opinion that the project would not adversely affect fish resources in the basin.

It is believed that no significant adverse impacts to wildlife would result from development of the project if antelope crossings are installed and an adequate minimum flow maintained. The IDFG, in submitted comments, concurs with this conclusion.

1/ Commission Directive to Staff, issued April 24, 1985, Docket No. EL85-19-000.

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The Ingram Warm Springs Ranch Project would not have significant adverse cumulative impacts on resources of the Salmon River Basin. Therefore, the Ingram Warm Springs Ranch project will be excluded from further consideration relative to cumulative impacts within the Salmon River Basin CIAP. 2/

Erosion, Sedimentation, and Slope Stability

The FWS, NMFS, IDFG, and the Bureau of Land Management (BLM) state that the project could benefit anadromous fish resources in the Salmon River by reducing the sediment input to the river from channel erosion in Warm Springs Creek.

The IDFG also recommends that disturbed areas be revegetated, and states that an erosion control plan should be submitted to IDFG for approval prior to construction. Erosion control measures recommended by the Soil Conservation Service (SCS) for the canal include rock riprap lining, rock riprap drops, and rock stilling basins at culvert outlets.

Construction activities would cause localized erosion and sedimentation. Article 33 requires the Licensee in consultation with SCS, IDFG, and BLM, to prepare a detailed plan to control erosion, sedimentation, and minimize the quantity of sediment resulting from project construction and operation.

Minimum Flow

The IDFG states that a minimum flow should be maintained in the upper portion of Warm Springs Creek in order to maintain a riparian zone with running water. The minimum flow should be adequate to provide water for wildlife and nongame mammal use, and to promote establishment of vegetation in the eroded areas of the stream. The flow should, however, be small enough to reduce channel head cutting and siltation. IDFG also states that the actual flow needed will have to be established in consultation with the IDFG following project start-up. Therefore, the Applicant will, during initial project operation and in cooperation with the IDFG, conduct tests to determine the minimum flow needed to meet the criteria of the IDFG. Article 34 requires the Licensee to conduct a study to determine the minimum flow needed in the main channel of Warm Springs Creek to provide for wildlife and vegetation needs.

2/ See Cluster Impact Assessment Procedure Geographic Scoping Phase; Environmental Assessment for the Salmon River Basin, Docket No. EL-19-103, dated August 15, 1985. This document is available in the Division of Public Information and in the Commission public file associated with the docket.

Wildlife Resources

The project area is used by pronghorn antelope for fawning, rearing, and foraging. The project canals have the potential to hinder the movement of antelope through the project area. The IDFG recommends that three canal crossing sites be installed. The Applicant agrees to install the recommended wildlife crossings and filed design drawings of the wildlife crossings.

The installation of the wildlife crossings are necessary to protect resident antelope and other wildlife species. The Applicant's design drawings of wildlife crossings over the canal are approved in the order and made part of the license.

The IDFG also recommends that the penstocks should be designed to prevent interference with wildlife movement. Although the Applicant states that burial of the penstock is likely, there is no assurance that the penstock will be buried. Therefore, to prevent interference of wildlife movement through the project area, Article 35 requires the Licensee to install adequate wildlife passageways.

The IDFG, further, recommends that the transmission lines be designed to avoid electrocution of raptors and that disturbed areas should be revegetated. These measures are necessary to ensure that the project does not adversely affect wildlife resources and are required by Article 35.

Cultural Resources

No known archeological or historic sites will be affected by the project. Article 36 requires the protection of archeological or historic sites in the event that such sites are discovered during construction, and in the event of any future construction at the project.

Columbia River Basin Fish and Wildlife Program

Pursuant to Section 4(h) of the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (PNEPPCA), Pub. L. No. 96-501, the Northwest Power Planning Council (NPPC) developed the Columbia River Basin Fish and Wildlife Program (Program) to protect, mitigate, and enhance fish and wildlife resources affected by the development and operation of hydroelectric projects on the Columbia River and

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its tributaries. Section 4(h) states that responsible Federal agencies should exercise their responsibilities to provide equitable treatment for fish and wildlife resources with other purposes for which hydropower is developed. It further states that these agencies shall take into account to the fullest extent practicable the Program adopted thereunder. Agencies are directed to consult with Federal and state fish and wildlife agencies, appropriate Indian Tribes, and affected project operators in carrying out the provisions of this paragraph.

The Commission's regulations require applicants to initiate pre-filing consultation with these entities and provide post-filling opportunities to review and comment on the application. These consultations have occurred in this case. The Commission has also given public notice and solicited comments on the application.

Section 1200 of the Program provides a framework for assessing and mitigating the impacts of new hydroelectric development on fish and wildlife resources and lists a number of mitigative measures that should be implemented. The relevant Federal and state fish and wildlife agencies, and the Nez Perce Tribe state that there are no important fish resources in Warm Springs Creek. However, the license provides for a study to determine the instream flows to protect vegetation and for wildlife use, raptor protection measures, and revegetation of disturbed areas, and is consistent with Section 1200.

Article 37 of the license reserves to the Commission the authority to require future alterations in project structures and operations in order to take into account to the fullest extent practicable NPPC's Program.

Therefore, the issuance of this license is consistent with the PNEPPCA Act and the Program developed thereunder.

FINDING OF NO SIGNIFICANT IMPACT

The project would result in the loss of approximately 40 acres of grass and shrub habitat and the loss or displacement of wildlife species that use the habitat. The project would, however, significantly reduce the heavy silt loads currently flowing into the Salmon River from Warm Springs Creek and thereby reduce or eliminate the adverse impacts from elevated levels of suspended sediments on the anadromous and resident fish fauna of the Salmon River. Implementation of measures required by the license articles would ensure that project operation would reduce impacts to vegetation and wildlife.

No Federally listed threatened or endangered species would be affected by the project. Similarly, no cultural resources listed or eligible for listing in the National Register of Historic Places would be affected.

Water Quality certification, required by Section 401 of the Clean Water Act, was issued by the State of Idaho Department of Health and Welfare on September 6, 1984.

In accordance with the National Environmental Policy Act of 1969, an Environmental Assessment 3/ was prepared for the Ingram Warm Springs Ranch Project (FERC No. 8498). On the basis of the record and Staff's independent analysis, issuance of the license for the project, as conditioned herein, will not constitute a major Federal action significantly affecting the quality of the human environment.

ENGINEERING CONSIDERATIONS

Safety and Adequacy

On April 8, 1985, Mr. G. C. Westergard filed a protest concerning impacts that the proposed project could have on downstream property during the winter months. Mr. Westergard states that the project would cause icing and subsequent flooding, which would impact downstream property. The Applicant has provided a report to rebut the protest. Staff has analyzed the protest and the report and it is concluded that the project will not cause freezing of water below the project. Likewise the proposed structures would impound an insignificant amount of water and their failure would not endanger downstream life or property. The project structures would be safe if constructed using sound engineering practices and upon compliance with the articles of this license. Article 38 requires the Licensee to submit construction contract drawings and specifications 60 days prior to the start of construction.

3/ Environmental Assessment, Ingram Warm Springs Ranch Project, FERC No. 8498 -- Idaho, September 5, 1985, prepared by the Division of Environmental Analysis, Office of Hydropower Licensing, Federal Energy Regulatory Commission. This document is available in the Division of Public Information and in the Commission's public file associated with the project.

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Economic Feasibility

The project would generate an estimated 16.8 million kWh annually. The applicant proposes to sell the project power to the Utah Power and Light Company. Utah Power and Light Company (UP&L) has advised the Commission that it intends to enter into a power purchase agreement with the Applicant for the power produced from the Ingram Warm Springs Ranch Project. Salmon River Electric Cooperative will wheel the power from the project to an interconnection point with transmission facilities of the Bonneville Power Administrative (BPA). BPA will, in turn, wheel the power to UP&L. The project is economically feasible based upon sale of project power at the 35-year-term schedule of energy purchase and the anticipated variable energy rate of Utah Power and Light Company.

OTHER ASPECTS OF COMPREHENSIVE DEVELOPMENT

The project will make good use of the flow and fall of the Warm Springs Creek, and is not in conflict with any existing or planned development of the basin. Upon compliance with the terms and conditions of the license, the project will be best adapted to a comprehensive plan of development of the waterway for beneficial purposes.

The Director of the Office of Hydropower Licensing or the Director's designee, under 18 C.F.R. § 375.314, orders:

(A) This license is issued to the Ingram Warm Springs Ranch Partnership (Licensee), under Part I of the Federal Power Act (Act) for a period of 50 years, effective the first day of the month in which this order is issued, for the construction, operation, and maintenance of the Ingram Warm Springs Ranch Hydroelectric Project No. 8498 located on Warm Springs Creek, in Custer County, Idaho. This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license and subject to the regulations the Commission issues under the provisions of the Act.

(B) The Ingram Warm Springs Ranch Hydroelectric Project No. 8498 consists of:

(1) All lands, to the extent of the Licensee's interests in those lands, constituting the project area and boundary are shown and described by a certain exhibit that forms part of the

application for license and that is designated and described as:

EXHIBIT	FERC DRAWING NO. 8498-	TITLE
G-3	8498- 9	Project Boundary
G-5	8498-10	Plan and Profile Upper Site
G-6	8498-11	Plan and Profile Lower Site

(2) Project works consisting of an upper development and a lower development. The upper development consisting of: (1) a 6-foot-high earthern diversion structure on Warm Springs Creek at elevation 5,630 feet; (2) a 20,000-foot-long, 5.5-foot-deep trapezoidal earthern canal; (3) a 10-foot-high, 42-foot-long concrete stilling basin; (4) a 750-foot-long, 42-inch-diameter steel penstock; (5) a concrete powerhouse at elevation 5,440 feet containing a single generating unit with an installed capacity of 1,100 kW at a head of 170 feet; (6) a tailrace discharging water into a second canal for the lower development; (7) a switchyard; (8) a 500-foot-long, 25-kV transmission line.

The lower development consisting of: (1) a 23,600-foot-long, 5.5-foot-deep trapezoidal earthern canal; (2) a 10-foot-high, 42-foot-long concrete stilling basin; (3) a 9,000-foot-long, 42-inch-diameter steel penstock; (4) a concrete powerhouse at elevation 5,085 feet containing a single generating unit with an installed capacity of 1,845 kW at a head of 320 feet; (5) a tailrace discharging water into an existing channel constructed by the U.S. Army Corps of Engineers; (6) a switchyard; and (7) a 50-foot-long, 25-kV transmission line.

The location, nature, and character of these project works are generally shown and described by the exhibit cited above and more specifically shown and described by the following exhibits that also form a part of the application for license and that are designated and described as:

Exhibit A - Pages 8 through 11 of the license application, filed August 6, 1984.

Exhibit	FERC Drawing No.	Title
F-3	8498-3	Diversion Dike
F-4	8498-4	Powerhouse Layout
F-6	8498-6	Intake Structure Plan and Section

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Exhibit E - The design drawing entitled "Big Game Animal Crossing" and the map showing the locations of the crossing sites, filed on December 3, 1984.

(3) All of the structures, fixtures, equipment, or facilities used or useful in the operation or maintenance of the project and located within the project boundary, all portable property that may be employed in connection with the project, located within or outside the project boundary, as approved by the Commission, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits A, E, F, and G, as designated in ordering paragraph B above, are approved and made a part of the license only to the extent that they show the general location and nature of the project and except as modified by the license articles below.

(D) This license is also subject to the terms and conditions set forth in form L-2, revised October 1975, entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States" designated as Articles 1 through 32, attached to and made a part of this license and also subject to the terms and conditions in the following articles:

Article 33. Licensee shall after consultation with the Soil Conservation Service, Idaho Department of Fish and Game, and Bureau of Land Management, prepare and file with the Commission, within 1 year from the date of issuance of this license, a plan to control erosion, dust, and slope stability, and to minimize the quantity of sediment or other potential water pollutants resulting from construction and operation of the project, including spoil disposal areas. The plan shall also include: (1) functional design drawings and map locations of control measures; (2) an implementation schedule; (3) monitoring and maintenance programs for project construction and operation; and (4) provisions for periodic review of the plan and for making any necessary revisions to the plan. Documentation of agency consultation on the plan and copies of any agency comments or recommendations shall be included in the filing.

In the event that the Licensee does not concur with any agency recommendations, Licensee shall provide a discussion of the reasons for not concurring based on actual site geological, soil, and groundwater conditions. The Commission reserves the right to require changes to the plan. Unless the Director, Office of

Hydropower Licensing, directs otherwise, the Licensee may commence ground disturbing or spoil-producing activities at the project 90 days after filing the above plan.

Article 34. Licensee shall, after consultation with the Idaho Department of Fish and Game and the U.S. Fish and Wildlife Service, develop an instream flow study plan for the Ingram Warm Springs Ranch Project on Warm Springs Creek to determine the minimum flow needed to: (1) provide water for wildlife and nongame mammal use; and (2) maintain a riparian zone and promote reestablishment of vegetation in the eroded area of the stream. Within 6 months from the date of issuance of this license, Licensee shall file, with copies to the agencies consulted, the flow study plan, and a schedule for study completion, with the Commission for approval. Documentation of agency consultation on the study plan shall be included in the filing.

Licensee shall conduct the flow study as approved by the Commission and in accordance with the schedule. Within three months from the date of completion of the study, Licensee shall file, with copies to the agencies consulted, a report on the results of the study, and for Commission approval, recommendations for minimum flow releases from the project. Documentation of agency consultation on the report and recommendations shall be included in the filing.

Article 35. Licensee shall, after consultation with the U.S. Fish and Wildlife Service and the Idaho Department of Fish and Game, and within 6 months from the date of issuance of this license, file for Commission approval a wildlife mitigative plan that includes specific plans to: (1) revegetate disturbed areas with plant species beneficial to wildlife as soon as practicable after construction; (2) design transmission lines in accordance with guidelines in "Suggested Practices for Raptor Protection on Power Lines -- the State of the Art in 1981", Raptor Research Report No. 4, Raptor Research Foundation, Inc., 1981; and (3) ensure that the penstock does not hinder the movement of wildlife. An implementation schedule and agency comments on the adequacy of the plan shall be included in the filing. The Licensee shall implement the plan as approved by the Commission.

Article 36. Licensee shall, prior to any future construction at the project, consult with the Idaho State Historic Preservation Officer (SHPO) and the Bureau of Land Management (BLM) about the need for cultural resource survey and salvage work. Documentation of the nature and extent of consultation, including a cultural resources management plan and a schedule to conduct any necessary

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investigation prior to such construction, and a copy of a letter from the SHPO accepting the plan, shall be filed with the Commission within 6 months of any construction activity in the location of such investigations. Licensee shall make available funds in a reasonable amount for any such work as required. If any previously unrecorded archeological or historic sites are discovered during the course of construction or development of any project works or other facilities at the project, construction activity in the vicinity shall be halted, a qualified archeologist shall be consulted to determine the significance of the sites, and Licensee shall consult with the SHPO and the BLM to develop a mitigative plan for the protection of significant archeological or historic resources. If Licensee, the BLM and the SHPO cannot agree on the amount of money to be expended on archeological or historical work related to the project, the Commission reserves the right to require Licensee to conduct, at its own expense, any such work found necessary.

Article 37. The Commission reserves the authority to order, upon its own motion or upon the recommendation of Federal or state fish and wildlife agencies or affected Indian Tribes, alterations of project structures and operations to take into account to the fullest extent practicable at each relevant stage of the decision-making process the regional fish and wildlife program developed and amended pursuant to the Pacific Northwest Electric Power Planning and Conservation Act.

Article 38. The Licensee shall provide one copy to the Commission's Regional Engineer and two copies to the Director, Division of Inspections, the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouses, and water conveyance structures, at lease 60 days prior to start of construction. The Director, Division of Inspections may require changes in the plans and specifications to assure a safe and adequate project.

Article 39. The Licensee shall, within 90 days of completion of construction, file for Commission approval revised Exhibits A, F, and G to describe and show the project as-built.

Article 40. The Licensee shall commence construction of project works within two years from the issuance date of the license and shall complete construction of the project within four years from the issuance date of the license.

Article 41. The Licensee shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations is consistent with the approved

design. At least 30 days prior to start of construction of the cofferdam, the Licensee shall provide to the Commission's Regional Engineer and Director, Division of Inspections, one copy of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

Article 42. The Licensee shall pay the United States the following annual charges:

(a) For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable annual charge as determined by the Commission in accordance with the provisions of its regulations, in effect from time to time. The authorized installed capacity for such purposes is 3930 horsepower.

(b) For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 520 acres of its lands, a reasonable annual charge as determined in accordance with its regulations in effect from time to time.

Article 43. (a) In accordance with the provisions of this article, the Licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The Licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the Licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the Licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) noncommercial piers, landings, boat docks, or similar structures and facilities

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that can accommodate no more than 10 water craft at a time and where said facility is intended to serve singlefamily type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable State and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary State and Federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the Licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The Licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary State and Federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary Federal and State water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary Federal and State approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the Licensee must file a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any Federal or State agency official consulted, and any Federal or State approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the Licensee to file an application for prior approval, the Licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraphs (c) or (d) of this article:

(1) Before conveying the interest, the Licensee shall consult with Federal and State fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the Licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

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(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the Licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

Article 44. Pursuant to Section 10(d) of the Act, after the first 20 years of operation of the project under the license the rate as computed below shall be the specified rate of return on the project for the establishment and maintenance of amortization reserves. One-half of the project surplus earnings, if any, accumulated after the first 20 years of operation under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account as of the end of each fiscal year: Provided, that, if and to the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year or years after the first 20 years of operation under the license, the amount of such deficiency shall be deducted from the amount of any surplus earnings accumulated thereafter until absorbed, and one-half of the remaining surplus earnings, if any, thus cumulatively computed, shall be set aside in the project amortization reserve account; and the amounts thus established in the project amortization reserve account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the weighted cost components of long-term debt, preferred stock, and the cost of common equity, as defined herein. The weighted cost component for each element of the reasonable rate of return is the product of its capital ratios and cost rate. The current capital ratios for each of the above elements of the rate of return shall be calculated annually based on an average of 13 monthly balances of amounts properly includable in the Licensee's Commission's Uniform System of Accounts. The cost rates for such ratios shall be the weighted average cost for long-term debt and preferred stock for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (40 basis points).

(E) This order is final unless appealed to the Commission by any party within 30 days from the issuance date of this order under 18 C.F.R. 385.1902 (1985). The Licensee's failure to file an application for rehearing shall constitute acceptance of this license. In acknowledgment of acceptance of this license and its terms and conditions, it shall be signed for the Licensee and returned to the Commission within 60 days from the date this order is issued.

Kenneth M. Pusateri
Acting Director, Office of
Hydropower Licensing

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IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this order, Ingram Warm Springs Ranch Partnership; this day of _____, 19____, has caused _____ their name to be signed hereto.

By_____
General Partner

Attest:

_____

(Executed in quadruplicate)

Form L-2
(Revised October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR UNCONSTRUCTED MAJOR PROJECT AFFECTING LANDS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project works shall be constructed in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Power Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any feature or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a non-power licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

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Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity

for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

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Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 20. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Timber on lands of the United States cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

Article 22. The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

Article 23. The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

Article 24. The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

Article 25. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment

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of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

Article 26. In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

Article 27. The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

Article 28. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

Article 29. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

Article 30. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 31. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

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Article 32. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

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P-8498-000

UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

Notice of Application Filed with the Commission

(January 25, 1985)

Take notice that the following hydroelectric application has been filed with the Federal Energy Regulatory Commission and is available for public inspection:

MICROFILMED

4-8-85

DC-A-35

Copies, 72-7372
72-7375 ✓

a. Type of Application: Major License (5 MW or Less)

b. Project No: 8498-000

c. Date Filed: August 6, 1984

d. Applicant: Will and Vangie Ingram

e. Name of Project: Ingram Warm Springs Ranch

f. Location: On Warm Springs Creek, a tributary to the Salmon River, partially located within BLM lands, near Challis, in Custer County, Idaho

g. Filed Pursuant to: Federal Power Act, 16 U.S.C §791(a)-825(r)

h. Contact Person: Mr. Vernon F. Ravenscroft
Consulting Associates, Inc.
P.O. Box 893
Boise, Idaho 83701

i. Comment Date:
APR 8 1985

j. Description of Project: The proposed project would involve two power developments located on the Ingram Warm Springs Ranch.

The upper development would consist of: (1) a 6-foot-high earthern diversion structure on the Warm Springs Creek at elevation 5,630 feet; (2) a 20,000-foot-long, 5.5-foot-deep trapezoidal earthern canal; (3) a 10-foot-high, 42-foot-long concrete stilling basin; (4) a 750-foot-long, 42-inch-diameter steel penstock; (5) a concrete powerhouse at elevation 5,440 feet containing a single generating unit with an installed capacity of 1,100 kW at a head of 170 feet; (6) a tailrace discharging water into a second canal for the lower development; (7) a switchyard; and (8) a 500-foot-long, 25-kV transmission line.

The lower development would consist of: (1) a 23,600-foot-long, 5.5-foot-deep trapezoidal earthern canal; (2) a 10-foot-high, 42-foot-long concrete stilling basin; (3) a 9000-foot-long, 42-inch-diameter steel penstock; (4) a concrete powerhouse at elevation 5,085 feet containing a single generating unit with an installed capacity of 1,845 kW at a head of 320 feet; (5) a tailrace discharging water into an existing channel constructed by the US Army Corps of Engineers; (6) a switchyard; (7) a 50-foot-long, 25-kV transmission line.

Both the upper and lower power developments would be connected to an existing Salmon Rural Electric transmission line. The Applicant estimates that the total average annual production from both power developments would be 16.8 million kWh. The cost to construct the project, in 1984 dollars, would be approximately $4,417,000.

k: Purpose of Project: The project power will be sold to a nearby utility Company.

l. This notice also consists of the following standard paragraphs: A3, A9, B, C and D1.

A3. License or Conduit Exemption -- Any qualified license, conduit exemption, or small hydroelectric exemption applicant desiring to file a competing application must submit to the Commission, on or before the specified comment date for the particular application, either a competing license, conduit exemption, or small hydroelectric exemption application, or a notice of intent to file such an application. Submission of a timely notice of intent allows an interested person to file the competing license, conduit exemption, or small hydroelectric exemption application no later than 120 days after the specified comment date for the particular application. Applications for preliminary permit will not be accepted in response to this notice.

This provision is subject to the following exception: if an application described in this notice was filed by the preliminary permittee during the term of the permit, a small hydroelectric exemption application may be filed by the permittee only (license and conduit exemption applications are not affected by this restriction).

A9. Notice of intent -- A notice of intent must specify the exact name, business address, and telephone number of the prospective applicant, include an unequivocal statement of intent to submit, if such an application may be filed, either (1) a preliminary permit application or (2) a license, small hydroelectric exemption, or conduit exemption application, and be served on the applicant(s) named in this public notice.

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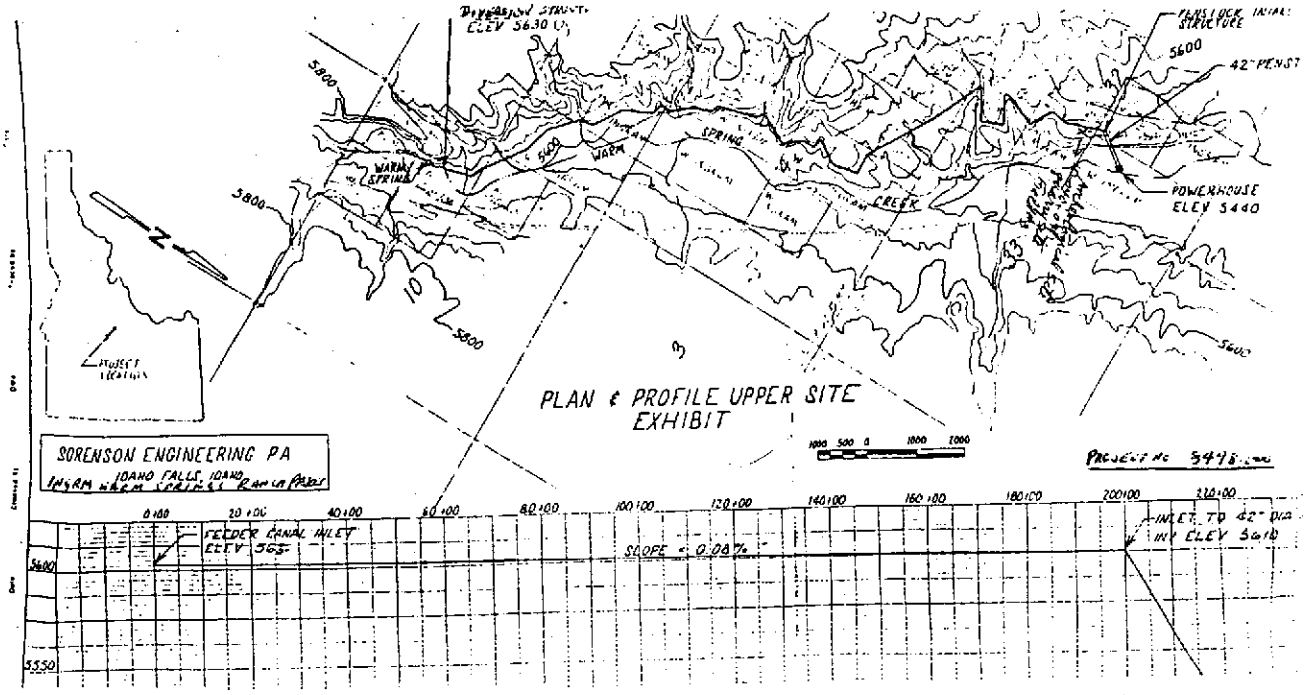
B. Comments, Protests, or Motions to Intervene - Anyone may submit comments, a protest, or a motion to intervene in accordance with the requirements of the Rules of Practice and Procedure, 18 C.F.R. §§385.210, .211, .214. In determining the appropriate action to take, the Commission will consider all protests or other comments filed, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any comments, protests, or motions to intervene must be received on or before the specified comment date for the particular application.

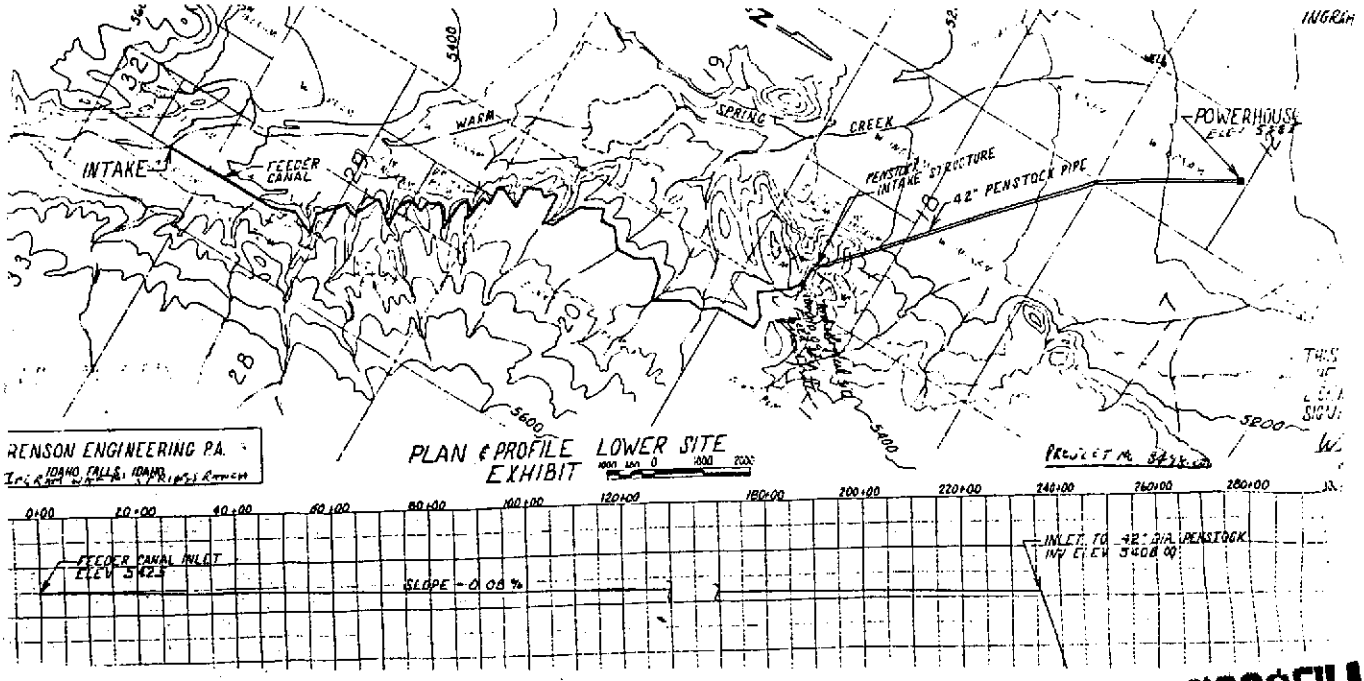
C. Filing and Service of Responsive Documents - Any filings must bear in all capital letters the title "COMMENTS", "NOTICE OF INTENT TO FILE COMPETING APPLICATION", "COMPETING APPLICATION", "PROTEST", or "MOTION TO INTERVENE", as applicable, and the Project Number of the particilar application to which the filing is in response. Any of the above named documents must be filed by providing the original and those copies required by the Commission's regulations to: Kenneth F. Plumb, Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, N.E., Washington, D.C. 20426. An additional copy must be sent to: Fred E. Springer, Director, Division of Project Management Branch, Office of Hydropower Licensing, Federal Energy Regulatory Commission, Room 208 RB at the above address. A copy of any notice of intent, competing application or motion to intervene must also be served upon each representative of the Applicant specified in the particular application.

D1. Agency Comments - Federal, State, and local agencies that receive this notice through direct mailing from the Commission are requested to provide comments pursuant to the Federal Power Act, the Fish and Wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, the Historical and Archeological Preservation Act, the National Environmental Policy Act, Pub. L No. 88-29, and other applicable statues. No other formal requests for comments will be made.

Comments should be confined to substantive issues relevant to the issuance of a license. A copy of the application may be obtained directly from the Applicant. If an agency does not file comments with the Commission within the time set for filing comments, it will be presumed to have no comments. One copy of an agency's comments must also be sent to the Applicant's representatives.

Lois D. Cashell
Acting Secretary





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State of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS
Governor

A. KENNETH DUNN
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

November 15, 1984

RE: Application for Permit No. 72-7375

Ingram Warm Springs Ranch
HC 61, Box 3020
Challis, ID 83226

Dear Mr. Ingram:

We have received your application for permit, for power purposes on your Upper Site, from our regionall office in Twin Falls for final review. In reviewing this application, we find that it is in good order and as soon as we receive a copy of your approval from the Federal Energy Regulatory Commission (FERC), we will be able to finalize the application.

This letter is just to advise you of the above. Please keep us informed of your progress in regard to your FERC application.

If you have any questions in regard to this matter, please feel free to contact our office.

Sincerely,

KAY WALKER
Technical Records Specialist

KW:sc

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Idaho first

FIRST STREET OFFICE

October 23, 1984

RECEIVED
OCT 24 1984
Department of Water Resources
Southern District Office

State of Idaho
Dept. of Water Resources
1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301

Attention: Mr. Loren Holme

Dear Mr. Holme:

We were informed today by Mrs. William Ingram that you will require a verification of their deposit balances which is for use on the Upper Site portion of their Hydro-Power project.

Please consider this letter as verification of deposits in the amount of $912,308.00.

If there would be any further information that you would require, please inform the Ingrams in order for them to give us authorization to release such information.

Very truly yours,

Elizabeth

Elizabeth E. Madson
Manager

EEM/sw

cc: Mrs. William Ingram

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

SOUTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

October 18, 1984

Ingram Warm Springs Ranch
H/C 61 Box 3020
Challis ID, 83226

Re: Applications for permit 72-7372 and 72-7375

Gentlemen:

This letter is to update you on the status of your two applications for permit.

Application 72-7372 (lower site), as you know , is protested. The following information is needed for the file prior to or at a hearing in the matter:

> A statement of the financial resources which are committed to the project and the means by which funds are to be provided for construction. Personal and corporate financial statements will be confidentially reviewed in comparison to the cost estimate and returned. Letters from lending institutions or developers indicating a financial committment will be retained in the application file.

We would prefer to wait until action on your license application to FERC is complete before holding a hearing on the protests against this application.

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The following items are still needed for application 72-7375 (upper site) before regional office review can be completed:

Plans for the fish propagation facilities. This must show the proposed layout of the ponds on the property and give the length, width , and depth dimensions of all ponds.

An itemized estimate of the cost of constructing the fish facilities.

Financial information, as above, for both the fish and hydropower facilities.

If you have any questions regarding these requirements, please contact this office.

Very truly yours,

Loren O. Holmes
Southern Region Supervisor

LOH:marya

cc: Consulting Associates Inc.

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AFFIDAVIT OF PUBLICATION

State of Idaho, County of Custer, ss:

I, MARGARET PARKS,

Publisher of the Challis Messenger, a weekly newspaper, published at Challis, Idaho, do solemnly swear that the notice hereto attached and made a part hereof, was published in the regular and entire issue of the Challis Messenger for 2 consecutive weeks, commencing with the issue dated JULY 19, 1984 and ending with the issue dated JULY 26, 1984.

Margaret Parks

Subscribed and sworn to before this 27 day of July, 1984

Ethel M. Peck

Notary Public, residing at Challis, Idaho. My commission expires on

Life

RECEIVED
JUL 30 1984
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT IDAHO

NOTICE OF APPLICATION FOR WATER RIGHT

Notice is hereby given that the following application(s) have been submitted for permit to appropriate the public waters of the State of Idaho:

72-7374
ANDREWS, RICHARD J.
SUNBEAM STORE, STANLEY, ID 83278
Source: SUNBEAM HOT SPRINGS trib. to SALMON RIVER GROUNDWATER SPRINGS trib. to SINKS
Date Filed: 06/11/1984
Diversion Pt: NESW NENE SENE Sec 19 T 11N R 15E NWNW SWNW Sec 20 T 11N R 15E
Use: COMMERCIAL (0.04 CFS) HEATING (0.05 CFS)
In: NENE SENE Sec 19 T 11N R 15E NWNW SWNW Sec 20 T 11N R 15E

72-7375
INGRAM WARM SPRINGS RANCH
H/C 61, BOX 3020, CHALLIS, ID 83226
Source: WARM SPRINGS CREEK trib. to SALMON RIVER
Date Filed: 04/19/1984
Diversion Pt: NWSW Sec 10 T 12N R 20E
Use: FISH PROP. (100.00 CFS) POWER (100.00 CFS)
In: NENE NWNE Sec 32 T 13N R 20E

72-7376
IVES, FREDRICK T.
BOX 53, ELLIS, ID 83235
Source: SPRING trib. to SINKS
Date Filed: 06/22/1984
Diversion Pt: NWNE Sec 10 T 15N R 20E
Use: STOCKWATER (0.02 CFS) DOMESTIC (0.02 CFS)
In: LOT 10 Sec 03 T 15N R 20E

72-7377
SAVAGE, ROBERT N. &/or BERTHA J.
BOX 743, CHALLIS, ID 83226
Source: WASTE WATER trib. to SALMON RIVER
Date Filed: 07/02/1984
Diversion Pt: SESE Sec 27 T 14N R 19E
Use: IRRIGATION (0.20 CFS)
In: SESE SEc 27 T 14N R 19E FOR 10 ACRES

If issued, the permit(s) will be subject to all prior water rights. Protests against the granting of any permit must be filed with the Director of the Idaho Department of Water Resources, 1041 Blue Lakes Blvd. North, Twin Falls, Idaho 83301 and received on or before AUGUST 6, 1984.

A. KENNETH DUNN
Director

Published 7/19 & 26/1984.

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STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Southern Region

1041 Blue Lakes Blvd N.
Twin Falls, Idaho 83301
(208) 734-3578

JULY 12, 1984

Custer Publishing Company
P. O. Box 405
Challis, Idaho 83226

Gentlemen:

Enclosed you will find a legal notice which we wish to have published on the dates indicated (once a week for two consecutive weekly issues) in your newspaper. We have allowed ample time for you to submit a galley proof to this office for review before the first publication date. If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Your cooperation is appreciated.

Please send the affidavit of publication and publication billing to this office before AUGUST 6, 1984.

Yours truly,

Mary A. Newby
Secretary

Encl.

MICROFILMED

NOTICE OF APPLICATION FOR WATER RIGHT

Notice is hereby given that the following application(s) have been submitted for permit to appropriate the public waters of the State of Idaho:

22-2325

INGRAM WARM SPRINGS RANCH

H/C 61, BOX 3020, CHALLIS, ID 83226

Source: WARM SPRINGS CREEK trib. to SALMON RIVER

Date Filed: 04/19/1984

Diversion Pt: NWSW Sec 10 T 12N R 20E

Use: FISH PROP. (100.00 CFS)
POWER (100.00 CFS)

In: NENE NWNE Sec 32 T 13N R 20E

If issued, the permit(s) will be subject to all prior water rights. Protests against the granting of any permit must be filed with the Director of the Idaho Department of Water Resources, 1041 Blue Lakes Blvd. North, Twin Falls, Idaho 83301 and received on or before AUGUST 6, 1984.

A. KENNETH DUNN

Director

Published 7/19 & 7/26/84.

MICROFILMED

72-7375

INGRAM WARM SPRINGS RANCH

H/C 61, BOX 3020, CHALLIS, ID 83226

Source: WARM SPRINGS CREEK trib. to SALMON RIVER

Date Filed: 04/19/1984

Diversion Pt: NWSW Sec 10 T 12N R 20E

Use: FISH PROP. (100.00 CFS) POWER (100.00 CFS)

In: NENE NWNE Sec 32 T 13N R 20E

SORENSON ENGINEERING, P.A.
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

RECEIVED
JUN 22 1984
Department of Water Resources
Southern Idaho Office

June 22, 1984

Mr. Loren Holmes
Idaho Dept. of Water Resources
1041 Blue Lakes Blvd.
Twin Falls, ID 83301

RE: WILL INGRAM WARM SPRINGS WATER RIGHT PERMIT FOR HYDRO DEVELOPMENT

Dear Mr. Holmes,

This letter is written at the request of Mr. Will Ingram and after conversations with Mr. Dave Tuthill of your Boise office.

Enclosed for your review is a layout map illustrating the location of the upper and lower sites for the power plants and appurtenant structures including the feeder canal and 42" diameter penstock. Please note that each powerhouse will be equipped with a frances type turbine.

Attached is an analysis showing the capacity of each site, the revenue expected to be generated together with capital costs.

Mr. Tuthill indicated this information was sufficient for processing the water right application at this time. We will submit final drawings of the powerhouse layout concurrent with submission of the FERC applicaton for your review.

Trusting this information to be of value.

Very truly yours,

Ted S. Sorenson, P.E.
Consulting Engineer

TSS:kw
encs.
cc: Will Ingram w/enc
Consulting associates w/enc.

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RECEIVED
JUN 22 1984
Department of Water Resources
Southern District Office

INGRAM RANCH HYDRO

UPPER SITE

PRELIMINARY COST ESTIMATES

Ted S. Sorenson, P.E.

June 20, 1984

60 cfs @ 160 ft. head 650 KW

REVENUE (ANNUAL) - 5.4×10^6 KW-HR/YR:

UP&L (5.4¢)	$294,800
Idaho Power (6.5¢)	351,000
Wheeling (0.5¢)	27,000

CAPITAL COSTS:

1.	Diversion & Intake	$ 50,000
2.	Feeder Canal (20,000 L.F.)	50,000
3.	Forebay & Inlet	10,000
4.	Trash Rack (self-cleaning)	10,000
5.	Penstock 750 @ 70	52,500
6.	Turbine/Generator Elect.	500,000
7.	Powerhouse	15,000
	Subtotal	$ 687,500
	Contingency & Engineering	172,500
	TOTAL	$ 860,000

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NOTE: Allow $10,000 per year for equipment repair sinking fund.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

SOUTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

June 22, 1984

Don Smith
U. S. Dept of Interior
BLM
Salmon District
Box 430
Salmon, Idaho 83467

Re: Applications for Permit No. 72-7375 and 72-7372

Dear Mr. Smith:

Enclosed are copies of the above referenced applications for your information and files.

Very truly yours,

Mary A. Newby
Sec/Office Coord.

Encl:

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
SOUTHERN REGION

John V. Evans
Governor

C. Stephen Allred
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

June 22, 1984

Tom Reinecker
Dept. of Fish & Game
Region 6
1515 Lincoln Road
Idaho Falls, Idaho 83401

Re: Application for Permit No. 72-7375

Dear Mr. Reinecker:

Enclosed is a copy of the above referenced application for permit for your information and files.

Very truly yours,

Mary A. Newby
Sec/Office Coord.

Encl:

MICROFILMED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

SOUTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

May 25, 1984

Ingram Warm Springs Ranch
Box 3020
Challis, Idaho 83226

Re: Application for Permit

Dear Mr. Ingram:

Please find enclosed the application you submitted to our office for hydro-power and fish propagation.

Item 8a (1) need to be filled in in ink and you need to sign page 3.

If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

Gary L. Funderburg
Sr. Water Resource Agent

LOH:GLF:marya

Encl:

MICROFILMED

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2670
P.O. BOX 893
BOISE, IDAHO 83701

September 10, 1984

RECEIVED
SEP 11 1984
Department of Water Resources
Southern District Office

Mr. Loren Holmes
IDAHO DEPARTMENT OF WATER RESOURCES
1041 Blue Lakes Blvd., N.
Twin Falls, Idaho 83301

Re: Ingram Warm Springs Ranch Hydro Project

Dear Mr. Holmes:

Enclosed is an addendum to the application for minor license on the Ingram Warm Springs project.

Included herein are the comments from the Department of Health and Welfare, Water Quality Division and a revised drawing on the plan and profile of the upper site.

If you have any further questions, please don't hesitate to contact us.

Sincerely,

Helen Chenoweth

Helen Chenoweth

MICROFILMED

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2670
P.O. BOX 893
BOISE, IDAHO 83701

Before the

FEDERAL ENERGY REGULATORY COMMISSION

ADDENDUM TO THE APPLICATION FOR LICENSE FOR THE WARM SPRINGS RANCH PROJECT

A MAJOR/MINOR WATER POWER PROJECT

(5 megawatts or less)

CUSTER COUNTY,

IDAHO

Prepared By:

Consulting Associates, Inc

Boise, Idaho

September 10, 1984

MICROFILMED

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2670
P.O. BOX 893
BOISE, IDAHO 83701

September 7, 1984

Mr. Kenneth F. Plumb, Secretary
Office of Electric Power Regulation
FEDERAL ENERGY REGULATORY COMMISSION
825 N. Capitol Street, NE
Washington, D.C. 20426

Re: Application for Minor License Addendum
Warm Springs Ranch Hydropower Project
FERC Project # 8498-000
Applicant: Will and Vangie Ingram

Dear Sir:

Please accept this addendum to the Minor License application which was filed with your office August 3, 1984. Because of the Tulalip Decision, this office changed from an Exemption to a license application for this project, and in so doing, we inadvertently neglected to properly consult with and inclcude comments from the Idaho Department of Health and Welfare, Water Quality Bureau.

We have since had consultations with that Department including consultations with Mr. Walter Poole, Senior Water Quality Specialist in the Pocatello, Idaho office and Mr. Jerry Yoder, Water Quality Specialist in the head office in Boise.

On August 29, 1984, Vern Ravenscroft of Consulting Associates spoke with Mr. John Murphy, F.E.R.C. project engineer, assigned to this project, and advised him of our updated work with the Department of Health and Welfare and asked that the project work be held pending the F.E.R.C. receiving the proper reports from H & W. This addendum is being hand carrier to the F.E.R.C. on Monday, September 10, 1984.

We are including all correspondence from H & W and our response to their comments contained in the following pages. In addition, Mr. Ted Sorenson has included a revised Plan and Profile for the upper site. A copy of his correspondence is also included.

Due to the severe environmental degredation which is occuring as a result of the Warm Springs Creek running unchecked into the Salmon River and the resulting amount of sediment load, we sincerely appreciate the efforts of all concerned as well as the efforts of the F.E.R.C. to expedite the entire application.

Sincerely,

Helen Chenoweth

Helen Chenoweth

STATE OF IDAHO

DEPARTMENT OF HEALTH
AND WELFARE

DIVISION OF ENVIRONMENT
Statehouse
Boise, Idaho 83720

September 6, 1984

Consulting Associates, Inc.
Box 893
Boise, Idaho 83701

Reference to: Ingram Warm Springs Ranch Water Power Project, Custer County, Idaho

Gentlemen:

We have reviewed the "Exhibit E" portion of the Federal Energy Regulatory Commission application for license for the Ingram Warm Springs Ranch Water Power Project and the verbal responses to the questions in our August 20, 1984 letter. The Division of Environment finds that as long as environmental impacts are minimized during the construction and subsequent erosion of disturbed soil is controlled, the facility will not impact the water quality of Warm Springs Creek.

From this determination and provided we are informed of progress and changes to the project and that we are supplied with plans and specs., we certify under Section 401 of Public Law 92-500 that the facility will comply with applicable requirements of Sections 301, 302, 303 and 307 of PL 92-500 and will not violate Idaho Water Quality Standards and Wastewater Treatment Requirements.

This certification does not imply approval of the activity by other agencies of the State of Idaho.

Sincerely,

Al E Murrey

for Lee W. Stokes, Ph. D.
Administrator

LWS:sf

cc: Al Murrey/Larry Koenig
Gordon Hopson/Walt Poole
Fred Springer-FERC

RECEIVED
SEP 6 1984

STATE OF IDAHO

DEPARTMENT OF HEALTH AND WELFARE

DIVISION OF ENVIRONMENT
150 North 3rd Avenue
Pocatello, Idaho
83201

August 28, 1984

Mr. Vern Ravenscroft
Consulting Associates Inc.
Box 893
Boise, Idaho 83701

Dear Mr. Ravenscroft:

As I agreed in our 27 August, 1984, telephone conversation, I am writing to confirm my recommendation to certify the Ingram Warm Springs Ranch project. Based upon your conversation with Jerry Yoder and me I can see no threat to water quality as a result of this project.

I am looking forward to hearing about the project's progress in the near future. Please keep our agency and me informed as work continues. If you have any questions or we can be of assistance, please call this office (236-6160).

Sincerely,

Walton C. Poole

Walton C. Poole
Senior Water Quality Specialist

WCP/jd

STATE OF IDAHO

DEPARTMENT OF HEALTH AND WELFARE

DIVISION OF ENVIRONMENT
150 North 3rd Avenue
Pocatello, Idaho
83201

August 28, 1984

Mr. Vern Ravenscroft
Consulting Associates Inc.
Box 893
Boise, Idaho 83701

Dear Mr. Ravenscroft:

I am writing to request that a copy of plans and specifications for the Ingram Warm Springs Ranch Power Project, Custer County, Idaho be provided for our office. Thank you for your assistance in providing this information.

Sincerely,

Walton C. Poole

Walton C. Poole
Senior Water Quality Specialist

WCP/jd

cc: Will Ingram
Ted Sorenson

EQUAL OPPORTUNITY EMPLOYER

APPLICANT RESPONSE

TO

AGENCY RESPONSE

IDAHO DEPARTMENT OF HEALTH AND WELFARE

WATER QUALITY DIVISION

Mr. Walter Poole, Senior Water Quality Specialist, Pocatello Idaho, has requested that he examine final construction plans and specifications on the Warm Springs project.

Applicant agrees.

Mr. Poole has also expressed concern relative to the possibility of other uses, such as commercial warm water fish production and the possibile effect on water quality such a venture may have.

Applicant, through Mr. Ravenscroft, project consultant, has verified that this possible commercial venture is sometime in the future, and has no bearing whatsoever on the construction and operation of the proposed hydro facility. It was agreed that if and when the time occurs for commerecial fish production in the Warm Springs Creek, that venture would be handled entirely separately from the F.E.R.C. acceptance and processing of the application, and the proper state application and consultation would take place at the appropriate time for this separate project.

All parties agreed.

SORENSON ENGINEERING, P.A.
CONSULTING ENGINEERS
550 LINDEN DRIVE
IDAHO FALLS, IDAHO 83401
208-522-8069

August 15, 1984

Helen Chenoweth
Consulting Associates
P.O. Box 893
Boise, ID 83701

RE: INGRAM HYDRO PROJECT

Dear Helen,

In checking through the application for the Ingram Ranch Project - Upper Site, it appears I've made a mistake on the stationing for Exhibit G-5.

Enclosed is a revised drawing for Exhibit G-5 for your use if an amendment proves to be necessary.

Very truly yours,

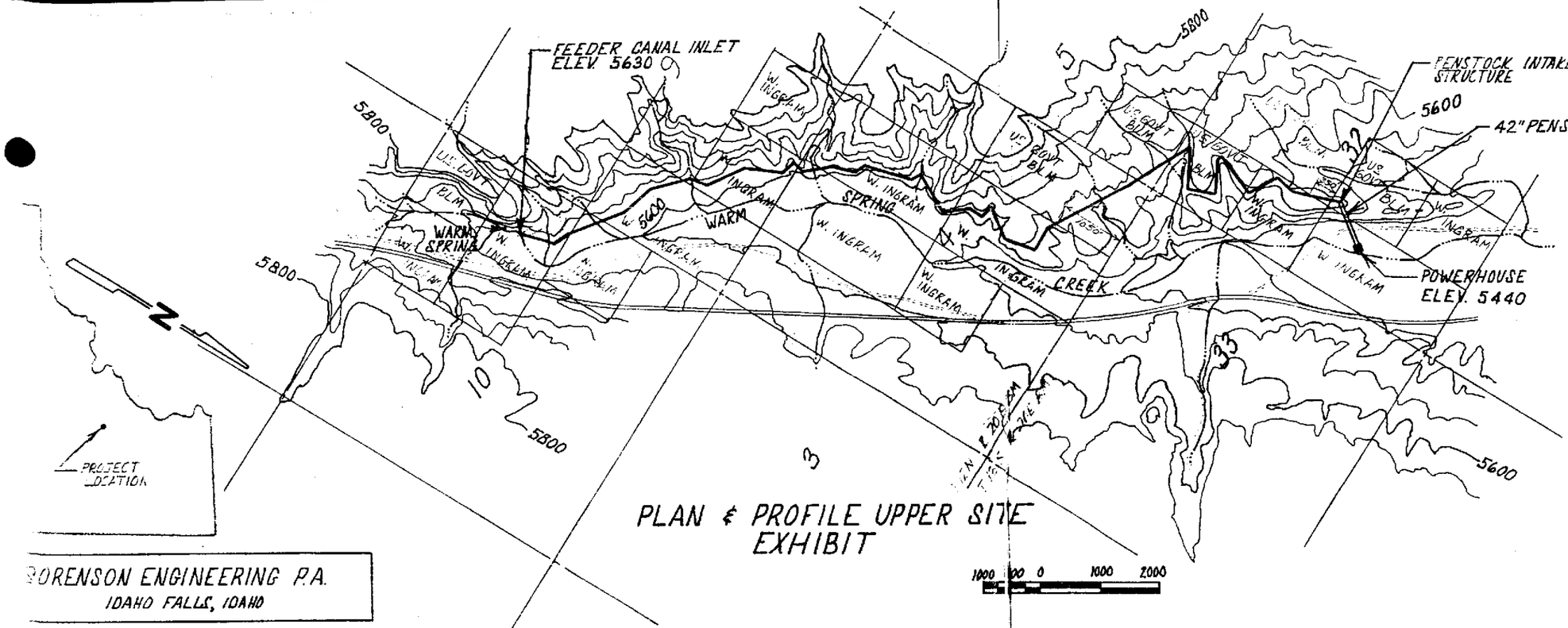
Ted S. Sorenson, P.E.
Project Engineer

TSS:kw
enc.

RECEIVED
AUG 24 1984

EXHIBIT L
FERC #
INGRAM RANCH HYDROELECTRI
PLAN & PROFILE
UPPER SITE

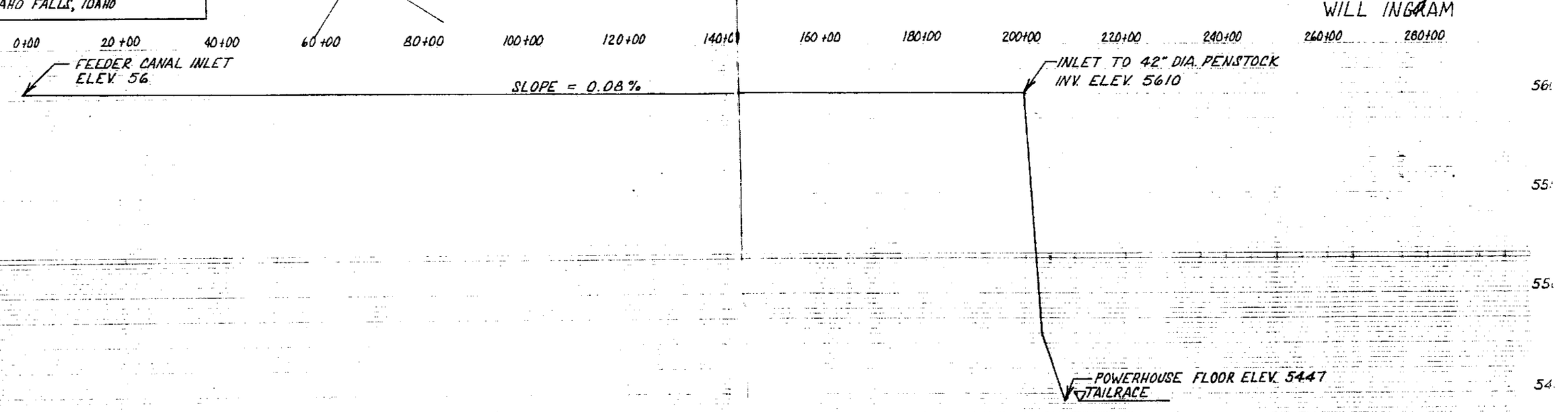
REGISTERED PROFESSIONAL ENGINEER
Ted S. Sorenson
7/22/94
STATE OF IDAHO
TED S. SORENSON



PLAN & PROFILE UPPER SITE
EXHIBIT

1000 500 0 1000 2000

SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO



THIS DRAWING IS A PART OF
THE FERC APPLICATION FOR
LICENSE MADE BY THE UND
SIGNED THIS 24th DAY July, 19

Will Ingram
WILL INGRAM

RECEIVED
AUG 24 1994

CERTIFICATION OF MAILING

I hereby certify that on the 10th day of September, 1984, I sent, by Certified-Registered mail, a copy of the foregoing addendum to the application for the major/minor license for the Ingram Warm Springs Ranch Hydropower Project, properly addressed with postage prepaid to the following parties:

Senator James A. McClure
U.S. Senate
Washington, D.C. 20510

Office of Senator James A. McClure
c/o Mike Fields
250 S. 4th Avenue
Pocatello, Idaho

Senator Steve Symms
U.S. Senate, Senate Hart Bldg.
Washington, D.C. 20510

Office of Senator Steve Symms
c/o Phil Reberger
Borah Post Office Building
Boise, Idaho 83701

Mr. Kenneth F. Plumb, Secretary
Office of Electric Power Regulation
FEDERAL ENERGY REGULATORY COMMISSION
825 N. Capitol Street, NE
M.S. 208 R.B.
Washington, D.C. 20426

Mr. William F. Kopfler
Regional Engineer
FEDERAL ENERGY REGULATORY COMMISSION
333 Market St. - 6th Street
San Francisco, California 94105

U.S. Army Corps of Engineers
Building 602
City/County Airport
Walla Walla, Washington 99362

Jack E. Griswold, Forest Supervisor
CHALLIS NATIONAL FOREST
P.O. Box 404
Challis, Idaho 83226

Mr. James N. Hawkins
Extension Agricultural Agent
P.O. Box 160
Challis, Idaho 83226

Mr. Tom Reinecker
Regional Supervisor
IDAHO DEPARTMENT OF FISH AND GAME
1515 Lincoln Road
Idaho Falls, Idaho 83401

Mr. Frank Maraffio, Chairman
CUSTER COUNTY BOARD OF COMMISSIONERS
P.O. Box 385
Challis, Idaho 83226

Mr. John P. Wolflin, Field Supervisor
FISH AND WILDLIFE SERVICE (U.S.)
Ecological Services
4620 Overland Road, Room 209
Boise, Idaho 83705

Mr. Thomas J. Green
State Archaeologist
IDAHO STATE HISTORICAL SOCIETY
610 North Julia Davis Drive,
Boise, Idaho 83702

Mr. Ralph L. Swift, Dist. Conservationist
SOIL CONSERVATION SERVICE (U.S.)
Salmon, Idaho

Mr. Keith Axline,
Challis Chapter
IDAHO CONSERVATION LEAGUE
P.O. Box 733
Challis, Idaho 83226

NATIONAL MARINE FISHERIES SERVICE
Environmental Division
847 NE 19th Avenue, Suite 350
Portland, Oregon 98232

Mr. Loren Holmes
IDAHO DEPARTMENT OF WATER RESOURCES
1041 Blue Lakes Blvd., N.
Twin Falls, Idaho 83301

Mr. Larry L. Koenig
Manager, Source Control
IDAHO DEPARTMENT OF HEALTH & WELFARE
Division of Environment
Statehouse Mall
Boise, Idaho 83720

Helen Chenoweth
Helen Chenoweth
Consulting Associates, Inc.

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2670
P.O. BOX 893
BOISE, IDAHO 83701

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR LICENSE

FOR THE

INGRAM WARM SPRINGS RANCH PROJECT

A MAJOR/MINOR WATER POWER PROJECT

(5 megawatts or less)

CUSTER COUNTY,

IDAHO

Prepared By:

Consulting Associates, Inc.

Boise, Idaho

August 2, 1984

MICROFILMED

PETITION FOR EXPEDITED PROCEDURE

ON THE

WARM SPRINGS RANCH HYDROPOWER PROJECT

APPLICATION FOR A MAJOR/MINOR LICENSE

Secretary Kenneth Plumb
Federal Energy Regulatory Commission
1325 K. Street, N.W.
M.S. 208 RB
Washington D.C.

Re: Ingram Warm Springs Ranch Hydropower Project
Challis, Idaho

Dear Mr. Secretary:

The Ingram Warm Springs Ranch project will, when constructed, solve a very serious, local erosion problem, which, at this time, is discharging 74 cfs of 90 degree F. mud into the Salmon River.

The Salmon River is considered one of the prime anadromous fish supporting streams in the contiguous 48 states of our nation.

Will and Vangie Ingram, at considerable personal financial risk, are willing to finance and build this project. In so doing, they will eliminate this serious threat to Idaho's Chinnok salmon and Steelhead trout fishery.

It is significant that diverse interests are united in the endorsement of this petition. Various agencies, and interest groups all join in this petition to seek an expedited processing of the enclosed major/minor license application in order to eliminate a very serious environmental problem.

Those who respectfully make this petition are listed below and their letters are contained herein.

1. Will and Vangie Ingram
2. Senator Steve Symms
3. Idaho Fish and Game Department

4. U.S. Fish and Wildlife Service
5. Custer County Commissioners
6. U.S.D.A. - Soil Conservation District
7. Custer County Extension Service
8. Bureau of Land Management
9. Idaho Conservation League
10. Consulting Associates, Inc.

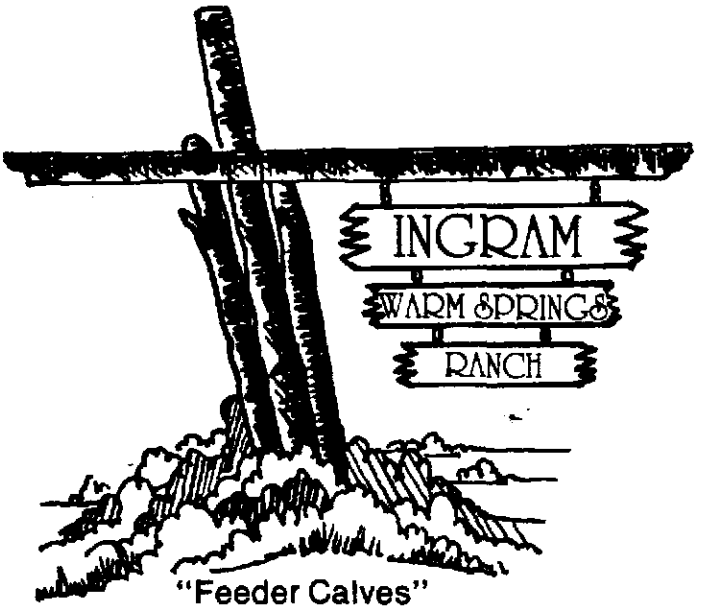
Thank you, Mr. Secretary, for your prompt attention to the remedy of this very serious environmental and community problem.

My office stands ready at any time to help your engineers and personnel in expediting this Application through the F.E.R.C. process.

Sincerely,

Vernon F. Ravenscroft
President, Consulting Associates, Inc.
Boise, Idaho

VFR:hc



"Feeder Calves"

July 21 1984

Will & Vangie Ingram
HC61 Box 3020
Challis, Id. 83226
(208) 879-4457

Gary & Jackie Ingram
HC68 Box 320
Clayton, Id. 83227
(208) 838-2369

Tim Ingram
HC61 Box 3020
Challis, Id. 83226
(208) 879-4721

Dave Ingram
Box 2584
Dillon, Colo. 80435
(303) 468-0067

Holly & Deb Houfburg
HC61 Box 3020
Challis, Id. 83226
(208) 879-4371

Federal Energy Regulatory Commission
Quinton Edson, Director of Hydropower Licensing
825 N Capitol Street, NE
Washington, D,C, 20426

Dear Mr. Edson:

Our family respectfully requests that the proceedures for obtaining a major/minor license to produce hydro-electric power be expedited so that we may construct a canal, before winter sets in, to prevent the extreme erosion of the land along Warm Springs Creek and to improve the water quality of this stream which flows into the main Salmon River.

Financially we cannot do this, on our own, unless we can see some return for the large investment necessary to solve these two problems.

Sincerely,

Will Ingram

RECEI
JUL

STEVE SYMMS
IDAHO

United States Senate

WASHINGTON, D.C. 20510

July 27, 1984

Mr. Raymond J. O'Connor
Chairman
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Dear Mr. Chairman:

I urge that the Ingram Warm Springs Ranch project application for a major/minor small hydro license be expedited in every possible way.

The substantial adverse impacts suffered as a result of the major earthquake which devastated this part of my state are outlined in detail in the application for this license. A careful review of these adverse impacts make obvious the need for expediting the consideration and awarding of this license.

Your prompt attention to this matter is appreciated.

Yours for a free society,

Steve Symms

STEVE SYMMS
UNITED STATES SENATOR

SS/mh

PLEASE REPLY TO:

☐ IDAHO FALLS OFFICE
211 FEDERAL BUILDING
IDAHO FALLS 83401
(208) 522-9779

☐ POCATELLO OFFICE
207 FEDERAL BUILDING
POCATELLO 83201
(208) 236-6775

☐ TWIN FALLS OFFICE
401 2ND ST. N. #108
TWIN FALLS 83301
(208) 734-2515

☐ BOISE OFFICE
BOX 1190
BOISE 83701
(208) 334-1776

☐ LEWISTON OFFICE
LEWIS-CLARK PLAZA
LEWISTON 83501
(208) 743-1492

☐ MOSCOW OFFICE
105 FEDERAL BUILDING
MOSCOW 83843
(208) 882-5560

☐ COEUR D'ALENE OFFICE
305 FEDERAL BUILDING
COEUR D'ALENE 83814
(208) 664-5490

IDAHO DEPARTMENT OF FISH AND GAME
REGION 6
1515 Lincoln Road
Idaho Falls • Idaho • 83401

July 16, 1984

Mr. Vernon F. Ravenscroft
Consulting Associates, Inc.
P. O. Box 893
Boise, Idaho 83701

Dear Mr. Ravenscroft:

It has come to my attention that the time frame for processing a Federal Energy Regulatory Commission minor license application is approximately one and one half years.

One of the major concerns this Department has is siltation moving into the main Salmon River from Warm Springs Creek near Challis. It is our belief the Ingram Hydro Project will measurably reduce this large source of siltation from the system and thereby reduce the adverse affects on salmon and steelhead populations in the Salmon River.

Due to this factor (siltation), we request FERC expedite procedures for processing the Ingram (Warm Spring minor license applicaiton).

Sincerely,

Tom Reinecker
Regional Supervisor
Region 6

cc: USFWS
Mel Reingold
Bureau of Fisheries
Butch Welch
Will Ingram

JUL 18 1984

United States Department of the Interior

FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
4620 Overland Road, Room 209
Boise, Idaho 83705

July 27, 1984

Mr. Vernon Ravenscroft
Consulting Associates, Inc.
P.O. Box 893
Boise, Idaho 83701

Re: Proposed Warm Springs Creek
Hydro Project, Will Ingram
Challis, Idaho

Dear Mr. Ravenscroft:

This is in response to Ms. Chenoweth's recent telephone call requesting correspondence from the Fish and Wildlife Service concerning an accelerated processing of the referenced project application with the Federal Energy Regulatory Commission (FERC).

As the Service stated in its correspondence of June 8, 1984, the development of hydropower at the Warm Springs Creek site would be a beneficial method of mitigating undesirable effects of the October 1983 earthquake. If there is a means for FERC to expedite processing of Mr. Ingram's application, damaging effects of the earthquake, in the form of sediment load to the Salmon River, would be mitigated all the sooner.

The Service encourages you on behalf of Mr. Ingram to pursue this opportunity to reduce sediment impacts while developing hydro potential that would have mostly positive impacts on fishery resources of the upper Salmon River Basin.

This concurs with Tom Reinecker's recommendation of July 16, 1984.

Sincerely yours,

John P. Wolflin
Field Supervisor

cc: IDFG, Hdqtrs., Boise
IDFG, Region 6, Idaho Falls
IDFG, Salmon
NMFS, Portland
FWS-AHR, Portland
USDI, Reg. Sol. Off., Portland
(Devine)
USDI, REO, Portland (Polityka)

CUSTER COUNTY BOARD OF COMMISSIONERS
P.O. BOX 385
CHALLIS, IDAHO 83226

Gentlemen:

The board of Custer County Commissioners request the expediting of the license application of Warm Spring Ranch for a hydro generation project on Warm Spring Creek, Custer County, Idaho.

Custer County experienced a major earthquake last October. As a result of the earthquake the flow of Warm Springs has quadrulped. In December and January a $210,000. flood project was completed but several problems still exist.

The board feels that the planned hydro project of Warm Springs Ranch will help reduce the erosion and silting still being caused by the increased flow.

Thank you in advance for consideration of our request.

Sincerely,

Frank Maraffio /cp

Frank Maraffio
Chairman, Custer County
Board of Commissioners

COOPERATIVE EXTENTION SERVICE
University of Idaho
College of Agriculture
In Cooperation with the
U.S. Department of Agriculture

P.O. Box 160
Challis, Idaho 83226
Phone (208) 879-2344

June 12, 1984

Federal Energy Regulator Commission
Quinton Edson, Director of Hydropower Licensing
825 N. Capitol Street, NE
MS 208 RB
Washington, D.C.

Dear Mr. Edson:

I am writing on behalf of Will Ingram concerning the flow of Warm Springs Creek since the October 28, 1984 earthquake. Warm Springs Creek before the earthquake flowed at 15 cfs. Since the quake the flow has increased steadily and at the last measurement it was flowing at 65 cfs.

The five fold increase is of some concern to the Ingrams, property owners below them and others. The increase in volume is causing a considerable amount of erosion on the Ingram property.

The erosion is not only washing valuable crop ground away, it is also increasing the bedload in the Salmon River and could have a detrimental effect on the spawning beds of anadromous fish. In addition every time the flow is slowed, the stream dumps its load creating sand bars that divert the channel and add to the erosion and soil loss. Flooding of additional crop ground is also occuring since the old existing cannel is not large enough to carry the additional water.

Everything considered the Ingram's are loosing valuable crop ground through erosion or flooding. The cost of stablizing the Warm Springs Channel, if possible due to the nature of the soils in the area, has been estimated at between $70-80,000. Upkeep of any stablization project over the next several years could be as much as $30-50,000.

This is a large expense for any one individual to undertake. Especially when one considers that the Ingram's primary source of income is the sale of weaner calves. The Ingram's, or any cattlemen for that matter, are hard pressed with the current market conditions in the cattle industry to make ends meet without considering the outlay of this kind of money with no economic return.

The University of Idaho is an equal opportunity/affirmative action employer and educational institution

The installation of a hydroelectric system is a viable alternative to the problem. Not only will it supply some return on the dollars invested, it also solves the problem at hand. That is, it would put a stop to the erosion and flooding of crop land and would also stop the sedimentation problems in the main Salmon River.

I would hope you would consider the Ingram's application for a minor hydroelectric permit in a favorable manner. If I can answer any questions or be of further assistance, let me know.

Sincerely,

James N. Hawkins
Extension Agricultural Agent

JNH:ms

United States Department of Agriculture

Soil Conservation Service

SUBJECT: Conservation Application

DATE: June 5, 1984

TO: Clinton Edgson
Director Hydro Power License
Federal Energy Licensing Agency
Washington D.C.

On June 5th Will Ingram called and requested a letter to you concerning the erosion problem on Warm Springs. The following is a situation statement on this problem.

Following the earthquake in October of 1983, the Warm Springs rising on the Ingram Ranch has increased steadily to around 70 cfs at present. This is an increase of about 50 Cfc. In March of 1984 when the snow and weather permitted it was discoveredthat with the increase in flow the channel had begun to erode severly.

On my initial visit to the site (March 23) the channel had an approximate 14 foot drop in a 200 foot length. Water was muddy to the point you could not see your hand submerged under the surface. The channel had deepened 10-12 feet from its original channel below the headcut. In April when I last observed the problem the headcut had moved approximately 400 feet upstream. I would estimate, if left untouched, the headcut will erode back to the spring. This is approximately two miles upstream from its present location. Soils are loams to sandy loams with no bedrock to act as a control, that could be observed. The sediment produced from the erosion area is deposited in the Salmon River. A team from the Bureau of Land Management and Forest Service ran a quantitave analysis of the sediment. A copy can be obtained from Lyle Lewis, Hydrologist for the Bureau of Land Management Salmon District. Bob Lehman and Art Shoemaker, Engineers for the Soil Conservation Service looked over the site and recommended alternatives. One of the alternatives was a channel to carry the water on a grade to a point where it would be dropped with a pipe, back to the reservoir or some other suitable point. This drop could then be used to gravity irrigate or generate power. This situation although the most expensive would be the only one that would probably eventually pay itself out.

This is a tremendous problem and one that I see no easy or inexpensive solution for. I have attached a picture of the problem. I think it speaks for itself. Any assistance from your agency in developing a solution for solving this problem in a timely manner will be greatly appreciated.

Ralph L. Swift
District Conservationist
Salmon, Idaho

RLS/ras

Encl.

RECEIVED
JUN 13 1984

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Salmon District
P.O. Box 430
Salmon, Idaho 83467

IN REPLY
REFER TO: I-20915

July 13, 1984

Helen Chenowith
P.O. Box 893
Boise, Idaho 83701

Dear Helen,

The Bureau of Land Management received a right of way application on June 8, 1984 for a ditch to be utilized for conveying excess water away from Will Ingram's private property. The earthquake of 1983 resulted in an increased flow from the Warm Springs located on his property. The extra flow is creating an erosion problem on his private property and subsequently an increased sediment load is carried into the Salmon River.

Public lands managed by the Bureau of Land Management are receiving limited erosion from the increased flow. The BLM, however, is involved with habitat management of all of the tributaries to the Salmon River from an area north of Salmon to Thompson Creek. Anadramous fish are the most intensively managed species by the various agencies involved with management of the Salmon River drainage. A lot of recreation dollars are spent in this area and a lot of agency (USFS, BLM, and IDF&G) dollars are spent increasing the fish population and enhancing the recreational experience for fishermen. I feel it to be beneficial to maintain high water quality standards in order to promote IDF&G's continued effort to increase anadramous fish numbers.

Since all the agencies are spending money within the Salmon River system to maintain water quality and enhance the anadramous fisheries, every effort should be made to assist the private landowner (Will Ingram) in his attempts to also reduce sediment that will ultimately enter into the river. For that reason, BLM will do everything within procedural and budgetary constraints to provide Mr. Ingram with a timely right of way grant. Every effort to expedite the process of waiver for Ingram, given the current problems, should be taken if at all possible.

Sincerely,

Donald L. Smith

Donald L. Smith
Challis Area Manager

P.O. Box 733
Challis, ID
June 22, 1984

Consulting Associates, Inc.
P.O. Box 893
Boise, Idaho 83701

Dear Vern and Helen:

This letter is to give the Idaho Conservation League's support to Will and Vangie Ingram's Warm Springs Ranch hydroelectric project, and to their request to expedite the approval from the Federal Energy Regulating Commission.

In our opinion, the facts that this project is being undertaken by an individual rancher and his wife; that it will mitigate a serious environmental hazard in the removal of stream turbidity and sedimentation that is tributary to the Salmon River; plus the approval of concerned federal and state agencies as expressed in the meeting of June 15, 1984, provides a significant amount of credence to the request.

If there is any other support or help that we can give, please let us know.

Sincerely,

Keith Axline
Challis Chapter
Idaho Conservation League

cc: Warm Springs Ranch

JUN 26

APPLICATION FOR LICENSE

FOR THE

WARM SPRINGS RANCH HYDROPOWER PROJECT

1. Will and Vangie Ingram, a partnership, located in Challis, Idaho, pursuant to Part 4 of the Federal Power Act, Subpart G, Sections 4.60 and 4.61, applies to the Federal Energy Regulatory Commission for a major/minor license for the Warm Springs Ranch Hydropower Project as described hereinafter.

This application for a major/minor license for the Warm Springs Ranch project is made after the applicant has properly and duly notified all relevant agencies as required. All agencies have been consulted, and their comments are contained in Exhibit E.

2. The location of the project is:

State:	Idaho
County:	Custer
Nearby Town:	Challis, Idaho
Stream:	Natural springs arising on the Ingram Warm Springs Ranch property, tributary to the Salmon River.

PROJECT CONTACTS

3. The exact name and business address of the Applicant:

Ingram Warm Springs Ranch Partnership
c/o Will Ingram, General Partner
Box 3020
Challis, Idaho 83226

(208) 879-4457

4. The exact name and business address of authorized agents for the Applicant in this Application:

Vernon F. Ravenscroft
Helen Chenoweth
CONSULTING ASSOCIATES, INC.
P.O. Box 893
Boise, Idaho 83701

(208) 345-2670

5. Will and Vangie Ingram are both citizens of the United States, residing and doing business in Challis, Idaho. Will Ingram is the General Partner of the Ingram Warm Springs Ranch.

6 (i). The statutory or regulatory requirements of Idaho that affect the project, as proposed, with respect to bed and banks, and the appropriation, diversion, and use of water for power purposes, and with respect to the right to engage in the business of developing, transmitting, and distributing power, and in any other business necessary to accomplish the purposes of the license under the Federal Power Act, are:

A. Article XV of the Idaho Constitution and Chapters 1 and 2, Title 42, Idaho Code, addresses the appropriation of water for beneficial use within the state of Idaho. The right to use such water is gained by application for permit and license to the Idaho Department of Water Resources. An application for hydro power development will be processed, but it is the present policy of the Idaho Department of Water Resources not to take final action on an application for water until a license or exemption from the Federal Energy Regulatory Commission has been obtained. In the meantime, the applicant's priority to water is secured by filing an application for water with the Department.

B. Chapter 38, Title 42, Idaho Code, The Stream Channel Protection Act, was enacted to regulate the alteration

of the beds and banks of Idaho streams. This act is also administered by the Idaho Department of Water Resources. No separate application for a stream channel alteration permit is necessary, however, when the alteration is intended to divert appropriated water from a stream. An application to the Department to appropriate water is sufficient and a separate application for a stream channel alteration permit is not necessary. A permit to appropriate water from a stream carries with it the right to alter the stream bed and bank to accomplish the diversion.

C. Chapter 9, Title 36, Idaho Code, deals with the protection of fish in Idaho waters. Section 36-906 requires suitable fish screening devices and fish ways to be constructed at all power sites to specifications of the Idaho Department of Fish and Game.

D. Chapter 11, Title 50, Idaho Code, grants unto Idaho counties the right to establish planning and zoning commissions, and grants regulatory authority to the counties to govern building standards and local use classifications. A zoning concurrence must be obtained from Custer County before this hydropower project can be constructed.

6. (ii) The steps which the Applicant has taken, or plans to take to comply with the statutory or regulatory requirements cited above are:

A. Regarding the appropriation of water for beneficial use within the State of Idaho, the Ingrams have applied for a water right for the Warm Springs Ranch project with the Department of Water Resources which will allow for a change in the nature of use of said water to be used in the proposed power project. This application will constitute an additional use for water that is presently being used for agricultural purposes. This additional use for hydropower purposes will represent a multiple beneficial use of the same water.

B. Regarding the Stream Channel Protection Act, no separate action by the Applicant is required.

C. Regarding the protection of fish in Idaho waters, this act is not applicable in this project. The water is too hot for any natural fish to exist in Warm Springs Creek.

D. Regarding planning and zoning commission regulatory authority, when water rights and the F.E.R.C. license

are in hand, the Applicant will submit the documents and the final design on this project to the Custer County planning and zoning committee for approval. This is a final prerequisite before construction may take place.

No other specific approvals or actions are required apart from licensure of the project by the Federal Energy Regulatory Commission. Advisory copies of the power sales contract and the interconnection contract with the applicable public utility will be filed with the Idaho Public Utilities Commission.

7. Project Description: The Warm Springs Ranch is owned, managed and is the residence of various members of the Ingram family. Warm Springs Creek arises on that property. The proposed project, which will involve two power drops is located solely on two properties. The Ingram Ranch and certain easements for canal right of way over BLM public controlled property.

Warm Springs Creek has recently experienced a dramatic increase in flow as a result of the earthquakes in the immediate community. This increased flow is causing major erosion on both public and private property. It is anticipated that the project construction will also serve as a source of stream channel erosion control which must be provided in other ways if the project is not built.

7. Brief Project Description

Proposed installed generating capacity: 2.945 mW

☐ Existing dam ☑ Unconstructed dam

☐ Existing dam, major modified project

8. Lands of the United States affected:

(i)	National Forest:	None
(ii)	Indian Reservation:	None
(iii)	Public Lands Under Jurisdiction of Bureau of Land Management:	520 acres
(iv)	Other:	None
(v)	Total U.S. Lands:	520 acres

(vi) ☑ Surveyed lands ☐ Unsurveyed lands

9. Construction of the project is planned to start within 6 months and is planned to be completed within 18 months from the date of issuance of the license.

10. This application is executed in the

State of Idaho

County of Ada,SS

Will Ingram, Box 3020, Challis, Idaho, being duly sworn deposes and says that the contents of this application are true to the best of his knowledge or belief. The undersigned applicant has signed this application this 30th day of July, 1984.

By: Will Ingram, Applicant

Subscribed and sworn to before me, a Notary Public of the State of Idaho this 30th day of July, 1984.

By: Margo Freeland, Notary Public

(seal)

Exhibit A

DESCRIPTION AND PROPOSED MODE OF OPERATION

In order to accommodate two separate drops which are separated by 30,000 linear feet of canal, the project will be composed of two separate powerhouse units and turbine/generator installations with separate interties into the Salmon Rural Electric 3-phase feeder line located 1/10 mile from each powerhouse.

For the sake of clarity, we shall list each installation by separate column in the "Technical Information" table contained hereinafter in Exhibit A.

We are submitting this Application as one project for the following reasons:

1. All of the water used at the two sites of generation has been diverted from the same diversion site.
2. The same water is used continuously and in the project and exhausts back into Warm Springs Creek at the same site.
3. The entire project will be constructed within 36 months.
4. Both sites of generation, when plant capacity is added together, are under 5 megawatts.
5. Both sites of generation are contained on the private property of Will and Vangie Ingram.

The project will be operated as a near constant source of energy due to the flow pattern of the Warm Springs. As such, it can be an especially significant source of energy during periods of peak demand (irrigation and airconditioning in summer and residential heating in the winter). The project will not be subject to the seasonal changes in available water as is the usual run-of-the-river project.

The project design has been completed with a full understanding of the public interest in correcting the critical environmental problem of sediment wash involved in Warm Springs Creek.

The diversion structure will be a simple earthen structure at the site of the existing wood diversion. The earthen diversion structure will be of a size sufficient to capture all of the spring water (70 cfs) and divert it away from the existing stream channel and into the conveyance canal which will route, on contour, to the proposed powerhouse.

There will be no impoundments created at the planned diversion structure. The water is already fully controlled by pre-existing diversion/ headgate structure.

The canal will have a capacity of 70 c.f.s., the contemplated maximum capacity of the generation plant.

The earthen canal will be a trapezoidal shaped channel and, because of the natural clay and silt content, will not be constructed with a liner.

The spillway will consist of a 1/4" steel pipe, 100 feet in length and 36" in diameter, installed in the cement headworks in order to accommodate any possible overflow prior to intake. These bypass pipelines will be installed, one at each headworks, with overlow Weirs and hand operated headgates. Any overflow which might accur will be piped to natural dry wash areas located next to each planned power-house sites.

The headworks will be located at the end of each respective canal (phase one and phase two) and will consist of a steel bar trashrack and rock/desilting chamber. The actual pipe intake will be located at the end of the cement headworks structure.

Because of the warm water (90 degrees F), icing or frazil icing will not be a problem in winter weather.

Because the headworks are removed from any nearby surveillance, they will be enclosed in a security fence.

One penstock will serve each power site. Diameter of the penstocks will be 42" with wall thickness, weight and pressure capacity sufficient to handle the hydraulic capacity with minimal friction loss. Each penstock will likely be buried, and consist of welded steel material with Dresser coupling expansion joints. The pipe will be unlined with an exterior coating of coal-tar enamel or one of the synthetic resins for corrosion protection.

Each powerhouse will be constructed of cement block with a security door, suitable station service power and lighting with security fence enclosing the plant. A hoist will be installed for the maintenance of the electric and mechanical equipment. The powerhouse will be properly camouflaged with earthtone paint and natural landscaping.

A transmission powerline will lead from the powerhouse to the Salmon Rural Electric feeder line of 12.4 kVa, each of which are located less than 1/10th mile from the powerhouses. Said powerline is located on property owned by the Applicant and controlled by Salmon Rural Electric by virtue of an easement. The plant will be connected through a suitable transformer/switching device, per utility standards.

Each generator will be variable flow units, sized to sufficiently handle maximum plant output. Each unit will be new and manufactured by Westinghouse or equivalent.

Each turbine will be of the standard Francis type units. Both units will be new and will be manufactured by Gilkes, Barber or equivalent.

Finally, to clarify how the water will be conveyed to each power site we will break the description down in to two phases.

Phase one of the project will gather the water 1/4 mile downstream from the major springs and transport through an open contour canal of 20,000 linear feet to the first powerhouse. Water will discharge from the plant into an earthen fish pond, (commercial warm water fish) and then, through gravity flow, feed into the second canal.

Phase two of the project will begin at the second contour canal which will be 30,000 linear feet of open, trapezoidal channel, including interrupting the canal by conveying water under a state highway through an inverted siphon. Water will pass through the turbines and discharge into an existing stream channel which was constructed under emergency provisions by the U.S. Army Corps of Engineers.

This project does not provide water in the usual sense that can be described by a stream flow duration chart. The

springs have been monitered repeatedly since the earth quake by Applicants. Measurements for past months since the earthquake are provided by Mr. Roy Mink, Morrison Knudsen Co. and Mary Shaleen and Dolores Totorica, Boise State University. See attached.

It need be clearly indicated that the Ingram water rights (Idaho) and this F.E.R.C. application are based upon the maximum flow which knowledgeable sources indicate will materialize. It must also be understood that this flow will need be re-evaluated at the time the project actually starts construction.

The turbine and generator design and specifications have been prepared by Project Engineer, Ted Sorenson of Idaho Falls. Mr. Sorenson is the source of technical data provided in the summaries which follow later in this application.

Elevation at the point of diversion is 5,630 msl. The elevation at the first point of generation is 5,440 msl. Elevation at the second point of generation will be 5,085 msl.

The dates planned for beginning and completing the proposed construction or development of the generating facilities are as follows:

1. F.E.R.C. Application for License 1984

2. Idaho Water Rights Application 1984
3. BLM right of way 1984
4. Financing 1984
5. Power Sales Agreement 1984
6. Construction . . . . . 1984 - 1985
7. Testing project 1985
8. Delivery of firm energy 1985

EXHIBIT A

TECHNICAL DATA

Proposed Installed Capacity:	#1 power site = 900 kW #2 power site = 1,700 kW Total - - - - - 2.945 mW
Diversion:	Materials - Earthen materials Height - 6' Width at base - 24' Width at crest - 10' Diversion simply sufficient to divert water from old stream channel into canal
(i) Generating Units:	#1 Power site Existing - None Proposed - One, variable flow unit. Auxiliary - None kW Capacity - 900 Manufacturer - Westinghouse or equivalent Future units - None #2 Power site Existing - None Proposed - One, variable flow unit. Auxiliary - None kW Capacity - 1,700 Manufacturer - Westinghouse or equivalent Future units - None
(ii) Turbines:	#1 Power site Number - One Manufacturer- Gilkes, Barber or equivalent Type - Francis #2 Power site Number - One Manufacturer - Gilkes, Barber or equivalent Type - Francis

(iii)	Plant operation:	No storage on either site. Plant will be strictly run-of-the-river.
(iv)	Estimated Average Annual Generation:	#1 Power site = 5,800,000 kWh #2 Power site = 11,000,000 kWh Total = = = = = 16,800,000 kWh
(v)	Static head:	#1 Power site = 170 ft. #2 Power site = 320 ft. Total = = = = 490 ft.
(vi)	Impoundments:	None
	Forebay:	None
	Net Storage	None
	Gross Storage	None
(vii)	Hydraulic capacity	70 cfs at each site.
	Average flow of stream at point of diversion	60 cfs
	Flow duration curve:	See attached
	Description of Drainage Area:	See attached geologic report from D.M. Totorica
(viii)	Pipeline:	Two 30" diam. steel overflow pipelines installed w/20 cfs capacity. Length of each pipe will be 100'. ¼" wall thickness.
	Ditches:	None
	Flumes: (Siphon)	One concrete box culvert to convey water under state highway. Height - 4', width - 5', length - 120' Material - Reinforced concrete.
	Canals:	Canal #1 Material - compacted earth fill trapezoidal shaped self sealing with the natural clay and silt Length - 20,000 linear ft. Depth - 5.5 ft. Width at top - 20.5 ft Width at base - 4 ft Slope - 1.5:1

Canal #2
Material - compacted earth fill trapezoidal shaped channel, self sealing with the natural clay and silt.
Length - 23,600 linear ft.
Depth - 5.5 ft.
Width at top - 20.5 ft.
Width at base - 4 ft.
Slope 1.5:1

Intake Facilities: In order to achieve the proper fixed flow, the headworks will serve as a stilling basin.

Material - Reinforced concrete
Height - 10 ft.
Width - 9 ft.
Length - 42 ft.

These dimensions will be the same for both headworks.

Penstock:

Power site #1
Length - 750 ft.
Diameter - 42 in.
Wall thickness - 0.187 in.
Weight - 86.2 lbs/sq ft.
Material - Welded steel with Dresser coupling expansion joints
Operating pressure - 75 psi

Power site #2
Length - 9,000 ft.
Diameter - 42 in.
Wall thickness - 0.25 in.
Weight - 115.6 lbs/sq. ft.
Material - Welded steel with Dresser coupling expansion joints.
Operating pressure 140 psi

Powerhouse:

Power site #1 and #2 will be the same.
Size - 25' x 21'
Material - Concrete block with steel security door and safety fencing, suitable station service power and lighting and overhead hoist system will be installed.
Exterior will be painted earthtone color and natural landscaping will be used for concealment.

Dam: None

Primary Transmission Lines:	Power site #1 and #2 Each plant will be connected through suitable transformers and switching devices per utility standards to an existing 3-phase transmission line controlled by Salmon Rural Electric of 12.5 kVa. Power site #1 Distance - 1/10 mile east of powerhouse. Power site #2 - Distance - 50 ft. north of powerhouse.
Other:	None
Estimated Cost of Project:	$4,417,500.00
Purpose of Project:	Generation and sale of electricity under the Public Utility Regulatory Policy Act to a suitable utility.

WARM SPRINGS CREEK

FLOW DURATION CURVE

The Warm Springs are a continuously flowing system originating from geothermal sources.

The system was dramatically altered approximately one year ago (October, 1983) by a major earthquake. Since that time, the springs have been repeatedly monitored for scientific purposes.

Total achieved flow (70 cfs) is known and have been accurately measured by Applicants who have their own measuring gauge.

A flow duration curve or an annual daily hydrograph are simply not available or applicable to this unique project.

[redacted]

162931

RECEIVED
MAY 7 1984

WARRANTY DEED

For Value Received TIMOTHY A. INGRAM, a single man,

the grantor , does hereby grant, bargain, sell and convey unto INGRAM WARM SPRINGS RANCH, a Partnership, with WILLIAM E. INGRAM, Managing Partner, and/or ALICE E. INGRAM, Managing Partner,
the grantee , whose current address is Star Route
Challis, Idaho 83226,
the following described premises, in Custer County Idaho, to-wit:

TOWNSHIP 13 NORTH, RANGE 20 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO.

Section 19: SE1/4, LESS Highway Right-of-Way.

Section 30: N1/2NE1/4.

TOGETHER With 85 inches of water from Warm Springs Creek, a tributary of Salmon River with Point of Diversion from Warm Springs Creek, date of priority of 3/1/1877,
SPECIFICALLY RESERVING TO GRANTOR, 15 inches of identical water for adjoining lands southwest of U.S. Highway No. 93, in SW1/4SW1/4, Section 18, Township 13 North, Range 20 East, Boise Meridian, Custer County, Idaho, and

SUBJECT TO All easements of sight and record.

TO HAVE AND TO HOLD the said premises, with their appurtenances unto the said Grantee , its heirs and assigns forever. And the said Grantor do es hereby covenant to and with the said Grantee , that he is the owner in fee simple of said premises; that they are free from all incumbrances

except as of record

and that he will warrant and defend the same from all lawful claims whatsoever.

Dated: April 1, 1982

Timothy A. Ingram

STATE OF IDAHO, COUNTY OF CUSTER
On this 12 day of April, 1982, before me, a notary public in and for the said State, personally appeared TIMOTHY A. INGRAM, a single man,

known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

Notary Public
Residing at Challis, Idaho
Comm. Expires Life

STATE OF IDAHO, COUNTY OF
I hereby certify that this instrument was filed for record at the request of

at 28 minutes past 8 o'clock P M., this 29 day of April, 1982, in my office, and duly recorded in Book of Deeds at Page

Howard A Baxter
Ex-Officio Recorder

By Joyce D. Black
Deputy.

Fees $2.00
Mail to: CCT

RECEIVED

MAY 7 1984

162932

WARRANTY DEED

For Value Received WILLIAM E. INGRAM and ALICE E. INGRAM, husband and wife,

the grantors, do hereby grant, bargain, sell and convey unto INGRAM WARM SPRINGS RANCH, a Partnership, with WILLIAM E. INGRAM, Managing Partner, and/or ALICE E. INGRAM, Managing Partner,

the grantee, whose current address is Star Route
Challis, Idaho 83226,

the following described premises, in Custer County Idaho, to-wit:

TOWNSHIP 13 NORTH, RANGE 19 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO.

Section 12: SE1/4.

Section 13: SE1/4NW1/4, SW1/4NE1/4, N1/2SE1/4, EXCEPTING Highway Right-of-Way, N1/2NE1/4, SE1/4NE1/4, SW1/4NW1/4.

TOWNSHIP 13 NORTH, RANGE 20 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO.

Section 18: Lots 1, 2, 3, and 4 LESS that portion lying South and West of U.S. Highway No. 93, and SE1/4SW1/4 LESS Highway Right-of-Way, NE1/4, E1/2NW1/4, NW1/4SE1/4, NE1/4SW1/4.

Section 29: W1/2SE1/4 LESS Highway Right-of-Way, S1/2NW1/4, NE1/4SW1/4 LESS Highway Right-of-Way, NW1/4NW1/4 LESS Highway Right-of-Way, NW1/4SW1/4, S1/2SW1/4.

Section 30: SE1/4NE1/4, E1/2SE1/4.

Section 31: E1/2NE1/4.

Section 32: NW1/4NW1/4.

SUBJECT TO All easements of sight and record.

TO HAVE AND TO HOLD the said premises, with their appurtenances unto the said Grantee, its heirs and assigns forever. And the said Grantors do hereby covenant to and with the said Grantee, that they are the owners in fee simple of said premises; that they are free from all incumbrances

and that they will warrant and defend the same from all lawful claims whatsoever.

Dated: Apr. 1, 1982

William E. Ingram

Alice E. Ingram

STATE OF IDAHO, COUNTY OF CUSTER

On this 1st day of April, 1982, before me, a notary public in and for the said State, personally appeared WILLIAM E. INGRAM and ALICE E. INGRAM, husband and wife,

known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

R. BENNETT NOTARY PUBLIC

Notary Public

Residing at Challis, Idaho

Comm. Expires Life

STATE OF IDAHO, COUNTY OF

I hereby certify that this instrument was filed for record at the request of

at 28 minutes past 2 o'clock P M., this 2nd day of April, 19 82, in my office, and duly recorded in Book of Deeds at Page

Howard A. Baxter
Ex-Officio Recorder

By Joyce D. Block
Deputy.

Fees $2.00

Mail to: CCT

162933

MAY 7 1984

WARRANTY DEED

For Value Received GARY WILLIAM INGRAM and JACQUELINE J. INGRAM, husband and wife,

the grantors, do hereby grant, bargain, sell and convey unto INGRAM WARM SPRINGS RANCH, a Partnership, with WILLIAM E. INGRAM, Managing Partner, and/or ALICE E. INGRAM, Managing Partner,
the grantee, whose current address is Star Route, Challis, Idaho 83226,
the following described premises, in Custer County Idaho, to-wit:

TOWNSHIP 13 NORTH, RANGE 20 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO.

Section 32: SE1/4NE1/4, NE1/4SE1/4, N1/2NE1/4, LESS Highway Right-of-Way.

Section 33: W1/2SW1/4, SE1/4SW1/4, LESS Highway Right-of-Way.

TOWNSHIP 12 NORTH, RANGE 20 EAST, BOISE MERIDIAN, CUSTER COUNTY, IDAHO.

Section 4: Lot 3, SE1/4NW1/4, E1/2SW1/4, SW1/4NE1/4, W1/2SE1/4.

Section 9: NE1/4NW1/4, N1/2NE1/4, SE1/4NE1/4.

Section 10: SW1/4NW1/4, N1/2SW1/4, SE1/4SW1/4.

Section 15: Lot 3, SE1/4NW1/4, SW1/4NE1/4.

SUBJECT TO All easements of sight and record.

TO HAVE AND TO HOLD the said premises, with their appurtenances unto the said Grantee, its heirs and assigns forever. And the said Grantors do hereby covenant to and with the said Grantee, that they are the owners in fee simple of said premises; that they are free from all incumbrances

except as of record

and that they will warrant and defend the same from all lawful claims whatsoever.

Dated: April 1, 1982

Gary William Ingram

Jacqueline J. Ingram

STATE OF IDAHO, COUNTY OF CUSTER
On this 1st day of April, 1982, before me, a notary public in and for the said State, personally appeared GARY WILLIAM INGRAM and JACQUELINE J. INGRAM, husband and wife,

known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

James W. Bennett
Notary Public
Residing at Challis, Idaho
Comm. Expires Life

STATE OF IDAHO, COUNTY OF
I hereby certify that this instrument was filed for record at the request of

at 28 minutes past 2 o'clock P M.,
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19 82, in my office, and duly recorded in Book
of Deeds at Page

Howard A. Baxter
Ex-Officio Recorder

By Joyce D. Black
Deputy.

Fees 2.00
Mail to: CCT

I-20670

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
MAY 7 1984

Salmon District Office
P. O. Box 430
Salmon, Idaho 83467

RIGHT-OF-WAY

Section A

1. There is hereby granted, pursuant to Title V of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1761), a nonexclusive, nonpossessory right-of-way to:

   William Ingram
   HC 61 Box 3020
   Challis, Idaho 83226

   In case of a change in address the holder shall immediately notify the authorized officer.

2. To use, subject to the terms and conditions set out below, the following described public land:

   T. 12 N., R. 20 E.
   Sec. 4: lot 4

   T. 13 N., R. 20 E.
   Sec. 32: SE¼SE¼, NW¼SE¼, SW¼NE¼, NE¼SW¼, NW¼,

3. Description of the right-of-way facility and purpose:

   The right-of-way consists of a ditch canal with an access road located adjacent for maintenance. The purpose is to divert the water from Warm Spring Creek by ditch along the 5600 foot elevation to a drop structure in sec. 29 and then back into Warm Springs Creek. The earthquake of October, 1983 has increased the flow of Warm Springs Spring from about 12 cfs before the earthquake to 73 cfs on 3/5/84. The creek is causing a very deep headcut on Mr. Ingram's private land.

   The right-of-way is 30 feet wide and 9430 feet long containing 6.5 acres more or less. A map showing the location of the right-of-way over the above described public land is attached hereto as Exhibit A.

Section B

1. The right-of-way holder agrees to comply with all the applicable regulations contained in 43 CFR 2800.

2. If the right-of-way holder violates any of the terms and conditions to this grant, the authorized officer, after giving written notice, may declare the

3. The grant is subject to all valid rights existing on the effective date of this grant.

4. There is reserved to the authorized officer, the right to grant additional rights-of-way or permits for compatible use on, over, under or adjacent to the land involved in this grant.

5. The right-of-way shall be relinquished to the United States if the authorized uses are no longer needed.

6. All other terms, conditions. Compliance will be in accordance with the terms and conditions as specified herein and in Exhibit B, attached hereto and made a part hereof.

7. Rental:

   In consideration for these uses, the right-of-way holder shall pay to the Bureau of Land Management, the sum of $125.00 for a five (5) year period beginning on the date of execution and thereafter every five years $125.00. Provided, however, charges for this use may be made or readjusted whenever necessary to place the charges on the basis of fair market value of use authorized by this grant. The permittee may be required to pay additional rental charges if the final survey to be submitted by the SCS after completion of the project indicates that a rental adjustment is necessary.

8. The right-of-way grant shall be granted in perpetuity from the effective date of this grant unless it is relinquished, abandoned, terminated, or otherwise modified pursuant to the terms and conditions of this grant or of any applicable Federal law or regulation.

Section C

The effective date of this right-of-way grant is the date of execution by the authorized officer.

The undersigned agrees to the terms and conditions of this right-of-way grant:

By: William Ingram
HC 61 Box 3020
Challis, Idaho 83226

William Ingram
Signature

April 2, 1984
Date

The right-of-way grant is executed as signed and dated below:

Ronald L. Smith
Area Manager

April 5, 1984
Date

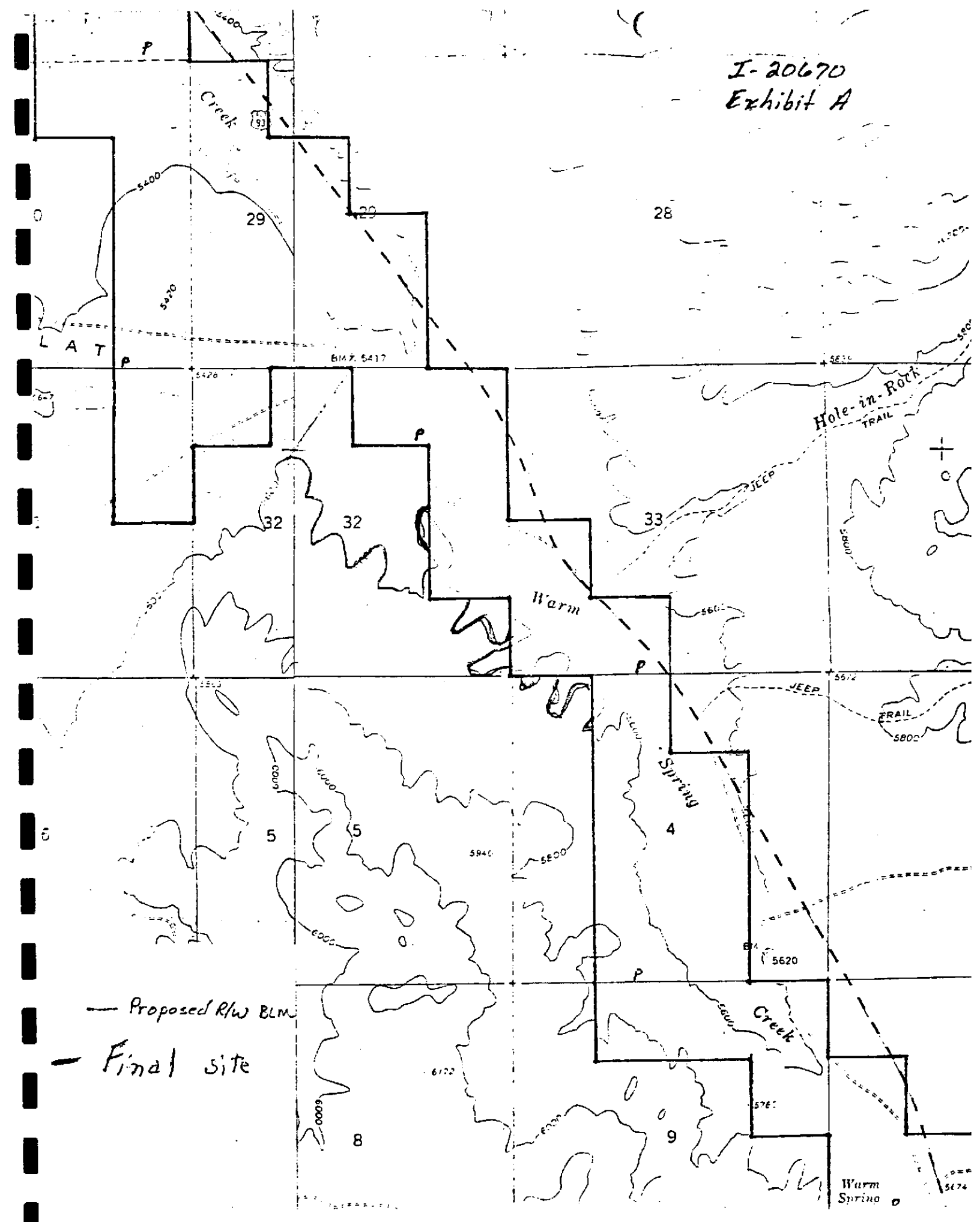

I-20670
Exhibit A
Creek
93
5400
29
28
5420
LAT
BM 5417
5426
Hole-in-Rock
TRAIL
JEEP
32
32
33
Warm
Spring
4
5
5
5940
5620
Creek
6172
8
9
Warm
Spring
5674
— Proposed R/W BLM
— Final site

EXHIBIT B
STIPULATIONS
BUREAU OF LAND MANAGEMENT
RIGHT-OF-WAY I-20670

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of Public Lands under this grant.

2. The holder shall comply with the applicable Federal and State laws and regulations concerning the use of pesticides (i.e., insecticides, herbicides, fungicides, rodenticides, and other similar substances) in all activities/operations under this grant. The holder shall obtain from the authorized officer approval of a written plan prior to the use of such substances. The plan must provide the type and quantity of material to be used; the pest, insect, fungus, etc., to be controlled; the method of application; the location for storage and disposal of containers; and other information that the authorized officer may require. The plan should be submitted no later than December 1 of any calendar year that covers the proposed activities for the next fiscal year (i.e., December 1, 1983, deadline for a fiscal year 1985 action). If need for emergency use of pesticides is identified, the use must be approved by the authorized officer. The use of substances on or near the right-of-way shall be in accordance with the approved plan. A pesticide shall not be used if the Secretary of the Interior has prohibited its use. A pesticide shall be used only in accordance with its registered uses and within other limitations if the Secretary has imposed limitations. Pesticides shall not be permanently stored on public lands authorized for use under this grant.

3. All improvements will be constructed to the construction specifications provided by the SCS.

4. The permittee will submit the final survey and drawings to this office within 90 days from completion of the project.

5. The disturbed areas will be seeded to the specification of the SCS.

6. If, after two growing seasons, the authorized officer determines that reseeding is necessary all disturbed areas will be reseeded with a seed mixture provided by the authorized officer.

7. The permittee shall notify this office before any construction begins on the BLM lands so that an archaeologist can be on site when the snow is removed to clear the area. If the construction doesn't start until after the snow melts a clearance will be required before any disturbance takes place. The center line or the R/W boundary must be staked for this clearance.

8. Compliance inspection will at 5 year intervals.

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

SOUTHERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

1041 Blue Lakes Blvd. North
Twin Falls, Idaho 83301
(208) 734-3578

July 23, 1984

Vernon F. Ravenscroft
P.O. Box 893
Boise, ID 83701

Dear Mr. Ravenscroft:

Enclosed is a copy of application for permit No. 72-7372 together with associated correspondence.

In order to avoid unnessesary delays, we are prepared to schedule a in the matter of the protests, once an application for licensing of the project has been accepted by FERC.

if you need any additional information, please contact this office.

Very truly yours
Loren O. Holmes

Southern Region Supervisor

cc: Will Ingram

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
AFFIDAVIT FOR WATER RIGHTS ACQUIRED
FOR POWER PURPOSES

RECEIVED
APR 26 1984
Department of Water Resources
Southern District Office

A. Establishment of Residency: (Complete either 1, or 2).

1. Individual Applicants or Individual Members of Partnership:

Ingram Warm Springs Ranch - William E. Ingram (Pres.)
(name) (title)

County of Custer, State of Idaho, being duly sworn, do hereby certify that I am a bona fide resident of the State of Idaho.

2. Corporation:

I, _____ (name) of _____ (city),

County of _____, State of Idaho, being duly sworn, depose and say: That I am the designated registered agent of the _____ (name of corporation): that as such I am in charge of the registered office of the said corporation as required by Section 30-1-12, Idaho Code, in _____ (city) Idaho, wherein are kept the corporate records required by Section 30-1-52, Idaho Code: and that _____ (name of corporation) is a corporation qualified to do business in the State of Idaho under the laws of the State of Idaho.

B. Ownership of Facilities: (To be completed for hydropower projects only)

The hydropower facility to be developed pursuant to the attached Application for Permit:

☒ Will not utilize existing man-made irrigation facilities such as a dam or a canal.

☐ Will utilize existing man-made irrigation facilities such as a dam or a canal, and permission of the owner is documented in an affidavit attached hereto.

☐ Will utilize existing man-made irrigation facilities such as a dam or a canal and the owner of the facilities is the signee of this affidavit.

Ingram Warm Springs Ranch
William E. Ingram
Applicant

State of Idaho)
County of Custer) ss.

On this 25th day of April, 19 84, personally appeared before me the signer(s) of the above instrument, who duly acknowledged to me that he ~~(she)(they)~~ executed the same.

Notary Public residing at Challis, Idaho

seal

My commission expires:

Lifetime

Form 202
3/78

Ident. No. 73-7272

RECEIVED

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

1. Name of applicant Lucas Warm Springs Ranch Phone 879-4457

   Post office address HC 61 Box 3020

2. Source of water supply Warm Springs Creek which is a tributary of Salmon River

3. Location of point of diversion is NW¼ of NE ¼ of Section 32 Township 13N

   Range 20E B.M. Custer County, additional points of diversion if any: 7

4. Water will be used for the following purposes:

   Amount 100 cfs (cfs or acre-feet per annum) for Hydropower purposes from Jan 1 to Dec 31 (both dates inclusive)

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

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

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

5. Total quantity to be appropriated:

   a. 100 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:

   a. Description of ditches, flumes, pumps, headgates, etc. Headgate, 3360' Canal 9000' Penstock 42"

   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 _____ (Month/Day) to _____ (Month/Day) inclusive.

   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: NW ¼ of SE ¼ of Section 12 Township 13N

   Range 19E B.M. (90% Nameplate) - 10,639,142 KWH/yr. or 1215 KW

   (2) Amount of power to be generated: _____ horsepower under 320 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	

Total number of acres to be irrigated _____

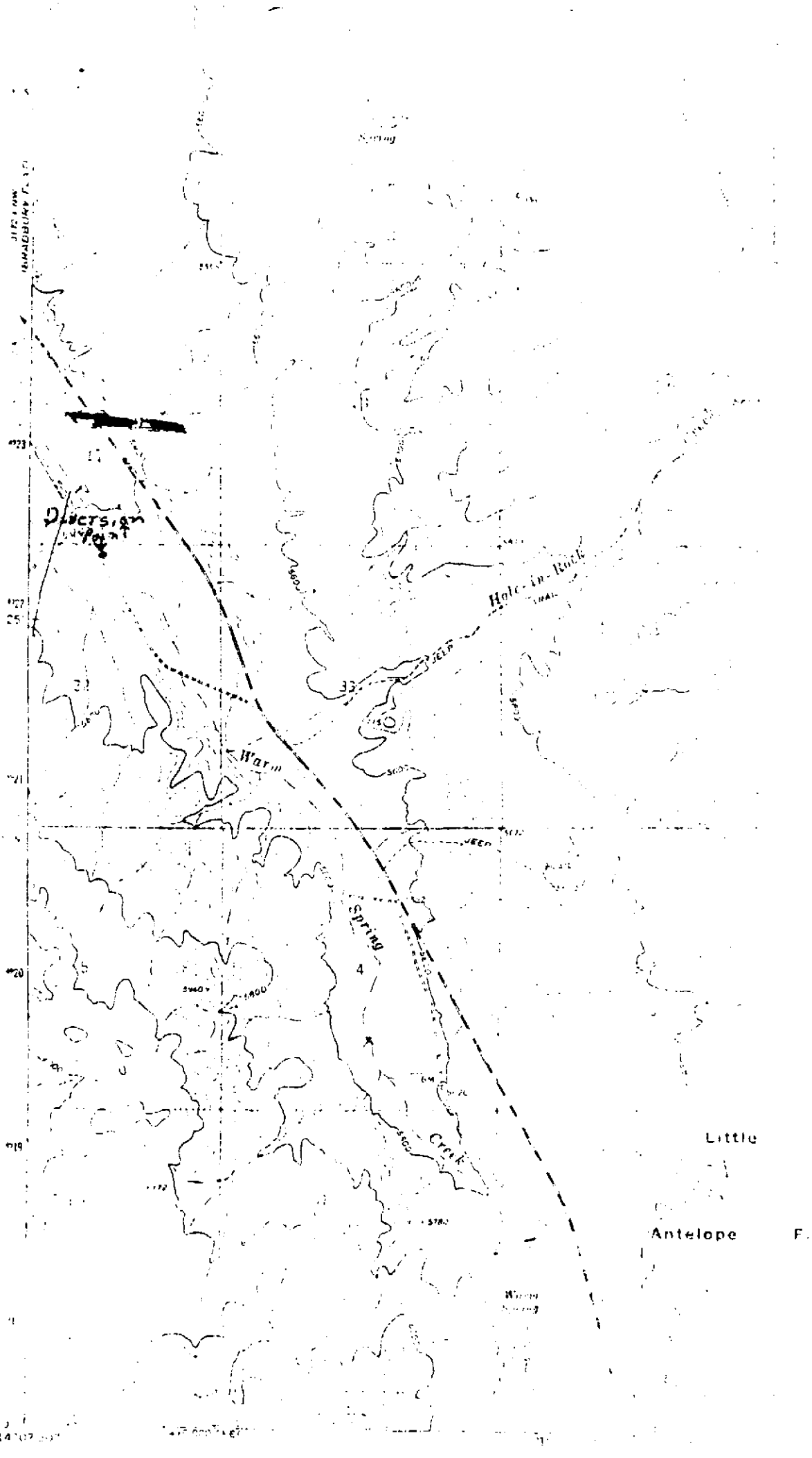
c. Describe any other water rights used for the same purposes as described above. _____

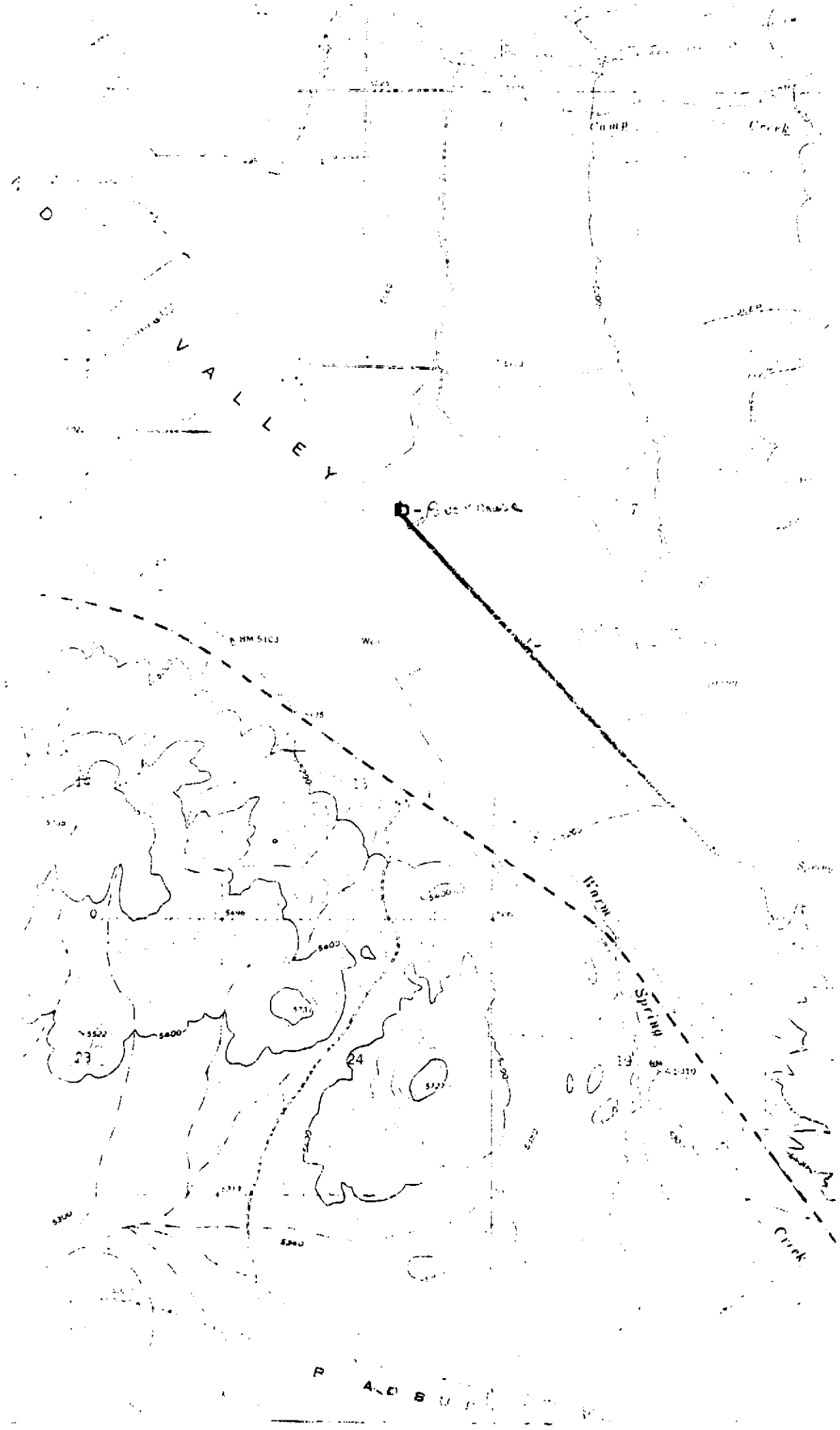
9. a. Who owns the property at the point of diversion Applicant

b. Who owns the land to be irrigated or place of use Applicant

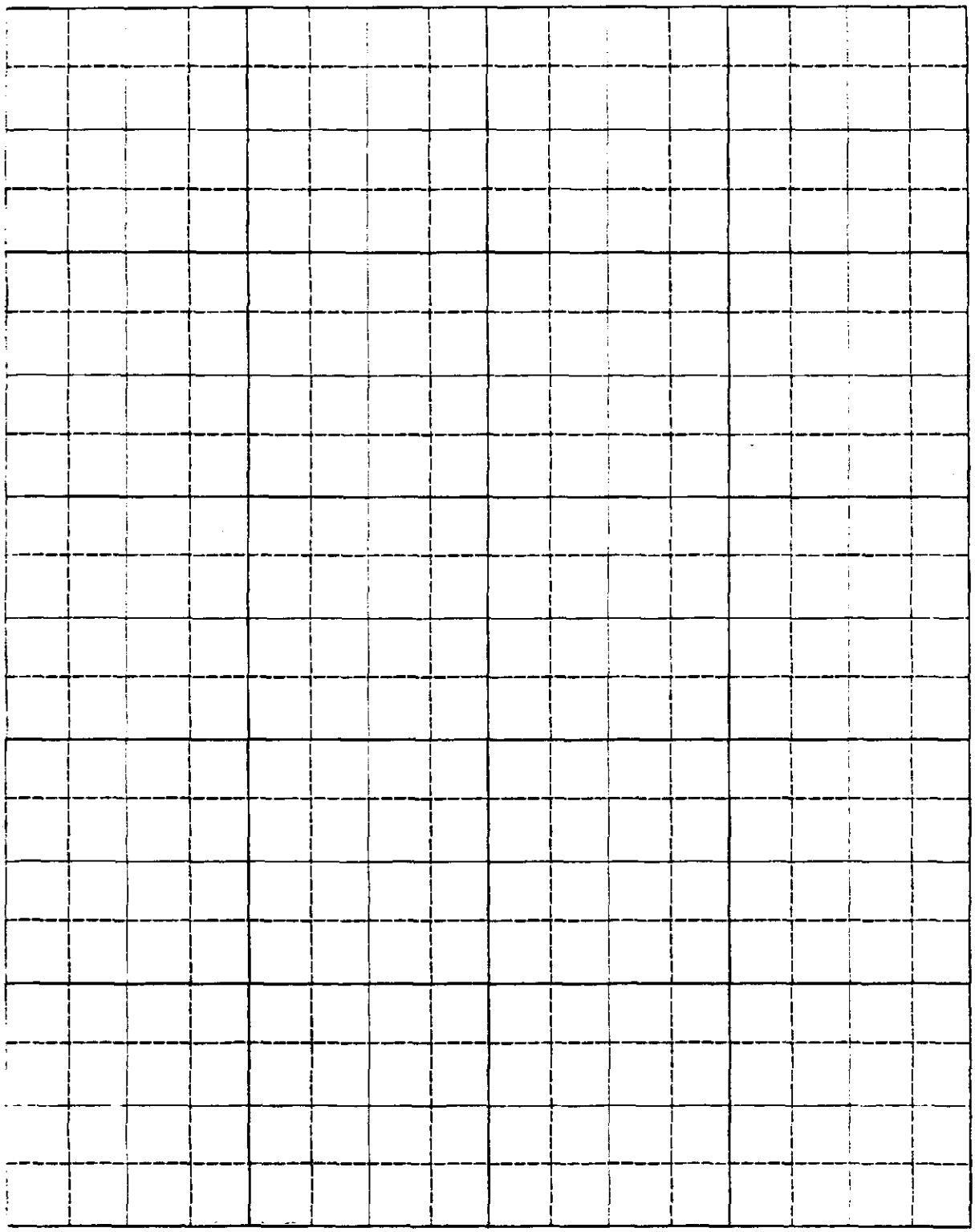
c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing _____

10. Remarks _____


Discussion
Point
Hole-in-Rock
Warm
Spring
Little
Antelope


Camp
Creek
VALLEY
Spring
Creek
23
24

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.

Ingram Warm Springs Ranch
Log Cabin Lodge

(Applicant)

Daily - 4/1/64

Received by marya Date 5/25/64 Time 11:30 a

Preliminary check by _____ Fee $ _____

Receipted by marya Date 4/1/64 # 33058

Publication prepared by marya Date 5/31/64

Published in Custer Publishing Co.

Publication dates 6/7 & 6/14/64

Publication approved marya Date 6/5/64

Protests filed by: _____

_____

_____

Copies of protests forwarded by _____

Hearing held by _____ Date _____

Recommended for approval denial by _____

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. _____ , and said application is hereby _____ .

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 _____ , 19 ____ .

   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:

[redacted] Exhibit E [redacted]

EXHIBIT E

The proposed Warm Springs Hydropower Project is located in Custer County near the town of Challis, Idaho.

The project is wholly contained on a private cattle ranch, owned and controlled by the applicants. The water source, Warm Springs Creek, has been the object of concern to the sportsmen who utilize the Salmon River near Challis for recreation and all of the agencies involved in land and water management because of the sediment load in it is now carrying to the main stem of the Salmon River. This project is unique in that all involved agencies are as anxious to see this project completed as is the applicant.

The Warm Springs Creek originates from a subterranean water source and emerges on the earth surface at a water temperature of 94 degrees F. Historically, the water volume of the Warm Springs Creek had been 12 cfs. However, on October 28, 1983, an earthquake measuring 7.3 M_s shook Idaho and surrounding states. Flow from Warm Springs Creek immediately ceased, but then gradually began to reappear. Within a short period of time, volumes of water began to appear that far exceeded the 80 year historic average. Presently, the flow appears to have stabilized at seventy (70) to seventy-five (75) cfs.

Immediately following this narrative, we are including a report done by Boise State University geologist, D.M. Totorica, under the direction of Mr. Roy Mink of Morrison-Knudsen Company, Boise, Idaho, entitled Effect of Earthquake on Ingram's Warm Springs Near Challis: Custer County, Idaho.

Since this report deals with the effect of the earthquake and the geologic setting, we will defer to this report and not include additional geologic information.

The immediate problem presented by the increased flow of the Warm Springs Creek is that this once placid, sleepy creek, which meandered on the surface through the Ingram ranch, is now cutting a gully through the property which presently measures 20 feet deep and 60 feet wide.

Needless to say, the sediment load which is being carried into the Salmon River on a daily basis, is creating harm to the fishery and related habitat as well as destroying the already fragile fishing areas. All of this is being caused by the sudden increased flow of Warm Springs, and the scouring and deepening of this creek is occurring on a daily basis as well as the steep soil banks continuing to slough into the creek.

This is indeed an environmental emergency, and the Applicant joins the relevant agencies in petitioning the Federal Energy Regulatory Commission for an expedited pro-

cessing of this application in order to bring about an end to this environmental hazard.

worked out by a House-Senate committee when

RECEIVED
JUN 21 1984

Exhibit E
Page 4

Quake side effect

Challis hydro project planned

By MARK ARMSTRONG
Central Idaho staff writer

CHALLIS — A rancher who's disgusted with a stream-widening project that's eroding his land and dumping silt into the Salmon River wants to make the project right by building two hydroelectric power plants and selling the power to utility companies.

Wil Ingram, whose 2,800-acre ranch near here contains the headwaters of Warm Springs Creek, says he would like to install two electricity-generating turbines on the creek.

October's earthquake increased the volume of the warm springs four times and flooded a subdivision last fall.

A diversion from the creek to power the turbines would alleviate an erosion problem caused by stream-widening this winter, Ingram said.

The Federal Emergency Management Agency paid 75 percent of the $220,000 project that widened the bottom of the stream and was intended to reduce the threat of flooding.

But ranchers here say the project was ill-fated because it was not designed properly, and they have asked FEMA to repair it.

After inspecting the work in April, FEMA officials turned down the request because property was no longer threatened by the stream.

"As far as we could determine the work was done and basically conforms with the original damage survey report," FEMA inspector Bruce Trowbridge said after inpecting the work in April.

(Please turn to Page A-3.)

Challis

(Continued from Page A-1)

Dick Buck, FEMA public assistance officer in charge of the Warm Springs project, said the project was authorized only becauase it posed an "immediate threat" to homes.

He said he is aware of the erosion on Ingram's property but said because it constitutes a threat to an individual rather than to the general public it is not eligible for further funding.

Ingram says the flow of his spring is not subsiding as geologists predicted it would, and the force of the water has cut a gully through his property 20 feet deep and 60 feet wide.

He said the stream-widening project was not designed properly because it involved work only on the east side of Highway 93 and not on the section of the stream on his land which is on the west side of the highway.

Meanwhile, Fish and Game Department officials say sedimention coming from Ingram's land caused by the increased stream flow threatens water quality and steelhead runs in the Salmon River.

"What he's proposing out there will basically cut the silt load entering the river at his own expense," said Fish and Game officer Butch Welch.

Welch said the Bureau of Land Management also favors the project, which would involve an easement on BLM land for a diversion canal.

Ingram says he will apply to the federal government for a license to produce hydroelectric power and if all goes well the project could be completed by this fall.

He would not discuss cost estimates for the plant.

PUBLIC NOTICE

Highway 47 is closed at Warm River for the duration of the summer due to bridge construction.

Idaho Falls POST REGISTER

EFFECT OF EARTHQUAKE ON INGRAM'S WARM SPRINGS NEAR CHALLIS; CUSTER COUNTY, IDAHO

D. M. TOTORICA

ABSTRACT

The Mt. Borah Earthquake of October 28, 1983 caused rather abrupt changes in the water flow system in the Little Antelope Flats area of central Idaho.

A warm springs that had been running at 6 cfs completely ceased flowing for a period of 8 days. The springs have since recovered and was measured at 55 cfs in February, 1984.

Increase in spring flowage is postulated to be because regional tilting increased hydrostatic head, also an increase in permeability produced by fracturing along previous fault zones. Hydraulic fracturing produced by pressure pulses could also increase permeability.

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INTRODUCTION

The purpose of this project is to develop an understanding of the geology and geothermal aspects of the October 28, 1983 earthquake on the Warm Springs Area near Challis, Idaho.

Project was commenced on November 4 and field work was conducted over three weekend periods in November 1983.

The area is accessible via Hwy 93 and is on the property of Will and Vangie Ingram of Challis, Idaho. Topography consists generally of a Devonian quartzite ridge that is faulted up against Tertiary Challis Volcanics overlain by alluvium. The spring is located in R 20E, T12N, Sec 10.

Vegetation is sparse, consisting mostly of sage brush and some grasses. Elevation of the springs is 5629 feet Rock exposures were good although strike and dip measurements were often hard to obtain.

Acknowledgement should be made to my field partner, Mary Shaleen, who also acted as a sounding board as I was writing this report. Will and Vangie Ingram also were especially generous with their time.

WARM SPRINGS

The Quake

On October 28, 1983, a 7.3 earthquake shook Idaho and surrounding states. It was the largest earthquake on the Continental United States for 24 years. Measurements taken were:

M_S (surface wave magnitude) 7.3

M_O (seismic moment) 1.122×10^{27}

E_S (estimated radiated energy) (source energy) 5.623×10^{22} ergs

M (single moment magnitude) 7.33

Effect on Warm Springs

A warm spring located approximately 23 miles north of the earthquake epicenter had been running 6 cfs for a period of at least eighty years (Ingram, personal communication). Flowage completely ceased for a period of eight days after the earthquake. The spring has since recovered and was measured at 44 cfs in mid December, 1983 and 65 cfs on February 6, 1984. Page 2 States 54.8 cfs

The warm springs is owned by the Ingram family and used to irrigate 1300 acres of land for hay production on their cattle ranch. Ingrams were seriously investigating the feasibility of commercially raising catfish and tolopia due to the $95^{\circ}F$ temperature of the spring.

At 10:20 am, October 28, two hours after the quake, Mr. Ingram went to inspect the area where the spring is located. He observed that the main spring was completely dry. Another smaller, 94°F, spring is located approximately 1/4 of a mile northwest of the main springs and between 8-10 feet lower in elevation; it was running about 15% of its normal, 1.6 cfs, and then completely dried up the morning of October 29. This smaller spring was observed to be running at approximately 20% of pre-quake volume on November 4 (day 7) at noon. The following day the major spring started to run and has been measured since by the U.S. Geologic Survey. It was 17 cfs on December 14 and increased to 44 cfs on December 15 and 54.8 cfs on February 6, 1984. Note that all these measurements were obtained using a Price Current meter by the USGS, whereas some other published flow data uses Pigme meter readings by other BSU students. (Fig. 2)

The flow cessation could have been caused by debris clogging the fracture openings. After shocks and settling probably caused new fracture systems to release water that was previously trapped.

The northern portion of the Mt. Borah Earthquake fault as mapped by Eisle and Baumhoff indicates that the north side of the fault block on which the warm springs are located was shifted upward to the south. This regional tilting also

must have increased the head and thus increased flowage. The increased flowage may be a fleeting phenomena as aftershocks may reseal the fractures.

The increase in flow could be accomplished by an increase in the aquifer pressure or by an increase of the aquifer permeability. The permeability increase may be a result of pressure pulses produced by seismic shaking and causing hydraulic fracturing. (Wood, 1984) This fracturing is most likely in areas of extensional tectonic stress such as this region of basin and range faulting.

General Geology

The Lost River mountains are located north of the Snake River Plain and southeast of the Idaho Batholith. The Range trends north, northwest and is the most prominent range in the area which is postulated to be the northern most extension of the Basin and Range Province. Borah Peak, at elevation 12,665 feet, is the highest in Idaho. The area is bounded by the Lost River Fault and the Lone Pine Fault. See figures 3,4 for Hays and others 1978 geologic map.

An east-west transect was conducted across the quartzite ridge face of the north trending fault above the warm springs. The fractures are of varied orientation but the most frequently occurring are with a NE strike and NW dip. The purpose of transect was to ascertain if fracture den-

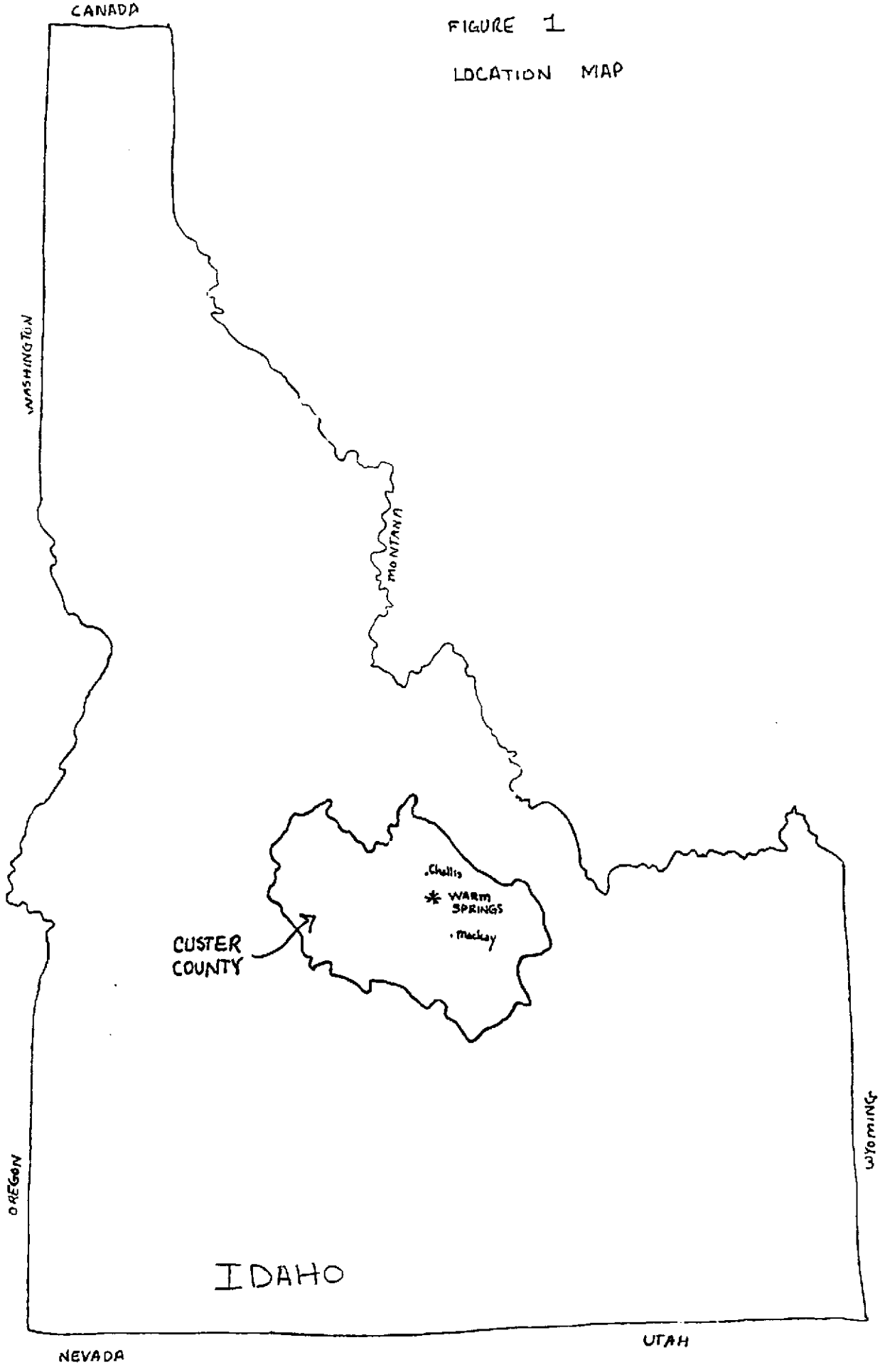
sity is greatest closest to the springs. The transect did not prove this, but additional data might make the transect more conclusive. (Fig. 6)

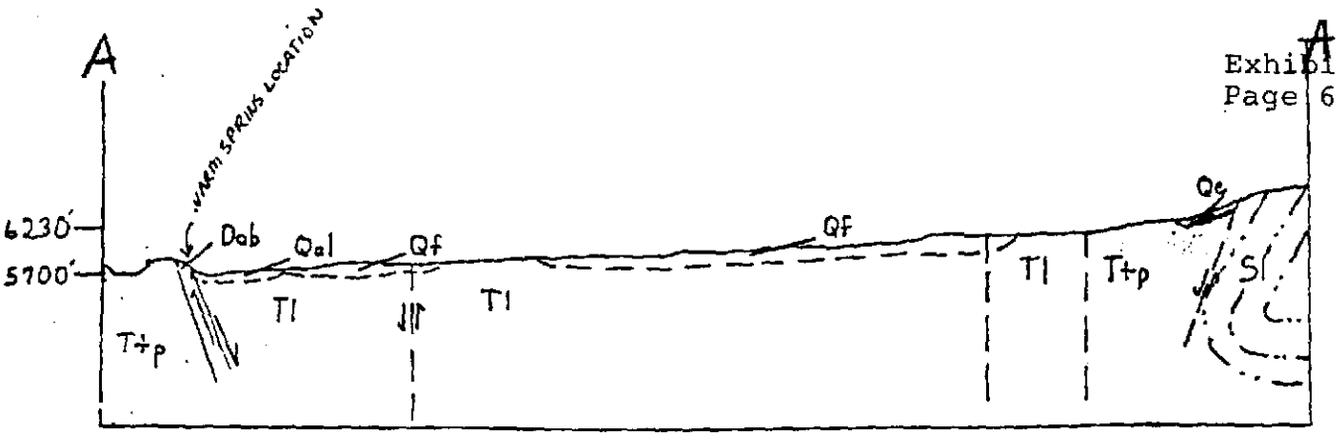
Geothermal

The heat source is postulated to be the Tertiary Challis Volcanics which overlays much of the surrounding area. (fig. 3, 4, 5) Assuming that the aquifer is in volcanics rocks, the estimated subsurface temperature is 85°C and the fraction of hot water in the warm spring is calculated to be 31.4%. (Using chemical analysis data provided by the USGS for Ingram's Warm Springs and regional cold water, calculation was made using Truesdell and Fournier's 1977 method plotting dissolved silica versus enthalpy.) See figure 9.

FIGURE 1

LOCATION MAP





Description of Map Units*

Qal	Alluvium- Gravel, sand, silt, and clay associated with present drainage.	Quaternary
Qfo	Old Alluvial Fan Deposits- Subangular to subrounded boulders, cobbles, and pebbles mixed with sand, silt, and clay deposited in broad coalescing fans in major basins between block-fault ranges.	
	Colluvium- Loose, incoherent accumulations of soil and rock fragments mantling land surface and obscuring bedrock.	
T+p	Silicic Tuff and Sedimentary Rocks- Chiefly thin bedded, locally massive, brown, yellowing-brown, and gray altered vitric tuff and pumice lapilli tuff containing sparse crystals of quartz, plagioclase, sanidine, biotite, amphibole, sphene, zircon, apatite, and allanite	Tertiary
Tl	Intermediate and Mafic Lavas- Dark brown weathering, dark-gray and greenish-gray rocks containing microphenocrysts of olivine, clinopyroxene, and rarely plagioclase in varying proportions.	
Dab	Beartooth Butte Formation- Quartzite and siltite medium gray to near white; sandstone and siltstone variably dolomitic, medium to very light gray or brownish gray, commonly with limonitic surfaces; small proportion of highly silty or sandy dolomite of similiar colors. Quartzite and sandstone mainly very fine grained, but may be medium grained. Medium to thick bedded, mostly with little or no lamination. Resistance to erosion high to weak depending on grain size and on presence or absense of interstitial silica. Thickness 67-215 m.	Devonian
Sl	Laketown Dolomite- Upper member is a variety of colors, impurites and outcrop form. Purer beds mainly medium light to very light gray or pink. Forms blocky ledges. Lower member is light colored dolomite that commonly forms ridges and peaks, predominantly medium light to light gray, mostly very fine to fine grained and almost pure. Beds medium to very thick, massive and obscurely defined. Forms ledges and cliffs. Joints common.	Silurian

* All map descriptions from Hays, McIntyre and Hobbs Open file report.

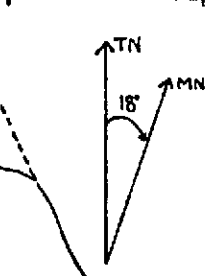
FIGURE 4

GEOLOGIC MAP OF THE WARM SPRINGS CREEK AREA, CHALLIS, IDAHO

Geology by M. Sholeen and D. Toterica



SCALE 1:250



ROCK UNITS

- Qal — ALLUVIUM - GRAVEL, SAND, SILT ASSOCIATED WITH PRESENT DRAINAGE
- Ttp — SILICIC TUFF AND SEDIMENTARY ROCKS - CHIEFLY THIN BEDDED BROWN, YELLOWING - BROWN AND GREY ALTERED VITRIC TUFF AND PUMICE LAPILLI TUFF.
- Tl — LAVAS - INTERMEDIATE TO MAFIC - DARK BROWN WEATHERING ALSO DARK-GREY AND GREENISH GREY ROCKS
- Dab — QUARTZITE AND SILTITE - MEDIUM GREY TO NEAR WHITE VARIABLY DOLOMITIC. MEDIUM TO THICK BEDDED

EXPLANATION OF SYMBOLS

- CONTACT
- CONTACT, LOCATED APPROXIMATELY, VERY APPROXIMATELY
- FAULT, SHOWING RELATIVE MOVEMENT (U / D)
- FAULT, LOCATED APPROXIMATELY, VERY APPROXIMATELY
- FAULT, CONCEALED
- 40 — STRIKE AND DIP OF BEDDING
- ROAD
- INTERMITTENT STREAM
- LOCATION OF WARM SPRINGS
- SYNCLINE, SHOWING APPROXIMATE AXIS

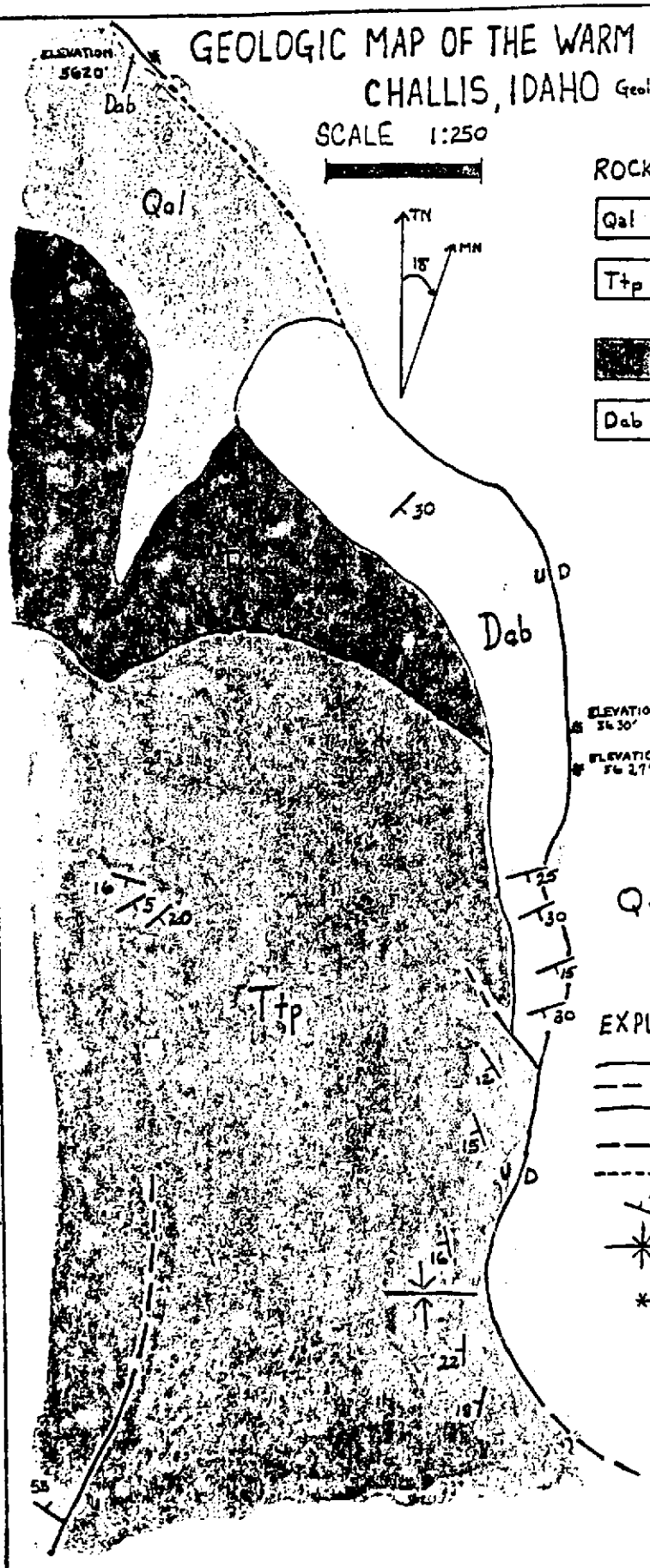
FIGURE 5

GEOLOGIC MAP OF THE WARM SPRINGS CREEK AREA, CHALLIS, IDAHO

Geology by M. Stuken and D. Tetorica



SCALE 1:250



ROCK UNITS

Qal	ALLUVIUM - GRAVEL, SAND, SILT ASSOCIATED WITH PRESENT DRAINAGE
Ttp	SILICIC TUFF AND SEDIMENTARY ROCKS - CHIEFLY THIN BEDDED BROWN, YELLOWISH-BROWN AND GREY ALTERED VITRIC TUFF AND PUMICE LAPILLI TUFF.
	LAVAS - INTERMEDIATE TO MAFIC - DARK BROWN WEATHERED ALSO DARK-GREY AND GREENISH GREY ROCKS
Dab	QUARTZITE AND SILTITE - MEDIUM GREY TO NEAR WHITE VARIABLY DOLOMITIC. MEDIUM TO THICK BEDDED

EXPLANATION OF SYMBOLS

- CONTACT
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- U / D — FAULT, SHOWING RELATIVE MOVEMENT
- FAULT, LOCATED APPROXIMATELY, VERY APPROXIMATELY
- FAULT, CONCEALED
- 40 — STRIKE AND DIP OF BEDDING
- SYNCLINE, SHOWING APPROXIMATE AXIS
- * WARM SPRINGS

FIGURE 6 TRANSECT

FRACTURES GREATER THAN 2" IN LENGTH AND WIDE ENOUGH FOR A RULER-SCALE PROTRACTOR TO GET INTO IT.

CONCLUSIONS: FRACTURES WITH

NW STRIKE & SW DIP	–	3
NW STRIKE & NE DIP	–	7
NE STRIKE & SE DIP	–	2
NE STRIKE & NW DIP	–	10
N STRIKE & NW DIP	–	4

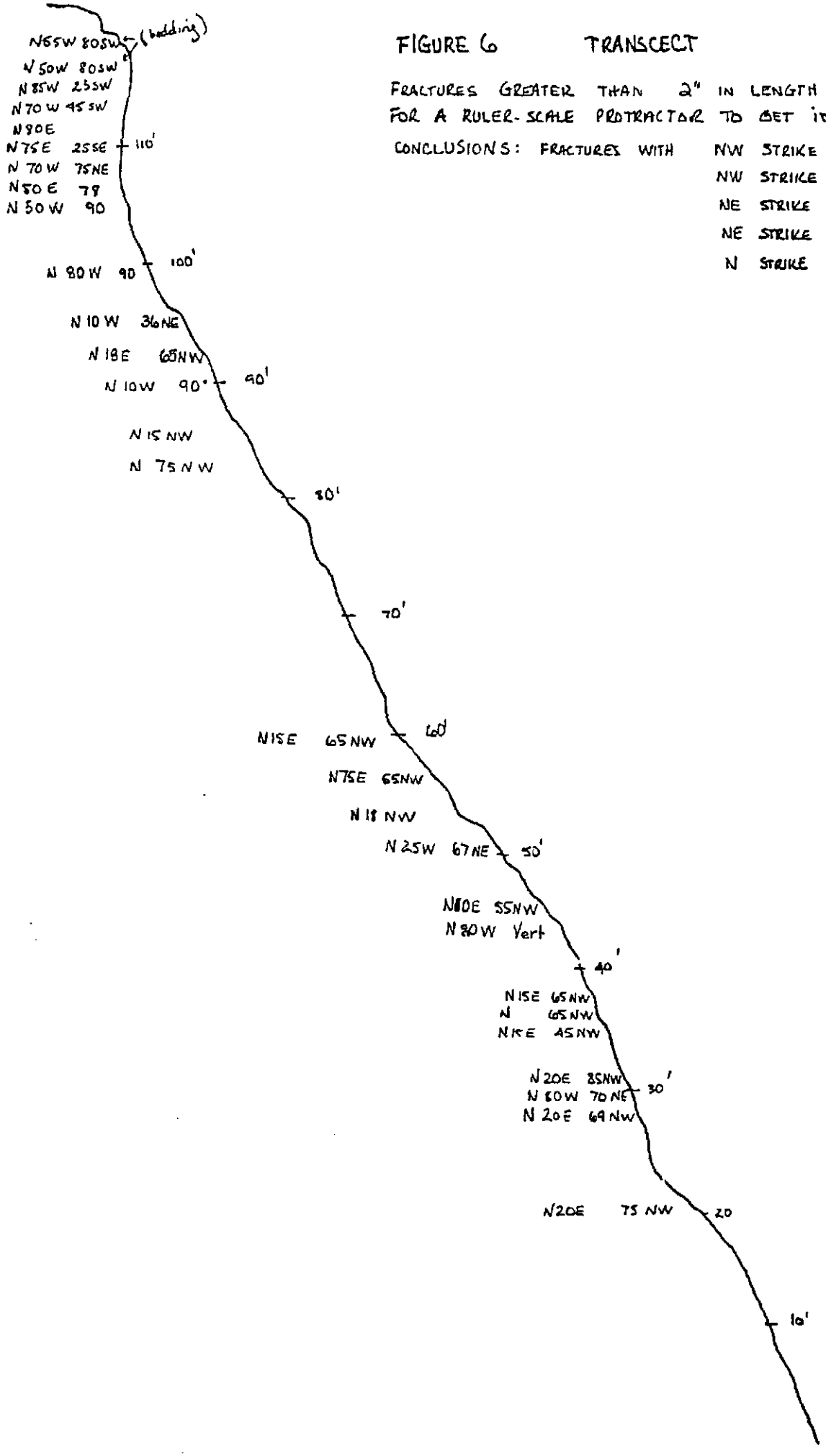


FIGURE 7 November 4th, seven days after earthquake. View is south, this main springs is completely dry.

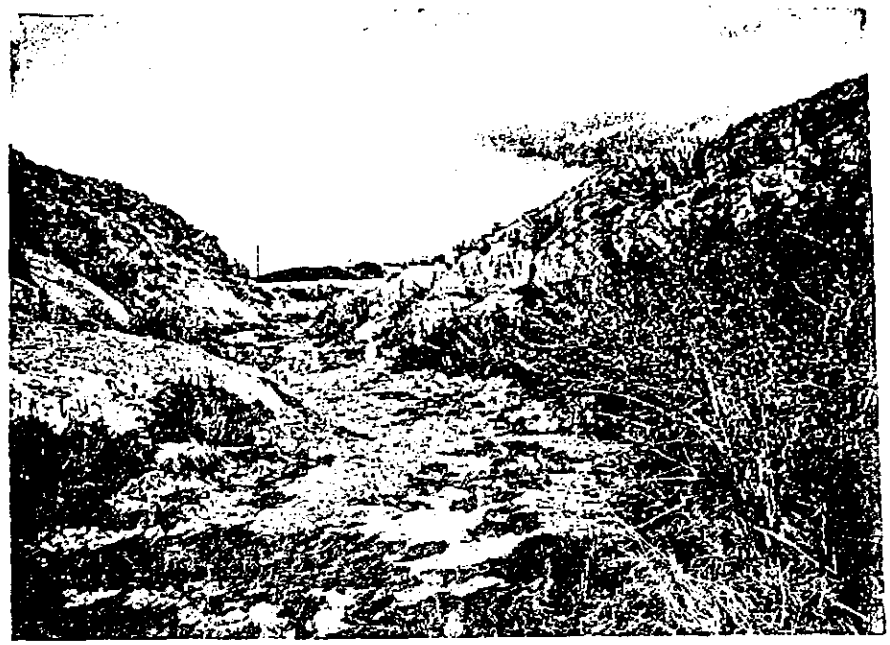


FIGURE 8 November 26th, twenty nine days after earthquake. Flow rate approximately 30 cfs.



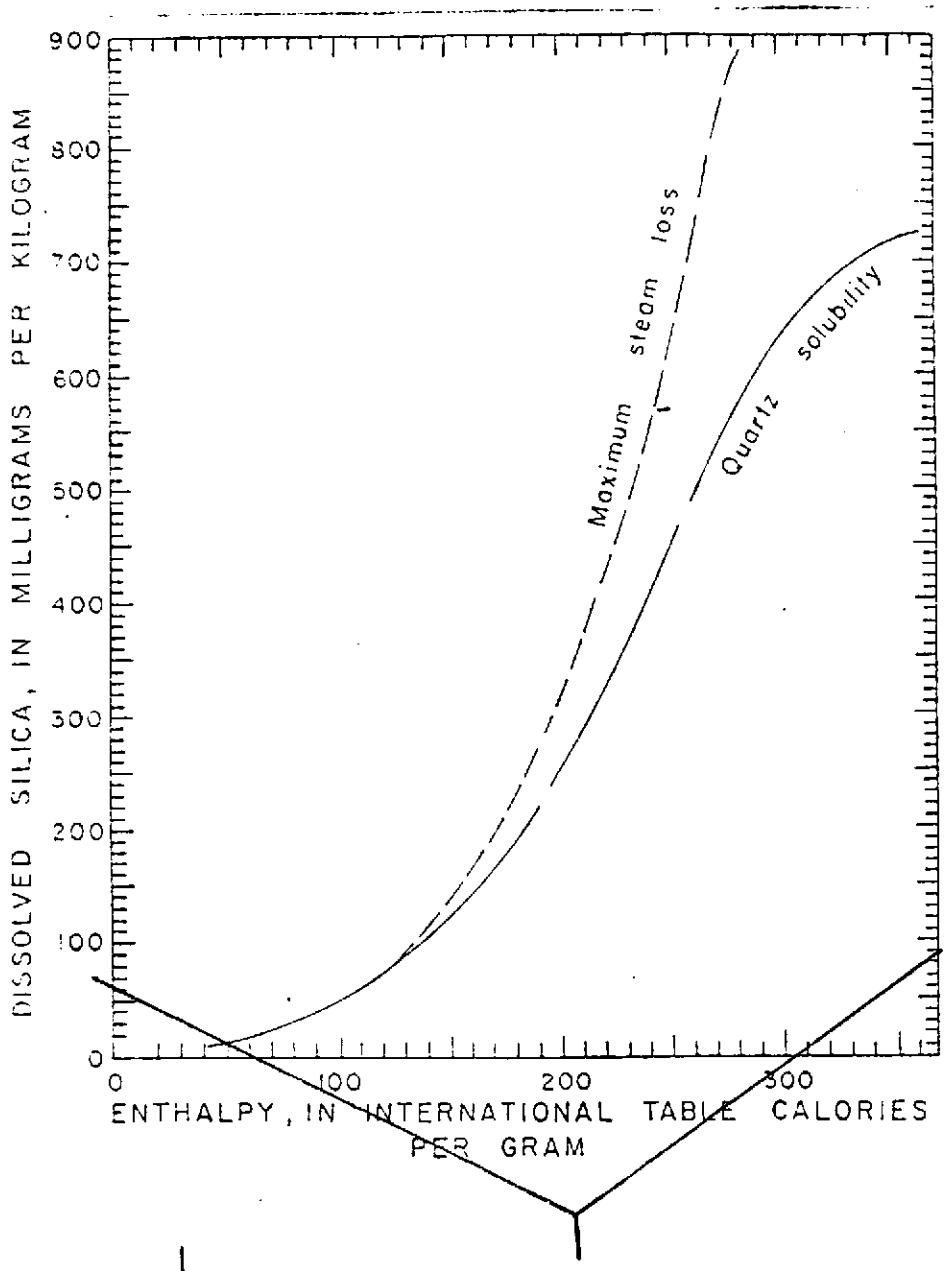
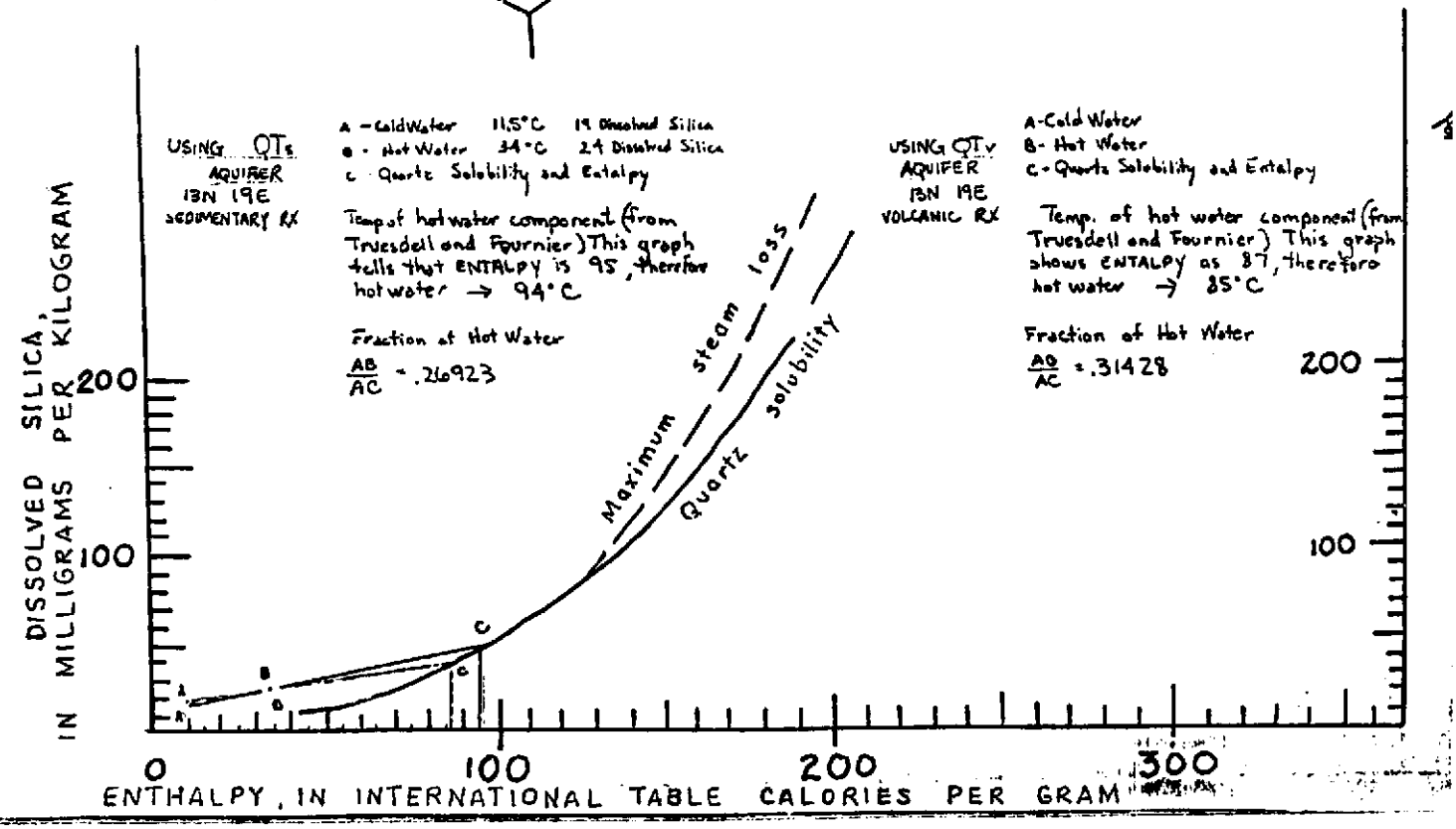


FIGURE 9
Silica, Entalpy Diagram
(After Truesdell and Fournier p.50)



REFERENCES CITED

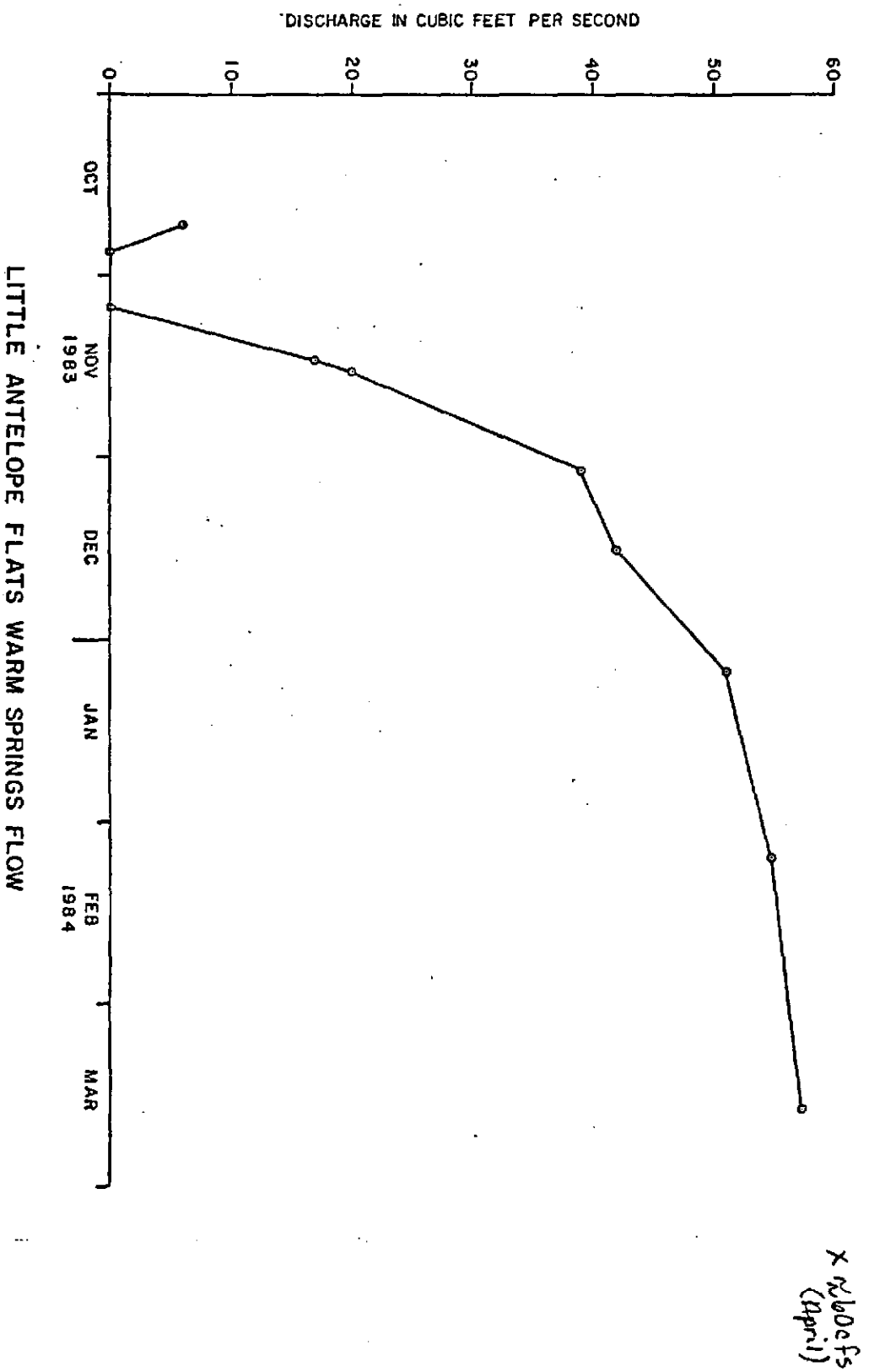
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LITTLE ANTELOPE FLATS WARM SPRINGS FLOW

X ~600cfs (April)

MODE OF OPERATION

The mode of operation of this plant will be run-of the river with no storage capabilities. In addition, the operation will be essentially continuous because of the artesian hot springs which provides a constant flow.

The mode of water supply will be the continuous flow from the springs. However, should additional geologic disturbance occur, engineer Ted Sorenson advises applicant the water source will be obtained by drilling into the water source and returning it to the earth's surface by geothermal force. Thus, should the water source diminish, an alternative method of securing the water source has been evaluated by the project engineer.

GEOLOGIC SETTING

Please see D.M. Totorica report contained herein.

VEGETATION

Vegetation involved within the project area falls within four catagories. The project diversion occurs in a wet meadow type area, with the conveyance canal running on a contour through grass type vegetation. At this point, the first powerhouse will be constructed. Water is then picked up again in a new conveyance system and is transported through shadscale type vegetation with the second powerhouse being located on private cultivated cropland, presently planted to alfalfa.

Specific types of vegetation involved in the project area involving each of the above listed vegetative types are as follows:

Wet Meadow Type - This type occurs mostly on gently sloping soils in small stream valleys and high mountain valleys where soil moisture is influenced more by runoff and seepage than precipitation. At the point of diversion, the stream is dominated by willow thickets and a complex plant community composed of water-tolerant grasses and sedges, some forbs and a few shrubs.

Grasses:

Wiregrass	Poa, spp.
Foxtail	Hordeum jubatum
Reedgrass	Calamagrostis spp.

Cattail	Typha latifolia
Sedges	Carex, spp.
Rushes	Juncus balticus
Bluegrass	Poa, spp.
Brome	Bromus, spp.
Timothy	Phleum pratense
Ryegrass	Elymus
Needle grass	Stipa
Tufted hairgrass	Dischampsia caespitosa
Wheatgrass	Agropyron

Forbs:

Iris	Iris missourunsis
Aster	Aster, spp.
Dandelion	Taraxacum
Yarrow	Achillae lanulosa
Lupine	Lupinus spp.
Senecio	Senecio spp.
Arrowgrass	Triglochin

Shrubs:

Quaking aspen	Populus tremuloides
Water birch	Betula fontinalis
Cottonwood	Populus spp
Streambank alder	Alnus tenuifolia

Grass Type - This vegetative family is characterized by mixed grass stands interspersed or broken by shrub areas. Species found within the project area are as follows:

Bluegrass	Poa
Needlegrass	Stipa

Desert ricegrass	Panicum obtusum
Letterman needlegrass	Stipa lettermani
Thread grass	Stipa comata
Carex	Carex spp.
Sand dropseed	Sporobolus cryptandrus
Indian ricegrass	Oryzopsis hymenoides
Squirreltail	Sitanion
Sandberg bluegrass	Poa secunda

Forbs:

Phlox	Phlox, spp.
Aster	Aster, spp.
Astragalus	Astragalus spp.
Russian thistle	Salsola Pestifer

Brush:

Shadscale	Atriplex confertifolia
Rabbit brush	Chrysothaninus
Budsage	Tridentata spp
Whitesage	Tridentata spp
Fringedsage	Tridentata spp.

Shadscale Type - This vegetative type occurs on droughty soils (usually gravelly, sandy loams). It is characterized by a sparse mixture of low shrubs and grasses with open spaces between the plants. Plant growth and herbage production is influenced markedly by annual precipitation which is generally low (about eight inches annually).

Major shrubs:

Shadscale	Atriplex confertifolia
Winterfat	Eurotia lanata
Nuttall saltbush	Atriplex nuttalli
Douglas rabbitbrush	Chrysothamnus
Black greasewood	Covilea tridentata
Four-winged saltbush	Atriplex canescens

Major grass species:

Sand dropseed	Sporobolus cryptandrus
Squirreltail	Sitanion
Indian ricegrass	Oryzopsis hymenoides
Letterman needlegrass	Stipa lettermani
Bluebunch wheatgrass	Agropyron spicatum
Needle grass	Stipa comata
Sandberg bluegrass	Poa secunda
Ryegrass	Elymus
Cheatgrass	Bronus tectorum
Red three awn	Aristada longiseta

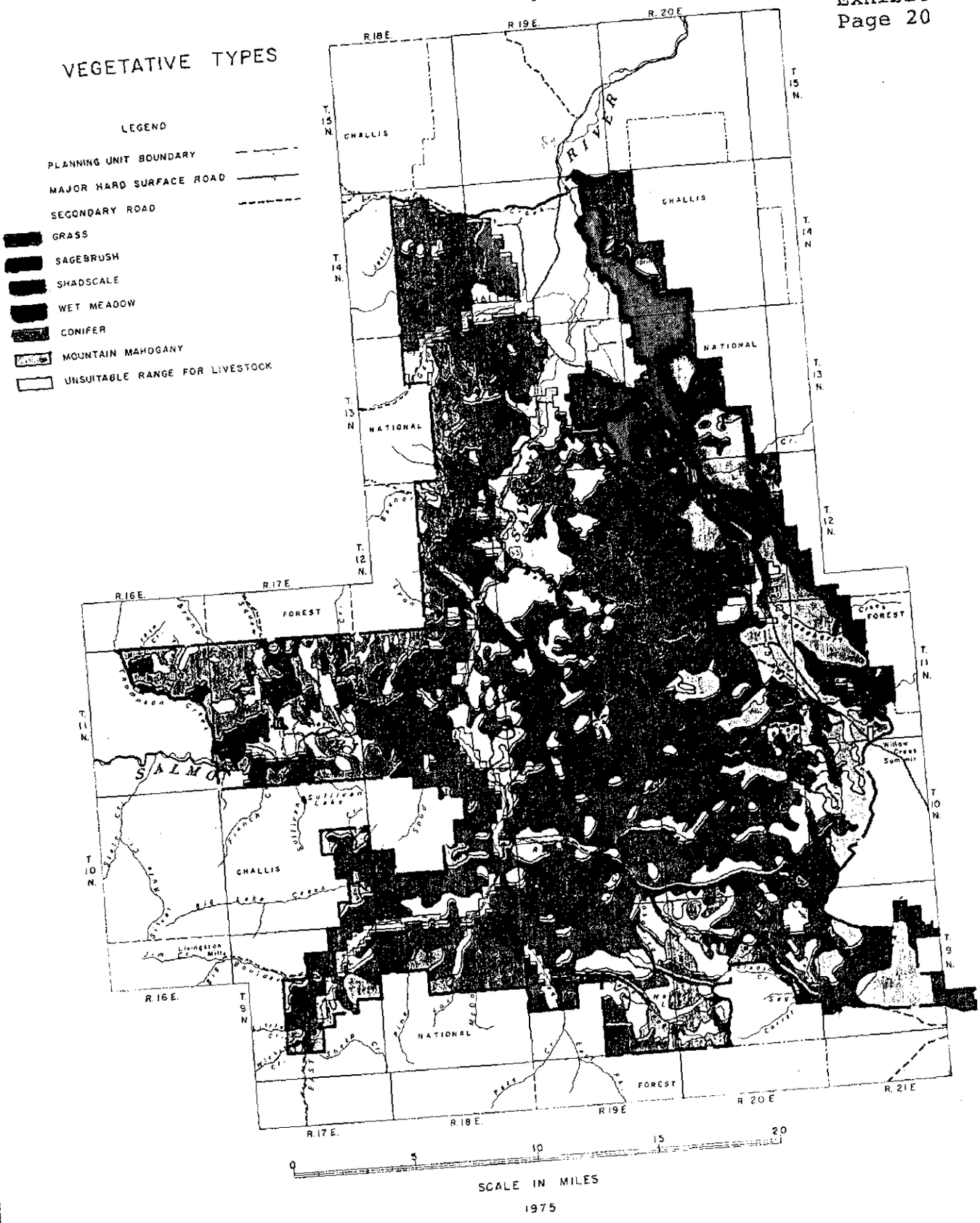
Forbs:

Phlox	Phlox spp
Eriogonum	Eriogonum spp
Russian thistle	Salsola pestifer

Source: Vernon Ravenscroft, Extension Forester
University of Idaho, 1945 - 1951

Range Plant Handbook, Prepared by U.S. Dept. of Agri.

Department of Interior, BLM, Final EIS



MAP 2-10 MAJOR VEGETATIVE TYPES WITHIN THE CHALLIS PLANNING UNIT

FISHERIES

There are no natural game fish whatsoever in the Warm Springs Creek due to the high temperature.

In the letter dated June 5, 1984 from the Idaho Fish and Game Department, Mr. Tom Reinecker, Regional Supervisor states, "It is our opinion the project will have a positive effect in reducing or eliminating the siltation presently flowing into the Salmon River (from Warm Springs Creek), north of Challis. The Siltation did have an adverse effect on steelhead fishing and caused additional maintenance work on fish screens along the Salmon River."

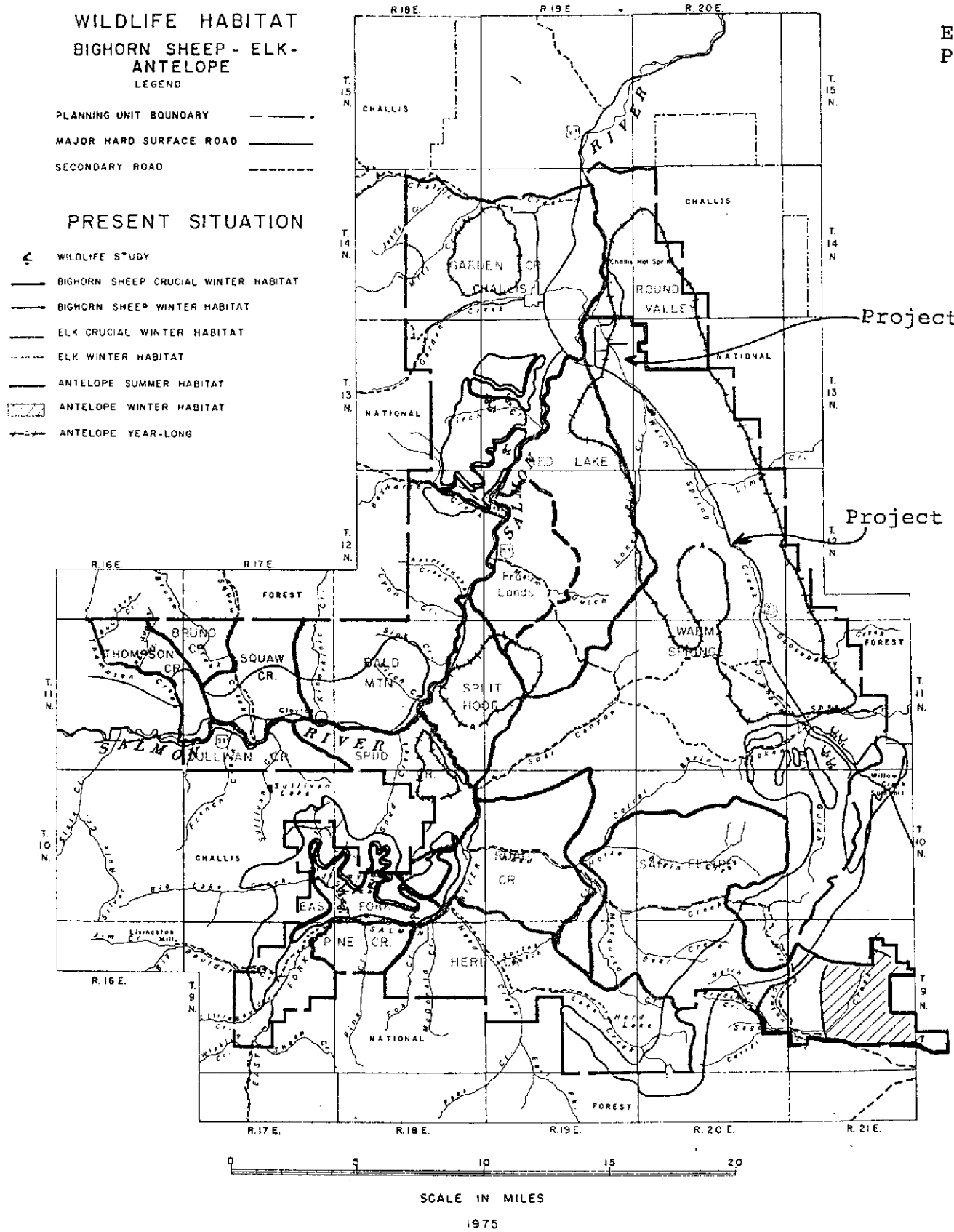
All relevant agencies have verified that there are absolutely no natural resident or anadromous fish in this stream due to the above mentioned factors.

WILDLIFE

Wildlife identified within the project area are determined primarily by the vegetative types whose plant species provide food and cover for numerous wildlife species, and have been listed along with their season of use around the project area as follows:

Elk	Winter
Antelope	Yearlong
Bighorn sheep	Winter
Mountain lion	Winter
Chipmunk	Summer
Weasel	Summer
Grasshopper mouse	Yearlong
Northern pocket gopher	Summer
Richardson's ground squirrel	Summer
Shrew	Summer
Mountain cottontail	Yearlong
Black-tailed jackrabbit	Yearlong
White-tailed jackrabbit	Yearlong
Coyote	Yearlong
Sage grouse	Summer
Chuckar	Yearlong
Mourning dove	Summer
Meadowlark	Summer
Horned lark	Yearlong

Vesper sparrow	Summer
Western rattlesnake	Summer
Sagebrush lizard	Summer
Short Horned lizard	Summer
Spotted skunk	Summer
Raccoon	Summer
Striped skunk	Summer
Fox	Yearlong
Short-tailed weasels	Summer
Lynx	Winter
Badger	Summer
Pine marten	Summer
Muskrat	Summer
Mink	Summer
River otter	Summer



MAP 2-14 IMPORTANT WINTER RANGES OF BIGHORN SHEEP AND ELK AND YEAR-LONG RANGES FOR ANTELOPE IN THE CHALLIS UNIT

WATER QUALITY AND QUANTITY

An examination of the Water Quality Data for Salmon River in the Challis area, prepared by the U.S. Geological Survey, will indicate the efforts of citizens and managing agencies have been rewarded by an increase in the water quality of the Salmon River, a major anadromous fish stream. Data reveals that almost all classes of dissolved solids, minerals, along with fecal coliform, fecal streptococci and general turbidity have decreased over the years with good management. See chart immediately after this narrative.

However, with the sudden increased flow of the Warm Springs Creek and the resulting sediment load that is being carried daily into the Salmon River, the turbidity has increased to the extend that is noticable 18 miles downstream from the mouth of Warm Springs Creek. This severe situation has been addressed previously in this report in detail.

To supplement the report on the severity of the degradation, we are also including pictures, which will clearly show the extent of the washing and scouring caused by Warm Springs Creek.

The quantity of water involved in the Warm Springs Creek

also has greatly increased, moving from 0 cfs to 39.4 cfs flow in 3 weeks in November, 1983 and then steadily increasing to readings in excess of 74 cfs in the summer of 1984.

Also included in this section is a report by Mr. Nick Zufelt, District Ranger, Challis, Idaho, on Warm Springs Creek Channel Stability and Sedimentation watershed survey conducted February 28, 1984.

WATER QUALITY DATA FOR SALMON RIVER STATIONS IN THE CHALLIS UNIT 1/

Date of Date	Instantaneous Discharge (CFS)	Sulfate (SO_4) (Mg/L)	Alkalinity as ($CaCO_3$) (Mg/L)	Dissolved Nitrite plus Nitrate (N) (Mg/L)	Total Phosphorus (P) (Mg/L)	Dissolved Solids Sum of Constituents (Mg/L)	Dissolved Solids (Tons per Ac.ft.)	Dissolved Solids (Tons per Day)	Hardness (Ca,Mg) (Mg/L)	Noncarbonate Hardness (Mg/L)	Specific Conductance (Micromhos)	pH Units	Temperature (Deg. C)	Fecal Coliform (Col. per 100 ml)	Fecal Streptococci KF Agar (Col.per 100 ml)	Carbon Dioxide (CO_2) (Mg/L)	Suspended Sediment (Mg/L)	Suspended Sediment Discharge (T/day)	Turbidity (JTU)	Dissolved Arsenic (AS) (Ug/L)
STATION NAME : Salmon River Near Challis, Idaho																				
STATION NUMBER: 13298500																				
LOCATION : SW/4 SE/4 SE/4, Sec. 7, T12N, R19E																				
5/26/71	4680	3.5	-	0.01	.060	65	.09	821	39	0	92	7.9	8.5				56	708		
6/26/71	10100	6.8	-	0.00	.020	64	.09	1750	40	0	79	7.4	8.0				172	4690		
7/23/71	3700	3.3	-	0.00	.040	64	.09	639	44	0	94	7.6	12.5				7	69		
9/01/71	1160	5.8	-	0.03	.040	99	.13	310	66	0	157	7.7	13.0				2	6.2		
10/7/71	1100	1.3	-	0.11	.050	93	.13	276	69	0	159	7.7	11.5				2	5.9	-	
5/31/72	13000	4.4	-	0.13	.330	59	.08	2070	33	0	94	7.2	7.0				392	13800	55	
6/14/72	8760	3.9	-	0.04	.070	57	.08	1350	35	0	79	7.2	8.0				130	3070	21	
7/24/72	2020	6.1	-	0.00	.020	78	.11	425	54	0	119	7.7	14.5				9	49	1	
10/5/72	1090	8.7	75	0.00	-	104	.14	306	73	0	162	7.2	7.0				7	21	-	5
4/30/73	1100	6.8	59	0.01	.02	85	.12	251	55	0	133	7.7	9.0				10	30	1	0
6/8/73	3170	5.3	42	0.02	.03	62	.08	531	39	0	92	7.5	11.5				22	188	-	0
9/21/73	762	-	-	-	-	-	-	-	-	-	165	-	10.0				-	-	-	-
10/6/73	-	9.0	80	0.00	.01	108	.15	175	73	0	183	8.4	7.5			0.6				-
6/15/78	14400	3.9	34	0.02	.00	52	.07	2020	29	0	75	7.6	8.7			1.6				2
7/13/74	4020	-	-	-	-	-	-	-	-	-	112	7.8	13.0			0				-

1/ Source: U. S. Geological Survey

CHALLIS NF

2510 Watershed Surveys and Plans February 29, 1984

Warm Springs Creek Channel Stability and Sedimentation

Nick Zufelt, District Ranger
Challis ND

On February 28, 1984, I accompanied Lyle Lewis to Warm Springs Creek locations identified on the enclosed maps, in an attempt to review the relative impacts of the channel cutting problem located above the impoundment. As you requested, we collected samples from Warm Springs Creek at various locations between the hot springs source and the confluence with the Salmon River. Our immediate objective was to determine the variance of turbidity levels above and below the problem area. The results are as follows:

Location (a)	Turbidity (NTU)
1. Below the hot spring source at the USGS measuring station	0.1 (b)
2. 100 yards below headcut	520
3. Upstream side of cement culvert (above impoundment)	960
4. Ingrams' impoundment inlet	920
5. Ingrams' impoundment outlet at downstream side of Highway #93 crossing	800
6. East channel (Warm Springs Creek) at Perry's property	560
7. East channel (Warm Springs Creek) at the confluence with the Salmon River	480

(a) See map for station location

(b) Flow measurement - 52 cfs

Based on a preliminary review of field observations and the associated turbidity measurement, a significant amount of sediment is reaching the Salmon River. Samples from station numbers 4, 5 and 7 will be analyzed for suspended sediment levels. These values will be available at a later date.

It appears that the channel is actively widening in the stream reach denoted in red on the enclosed map. After two visits, the headcut had not advanced upstream appreciably. However, the lateral erosion of the streambanks, immediately downstream from the headcut, has progressed rapidly. Periodic reviews of the headcut area will be needed to determine the rate of advance.

Stabilization efforts should concentrate on stabilizing the headcut feature, while allowing the downstream channel to reach an equilibrium naturally.

Please contact me about our future role and/or objectives in this matter.

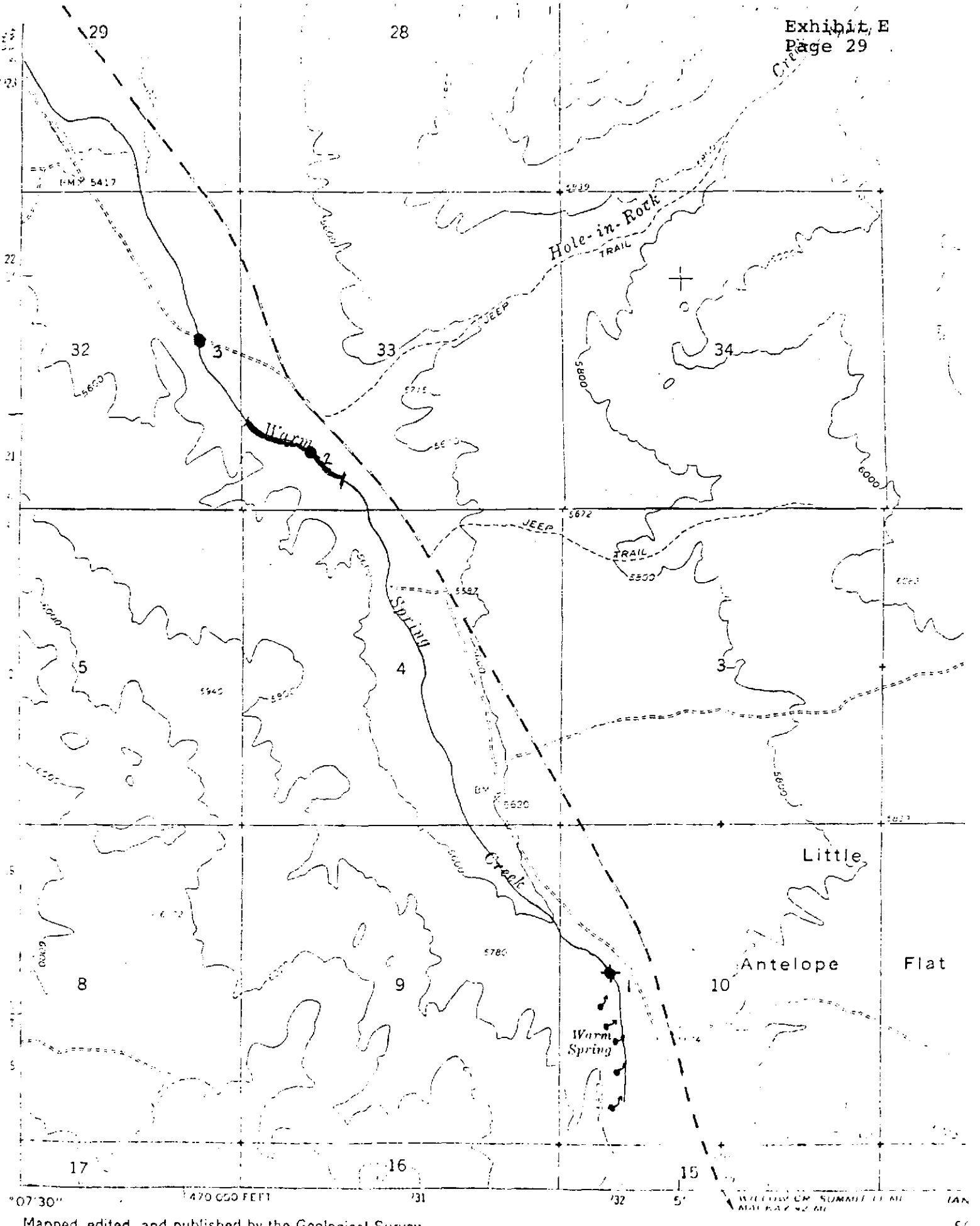
RLEIBY

ROLAND L. LEIBY
Hydrologist

LYLE LEWIS
BLM
District Office

Enclosures

cc. Leiby, Lewis



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

WARM SPRINGS CREEK MAY, 1984





Typical area of streambank ready to slough into Warm Springs Creek.

Man holding 13 foot road showing new depth of stream channel.

Man holding stick on
original Warm Springs stream channel
with new channel cut to left
in this picture.



View of new stream channel

looking upstream in a southeasterly direction.



SURFACE WATER AND RUNOFF

There are major problems with runoff under normal conditions. Soils are primarily derived from glacial activity and are highly erodable. Low rainfall and sparce vegetation make these soils subject to severe gully formation --anytime they are subjected to a heavy rainfall, or increased water volume in any stream.

This gully formation is seriously evident along Warm Springs Creek as a result of the five-fold increase in the flow of that stream.

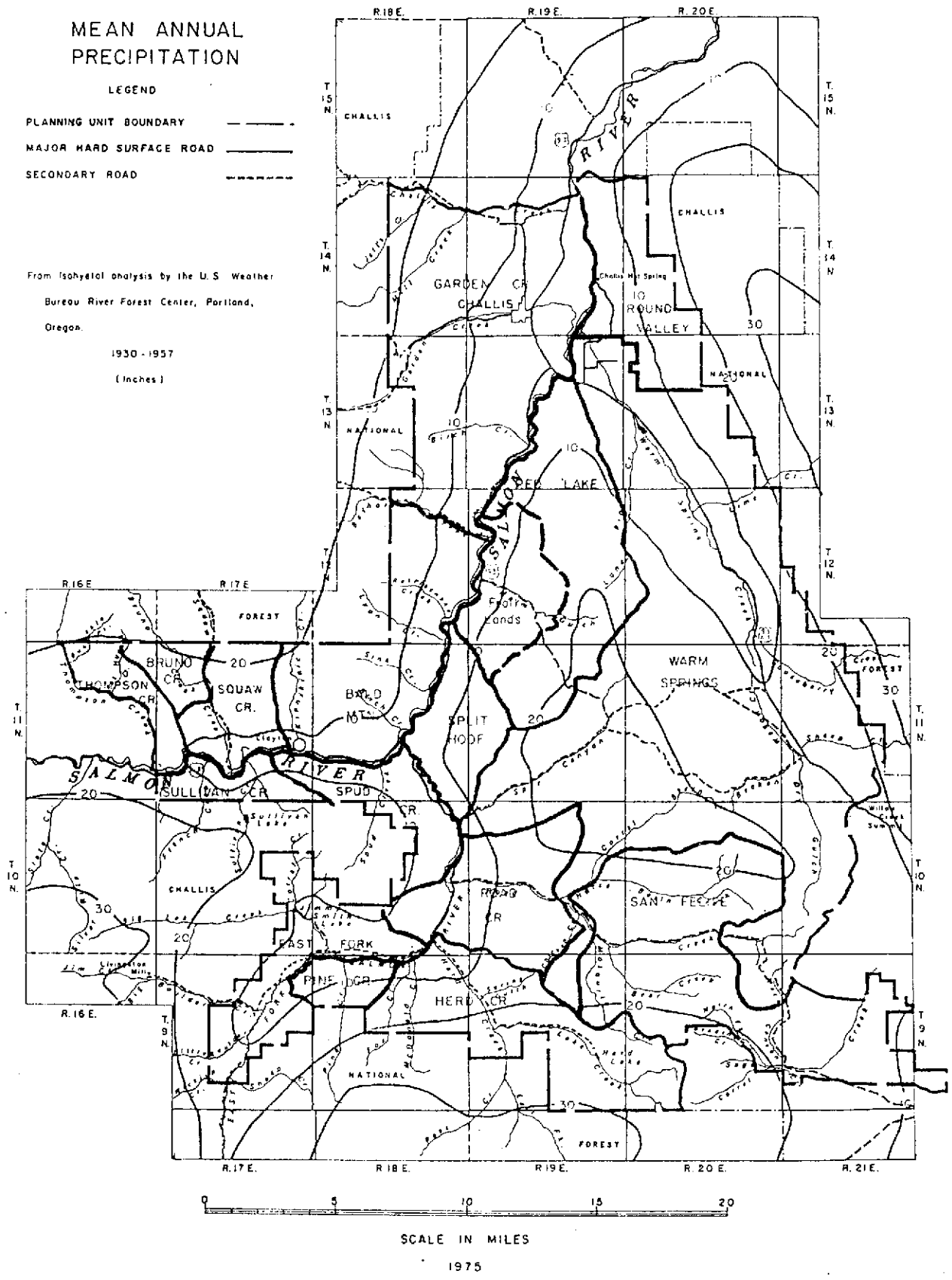
Typical cloudbursts from summer lightning storms can further aggravate the increased sediment load in Warm Springs Creek and the Salmon River.

The present unnatural sediment (70+ cfs of 90 degree F mud) is harming the Salmon migration in the Salmon River. In the project area, annual precipitation ranges from approximately seven to sixteen inches per hear with a mean of approximately twelve inches. Records from the U.S. Weather Bureau, River Forest Center, Portland, Oregon, approximately three cloudbursts which would cause severe runoff occur in the general area of the project each year, each deluging

an estimated three square miles.

Temperature:

The average annual temperature at Challis is 44.1 degrees F. The record mean monthly maximum temperature of 85.5 degrees F was recorded in July.



MAP 2-1 ISOHYETAL MAP OF CHALLIS UNIT. Lines connect areas of equal precipitation.

RECREATIONAL USE

Recreation opportunities in the immediate project area are somewhat restricted because much of the project is contained on private land.

However, recreation opportunities in the general area are very diverse. Most opportunities are found on the Salmon River during salmon and steelhead runs when fishing is permitted.

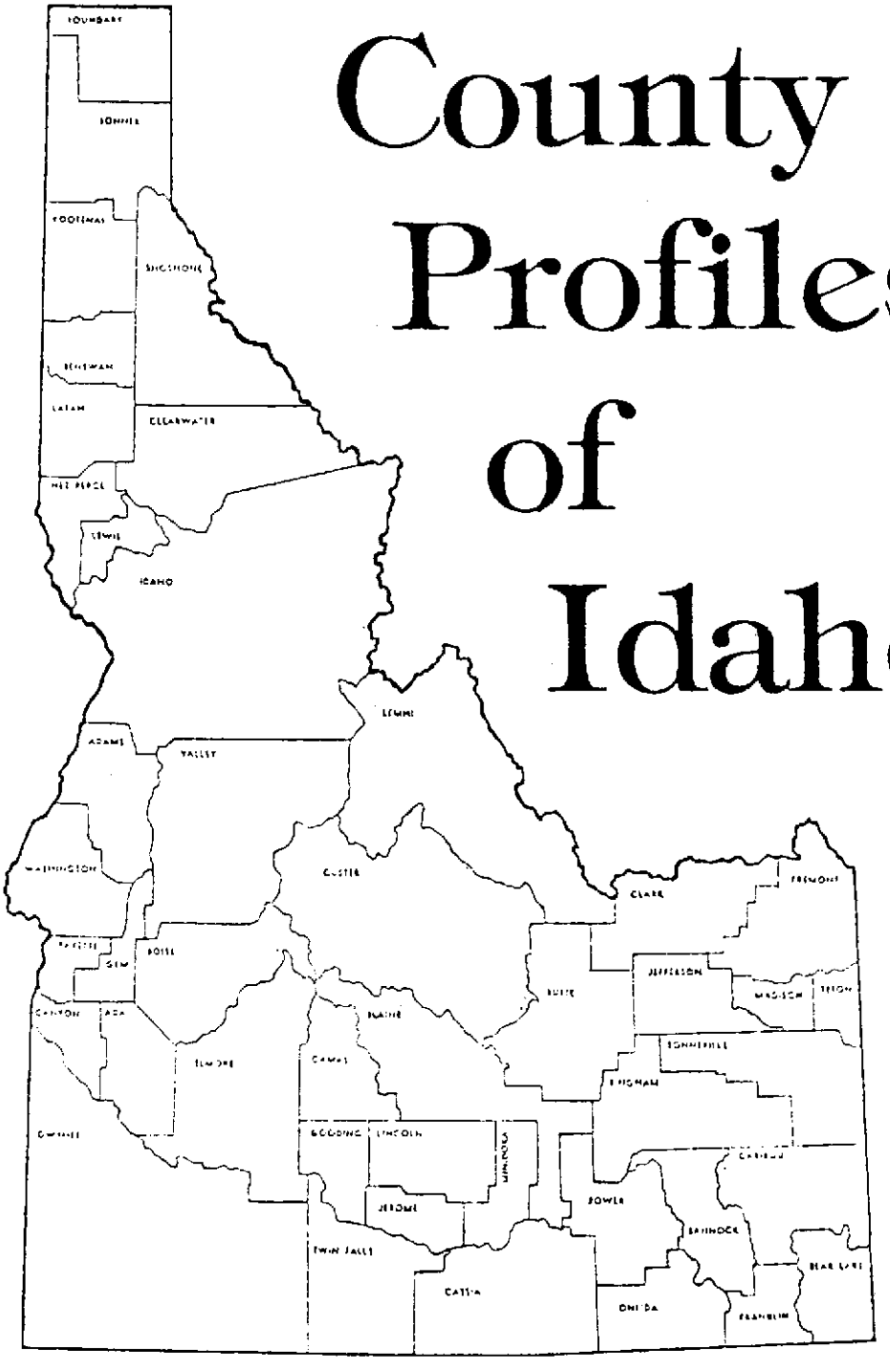
Active recreationists have opportunities to hike, float the Salmon River, hunt, collect rocks, ride horseback or drive off-road vehicles.

The following Estimated Visitor Use of the Challis Unit by Recreational Activity was prepared from data collected by the Bureau of Land Management, Challis Region and published in their Final Environmental Impact Statement as follows:

Sightseeing	80,400 Visitor Days
Fishing	10,000 Visitor Days
Hunting	20,000 Visitor Days
Collecting	500 Visitor Days
Off-Road Vehicle	200 Visitor Days
Camping	12,000 Visitor Days

SOCIO-ECONOMIC ASPECTS

For detailed analysis of the socio-economic aspects of the Custer County area, we sought information from the Division of Economic and Community Affairs on Statistical Indicators of Change in Idaho and have included this information in toto.



County Profiles of Idaho

Statistical Indicators of Change in Idaho

John V. Evans, Governor

Division of Economic and Community Affairs

COUNTY: Custer

COUNTY SEAT: Challis

I. PEOPLE

County's population as percentage of the state total - 1980: 0.4 %

Population: 1950 3,318 1960 2,996 1970 2,967 1980 3,385

Percent of population change - 1970-80: 14.1 % Idaho - 1970-80: 32.4 %

Population per square mile: 1950 0.7 1960 0.6 1970 0.6 1980 0.7

Percent of 1980 population*: rural 100.0% urban 0 %

*Census Bureau defines urban as incorporated cities of 2,500 persons or more and urbanized areas. See explanation of urbanized area on page iii.

Components of change - 1970-80:

Births 500 Deaths 300 Net migration 200 Percent migration 6.3 %

Persons per household: 1960 3.36 1970 3.05 1980 2.73

Median age: 1970 32.0 Idaho median age: 1970 26.4

Birth rate: 1970 13.8 Fertility rate: 1970 79.5

Birth rate: 1980** 19.2 Fertility rate: 1980** 100.6

Idaho birth rate: 1980** 20.1 Idaho fertility rate: 1980** 88.8

U. S. birth rate: 1979 15.8 U. S. fertility rate: 1979 68.0

**1980 data estimated by Division of Economic & Community Affairs

II. HOUSING AND ECONOMY

Housing 1970:

All housing units: 1,320 1980: 2,100

Number of mobile homes or trailers: 111 1980: 346

Number of overcrowded units (1.5+ persons per room): 24 1980: 13

Number of units lacking some or all plumbing facilities: 157 1980: 208

Household composition (% of households by size): 1-2 50.6 % 3-5 38.8 % 6+ 10.6 %

Households eligible for assistance:		Elderly	Families
	1980:	57.4	35.9 6.7
	1970	52	79
	1978	39	44

Year structure built:

1969 to March 1970	8	1950 to 1959	170
1965 to 1968	109	1940 to 1949	161
1960 to 1964	106	1939 or earlier	603

New housing units authorized in permit issuing places*:

Place	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
**	--	--	--	--	--	--	--	--	--	--

*In most cases the totals do not represent a universal number for the county. Only places issuing permits are recorded.
**Was not identified as a permit issuing place at that time.
***Eleven months reported instead of full year.

Percent of average monthly unemployment - 1979:

Jan.	10.8 %	Feb.	9.7 %	Mar.	8.7 %	Apr.	6.8 %	May	5.1 %	Jun.	4.1 %
Jul.	3.7 %	Aug.	3.0 %	Sep.	2.8 %	Oct.	2.5 %	Nov.	3.4 %	Dec.	5.5 %

Percent of labor force unemployed: 1970 5.0 % 1975 7.6 % 1979 5.2 %

Month and percentage of highest unemployment: 1975 Feb. - 15.3% 1979 Jan. - 10.8%

Month and percentage of lowest unemployment: 1975 Sep. - 3.1% 1979 Oct. - 2.5%

Percent of females (16+) in labor force: 1960 (14+) 30.6 % 1970 37.3 %

Employment - full and part time by place of work (B. E. A. data):

	1967	1970	1977	1979
Total employment	1,210	1,248	1,389	1,459
Farm proprietors	278	247	251	240
Non-farm proprietors	194	227	231	238
Wage and salary employment				
Federal civilian	122	107	164	198
Military	--	--	20	22
State and local	164	207	231	228
Manufacturing	24	(D)	(L)	(L)
Mining	64	84	54	60
Construction	23	(D)	(L)	15
Trans., Comm. & Pub. Util.	41	37	39	26
Trade	91	106	114	122
Finance, Insurance & Real Estate	16	19	21	26
Services	74	95	123	158
Other	--	--	(L)	10
Farm	119	108	117	108

(D) Not shown to avoid disclosure of confidential information
(L) Less than 10 workers

Average Idaho tax return (county) - 1980: $ 400

Average Idaho tax return (state) - 1980: $ 531

Sales tax: 1975* $ 168,543 1979* $ 257,606 1980* $ 301,937

Market value of all property** - 1980: $ 85,578,187

Total property tax collected** - 1980: $ 665,613

Property tax as percent of market value**: County - 1980 0.778 % State - 1980 1.064%

Highest tax code area and tax as % of market value** - 1980: Area (02) - 1.102 %

*Fiscal Year **after homeowner exemption

Per capita income:	1970	$ 2,500	1979	$ 6,768
% of national average:	1970	63.0 %	1979	77.3 %
% of state average:	1970	76.0 %	1979	88.7 %

Median family income - 1969: $ 7,063 Median family income* - 1980: $ 13,600
*HUD estimate

Transfer payments (thousands of dollars - county):
1970 $ 960 1975 $ 2,185 1979 $ 3,374

Number of business establishments - 1979: 87

III. EDUCATION AND SOCIAL INDICATORS

Percent of families below poverty level: 1969 16.3 %

Welfare - average number of persons per month in 1980 who utilized:

Old age 3.6 ADC* 31.6 Aid to blind -- APTD** 7.7
*aid to dependent children **aid to permanently or totally disabled

Educational funding levels - FY 80:

State funds per Average Daily Attendance (ADA): Challis, Jt. - $1,606; Mackay, Jt. - $1,704

All fund expenditures per ADA: Challis, Jt. - $1,963; Mackay, Jt. - $2,246

All fund expenditures per ADA (state average): $ 1,760

Median school years completed (persons over 25): 1970 12.1

Teacher's average salary - 1980:	Male		Female
Elementary	$ 14,424		$ 14,370
Secondary	15,509		15,863
State average - elementary	14,953		14,764
State average - secondary	15,732		15,152
National average		$ 18,162	

Health care - 1979:

Number of persons per M. D. 3,400 Number of hospitals --

Number of persons per M. D. (state average) 838.6

Ambulance services 3 Total hospital beds --

Crime - number of offenses:	1973	1976	1978	1979
Murder	--	--	--	--
Rape	--	1	--	--
Robbery	--	--	1	--
Aggravated Assault	3	5	4	5
Burglary	6	25	32	17
Larceny	9	43	38	25
Motor Vehicle Theft	9	4	4	4

Suicide rate per 100,000 persons - 1979: 60.6 state average: 13.8

Marriage rate per 1,000 persons - 1979: 15.5 state average: 14.8

Divorce rate per 1,000 persons - 1979: 3.9 state average: 7.1

IV. NATURAL RESOURCES

Land Ownership - 1979:	Acres	% Total
Federal land	2,944,531	93.3
BLM	817,476	27.8
National Forests	2,124,395	72.1
Other	2,660	.1
State land	53,015	1.7
Endowment land	52,471	99.0
Fish & Game	544	1.0
Parks and Recreation	--	--
Private land	154,778	4.9
County land	2,300	.1
Municipal land	--	--
Total land ownership acres	3,154,624	100.0

Land use* - 1976	Acres	% Total
Urban or built-up land	--	--
Agricultural land	116,600	3.8
Rangeland	1,455,700	46.0
Forest land	1,473,800	46.6
Water	4,500	.1
Wetland	111,000	3.5
Barren land	--	--
Tundra	--	--
Perennial snow or ice	--	--
Total land use acres	3,161,600	100.0

*U.S.G.S. land use/cover classification system. The water category and the rounding and estimating of satellite based data results in slightly higher totals for land use.

V. AGRICULTURE (from 1978 Census of Agriculture - Preliminary Report)

	All Farms 1978	All Farms 1974
All farms . . . . . number	241	201
Land in farms . . . . . .acres	145,033	141,265
Average size of farm . . . . . .acres	602	703
Total cropland . . . . . .farms	219	185
acres	59,076	51,482
Average per farm, value products sold . .dollars	38,143	24,761
Cattle & calves, inventory . . . . . number	40,060	41,262
Hogs & pigs, inventory . . . . . number	2,096	1,031

(D) data withheld to avoid disclosing information for individual farms

	All Farms 1978	All Farms 1974	Farms w/sales of $2,500 & over 1978	Farms w/sales of $2,500 & over 1974
Farms by size:				
Under 10 acres . . . . . farms	3	3	3	2
10 to 49 acres . . . . . farms	24	11	12	1
50 to 179 acres . . . . . farms	56	43	41	32
180 to 499 acres . . . . . farms	81	71	74	69
500 to 999 acres . . . . . farms	43	41	38	39
1,000 to 1,999 acres . . . . . farms	21	21	21	19
2,000 acres and over . . . . . farms	13	12	11	10
Farms, value of land & buildings				
Average per farm . . . . . dollars	299,162	232,057	342,487	242,284
Average per acre . . . . . dollars	432	330	461	329
Tenure of operator				
Full owner . . . . . farms	190	155	157	135
Part owner . . . . . farms	39	34	33	28
Tenant . . . . . farms	12	12	10	9
Principal occupation				
Farming . . . . . farms	168	149	150	136
Other than farming . . . . . farms	73	42	50	31

Planning/zoning commission - 1979: yes County comprehensive plan - 1979: no

Subdivision ordinance - 1979: no Zoning ordinance - 1979: no

Miles of road - 1979: interstate -- state 182.28 local 416.17

Motor vehicles registered - 1980: cars 2,856 Other 465

Per capita total vehicles .98

CITY POPULATION

	1970 Census	1980 Census	% Change
Challis	784	758	-3.3%
Clayton	36	43	19.4%
Lost River	40	28	-30.0%
Mackay	539	541	0.4%
	47	99	110.6%

LAND OWNERSHIP - 1979
(in acres)

	County	Municipal	State Endowment	Fish & Game	Parks & Recreation	Total State Land	B.L.M.	National Forest	Bureau of Reclamation	Dept. of Energy (INE
Region I										
Benewah	1,875		40,495	6,340	6,856	53,691	15,921	41,386		
Bonner	4,521	4,117	148,424	1,305	605	150,334	20,607	481,402		
Boundary	1,418		96,633	1,104		97,737	5,919	469,741		
Kootenai	3,677	190	26,607	6,357	4,213	37,177	18,877	242,351	63	
Shoshone	3,059	96	63,152			63,152	73,690	1,181,237		
TOTALS	14,550	4,403	375,311	15,106	11,674	402,091	135,014	2,416,117	63	
Region II										
Clearwater	1,809	430	226,662	408		227,070	8,088	808,252		
Idaho	4,900	334	84,569	527		85,096	95,630	4,433,078		
Latah	3,679	17	33,732	296	3,171	37,199	1,361	112,506		
Lewis			2,018	291	418	2,727	7,526	10		
Nez Perce	4,111	725	12,205	13,546		25,751	20,417			
TOTALS	14,499	1,506	359,186	15,068	3,589	377,843	133,022	5,353,846		
Region III										
Ada	5,270	2,493	36,512	7,781	641	44,934	192,892	4,211	106,162	
Adams	2,239		49,848	27	17	49,892	54,325	498,919	4,139	
Boise	960		82,353	2,695		85,048	31,896	871,694	29,348	
Canyon	365	485	619	1,866		2,485	3,560		11,164	
Elmore		24	120,240	6,332	513	127,085	544,588	784,969	103,747	
Gem	1,735	170	22,337	216		22,553	72,334	60,417	1,912	
Owyhee	1,676	35	327,098	361	2,840	330,299	3,658,722		12,625	
Payette	1,860	320	7,841	659		8,500	66,229		254	
Valley	2,180		69,948	1,720	1,281	72,949	6,013	2,025,679	38,630	
Washington	2,920	195	61,992	11		62,003	216,446	128,002	1,576	
TOTALS	19,205	3,722	778,788	21,668	5,292	805,748	4,847,005	4,373,891	309,557	
Region IV										
Blaine	4,000	1,000	78,306	955		79,261	790,538	488,583	5,123	
Camas	2,320		20,018	41		20,059	118,992	321,628	143	
Cassia	1,800	596	54,499	87	640	55,226	518,951	392,449	12,514	
Gooding	750	97	10,203	2,204	732	13,139	261,159		420	
Jerome	2,503	10	6,377	249		6,626	89,396		12,879	
Lincoln	110		29,521	120	480	30,121	575,615		754	
Minidoka	3,285	113	11,480	13		11,493	167,283		9,701	
Twin Falls	1,850	1,382	29,582	63	493	30,138	552,078	92,655		
TOTALS	16,618	3,198	239,986	3,732	2,345	246,063	3,074,012	1,295,315	41,534	
Region V										
Bannock	4,900	7,000	45,997	3,235	3,138	52,370	79,540	114,294	27,107	
Bear Lake			16,196	1,788	914	18,898	41,358	230,064		
Bingham	5,480	354	118,248	1,327		119,575	323,910		15,501	64,173
Caribou	2,700	120	112,461	69		112,530	67,622	379,910	165	
Franklin			13,344	5		13,349	15,733	121,513	2,101	
Oneida			14,132			14,132	268,946	140,025		
Power	2,900	335	42,002	120	576	42,698	228,488	36,047	20,783	
TOTALS	15,980	7,809	362,380	6,544	4,628	373,552	1,025,597	1,021,853	65,657	64,173
Region VI										
Bonneville	4,350	1,597	50,859	2		50,861	84,530	482,669	38,825	7,007
Butte	2,360	7	35,247	4		35,251	563,602	271,062		341,725
Clark	1,600		88,294	169		88,463	338,159	358,776		13,387
Custer	2,300		52,471	544		53,015	817,496	3,124,395	2,660	
Fremont	486	100	90,724	15,807	12,557	119,088	140,016	525,940	9,485	
Jefferson	395		11,283	10,814		22,097	191,087			144,774
Lemhi	1,800	76	41,737	427		42,164	581,996	2,069,425		
Madison	1,860	100	40,696	145		40,841	16,643	41,440	1,706	
Teton	200		6,697	469		7,166	6,001	88,293	559	
TOTALS	15,351	1,880	418,008	28,381	12,557	458,946	2,739,510	5,962,000	53,237	506,893
STATE TOTALS	96,203	22,513	2,533,659	90,499	40,085	2,664,243	11,954,160	20,423,022	470,048	571,066

* Figure includes the B.L.M. Category of "Reserved Lands - Other", which is approximately 3% of their total.
** Figure represents only acquired B.I.A. lands and not reservation lands per se.
*** Figure includes roads and highways which inflate the category somewhat.

POPULATION DATA (cont.)

Region IV	Population Per Sq. Mile	Population 1970	Population 1980	Change 1970-80 #	Change 1970-80 %	Components of Change 1970-80* Births	Deaths	Net Migration #	Net Migration %
Blaine	3.7	5,749	9,841	4,092	71.2	1,300	500	3,200	56.4
Camas	.8	728	818	90	12.4	100	100	(z)	2.6
Cassia	7.6	17,017	19,427	2,410	14.2	4,700	1,400	-900	-5.1
Gooding	16.5	8,645	11,874	3,229	37.4	1,800	1,100	2,500	29.4
Jerome	24.9	10,253	14,840	4,587	44.7	2,600	1,000	3,000	29.6
Lincoln	2.9	3,057	3,436	379	12.4	600	300	100	2.7
Minidoka	26.3	15,731	19,718	3,987	25.3	4,400	1,200	800	4.9
Twin Falls	27.2	41,807	52,927	11,120	26.6	9,000	4,300	6,400	15.3
TOTALS	11.6	102,987	132,881	29,894	29.0	24,500	9,000	15,100	14.7
Region V									
Bannock	58.3	52,200	65,421	13,221	25.3	13,400	4,000	3,800	7.3
Bear Lake	7.0	5.801	6,931	1,130	19.5	1,400	600	300	5.6
Bingham	17.5	29,167	36,489	7,322	25.1	8,300	2,300	1,300	4.4
Caribou	5.0	6,534	8,695	2,161	33.1	1,900	500	700	11.0
Franklin	13.4	7,373	8,895	1,522	20.6	1,900	700	400	4.9
Oneida	2.7	2,864	3,258	394	13.8	600	400	200	6.5
Power	4.8	4,864	6,844	1,980	40.7	1,200	400	1,200	24.3
TOTALS	14.8	108,803	136,533	27,730	25.5	28,700	8,900	7,900	7.3
Region VI									
Bonneville	35.9	52,457	65,980	13,523	25.8	14,700	3,400	2,200	4.2
Butte	1.5	2,925	3,342	417	14.3	700	200	-100	-2.3
Clark	.5	741	798	57	7.7	100	100	(z)	-4.9
Custer	.7	2,967	3,385	418	14.1	500	300	200	6.3
Fremont	5.8	8,710	10,813	2,103	24.1	2,400	800	500	6.0
Jefferson	14.0	11,740	15,304	3,564	30.4	3,500	900	1,000	8.4
Lemhi	1.6	5,566	7,460	1,894	34.0	1,200	700	1,400	24.8
Madison	41.2	13,452	19,480	6,028	44.8	4,400	800	2,400	18.0
Teton	6.3	2,351	2,897	546	23.2	600	200	100	5.7
TOTALS	6.7	100,909	129,459	28,550	28.3	28,100	7,400	7,200	7.1
STATE TOTALS	11.4	713,015	943,935	230,920	32.4	166,000	64,000	129,000	18.1

* 1980 county data estimated to the nearest hundred by the Division of Economic & Community Affairs from data provided by the Idaho Bureau of Vital Statistics. State estimated to nearest thousand.

(z) less than 50

TAX AND INCOME DATA
(cont.)

	Per Capita Income (1969)	(1979)	Average Idaho Tax Per Return (1980)	Property Tax As % of Market Value* (1980)		Total Property Tax Collected* (1980)
Region IV						
Blaine	$3,349	$8,577	$513	0.788		$ 4,893,216
Camas	3,296	8,127	306	0.820		283,904
Cassia	2,358	7,881	471	0.688		3,668,507
Gooding	2,507	6,399	400	1.108		2,374,728
Jerome	2,155	6,802	441	1.014		3,360,009
Lincoln	2,108	7,160	411	0.864		832,116
Minidoka	2,277	6,361	433	0.919		3,322,896
Twin Falls	2,638	8,377	502	1.102		10,268,553
Average -	$2,506	$7,614	Average - $470		TOTAL	$29,003,929
Region V						
Bannock	$2,670	$7,599	$610	1.479		$15,903,024
Bear Lake	2,281	6,473	485	1.117		1,950,950
Bingham	2,438	6,190	458	1.221		7,672,046
Caribou	2,488	7,624	606	0.919		2,713,509
Franklin	1,940	5,481	342	1.011		1,778,072
Oneida	2,243	6,632	266	1.186		1,114,615
Power	2,585	7,121	533	1.051		3,838,064
Average -	$2,512	$6,965	Average - $539		TOTAL	$34,970,280
Region VI						
Bonneville	$2,916	$7,768	$628	1.289		$16,044,947
Butte	2,408	7,082	487	0.908		653,645
Clark	2,391	9,972	319	1.036		347,494
Custer	2,308	6,768	400	0.778		665,613
Fremont	2,354	5,750	366	1.130		2,443,433
Jefferson	2,107	5,414	387	0.829		2,283,717
Lemhi	2,464	7,297	394	1.010		1,331,674
Madison	2,191	4,669	395	1.195		4,173,848
Teton	1,883	6,462	256	0.733		524,084
Average -	$2,591	$6,730	Average - $518		TOTAL	$28,468,455
STATE TOTALS	$2,649	$7,632	$531	1.064		$223,713,397

* After homeowners exemption

HISTORICAL AND ARCHAEOLOGICAL RESOURCES

About 12,500 years ago, a series of subdivisions of the Big Game Hunting stage spread through North America. These subdivisions are formally known as the Clovis, Folsom, and Plano archaeological cultures. Projectile points characteristic of the Folsom and Plano cultures have been found on the surface within the generalized area, indicating at least 11,000 years of human occupation. Between 7,000 and 7,800 years ago, the Bitterroot culture emerged and has been suggested as the archaeological expression of the historic Northern Shoshoni.

The Custer County area was occupied in an overlapping fashion by foot Shoshoni known as tukudeka's (mountain sheep-eaters), and after the early 1700s by various groups of horse-mounted Shoshoni. This marked the introduction of domestic horses into the area. These people maintained a simple life-style of hunting, fishing, and gathering.

The first Euro-Americans to explore the area were a Hudson Bay Company fur trapping brigade led by Michael Bourdon in 1822. In the mid-1860s, gold was discovered in the Salmon River region and thousands of miners poured into the area. Towns to supply the various mining regions soon were being founded, including the town of Challis.

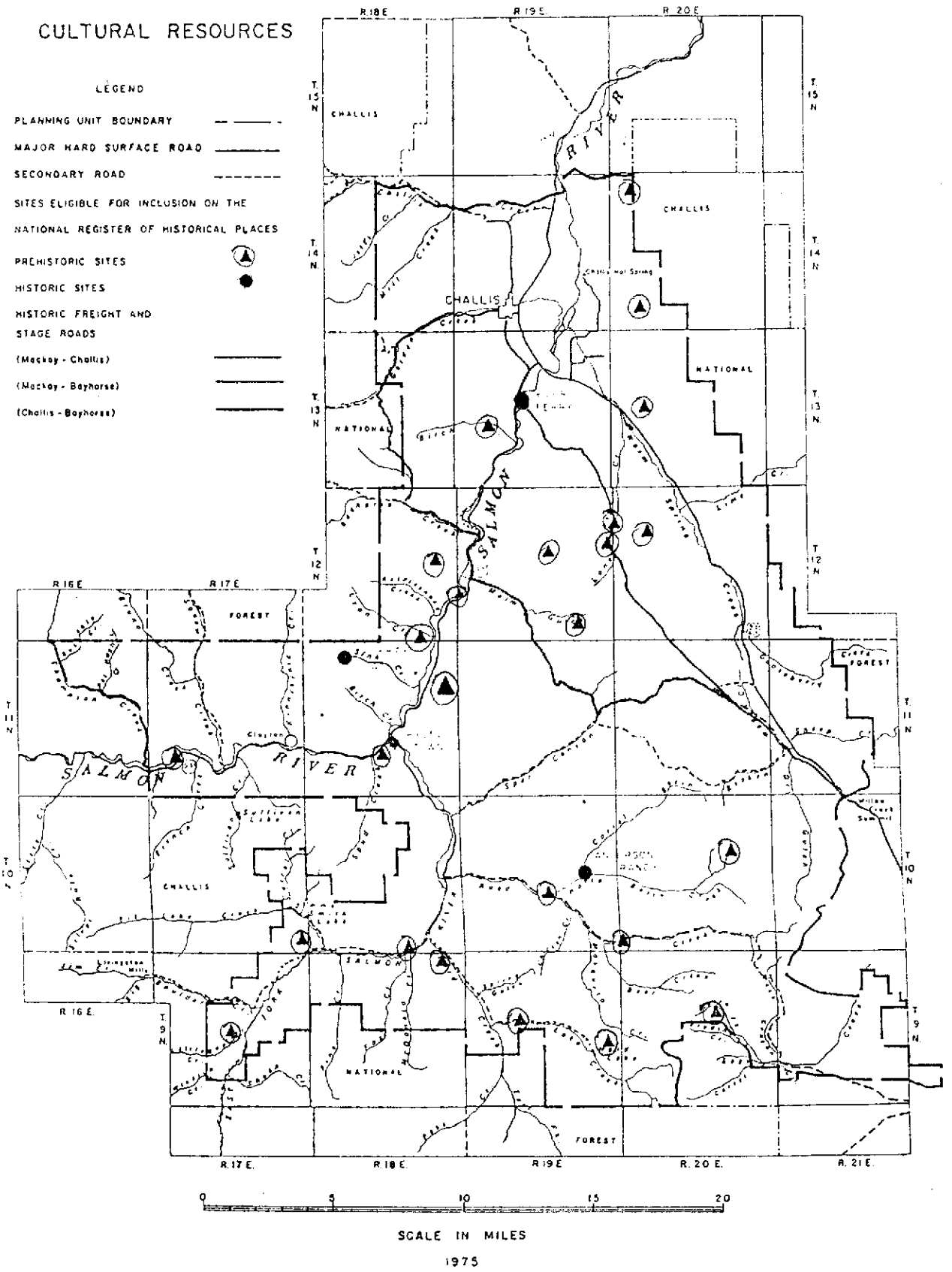
As the population of the mining districts increased in

1877, 1878 and 1879, small farms and ranches appeared in the surrounding valleys to supply the need for fresh produce and meat. This marked the introduction of domestic livestock to the area. Freight and stage roads were established to make even more freightable items available to the mining districts.

This expansion by the white population finally resulted in the Sheepeater War of 1879, and the Indians were forced onto reservations.

Custer County was created in 1881, and Challis was elected county seat. By the late 1890s and early 1900s, the mines began to fade and the discouraged miners gradually began to move out or acquire farms and ranches in the surrounding valleys.

Challis became a ranching/farming-oriented community and survived the fate of many mining-oriented towns.



LOCATION OF ELIGIBLE SITES FOR INCLUSION ON THE NATIONAL REGISTER OF HISTORIC PLACES.

THREATENED OR ENDANGERED PLANT LIFE

There are no species of threatened or endangered plant life in or near the project area.

THREATENED OR ENDANGERED ANIMAL LIFE

Whereas the project area does contain a yeararound habitat for the Pronghorn Antelope, this species has not been listed as a threatened or endangered animal.

There are no other species of threatened or endangered animal life in or near the project area.

CRITICAL HABITATS

No critical habitats have been listed or identified within the project area. It has been established by the Idaho Fish and Game Department the project area may contain fawning-rearing habitat for the Pronghorn antelope.

Although this has not been listed as a critical habitat, Mr. Reinecker has indicated in his letter of July 5, 1984 that the Department of Fish and Game is recommending crossings be constructed across the canal of project #2. to aid the antelope in crossing the canal.

EXPECTED ENVIRONMENTAL IMPACTS

The environmental impacts on this project will be positive because the net effect will be to eliminate the excessive sediment load presently being carried to the Salmon River.

The Applicant and Project Engineer anticipate the water quantity to be maintained for a sufficient number of years to carry this project through the license term by either the natural geothermal/artesian flow or supplemented with a well should the flow diminish.

The water quality will be markedly improved by diverting water from the existing stream channel into the project conveyance system.

Vegetative Cover	No adverse impact.
Sedimentation	Positive impact. Sediment risk during construction will be nearly nonexistent in that the construction of of the conveyence system and powerhouse will occur away from the existing stream channel.
Fisheries	No adverse impact. Fishery in the Salmon Rivery will be improved by eliminating the sediment load and thus improving water quality of the Salmon River.
	Metallic pollution from the

Fisheries (cont.)	turbines will be avoided by specifying non-use of heavy metal propellers and parts with the use of stainless steel propellers and standard steel penstocks. There will be no deep plunging involved in the discharge, so there will be no nitrogen supersaturation occurring in this project. Penstock and intake facilities will be designed so as to avoid air entrainment.
Wildlife	No impact. Applicant will construct antelope crossings across the canal as recommended by Idaho Fish and Game Department.
Water Quality	Water quality will be greatly improved
Land and Water Use	No adverse impact.
Recreational use	Unchanged
Socio-Economic aspects	Positive impact. Increased tax base, reliable power source, economic benefits from construction of the project, minimal increased employment.
Historical and archaeological resources.	No impact
Visual	Minimal impact.
Threatened or endangered animal life.	No impact.
Critical habitats.	No impact.

ALTERNATIVE MEANS OF OBTAINING AN AMOUNT OF POWER EQUAL TO THAT PROVIDED BY THE PROJECT IF PROJECT NOT AUTHORIZED

Energy conservation has been the prime concern of land management agencies, realizing that althernative sources of energy production are long ranged in ability to produce on-line, reliable power economically. Small hydro production appears to the the most feasible source of power production at this time.

The following page will tabulate the energy source potential studied and examined by various agencies and organizations in Idaho. It will quite clearly show that small hydro production is the most feasible means of energy production.

POTENTIAL ENERGY PRODUCTION

SOUTHERN IDAHO

Commodity	Likelihood	Reason
Oil & Gas	Low	Limited exploration; reserves presently unknown.
Wood biomass	Fairly good	Co-generation power production at operating mills looks good, however mills in southern Idaho are not as prevelent as in central and northern Idaho. Wood by-product used for gasahol proved economically unfeasible.
Uranium	Low	Environmental problems
Geothermal	Limited	Hot holes abound in Idaho, but most are dry holes. Future may hold some promise for geothermal development with proper exploration and use of the heat exchange concept developed and used on the North Slope in Alaska. Financing for speculation purposes in well exploration remains a serious problem.
Solar	Moderate	Not feasible on a large scale. Being used in some home construction.

Commodity	Likelihood	Reason (cont.)
Wind	Moderate	Idaho Power Company has had six applications for contract negotiations for facilities involving wind power. The south/central Idaho area has moderate amounts of wind, however, this source of power is not reliable
Pumped Storage	Unlikely	Idaho Power Company has evaluated this possibility, however, nothing has developed.
Coal	Moderate	Major source of power for major utilities. Construction of new coal fired plants is very costly and transportation of coal poses problems. Coal slurry pipeline is unlikely in the near future.

STEPS TAKEN BY APPLICANT

IN

CONSULTING WITH AGENCIES

The following agencies have been contacted, and have had personal consultations with the Applicant or a representative from Consulting Associates, Inc.:

1. Bureau of Land Management, Salmon District Office
2. U.S. Department of Agriculture, Challis National Forest, Challis, Idaho
3. Cooperative Extension Service, University of Idaho, Moscow, Idaho
4. Custer County Board of Commissioners, Challis, Idaho
5. Idaho Department of Fish and Game, Region 6, Idaho Falls, Idaho
6. U.S. Department of Interior, Fish and Wildlife Service, Boise, Idaho
7. Idaho State Historic Preservation Office, Idaho State Historical Society, Boise, Idaho
8. U.S. Department of Agriculture, Soil Conservation Service, Salmon, Idaho
9. Public Interest Group - Idaho Conservation League, Kieth Axline, Challis Chapter, Challis, Idaho

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Salmon District
P.O. Box 430
Salmon, Idaho 83467

IN REPLY
REFER TO: I-20915

July 13, 1984

Helen Chenowith
P.O. Box 893
Boise, Idaho 83701

Dear Helen,

The Bureau of Land Management received a right of way application on June 8, 1984 for a ditch to be utilized for conveying excess water away from Will Ingram's private property. The earthquake of 1983 resulted in an increased flow from the Warm Springs located on his property. The extra flow is creating an erosion problem on his private property and subsequently an increased sediment load is carried into the Salmon River.

Public lands managed by the Bureau of Land Management are receiving limited erosion from the increased flow. The BLM, however, is involved with habitat management of all of the tributaries to the Salmon River from an area north of Salmon to Thompson Creek. Anadramous fish are the most intensively managed species by the various agencies involved with management of the Salmon River drainage. A lot of recreation dollars are spent in this area and a lot of agency (USFS, BLM, and IDF&G) dollars are spent increasing the fish population and enhancing the recreational experience for fishermen. I feel it to be beneficial to maintain high water quality standards in order to promote IDF&G's continued effort to increase anadramous fish numbers.

Since all the agencies are spending money within the Salmon River system to maintain water quality and enhance the anadramous fisheries, every effort should be made to assist the private landowner (Will Ingram) in his attempts to also reduce sediment that will ultimately enter into the river. For that reason, BLM will do everything within procedural and budgetary constraints to provide Mr. Ingram with a timely right of way grant. Every effort to expedite the process of waiver for Ingram, given the current problems, should be taken if at all possible.

Sincerely,

Donald L. Smith

Donald L. Smith
Challis Area Manager

REPLY REFER TO
2800

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
SALMON DISTRICT OFFICE
P.O. Box 430
Salmon, Idaho 83467
(208) 756-2201

June 6, 1984

Quinton Edson, Director
Division of Hydropower Licensing
Federal Energy Regulatory Commission

Dear Mr. Edson:

The Salmon District, Bureau of Land Management, with regard to Will Ingram's proposal to develop a small hydroelectricity producing facility from water rising from the Warm Springs area, offers the following observations regarding the damage and/or potential damage that said stream is now causing. It is a known fact that the Warm Springs Creek is flowing at a rate many times that of its historical flow. The resulting stream is cutting through private lands and a small portion of BLM managed lands with serious erosive results. The channel is 15 to 20 feet deep in places with severe bank sloughing occurring.

Heavy siltation is occurring downstream and subsequently is being deposited into the Salmon River. Impacts to the river have not been measured, but there is certainly a reduction of water quality and some impact to spawning redds of chinook salmon and steelhead.

If you have any further questions, feel free to call Don Smith, Challis Area Manager, at 756-2201. The BLM offers these observations regarding this proposal only as a statement of facts. We do not intend to promote or oppose Mr. Ingram's application at this time, but when a R/W application is received we will analyze the impacts of the proposal on the public land.

Sincerely,

Kenneth G. Walker

Kenneth G. Walker
District Manager

RECEIVED
JUN 13 1984

APPLICANT RESPONSE TO

BUREAU OF LAND MANAGEMENT

Applicant agrees fully with the response of Mr. Kenneth G. Walker, District Manager in his letter of June 6, 1984. Applicant further agrees to inspection by Department personnel during construction of the project.

United States Department of Agriculture
Forest Service
Challis National Forest
P. O. Box 404
Challis, Idaho 83226

Reply to 2510

Date June 8, 1984

Federal Energy Regulatory Commission
Quinton Edson, Director of Hydropower Licensing
825 N Capitol Street, NE
MS 208 RB
Washington, D.C. 20426

Dear Mr. Edson:

The Forest Service was requested, through the Custer County Commissioners, to review discharge problems from Ingram's Warm Springs following the earthquake of October 28, 1983. Since that time, the flows went from approximately a normal of 8 cubic feet per second (CFS), down to 0 cfs in November 1983, and then steadily increased to approximately 50 cfs. The discharge has been fluctuating around the latter level.

The problems caused by these increased flows are discussed in a letter written by our Hydrologist after his field review of the upper Warm Springs Creek drainage. A copy of the letter is attached.

No National Forest System lands are involved; therefore, proposals for Warm Springs Creek will have no effect on our management programs.

Gordon V. Reid

For
JACK E. GRISWOLD
Forest Supervisor

RECEIVED
JUN 13 1984

CHALLIS NF

2510 Watershed Surveys and Plans February 29, 1984

Warm Springs Creek Channel Stability and Sedimentation

Nick Zufelt, District Ranger
Challis ND

On February 28, 1984, I accompanied Lyle Lewis to Warm Springs Creek locations identified on the enclosed maps, in an attempt to review the relative impacts of the channel cutting problem located above the impoundment. As you requested, we collected samples from Warm Springs Creek at various locations between the hot springs source and the confluence with the Salmon River. Our immediate objective was to determine the variance of turbidity levels above and below the problem area. The results are as follows:

Location (a)	Turbidity (NTU)
1. Below the hot spring source at the USGS measuring station	0.1 (b)
2. 100 yards below headcut	520
3. Upstream side of cement culvert (above impoundment)	960
4. Ingrams' impoundment inlet	920
5. Ingrams' impoundment outlet at downstream side of Highway #93 crossing	800
6. East channel (Warm Springs Creek) at Perry's property	560
7. East channel (Warm Springs Creek) at the confluence with the Salmon River	480

(a) See map for station location

(b) Flow measurement - 52 cfs

Based on a preliminary review of field observations and the associated turbidity measurement, a significant amount of sediment is reaching the Salmon River. Samples from station numbers 4, 5 and 7 will be analyzed for suspended sediment levels. These values will be available at a later date.

It appears that the channel is actively widening in the stream reach denoted in red on the enclosed map. After two visits, the headcut had not advanced upstream appreciably. However, the lateral erosion of the streambanks, immediately downstream from the headcut, has progressed rapidly. Periodic reviews of the headcut area will be needed to determine the rate of advance.

Stabilization efforts should concentrate on stabilizing the headcut feature, while allowing the downstream channel to reach an equilibrium naturally.

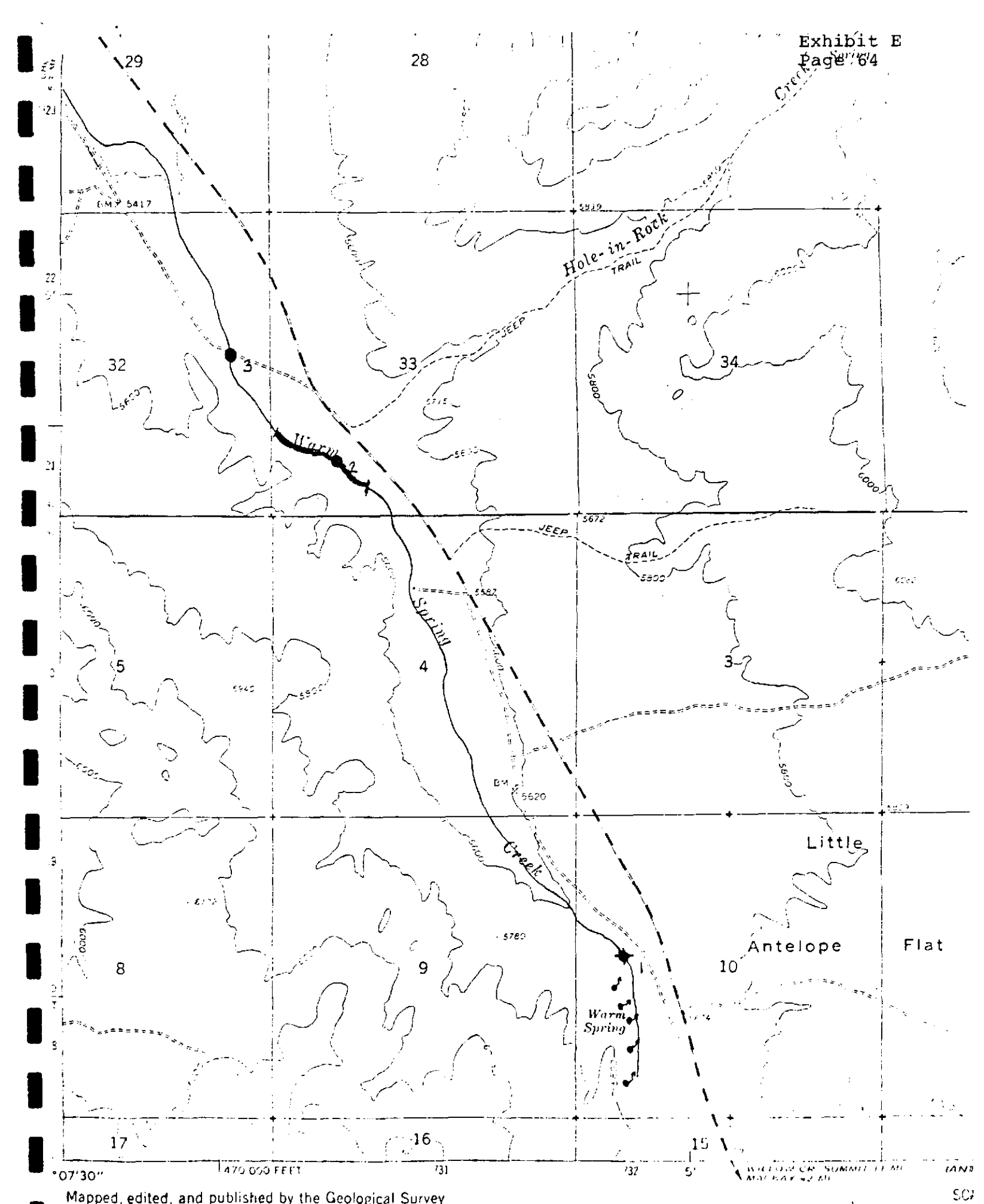
Please contact me about our future role and/or objectives in this matter.

ROLAND L. LEIBY
Hydrologist

LYLE LEWIS
BLM
District Office

Enclosures

cc. Leiby, Lewis



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

APPLICANT RESPONSE TO

CHALLIS NATIONAL FOREST

LETTER OF JUNE 8, 1984

Applicant agrees fully with the response of Mr. Jack Griswold, Forest Supervisor for the Challis National Forest.

Mr. Griswold has enclosed a report done by Mr. Nick Zufelt, District Ranger on his watershed survey conducted on the Warm Springs Creek Channel Stability and Sedimentation.

The report is wholly contained in this section as well as the section of the Application entitled Exhibit E - Water Quality and Quantity.

Applicant agrees to inspection by Forest personnel during project construction.

COOPERATIVE EXTENTION SERVICE
University of Idaho
College of Agriculture
In Cooperation with the
U.S. Department of Agriculture

P.O. Box 160
Challis, Idaho 83226
Phone (208) 879-2344

June 12, 1984

Federal Energy Regulator Commission
Quinton Edson, Director of Hydropower Licensing
825 N. Capitol Street, NE
MS 208 RB
Washington, D.C.

Dear Mr. Edson:

I am writing on behalf of Will Ingram concerning the flow of Warm Springs Creek since the October 28, 1984 earthquake. Warm Springs Creek before the earthquake flowed at 15 cfs. Since the quake the flow has increased steadily and at the last measurement it was flowing at 65 cfs.

The five fold increase is of some concern to the Ingrams, property owners below them and others. The increase in volume is causing a considerable amount of erosion on the Ingram property.

The erosion is not only washing valuable crop ground away, it is also increasing the bedload in the Salmon River and could have a detrimental effect on the spawning beds of anadromous fish. In addition every time the flow is slowed, the stream dumps its load creating sand bars that divert the channel and add to the erosion and soil loss. Flooding of additional crop ground is also occuring since the old existing cannel is not large enough to carry the additional water.

Everything considered the Ingram's are loosing valuable crop ground through erosion or flooding. The cost of stablizing the Warm Springs Channel, if possible due to the nature of the soils in the area, has been estimated at between $70-80,000. Upkeep of any stablization project over the next several years could be as much as $30-50,000.

This is a large expense for any one individual to undertake. Especially when one considers that the Ingram's primary source of income is the sale of weaner calves. The Ingram's, or any cattlemen for that matter, are hard pressed with the current market conditions in the cattle industry to make ends meet without considering the outlay of this kind of money with no economic return.

The University of Idaho is an equal opportunity/affirmative action employer and educational institution

The installation of a hydroelectric system is a viable alternative to the problem. Not only will it supply some return on the dollars invested, it also solves the problem at hand. That is, it would put a stop to the erosion and flooding of crop land and would also stop the sedimentation problems in the main Salmon River.

I would hope you would consider the Ingram's application for a minor hydroelectric permit in a favorable manner. If I can answer any questions or be of further assistance, let me know.

Sincerely,

James N. Hawkins
Extension Agricultural Agent

JNH:ms

APPLICANT RESPONSE TO

COOPERATIVE EXTENTION SERVICE

UNIVERSITY OF IDAHO

LETTER OF JUNE 12, 1984

Applicant agrees fully with the response of Mr. James N. Hawkins, Extension Agricultural Agent, Challis, Idaho.

Applicant further agrees to inspection by Extension personnel during project construction.

CUSTER COUNTY BOARD OF COMMISSIONERS
P.O. BOX 385
CHALLIS, IDAHO 83226

Gentlemen:

The board of Custer County Commissioners request the expediting of the license application of Warm Spring Ranch for a hydro generation project on Warm Spring Creek, Custer County, Idaho.

Custer County experienced a major earthquake last October. As a result of the earthquake the flow of Warm Springs has quadrulped. In December and January a $210,000. flood project was completed but several problems still exist.

The board feels that the planned hydro project of Warm Springs Ranch will help reduce the erosion and silting still being caused by the increased flow.

Thank you in advance for consideration of our request.

Sincerely,

Frank Maraffio/cp

Frank Maraffio
Chairman, Custer County
Board of Commissioners

APPLICANT RESPONSE TO

CUSTER COUNTY BOARD OF COMMISSIONERS

Applicant fully agrees with the response of Mr. Frank Maraffio, Chairman, Custer County Board of Commissioners, and Applicant will keep the Commission apprised of measures to correct the erosion problem, as soon as Applicant is licensed to proceed.

IDAHO DEPARTMENT OF FISH AND GAME
REGION 6
1515 Lincoln Road
Idaho Falls • Idaho • 83401

July 16, 1984

Mr. Vernon F. Ravenscroft
Consulting Associates, Inc.
P. O. Box 893
Boise, Idaho 83701

Dear Mr. Ravenscroft:

It has come to my attention that the time frame for processing a Federal Energy Regulatory Commission minor license application is approximately one and one half years.

One of the major concerns this Department has is siltation moving into the main Salmon River from Warm Springs Creek near Challis. It is our belief the Ingram Hydro Project will measurably reduce this large source of siltation from the system and thereby reduce the adverse affects on salmon and steelhead populations in the Salmon River.

Due to this factor (siltation), we request FERC expedite procedures for processing the Ingram (Warm Spring minor license applicaiton).

Sincerely,

Tom Reinecker
Regional Supervisor
Region 6

cc: USFWS
Mel Reingold
Bureau of Fisheries
Butch Welch
Will Ingram

IDAHO DEPARTMENT OF FISH AND GAME
REGION 6
1515 Lincoln Road
Idaho Falls • Idaho • 83401

July 5, 1984

Mr. Vernon F. Ravenscroft
Consulting Associates, Inc.
P. O. Box 893
Boise, Idaho 83701

RE: Proposed Warm Springs Hydro Project, Will Ingram, Challis, Idaho.

Dear Mr. Ravenscroft:

Department personnel again reviewed the proposed plans for a hydro project on Warm Springs Creek near Challis, Idaho.

Following the meeting on June 15, 1984, Tom Parker, Regional Wildlife Manager at Salmon, toured the are with Butch Welch, Conservation Officer at Challis.

It is our opinion the project will have a positive effect in reducing or eliminating the siltation presently flowing into the Salmon River, north of Challis. The siltation did have an adverse effect on steelhead fishing and caused additional maintenance work on fish screens along the Salmon River.

At the June 15 meeting, statements were made that the present Warm Springs Creek channel will not be dewatered, but that several c.f.s would be retained in the creek to fulfill downstream water rights. This point should be brought out in the report to show water availability for small mammals, birds and not game species.

The last major concern with this project is the potential of a movement barrier for antelope.

As designated on the project map, canal #2 runs approximately 20,000 linear feet in a southeast to northwest direction. The canal runs through sagebrush foothills adjacent to irrigated cropland. Pronghorn antelope, Antilocapra americana, are the

primary ungulate species utilizing the project area. As indicated in the project plans, the canal will be either 11 or 16 feet in width at the top. A water barrier of this length and width may hinder antelope movements in the area.

On an inspection June 6, 1984 with Will Ingram three doe antelope were using the area in question. As of that date fawning activity should just be at or past the peak. This indicates that antelope are using the area in question for a fawning-rearing area as well as for forage.

On several occasions we have discussed with Will Ingram crossings which would benefit both antelope and cattle movements between the canal and the fenced, irrigated land. Such crossings should be located at natural crossing sites. The crossings would be simple, i.e., wooden bridges with dirt covering, or buried metal culverts. We recommend four crossing sites per mile along that portion of canal #2 where it crosses Bureau of Land Management land between the two portions of Warm Springs Ranch. These crossings should allow ingress and egress for antelope into the area between the canal and irrigated lands.

In addition, penstock inlets should be screened or otherwise designed to allow escapement of any wildlife which should accidentally fall into the canal.

These comments do not constitute submission of terms and conditions under Sectin 408 of the Energy Security Act of 1980. Terms and conditions will be submitted after notice of application from the Federal Energy Regulatory Commission (FERC).

Sincerely,

Tom Reinecker
Regional Supervisor
Region 6

cc: Will Ingram
Tom Parker
Butch Welch
Bureau of Fisheries
Program Coordination
US Fish and Wildlife Service
Salmon District BLM

IDAHO DEPARTMENT OF FISH AND GAME
REGION 6
1515 Lincoln Road
Idaho Falls • Idaho • 83401

May 24, 1984

Mr. Vernon F. Ravenscroft
Consulting Associates, Inc.
P. O. Box 893
Boise, Idaho 83701

RE: Ingram Warm Springs Ranch

Dear Mr. Ravenscroft:

Department of Fish and Game personnel have reviewed the draft copy of the exemption application for the Ingram Warm Springs Ranch hydro-project.

As you pointed out, Warm Springs Creek is too warm to support any native species of fish (94^{0}F). Anadromous fish do not utilize the stream. We also are concerned about the continual erosion caused by the increasing flow of the warm springs. The high turbidity caused by the erosion interferred with the harvest of steelhead on the Salmon River this spring.

The number two canal location and specifications should be reviewed to minimize blocking the movement of antelope and the loss of antelope fawns.

From a resource point of view, at this time, the Department would not be opposed to the proposed hydro-generation project as described in the draft application.

These comments do not constitute submission of terms and conditions under Section 408 of the Energy Security Act of 1980. Terms and conditions will be submitted after notice of application from the Federal Energy Regulatory Commission (FERC).

RECEIVED
MAY 29 1984

As required by Section 4.107 (a), (2) of the FERC Order No. 106, please forward a copy of the exemption application to Idaho Department of Fish and Game, P. O. Box 25, Boise, Idaho 83707 at the time it is submitted to the Federal Energy Regulatory Commission.

We appreciate the opportunity to comment on this application.

Sincerely,

Tom Reinecker
Regional Supervisor
Region 6

cc: USFWS
Program Coordination
Fisheries
Mel Reingold
Will Ingram (Challis)

APPLICANT RESPONSE TO

IDAHO DEPARTMENT OF FISH AND GAME

LETTERS OF MAY 24, 1984 and JULY 5, 1984

Applicant agrees fully with each letter in their entirety and will cooperate with the Idaho Department of Fish and Game in providing antelope crossings as recommended in Mr. Tom Reinecker's letter of July 5, 1984.

Applicant further agrees to inspection by Department personnel during and after project construction.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
4620 Overland Road, Room 209
Boise, Idaho 83705

July 27, 1984

Mr. Vernon Ravenscroft
Consulting Associates, Inc.
P.O. Box 893
Boise, Idaho 83701

Re: Proposed Warm Springs Creek
Hydro Project, Will Ingram
Challis, Idaho

Dear Mr. Ravenscroft:

This is in response to Ms. Chenoweth's recent telephone call requesting correspondence from the Fish and Wildlife Service concerning an accelerated processing of the referenced project application with the Federal Energy Regulatory Commission (FERC).

As the Service stated in its correspondence of June 8, 1984, the development of hydropower at the Warm Springs Creek site would be a beneficial method of mitigating undesirable effects of the October 1983 earthquake. If there is a means for FERC to expedite processing of Mr. Ingram's application, damaging effects of the earthquake, in the form of sediment load to the Salmon River, would be mitigated all the sooner.

The Service encourages you on behalf of Mr. Ingram to pursue this opportunity to reduce sediment impacts while developing hydro potential that would have mostly positive impacts on fishery resources of the upper Salmon River Basin.

This concurs with Tom Reinecker's recommendation of July 16, 1984.

Sincerely yours,

John P. Wolflin
Field Supervisor

cc: IDFG, Hdqtrs., Boise
IDFG, Region 6, Idaho Falls
IDFG, Salmon
NMFS, Portland
FWS-AHR, Portland
USDI, Reg. Sol. Off., Portland
(Devine)
USDI, REO, Portland (Polityka)

RECEIVED
JUN 11 1984

United States Department of the Interior

FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
4620 Overland Road, Room 209
Boise, Idaho 83705

June 8, 1984

Mr. Vernon F. Ravenscroft
Consulting Associates, Inc.
P.O. Box 893
Boise, Idaho 83701

Re: Proposed Warm Springs Creek
Hydro Project, Will Ingram
Challis, Idaho

Dear Mr. Ravenscroft:

This is in response to your letter of May 8, 1984 concerning the referenced proposal. The Fish and Wildlife Service is aware of problems in Warm Springs Creek that are a result of increased flows and subsequent head cutting after the October 28, 1983 earthquake. This proposal is viewed as an opportunity to correct a serious bed load and turbidity problem affecting the Salmon River.

We wish to meet with you, the applicant, National Marine Fisheries Service and Idaho Department of Fish and Game on-site to discuss your proposal. Please arrange for this meeting and inform us of the details. This does not constitute submission of terms and conditions on the part of the Service. Also, you should be aware that 9th District Court recently overturned the 1982 FERC rulemaking concerning Order 106 and the definition of "Natural Water Feature". You should examine the relationship of this action to the proposed action.

Sincerely yours,

John P. Wolflin
Field Supervisor

cc: IDFG, Salmon (Reingold)
IDFG, Idaho Falls (Reinecker)
NMFS, Portland (Bennett)

APPLICANT RESPONSE TO

FISH AND WILDLIFE SERVICE

Applicant acknowledges the response from Fish and Wildlife Service and will provide updated information on correction of the erosion problem as soon as Applicant is authorized to proceed from the Federal Energy Regulatory Commission.

IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, 83702

May 21, 1984

Mr. Vernon F. Ravenscroft
Consulting Associates, Inc.
P.O. Box 893
Boise, Idaho 83701

Dear Mr. Ravenscroft:

Ingram Warm Springs Ranch Hydroelectric Facility

Thank you for the information you recently sent to us concerning the referenced hydroelectric project.

We reviewed the information and checked our records which indicate that the project is located in an area where some sites have been recorded and where other unrecorded sites are likely to exist. To our knowledge, the area has never been formally surveyed for cultural resources. Therefore, we recommend that an inspection be conducted by a professional archaeologist to ascertain the possible effect on sites 10-CR-249 and 10-CR-250 (their exact locations are unknown) and to ensure that unrecorded archaeological or historical properties are not inadvertently destroyed.

Please feel free to contact our office if you need further assistance or have any questions regarding our comments.

Sincerely,

Thomas J. Green
State Archaeologist
State Historic Preservation Office

TJG/bhd

RECEIVED
MAY 24 1984

APPLICANT RESPONSE TO

STATE HISTORIC PRESERVATION OFFICE

Applicant acknowledges Mr. Thomas Green's recommendation that an inspection be conducted by a professional archaeologist to ascertain the possible effect on sites 10-CR-249 and 10-CR-250 to ensure that unrecorded archaeological or historical properties are not inadvertently destroyed.

Applicant and project engineer have asked the cooperation of the Bureau of Land Management in offering their services in this capacity. They have agreed to examine the canal route relative to the above mentioned sites and report back to Mr. Green and Project Engineer, Ted Sorenson.

United States Department of Agriculture

Soil Conservation Service

SUBJECT: Conservation Application DATE: June 5, 1984

TO: Clinton Ednson
Director Hydro Power License
Federal Energy Licensing Agency
Washington D.C.

On June 5th Will Ingram called and requested a letter to you concerning the erosion problem on Warm Springs. The following is a situation statement on this problem.

Following the earthquake in October of 1983, the Warm Springs rising on the Ingram Ranch has increased steadily to around 70 cfs at present. This is an increase of about 50 Cfc. In March of 1984 when the snow and weather permitted it was discoveredthat with the increase in flow the channel had begun to erode severly.

On my initial visit to the site (March 23) the channel had an approximate 14 foot drop in a 200 foot length. Water was muddy to the point you could not see your hand submerged under the surface. The channel had deepened 10-12 feet from its original channel below the headcut. In April when I last observed the problem the headcut had moved approximately 400 feet upstream. I would estimate, if left untouched, the headcut will erode back to the spring. This is approximately two miles upstream from its present location. Soils are loams to sandy loams with no bedrock to act as a control, that could be observed. The sediment produced from the erosion area is deposited in the Salmon River. A team from the Bureau of Land Management and Forest Service ran a quantitave analysis of the sediment. A copy can be obtained from Lyle Lewis, Hydrologist for the Bureau of Land Management Salmon District. Bob Lehman and Art Shoemaker, Engineers for the Soil Conservation Service looked over the site and recommended alternatives. One of the alternatives was a channel to carry the water on a grade to a point where it would be dropped with a pipe, back to the reservoir or some other suitable point. This drop could then be used to gravity irrigate or generate power. This situation although the most expensive would be the only one that would probably eventually pay itself out.

This is a tremendous problem and one that I see no easy or inexpensive solution for. I have attached a picture of the problem. I think it speaks for itself. Any assistance from your agency in developing a solution for solving this problem in a timely manner will be greatly appreciated.

Ralph L. Swift
District Conservationist
Salmon, Idaho

RLS/ras

Encl.

RECEIVED
JUN 13 1984

APPLICANT RESPONSE TO

SOIL CONSERVATION SERVICE

Applicant fully agrees with the letter drafted by Mr. Ralph L. Swift, District Conservationist, Salmon, Idaho, and agrees to inspection by that department during and after construction of the project.

P.O. Box 733
Challis, ID
June 22, 1984

Consulting Associates, Inc.
P.O. Box 893
Boise, Idaho 83701

Dear Vern and Helen:

This letter is to give the Idaho Conservation League's support to Will and Vangie Ingram's Warm Springs Ranch hydroelectric project, and to their request to expedite the approval from the Federal Energy Regulating Commission.

In our opinion, the facts that this project is being undertaken by an individual rancher and his wife; that it will mitigate a serious environmental hazard in the removal of stream turbidity and sedimentation that is tributary to the Salmon River; plus the approval of concerned federal and state agencies as expressed in the meeting of June 15, 1984, provides a significant amount of credence to the request.

If there is any other support or help that we can give, please let us know.

Sincerely,

Keith Axline
Challis Chapter
Idaho Conservation League

cc: Warm Springs Ranch

APPLICANT RESPONSE TO

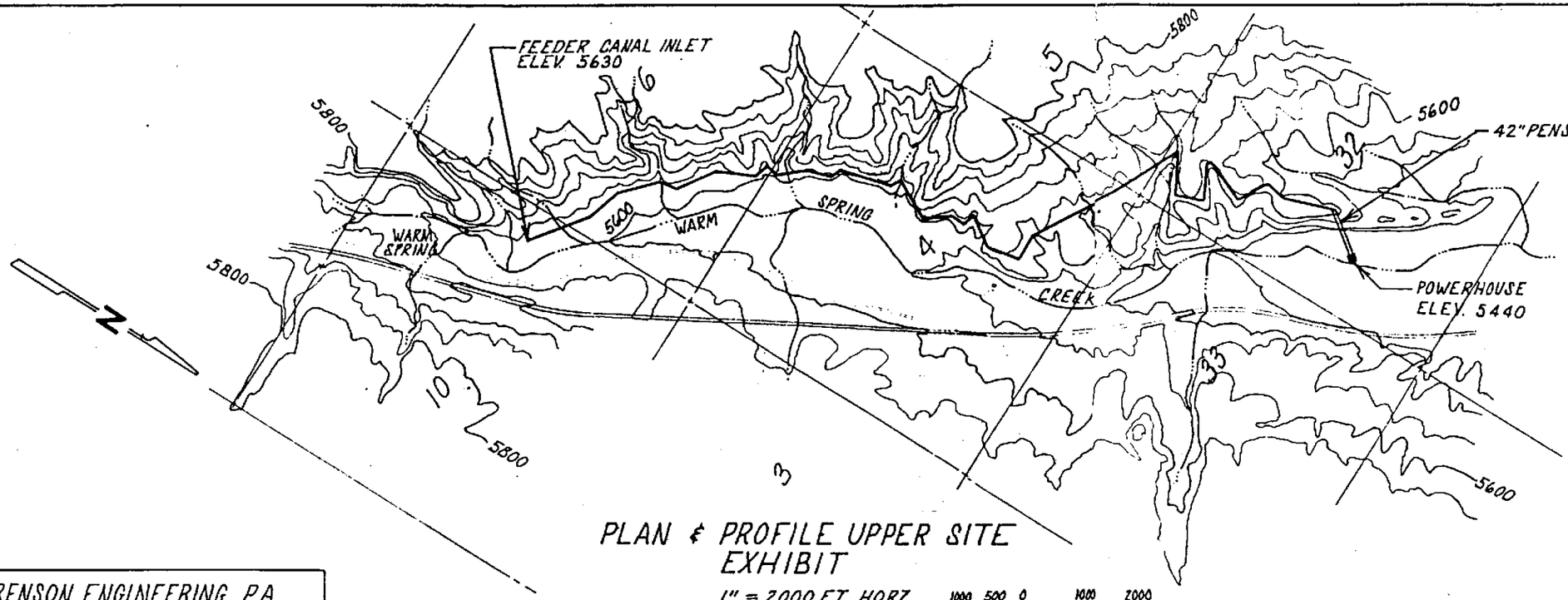
IDAHO CONSERVATION LEAGUE

Applicant agrees fully with the response of Mr. Keith Axline, Challis Chapter of the ICL and agrees to inspection by Mr. Axline of the project during construction of the project.

[redacted] Exhibit F [redacted]

US DEPARTMENT of AGRICULTURE - FOREST SERVICE			
FOREST	ROAD NUMBER	MILE POSTS	SHEETS
			EXHIBIT F-1

THE ALIGNMENT, GRADE AND CULVERTS AS HEREON SHOWN ARE SUBJECT TO ADJUSTMENT



PLAN & PROFILE UPPER SITE EXHIBIT

1" = 2000 FT HORZ.
1" = 50 FT. VERT.

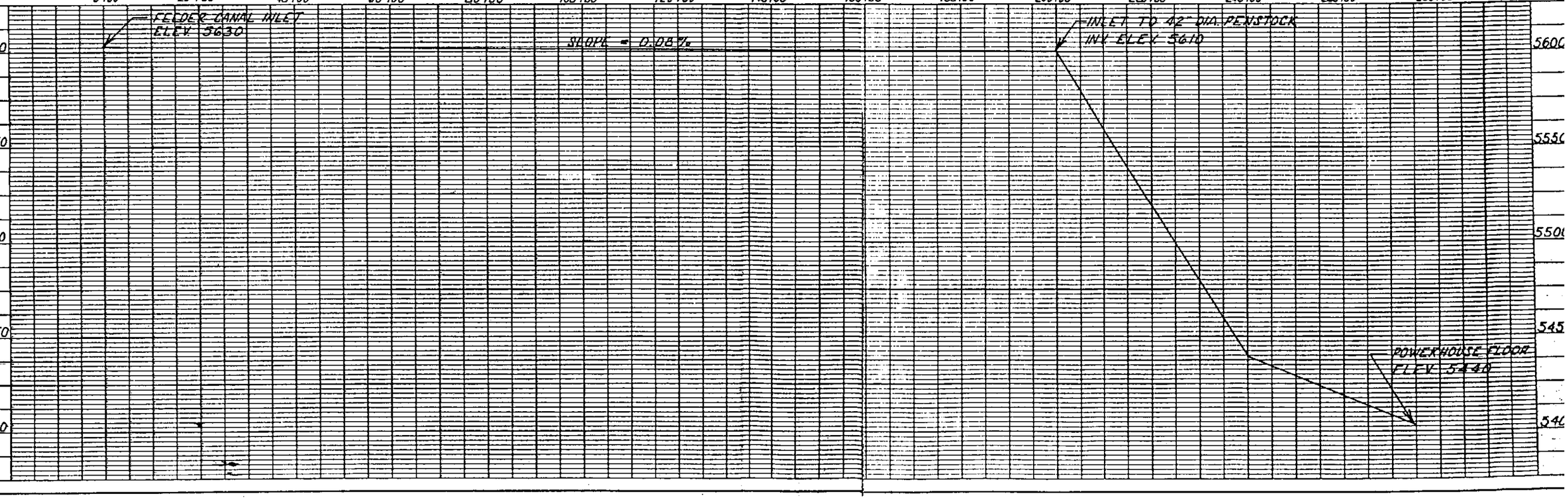
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SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO



THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 23 DAY July, 1984

William Ingram
WILL INGRAM

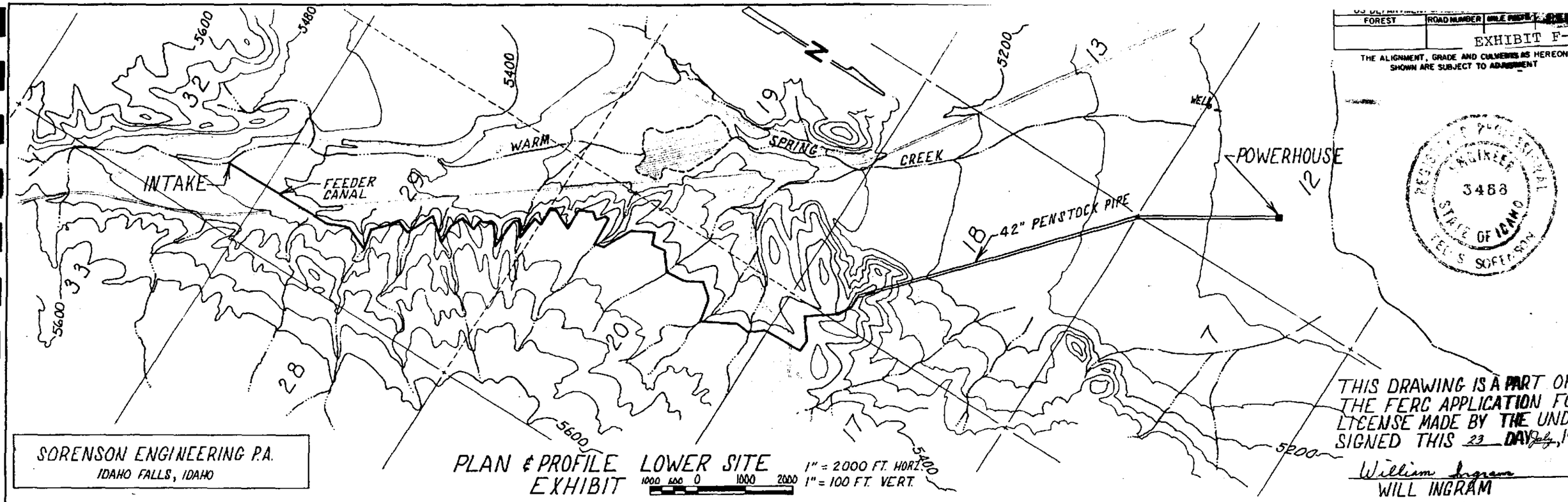


Data
Traced by
Date
Checked by
Date
Designed by
Date
Surveyed by

FOREST	ROAD NUMBER	MILE POSTS	
			EXHIBIT F-2

THE ALIGNMENT, GRADE AND CULVERTS AS HEREON SHOWN ARE SUBJECT TO ADJUSTMENT

REGISTERED PROFESSIONAL ENGINEER 3488 STATE OF IDAHO FELS SORENSON



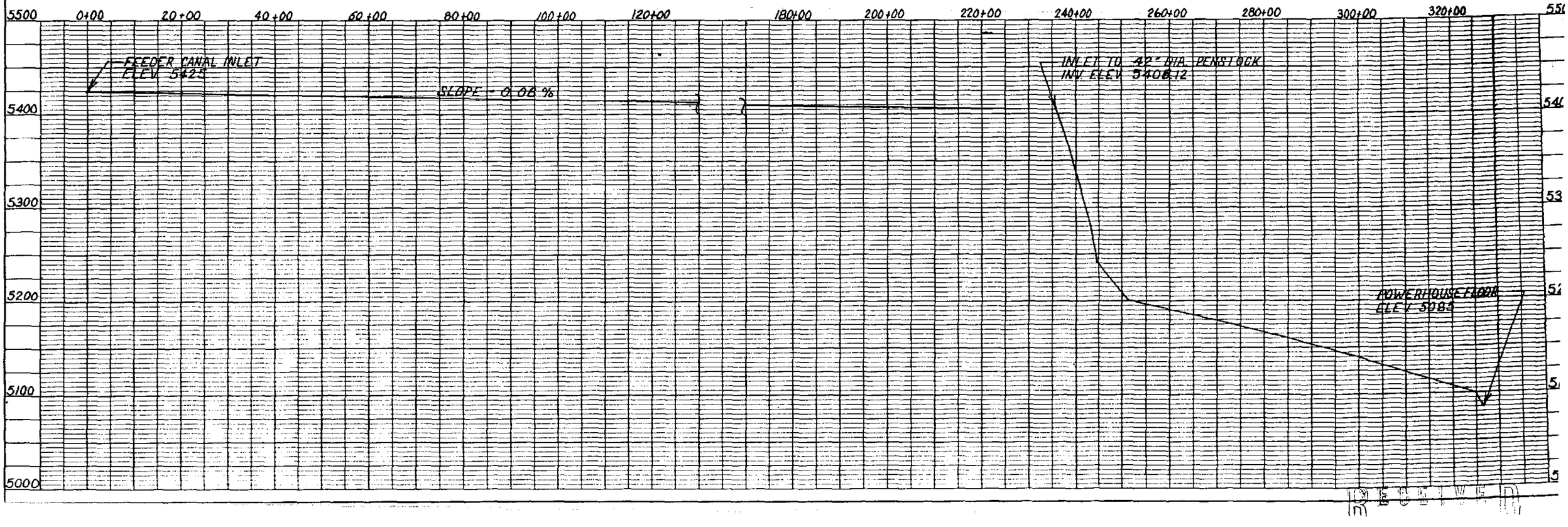
SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO

PLAN & PROFILE LOWER SITE EXHIBIT

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1" = 2000 FT. HORIZ.
1" = 100 FT. VERT.

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 23 DAY July, 19 84

William Ingram
WILL INGRAM



RECEIVED

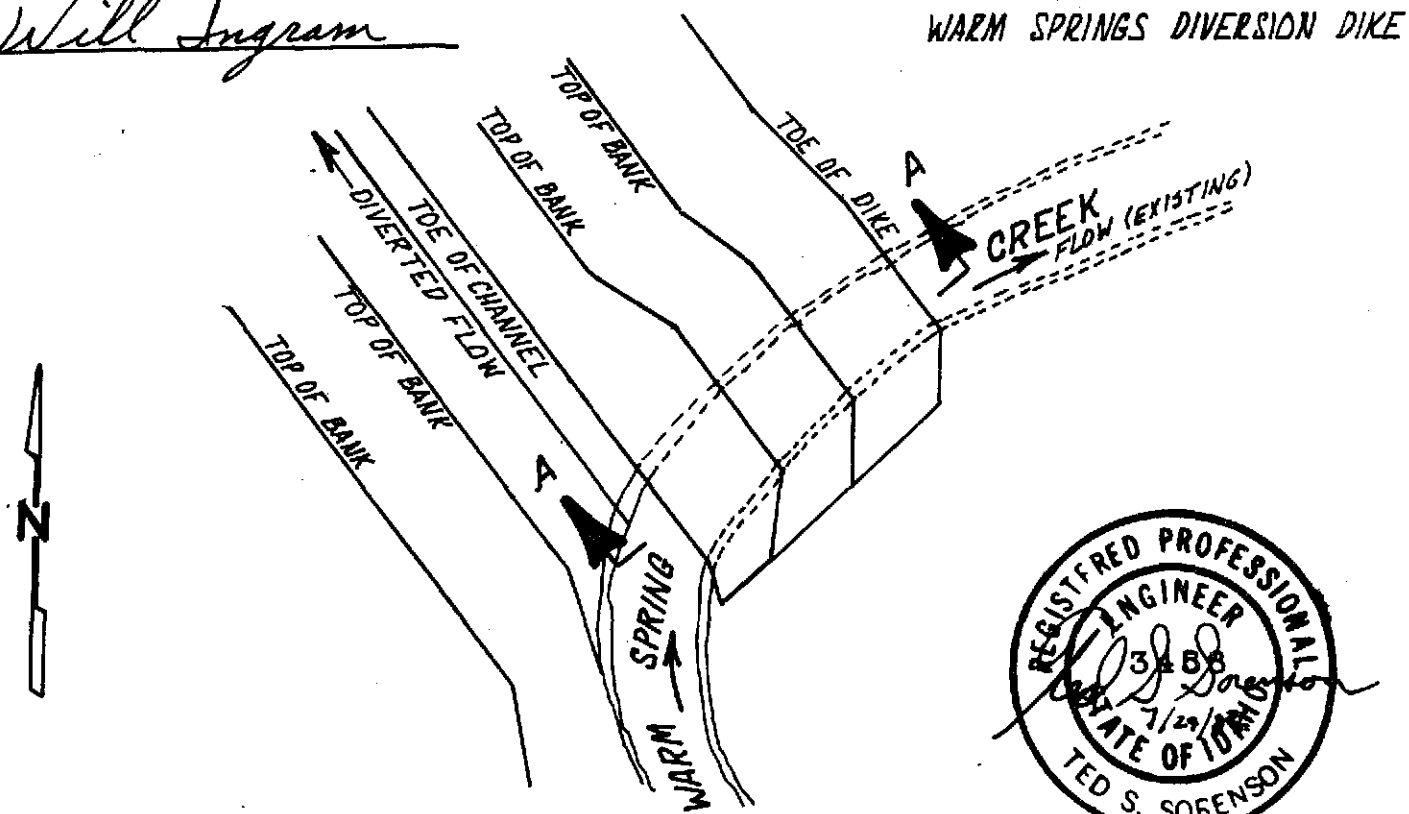
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 24th DAY JULY, 1984.

Will Ingram

EXHIBIT F-3

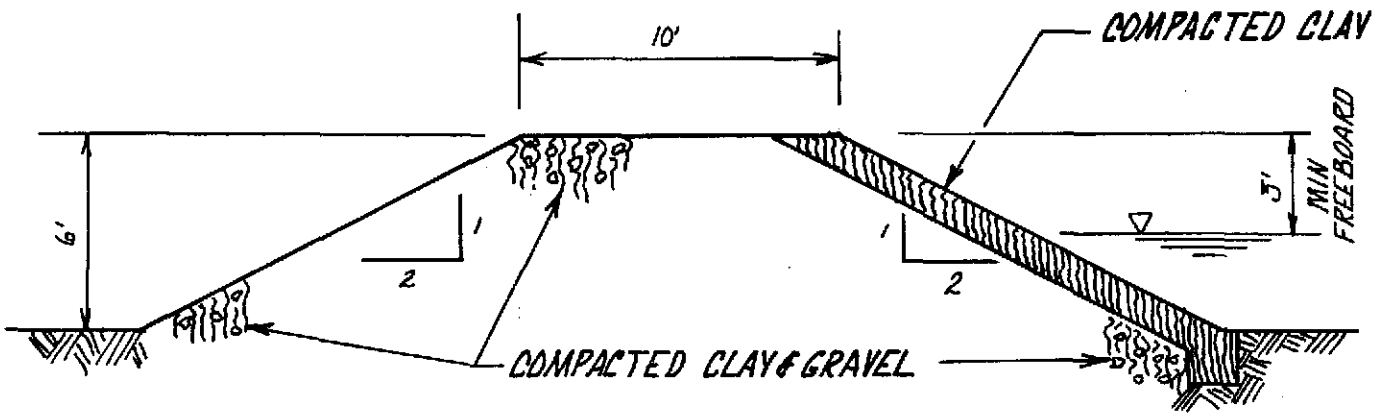
FERC #

WARM SPRINGS DIVERSION DIKE



REGISTERED PROFESSIONAL ENGINEER
3458
7/24/84
STATE OF IDAHO
TED S. SORENSON

DIVERSION DIKE PLAN



SECTION A-A

EXHIBIT F-4

FERC #

Ingram Ranch Hydroelectric
Powerhouse Layout
Upper and Lower Site

UPPER SITE NORTH

LOWER SITE NORTH

SWITCH GEAR

GENERATOR

BUTTERFLY ISOLATION VALVE

42" ϕ PENSTOCK

FLOW

FRANCIS TURBINE

TRAVELING BRIDGE HOIST

21'

9'

FLOW

DRAFT TUBE

PLAN VIEW

BAR SCALE
0 1 2 3 ft

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 24th DAY JULY, 1984.

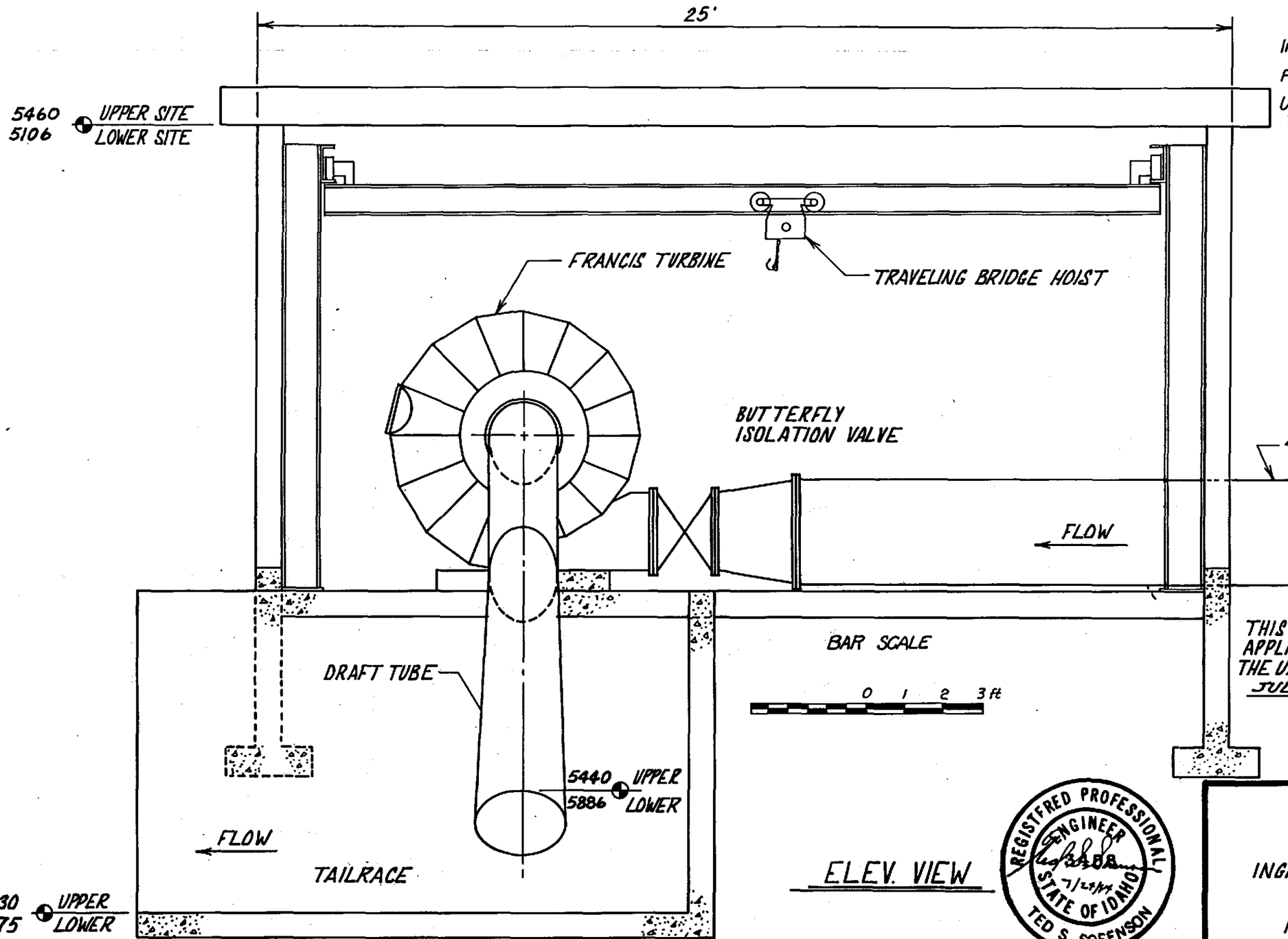
Will Ingram
WILL INGRAM

REGISTERED PROFESSIONAL ENGINEER
3488
7/24/84
STATE OF IDAHO
TED S. SORENSON

EXHIBIT L
FERC #
INGRAM RANCH HYDROELECTRIC FACILITY
POWERHOUSE LAYOUT
UPPER AND LOWER SITE
845033

EXHIBIT F-5

FERC #



ELEV. VIEW

Ingram Ranch Hydroelectric
Powerhouse Layout
Upper and Lower Site

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 24th DAY JULY, 1984.

Will Ingram
WILL INGRAM

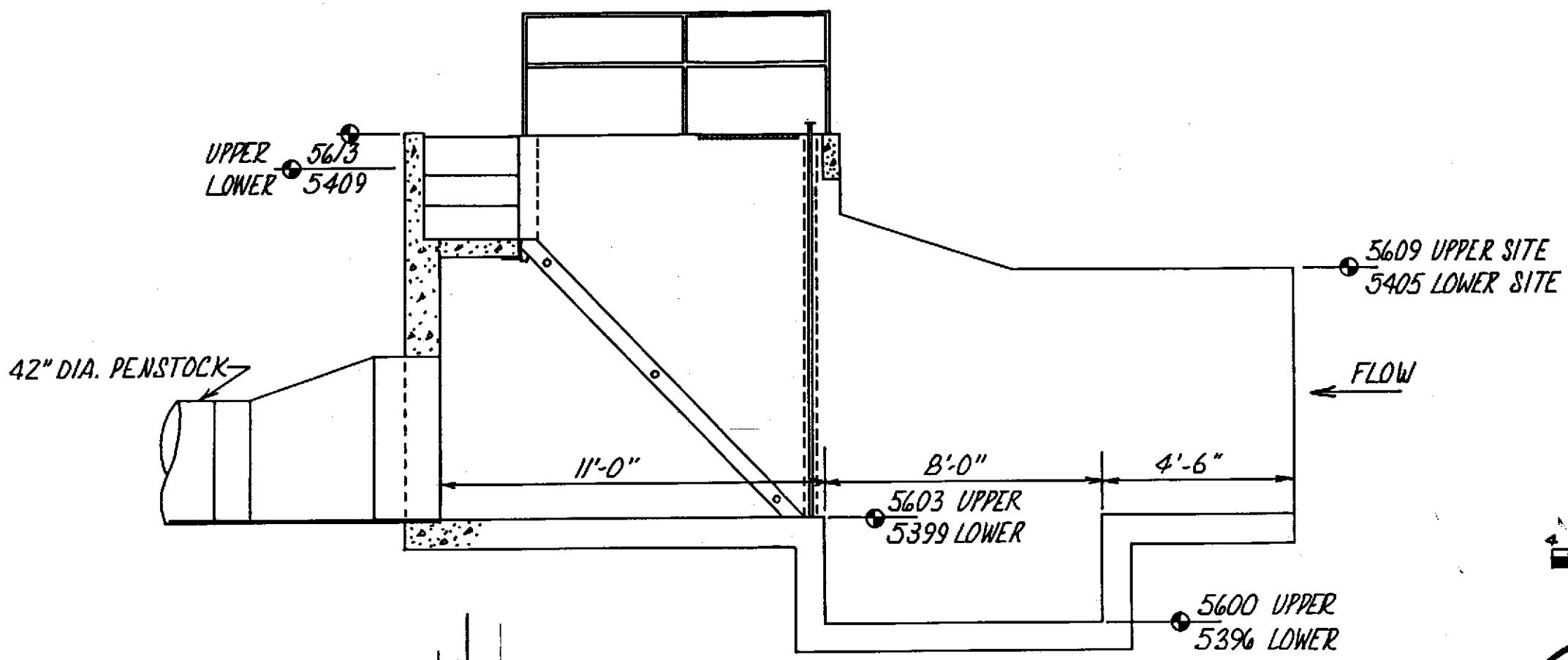
REGISTERED PROFESSIONAL ENGINEER
7/27/84
STATE OF IDAHO
TED S. SORENSON

EXHIBIT L
FERC #
INGRAM RANCH HYDROELECTRIC FACILITY
POWERHOUSE LAYOUT
UPPER AND LOWER SITE
B45032

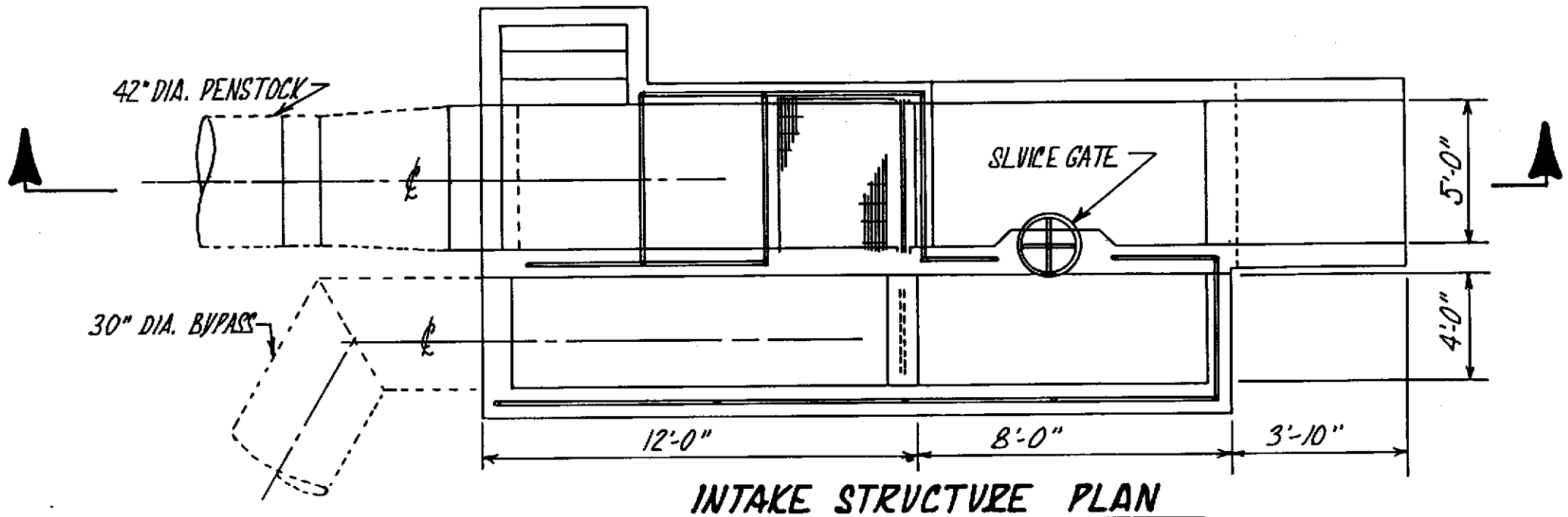
EXHIBIT F-6

FERC #

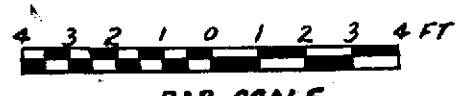
Ingram Ranch Hydroelectric
Powerhouse Layout
Upper and Lower Site



INTAKE STRUCTURE SECTION



INTAKE STRUCTURE PLAN



BAR SCALE



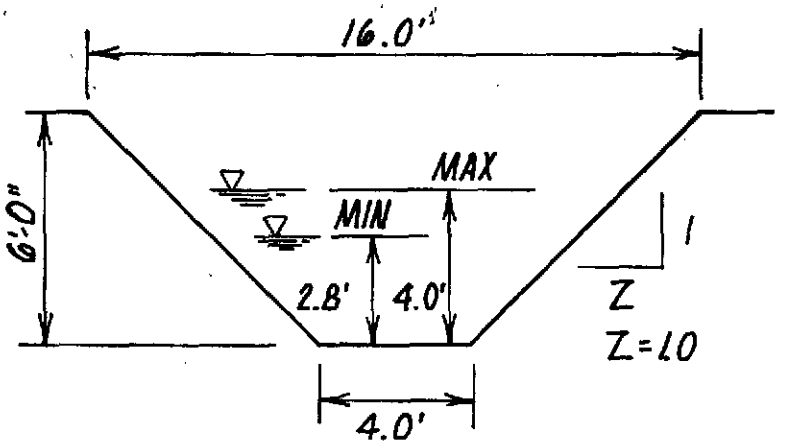
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 24th DAY JULY, 1984.

Will Ingram
WILL INGRAM

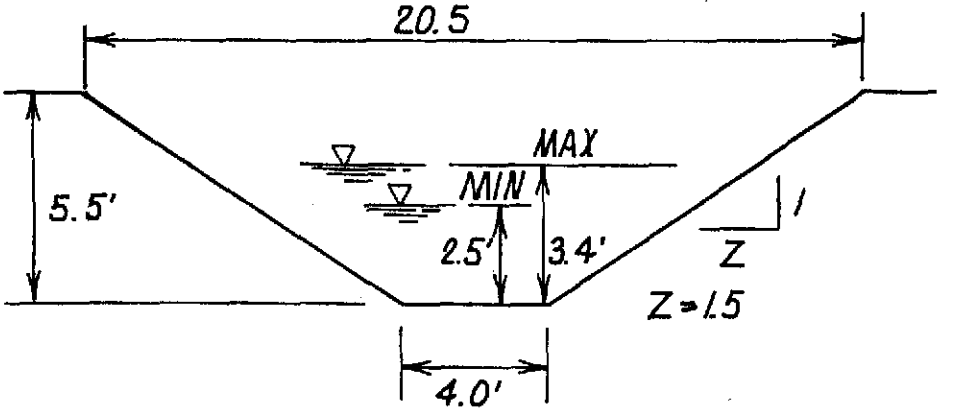
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 24th DAY JULY, 1984.

Will Ingram
WILL INGRAM

FERC #
INGRAM RANCH HYDROELECTRIC
TYPICAL CANAL CROSS SECTIONS
UPPER AND LOWER SITE
EXHIBIT F-7

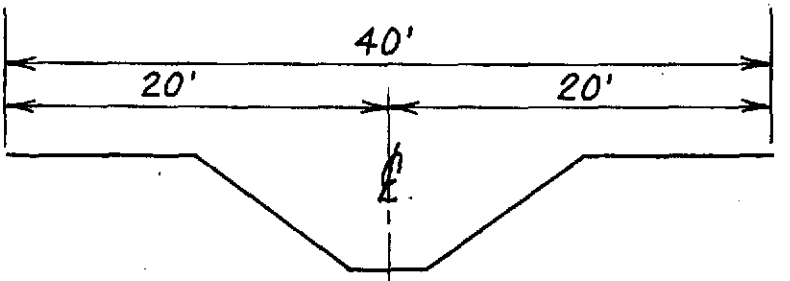


Q	d
CFS	FT
35	2.8'
45	3.3'
70	4.0'

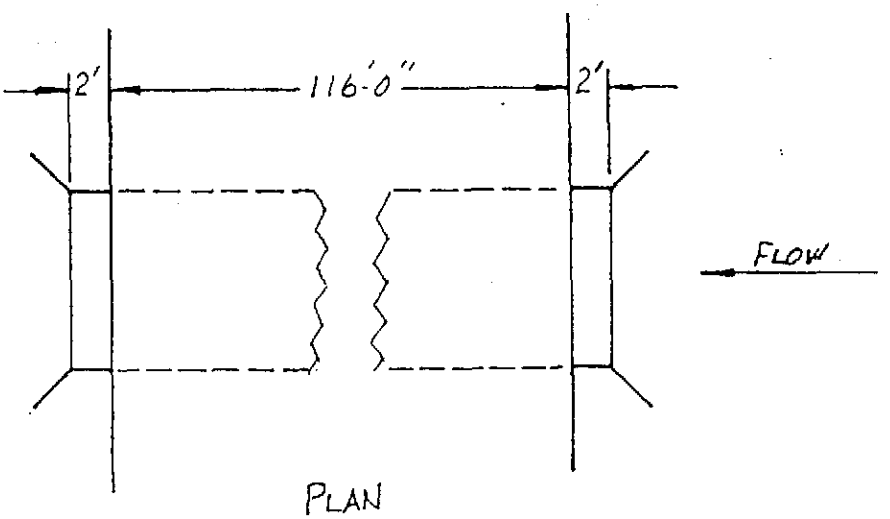


Q	d
CFS	FT
35	2.5'
45	2.9'
70	3.4'

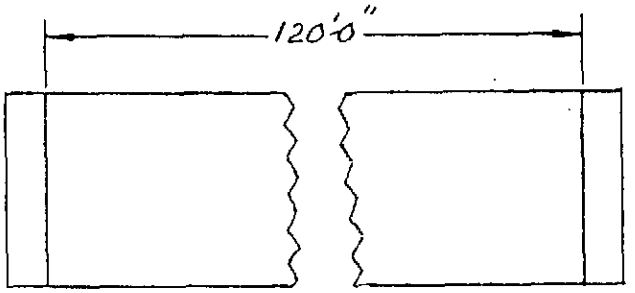
REGISTERED PROFESSIONAL ENGINEER
3488
STATE OF IDAHO
TED S. SORENSON



RIGHT OF WAY SECTION



PLAN

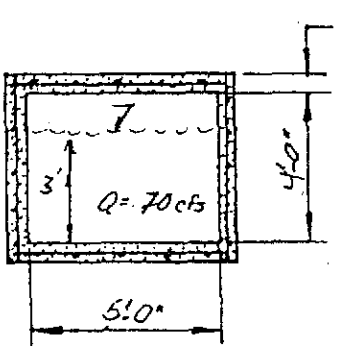


USE DECK OF BOX CULVERT AS ROAD SURFACE

ELEVATION

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE BY THE UNDERSIGNED THE 30th DAY AUG 1984

Will Ingram



PRECAST REINFORCED CONCRETE BOX CULVERT TYPICAL

REGISTERED PROFESSIONAL ENGINEER
3488
7-30-84
STATE OF IDAHO
TED S. SORENSON

HYDROELECTRIC FACILITY
TYPICAL COUNTY
ROAD CROSSING

EXHIBIT F-8

EXHIBIT G

Maps and technical descriptions have been provided by Ted Sorenson, Idaho Falls and are as follows:

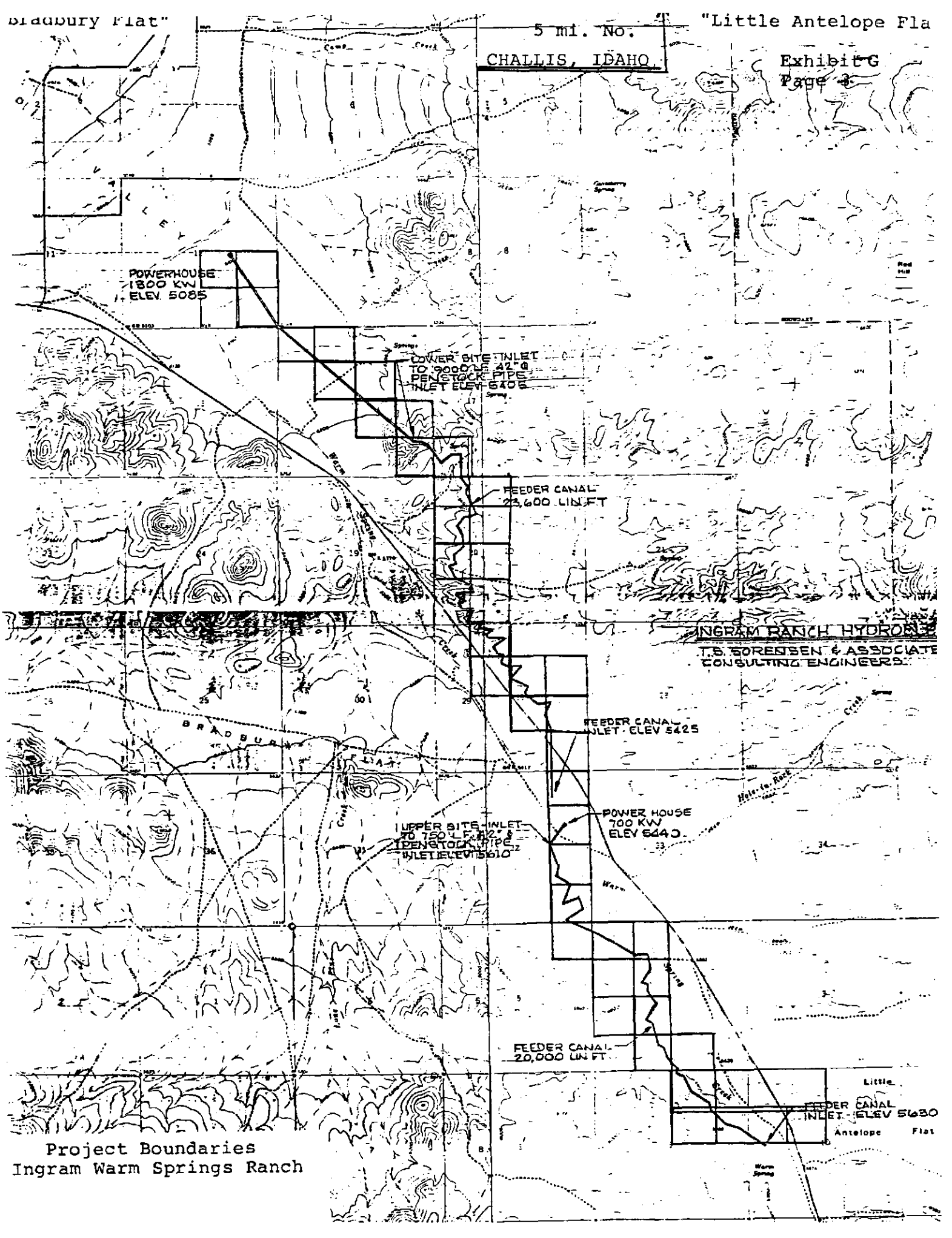
1. A project boundary map, provided herein, shows the location of the project as a whole with reference to the affected stream and other body of water.

2. Project Boundaries are-

SW¼,NW¼, Sec. 10; S½, NE¼,and NW¼, NE¼, Sec. 9; SW¼, SE¼, and E½, SW¼, and E½, NW¼, and NW¼, NW¼, Sec 4; NE¼, NE¼, Sec. 5 all in T 12 N, R 20 E, BM. and, E½, SE¼, and E½ NE¼, Sec 32; and E½, SE¼, and NW¼, SE¼, and SW¼, NE¼ and E½, NW¼ in Sec. 29; and S½, SW¼, NW¼, SW¼ and all of the NW¼ in Sec 20; and SW¼, SW¼, Sec. 17: E½, SE¼, and NW¼, SE¼, and SE¼, NE¼, and W½, NW¼, and NW¼, NW¼ in Sec 18, all in T13N, R20 W, B.M., and E½, SE¼, and NW¼, SE¼ in Sec 12, T 13 N, R 19W, B.M.

3. There are no areas within the project boundary or affected by the Ingram Warm Springs Ranch project, which are included in or have been designated for study for inclusion in the National Wild and Scenic Rivers System.

4. There are no areas within the project boundary that, under the provisions of the Wilderness Act, have been designated as wilderness or wilderness study areas.



Project Boundaries
Ingram Warm Springs Ranch

General Location of

INGRAM WARM SPRINGS RANCH

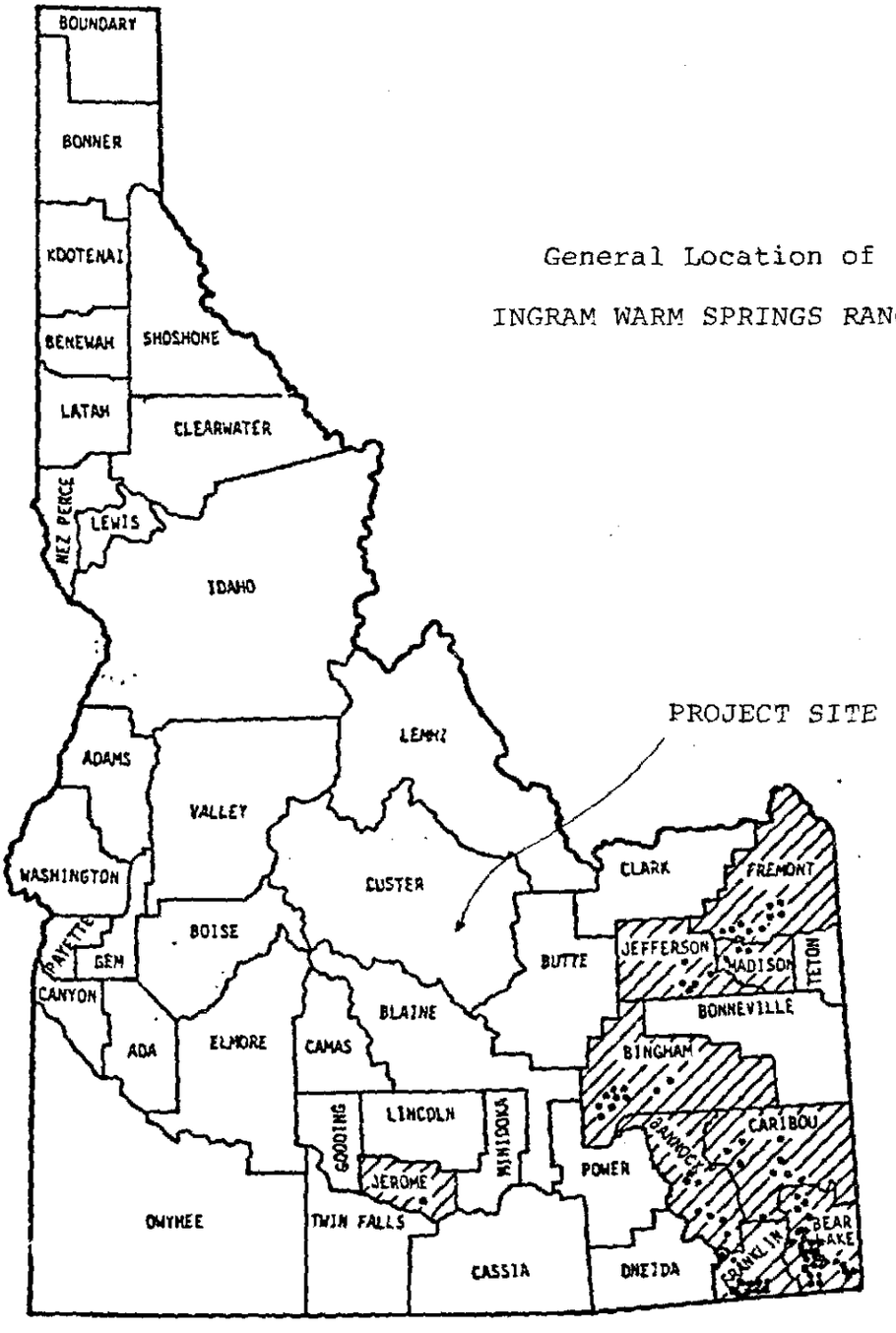


EXHIBIT G-5

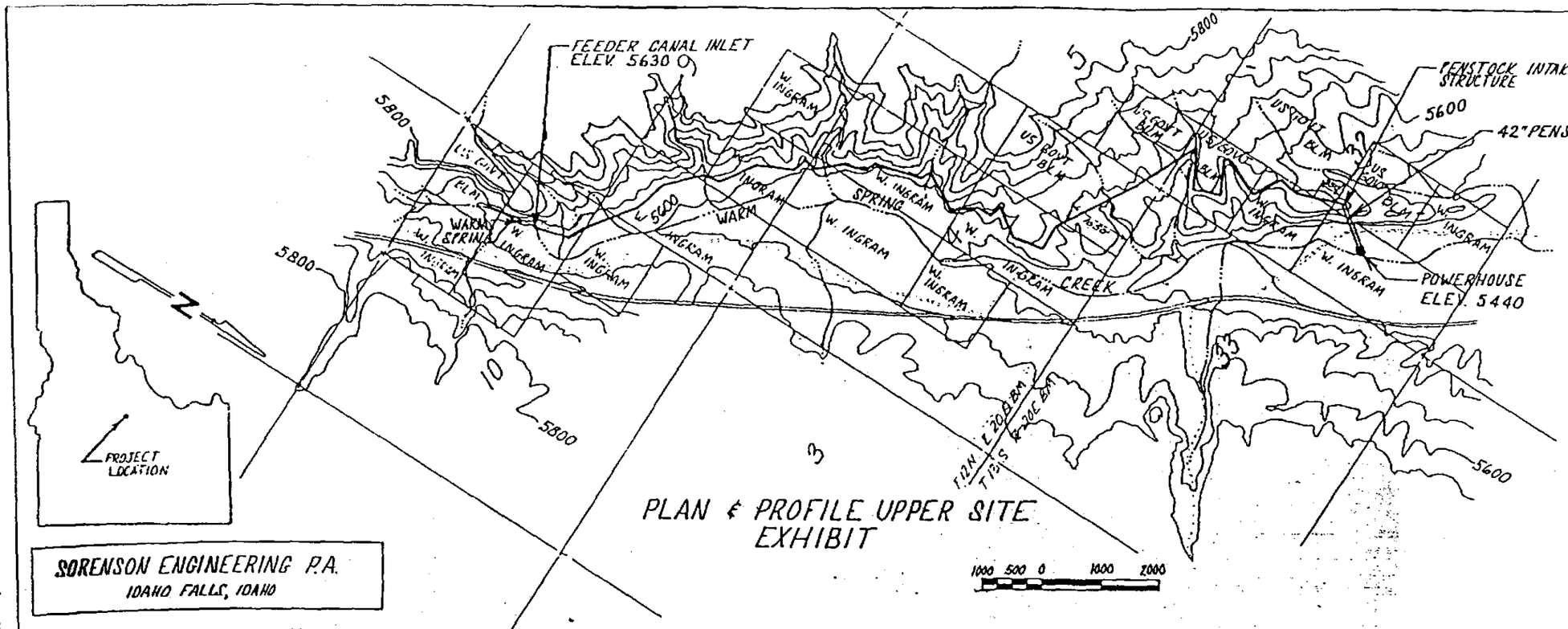
FERC #

INGRAM RANCH HYDROELECTRIC

PLAN & PROFILE

UPPER SITE

REGISTERED PROFESSIONAL ENGINEER
Ted S. Sorenson
7/24/84
STATE OF IDAHO
TED S. SORENSON



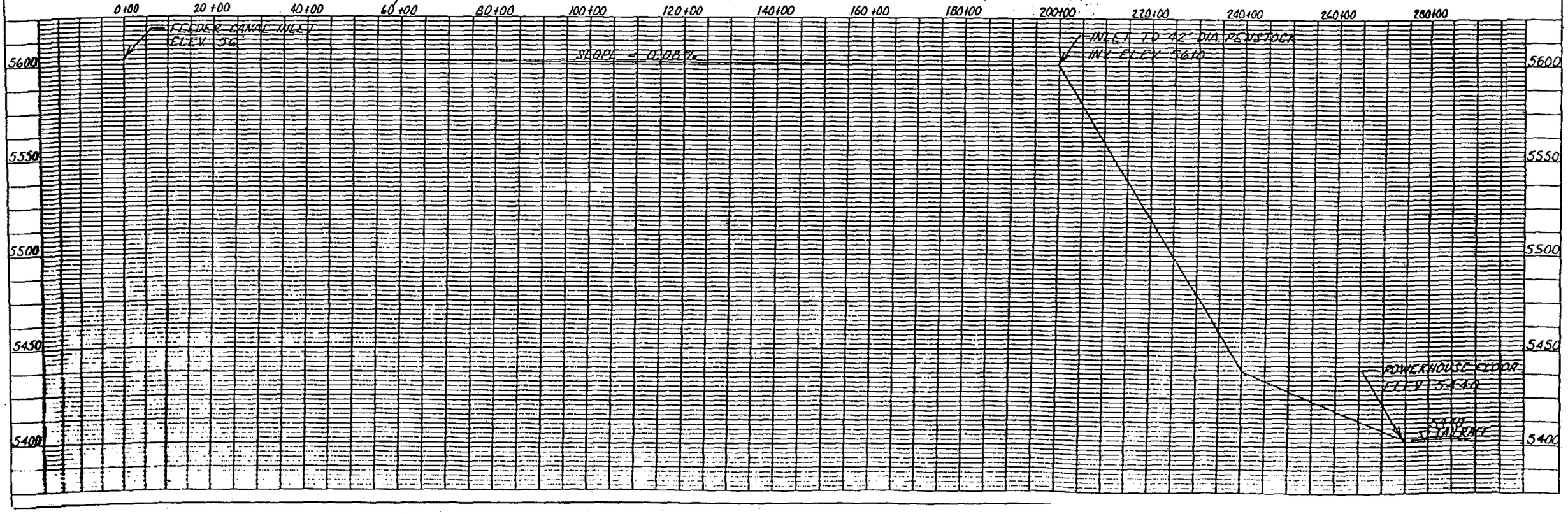
PLAN & PROFILE UPPER SITE
EXHIBIT

1000 500 0 1000 2000

SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDER SIGNED THIS 24th DAY July, 1984.

Will Ingram
WILL INGRAM



Checked by
Date
Designed by
Date
Surveyed by

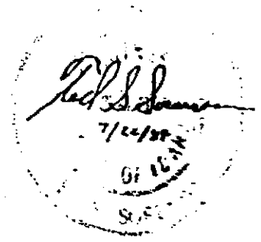
EXHIBIT G-6

FERC #

INGRAM RANCH HYDROELECTRI

PLAN & PROFILE

LOWER SITE



THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 24th DAY July, 1984

Will Ingram

WILL INGRAM

SORENSON ENGINEERING P.A.

IDAHO FALLS, IDAHO

PLAN & PROFILE LOWER SITE

EXHIBIT

1000 500 0 1000 2000

Cert. of Mailing

CERTIFICATION OF MAILING

I hereby certify that on the 2nd day of August, 1984, I sent, by Certified-Registered mail, a copy of the foregoing Application for Minor/Major License for the Ingram Warm Springs Ranch Hydropower Project, properly addressed with postage prepaid, to the following parties:

Senator James A. McClure
U.S. Senate
Washington, D.C. 20510

Office of Senator James A. McClure
c/o Mike Fields
250 S. 4th Avenue
Pocatello, Idaho

Senator Steve Symms
U.S. Senate, Senate Hart Bldg.
Washington, D.C. 20510

Office of Senator Steve Symms
c/o Phil Reberger
Borah Post Office Building
Boise, Idaho 83701

Mr. Kenneth F. Plumb, Secretary
Office of Electric Power Regulation
FEDERAL ENERGY REGULATORY COMMISSION
825 N. Capitol Street, NE
M.S. 208 R.B.
Washington, D.C. 20426

Mr. William F. Kopfler
Regional Engineer
FEDERAL ENERGY REGULATORY COMMISSION
333 Market St. - 6th Floor
San Francisco, Ca. 94105

U.S. Army Corps of Engineers
Building 602,
City/County Airport
Walla Walla, Washington 99362

Mr. E. F. Hubbard
District Chief
U.S. GEOLOGICAL SURVEY
Water Resources Division
Box 036 Federal Bldg., Rm. 365
550 West Fort St.
Boise, Idaho 83724

Mr. Jerry Conley, Director
IDAHO DEPARTMENT OF FISH & GAME
P.O. Box 25
Boise, Idaho 83707

Mr. Donald L. Smith
Challis Area Manager
Bureau of Land Management
P.O. Box 430
Salmon, Idaho 83467

Jack E. Griswold, Forest Supervisor
CHALLIS NATIONAL FOREST
P.O. Box 404
Challis, Idaho 83226

Mr. James N. Hawkins
Extension Agricultural Agent
P.O. Box 160
Challis, Idaho 83226

Mr. Tom Reinecker
Regional Supervisor
IDAHO DEPARTMENT OF FISH AND GAME
1515 Lincoln Road
Idaho Falls, Idaho 83401

Mr. Frank Maraffio, Chairman
CUSTER COUNTY BOARD OF COMMISSIONERS
P.O. Box 385
Challis, Idaho 83226

Mr. John P. Wolflin, Field Supervisor
FISH AND WILDLIFE SERVICE (U.S.)
Ecological Services
4620 Overland Road, Room 209
Boise, Idaho 83705

Mr. Thomas J. Green
State Archaeologist
IDAHO STATE HISTORICAL SOCIETY
610 North Julia Davis Drive,
Boise, Idaho 83702

Mr. Ralph L. Swift, Dist. Conservationist
SOIL CONSERVATION SERVICE (U.S.)
Salmon, Idaho

Mr. Keith Axline,
Challis Chapter
IDAHO CONSERVATION LEAGUE
P.O. Box 733
Challis, Idaho 83226

NATIONAL MARINE FISHERIES SERVICE
Environmental Division
847 NE 19th Avenue, Suite 350
Portland, Oregon 98232

Mr. Loren Holmes
IDAHO DEPARTMENT OF WATER RESOURCES
1041 Blue Lakes Blvd., N.
Twin Falls, Idaho 83301

Mr. Larry L. Koenig
Manager, Source Control
IDAHO DEPARTMENT OF HEALTH & WELFARE
Division of Environment
Statehouse Mall
Boise, Idaho 83720

Helen Chenoweth
Helen Chenoweth
Consulting Associates, Inc.