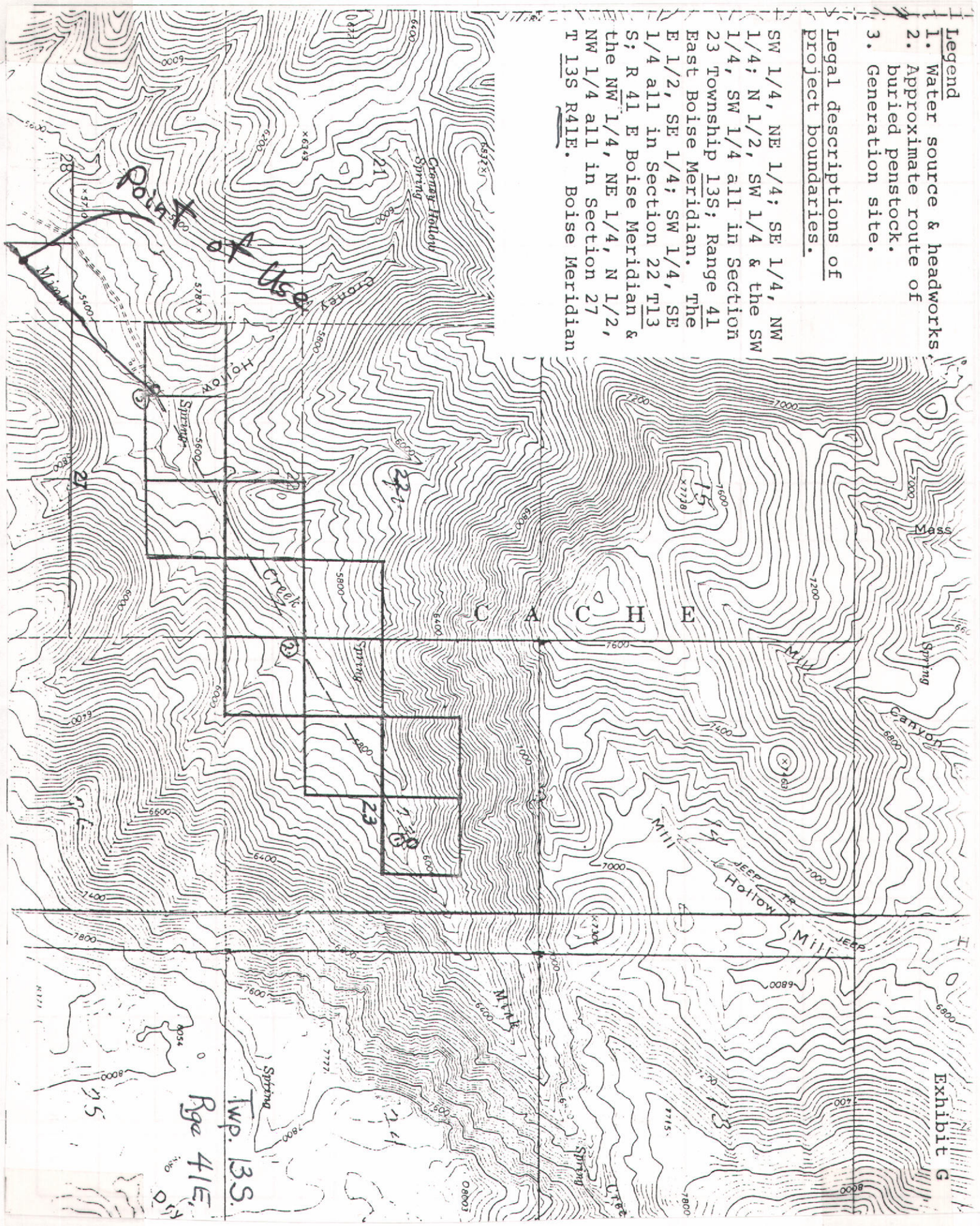
11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



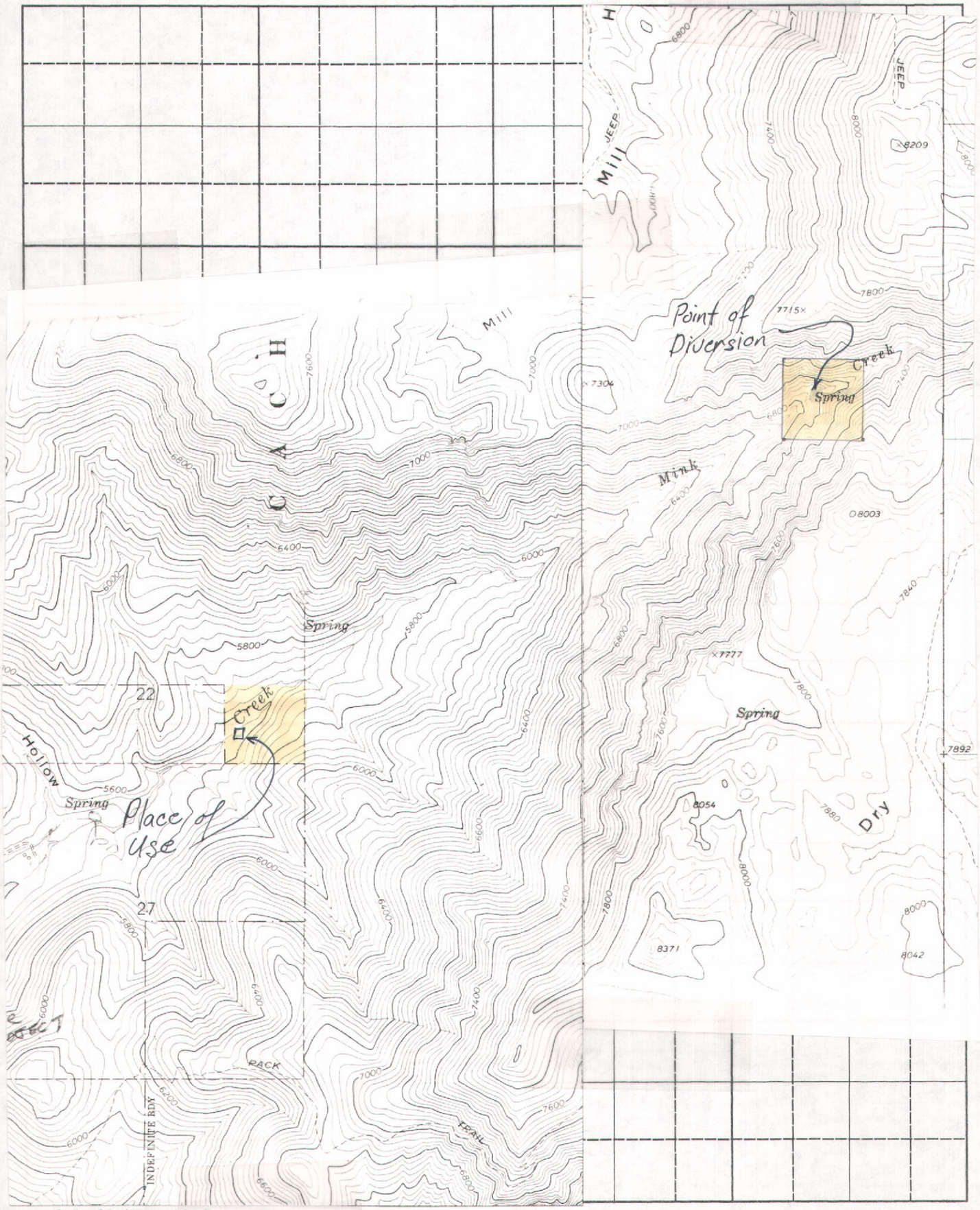
BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

Robert M. Faehnle

(Applicant)

MICROFILMED

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



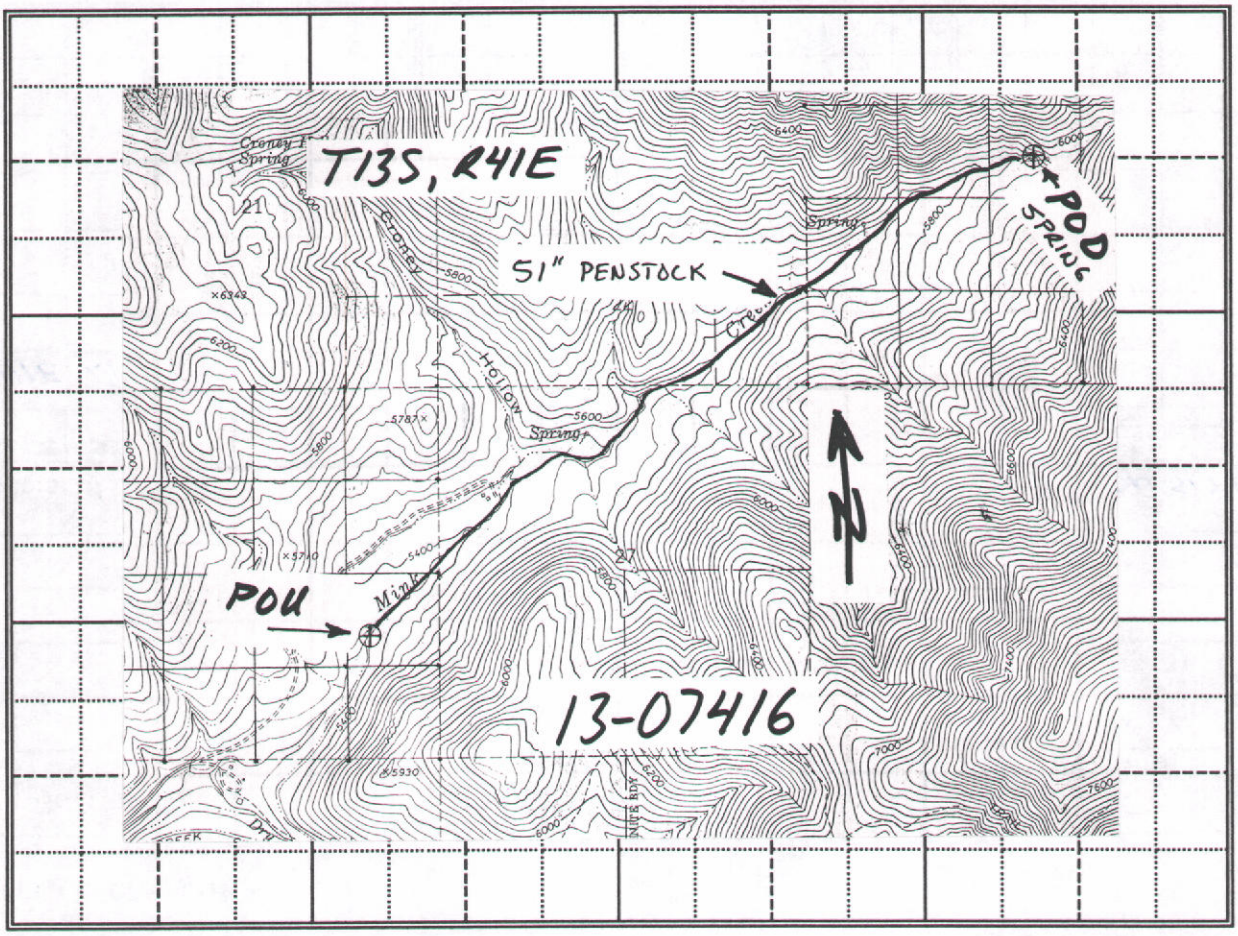
Scale: ~~2 inches equal 1 mile.~~ 1:24,000

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.

(Applicant)

MICROFILMED

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*

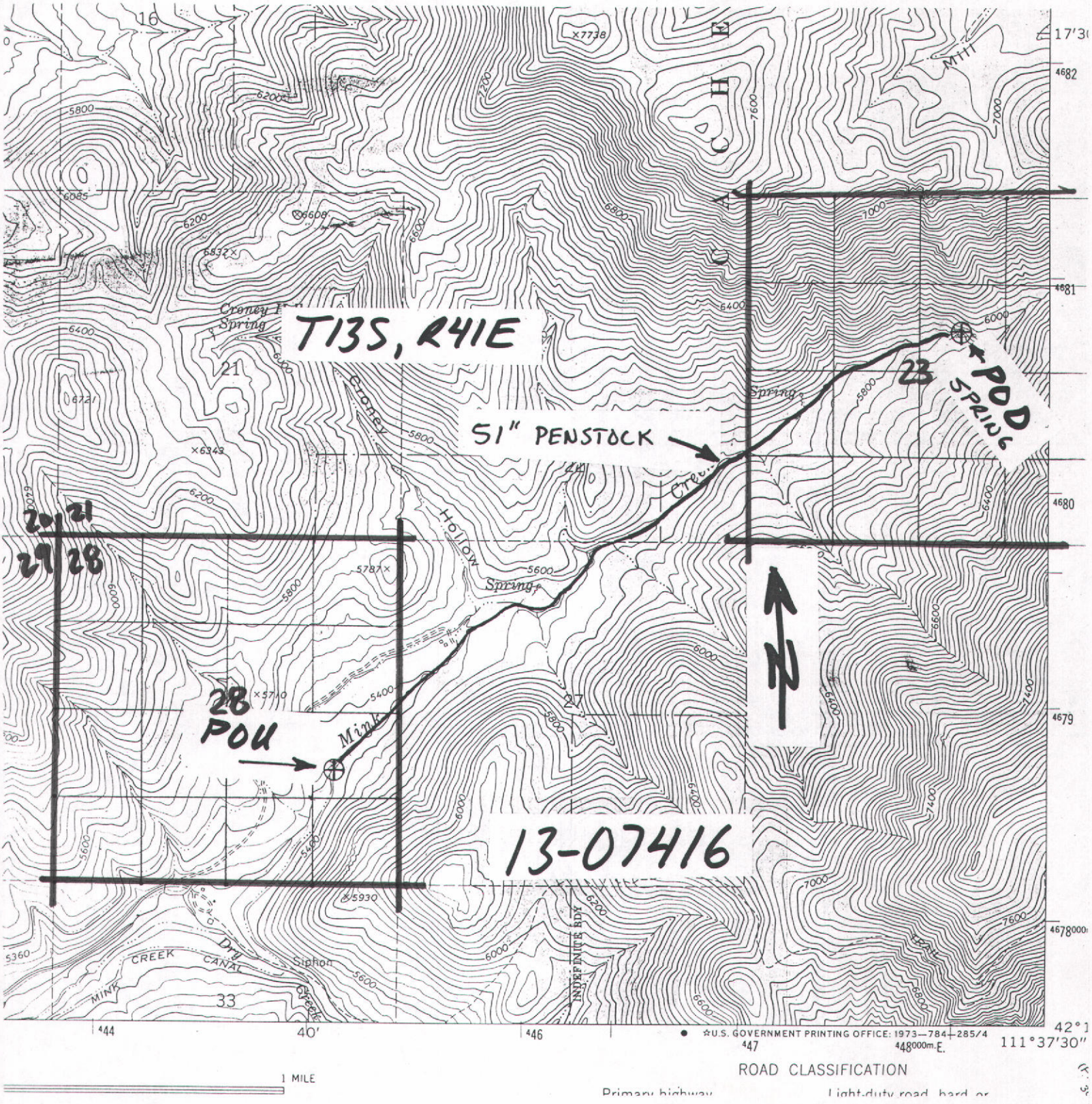
D. FLOW MEASUREMENTS

1.

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

2. **Measurements:** _____

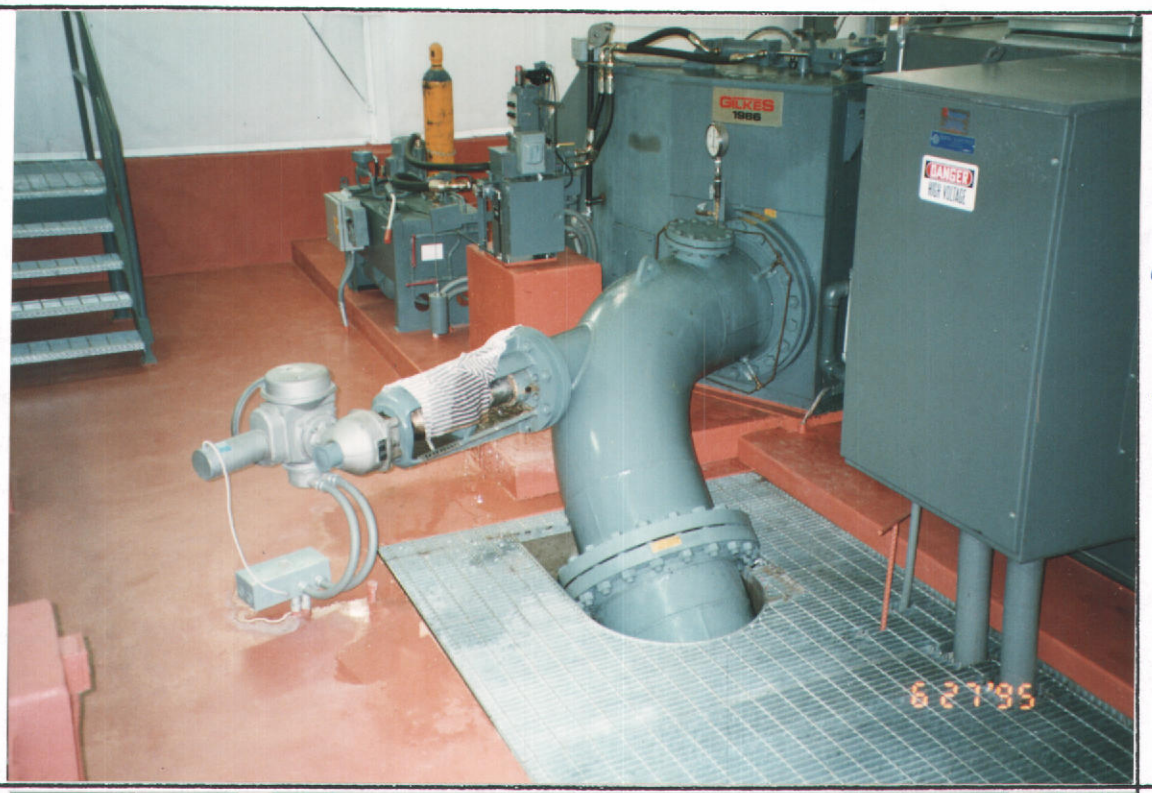
MICROFILMED
JUL 18 1997



MICROFILMED
JUL 18 1997

POWER GENERATION

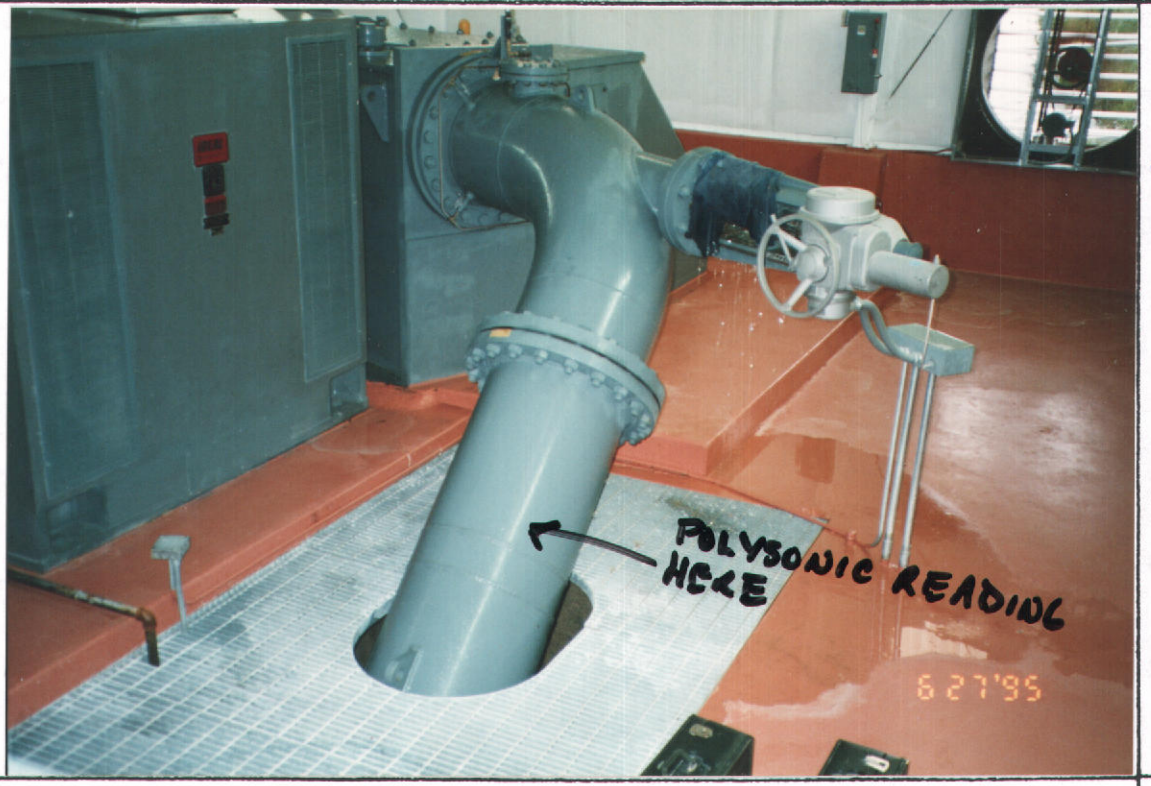
212



INTERIOR OF POWER PLANT.

NO READING ON THIS SIDE OF MACHINE

LOWER TURBINE



UPPER TURBINE

CFS READING TAKEN THIS SIDE.

MICROFILMED
JUL 18 1997

13-07416

ROBERT N. FACKRELL
POWER GENERATION

1 of 2



VIEW OF POWER HOUSE POW

→ DISCHARGE CHANNEL TO ↓

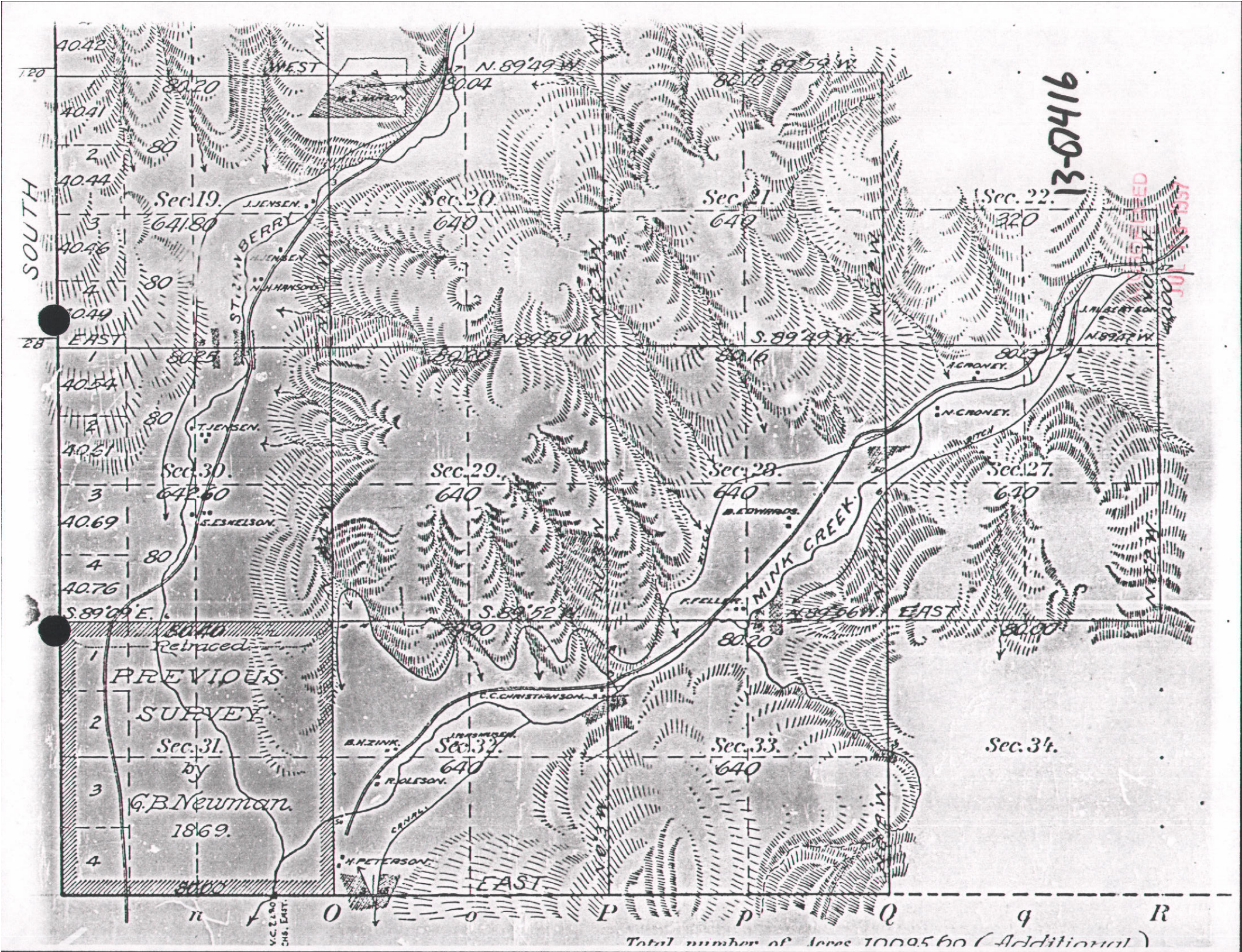
← MINK CREEK



NAME + SPECIFICATION OF TURBINE.

MICROFILMED
JUL 18 1997

13-07416

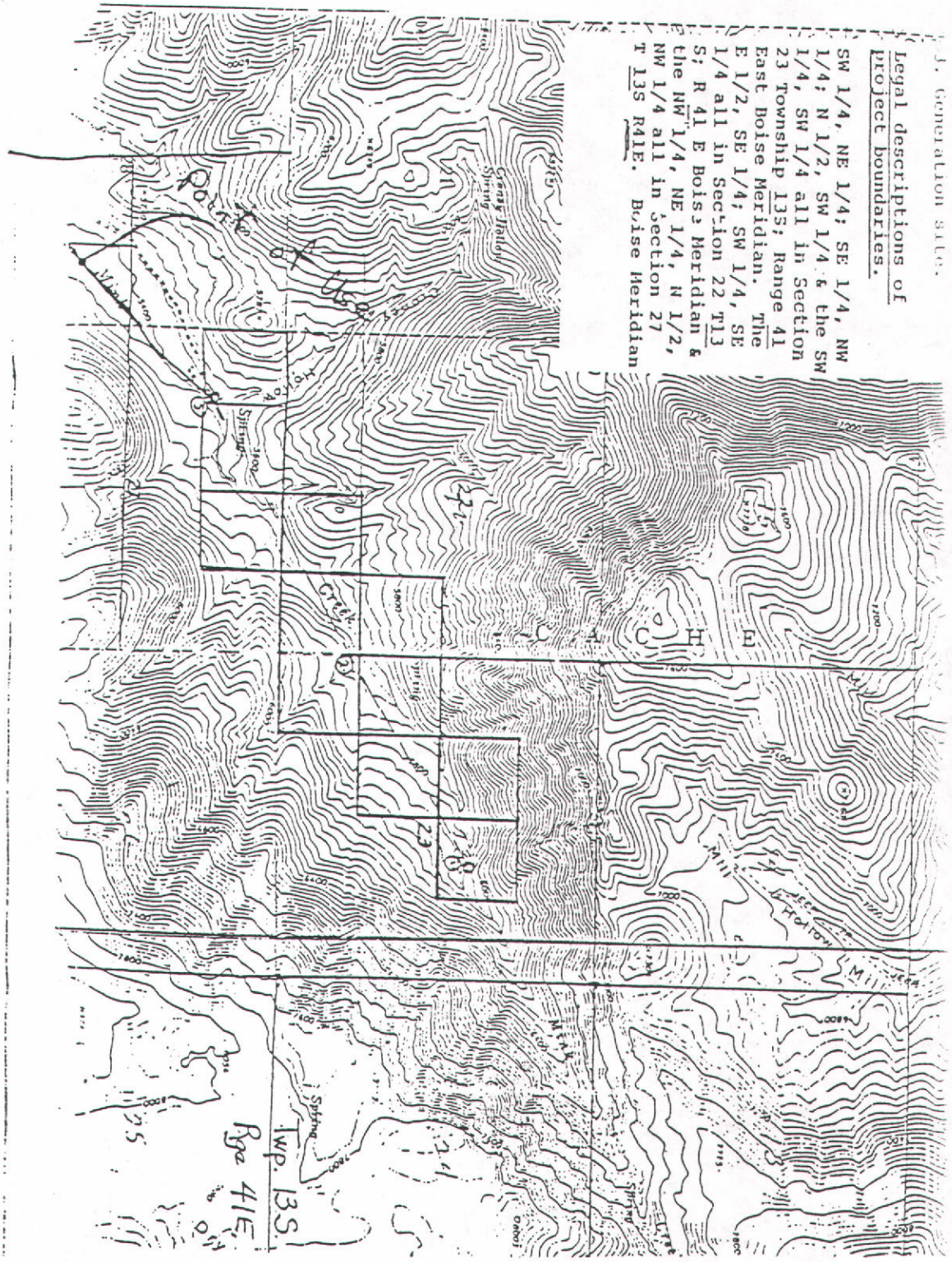


13-0416

FILED
JUL 1957

Total number of Acres 10095.60 (Additional)

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



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

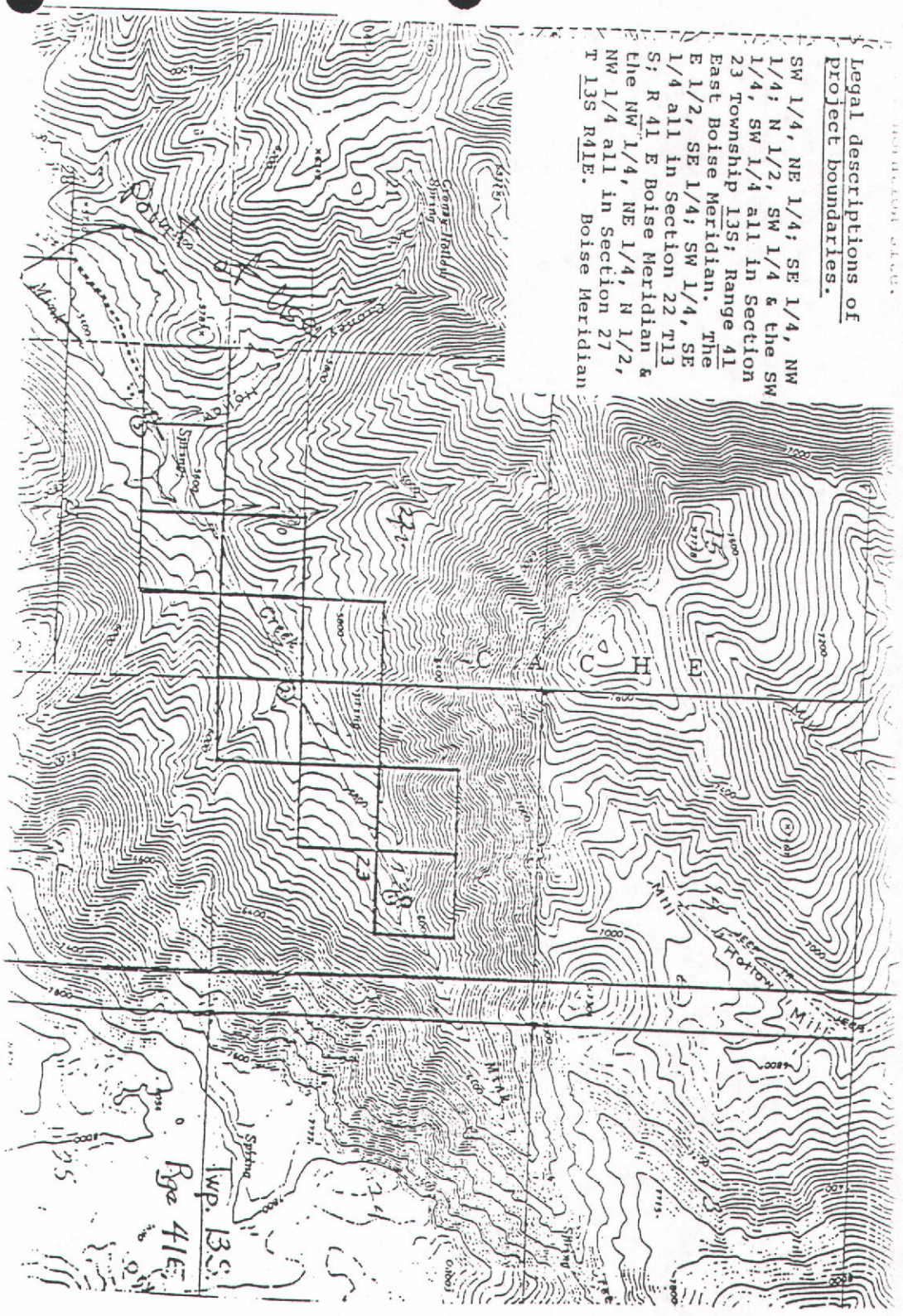
(Applicant)

MICROFILMED
JUL 18 1997

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

Legal descriptions of project boundaries.

SW 1/4, NE 1/4; SE 1/4, NW 1/4; N 1/2, SW 1/4 & the SW 1/4, SW 1/4 all in Section 23 Township 13S; Range 41 East Boise Meridian. The E 1/2, SE 1/4; SW 1/4, SE 1/4 all in Section 22 T13 S; R 41 E Boise Meridian & the NW 1/4, NE 1/4, N 1/2, NW 1/4 all in Section 27 T 13S R41E. Boise Meridian



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

(Applicant)

MICROFILMED
JUN 18 1997

Cert. of Mailing

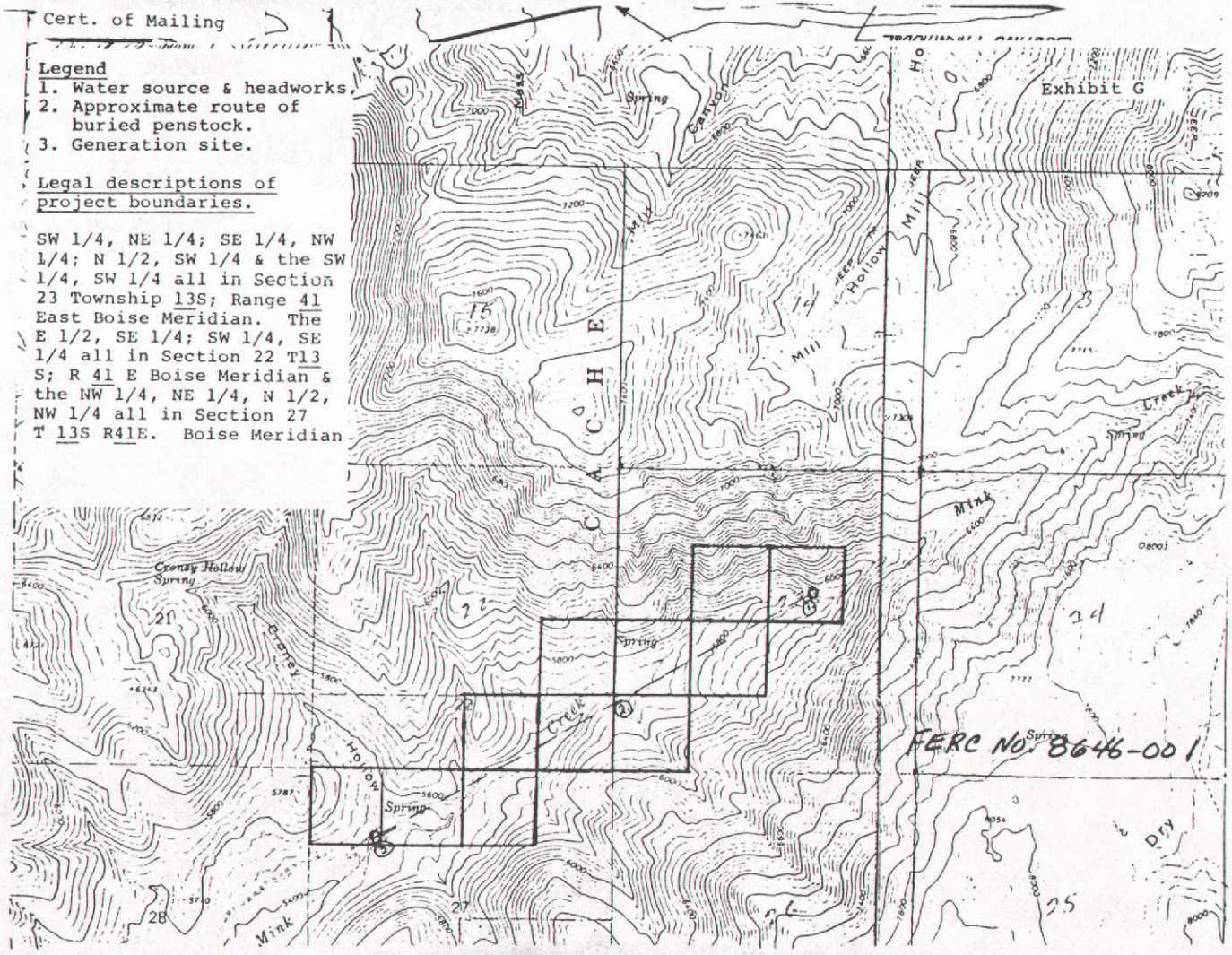
Exhibit G

Legend

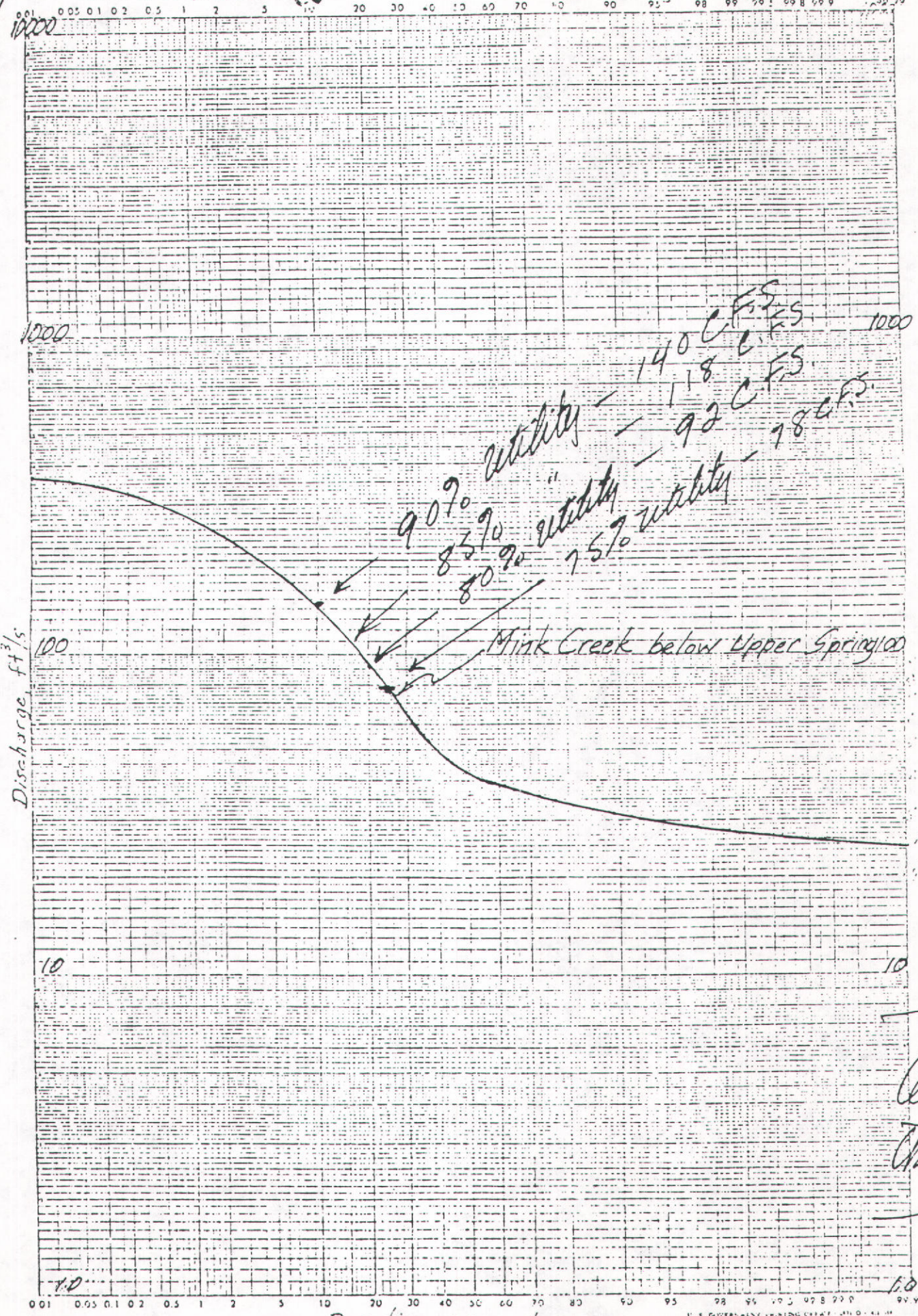
1. Water source & headworks.
2. Approximate route of buried penstock.
3. Generation site.

Legal descriptions of project boundaries.

SW 1/4, NE 1/4; SE 1/4, NW 1/4; N 1/2, SW 1/4 & the SW 1/4, SW 1/4 all in Section 23 Township 13S; Range 41 East Boise Meridian. The E 1/2, SE 1/4; SW 1/4, SE 1/4 all in Section 22 T13 S; R 41 E Boise Meridian & the NW 1/4, NE 1/4, N 1/2, NW 1/4 all in Section 27 T 13S R41E. Boise Meridian



Duration curve of Mink Creek below Upper Springs near Mink Cree



Sheet No. ..... of ..... Sheets. Prepared by Cap Date 6/13/84 Checked by ..... Date .....

Cecil Thomas

Form 9-285 (9-77)

SEMI-LOG PLOT OF DAILY VALUES

Station Name Estimated Median day values for Mink Creek below upper springs near Mink Creek, Idaho

Station Number _____ Year _____

October | November | December | January | February | March | April | May | June | July | August | September

1000

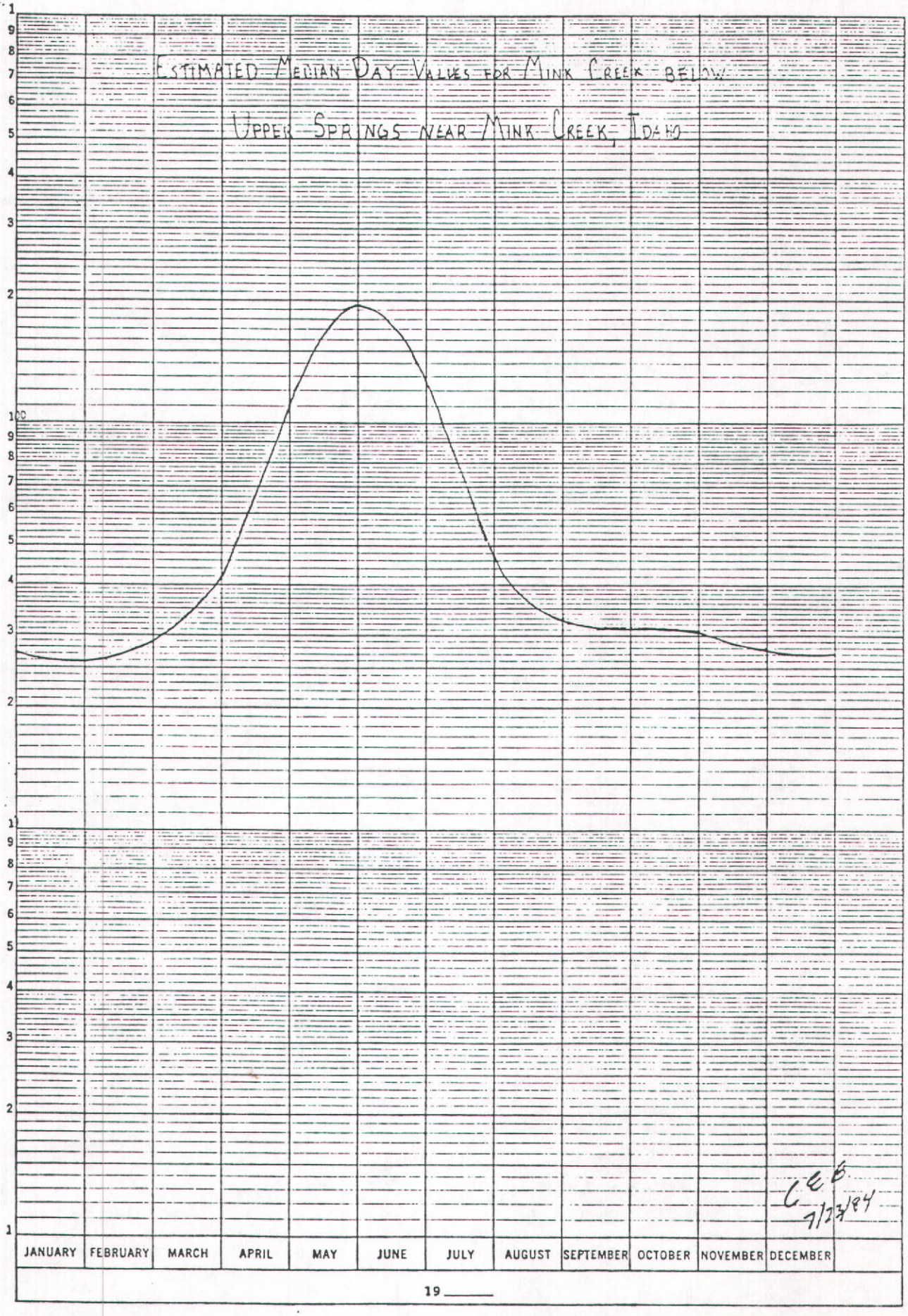
100

10

1

Plotted by DAH Checked by _____ Date June 13, 1984

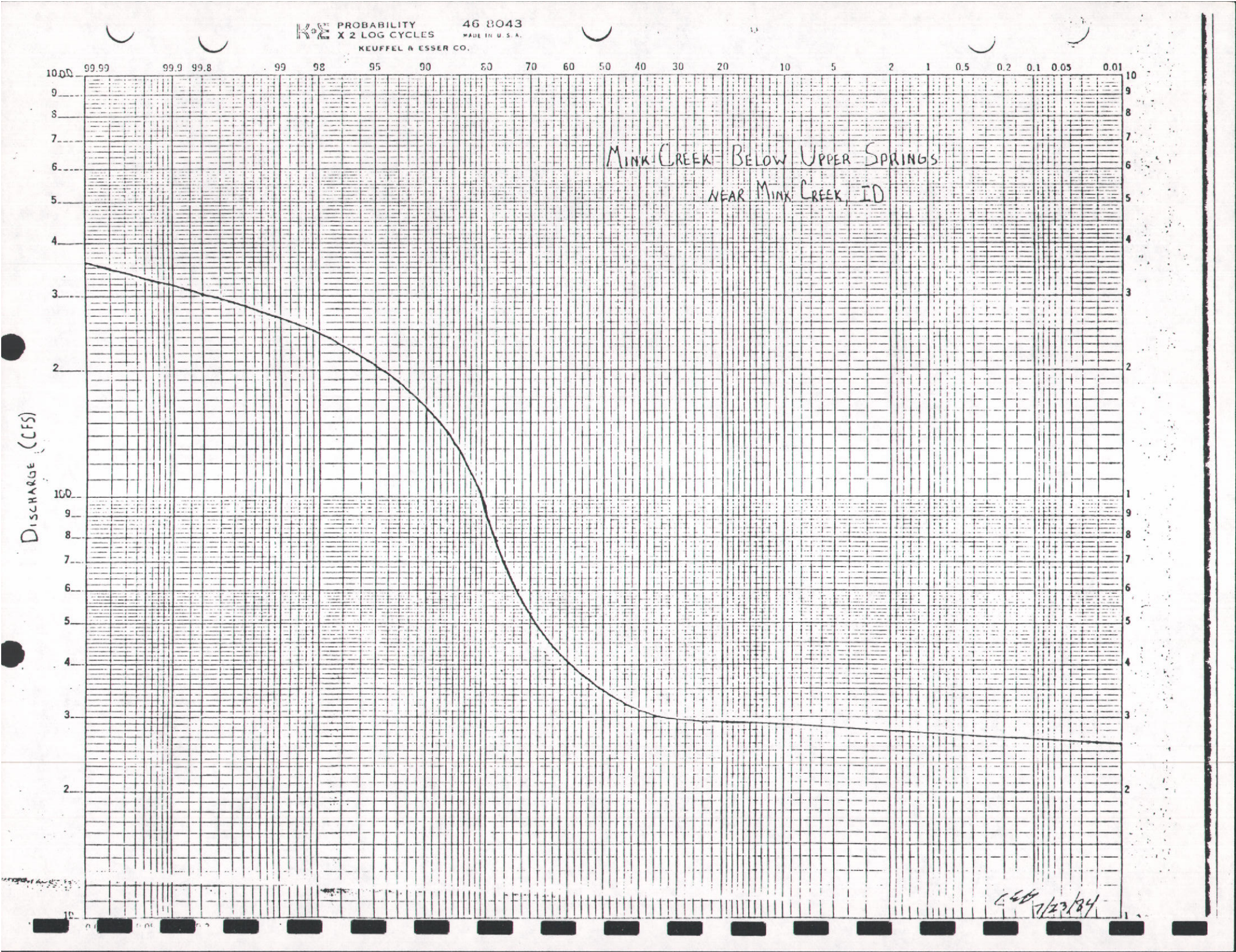
ESTIMATED MEDIAN DAY VALUES FOR MINK CREEK BELOW UPPER SPRINGS NEAR MINK CREEK, IDAHO



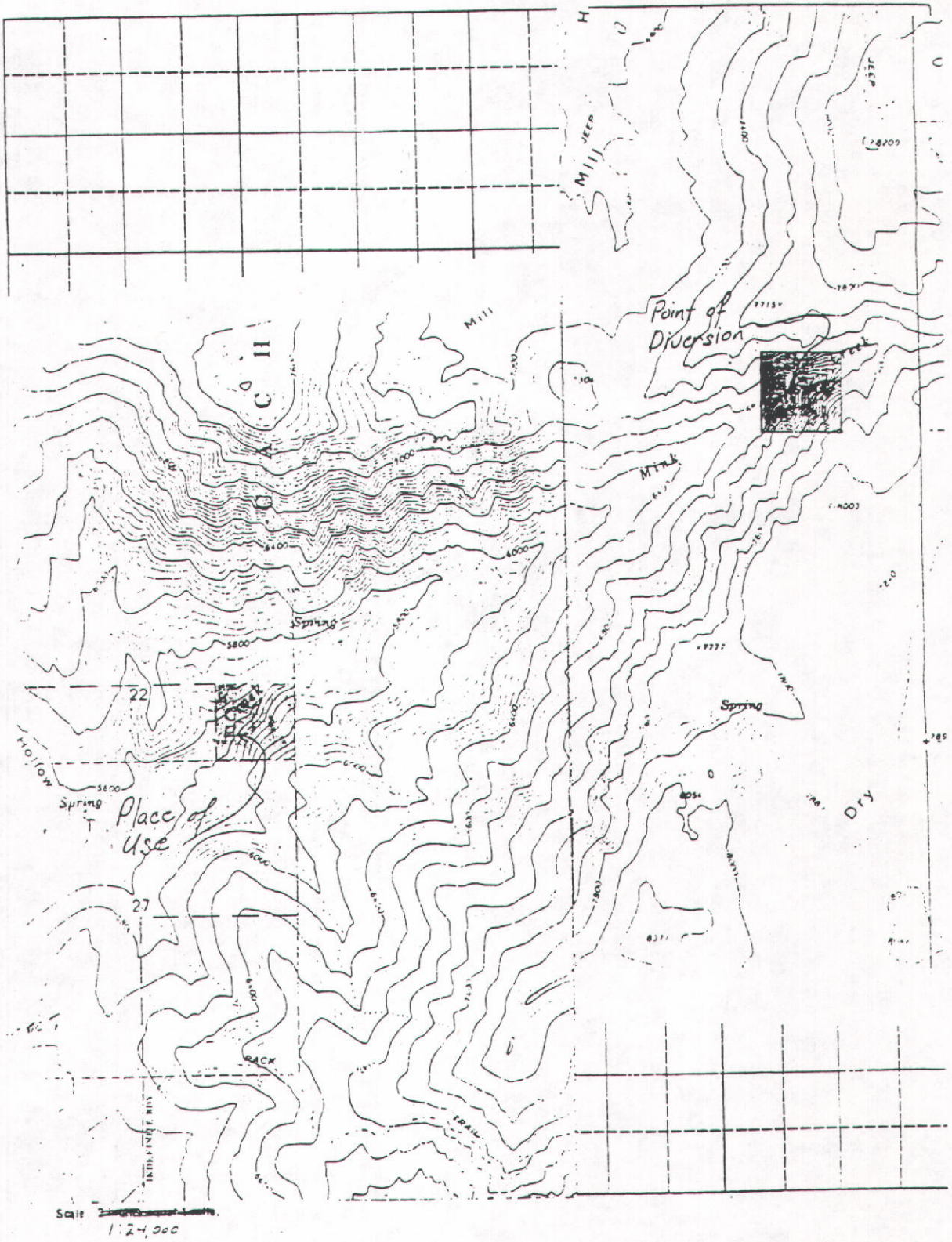
C E B
7/23/84

19____

KEUFFEL & ESSER CO.
MADE IN U.S.A.
X 3 LOG CYCLES

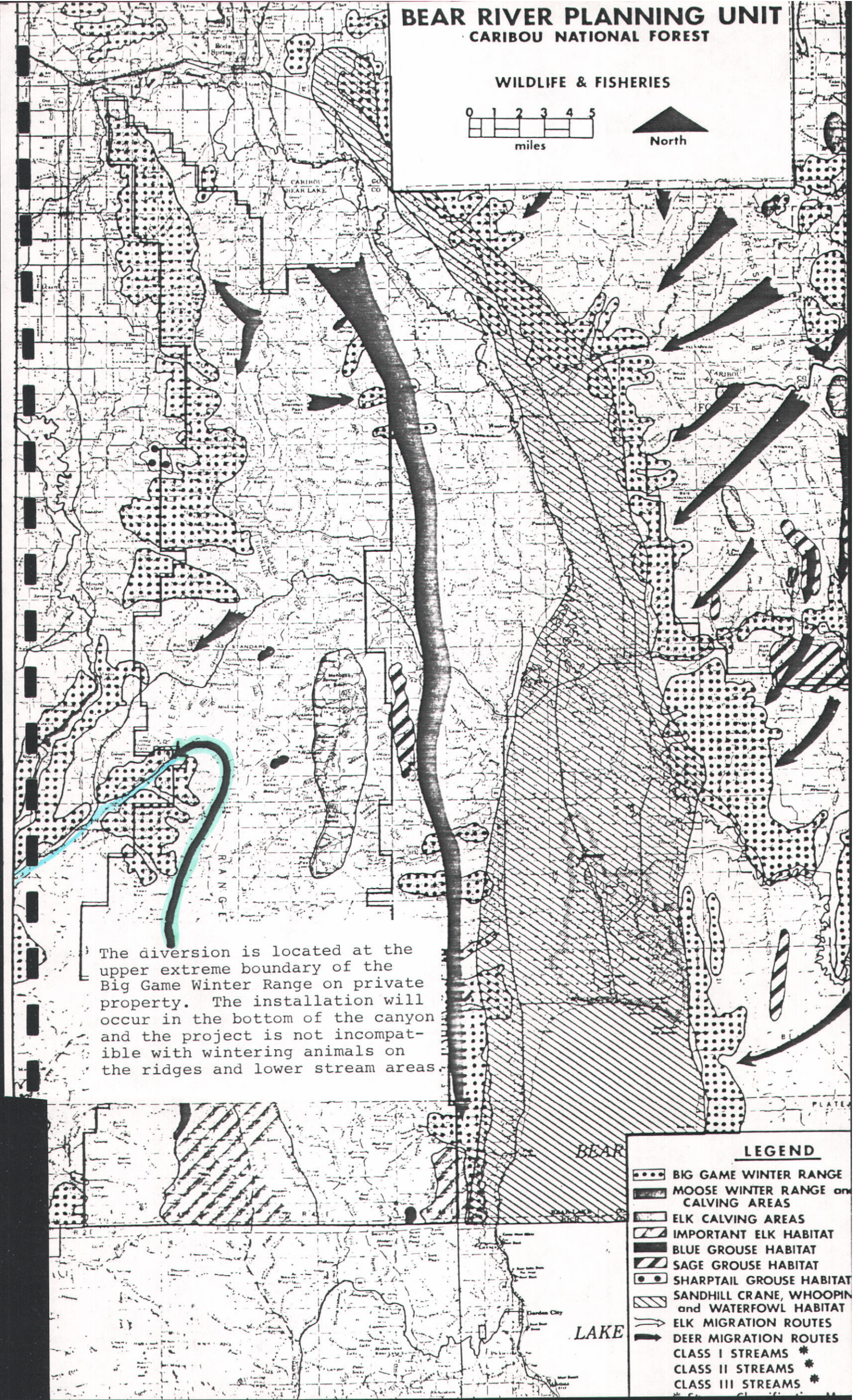

K+E PROBABILITY
X 2 LOG CYCLES
KEUFFEL & ESSER CO.
46 8043
MADE IN U.S.A.
99.99 99.9 99.8 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01
DISCHARGE (CFS)
MINK CREEK BELOW UPPER SPRINGS
NEAR MINK CREEK, ID
CEB 7/23/84

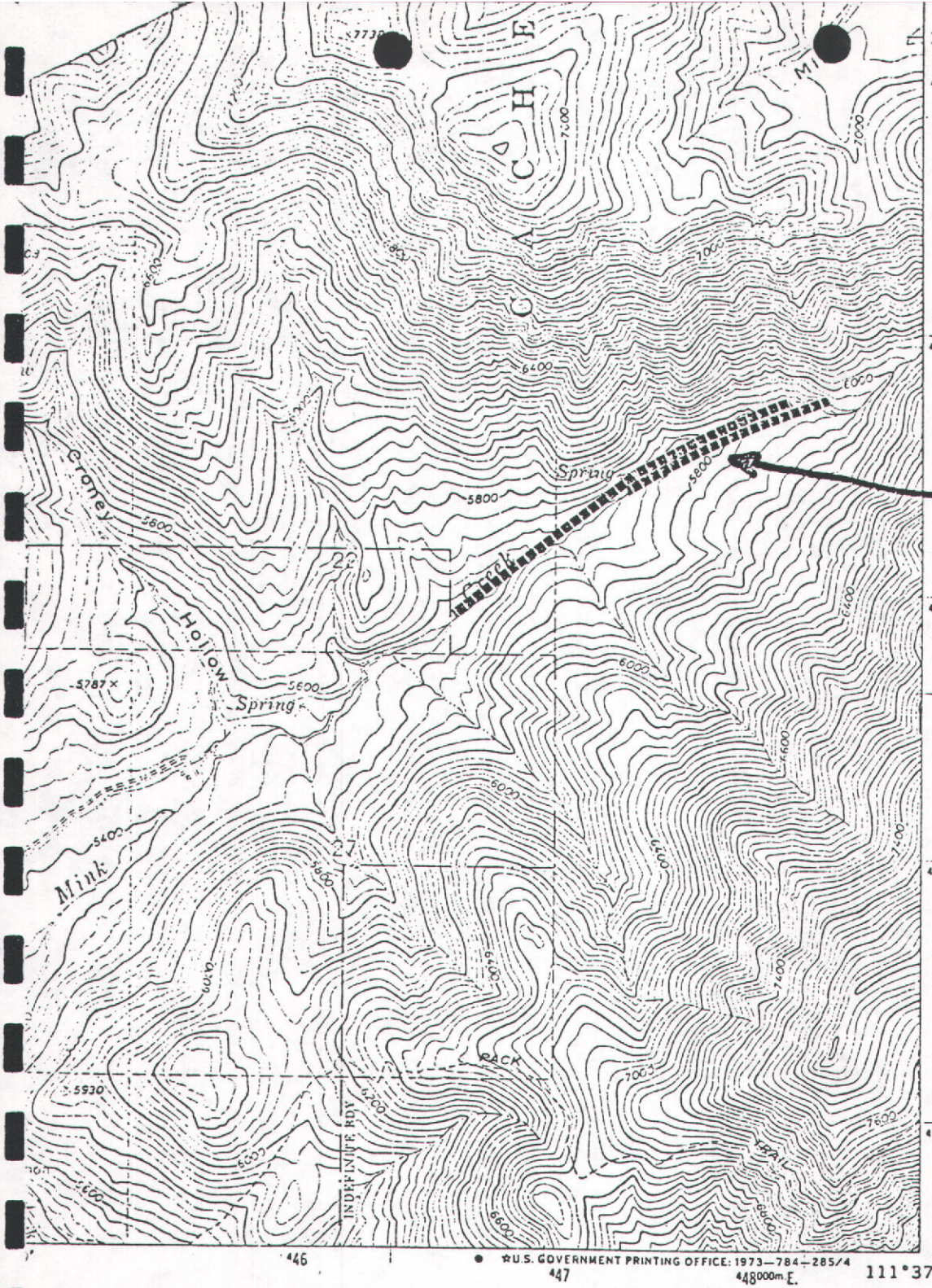
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BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

(Applicant)


BEAR RIVER PLANNING UNIT
CARIBOU NATIONAL FOREST
WILDLIFE & FISHERIES
0 1 2 3 4 5
miles
North
The diversion is located at the upper extreme boundary of the Big Game Winter Range on private property. The installation will occur in the bottom of the canyon and the project is not incompatible with wintering animals on the ridges and lower stream areas.
LEGEND
BIG GAME WINTER RANGE
MOOSE WINTER RANGE and CALVING AREAS
ELK CALVING AREAS
IMPORTANT ELK HABITAT
BLUE GROUSE HABITAT
SAGE GROUSE HABITAT
SHARPTAIL GROUSE HABITAT
SANDHILL CRANE, WHOOPIN and WATERFOWL HABITAT
ELK MIGRATION ROUTES
DEER MIGRATION ROUTES
CLASS I STREAMS *
CLASS II STREAMS *
CLASS III STREAMS *



☆U.S. GOVERNMENT PRINTING OFFICE: 1973—784-285/4

ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light-duty road, hard or improved surface

Unimproved road

Interstate Route U. S. Route State Route



QUADRANGLE LOCATION

ONEIDA NARROWS RESERVOIR, IDAHO

N4215—W11137.5/7.5

1969

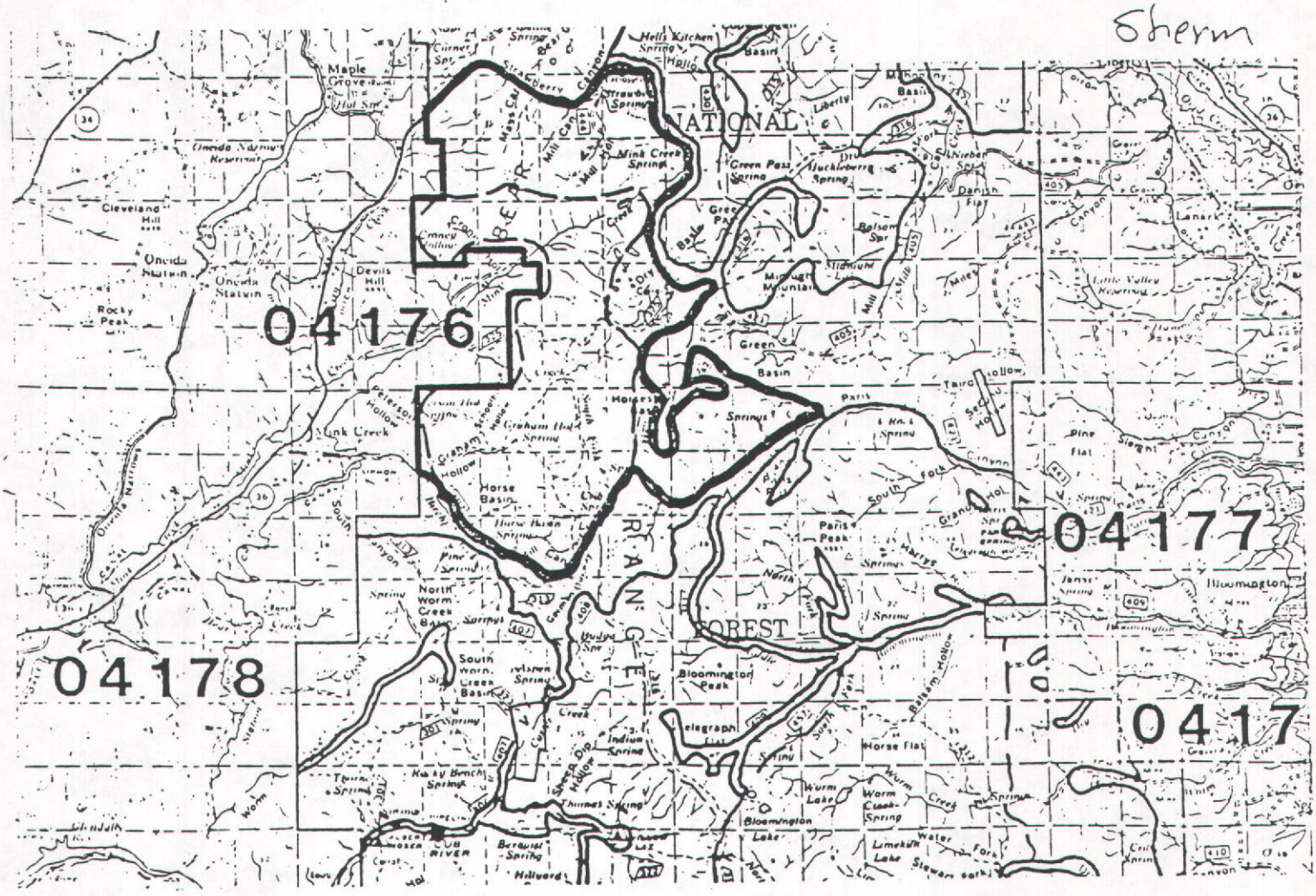
AMS 3668 I SW—SERIES V893

Robert

Enclosed is the Preliminary write up for mink creek that is being evaluated in the Forest plan as one of 34 roadless areas on The Forest.

Sherm

04176 MINK CREEK



LEGEND:

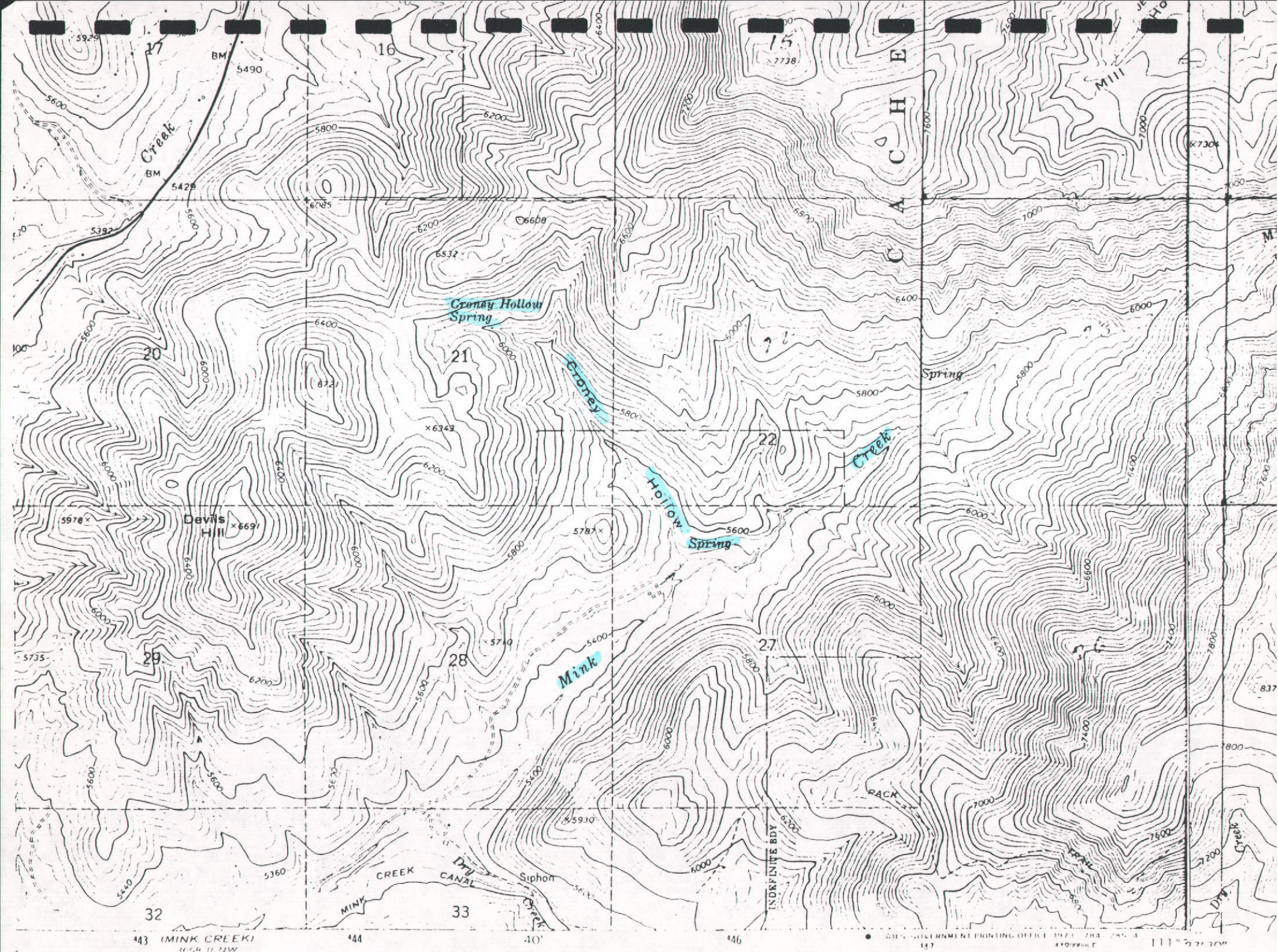
Roadless Area Boundary

04173 — Roadless Area Identification Number

Lands inventoried as roadless during RARE II that have been developed and no longer meet roadless area criteria.

Scheduled for treatment or timber harvest in 1984 or 1985 under existing land management plans.

Maximum Wilderness/Maximum Market - Alternative #11.

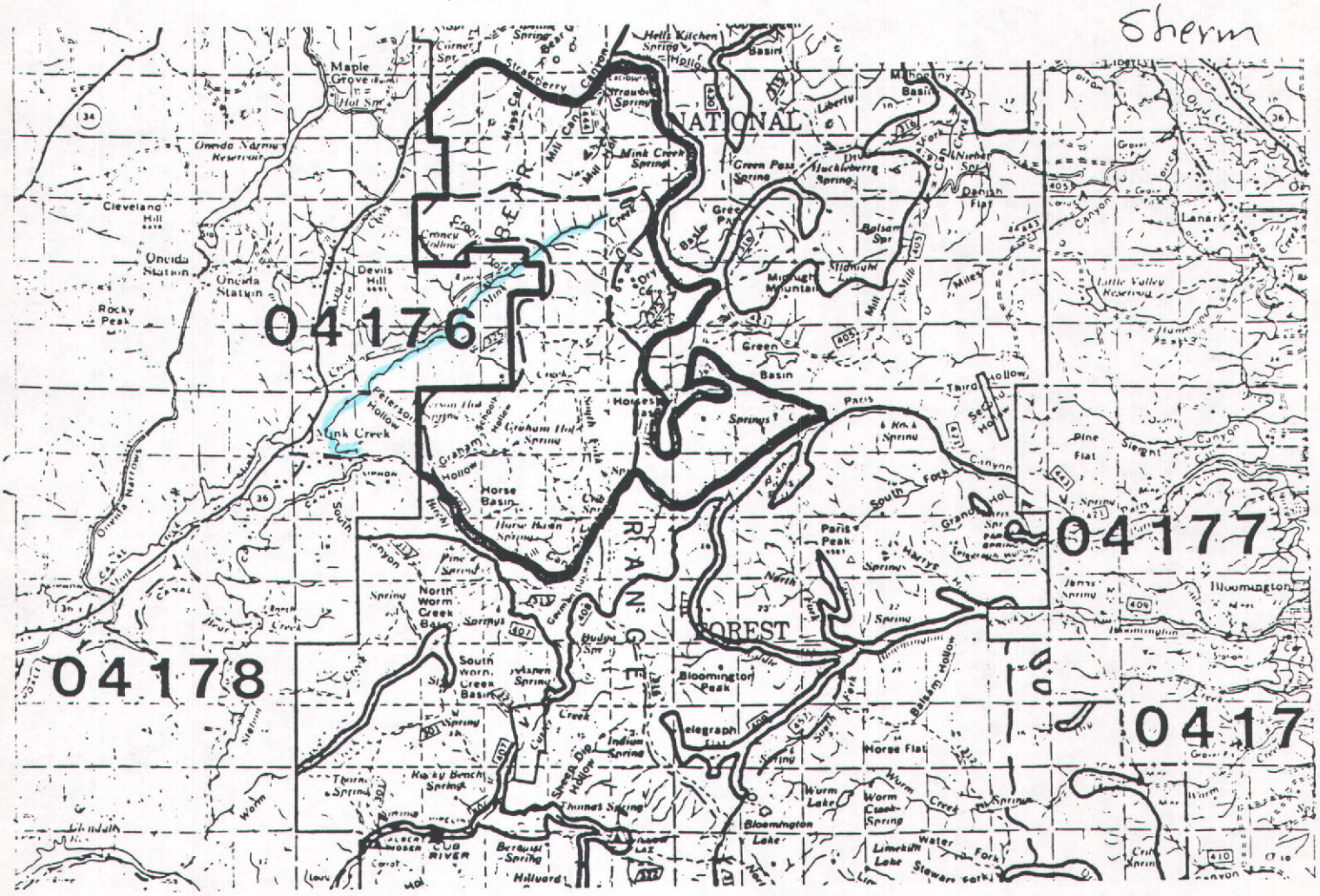

Croney Hollow Spring
Croney Hollow Creek
Spring
Devils Hill
Mink Creek
Dry Canal
Siphon
Mink Creek
INDEFINITE BDY
RACK
Creek
17
16
15
20
21
22
29
28
27
32
33
BM
5490
5428
5392
6085
6608
6532
6343
5978
6691
5787
5710
5735
5930
5360
7738
7304
7000
6400
6200
6000
5800
5600
5400
5200
5000
7600
7800
7400
7200
443 (MINK CREEK)
444
40'
446
447
111°22'30"

Robert

Enclosed is the Preliminary write up for mink creek that is being evaluated in the Forest Plan as one of 34 roadless areas on The Forest.

Sherm

04176 MINK CREEK



LEGEND:

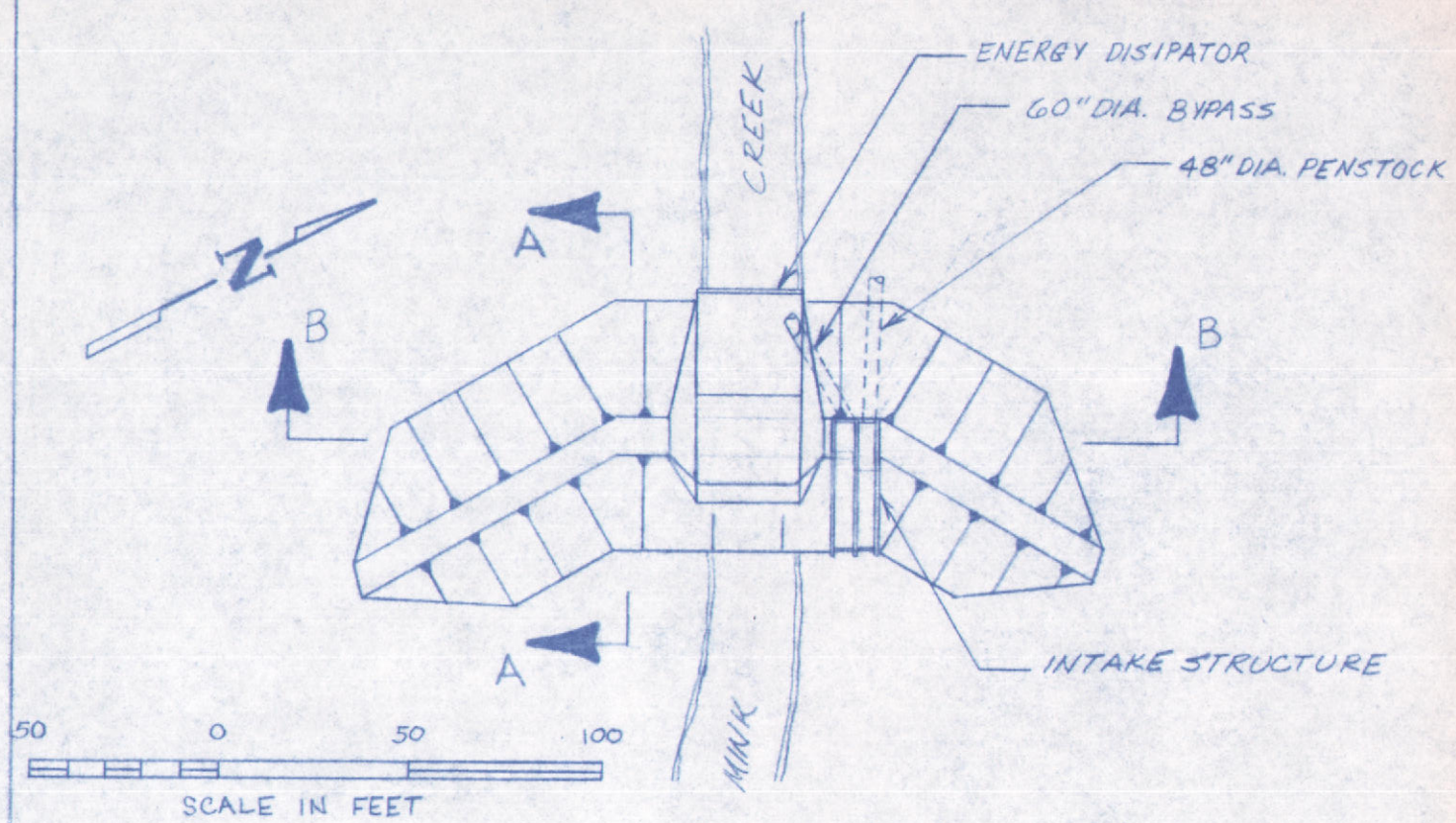
Roadless Area Boundary

04173 — Roadless Area Identification Number

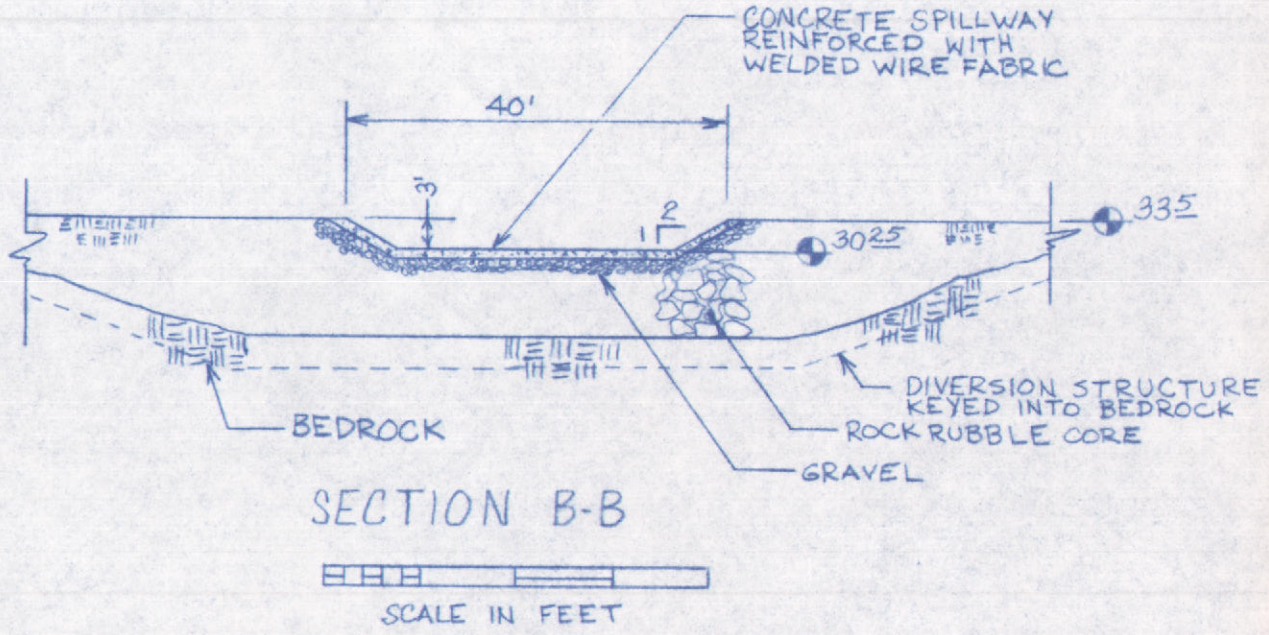
Lands inventoried as roadless during RARE II that have been developed and no longer meet roadless area criteria.

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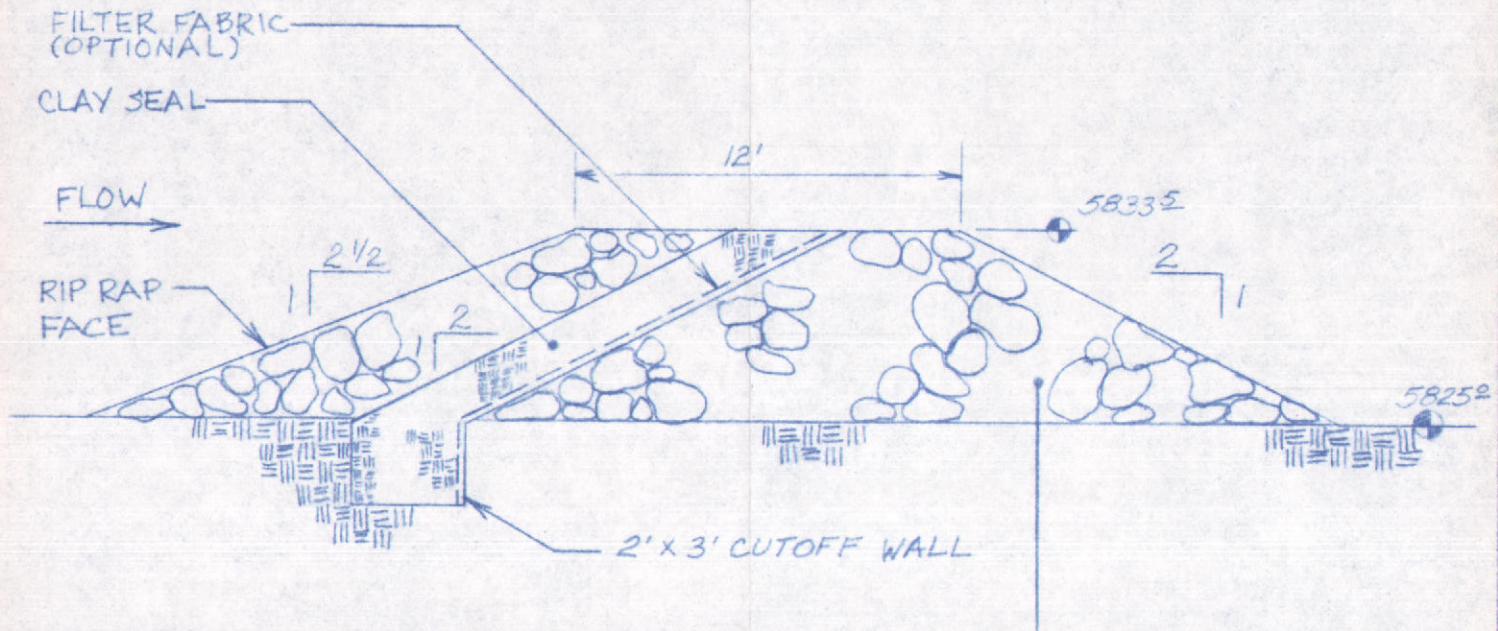


GENERAL ARRANGEMENT DIVERSION STRUCTURE



SECTION B-B

SCALE IN FEET



SECTION A-A

5 0 5 10

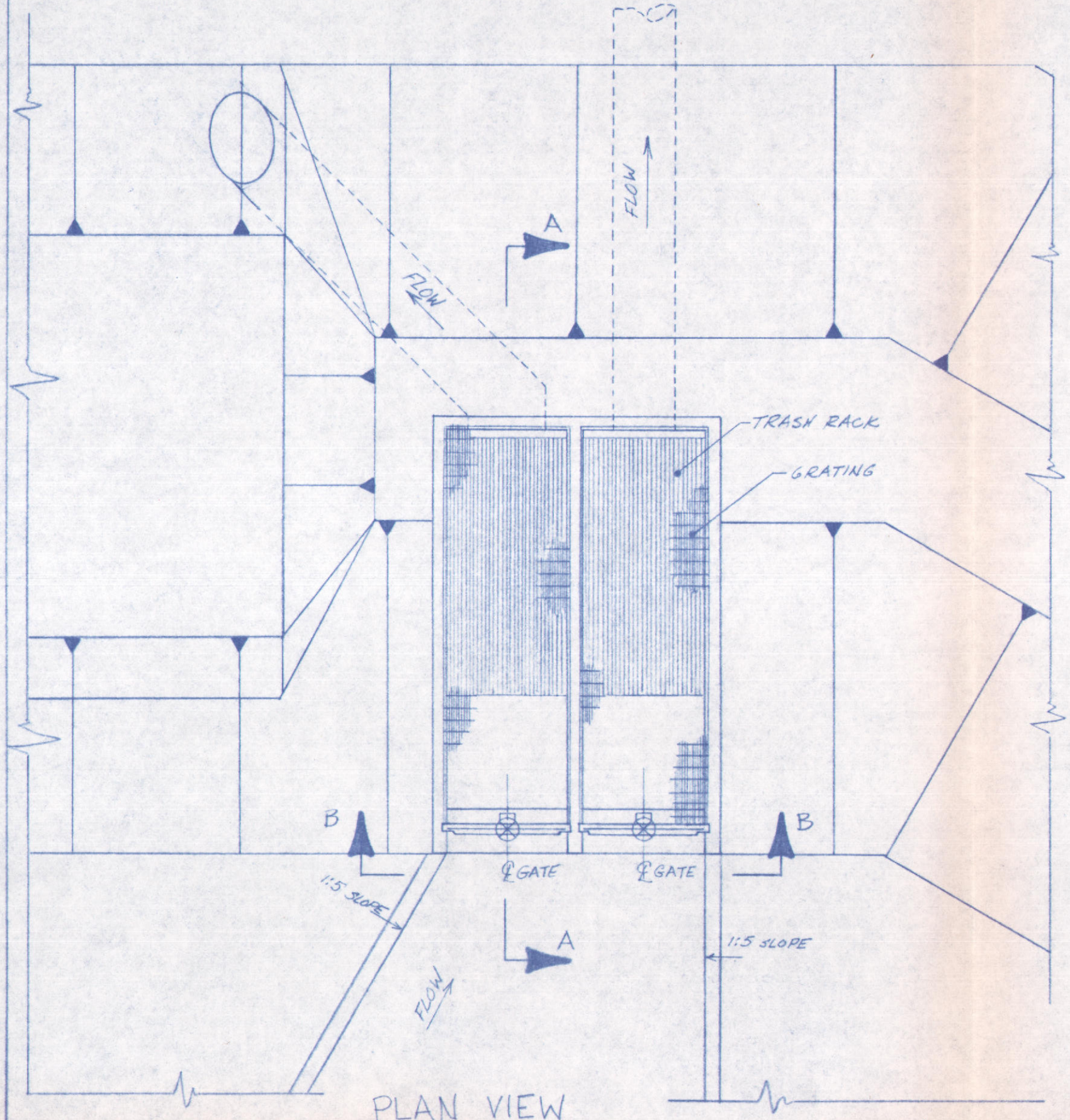
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER
10/1/84
STATE OF IDAHO
TED S. SORENSON

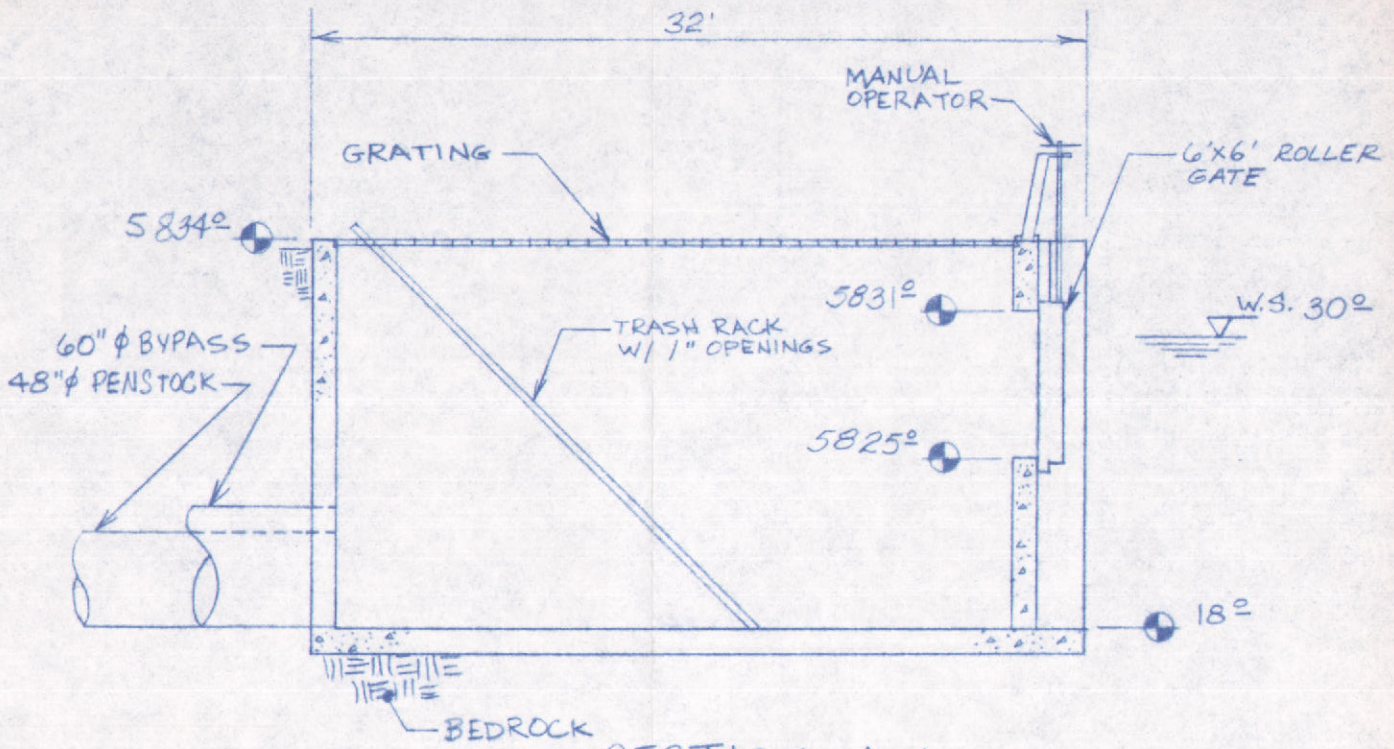
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 1 DAY OF October, 1984.

Robert N. Fackrell
ROBERT N. FACKRELL

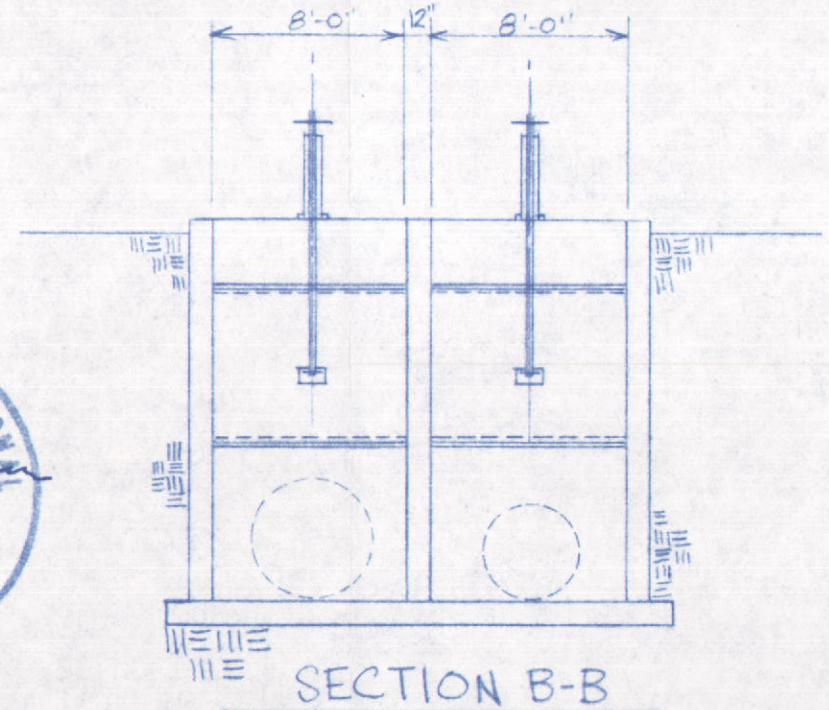
EXHIBIT F
FERC #
MINK CREEK HYDROELECTRIC FACILITY
HEADWORKS



PLAN VIEW



SECTION A-A



SECTION B-B

5 0 5 10

SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER 3468 STATE OF IDAHO TED S. SORENSON

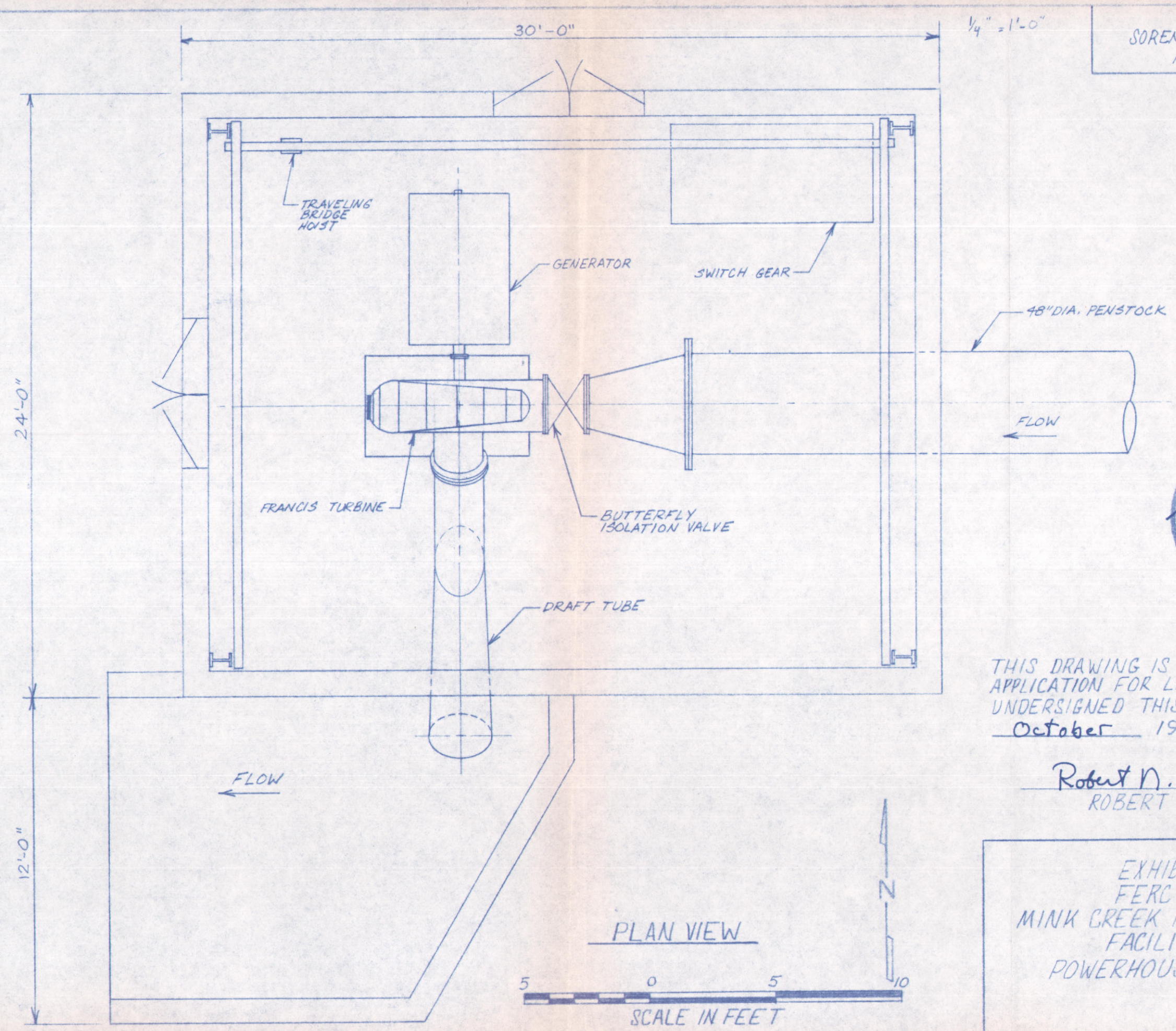
Ted S. Sorenson 10/1/84

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 1 DAY OF October, 1984.

Robert N. Fackrell

ROBERT N. FACKRELL

EXHIBIT F
FERC #
MINK CREEK
HYDROELECTRIC FACILITY
INTAKE STRUCTURE



1/4" = 1'-0"

SORENSON ENGINEERING, P.A.
IDAHO FALLS, IDAHO

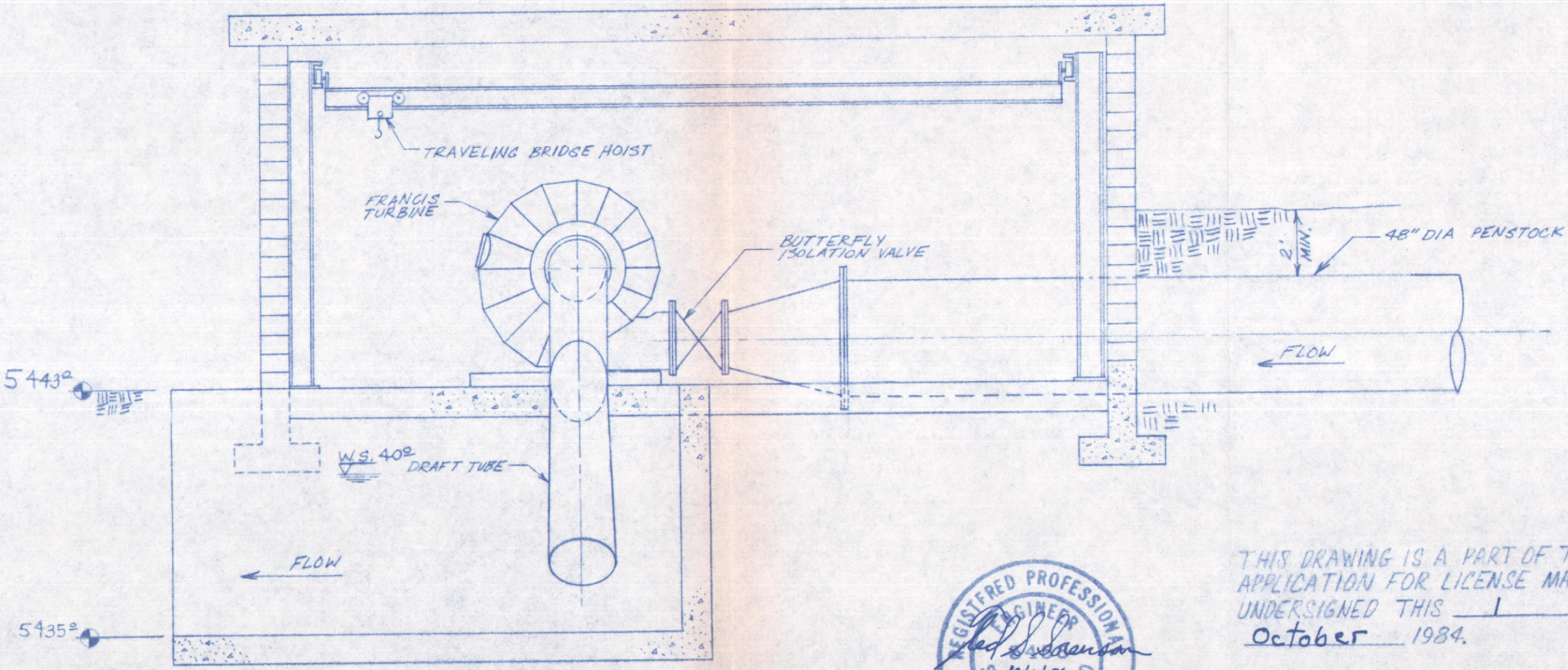
REGISTERED PROFESSIONAL ENGINEER
Ted S. Sorenson
10/1/84
STATE OF IDAHO
TED S. SORENSON

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 1 DAY OF October 1984.

Robert N. Fackrell
ROBERT N. FACKRELL

EXHIBIT F
FERC #
MINK CREEK HYDROELECTRIC FACILITY
POWERHOUSE LAYOUT

SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO



5 0 5 10
SCALE IN FEET

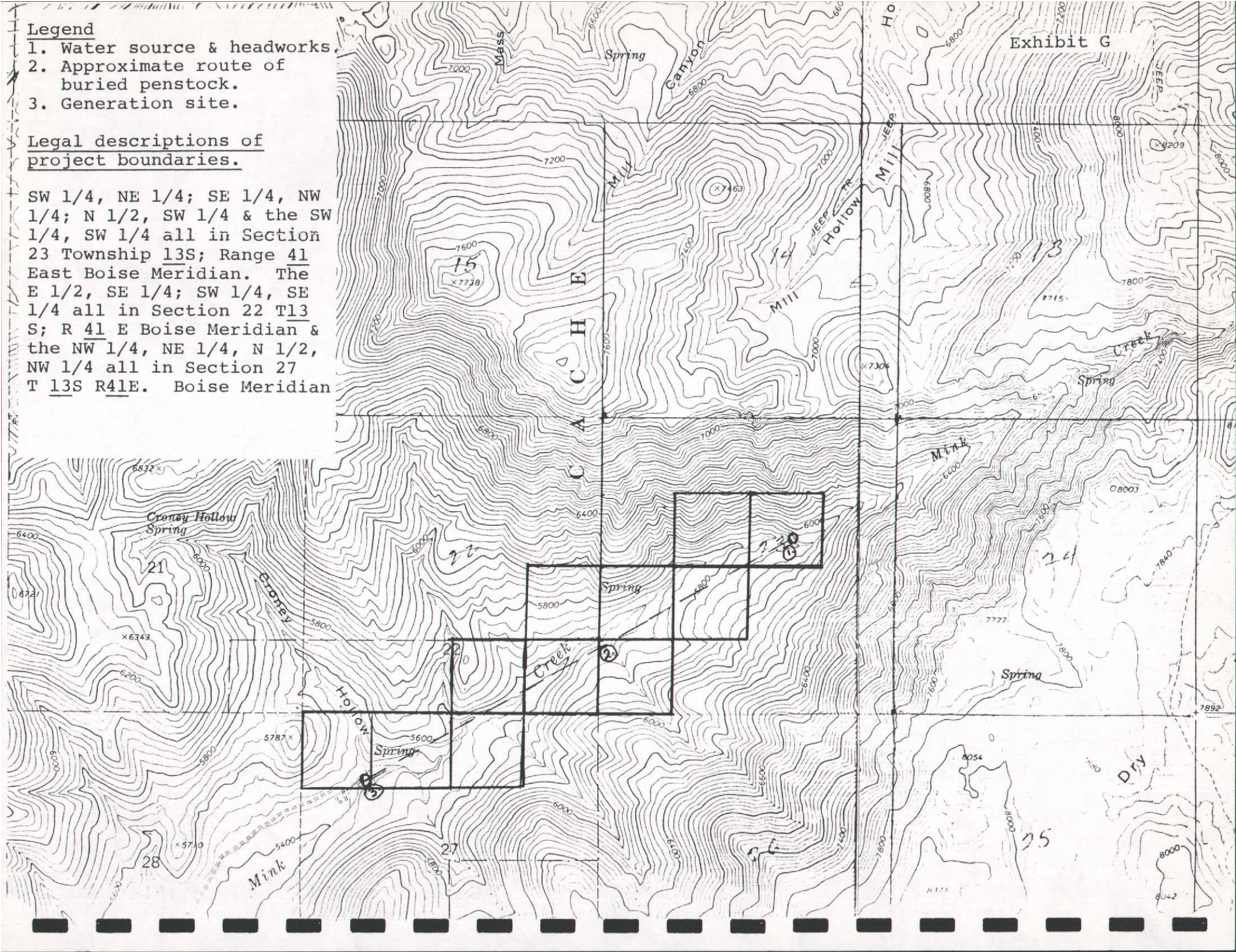
ELEVATION VIEW

REGISTERED PROFESSIONAL ENGINEER
Ted S. Sorenson
10/1/84
STATE OF IDAHO
TED S. SORENSON

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 1 DAY OF October 1984.

Robert N. Fackrell
ROBERT N. FACKRELL

EXHIBIT F
FERC #
MINK CREEK HYDROELECTRIC FACILITY
POWERHOUSE LAYOUT


Exhibit G
Legend
1. Water source & headworks.
2. Approximate route of buried penstock.
3. Generation site.
Legal descriptions of project boundaries.
SW 1/4, NE 1/4; SE 1/4, NW 1/4; N 1/2, SW 1/4 & the SW 1/4, SW 1/4 all in Section 23 Township 13S; Range 41 East Boise Meridian. The E 1/2, SE 1/4; SW 1/4, SE 1/4 all in Section 22 T13 S; R 41 E Boise Meridian & the NW 1/4, NE 1/4, N 1/2, NW 1/4 all in Section 27 T 13S R41E. Boise Meridian
CACHE
Mass Spring Canyon
Mill Hollow
Jeep Tr
Mink Creek
Croney Hollow Spring
Croney Creek
Hollow Spring
Dry
Spring
1
2
3

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 1 DAY OF October, 1984.
Robert N. Faehnle

EXHIBIT G
PROJECT LANDS & BOUNDARIES

SCALE IN FEET

N

U.S. GOVT.
CACHE NATIONAL FOREST
(UNSURVEYED)

T. 13 S. R. 41 E
BOISE, IDA. MERIDIAN

S. 28°00'00"E. 6300'±

S. 76°30'00"E 8900'±

POWERHOUSE

Springs

INTAKE STRUCTURE

CREEK

V. BENSON

V. BENSON

MINK

(UNSURVEYED)

REGISTERED PROFESSIONAL ENGINEER
3468
STATE OF IDAHO
TED S. SORENSON
10/1/84

SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO

T. 13 S.
R. 41 E
R. 42 E

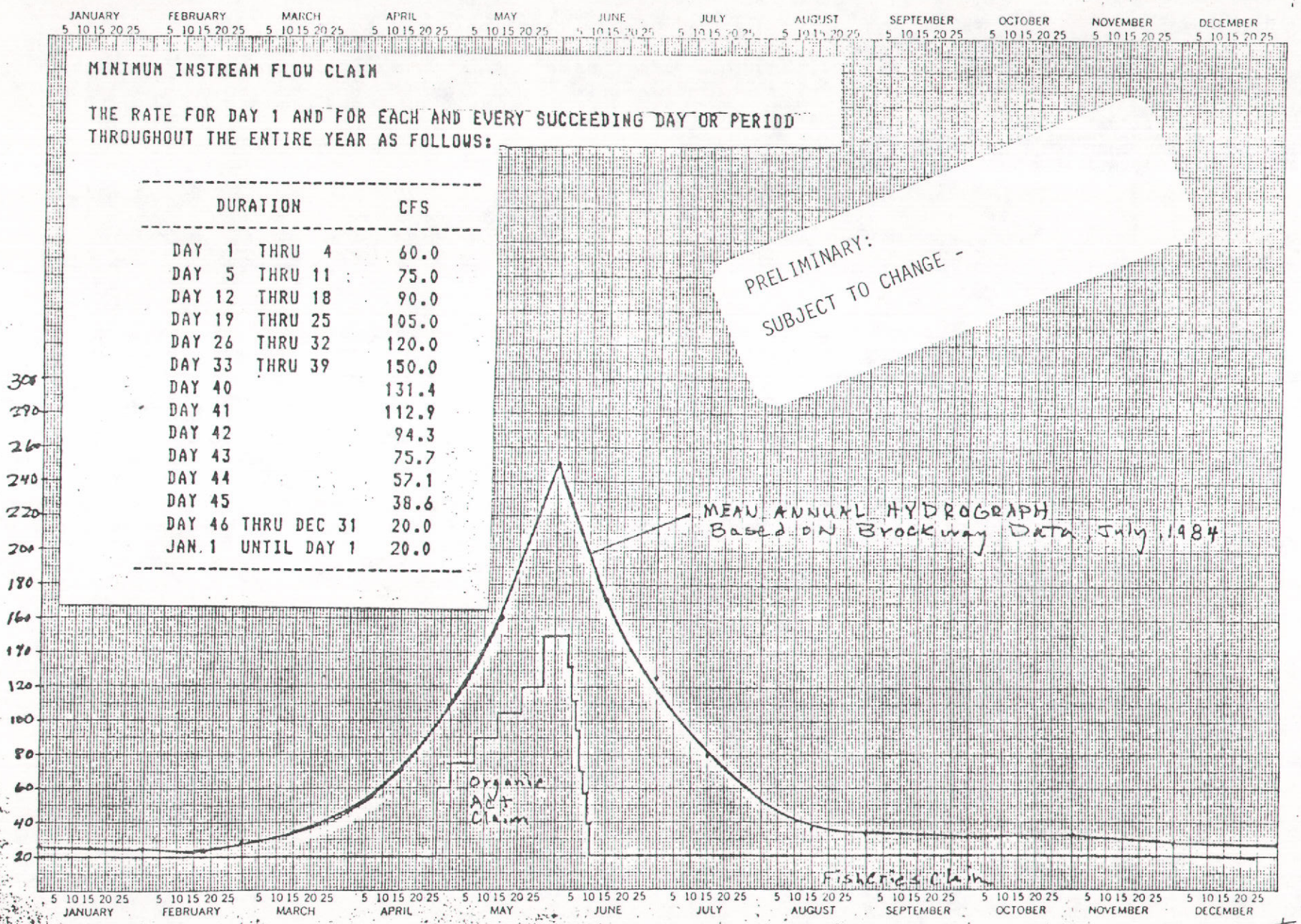
8 7 18 17 16 19 20 21 22 30 29 28 27 31 32 33

K·E 1 YEAR BY DAYS X 250 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

46 2893

Stream: Mink Creek below Upper Springs near Mink Creek, Idaho

Instream Flow Claim Hydrograph – Caribou NF

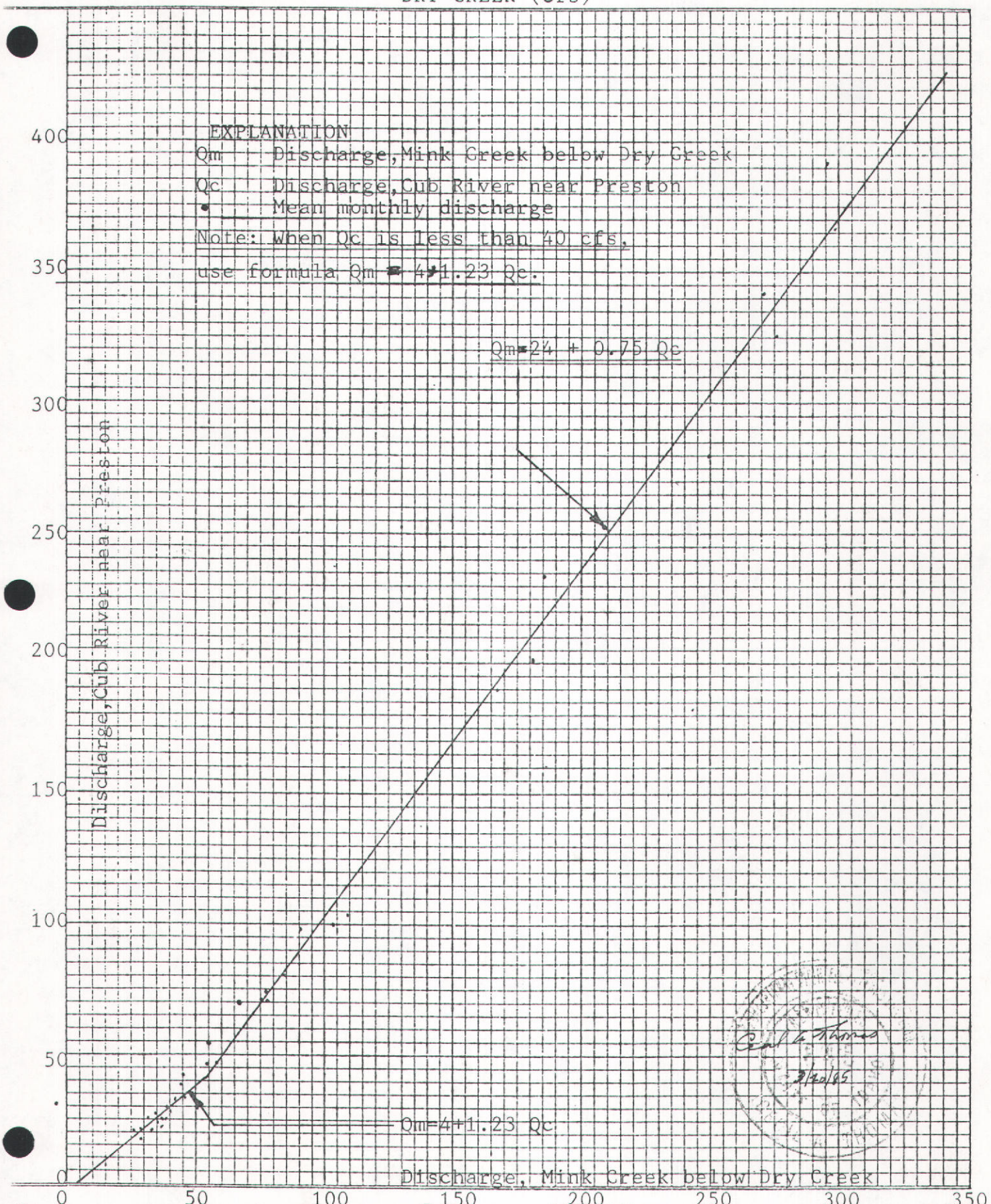


Tim Burton
11-14-84

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

Station Number _____

COMPARISON OF DISCHARGE, CUB RIVER PRESTON AND MINK CREEK BELOW DRY CREEK (cfs)



Carl A Thomas
3/20/85

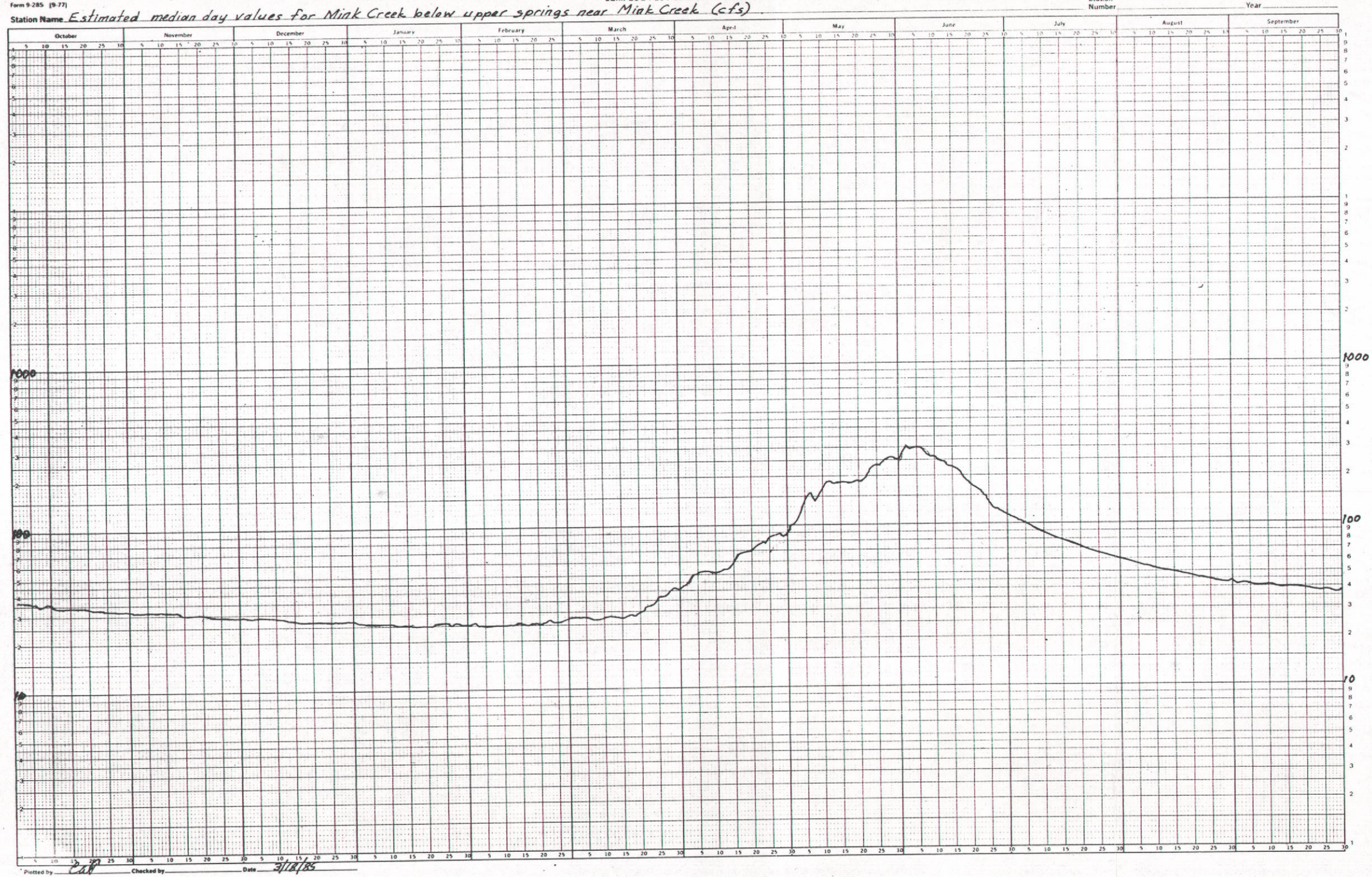
No. _____ of _____ sheets. Prepared by Cas Date 3/20/85 Checked by _____ Date _____

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY (WATER RESOURCES DIVISION)
SEMI-LOG PLOT OF DAILY VALUES

Form 9-285 (9-77)

Station Name Estimated median day values for Mink Creek below upper springs near Mink Creek (cfs)

Station Number _____ Year _____



Plotted by CAW Checked by _____ Date 3/18/85

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE

WATER RIGHT NO. 13-07416

Priority: May 18, 1984

Maximum Diversion Rate: 100.00 CFS
Maximum Diversion Volume: 27663.0 AF

This is to certify, that ROBERT N FACKRELL
PO BOX 1
PRESTON ID 83263 has complied with the terms and conditions of the permit, issued pursuant to Application for Permit dated May 18, 1984; and has submitted Proof of Beneficial Use on July 10, 1991. An examination indicates that the works have a diversion capacity of 100.000 cfs of water from:

MINK CREEK tributary to **BEAR 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	100.00 CFS	27663.0 AF

LOCATION OF POINT(S) OF DIVERSION: SWNE , Sec. 23, Township 13S, Range 41E
FRANKLIN County

PLACE OF USE: POWER

TWN	RGE	SEC	
13S	41E	28	NESE

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. This right does not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.
6. Use of water under this right shall be non-consumptive.
7. Water used under this right when discharged into a natural channel or subsurface system shall meet Idaho Water Quality Standards.

MICROFILMED
JUL 18 1997

State of Idaho
Department of Water Resources

WATER RIGHT LICENSE

WATER RIGHT NO. 13-07416

CONDITIONS OF APPROVAL AND REMARKS

8. The water right confirmed in this license 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 license and shall not give rise to any right or claim against any future rights to the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this license.
9. Use of water under this water right will be regulated by the watermaster of State Water District No. 13N.
10. A measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works.
11. The diversion and use of water for hydropower purposes under this license is subject to review by the Director after the date of expiration of license 8646-001 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.
12. This right is subject to an agreement dated 1/13/86 between the right holder and protestant(s) to the extent such agreement covers matters within the jurisdiction of the Department of Water Resources. Included in this agreement is the maintenance of a minimum bypass flow. The department retains jurisdiction over this right to require the installation of a measuring device below the Mink Creek Irrigation Company's diversion if needed for measurement of bypass flows by the watermaster.

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 30TH day of JUNE, 1997.

Acting for KARL J. DREHER, Director

MICROFILMED
JUL 14 1997

Form 217
07-90

RECEIVED
JUL 11 1991
Department of Water Resources

For Office Use Only
Amt. of Fee $ 600.00
Date 10.7.91
Receipt No. 0021128
Received by MJH

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

PROOF OF BENEFICIAL USE

The Idaho Department of Water Resources will consider this form as a statement that the permit holder(s) has/have 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.

1. Permit No. 13-07416 Telephone No. 208-852-1320

2. Name(s) of Permit Holder(s): Robert N. Fackrell

3. Post Office Address: P.O. Box #1, Preston, Idaho 83263

4. Source of Water: Mink Creek

   a. If ground water, well driller's name: _____ Date drilled: _____

   b. Pump horsepower: _____ Pressure (psi): _____ Dynamic pumping level (ft.): _____

5. Extent of Use:

   Domestic _____ (No. of households) Irrigation _____ (No. of acres)

   Stockwater _____ (No. and type of stock) Other Hydroelectric

6. Total rate and/or volume for which proof is submitted 100 cfs _____ acre/feet

7. Refer to the approval conditions on your permit and respond accordingly:

   Measuring device: Required? ___Yes ___No Installed? X Yes ___No

   OR

   Flow Measurement Port: Required? ___Yes X No Installed? ___Yes X No

8. Fee Enclosed: $ 600.00 (See License Examination Fee Schedule)

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

   Robert N. Fackrell 208-852-1320
   Name Telephone No.

   P.O. Box #1, Preston, Idaho 83263
   Address

10. 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.

RECEIVED
AUG 19 1991

June 7, 1991
Date

Signature (and title if on behalf of a company or organization)

Form 202
3/78

Ident. No. 13-7416

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPROVED

AMENDED

APPLICATION FOR PERMIT

AMENDED

To appropriate the public waters of the State of Idaho

1. Name of applicant Robert N. Fackrell Phone 208-852-1522

   Post office address P.O. Box 1, Preston, ID 83263

2. Source of water supply Mink Creek which is a tributary of Bear River

3. Location of point of diversion is SW ¼ of NE ¼ of Section 23 Township 13S

   Range 41E B.M. Franklin County, additional points of diversion if any: ____

   (unsurveyed)

4. Water will be used for the following purposes:

   Amount 100.0 ~~cfs~~ (cfs ~~or acre-feet per annum~~) Power purposes from 1/1 to 12/31 (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. 100.0 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:

   a. Description of ditches, flumes, pumps, headgates, etc. concrete and steel diversion structure with a 60" diameter bypass and 48" diameter penstock

   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: NE ¼ of SE ¼ of Section 28 Township 13S

      Range 41E B.M.

      (2) Amount of power to be generated: 3.1 mw horsepower under 467 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. None

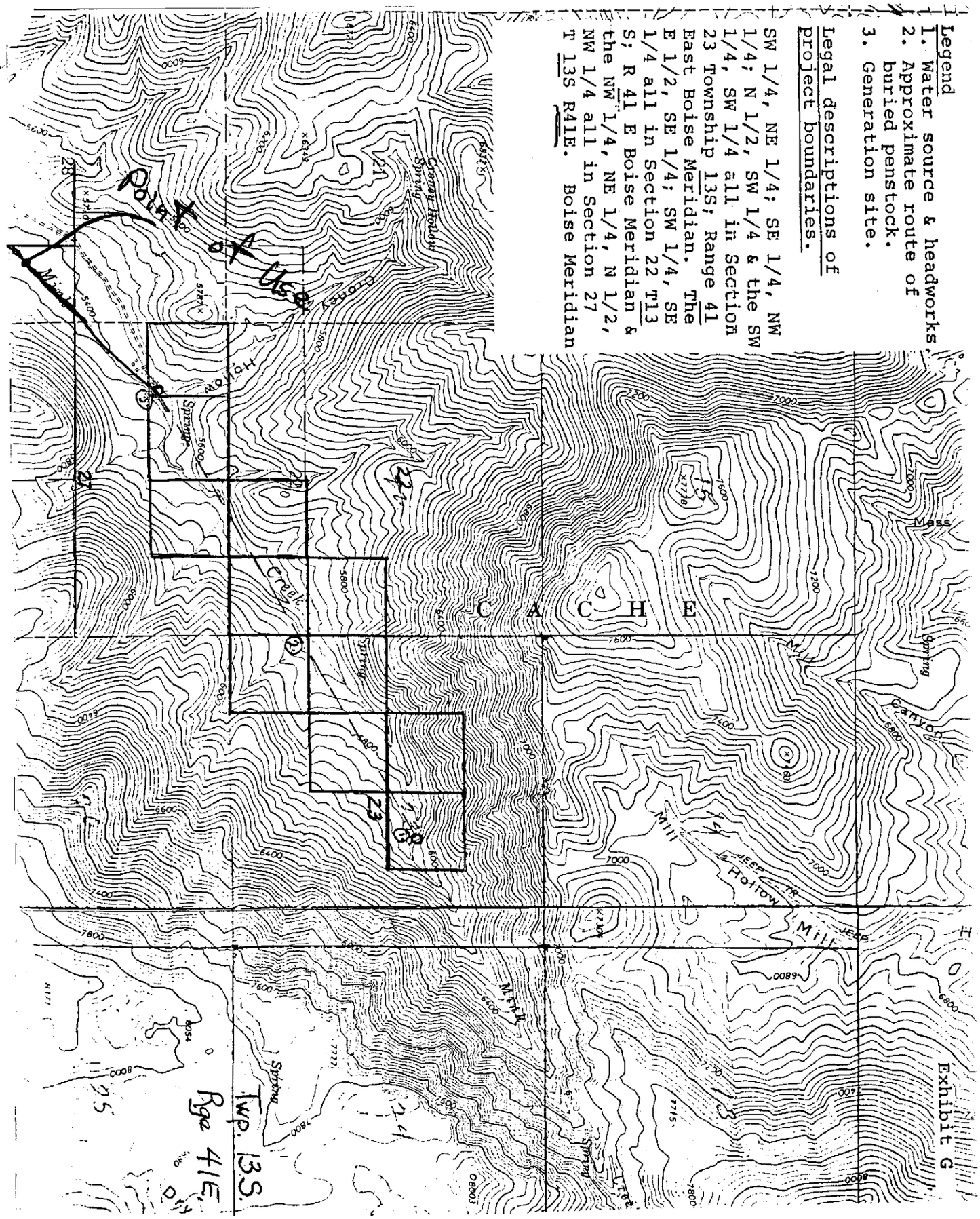
9. a. Who owns the property at the point of diversion U.S. Forest Service

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

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing Applicant has secured agreement with Valdo Benson for construction of project on Mr. Benson's property. A special use permit is being obtained from USFS.

10. Remarks The application is being amended in order to accurately describe the hydro-electric project as presented in the application for license before the Federal Energy Regulatory Commission.

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



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.

Robert M. Faehnle

(Applicant)

Proposed Priority 5/18/84

Received by KW Date 5-15-86 Time 1:30p

Preliminary check by KW Fee $ 20.00

Receipted by MD Date 5/20/86 # 39639

Publication prepared by MD Date 5/21/86

Published in Preston Citizen Lewiston Trib
Times News Idaho Statesman

NOC Lewiston Trib + Reg. Ad in Preston Citizen 5-3 + 5-10-86

Publication dates 5/29 + 6/5/86

Publication approved KW Date 8-01-86

Protests filed by: _____

Copies of protests forwarded by _____

Hearing held by _____ Date _____

Recommended for (approval) denial by KW

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. 13-7416, and said application is hereby APPROVED.

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

   a. SUBJECT TO ALL PRIOR WATER RIGHTS.

   b. Proof of construction of works and application of water to beneficial use shall be submitted on or before August 1, 19 91.

   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

Witness my hand this 20th day of August, 1986.

L. Glen Saxton
Chief, Operations Bureau

MODIFIED

ATTACHMENT TO CONDITIONS OF APPROVAL

For Permit No. 13-7416

d. Water used under this permit if discharged into a natural channel or subsurface system shall meet Idaho Water Quality Standards.

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

g. A measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works.

h. The diversion and use of water under this permit and any license subsequently issued is subject to review by the Director on the date(s) of expiration of any license 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.

i. 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.

j. This permit is subject to the agreement dated 1/13/1986 between permit holder and protestant(s) to the extent such agreement covers matters within the jurisdiction of the Department of Water Resources.

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

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

m. A separate stream alteration permit from the IDWR is required for any activity in the stream channel other than construction and/or maintenance of the diversion structure. If your proposed construction or operation involves construction of an outfall or any other work in the stream channel other than a water diversion, you must contact the Department and obtain a Stream Channel Alteration permit prior to the start of construction.

n. Use of water under this permit is subject to control by the watermaster of State Water District No. 13N, Mink Creek.

Witness my hand this 20th day of August, 1986.

L. Glen Saxton

Chief, Operations Bureau

MICROFILMED

Form 205/206
7/81

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, Robert N. Fackrell (name) of Preston (city),

county of Franklin, 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.

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

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

(check one)

[X] 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.

Applicant

State of Idaho)
County of Bonneville) ss.

On this 18th day of May, 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

seal

Idaho Falls, ID

My commission expires:

6-15-85

Void - see amended application.

Form 202
3/78

Ident. No. 13-7416

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

1. Name of applicant Robert N. Fackrell Phone 208-852-1522

Post office address P.O. Box 1, Preston, ID 83263

2. Source of water supply Mink Creek which is a tributary of Bear River

3. Location of point of diversion is SW ¼ of SE ¼ of Section 13 Township 13S

Range 41E B.M. Franklin County, additional points of diversion if any: ____

(unsurveyed)

4. Water will be used for the following purposes:

Amount 125.0cfs for Power Generation purposes from 1/1 to 12/31 (both dates inclusive)
(cfs or acre-feet per annum)

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

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

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

5. Total quantity to be appropriated:

a. 125.0 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. concrete diversion into 42" penstock

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: SE ¼ of SE ¼ of Section 22 Township 13S Range 41E B.M.

      (2) Amount of power to be generated: 9900kw ~~horsepower~~ under 1200 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: _____

UNCONTESTED

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. None

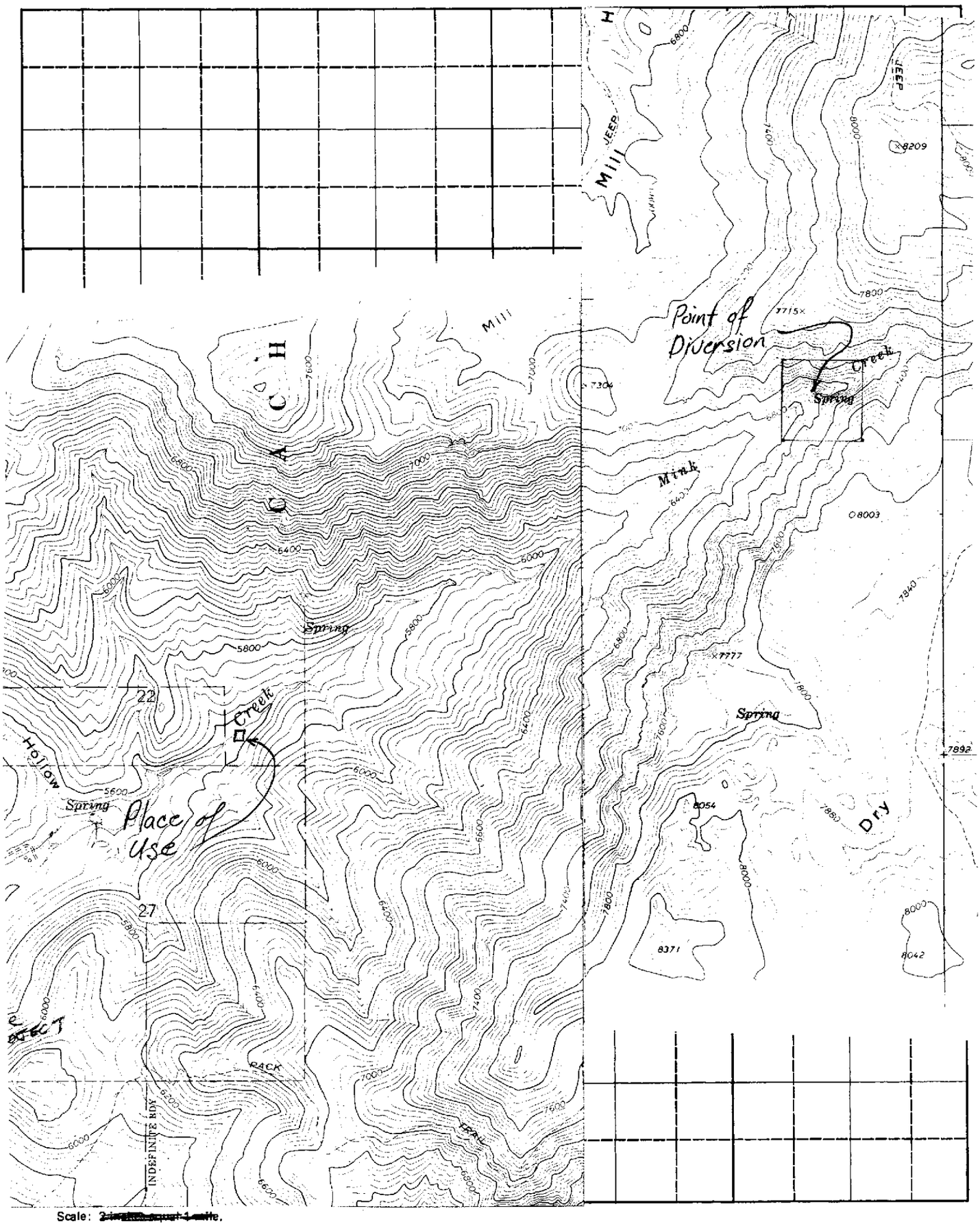
9. a. Who owns the property at the point of diversion US Forest Service (Cache National Forest)

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

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing Applicant will have to acquire a special use permit from the Forest Service.

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~~. 1:24,000

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.

John M. Faehull
(Applicant)

RECEIVED

Received by EMC Date 5/18/84 Time 1:45 p.m.

Preliminary check by GFR Fee $ 1350.00

Receipted by CW Date 5-18-84 #33548

Publication prepared by CW Date 5-23-84

Published in Preston Citizen

Publication dates 5/31 & 6/07/84

Publication approved OK Date 7-5-84

Protests filed by: ~~Forest Service~~ Withdrawn, F & G

Copies of protests forwarded by CW

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:

#875

No 2510

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO, }
County of Franklin } ss.

J. Walter Ross
being duly sworn,

deposes and says:

That he is the Co-Publisher of THE PRESTON CITIZEN, a weekly newspaper published at Preston, in the County of Franklin and State of Idaho; that said paper has been and is in general circulation in the county aforesaid, and in the vicinity of Preston; that the advertisement, a copy of which is attached hereto, was published in said newspaper once a week for 2 consecutive weeks in the regular and entire issue of said paper during the period of time of publication, and was published in the newspaper proper and not a supplement; that said paper has been established and regularly published for more than seventy-eight consecutive weeks prior to the date of first publication of said advertisement.

Such notice was published in the issue beginning with July 10, 1986, and ending with the issue of July 17, 1986

J. Walter Ross

Fee $ 28.00

Subscribed and sworn to before me this 31st day of July, 1986.

Kim D. Ale

Notary Public, Residing at Preston, Idaho

My Commission Expires June 7, 1992

NOTICE OF AMENDED APPLICATION FOR WATER PERMIT

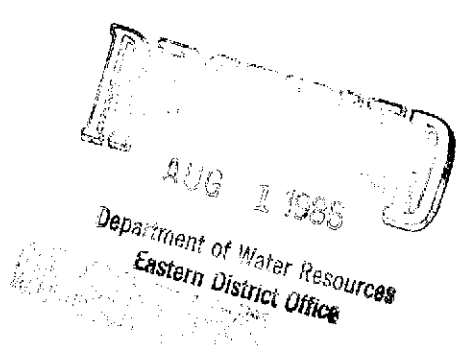
Notice is hereby given that Application for Permit No. 13-7416 in the name of Robert N. Fackrell, Preston, Idaho was filed for the diversion of 125.0 cfs of water from Mink Creek tributary to Bear River, with point of diversion within the SW¼ SE¼, Section 13T, 13S, R. 41E., B.M., Franklin County, the water to be used for power generation purposes from Jan. 1 to Dec. 31, with the SE¼ SE¼, Sec. 22, T. 13S, R. 41E, B.M.

The applicant now proposes to amend Application No. 13-7416, requesting 100.0 cfs of water and amending the point of diversion to within the SW¼ NE¼, Sec. 23, T. 13S, R. 41E, for use within the NE¼ SE¼, Sec. 28, T. 13S, R. 41E, B.M. Franklin County.

Any protest to the proposed amending of the application must be filed with the Department of Water Resources 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83401, on or before July 28, 1986.

A. Kenneth Dunn
Director

Legal No. 2510 —32L— Publish July 10, 17, 1986.



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

Date 072086 INVOICE No. L00080946

Account No. 44460

Description 80946NOTIC

Times 2 Lines 22

Tab Lines

$ 19.25

LEGAL ADVERTISING
INVOICE

SOLD TO:

DEPT OF WATER RESOURCES
150 SHOUP AVE, SUITE 15
IDAHO FALLS
ID83402

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

AFFIDAVIT OF PUBLICATION

80946

NOTICE OF CORRECTION

Notice is hereby given that Application No. 13-7416 in the name of Robert N. Fackrell, Preston, Idaho, was incorrectly advertised on May 29 and June 5, 1986. The Amended Point of Diversion was advertised as being within the SE¼NE¼, Sec. 23, T. 13S, R. 41E.

Whereas, the actual amended point of diversion is within the SW¼NE¼, Sec. 23, T. 13S, R. 41E, B.M.

Any protests against the granting of this permit as a result of thiscorrection must be filed with the Department of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83402, on or before July 21, 1986.

A. Kenneth Dunn
Director
81906

RECEIVED
JUL 17 1986
Department of Water Resources
Eastern District Office

STATE OF IDAHO, ss.
County of Nez Perce

R. R. Thomason, 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 CORRECTION IS

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 070386, or once a WEEK for 2 consecutive WEEKS, the first publication thereof being on the 070386, and the last publication thereof being on the 071086, and said NOTICE OF CORRECTION IS 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.

R. R. Thomason

SUBSCRIBED AND SWORN BEFORE ME THIS THE 14 day of July 1986

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

NOTICE OF AMENDED APPLICATION FOR WATER PERMIT

Notice is hereby given that Application for Permit No. 13-7416 in the name of Robert N. Fackrell, Preston, Idaho was filed for the diversion of 125.0 cfs of water from Mink Creek tributary to Bear River, with point of diversion within the SW¼SE¼, Sec. 13 T. 13S, R 41E., B.M., Franklin County, the water to be used for Power generation purposes from Jan 1. to Dec. 31, within the SE¼SE¼, Sec. 22, T 13S, R.41E, B.M.

The applicant now proposes to amend Application No. 13-7416, requesting 100.0 cfs of water and amending the point of diversion to within the SW¼NE¼, Sec. 23, T. 13S, R. 41E, for use within the NE¼SE¼, Sec. 28, T. 13S, R. 41E, B.M. Franklin County.

Any protest to the proposed amending of the application must be filed with the Department of Water Resources 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83401, on or before June 23, 1986.

A. Kenneth Dunn
Director

PUBLISH: **Thursdays, May 29, and June 5 & 12, 1986.**

Affidavit of Publication

№ 16326

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

I, Belinda J 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 Three consecutive Weeks, commencing with the issue dated May 29, 1986, and ending with the issue dated June 12, 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 J Capps

Subscribed and sworn to before me on this 12th day of June, 1986.

Dianna Kruse

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

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

Date 040E86 INVOICE No. L00077544

Account No. 44463

Description 77544NOTIC

Times 2 Lines 32

Tab Lines

LEGAL ADVERTISING
INVOICE

SOLD TO: STATE OF IDAHO
DEPT OF WATER RESOURCES
150 SHOUP AVE. SUITE 15
IDAHO FALLS
ID83402

$ 28.00

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

AFFIDAVIT OF PUBLICATION

77544

NOTICE OF AMENDED APPLICATION FOR WATER PERMIT

Notice is hereby given that Application for Permit No. 13-7416 in the name of Robert N. Fackrell, Preston, Idaho, was filed for the diversion of 125.0 cfs of water from Mink Creek tributary to Bear River, with point of diversion within the SW¼SE¼, Sec. 13 T. 13S, R. 41E., B.M., Franklin County; the water to be used for Power generation purposes from Jan. 1 to Dec. 31, within the SE¼SE¼, Sec. 22, T. 13S, R.41E, B.M.

The applicant now proposes to amend Application No. 13-7416, requesting 100.0 cfs of water and amending the point of diversion to within the SE¼NE¼, Sec. 23 T. 13S, R. 41E, for use within the NE¼SE¼, Sec. 28, T. 13S, R. 41E, B.M. Franklin County.

Any protest to the proposed amending of the application must be filed with the Department of Water Resources 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83401, on or before June 16, 1986.

A. Kenneth Dunn
Director

RECEIVED
JUN 9 1986
Department of Water Resources
Eastern District Office

STATE OF IDAHO, ss.
County of Nez Perce

R. R. Thomason, 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 AMENDED APPLICAT

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 052986, or once a WEEK for 2 consecutive WEEKS, the first publication thereof being on the 052986, and the last publication thereof being on the 060586, and said NOTICE OF AMENDED APPLICAT 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.

Rena R. Thomason

SUBSCRIBED AND SWORN BEFORE ME THIS THE 5 day of June 1986

Sherrel McLantz

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
31.04

Account Name	Account Number
ID. Department of Water Resources - Eastern Reg.	#100564

Address	City/State	Zip
150 Shoup Ave., Suite 15	Idaho Falls, ID	83402

Ordered By	P.O. Number	Rate	Run Dates
Ronald D. Carlson		nt	1986 May 29, June 5

Identification	Legal Number
Amended Application for Water Right - Fackrell	#2264

[1] Number of Affidavits Requested

NOTICE OF AMENDED APPLICATION FOR WATER PERMIT

Notice is hereby given that the Application for Permit No. 13-7416 in the name of ROBERT N. FACKRELL, Preston, Idaho, was filed for the diversion of 125.0 cfs of water from Mink Creek tributary to Bear River, with point of diversion within the SW¼SE¼, Sec. 13T.13S., R.41E., B.M., Franklin County, the water to be used for power generation purposes from Jan. 1 to Dec. 31, within the SE¼SE¼, Sec. 22, T.13S., R.41E., B.M.

The applicant now proposes to amend Application No. 13-7416, requesting 100.0 cfs of water and amending the point of diversion to within the SW¼NE¼, Sec. 23, T.13S., R.41E., for use within the NE¼SE¼, Sec. 28, T.13S., R.41E., B.M., Franklin County.

Any protest to the proposed amending of the application must be filed with the Department of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83401, on or before June 16, 1986.

A. KENNETH DUNN
Director

Pub. May 29, June 5, 1986 2264

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 May 29, 1986, and ending with the issue of June 5, 1986.

Laura Gay Barnes

Subscribed and sworn to before me this 5th day of June, 1986.

Notary Public for Idaho, Residing at Boise, Idaho.

#875 JUN 25 1984

No 2117

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO, }
County of Franklin } ss.

J. Walter Ross

being duly sworn,

deposes and says:

That he is the Co-Publisher of THE PRESTON CITIZEN, a weekly newspaper published at Preston, in the County of Franklin and State of Idaho; that said paper has been and is in general circulation in the county aforesaid, and in the vicinity of Preston; that the advertisement, a copy of which is attached hereto, was published in said newspaper once a week for 2 consecutive weeks in the regular and entire issue of said paper during the period of time of publication, and was published in the newspaper proper and not a supplement; that said paper has been established and regularly published for more than seventy-eight consecutive weeks prior to the date of first publication of said advertisement.

Such notice was published in the issue beginning with May 31, 1984, and ending with the issue of June 7, 1984.

J. Walter Ross

Fee $ 14.38

Subscribed and sworn to before me this 30th day of June, 1984.

Kevin Allen

Notary Public, Residing at Preston, Idaho

My Commission Expires June 1, 1986

RECEIVED
JUL 5 1984
Department of Water Resources
Eastern District Office

NOTICE OF APPLICATION FOR WATER RIGHT

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

13-7416
FACKRELL, ROBERT N.
P.O. BOX 1, PRESTON, ID 83263
Source: MINK CREEK trib. to BEAR RIVER
Date Filed: 05/18/1984
Diversion Pt: SWSE Sec 13 T 13S R 41E
Use: POWER (125.00 CFS)
In: SESE Sec 22 T 13S R 41E

The permit(s) will be subject to all prior water rights. Protests must be filed with the Director, Dept. of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83402 on or before JUNE 18, 1984.

KEN DUNN, Dir.

Published 5/31 & 6/7/84.
Legal No. 2117 —23L— Published May 31, June 7, 1984

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

July 1, 1997

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

ROBERT N FACKRELL
PO BOX 1
PRESTON ID 83263

RE: WATER RIGHT NO. 13-07416

Dear Water Right Holder(s):

The Department of Water Resources (the Department) has issued the enclosed license confirming that a water right has been established in accordance with the permit referenced above. The license is a **preliminary order** issued by the Department pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department unless a party petitions for reconsideration or files an exception and/or brief as further described below:**

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the Department within fourteen (14) days of the service date of this order. The Department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See section 67-5243(3), Idaho Code.

EXCEPTIONS AND BRIEFS

Within twenty-one (21) days after (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding. Otherwise, this preliminary order will become a final order of the Department.

If any party appeals or takes exceptions to this preliminary order, opposing parties shall have twenty-one (21) days to respond to any party's appeal. Written briefs in support of or taking exceptions to the preliminary order shall be filed with the Department. The Department retains the right to review the preliminary order on its own motion.

ORAL ARGUMENT

If the Department grants a petition to review the preliminary order, the Department shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Department will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Department orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Department in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with Rules of Procedure 302 and 303.

FINAL ORDER

The Department will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Department may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The Department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

> Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:
>
> (a) the petition for reconsideration is disposed of; or
> (b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

i. A hearing was held,
ii. The final agency action was taken,
iii. The party seeking review of the order resides, or
iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

Sincerely,

Shelley Walter Keen

Shelley W. Keen
Water Rights Supervisor

SK:klt

Enclosure

CERTIFICATE OF MAILING

I hereby certify that on the **1st** day of **July, 1997**, I mailed a true and correct copy, postage prepaid, of the foregoing **PRELIMINARY ORDER (Approved License)** to the person(s) listed below:

Water Right No. 13-07416

ROBERT N FACKRELL
PO BOX 1
PRESTON ID 83263

Kari Lynn Townsend
Secretary

MEMORANDUM

TO: File 13-07416

FROM: Sharla

DATE: June 25, 1997

RE: Recommendation Adjustment(s)

The final license recommendations for Right 13-07416 are based on the following:

H. RECOMMENDATIONS

Power	1/1 - 12/31	100.0 cfs	27,663.0 afa

A volume based on year-round constant flow is not reasonable. The volume, therefore, is based upon the volume calculation submitted by the right holder in his letter of June 16.

Examiner: Don Simpkins
Exam Date: June 27, 1995

RECEIVED
JUN 18 1997
Department of Water Resources

June 16, 1997

Ms. Sharla Curtis
Idaho Department Of Water Resources
1301 North Orchard Street
Boise, Idaho 83720-9000

Dear Sharla,

In response to your request of June 2, 1997, I present the following:

1. The photos provided by your examiner indicating an "upper and lower turbine" must be incorrectly labeled. Most likely what the examiner was referring to was an upper and lower nozzle. There are two nozzles on the single turbine, one of which directs the water flow toward the top of the turbine runner, and the remaining nozzle which directs the flow of water toward the bottom of the turbine runner. There is only one turbine at the facility, which is rated at 100 cfs.

2. The best annual flow of water through the turbine occurred last year. During 1996 there was a total of 10,711,260 kilowatt hours of electricity produced by the facility. It takes approximately 1 cfs. of water flowing for 1 hr. to produce 32 kilowatt hours of electricity. Or 3,600 cubic feet of water to produce 32 kwh of electricity. (1 X 60 = 60, 60 X 60 = 3,600.) Thus the total flow through the turbine during 1996 was 1,205,017,200 cubic feet. (10,711,260 kwh ÷ 32 = 334,727 each 32 kwh units. 334,727 X 3,600 cubic feet = 1,205,017,200 cubic feet cubic feet of water.) This totals 27,663 acre feet of water that passed through the turbine during the calendar year of 1996. (1,205,017,200 ÷ 43,560 = 27,663 acre feet.)

Please understand that the flows vary on an annual basis, and the above information is for the calendar year of 1996 only. I anticipate 1997 to have higher flows than 1996. Also understand that a significant amount of water by-passes the electrical generating facility, so this information is not applicable for determining the actual flow of Mink Creek.

If there is anything additional that I may help you with, please call me at 208-852-3111.

Cordially,

Robert N. Fackrell

FACKRELL CONSTRUCTION CO.

P. O. Box #1 • Preston, Idaho 83263 • (208) 852-1320
or 852-1522

MEMORANDUM

DATE: June 16, 1997

TO: Sharla Curtis

FROM: Shelley W. Keen SWK

RE: Water Right 13-07416

This morning Robert Fackrell called in response to your request for more information about his use of water under permit 13-07416. He told me that there is only one turbine, but the flow is split and directed to two different nozzles that cause water to impact the turbine at two different angles. He also told me that he will supply you with information about the annual diversion volume for the hydropower facility.

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

June 2, 1997

Robert N. Fackrell
P.O. Box 1
Preston, ID 83263

RE: Water Right 13-07416

Dear Water Right Holder(s):

We are in the process of reviewing your permit for the purpose of issuing a license. In order to complete this process I need some additional information from you. We need a schematic of the system. Information in the file indicates the facility uses one turbine rated at 100 cfs. Our examiner's photos identify an upper and lower turbine. In your schematic diagram, please clarify this "oddity" for us.

We also need flow records from 8/86 to 7/91 or the best 12 month period in that range. This information is needed to establish an annual volume for the license and to help us understand the system so that the flow recommended for licensing is accurate.

Thank you for your help in this matter. If you have any questions, please feel free to contact me at (208) 327-5452.

Sincerely;

Sharla Curtis
Water Resource Agent

SC:cb

LICENSE REVIEW CHECKLIST

PERMIT NO. 13-07416 DATE 5/14/97 REVIEWER: *SHARLA*

	Change	OK	
NAME	__	✓	Address Change NO
SOURCE	__	✓	Is change clarification of originally intended source? __ If not, prepare Notice of Intent to Void __
POINT OF DIV	__	✓	Amendment required NO
PLACE OF USE	__	✓	Amendment required NO

Does map agree with written description? ✓ yes __ no

OVERLAPS __ P/D __ P/U

RATE OF DIV

Permitted Rate 100.0 cfs
Fee limit 20.0+ cfs $600.00
Measured 49.44 cfs (upper) rated 100 cfs.
Theoretical ____ cfs

Recommended Total Div Rate 100.0 cfs

ANNUAL VOLUME/ NATURE OF USES			Use	Volume Calculation
	__	✓	Power	72,270 af
			_____	_____ af
			_____	_____ af
			_____	_____ af
			SUBTOTAL	_____ af

Flow rate 100 cfs X 365 days X 1.983 = 72,270 af
Total volume recommended ____ af
(SUBTOTAL or Flow Rate, whichever is less)

REMARKS W93(6/2036)(8646-001)

CONDITIONS R04 __ Watermaster Control WD# 13N
__ GW Measurement/Measuring Device
__ Overlap
__ Use-specific conditions 025, 027, 09E, R23

Advancement of Priority Date Required __ yes ✓ no

SRBA Claim Filed N/A
Adjustment Memo Volume

1st Amend Letter N/A
2nd Amend Letter N/A

Form 219
6/92

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

BENEFICIAL USE FIELD REPORT

RECEIVED
JAN 22 1996
Department of Water Resources

A. GENERAL INFORMATION

Permit No. 13-7416

1. Owner: ROBERT W. FACKRELL Phone No (208) 852-3111

Current Address: P.O. BOX 1, PRESTON, ID 83263

2. Accompanied by: OWNER EXAM DATE: 6/27/95

Address: N/A Phone No. N/A

Relationship to Permit Holder: N/A

3. Source: HINK CREEK tributary to BEAR RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: ~~13-00875A~~, ~~13-00896A~~ N.A.

2. Other water rights with the same point of diversion: NONE

C. DIVERSION AND DELIVERY SYSTEM

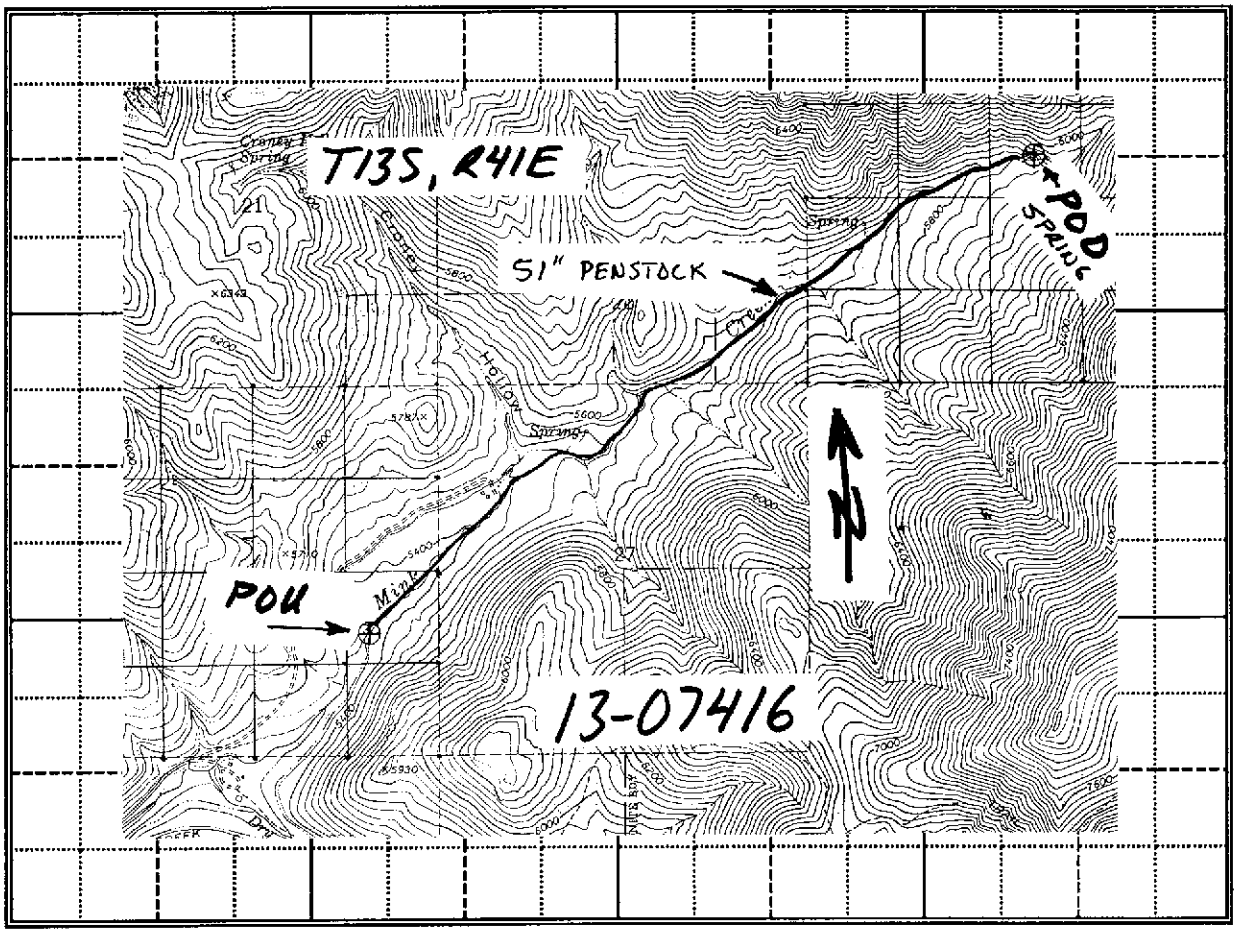
1. **Point(s) of Diversion:**

Ident No.	Gov't Lot	¼	¼	¼	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
		SE	SW	NE	23	13S	41E	FRANKLIN	U.S.G.S. TOPO MAP

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

TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
13S	41E	28													P				

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

2. Measurements: _____

E. NARRATIVE/REMARKS/COMMENTS

SEE ATTACHMENT. * TED SORENSEN ENGINEERS

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

F. FLOW CALCULATIONS ____ Additional Computation Sheets Attached

Measured Method:

POLYSONIC READING Q = 49.44CFS UPPER TURBINE x 2 = 98.88CFS
2.219E-46PH

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:

NON-CONSUMPTIVE USE

H. RECOMMENDATIONS PERMIT LIMITS TO TURBINE RATED FLOW-100CFS.

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	100 CFS	
		Totals:	100 CFS	

2. Recommended Amendments

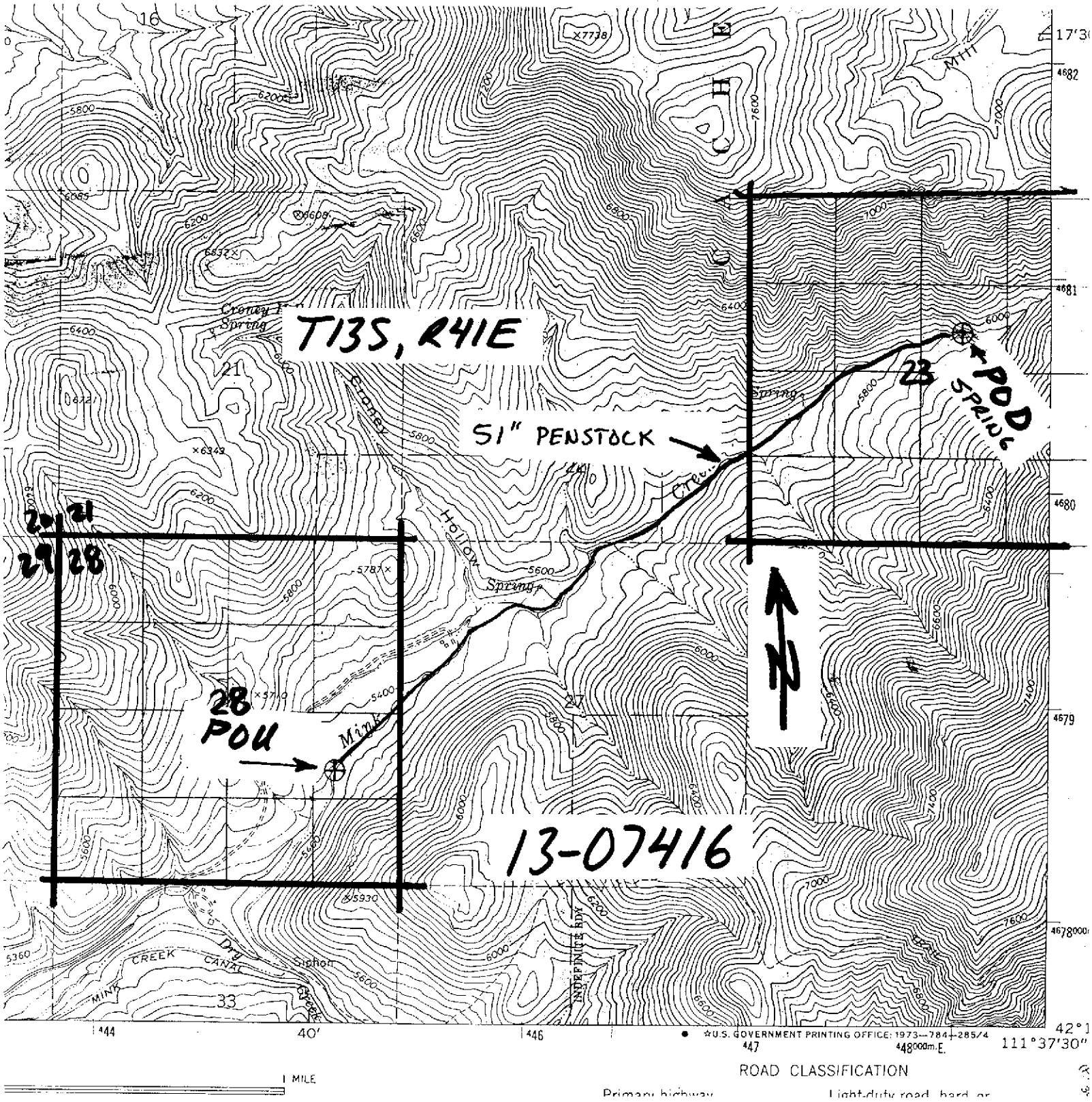
___ Change P.D. as reflected above ___ Add P.D. as reflected above ___ None
___ Change P.U. as reflected above ___ Add P.U. as reflected above ___ Other

I. AUTHENTICATION

Field Examiner's Name Simpkins Date 1-11-96

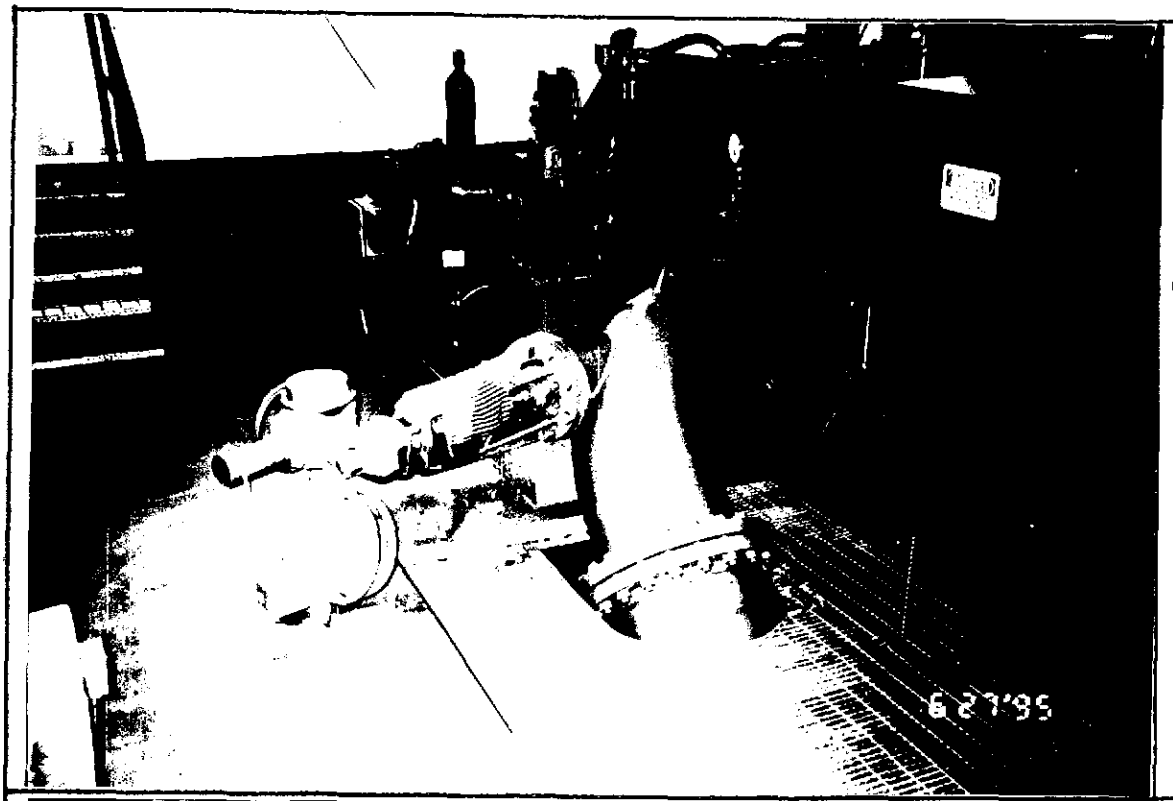
Reviewer H. Gjones Date 1-12-96

SEAL


T13S, R41E
51" PENSTOCK
POD
SPRING
POU
28
21
29
28
13-07416
Crooney Spring
Hollow Spring
Mink Creek
Dry Creek Canal
Siphon
INDEPENDENCE BDY
N
16
17
20
21
27
28
33
MILE
ROAD CLASSIFICATION

POWER GENERATION

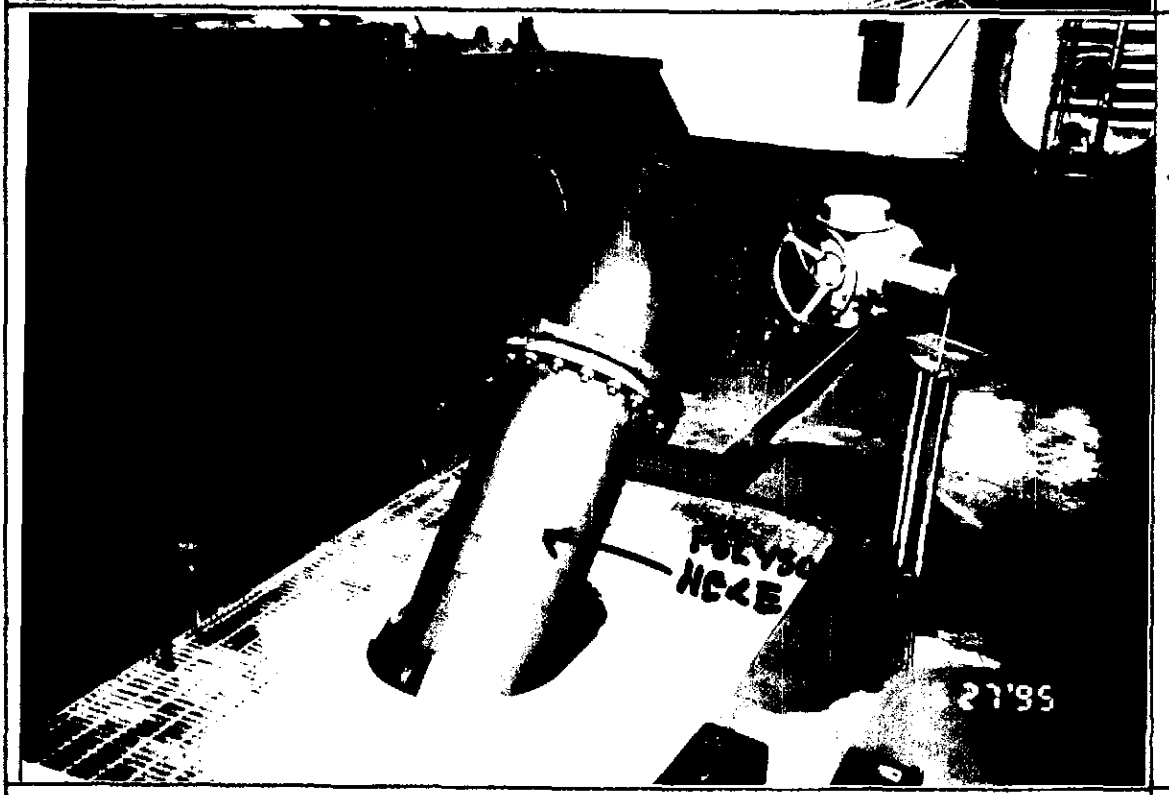
212



INTERIOR OF POWER PLANT.

NO READING ON THIS SIDE OF MACHINE

LOWER TURBINE



UPPER TURBINE

CFS READING TAKEN THIS SIDE.

13-07416

ROBERT N. FACKRELL
POWER GENERATION

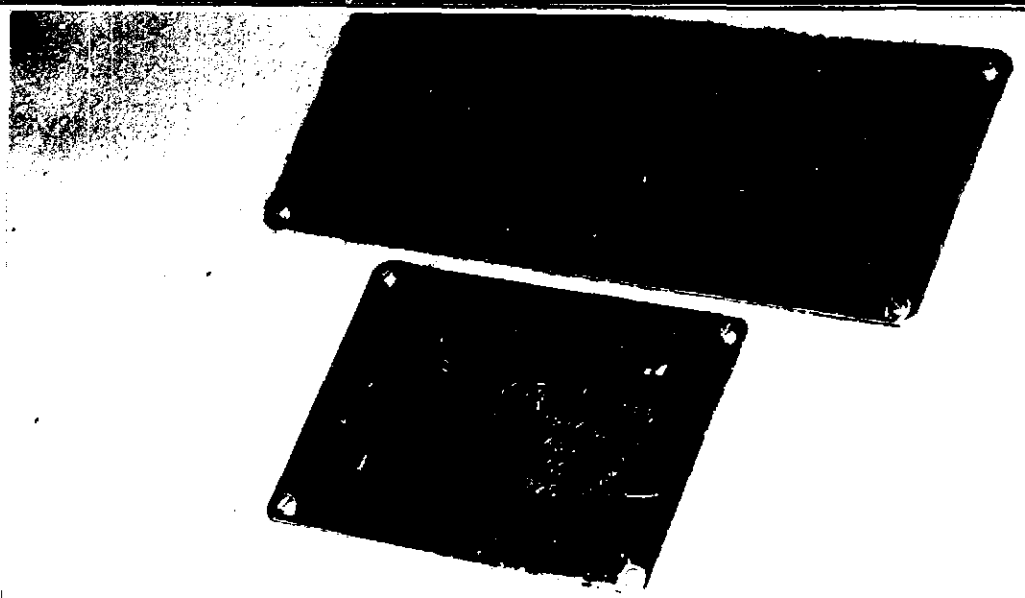
1 of 2



VIEW OF POWER HOUSE POW

→ DISCHARGE CHANNEL TO ↓

← MINK CREEK



NAME + SPECIFICATION OF TURBINE.

13-07416

13-7416 upper flow

0883.8 MMSEC
100.12 % T0

06-27 16:0200
+002.50 % AI2

PRINTER USE
? YES

MODE SELECT
INPUT

OUTER DIAMETER
24.0500 IN

PIPE MATERIAL
? CS,SS

WALL THICKNESS
0.3441 IN

INNER LINING
? NO LING.

KIND OF FLUID
? ANOTHER

SOUND VELOCITY
1460 M/S-

SENSOR MOUNTING
? V

TYPE OF SENSOR
? SMALL

DATA CHANGE
? NO

SPACING
19.668 IN V

ZERO MODE
CLEAR

ZERO MODE
AUT ZERO

06-27 16:0400 *R
+002.60 % AI2

MODE SELECT
T0 CHECK

0883.8 MMSEC
100.12 % T0

06-27 16:0400 *R
+ 1.563E 4GPM

MODE SELECT
T0 CHECK

0883.7 MMSEC
100.12 % T0

06-27 16:1800 *R
+ 2.223E 4GPM

06-27 16:2700 *R
+ 2.219E 4GPM

13-7416 upper flow

0883.8 MMSEC
100.12 % T0

06-27 16:0200
+002.50 % AI2

PRINTER USE
? YES

MODE SELECT
INPUT

OUTER DIAMETER
24.0500 IN

PIPE MATERIAL
? CS,SS

WALL THICKNESS
0.3441 IN

INNER LINING
? NO LING.

KIND OF FLUID
? ANOTHER

SOUND VELOCITY
1460 M/S-

SENSOR MOUNTING
? V

TYPE OF SENSOR
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19.668 IN V

ZERO MODE
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ZERO MODE
AUT ZERO

06-27 16:0400 *R
+002.60 % AI2

MODE SELECT
T0 CHECK

0883.8 MMSEC
100.12 % T0

06-27 16:0400 *R
+ 1.563E 4GPM

MODE SELECT
T0 CHECK

0883.7 MMSEC
100.12 % T0

06-27 16:1800 *R
+ 2.223E 4GPM

06-27 16:2700 *R
+ 2.219E 4GPM

SONIC METER READOUT

13-07416

E. NARRATIVE

ON 6/27/95 A BENEFICIAL USE FIELD EXAM WAS CONDUCTED WITH MR. FACKRELL, FOR A HYDRO PROJECT DIVERSION, ON PERMIT # 13-07416.

POINT OF DIVERSION IS FROM FROM MINK CREEK WHERE WATER IS TAKEN INTO A 51 INCH PENSTOCK. THE PENSTOCK LATER REDUCES TO 36 INCH AND AT PLACE OF USE, REDUCES AGAIN TO TWO 24 INCH STEEL PIPELINES PRIOR TO ENTERING TURBINE.

THE POWER TURBINE USES AN ENGLISH BUILT "GILKES" TURBINE GENERATOR.

TURBINE # 56319
RATED OUTPUT 4,234 B.H.P.
RATED NETT HEAD 430 FEET
RATED FLOW 100 C.F.S.
SPEED 720 R.P.M.
APPROX. ELEVATION DROP 520 FEET

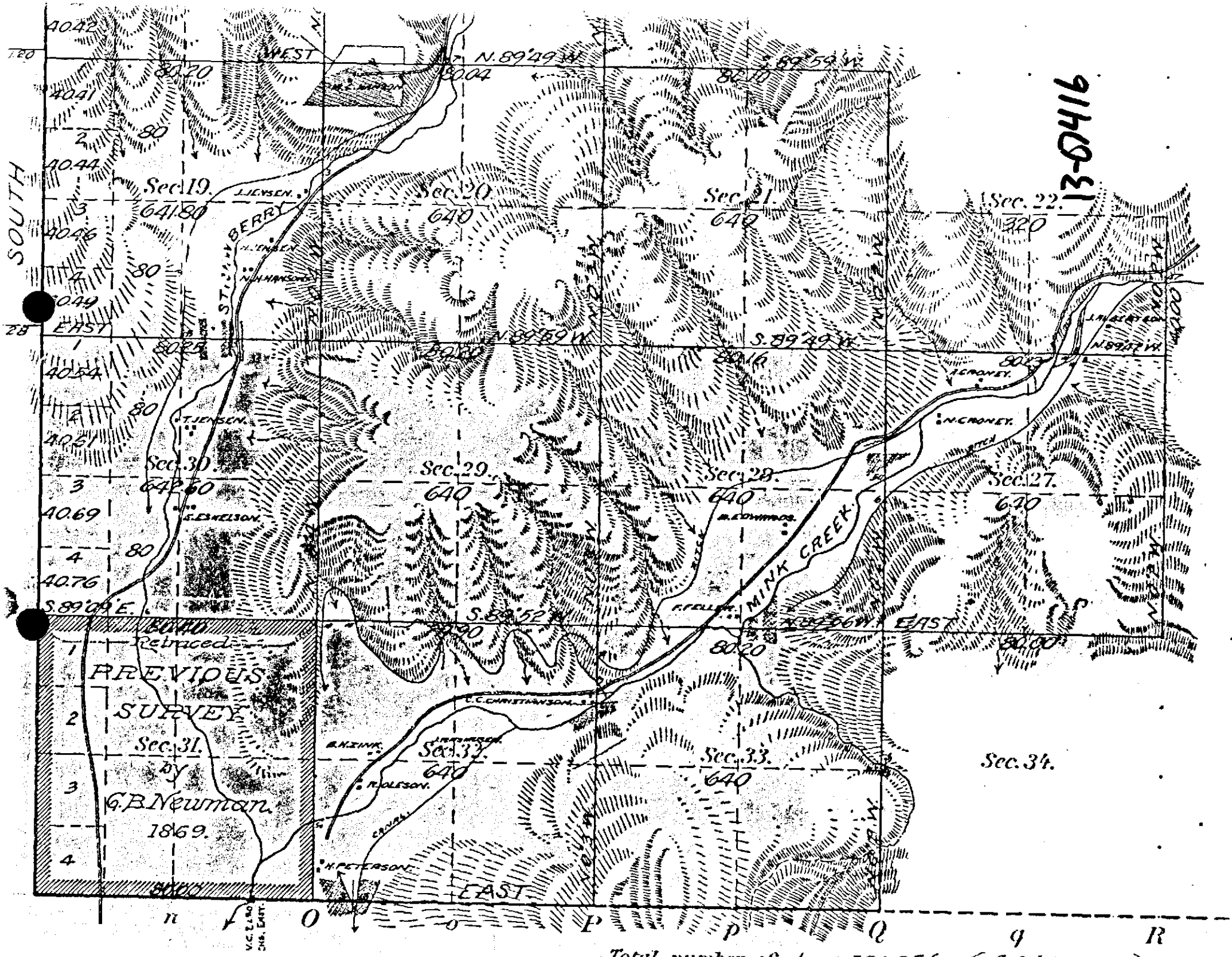
TYME-FLYTE POLYSONIC METER USED FOR CFS FLOW TESTING
MODEL TF-P SERIAL # 7M0263

NO ACCESS TO LOWER TURBINE FOR TESTING

UPPER TURBINE (RIGHT)
410 FT HEAD
NOZZEL 78 % OPEN
READING 2.219E-4GPM = 49.44 CFS X 2 = 98.88 CFS
NEEDLE SET AT 66% COMBINES BOTH

LOWER TURBINE (LEFT)
422 FT HEAD
NOZZEL 74 % OPEN
NO READING -- STRUCTURAL DESIGN PROBLEMS
NEEDLE SET AT 66%

13-07416



9140-13

Total number of Acres 10095.60 (Additional)

Water Right file 13-7416

72 FERC ¶ 64,

RECEIVED
AUG 24 1995
Department of Water Resources

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Robert Fackrell

Project No. 8646-015
Idaho

13-7416

ORDER AMENDING FLUSHING FLOWS

(Issued August 17, 1995)

Robert Fackrell (licensee) requested, by letters dated May 5, 1991, and December 12, 1992 to the Commission, an amendment to the flushing flows required in article 103 of the license for the Mink Creek Project (FERC No. 8646).

Background

Article 103 requires the licensee to maintain a continuous minimum flow in the project's bypass reach of 10 cubic feet per second (cfs) for most of the year. The article also requires higher flushing flows (for channel maintenance) according to the schedule in Table 1.

Table 1. Flow/Flushing Requirements of Article 103.

Duration	Minimum Flow Releases (cfs)
Day 1 thru 4	60
Day 5 thru 11	75
Day 12 thru 18	90
Day 19 thru 25	105
Day 26 thru 32	120
Day 33 thru 39	150
Day 40	130
Day 41	110
Day 42	90
Day 43	70
Day 44	50
Day 45	30
Day 46 thru December 31	10
January 1 thru Day 1	10

where Day 1 is the day that flow attains a rate of 90 cfs and equals or exceeds that rate for 24 hours, but in no event earlier than April 1.

The licensee may temporarily modify the minimum flows if required by emergencies beyond the control of the licensee. The licensee may also modify the minimum flows for short periods upon mutual agreement between the licensee and the U.S. Forest Service.

In a January 13, 1985, Water Right Resolution[1] between the licensee and the U.S. Forest Service (FS), a minimum flow of 10 cfs for the Mink Creek Project was established, along with additional flows to be released over a 45-day period to preserve the integrity of the stream channel. The 45-day period of increased flows each year is necessary to flush sediment and debris from the stream, maintain bends and channel bars, and create the average morphological character of the stream channel. As part of the Water Right Resolution, the FS stated that the instream hydrograph may be proportionately adjusted to reflect the natural streamflow hydrograph at the diversion point after additional stream flow measurements have better defined the natural hydrograph, and upon mutual agreement between the applicant and the FS.

Under section 4(e) of the Federal Power Act, the licensee is subject to the flow/flushing 4(e) conditions submitted by the FS during the license application process. Consequently, the FS filed with the Commission the flow/flushing requirements as stated in the Water Right Resolution. These requirements were incorporated into the license for the Mink Creek Project as article 103.[2]

FS's Proposed Changes and Licensee's Request to Amend Article 403

In a letter dated September 15, 1987, to the licensee, the FS again indicated that the instream hydrograph may be proportionately adjusted after additional streamflow measurements have better defined the natural hydrograph. The FS also stated that the licensee's inflow measurements showed that the original flow estimates overestimated the peak discharges on Mink Creek. Therefore, in the September 15 letter, the FS proposed revised minimum flow releases (Table 2).

Table 2. Forest Service Proposed Changes to Article 103

Duration	Revised (1987) Minimum Flow Releases (cfs)
Day 1 thru 4	30
Day 5 thru 11	37.5
Day 12 thru 18	45

[1] WATER RIGHT RESOLUTION between Robert N. Fackrell and the United States of America - USDA Forest Service Permit No. 13-7416 signed January 13, 1986.

[2] Article 103, as written in the license, did not include the language that the hydrograph may be adjusted after additional measurements better defined the natural hydrograph, upon mutual agreement between the licensee and the FS.

Day 19 thru 25	52.5
Day 26 thru 32	60
Day 33 thru 39	75
Day 40	65
Day 41	55
Day 42	45
Day 43	35
Day 44	25
Day 45	15
Day 46 thru December 31	10
January 1 thru Day 1	10

where day 1 is the day that flow from the spring attains a rate of 110 cfs and equals or exceeds that rate for 24 hours, but in no event earlier than April 1.

The FS further explained that the method used to construct the above instream flow hydrograph was based on the fact that the peak discharge in 1987 was 70 cfs. The FS stated the March snowpack in the Mink Creek recharge area was 55% of average long-term snow-water content and that the normal peak discharge based on these facts would be estimated at 130 cfs. Thus, the FS recommended the peak on the estimated natural hydrograph should be adjusted down to reflect the 130 cfs rate. Therefore the FS proportionately adjusted the instream flow hydrograph down by the reduced natural hydrograph stream flow rates. Accordingly, the licensee filed its request with the Commission, to amend the flushing flows required in article 103 of the project license.

Agency comments

The U.S. Fish and Wildlife Service (FWS), in a letter dated March 14, 1988, to the licensee, had no objection concerning the flow/flushing requirements as revised by the FS in Table 2. In a March 16, 1988 letter, the Idaho Department of Fish and Game (IDFG) stated they would not object to the proposed flows (Table 2) for the spring of 1988, but questioned the adjustment based on only one abnormal flow year. The IDFG further requested that the flow/flushing requirements be readjusted as additional flow data is obtained.

In an April 23, 1991, the IDFG stated they understood that the flow/flushing requirements of the license were interim until better hydrologic data could be obtained. The IDFG again stated, as in their 1988 letter, that they became concerned when it appeared that the FS had only used one year's data to amend the flushing flow requirements. The IDFG preferred that the FS compile a larger data base to determine flow/flushing requirements.

By letter dated April 7, 1994, to the licensee, the FS stated that "article 103 terms of your FERC permit allow flow

adjustments based on forecast streamflows." The FS reported that based on a March 1994 snowpack that was 85% of normal, the minimum flow releases for 1994 should be adjusted to 85% of the previously revised minimum flows (Table 3).

Table 3. Forest Service Proposed Changes to Article 103 Based on Forecast Stream Flows (April 1994).

Duration	Revised (1987) Minimum Flow Releases (cfs)	Adjusted 1994 Minimum Flow (cfs)
Day 1 thru 4	30	25.5
Day 5 thru 11	37.5	32
Day 12 thru 18	45	38
Day 19 thru 25	52.5	44
Day 26 thru 32	60	51
Day 33 thru 39	75	64
Day 40	65	55
Day 41	55	47
Day 42	45	38
Day 43	35	30
Day 44	25	21
Day 45	15	13
Day 46 thru Dec. 31	10	10
Jan. 1 thru Day 1	10	10

where day 1 is the day that flow from the spring attains a rate of 93.5 cfs and equals or exceeds that rate for 24 hours, but in no event earlier than April 1. Further, the FS stated that under no circumstances can the licensee divert more than 100 cfs through the power plant and any excess flows must remain in the stream channel.

In another letter to the licensee, dated May 12, 1994, the FS stated that actual runoff for 1994 was closer to 70% to 75% of normal flows and that the licensee could adjust flows to 75% of the permitted flow adjustments (Table 4).

Table 4. Forest Service Proposed Changes to Article 103 Based on Forecast Stream Flows (May 1994).

Duration	Revised (1987) Minimum Flow Releases (cfs)	Re-adjusted 1994 Minimum Flow (cfs)
Day 1 thru 4	30	22.5
Day 5 thru 11	37.5	28
Day 12 thru 18	45	34
Day 19 thru 25	52.5	39.5
Day 26 thru 32	60	45
Day 33 thru 39	75	56
Day 40	65	49
Day 41	55	41

Day 42	45	34
Day 43	35	26
Day 44	25	19
Day 45	15	11
Day 46 thru Dec. 31	10	10
Jan. 1 thru Day 1	10	10

The FS again stated that under no circumstances can the licensee divert more than 100 cfs through the power plant. Any excess flows must remain in the stream channel.

Staff's preliminary analysis

By letter dated March 28, 1995, the Director, Division of Project Compliance and Administration (Director) requested the licensee, FS, FWS, and IDFG review and provide comments on staff's preliminary analysis regarding the proposed flushing flows. Staff's preliminary analysis concluded that article 103 should be amended as follows:

> Article 103. Licensee shall maintain in the bypassed stream reach a continuous minimum flow as shown on the quantification below, and as measured immediately downstream from the point of diversion on Mink Creek, for maintaining favorable conditions for water flows and for the protection of fish and wildlife resources. The licensee may temporarily modify minimum flows if required by emergencies beyond the control of the licensee. The licensee may also modify minimum flows for short periods upon mutual agreement between the licensee and the Forest Service.
>
> Instream Flow Claim: a continuous instream flow equivalent to an average of 17,000 acre-feet per year (39.1% of historic flow) defined and distributed as follows:
>
> a. Minimum flow rates: the rate for Day 1 and for each and every succeeding day or period throughout the entire year as follows:

Duration	Streamflow (cfs)
Day 1 thru 4	30.0
Day 5 thru 11	37.5
Day 12 thru 18	45.0
Day 19 thru 25	52.5
Day 26 thru 32	60.0
Day 33 thru 39	75.0
Day 40	65.0
Day 41	55.0
Day 42	45.0
Day 43	35.0
Day 44	25.0

Day 45	15.0
Day 46 thru December 31	10.0
January 1 thru Day 1	10.0

> b. Day 1: the day that flow attains a rate of 90.0 cfs and equals or exceeds that rate for 24 hours, but in no event earlier than April 1.
>
> c. If, for any year, the Forest Service determines, based on the measured March snowpack in the Bear River basin, that flow adjustments should be made to the above flow regime according to forecast stream flows, the licensee shall file, with the Commission, a report, that includes a copy of the Forest Service's letter indicating such adjustments are necessary for that particular year, prior to Day 1. The report shall include documentation that the U.S. Fish and Wildlife Service and the Idaho Department of Fish and Game were served copies of the Forest Service's letter.
>
> d. If the minimum flow falls below the requirements under paragraph (a) above, the licensee shall file a report with the Commission within 30 days of the incident. The report shall, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report shall also include: 1) operational data necessary to determine compliance with article 103; 2) a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and 3) comments or correspondence, if any, received from the resource agencies regarding the incident. Based on the report and the Commission's evaluation of the incident, the Commission reserves the right to require modifications to project facilities and operations to ensure future compliance.
>
> e. In the event that natural flows do not attain the rates decreed above, the United States shall be entitled to the natural flows actually occurring during the time periods described above.

Comments on staff's preliminary analysis

The FS, by letter dated March 31, 1995, concurred with staff's preliminary analysis that the flushing flows should be modified. The FS stated that proposed flows have maintained channel stability and fisheries habitat over the past several years and should continue to do so. The FS also concurred with

the proposed changes to paragraphs c, d, and e in the amended article.

By letter dated April 14, 1995, the IDFG commented that they want input into the proposed flow changes before any decisions regarding the changes are made. The IDFG also stated it would be very beneficial if the FS could provide snowpack information and flow requirements as soon as they become available. The IDFG also specifically stated that it should be consulted before any proposed changes to the flushing flows.

The FWS, by letter dated May 2, 1995, concurred with staff's preliminary analysis on the flow changes. The licensee, in a letter filed with the Commission on May 15, 1995, also concurred with staff's analysis.

Discussion and Conclusions

In 1987, the FS suggested adjusting the flushing flows to 50% of those listed in license article 103. The licensee agreed with this and received concurrence from the FWS. The IDFG stated they would accept this for 1987, but asked that the flows be reevaluated, since this adjustment was based on only one year of streamflow data. However, when the flow releases were changed by the licensee in 1987, as recommended by the FS, the licensee did not notify the Commission of the flow release changes, nor request the Commission amend article 103. From 1988 thru 1993, the licensee operated the project according to the adjusted flows established by the FS (Table 2).

Article 402 requires the licensee to annually make available, to the Commission and the resource agencies, the record of minimum flows obtained from the licensee's continuous monitoring gage. By letter dated September 19, 1989, to the licensee, the Commission's Portland Regional Office (PRO) requested that the licensee graphically illustrate the minimum flow regime for Mink Creek annually. The Commission's PRO required the licensee to take the continuous monitoring data recorded at the project and provide a detailed graphical illustration of the flow regime to the Commission and the agencies.

Since 1988, the licensee has annually filed graphical illustrations of the minimum flow regime for the Mink Creek Project that are lower than the flushing flows required by article 103. The licensee was informed by Commission staff that until an order was issued approving the adjusted flows, the licensee was required to release the flushing flows set forth in license article 103. The licensee responded that he complied with FS channel maintenance flushing flows rather than the flows required in the license, since FS has jurisdiction over this matter.

In May 1991 and December 1992, the licensee made requests to amend article 103 of the project license. The licensee received concurrence from the FWS in 1988. In response to the IDFG's request that the adjustment to flushing flows be made after looking at several years of streamflow data, the FS looked at flow records from 1987 through 1993 and determined that their original reduction of 50% was still valid. The IDFG did not provide comments on the adjusted flushing/flow regime.

The FS has reviewed streamflow data from 1987 to 1993 and has concluded that their original reduction of 50% is sufficient to maintain favorable conditions for water flows and for the protection of fish and wildlife resources. Commission staff concurs that the flushing flows recommended by the FS (Table 2) are sufficient to maintain the stream channel and protect the fish and wildlife resources.

The FS, in the April and May 1994 letters, included the condition that under no circumstances can the licensee divert more than 100 cfs through the power plant and that any flows must remain in the stream channel. Since the project has a maximum hydraulic capacity of 100 cfs, this condition does not need to be included in article 103.

The IDFG, in their comments on staff's preliminary analysis, recommended that the FS consult with the IDFG before modifying the minimum flow requirements. This condition was not included in the FS's comments on the article. Since article 103 was incorporated in the project license as a 4(e) condition imposed by the FS, and no mention was made by the FS that it consult with the IDFG on any proposed changes to the flushing flows, IDFG's recommendation that it be consulted prior to any flow changes will not be included in article 103. However, we would encourage any informal consultation between the resource agencies or the resource agencies and the licensee concerning any proposed changes in the flushing flows.

The flushing flows originally proposed in staff's preliminary analysis, and concurred with by the licensee and the resources agencies, should be adequate to protect the fish and wildlife resources of Mink Creek, and should, therefore, be approved.

The Director orders:

(A) Article 103 of the project license for the Mink Creek Project (FERC No. 8646) is amended as follows:

Article 103. Licensee shall maintain in the bypassed stream reach a continuous minimum flow as shown on the quantification below, and as measured immediately downstream from the point of diversion on Mink Creek, for maintaining

favorable conditions for water flows and for the protection of fish and wildlife resources. The licensee may temporarily modify minimum flows if required by emergencies beyond the control of the licensee. The licensee may also modify minimum flows for short periods upon mutual agreement between the licensee and the Forest Service.

Instream Flow Claim: a continuous instream flow equivalent to an average of 17,000 acre-feet per year (39.1% of historic flow) defined and distributed as follows:

a. Minimum flow rates: the rate for Day 1 and for each and every succeeding day or period throughout the entire year as follows:

Duration	Streamflow (cfs)
Day 1 thru 4	30.0
Day 5 thru 11	37.5
Day 12 thru 18	45.0
Day 19 thru 25	52.5
Day 26 thru 32	60.0
Day 33 thru 39	75.0
Day 40	65.0
Day 41	55.0
Day 42	45.0
Day 43	35.0
Day 44	25.0
Day 45	15.0
Day 46 thru December 31	10.0
January 1 thru Day 1	10.0

b. Day 1: the day that flow attains a rate of 90.0 cfs and equals or exceeds that rate for 24 hours, but in no event earlier than April 1.

c. If, for any year, the Forest Service determines, based on the measured March snowpack in the Bear River basin, that flow adjustments should be made to the above flow regime according to forecast stream flows, the licensee shall file, with the Commission, a report, that includes a copy of the Forest Service's letter indicating such adjustments are necessary for that particular year, prior to Day 1. The report shall include documentation that the U.S. Fish and Wildlife Service and the Idaho Department of Fish and Game were served copies of the Forest Service's letter.

d. If the minimum flow falls below the requirements under item (a) above, the licensee shall file a report with the Commission within 30 days of the incident. The report shall, to the extent possible,

identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report shall also include: 1) operational data necessary to determine compliance with article 103; 2) a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and 3) comments or correspondence, if any, received from the resource agencies regarding the incident. Based on the report and the Commission's evaluation of the incident, the Commission reserves the right to require modifications to project facilities and operations to ensure future compliance.

e. In the event that natural flows do not attain the rates decreed above, the United States shall be entitled to the natural flows actually occurring during the time periods described above.

(B) Unless otherwise directed in this order, the licensee shall file an original and seven copies of any filing required by this order with:

The Secretary
Federal Energy Regulatory Commission
Mail Code: DPCA, HL-21.1
825 North Capitol Street, N.E.
Washington, D.C. 20426

In addition, the licensee shall serve copies of these filings on any entity specified in this order to be consulted on matters related to these filings. Proof of service on these entities shall accompany the filings with the Commission.

(C) 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 CFR § 385.713.

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

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Robert Fackrell

Project No. 8646-033
Idaho

ORDER AMENDING LICENSE

13-7416

(Issued August 11, 1995)

On July 17, 1995, Robert Fackrell (licensee) filed an application to amend Article 102 of the project license for the Mink Creek Project.[1]

The licensee filed this application in response to a request from the Caribou National Forest, Montpelier Ranger District (FS). In a letter dated July 10, 1995, the FS noted the excellent condition of the project and proposed that the frequency of the inspections should be reduced to 3-year intervals.

This is a reasonable request. Therefore, Article 102 should be amended to require the licensee to consult with the FS every three years. All other requirements of the article should be retained.

The Director orders:

(A) Article 102 of the license for the Mink Creek Project (FERC No. 8646) is amended as follows:

Article 102: Starting in 1998 and every 3 years thereafter, on or about the anniversary date of the license, the licensee shall consult with the Forest Service with regard to measures needed to ensure protection and development of the natural resource values of the project area. Within 2 months following said meeting, the licensee shall file a report with the Commission of any recommendations made by these agencies. The Commission reserves the right, after notice and opportunity for hearing, to require changes in the project and its operation which may be necessary to accomplish natural resource protection and development.

[1] See Order Issuing License (5MW Or Less) And Dismissing Application For Preliminary Permit With Prejudice, 35 FERC, ¶ 62,580 (1986). Article 102 states:

> Each year, on or about the anniversary date of the license, the licensee shall consult with the Forest Service with regard to measures needed to ensure protection and development of the natural resource values of the project area. Within 2 months following said meeting, the licensee shall file a report with the Commission of any recommendations made by these agencies. The Commission reserves the right, after notice and opportunity for hearing, to require changes in the project and its operation which may be necessary to accomplish natural resource protection and development.

(B) 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.

Joseph D Murphy

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

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Robert Fackrell

Project No. 8646-027
Idaho

13-7416

ORDER MODIFYING AND APPROVING TROUT MONITORING RECOMMENDATIONS

(Issued August 10, 1995)

On January 28, 1993 and supplemented August 24, 1993, Robert Fackrell (licensee) filed a final report, under article 404 of the project license, on the monitoring of trout populations below the Mink Creek Hydroelectric Project (FERC No. 8636). Article 404 required the licensee to file the results of the fish population monitoring, to include a schedule for filing recommendations, if needed, for modifying project structures or operation in the event the project is determined to have adversely affected the fish resources of Mink Creek. Comments from the Idaho Department of Fish and Game (IDFG), the U.S. Fish and Wildlife Service (FWS) and the U.S. Forest Service (FS) were included with the licensee's filing.

Background

The trout population monitoring was required to provide information sufficient to determine the adequacy of the fish habitat enhancement structures in mitigating project-related impacts on the fish resource. The licensee was required to install the enhancement structures under article 403. Thus, the licensee installed 34 rock and log weirs. Below each weir, a one-meter deep plunge pool was created to reduce the flow and provide additional pool habitat.

In the Commission's November 28, 1986 Order Modifying in Part and Approving in Part Fish Population Monitoring Plan, the licensee was required to monitor changes in the size of trout populations as well as changes in the physical habitat associated with the installation of habitat improvement structures. The licensee was also required, for the first five years of project operations, to file annual reports that included an analysis of changes that occurred in the physical habitat and trout populations of Mink Creek. Sampling was conducted by electrofishing with a 300 volt DC backpack unit. Population estimates were made using a two-pass removal procedure in 17 of the 34 pools present below the project. The same 17 pools were sampled each year of the study.

In the November 1986 Commission order, it was stated that the decision to continue the monitoring program after 5 years should be based on the data accumulated over the five-year study period. It was also stated that construction of the fish enhancement structures may sufficiently mitigate for project-

related impacts to the fish resource, making further monitoring unnecessary.

Results of 5-year study

In the January 28, 1993 filing, the licensee reported that the numbers of age-1 and older trout that have been sampled annually since 1987 in 17 of 34 pools substantially increased, especially in 1989-90. Since 1990, these numbers seem to have stabilized. The licensee stated that in 1992, 45 cutthroat and 768 brook trout were collected, and if the unsampled pools held similar numbers, the 1992 population in all pools combined would be approximately 90 cutthroat and 1500 brook trout. The licensee concluded that trout populations have increased substantially in the study portion of Mink Creek since initiation of project operation in January 1987. The number of age-1 and older fish has approximately tripled, and while brook trout remain the dominant species, the population of cutthroat trout also appears to have benefitted. Therefore, based on the monitoring study results, the licensee proposes no recommendations for modifying project structures or operation.

Agency comments

By letter dated June 23, 1993, the licensee requested comments from the FWS, IDFG, and FS on the results of the fish population monitoring. In this letter, the licensee recommended no modifications of project structures or operations due to no apparent adverse effects on the fish resources of Mink Creek. In an August 24, 1993 filing, the licensee stated that no response was received from the agencies concerning the June 23 letter.

Commission staff, by letter dated March 28, 1995, provided staff's preliminary analysis of the results of the 5-year trout monitoring study and requested comments from the FS, IDFG, and the FWS on the licensee's recommendations and staff's analysis.

The FS, by letter dated March 31, 1995, concurred that no modifications to project structures or operations are required. The FS did recommend that the licensee continue maintaining the structures on a yearly basis to insure structural integrity and function. The FS also stated they would like to receive an annual report from the licensee on the status and condition of each of the habitat improvement structures by October 1 each year.

The IDFG, by letter dated April 14, 1995, concurred that trout numbers have increased in the areas of the rock and log weirs, but also commented there are no comparisons of trout numbers in areas where weirs were not built. The FWS, by letter dated May 2, 1995, also concurred with the licensee's conclusions

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FEDERAL ENERGY REGULATORY COMMISSION

Robert Fackrell

Project No. 8646-021
Idaho

13-7416

ORDER AMENDING SIDE CHANNEL GAGING REQUIREMENTS

(Issued August 11, 1995)

By letter dated July 15, 1991, Robert Fackrell (licensee) requested an amendment to article 402 of the license for the Mink Creek Project (FERC No. 8646). Article 402 states that the licensee shall construct and operate streamflow gages, as required by article 8, in the bypass reach, including side channels, of Mink Creek below the project dam in a manner to allow continuous monitoring of the Mink Creek Project minimum flows required by article 103. Further, the licensee is required to annually make available to the U.S Fish and Wildlife Service (FWS), the U.S. Forest Service (FS), the Idaho Department of Fish and Game (IDFG) and the Commission's Portland Regional Office (PRO) Director, the record of minimum flows obtained from these gages.

Licensee's proposal

During an April 5, 1988, on-site inspection of the Mink Creek Project which was attended by staff from the Commission's PRO, IDFG, and the FWS, it was agreed that, because downstream irrigators withdraw water from the side channels, and therefore continually thwart the licensee's efforts to divide the flow equally in the side channels, the requirement for placing a gage and recording the flows in the side channels was not necessary. The licensee was advised, in a letter from the Commission's PRO dated September 19, 1989, to seek concurrence from the resource agencies and submit a request to the Commission that the license article be amended to delete the requirement.

Agency comments

By letter dated September 22, 1989, the licensee requested concurrence from the FWS and the IDFG regarding the removal of the requirement to install gages in the side channels as required by article 402. The FWS responded to the licensee, by letter dated October 11, 1989, requesting further information showing all agricultural diversions in relation to major project works, such as diversion structures and tailrace return flows. Comments were not received from the IDFG.

Regarding this issue, staff prepared a preliminary analysis that was sent to the licensee, FWS, IDFG, and FS. In the analysis, staff concluded that the licensee's request to amend article 402 and delete the side channel gaging requirement should

be approved. Concurrence on the deletion of the side channel gaging requirements was received from the FS, by letter dated March 31, 1995, the IDFG, by letter dated April 14, 1995, the FWS, by letter dated May 2, 1995, and the licensee, by letter filed May 19, 1995.

Discussion and Conclusions

The licensee has attempted to divide the flow equally in the side channels of the diversion. However, downstream irrigators continually alter the flow back into the one side channel. During an Operations Inspection conducted by staff from the Commission's PRO on June 30, 1989, the licensee showed staff how he attempted to divide the flow and how the irrigators blocked his attempts.

From the results of the licensee's five year trout population monitoring study conducted between 1987 and 1992, the trout population has substantially increased during this time frame. Cutthroat trout populations have slightly increased, while brook trout populations have nearly doubled. Therefore, since the streamflow was established to protect trout, the flows that the licensee has been releasing appear to be adequate to protect the populations of cutthroat and brook trout below the Mink Creek Project.

There are no license requirements for the licensee to divide the flow equally in the side channels of the diversion. Although the licensee has made an effort to protect the aquatic resources of both channels by directing flows into both channels, these attempts are negated by the withdrawal of water made by the downstream irrigators. Therefore, the licensee's request to amend article 402 to delete the side channel gaging requirements should be approved.

The Director orders:

(A) Article 402 of the project license for the Mink Creek Project (FERC No. 8646) is amended as follows:

> The licensee shall construct and operate streamflow gages as required by standard license article 8 in the bypass reach of Mink Creek below the project dam in a manner to allow continuous monitoring of the Mink Creek Project minimum flows required by article 103. Further the licensee shall annually make available to the U.S Fish and Wildlife Service, Forest Service, the Idaho Department of Fish and Game, and the Commission's Portland Regional Office Director, the record of minimum flows obtained from these gages.

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October 11, 1991

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Department of Water Resources

Mr. Keith Higginson
Director
Idaho Dept. of Water Resources
1301 North Orchard
Boise, ID 83706

Re: Security Interest in Water Permit No. 13-7416
MTBR&F File No. 4-620.555

Dear Mr. Higginson:

This office represents First Security Bank of Idaho, N.A., in connection with certain loans to Robert N. and Stephanie C. Fackrell. In connection with that lending relationship, the Fackrells have granted to First Security Bank of Idaho, N.A., a security interest in Permit No. 13-7416.

Pursuant to Idaho Code § 42-207, enclosed is a copy of the security agreement granting a security interest in Permit No. 13-7416, together with a copy of a certificate from the Comptroller of the Currency dated August 13, 1991 evidencing the authority of First Security Bank of Idaho to transact business as a national banking association. As you may know, under the Idaho Bank Act, and more particularly Idaho Code § 26-202, banks organized under the laws of the United States and issued an organization certificate by the Comptroller of the Currency need not obtain approval of the Director of the Idaho Department of Finance to transact banking business within the state of Idaho. If you have any questions as to First Security Bank of Idaho possessing the qualifications set forth in Idaho Code § 42-206, please call so we may further discuss your concerns.

The transfer was made in good faith for the purpose of securing financing extended by First Security Bank of Idaho to the Fackrells and was not made for purposes of speculation or delay.

Thank you for your assistance in filing evidence of this transfer.

Very truly yours,

Christine E. Nicholas

CEN/jlm
Enclosure

COPY

SECURITY AGREEMENT COVERING WATER PERMIT

This Security Agreement ("Agreement") is made this 6th day of September, 1991, by and between **ROBERT N. FACKRELL** and **STEPHANIE C. FACKRELL**, husband and wife ("Debtor") and **FIRST SECURITY BANK OF IDAHO, N.A.** ("Secured Party").

RECITALS

1. Debtor is the owner of a certain water permit issued by the Idaho Department of Water Resources, identified as Permit No. 13-7416 (the "Water Permit"). A true and correct copy of the Water Permit is attached as **Exhibit A**.

2. Pursuant to a Loan Agreement between Debtor, Fackrell Construction Company, Inc. and Secured Party dated September 6, 1991 (the "Loan Agreement"), Debtor agreed to grant Secured Party a security interest in all of its right, title and interest in and to the Water Permit as collateral security for repayment of the indebtedness identified in the Loan Agreement.

NOW, THEREFORE, in consideration of the promises, covenants, and conditions contained herein and the recitals set forth above, which constitute a material part of this Agreement, the parties agree as follows:

SECURITY INTEREST

1. In accordance with Idaho Code Section 42-207, Debtor hereby pledges and grants to Secured Party as security for the prompt repayment of the indebtedness and prompt performance of Debtor's obligations referred to in the Loan Agreement, a security interest in and to the Water Permit, and a security interest in and to all water permits or applications therefor acquired by Debtor on or after the date hereof relating to the hydroelectric facility known as the Mink Creek Hydroelectric project ("Mink Creek Hydroelectric Permits").

2. In accordance with Idaho Code Section 42-207, Debtor hereby authorizes and requests the Director of the Idaho Department of Water Resources to record the existence of the security interest granted hereunder with respect to the Water Permit and to all Mink Creek Hydroelectric Permits or water licenses arising from said Water Permit or Mink Creek Hydroelectric Permits ("Water Licenses") acquired by Debtor.

3. Debtor shall execute and deliver to Bank, concurrent with Debtor's execution of this Agreement, and at any time or times hereafter at the request of Bank, all financing statements, continuation financing statements, fixture filings,

security agreements, chattel mortgages, assignments, affidavits, reports, notices and schedules and all other documents that Bank may reasonably request, in form satisfactory to Bank, to perfect and maintain perfected Bank's security interests in the Water Permit and Mink Creek Hydroelectric Permits or Water Licenses.

4. Debtor has not and shall not grant a security interest in the Water Permit, Mink Creek Hydroelectric Permits or Water Licenses to any other party so long as the indebtedness and Debtor's obligations referred to in the Loan Agreement remain unsatisfied.

5. Debtor will undertake all actions necessary to continue the Water Permit or Mink Creek Hydroelectric Permits in full force and effect and agrees to timely file each proof of application to a beneficial use required by Idaho Code Section 42-217. Debtor agrees to abide by the terms of the Water Permit and all Mink Creek Hydroelectric Permits and to take all actions necessary under Idaho Code Sections 42-201 through 42-247 to ensure Debtor receives a license for the water rights evidenced by the Water Permit and all Mink Creek Hydroelectric Permits and to ensure that no such water rights or license is lost or impaired through forfeiture, abandonment, change of point of diversion and place of use, or otherwise under the laws of the state of Idaho.

6. Debtor will provide Bank with evidence of the issuance or denial of a license pursuant to the Water Permit and each Mink Creek Hydroelectric Permit immediately following notice by the Idaho Department of Water Resources.

7. Upon Debtor's default in repayment of the indebtedness or performance of Debtor's obligations referred to in the Loan Agreement, Bank shall have all rights referred to in the Loan Agreement, together with all rights of a secured party under the Idaho Uniform Commercial Code and other applicable Idaho law.

IN WITNESS WHEREOF, Debtor has executed this Agreement this 6th day of September, 1991.

Robert N. Fackrell

Stephanie C. Fackrell

Form 202
3/78

Ident. No. 13

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

AMENDED

APPLICATION FOR PERMIT

AMENDED

To appropriate the public waters of the State of Idaho

1. Name of applicant Robert N. Fackrell Phone 208-852-152.

Post office address P.O. Box 1, Preston, ID 83263

2. Source of water supply Mink Creek which is a tributary of Bear River

3. Location of point of diversion is SW ¼ of NE ¼ of Section 23 Township 1

Range 41E B.M. Franklin County, additional points of diversion if any:

(unsurveyed)

4. Water will be used for the following purposes:

Amount 100.0 ~~cfs~~ Power purposes from 1/1 to 12/31 (both dates inc
(cfs or ~~acre-feet per annum~~)

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

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

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

5. Total quantity to be appropriated:

a. 100.0 cubic feet per second and/or b. _____ acre-feet per a

6. Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. concrete and steel diversion structure with a 60" diameter bypass and 48" diameter penstock

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

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

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 ben
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: NE ¼ of SE ¼ of Section 28 Township 13S
Range 41E B.M.

(2) Amount of power to be generated: 3.1 mw horsepower under 467 feet of

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

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

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

EXHIBIT
A

TWP	RANGE	SEC.	NE¼								SW¼				SE¼			
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	[illegible]	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. None

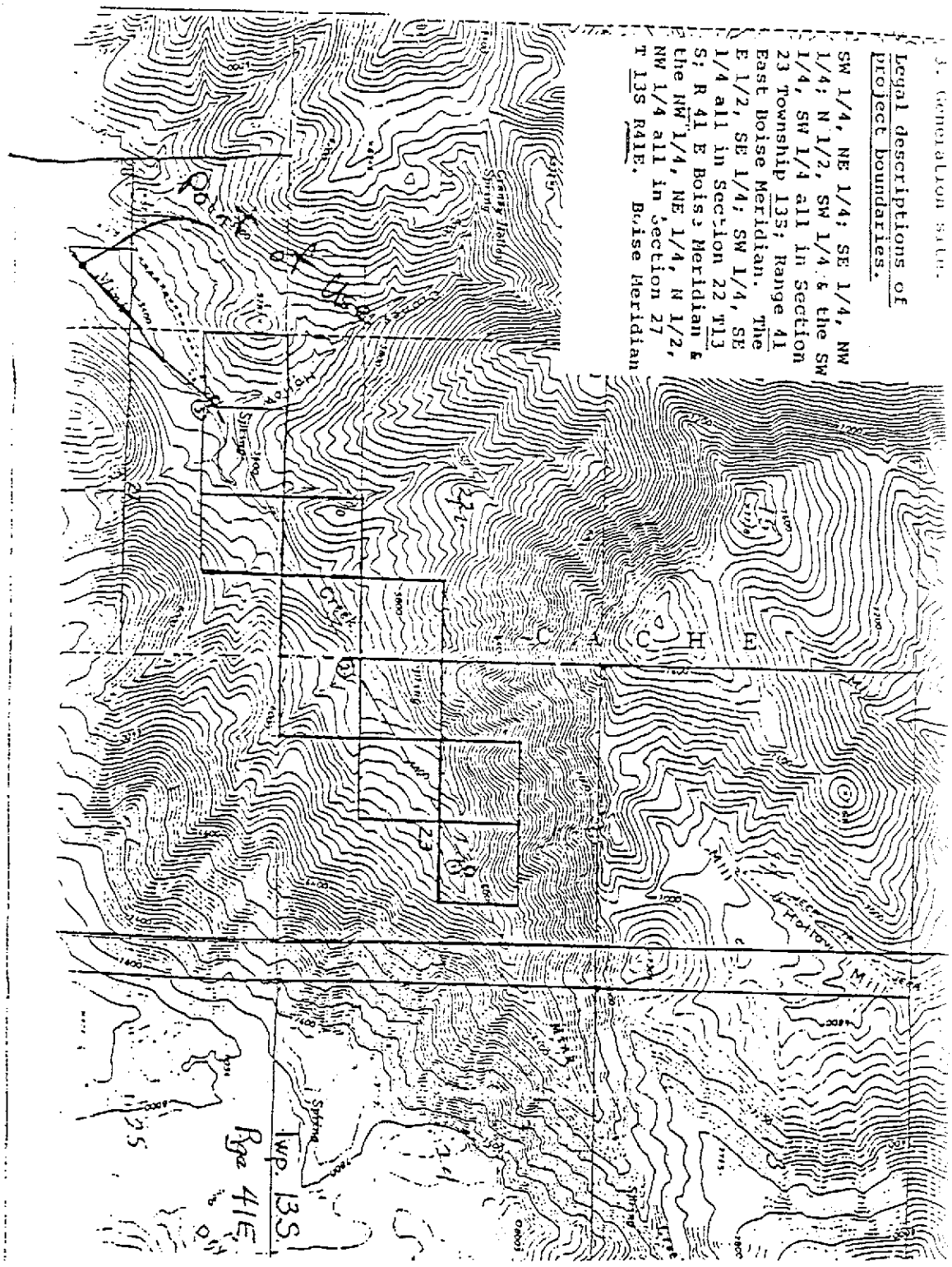
9. a. Who owns the property at the point of diversion U.S. Forest Service

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

c. If the property is owned by a person other than the applicant, describe the arrangement enab applicant to make this filing Applicant has secured agreement with Valdo for construction of project on Mr. Benson's property. A spec use permit is being obtained from USFS.

10. Remarks The application is being amended in order to accurately describe the hydro-electric project as presented in the application for license before the Federal Energy Regulat Commission.

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



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

(Applicant)

Proposed Priority 5/18/84

Received by KW Date 5-15-86 Time 1:30 P

Preliminary check by KW Fee $ 20.00

Receipted by MO Date 5/20/86 # 39639

Publication prepared by MO Date 5/21/86

Published in Preston Citizen Lewiston Trib. Idaho Statesman Times News Reg. Ad Citizen

Publication dates 5/29 + 6/5/86

Publication approved KW Date 8-01-86

Protests filed by: _____

Copies of protests forwarded by _____

Hearing held by _____ Date _____

Recommended for (approval) denial by KW

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 S of Idaho No. 13-7416, 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 o fore August 1, 19 91.

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

   d. Other: SEE ATTACHED SHEET FOR CONDITIONS d thru

Witness my hand this 20th day of August, 1986.

L. Glen Saylor

Chief, Operations Bureau

ATTACHMENT TO CONDITIONS OF APPROVAL

For Permit No. 13-7416

d. Water used under this permit if discharged into a natural channel or subsurface system shall meet Idaho Water Quality Standards.

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

g. A measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works.

h. The diversion and use of water under this permit and any license subsequently issued is subject to review by the Director on the date(s) of expiration of any license 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.

i. 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.

j. This permit is subject to the agreement dated 1/13/1986 between permit holder and protestant(s) to the extent such agreement covers matters within the jurisdiction of the Department of Water Resources.

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

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

m. A separate stream alteration permit from the IDWR is required for any activity in the stream channel other than construction and/or maintenance of the diversion structure. If your proposed construction or operation involves construction of an outfall or any other work in the stream channel other than a water diversion, you must contact the Department and obtain a Stream Channel Alteration permit prior to the start of construction.

n. Use of water under this permit is subject to control by the watermaster of State Water District No. 13N, Mink Creek.

Witness my hand this 20th day of August, 1986.

L. Glenn Saxton

Chief, Operations Bureau

May 13, 1986

Mr. Ernest Carlsen
Assistant Regional Supervisor
State of Idaho Department of Water Resources
150 Shoup - Suite 15
Idaho Falls, Idaho 83402

Dear Mr. Carlsen,

Please find enclosed the corrected amended application for permit on the Mink Creek Hydro Electric project. Also enclosed is the twenty dollar fee for this amendment. Should there be any additional information needed, please advise me.

Sincerely,

Robert N. Fackrell

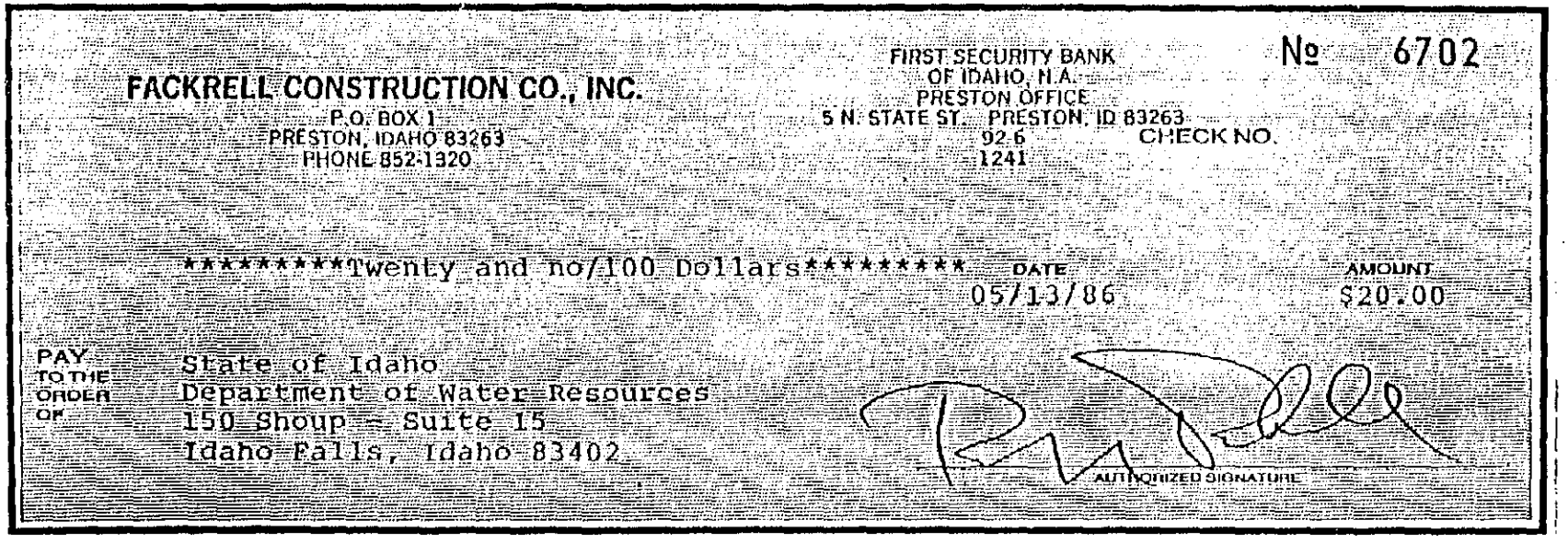
RNF/sk
Enclosure

FACKRELL CONSTRUCTION CO., INC.

P. O. Box #1 • Preston, Idaho 83263 • (208) 852-13
P. O. Box 345 • Richmond, Utah 84333 • (801) 723-21

FACKRELL CONSTRUCTION CO., INC.

Amendment Fee on Mink Creek Water Right



FACKRELL CONSTRUCTION CO., INC.
P.O. BOX 1
PRESTON, IDAHO 83263
PHONE 852-1320

FIRST SECURITY BANK
OF IDAHO, N.A.
PRESTON OFFICE
5 N. STATE ST., PRESTON, ID 83263
92-6
1241

No. 6702

CHECK NO.

**********Twenty and no/100 Dollars**********

DATE 05/13/86

AMOUNT $20.00

PAY TO THE ORDER OF
State of Idaho
Department of Water Resources
150 Shoup - Suite 15
Idaho Falls, Idaho 83402

AUTHORIZED SIGNATURE

"006702" 1:124100064:016 00105 34"

m 202
3

Ident. No. 13-7416

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

AMENDED

APPLICATION FOR PERMIT AMENDED

To appropriate the public waters of the State of Idaho

Name of applicant Robert N. Fackrell Phone 208-852-1522

Post office address P.O. Box 1, Preston, ID 83263

Source of water supply Mink Creek which is a tributary of Bear River

Location of point of diversion is SW ¼ of NE ¼ of Section 23 Township 13S

Range 41E B.M. Franklin County, additional points of diversion if any:

(unsurveyed)

Water will be used for the following purposes:

Amount 100.0 ~~cfs~~ (cfs or ~~acre-feet~~ per annum) Power purposes from 1/1 to 12/31 (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)

Total quantity to be appropriated:

a. 100.0 cubic feet per second and/or b. _____ acre-feet per annum.

Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. concrete and steel diversion structure with a 60" diameter bypass and 48" diameter penstock

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.

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).*

Description of proposed uses:

a. If water is not for irrigation:

(1) Give the place of use of water: NE ¼ of SE ¼ of Section 28 Township 13S Range 41E B.M.

(2) Amount of power to be generated: 3-1 mw horsepower under 467 feet of head.

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

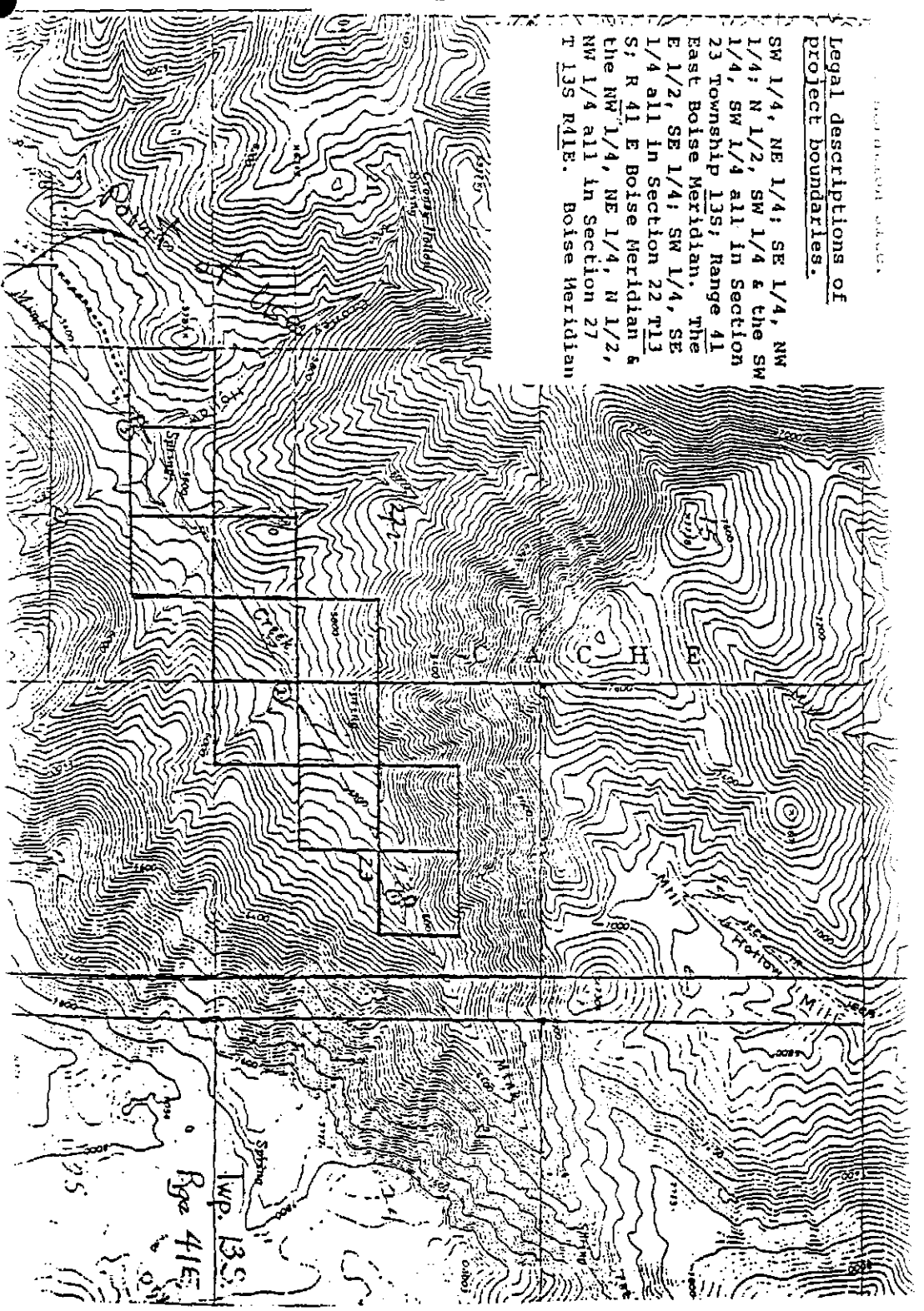
(4) Name of municipality to be served _____, or number of families to be supplied with domestic water _____.

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

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

Legal descriptions of project boundaries.

SW 1/4, NE 1/4; SE 1/4, NW 1/4; N 1/2, SW 1/4 & the SW 1/4, SW 1/4 all in Section 23 Township 13S; Range 41 East Boise Meridian. The E 1/2, SE 1/4; SW 1/4, SE 1/4 all in Section 22 T13 S; R 41 E Boise Meridian & the NW 1/4, NE 1/4, N 1/2, NW 1/4 all in Section 27 T 13S R41E. Boise Meridian



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

(Applicant)

LAND SURVEYORS CONSULTING CIVIL ENGINEERS

ALLRED HUDSON
AND
ASSOCIATES

38 SOUTHEAST FIRST
PRESTON IDAHO
83263 852-1653

40 EAST FOOTHILL AVE.
SODA SPRINGS IDAHO
83276 547-4141

MINK CREEK POWER PROJECT

TAILRACE EASEMENT
July 2, 1986

An easement for construction and maintenance of a tailrace ditch over the following parcel in Section 28, T 13 S, R 41 E, B.M., Franklin County and further described as follows:

Beginning at the East quarter corner of said Section 28, which is S 00°08' E 33.0' by record from a witness corner monument set in 1975 by the B.L.M.; thence S 39°39'27" W 1216.04'; thence S 75°43'22" W 98.05' to the True Point of Beginning, a ½" rod; thence S 75°43'22" W 49.14' to a ½" rod; thence S 87°34'00" W 93.67' to the East end of the diversion dam wingwall; thence along the East bank of Mink Creek N 22°33'41" E 86.09'; thence N 36°40'40" E 61.21'to a ½" rod; thence S 01°41'00" E (S 1° 41 E by record)45.57' to a ½" rod; thence N 84°52'00" E 64.00' (N 84°52' E 64.0' by record) to a ½" rod; thence S 05°08'00" E (S 5°08' E by record) 72.95' to the True Point of Beginning Containing 0.2 acres of land.

CONSULTING CIVIL ENGINEERS

[illegible]

[illegible]
FRESTON [illegible] IDAHO
83263 [illegible]

40 EAST HOOPER AVE.
SODA SPRINGS IDAHO
83276 547-4141

MINK CREEK POWER PROJECT

Power Line & Road Easement In
U.S.A. Property

An easement for access 30 feet wide over the following described property in Section 28, T 13 S, R 41 E., B.M., Franklin County;

Beginning at the East quarter corner of said Section 28 which is S 0°08' E 33.0' by record from a witness corner monument set in 1973 by the B.L.M.; thence S 47°43'52" W 1576.21' (based on astronomic North) to the True Point of Beginning; which is on the center line of said easement and is also on the boundary of a parcel owned by the United States of America and filed under inst. no. 83354 in the official records of Franklin County; thence N 58°38'00" W (N 58°38' W by rec.) 15.62' along said boundary line; thence N 47°34'34" E 39.16'; thence N 21°56'04" E 53.34' to a point on the boundary line of said parcel; thence S 05°08'00" E (S 5°08' E by record) 65.93' along said boundary line; thence S 21°56'04" W 1.47'; thence S 47°34'34" W 37.26' to a point on said boundary line; thence N 58°38'00" W (N 58°38' W by rec.) 15.62' along said boundary line to the True Point of Beginning.

Also an easement for access 30 feet wide, 15 feet on each side of the following described line in Section 28, T 13 S, R 41 E, B.M., Franklin County.

Beginning at the East quarter corner of said Section 28; thence S 49°10'25" W 1462.50' to the True Point of Beginning which is on the boundary line of the parcel filed under inst. no. 83354 in Franklin County; thence N 21°56'04' E 81.20'; thence N 35°01'17" E 146.79'; thence N 44°19'14" E 45.93' to a point which is S 52°50'08" W 1204.67' from the said East quarter corner of Section 28. The side lines of said easement to lengthen and shorten as needed to terminate at the boundary line of said parcel filed under inst no. 83354.

Comptroller of the Currency
Administrator of National Banks

Washington, D.C. 20219

CERTIFICATE

I, Robert L. Clarke, Comptroller of the Currency, do hereby certify that:

1. The Comptroller of the Currency, pursuant to Revised Statutes 324, et seq., as amended, 12 U.S.C. 1, et seq., as amended, has possession, custody and control of all records pertaining to the chartering, regulation and supervision of all National Banking Associations.

2. "First Security Bank of Idaho, National Association", Boise, Idaho, Charter No. 14444, is a National Banking Association formed under the laws of the United States and is authorized thereunder to transact the business of banking on the date of this Certificate.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and caused my seal of office to be affixed to these presents at the Treasury Department, in the City of Washington and District of Columbia, this 13th day of August, 1991.

Comptroller of the Currency

DEAN SMITH IS THE WATERMASTER — DON'T WE WANT TO TELL HIM WE HAVE AUTHORITY TO SHUT OFF THE WATER TO THE HY DRO PLANT IF THEY ARE NOT IN COMPLIANCE?

August 28, 1990

Dean C. Smith
3168 East Hwy 36
Preston, ID 83263

RE: Fackrell Mink Creek Power Plant

Dear Mr. Smith:

You asked some questions about the Mink Creek Power Plant at our hearing in Preston on August 21, 1990. Enclosed are copies of the water right permit and portions of the FERC license granted to Mr. Fackrell.

Mr. Fackrell is required to maintain a constant minimum instream flow of 10.0 cfs except during a 45 day period during the high run-off when he must release a greater amount of water for flushing flows.

The state water right requires that a measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works. The Department will interpret this provision to mean that the permit holder must install both a measuring device in Mink Creek to ensure release of the minimum streamflow, and also a ~~measuring device to measure water being diverted.~~ lockable control device on its diversion so that it may be shut off if necessary.

If water is being diverted without the measuring devices being completed, the Department will take necessary steps to require installation. Furthermore, if the minimum streamflow is not being maintained, and you or other people have knowledge of the failure to maintain the minimum streamflow, please file an affidavit with this office, and the Department will take appropriate action. I am sure the Federal Energy Regulatory Commission would also like to know if its minimum streamflow conditions have not been complied with.

Sincerely,

GARY SPACKMAN, Manager
Water Right Permits Section

GS:js

Enclosure
cc: Robert Fackrell

MICROFILMED
MAY 1 6 1997

August 6, 1991

ROBERT N. FACKRELL
P.O. BOX 1
PRESTON, ID 83263

PROOF ACKNOWLEDGMENT LETTER

RE: PERMIT NO. 13-07416

Dear Permit Holder:

The department acknowledges receipt of the proof of beneficial use form submitted for the above referenced permit. The next step in the process of developing a water right is for the department to conduct a field examination to determine and confirm the use being made of the water.

If you have questions concerning this matter, please feel free to contact the EASTERN Regional Office in Idaho Falls at (208)525-7161.

Sincerely,

Rita Fleck
Secretary/Records Manager

c: IDWR - Region

RECEIVED
AUG 19 1991

ANALYSIS SHEET
for
PROOF OF BENEFICIAL USE

Permit No. 13-7416 Date 7-31-91

GENERAL CONSIDERATIONS
- ✓ Name same as permit?
- ✓ Address same as permit? If no, indicate below.
- ✓ Proof timely received? If no, complete priority advancement below.

SOURCE OF WATER
- ✓ Surface water source
- ____ Ground water source
  - NA Drill permit req'd?
  - ____ Copy in file? Drill permit no. ____
  - ____ Amt paid for drilling permit? ____ Correct?
  - ____ Well log in file?

LICENSE EXAMINATION FEE
- ✓ Required?
- 600.00 Amount submitted?
- ✓ Correct amount?

MEASURING DEVICE
- ✓ Measuring device or access port required?
- ✓ Installed?
- ____ Waiver requested or needed?

DEFICIENCIES OR ACTION ITEMS

Proof acceptable

PRIORITY CALCULATION

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

138587

May 31, 1991

ROBERT N. FACKRELL
P.O. BOX 1
PRESTON, ID 83263

PROOF DUE NOTICE

RE: PERMIT NO. 13-07416

Dear Permit Holder:

One of the conditions of approval of the above referenced water permit was that proof of the extent of your beneficial use must be submitted to this office on or before August 1, 1991. (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 completed your project, and you or a previous owner of this permit have not received a prior extension of time, you may request an extension of time if the delay is for reasonable cause as provided in Section 42-204, Idaho Code. If you have been prevented from proceeding by a governmental agency or by litigation which might bring title to the water in question, more than one extension of time can be granted. An extension of time request form is enclosed for your convenience.

Either an acceptable proof of beneficial use submittal or an acceptable request for an extension of time must be received by this department on or before the above described proof due date. 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

RECEIVED
AUG 19 1991

October 01, 1990

RECEIVED
OCT 4 1990
Department of Water Resources

Mr. R. Keith Higginson, Director
State of Idaho Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, Idaho 83720

RE: Permit to Appropriate Water No. 13-7416

Dear Keith,

In response to the letter of Mr. Gary Spackman dated September 26, 1990, I offer the following:

1. At no time that I am aware of has the Mink Creek been dewatered between my point of diversion and the point of discharge back into Mink Creek.

2. I have been contacted on occasion by Mr. Smith and advised that I needed to increase my bypass flow due to water use by Mink Creek Irrigation Company. On each and every occasion I have responded immediately to his request to increase the bypass flow.

3. There has not, to my knowledge, ever been any kind of "fish kill" caused by the operation of the Mink Creek Hydroelectric Facility. In fact, I received in the mail the annual fish population study done by Dr. Jack Griffith on the same day that I received the above referenced letter from Mr. Spackman. I have attached a copy of the study for your review and files.

4. I have made every attempt to cooperate fully with Mr. Smith with regard to the management of the Water of Mink Creek so as to be in compliance with my responsibilities. I will continue to make every effort to cooperate.

MICROFILMED
AUG 19 1991

FACKRELL CONSTRUCTION CO., INC.

P. O. Box #1 • Preston, Idaho 83263 • (208) 852-1320
237 S. 800 E. • River Heights, Utah 84321 • (801) 752-7000

5. I have concern that the heated political climate surrounding the request for water right on the Bear River Narrows project may have in some way entered into this matter.

In summary, I have in the past fully cooperated in the management effort on Mink Creek. I have made every effort to see that appropriate flows have been maintained. I have provided bypass equipment that is manually operated for the use of Mr. Smith if he deems it necessary. And, I certainly intend to continue to cooperate fully.

Cordially,

Robert N. Fackrell

RNF/sf
cc: FERC, J. Mark Robinson
IDF&G, Will Reed
Enclosure

MICROFILMED
AUG 19 1991

FISH POPULATIONS

IN MINK CREEK, FRANKLIN COUNTY, IDAHO, IN 1990

(FERC PROJECT 8646-001)

Rob - here's 1990 report for you to distribute to agency folks. Fish numbers should make you happy - they continue to increase!

Jack

Prepared By:

J. S. Griffith
Box 8007
Pocatello, Idaho 8320

23 September 1990

UNPROCESSED
AUG 19 1991

The Mink Creek Hydroelectric Project was completed in 1986 and modified flow and fish habitat in a portion of Mink Creek, Franklin County, Idaho. Licensing conditions included monitoring of changes in fish habitat and trout populations following construction of the project. The objective of this report is to describe the fish population in the 2.9-km section of Mink Creek affected by the hydropower project in 1990, during the fourth summer of operation.

A total of thirty-four pools were created during project construction by the placement of log and rock weirs. Trout in the eighteen of those pools selected for analysis were emunerated by electrofishing. Fish in the six "control" sections that were not affected by construction of the habitat structures but are partially dewatered in summer by project operation were also sampled. Changes in trout populations are assessed by comparisons with pre-project fish population data.

STUDY SITE

Mink Creek is a spring-fed headwater stream originating in the Bear River range approximately 9.6 km east of the Oneida Narrows Reservoir on Bear River. The project is located within sections 22, 23, and 27, Township 13 South, Range 41 East, Boise Meridian, Franklin Co., Idaho. The stream drains an area of 50 km^2. Stream elevation in the project reach ranges from 1777 m MSL at the intake structure to 1634 m at the powerhouse. Stream gradient exceeds 20% above the intake structure and averages 5% for the project stream reach.

RECEIVED
AUG 19 1991

RESULTS

On 26-27 August 1990, the numbers of trout using the eighteen pools that had been previously sampled in 1987-89 were assessed by electrofishing with a 300 volt DC backpack unit. Population estimates were made using the two-pass removal procedure. As in 1989, one pool (number 11) could not be sampled by electrofishing because beaver had constructed a dam over the top of the structure and the pool was too large and deep to sample effectively. In 1990, trout in this pool were counted by a snorkeler in a wet suit.

In 1990, a total of 48 age-1 and older cutthroat trout (Oncorhynchus clarki) were collected in the seventeen pools exclusive of pool 11 and an additional 11 individuals in pool 11 (Table 1). This represents a doubling over 1987-89 numbers of age-1 and older cutthroat trout (Tables 2-4).

Also in 1990, numbers of age-1 and older brook trout (Salvelinus fontinalis) increased substantially over 1987-89 levels in pools. A total of 832 older brook trout were collected in the seventeen pools exclusive of pool 11 and an additional 198 individuals were counted in pool 11 (Table 1). In 1988, the number was 449 and in 1989, 522 age-1 and older brook trout were collected (Tables 3 and 4). Size of both species of trout captured in 1990 was comparable to that in 1987-89.

As in the previous two years, age-0 cutthroat trout approximately 40 mm in length were seen in some sections but were not systematically collected because of their small size. Age-0 brook trout (70-100 mm) were less abundant in 1990 than in previous years (138 individuals in 1990 vs. 268 in 1989; Tables 1 and 4).

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Six "control" sections, not affected by construction of the habitat improvement structures, were sampled in 1990. The numbers of age-0 and age-1 and older trout of both species in 1990 were comparable to 1988-89 levels (Table 5).

Additional snorkeling observations were made in the vicinity of the project powerhouse on 27 August 1990. The large pool extending from the powerhouse outfall downstream to the irrigation diversion headgate held in excess of 300 trout larger than 20 cm in length. More than half of these fish were cutthroat trout, some approximately 40 cm long. The remaining fish were brook trout.

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Table 1. Numbers of trout collected by electrofishing in pools in Mink Creek, 26 August 1990.

Pool	cutthroat trout		brook trout	
	number	length, cm	number age 1 & older	number age 0
1	7	15-37	71	9
2	6	13-24	28	5
7	4	15-21	48	19
8	10	16-21	118	20
9	0	-	30	6
11	-	-	--	-
12	5	12-27	81	6
13	2	26-33	26	8
14	0	-	12	2
17	1	14	80	11
18	2	12-24	92	8
19	1	15	41	4
26	3	16-33	50	9
27	5	16-37	75	8
28	0	-	14	4
30	0	-	9	9
31	1	36	6	6
32	1	19	51	4
total	48		832	138

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

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

September 26, 1990

Robert N. Fackrell
P.O. Box 1
Preston, ID 83263

RE: Permit to Appropriate Water No. 13-7416

Dear Mr. Fackrell:

The watermaster for Water District #13-N, Mink Creek, has informed the Department that, on several occasions, Mink Creek has been dewatered between the point of diversion for your hydropower plant, and the point of discharge back to Mink Creek. The watermaster represents that the stream has been dewatered below the Mink Creek Irrigation Company diversion, which is located within the bypass reach. The watermaster represents that you are not passing sufficient water to satisfy both the Mink Creek Irrigation Company rights, and the 10.0 cfs minimum bypass flow. Finally, the watermaster represents that the dewatering of Mink Creek has caused substantial fish kills in Mink Creek.

The purpose of this letter is to notify you of the way the hydropower project, including the required bypass flow, will receive water relative to other existing proprietary water rights. IDWR is the state agency responsible, through its local water district, for distributing water to those having the right to use it. IDWR believes that you need to be advised of its intended distribution plan.

The agreement between you and the protestants to application for permit no. 13-7416 states that a minimum bypass flow of 10.0 cubic feet per second must be maintained within the bypass reach, but then only requires that it be measured at the hydropower point of diversion. The FERC license incorporates the language of the agreement between the parties almost verbatim.

The watermaster will be instructed to deliver sufficient water past your point of diversion to satisfy proprietary rights plus the minimum bypass flow. At certain times of the year, Mink Creek Irrigation Company diverts 14.77 cfs. The watermaster will adjust your diversion gates to ensure that the proper amount of water is delivered downstream.

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The watermaster represents that no measuring device is located below the Mink Creek Irrigation Company diversion. To ensure that the watermaster can measure the flows, the Department

may require the installation of a measuring device below the Mink Creek Irrigation Company's point of diversion.

Please consider this letter notice that, if flows in Mink Creek are reduced below 10.0 cfs in any portion of the bypass reach, the Department will seek civil penalties pursuant to Idaho Code § 42-351 for illegal diversion of water and non-compliance with the terms of the water right permit. The Department may also seek remedies pursuant to Idaho Code § 42-311.

Finally, assignment to the watermaster of monitoring your diversion, will require a great deal more of his time. The Department may impose some requirement for you to compensate the watermaster for your proportional share of extraordinary regulation not normally needed for regular consumptive water rights.

Respectively,

Gary Spackman

GARY SPACKMAN, Manager
Water Right Permits Section

GS:js

cc: Eastern Region
FERC, J. Mark Robinson
F & G, Will Reed
Dean Smith

AUG 19 1991

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

STATEHOUSE
BOISE, IDAHO 83720
(208) 334-4440
AUGUST 24, 1986

FACKRELL, ROBERT N.
P.O. BOX 1
PRESTON, ID 83263

PERMIT APPROVAL NOTICE

RE: PERMIT NO. 13-7416

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.

BE SURE TO NOTE THE SPECIAL CONDITION REQUIRING YOU TO INSTALL A MEASURING DEVICE AND LOCKABLE CONTROLLING WORKS THAT WILL ENABLE THE WATERMASTER TO CONTROL YOUR RATE OF DIVERSION.

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.

SINCERELY,

GARY SPACKMAN
SUPERVISOR, WATER ALLOCATION SECTION

GS: SC
ENCLOSURES

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1mw = 1000 kW

3.1 mw = 3100 kW

POWER CALCULATIONS FOR APPLICATION NO. 13-7416

P = Kilowatts .74 X hp

Q = cfs 100.

H = feet 467

e = efficiency

1.) Affidavit of Residency
2.) Ownership of Facilities
3.) *Financial Ability — see attached to 5/29/84 correspondence
4.) Feasibility of Project
a. Plans, drawings
b. Economic analysis
5.) *Compliance w/FERC — License
*only for projects of more than 25 cfs or more than 500 horsepower.

$$e = \frac{P(11.8)}{QH} = \frac{3100(11.8)}{100 \times 467} = \frac{36580}{46700} = 0.78$$

Based on the above calculations the proposed project must have an 78 % efficiency.

****

OVERLAP REVIEW per VAX:

P/D none (13-7416 does not show up - needs coding correction)

P/U 11-0834, 11-0835B, 11-0835A, 11-0836A } all irrig. rights

BYPASSED AREA by section - no power rights -

Recommend LH for bypassed irrigation rights — KW 8/19/86

Form No. 202a
3/79

State of Idaho

AMENDED Department of Water Resources AMENDED

APPLICATION FOR PERMIT ANALYSIS SHEET

INITIAL REVIEW BY: KEITH C. WILSON APPLICATION NUMBER: _____

CHECK: 19 MAY 1986

- ☑ Source.
- ☑ Point of diversion.
- ☑ County.
- ☑ Quantity of water and period of use.
- ☑ Description of diverting works.
- ☑ Time required for beneficial use of water.
- ☑ Place of use or acres irrigated.
- ☑ Map.
- ☑ Signature.
- ☑ Fee.

Field check by: _____
Date: _____
Comments: _____

- ☐ Yes ☑ No Field check required.
- ☐ Yes ☑ No Critical groundwater area.
- ☐ Yes ☑ No Request dam safety information. Sent by: _____ Date: _____
- ☑ Yes ☐ No* In form to receipt.

*REQUEST THE FOLLOWING ADDITIONAL INFORMATION FROM THE APPLICANT: _____

SEND COPIES TO:

☐ Idaho State Health Department.	Copies sent by: _____	Date: _____
☑ Idaho Fish and Game Department.	MD	6-3
☐ Idaho Department of Lands.		
☐ U.S. Bureau of Land Management.		
☑ U.S. Forest Service.	MD	6-3
☑ Other WD 13 N	MD	6-3

PROCESSING:

- ☐ Yes ☑ No Platted by: _____ Map No. _____
- ☐ Yes ☑ No Other rights on same place of use. _____
- ☑ Yes ☐ No* In form for advertising. Final date for protests: ~~6-16-86~~ ~~6-23-86~~ 7-21-86
- ☑ Yes ☐ No Protests received. If yes, record information on 4th page of application.

FINAL REGIONAL PROCESSING REVIEW:

statewide
- ☑ Affidavit of publication received. Date: _____
- ☑ Application published correctly. If not, record action taken: _____
- ☑ Fee amount, receipt date & number, recorded on application.
- ☑ Publication dates and paper, recorded on application.

withdrawn
- ☑ Protests, dates, withdrawal, etc., recorded on application.
- ☑ Recommendation & initial, recorded on application.
- ☑ Yes ☐ No Measuring device required.
- ☐ Yes ☑ No Access port required.
- ☑ Yes ☐ No Will water be delivered by watermaster? If yes, what district? 13N
- 5-18-84 Date of priority recommended.

Special conditions of approval or cover letter. Standard conditions of approval for hydropower, in a water district, with a FERC license.

01E, 05 (13N), 08A, 17G, 04, 17K, 25, ~~26A~~, 27, 30 N/A Power 25 cfs.

file copy destroyed KW

By: Ernest Carlson, Date: Aug 13, 1986.

STATE OFFICE REVIEW: 17G 17K 20A (1-13-1986) 25 27 30

L08, L14 09E 08A 04 01E 05 (13N, 17N, 17K CR.)

☐ See attached sheet for more information.

By: KW Date: 8/19/86

RECEIVED AUG 18 1986

Receipt letter 5/30

Department of Water Resources

POINT OF DIVERSION AND STREAM INDEX INFORMATION

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH
____	__	___	___	__	_	___.__

IDAHO STREAM CODE INDEX

___.___.___.___.___.___.___.___.___.___

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH
____	__	___	___	__	_	___.__

IDAHO STREAM CODE INDEX

___.___.___.___.___.___.___.___.___.___

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH
____	__	___	___	__	_	___.__

IDAHO STREAM CODE INDEX

___.___.___.___.___.___.___.___.___.___

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH
____	__	___	___	__	_	___.__

IDAHO STREAM CODE INDEX

___.___.___.___.___.___.___.___.___.___

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

85 FERC ¶62,580

Robert Fackrell — Project No. 8646-001
Cook Electric, Inc. — Project No. 7957-000

ORDER ISSUING LICENSE (5MW OR LESS) AND DISMISSING APPLICATION FOR PRELIMINARY PERMIT WITH PREJUDICE

(Issue June 30, 1986)

Robert Fackrell has filed a license application under Part I of the Federal Power Act (Act) to construct, operate, and maintain the Mink Creek Project, located in Franklin County, Idaho, on Mink Creek, a tributary of the Bear River. The project would occupy lands of the United States within the Caribou National Forest.

Notice of the application has been published. The motions to intervene that have been granted and the comments and protests filed by agencies and individuals have been fully considered in determining whether to issue this license, as discussed below.

Competing Preliminary Permit Application

The license application was filed in competition with a preliminary permit application filed by Cook Electric, Inc. for Project No. 7957. The permit applicant failed to substantiate the technical, environmental, economic, and other aspects of its proposal and was therefore dismissed without prejudice so that it could be automatically reinstated if the competing development application were subsequently denied. See Dennis v. McGrew, 32 FERC ¶61,229 (1985). The licensee has met the statutory and regulatory license requirements, including demonstrating its ability to carry out its plans. The preliminary permit application is therefore dismissed with prejudice.

Summary of Findings

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license. Analysis and support for related license articles are provided in the Safety and Design Assessment attached to this order.

An Environmental Assessment (EA) was issued for this project. Background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment are contained in the EA attached to this order. Issuance of this license is not a major federal action significantly affecting the quality of the human environment.

The Director, Office of Hydropower Licensing, concludes that the project would not conflict with any planned or authorized development, and would be best adapted to comprehensive development of the waterway for beneficial public uses.

The Director orders:

(A) The application for preliminary permit for Project No. 7957 filed by Cook Electric, Inc. is dismissed with prejudice.

(B) This license is issued to Robert Fackrell (licensee) for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Mink Creek Project. 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 provision of the Act.

(C) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by Exhibit G:

Exhibit G-	FERC No. 8646-	Showing
1	5	Facility Site Plan (revised 05/86)
2	6	Facility Site Plan (revised 05/86)

(2) Project works consisting of: (a) a 5-foot-high, 280-foot-long rock rubble core diversion dam at elevation 5,830 feet; (b) a 40-foot-wide reinforced concrete spillway; (c) a 14-foot-high, 30-foot-long reinforced concrete intake structure having a steel trashrack and two 6-foot by 6-foot gates to control flows; (d) a 60-inch-diameter steel bypass pipe located adjacent to the penstock, to convey excess water back into the stream; (e) a 4-foot-diameter, 11,300-foot-long buried steel penstock terminating at a Pelton turbine; (f) a 24-foot-wide, 30-foot-long metal powerhouse containing one 3.1-MW generating unit with an estimated average annual energy output of 11,094 MWh, operating under a head of 430 feet; (g) a 500-foot-long earthen tailrace; (h) 4.16-kV generator leads; (i) a 4.16/12.5-kV transformer; (j) a 6-mile-long, 12.5-kV

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FERC LICENSE #8646-001

transmission line tying into an existing Utah Power and Light Company line; and (k) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F recommended for approval in the attached Safety and Design Assessment.

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

(D) The Exhibit G described above and those sections of Exhibits A and F recommended for approval in the attached Safety and Design Assessment are approved and made part of the license.

(E) This license is subject to the following articles submitted by the United States Department of Agriculture, Forest Service under section 4(e) of the Act:

Article 101. Within 6 months following the date of issuance of this license and before starting any activities of a land-disturbing nature, the licensee shall file with the Director, Office of Hydropower Licensing, a special-use authorization approved and enforceable by the Forest Service.

The licensee may not commence activities authorized in the license and Forest Service special-use authorization until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, instructs otherwise.

Article 102. Each year, on or about the anniversary date of the license, the licensee shall consult with the Forest Service with regard to measures needed to ensure protection and development of the natural resource values of the project area. Within 2 months following said meeting, the licensee shall file a report with the Commission of any recommendations made by these agencies. The Commission reserves the right, after notice and opportunity for hearing, to require changes in the project and its operation which may be necessary to accomplish natural resource protection and development.

Article 103. Licensee shall maintain in the bypassed stream reach a continuous minimum flow as shown on the quantification below, and as measured immediately downstream from the point of diversion on Mink Creek, for maintaining "favorable conditions for water flows" and for the protection of fish and wildlife resources. The licensee may temporarily modify minimum flows if required by emergencies beyond the control of the licensee. The licensee may also modify minimum flows for short periods upon mutual agreement between the licensee and the Forest Service.

Instream Flow Claim: a continuous instream flow equivalent to an average of 17,000 acre-feet per year (39.1% of historic flow) defined and distributed as follows:

a. Minimum flow rates: the rate for Day 1 and for each and every succeeding day or period throughout the entire year as follows:

DURATION	STREAMFLOW (CFS)
Day 01 thru 04	60.0
Day 05 thru 11	75.0
Day 12 thru 18	90.0
Day 19 thru 25	105.0
Day 26 thru 32	120.0
Day 33 thru 39	150.0
Day 40	130.0
Day 41	110.0
Day 42	90.0
Day 43	70.0
Day 44	50.0
Day 45	30.0
Day 46 thru Dec. 31	10.0
Jan. 1 thru day 1	10.0

b. Day 1: the day that flow attains a rate of 90.0 cfs and equals or exceeds that rate for 24 hours, but in no event earlier than April 1.

In the event that natural flows do not attain the rates decreed above, the United States shall be entitled to the natural flows actually occurring during the time periods described above.

Article 104. Within 1 year from the issuance of this license and before starting any activities of a land-disturbing nature, the licensee in consultation with the Forest Service, shall file a fish and wildlife habitat mitigation plan approved by the Forest Service with the Director, Office of Hydropower Licensing. This plan shall identify requirements for construction and mitigation measures to meet Forest Service fish and wildlife habitat objectives and standards. The plan also shall include a schedule for accomplishing these objectives and standards and shall identify any needs for additional studies.

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The licensee may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, instructs otherwise.

Within 2 months following completion of the in-stream flow study, the licensee shall file the final mitigation plan incorporating any study recommendations approved by the Forest Service with the Director, Office of Hydropower Licensing.

The licensee may not commence activities affected by the final plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, instructs otherwise.

Article 105. Within 1 year following the date of issuance of this license, and before starting any activities of a land-disturbing nature, the licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for accommodation of project-induced recreation.

The licensee may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, instructs otherwise.

Article 106. Within 1 year following the date of issuance of this license and before starting any activities of a land-disturbing nature, the licensee shall, after consultation with the Forest Service, file with the Director, Office of Hydropower Licensing, a plan for the operation and maintenance of the reservoir approved by the Forest Service. The plan shall address at least the following: Water storage and releases, including storage limitations (if any), dates and/or criteria for filling and release; procedures for flood conditions; erosion prevention in the reservoir area and spillway channel; and trash and debris removal. The plan shall include an implementation schedule, maintenance program, and evidence of agency consultation.

Article 107. Within 1 year following the date of issuance of this license and prior to the engaging of any activities of a land-disturbing nature, the licensee, in consultation with the Forest Service, shall complete a water quality study to assess the impact of the project on the water quality of Croney Hollow Springs and file the study with the Director, Office of Hydropower Licensing, along with comments from the above agency. The Director may approve the study or require its modification. If the results of the approved study indicate that changes in project structures or operations are necessary to maintain water quality standards of the State of Idaho, licensee shall file with the Commission a

mitigation schedule approved by the Forest Service, for implementing the specific changes in project structures or operations. At the same time, the licensee shall send copies of the schedule to the agencies consulted.

The licensee may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, instructs otherwise.

Article 108. Within 1 year following the date of issuance of this license, and before starting any activities of a land-disturbing nature, the licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for the control of erosion, stream sedimentation, dust, and soil mass movement.

The licensee may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, instructs otherwise.

Article 109. Within 1 year following the date of issuance of this license and at least 60 days before starting any activities of a land-disturbing nature, the licensee shall file a plan approved by the Forest Service with the Director, Office of Hydropower Licensing, for oil and hazardous substances storage and spill prevention and cleanup.

The plan shall require, at a minimum, the licensee to maintain in the project area a cache of spill cleanup equipment suitable to contain any spill from the project; periodically inform the Forest Service of the location of the spill cleanup equipment on National Forest System lands and of the location, type, and quantity of oil and hazardous substances stored in the project area; and to inform the Forest Service immediately of the nature, time, date, location, and action taken for any spill.

The licensee may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, instructs otherwise.

Article 110. Within 1 year following the date of issuance of this license and before starting any activities of a land-disturbing nature relative to the construction of the proposed project features or facilities, the licensee shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for the design and construction of the project facilities in order to preserve or enhance its visual character. The plan

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shall consider facility configurations and alignments, building materials, color, conservation of vegetation, landscaping, and screening. Project facilities include, among other things, the diversion structure, penstock, powerhouse, transmission lines and corridor, and all access roads.

The licensee may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing, instructs otherwise.

Article 111. Licensee shall, prior to any changes in the location of any existing or proposed project features or facilities, or any changes in the proposed uses of project lands and waters, or divergence from any approved exhibits filed with the Commission, consult and cooperate with the Forest Service in regard to measures needed to ensure the protection and development of the natural resource values of the project area that could be affected by such changes or divergence. Within 60 days following any consultations and prior to any such changes or divergence, the licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of the Forest Service. This article does not relieve the licensee from the requirements of Article 3 of this license. In the event that Forest Service approval of the changes cannot be secured, the proposed changes or modifications shall be considered to be a substantial alteration and must be submitted to the Commission for approval in accordance with Article 2.

Article 112. Licensee shall not use pesticides or herbicides on National Forest System (NFS) lands for any purpose without the prior written approval of the Forest Service. Each year, on or about the anniversary date of the license, the licensee shall file a pesticide and herbicide use plan approved by the Forest Service with the Director, Office of Hydropower Licensing. Exceptions to this schedule may be allowed only when unexpected outbreaks of pests require control measures that were not anticipated at the time the annual report was submitted. At that time the Forest Service may grant an emergency approval. The licensee shall, within 1 month, file a copy of this approval with the Director, Office of Hydropower Licensing. Only those materials registered by the U.S. Environmental Protection Agency for the specific purpose planned will be considered for use on National Forest System lands. Label instructions will be strictly followed in the preparation and application of pesticides and disposal of excess materials and containers.

Article 113. Licensee shall construct the transmission line in such a manner so it will minimize the hazard to raptors and other birds. (Reference: "Suggested Practices for Raptor Protection on Powerlines." Edison Electric Institute 1981.")

(F) This license is subject to the articles set forth in Form L-2 , (October 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States," except Article 20. The license is also subject to the following additional articles:

Article 201. The licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued:

a. For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 4,130 horsepower.

b. For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 12 acres of its lands, a reasonable annual charge as determined by the Commission in accordance with its regulations, in effect from time to time.

Article 202. Pursuant to Section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of 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 at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts 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 annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost

for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs 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 (400 basis points).

Article 203. The licensee shall clear and keep clear to an adequate width all 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 result from maintenance, operation, 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. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

Article 301. 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 302. The licensee shall at least 60 days prior to start of construction, submit one copy to the Commission's Regional Director and two copies to the Director, Division of Inspections, of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The Director, Division of Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 303. The licensee shall within 90 days of completion of construction file, for approval by the Commission, revised Exhibits A, F, and G to describe and show the project as built.

Article 401. The licensee shall consult with the Idaho Department of Fish and Game, the U.S. Fish and Wildlife Service, the Soil Conservation Service, and the Forest Service before preparing the plan required by article 108, and shall include documentation of agency consultation when filing the plan with the Commission. The plan shall apply to project related activities on all project lands.

Article 402. The licensee shall construct and operate streamflow gages as required by standard license article 8 in the bypass reach, including side channels, of Mink Creek below the project dam in a manner to allow continuous monitoring of the Mink Creek Project minimum flows required by article 103. Further, the licensee shall annually make available to the U.S. Fish and Wildlife Service, Forest Service, the Idaho Department of Fish and Game, and Portland Office Regional Director, the record of minimum flows obtained from these gages.

Article 403. The licensee, after consultation with the Forest Service, the Idaho Department of Fish and Game, and the U.S. Fish and Wildlife Service, shall develop and shall implement a plan to construct fish habitat enhancement structures in the bypass reach of Mink Creek. The plan shall include, but shall not be limited to, the number and location of the structures and a description of procedures to be implemented in maintaining these structures. A copy of the plan, including documentation of agency consultation on the plan, shall be submitted to the Commission within 4 months from the date of issuance of the license. Unless the Director of the Office of Hydropower Licensing instructs otherwise, the licensee shall construct fish habitat enhancement structures in Mink Creek as specified by the plan 90 days after filing the plan. The Commission reserves the right to require modification to the plan.

Article 404. The licensee, after consultation with the Forest Service, the U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game, shall develop a plan to monitor changes in fish populations associated with operation of the Mink Creek Project. The plan shall include a schedule for filing the results of the fish population monitoring and a schedule for filing recommendations for modifying project structures or operation in the event that the results indicate that project operation has adversely affected the fish resources of Mink Creek despite the mitigation requirements of this license. The licensee, within 4 months from the date of issuance of the license, shall file the plan for Commission approval. Comments from the aforementioned agencies shall be included in the filing.

Article 405. The licensee, after consultation with the U.S. Fish and Wildlife Service, the Forest Service, and the Idaho Department of Fish and Game, shall file for Commission approval, within 4 months from the date of issuance of this license, a plan to mitigate in kind for the loss of riparian habitat from project construction and operation. The plan shall include but shall not be limited to: (a) identification of the type of habitat to be used for replacement; (b) a determination of the location and the number of acres of habitat to be used for replacement; (c) a discussion of the specific construction and maintenance techniques to be used for onsite mitigation; (d) a schedule of implementation;

and (e) a monitoring program to determine the effectiveness of mitigative measures. Documentation of agency consultation on the mitigative plan shall be included in the filing.

Article 406. The licensee, after consultation with the U.S. Fish and Wildlife Service, the Forest Service, and the Idaho Department of Fish and Game, and within 4 months from the date of issuance of this license, shall file a transmission line design plan, prepared in accordance with the guidelines set forth in the publication, Suggested Practices for Raptor Protection on Power Lines, Raptor Research Report no. 4, issued by the Raptor Research Foundation, Inc., in 1981. The plan shall include detailed design drawings of the transmission line, clearly showing phase spacing, configuration, and grounding practices, a construction schedule, and agency comments on the adequacy of the design plan. Unless the Director of the Office of Hydropower Licensing instructs otherwise, the licensee may commence transmission line construction 90 days after filing the plan.

Article 407. The licensee, prior to any construction other than that specifically authorized, shall consult with the Idaho State Historic Preservation Officer (SHPO) and the Forest Service (FS) Supervisor of the Caribou National Forest about the need for cultural resource survey and salvage work. The licensee shall file documentation of the nature and extent of consultation, including a cultural resources management plan and a schedule to conduct any necessary investigation with the Commission, together with copies of letters from the SHPO and FS accepting the plan, 6 months before undertaking any construction activity in the location of such investigations. The licensee shall make available funds in a reasonable amount for any required work. If the licensee discovers any previously unrecorded archeological or historical sites on National Forest System lands or on other project lands during the course of the construction or development of any project works or other facilities at the project, the licensee shall stop construction activity in the vicinity of such archeological or historic sites and shall consult with FS, the SHPO, and a qualified archeologist to determine the significance of the sites and to develop a mitigative plan for the protection of significant archeological or historic resources. Before starting to excavate or remove any archeological resource located on National Forest System lands, the licensee shall secure a permit from FS authorizing such excavation or removal. If the licensee, the SHPO, and FS cannot agree on the amount of money to be expended on archeological or historic work related to the project, the Commission reserves the right to require the licensee, at its own expense, to conduct any necessary work.

Article 408. (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) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family 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 submit 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.

(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.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(G) This order is issued under authority delegated to the Director and is final unless appealed under Rule 1902 to the Commission by any party within 30 days from the issuance date of this order. Filing an appeal does not stay the effective date of this order or any date specified in this order. The licensee's failure to appeal this order shall constitute acceptance of the license.

Richard T. Hunt

Richard T. Hunt
Director, Office of
Hydropower Licensing

APPENDIX A
SAFETY AND DESIGN ASSESSMENT
MINK CREEK PROJECT
FERC NO. 8646-001 IDAHO

DAM SAFETY

The Commission's Fort Worth Regional Director classified the proposed earth and rockfill Mink Creek dam as low hazard on November 8, 1984. The dam would impound approximately two acre-feet of water at elevation 5833.5 msl. The flood wave that would result from failure of the dam would be less than 3.0 feet high, thus posing no threat to downstream life or property. The dam would be located in a national forest, and there are no downstream structures within the inundation limits of the dambreak flow.

PROJECT DESIGN

Water would be diverted from Mink Creek into a concrete intake structure. Gates in the intake structure would regulate the flow into the 60-inch-diameter steel bypass conduit and the 48-inch-diameter buried penstock. The penstock would convey flow 11,300 feet to the generating unit located in a metal powerhouse. Flow from the turbine would then be discharged via a tailrace to Mink Creek. The proposed powerhouse, diversion structure, and penstock designs comply with acceptable engineering design criteria. The Commission's staff concluded that project construction can be completed within two years after commencement. Within 90 days of completion of construction the licensee shall file revised Exhibits A and F to show the project as-built.

EXHIBITS

The following portions of Exhibit A and the following Exhibit F drawings conform to the Commission's rules and regulations and should be included in the license.

Exhibit A. General Technical Information filed with the Commission April 29, 1985, page one.

Exhibit F Drawing	FERC No. 8646-	Description
F-1	1	Mink Creek Hydroelectric Facility Powerhouse Layout revised 4/25/85. (Cross section view)

Exhibit F Drawing	FERC No. 8646-	Description
F-2	2	Mink Creek Hydroelectric Facility Powerhouse Layout revised 4/25/85. (Plan view)
F-3	3	Plan View and Profile of the Proposed Penstock 0+00 to 51+20.
F-4	4	Plan View and Profile of the Proposed Penstock 51+20 to 84+90.

APPENDIX B 1/
ENVIRONMENTAL ASSESSMENT
DIVISION OF ENVIRONMENTAL ANALYSIS, OFFICE OF HYDROPOWER LICENSING
FEDERAL ENERGY REGULATORY COMMISSION

Mink Creek Project
FERC No. 8646-001--Idaho
May 15, 1986

I. APPLICATION

Robert Packrell (applicant) applied on September 18, 1985, for a major license, 5 megawatts (MW) or less, for the Mink Creek Hydroelectric Project. The application was supplemented on March 26, May 10, and December 3, 1985, and March 6 and May 9, 1986.

The Mink Creek Project would be located on Mink Creek in Franklin County, Idaho, approximately 13 miles northeast of Preston, Idaho (Figure 1). Mink Creek is a tributary of the Bear River within the Great Salt Lake Basin.

The project would utilize 12 acres of federal land within the Cache National Forest, administered by the Forest Service (FS), Montpelier Ranger District, of the Caribou National Forest.

II. RESOURCE DEVELOPMENT

A. Purpose

The proposed project would provide an estimated average of 11,094,000 kilowatthours (kWh) of electrical energy per year to Utah Power and Light Company, a local utility.

B. Need for Power

There is at this time available data to support an opinion that growth in the demand for electric power and energy (due to population growth, continuing demand for additional amenities, etc.) will continue. Given positive load growth and an existing resource base, a reliability need for additional resources can at any time be projected to exist at some time in the future for any power system. Additional resources would have to be obtained for any system at some point in time in order to meet projected additional load requirements with the same degree of reliability established by an existing criterion for the system. Timing of the need would vary in different systems dependent upon, among other things, the rates of load growth, the load characteristics, the available existing power resources and the reliability criteria established for each system.

1/ Illustrations referenced in the text are omitted from this document due to reproduction requirements.

Installation of a power resource prior to the existence of a reliability need can be justified if early installation of the resource will over its operating life provide benefits relative to operation of the system with the most likely alternative resource installed to meet the reliability need when it occurs. The early installation of a hydroelectric resource and the use of hydroelectric energy to displace more expensive thermal energy generation coupled with the incremental deferral of a thermal capacity alternative can produce economic benefits. Fossil fuel conservation and reduced atmospheric impacts of fossil fuel combustion are additional benefits of hydroelectric displacement and deferral of the thermal generation.

The project is located in the Northwest Power Pool Area (NWPP) of the Western Systems Coordinating Council (WSCC) region. In the April 1985, Coordinated Bulk Power Supply Program, WSCC shows that the NWPP is projecting the addition of 3,214 MW of coal-fired and 1,650 MW of nuclear-powered steam generating capacity and 73 MW of cogeneration capacity to meet projected load growth over the next 10-year period. The project could provide a small portion of this resource requirement.

The staff's economic analyses show that benefits are possible through installation of the project and, therefore, show a need for the project. From the time the project goes on line until needed to serve load directly, it would be available to off-load existing fossil-fueled electric generating plants located in the NWPP and adjacent areas, and thereby, to conserve nonrenewable resources, and to reduce the emission of noxious by-products caused by the combustion of fossil fuels.

Additionally, the applicant has negotiated a contract to sell the project power and thereby has established a need for the project.

C. Economic Analysis

The applicant has received a bid price of $2,381,000 for construction of the project. Using this cost, an estimated annual generation of 11,094,000 kWh, and discounting techniques, the staff estimates the levelized cost of the project to be 33.1 mills/kWh or $367,000 annually. The staff concludes the project is economically feasible because the cost of energy from the project is projected to be less than the value of energy under the contract.

A signed agreement with Utah Power and Light Company for power sales was provided by the applicant and served as a value of power in assessing the feasibility of the project. The levelized power value amounts to 47.0 mills/kWh or about $521,000 per year.

D. Comprehensive Development

The project's 3,075-kilowatt (kW) unit would have a maximum hydraulic capacity of 100 cubic feet per second (cfs). The project would develop a gross head of 467 feet utilizing a 48-inch-diameter penstock, with head loss through the water passages resulting in an average net hydraulic head of about 430 feet. The flow in Mink Creek exceeds the hydraulic capacity of the unit about 15 percent of the time.

The applicant estimates that the project would generate about 11,094,000 kWh annually. The staff finds this estimate of annual generation reasonable. There is no stream gage located on Mink Creek, so the applicant used a synthetic streamflow simulation with streamflow data from a hydrologically similar gaged stream near Preston, Idaho. The gage is located approximately 5 miles from the project. Forty years of records from Geological Survey gage no. 10087500 were used in the simulation analysis because the long period of record best reflects anticipated streamflow in Mink Creek. The staff agrees with the applicant's methodology for the estimated streamflow in Mink Creek.

The Commission's Planning Status Report for the Great Basin discusses the existing water resource developments and reconnaissance level plans of possible future development within the basin. The project would not conflict with any existing or planned development or any pending applications for exemption, license, or preliminary permit.

In summary, the staff's analysis shows that the proposed project is properly designed to develop the hydropower potential of Mink Creek.

II. PROPOSED PROJECT AND ALTERNATIVES

A. Proposed Project

1. Project Description

The proposed project would consist of: (1) a 5-foot-high, 280-foot-long diversion dam at elevation 5,820 feet, with a 40-foot-wide, reinforced-concrete spillway and a 14-foot-high, 30-foot-long reinforced intake structure, having a steel trashrack and two 6-foot roller gates to control the flow; (2) a 60-inch-diameter steel bypass pipe located adjacent to the penstock, to convey excess water back into the creek; (3) a 4-foot-diameter, 11,300-foot-long, buried steel penstock, terminating at one Pelton turbine; (4) a powerhouse at elevation 5,360 feet, containing one 3.1-MW generating unit; (5) a 500-foot-long earthen tailrace returning flows to Mink Creek; and (6) a 6-mile-long, 12.5-kilovolt transmission line, interconnecting with an existing

Utah Power and Light Company transmission line. Principal project features are shown in figure 2. Because the pool formed by the diversion dam would have negligible storage capacity, the project would be operated in a run-of-river mode.

2. Proposed Mitigative Measures

The applicant proposes to revegetate areas disturbed during the burial of the pipeline as soon as possible after construction. The applicant would release a minimum flow of 10 cfs from the project diversion dam to protect the fishery resources of the bypass reach. To further enhance the fishery resources of Mink Creek, the applicant proposes to construct rock weirs within the creek channel to increase the amount of habitat available to adult trout. To mitigate any adverse impacts of project operation on the quality and quantity of the water supply of the unincorporated community of Mink Creek, the applicant proposes to supplement the water supply with water from the project. The applicant proposes to design the project transmission line structures to prevent the electrocution of raptors, and finish the powerhouse exterior in colors that would blend with the surrounding landscape.

B. Federal Land Management Conditions

Under the requirements of section 4(e) of the Federal Power Act, FS, by letters dated November 14, 1985, and April 9, 1986, (Attachments 1 and 2), has provided 13 conditions to be included in any license issued for the proposed project. Those conditions would require the applicant to consult with FS periodically, to maintain a continuous minimum flow downstream from the project diversion dam, to raptor-proof the project transmission line, and to prepare plans for the following:

(a) the assessment and mitigation of any adverse project impacts on water quality, fish, and wildlife;

(b) the accommodation of any increase in recreational use of the area induced by the project;

(c) the control of dust, soil erosion and mass movement, and stream sedimentation;

(d) the operation and maintenance of the pool formed by the diversion dam;

(e) pesticide and herbicide use;

(f) oil and hazardous substance storage, spill prevention, and cleanup; and

(g) the design and construction of project facilities to preserve the area's present visual character.

C. Alternatives to the Proposed Project

Hydroelectric projects are unique in the electric power generation field because of their rugged machinery, high reliability, low operating and maintenance costs, long life, and use of a renewable resource. These characteristics, plus a guaranteed market under the Public Utilities Regulatory Policies Act and tax advantages such as rapid depreciation and energy credits, have made small hydroelectric project development an attractive business venture and have fostered a considerable amount of competition for the more feasible hydroelectric projects.

There is a finite number of economically feasible hydroelectric sites. Generally, hydroelectric sites are selected on the basis of the availability of adequate streamflow, favorable topography, (a sharp vertical drop in a short horizontal distance), accessibility, power transmission distance, and minimum streamflow and fishery requirements. This site has been selected for development by the applicant, and the alternative is not to construct the project.

If the proposed project is not constructed, the power that would have been developed would be provided by nonrenewable fuels, a negative influence on energy independence. It is presumed that projects that would use nonpassive renewable resources other than hydropower, such as wind, biomass, or solar photovoltaic power generation, will be installed when they become commercially and economically feasible. Whether the proposed project is built or not, the installation of projects that would use passive renewable resources, such as solar water or space heating will continue, and conservation efforts will continue, until the market is saturated or until these installations become uneconomical.

D. Alternative of No Action

No action would prohibit the applicant from constructing the proposed project. No action would mean no alteration of the existing environment and no use of the potential hydropower that could be derived from the project.

IV. CONSULTATION AND COMPLIANCE

A. Agency Consultation

The Commission's regulations require prospective applicants to consult with the appropriate resource agencies before filing an application for license. This constitutes an initial step in compliance with the Fish and Wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, and other federal statutes. Prefiling consultation must be complete and must be documented in accordance with the Commission's regulations.

After the Commission accepts the application, formal comments may be submitted by concerned entities during the public notice period. In addition, organizations and individuals may petition to intervene and become a party to any subsequent proceedings. The comments provided by concerned entities are made part of the record and are considered during the review of the proposed project. The following entities commented on the application subsequent to the public notice, which was issued on September 18, 1985.

Commenting entity	Date of letter
Forest Service	November 14, 1985, April 9, 1986, May 1, 1986
Department of the Interior	November 27, 1985
Department of the Army, Sacramento District Corps of Engineers	January 10, 1986
Idaho Department of Fish and Game	March 13, 1986, May 6, 1986

The applicant responded to the agency comments in a letter dated December 19, 1985.

Intervenor	Date of Petition
Idaho Department of Fish and Game	November 21, 1985

B. Water Quality Certification

On May 14, 1986, the Idaho Department of Health and Welfare issued a water quality certificate for the proposed project, as authorized in Section 401 of the Clean Water Act.

V. ENVIRONMENTAL ANALYSIS

A. Proposed Project

The staff's analysis shows that adverse effects of the proposed project on visual and socioeconomic resources would be insignificant.

1. General Description of the Locale

Elevations in the vicinity of the proposed project range from about 5,000 feet to nearly 8,000 feet. The proposed project would be located along the bottom of a steep-walled, V-shaped canyon, vegetated with a deciduous forest.

2. Geology and Soils

Affected Environment: Bedrock in the area includes limestone, siltstone, quartzite, and dolomite; rock outcrops are common. Project area soils are shallow to deep loamy-skeletal soils, with high to moderate erosion hazard and low stability hazard (Robert Fackrell, 1985).

Environmental Impacts and Recommendations: Burying the pipeline and construction of the diversion dam, intake structure, powerhouse, tailrace, and transmission line would require excavation and other ground-disturbing activities. Those activities would increase soil erosion, localized, unstable slope conditions, and stream sedimentation. The most extreme effects of sediment would occur during the construction of the rock and earthfill dam. Soil erosion and stream sedimentation would be the most severe if the project is constructed during the spring runoff period or during extremely wet weather in the fall.

The Department of the Interior (Interior) recommends that the applicant develop a plan to control soil erosion and contain sediment at the project construction sites. The FS requires the applicant, before construction, to file with the Commission a FS-approved plan to control soil erosion, dust, slope stability, and stream sedimentation.

The applicant has outlined a plan to control soil erosion, slope stability, and the introduction of sediment into Mink Creek. The plan includes regrading and reseeding disturbed areas, retaining sediment at construction sites, scheduling construction activities for periods of low streamflow or low precipitation, monitoring soil erosion and slope stability after construction, and conducting a maintenance program for project lands and facilities (Robert Fackrell, 1986).

Careful planning, timing, and implementation of a FS-approved control plan would minimize erosion, sedimentation, and slope stability problems at the project. The applicant should consult with FS, the Soil Conservation Service, the U.S. Fish and Wildlife Service (FWS), and the Idaho Department of Fish and Game (IDFG) before preparing the control plan.

Unavoidable Adverse Impacts: Some minor, localized, short-term soil erosion and stream sedimentation would be unavoidable, particularly during the construction of the diversion dam.

3. Water Resources

Affected Environment: The flow regime of Mink Creek is typical of the high-elevation watersheds of the Wasatch Mountain Range. The high-flow period extends from April through July; during this period, rapid melting of the snowpack produces peak monthly flows that exceed 200 cfs. In the late summer and the fall, the streamflow in the high-elevation watersheds is characteristically very low, although during this time, accretion flows from springs augment the flow of Mink Creek. This spring flow maintains the flow of Mink Creek from 25 to 30 cfs during the late summer and the fall (Robert Fackrell, 1984, application, exhibit E).

Mink Creek loses some flow through permeable reaches of the streambed below the proposed point of diversion, and is believed to discharge into the Croney Hollow Spring, located in a watershed immediately adjacent to the project watershed. In measurements taken in the area of the proposed intake on June 7, 1984, the loss was estimated to be approximately 10 percent of the flow of Mink Creek or 5.8 cfs. On the same date, the flow of Croney Hollow Spring was 10.9 cfs, which may indicate that the discharge from this watershed does not depend totally upon recharge from the portion of Mink Creek that the project would affect. The community of Mink Creek uses approximately 0.003 cfs of the flow of Croney Hollow Spring as a municipal water supply (Robert Fackrell, 1985).

The water quality of Mink Creek is suitable for the maintenance of a salmonid fishery. The high gradient of the creek and the lack of significant loading of organic wastes maintain the dissolved oxygen concentration of Mink Creek near saturation levels. Because the flow of the creek originates from snowmelt and from springs, the water temperature remains relatively low, with maximum temperatures of less than 15 degrees Centigrade (°C). The pH of the creek ranges from 7.4 to 8.6, reflecting the discharge of springs from the limestone aquifers of the Mink Creek watershed. Hardness values of the water in Mink Creek range from 6 to 72 milligrams per liter $CaCO_3$ (Robert Fackrell, 1985).

Environmental Impacts and Recommendations: Building the project would introduce sediment into the water column directly, by instream construction activities, and indirectly, by erosion from disturbed land surfaces. Because of the high gradient of Mink Creek, most of the fine sediment that enters the creek would be transported well downstream of the project area. The implementation of the erosion control program stipulated by FS in its 4(e) conditions would minimize the impacts of project construction on water quality.

Operating the project would reduce the flow in the approximately 12,000-foot-long bypass reach and would alter the thermal regime of Mink Creek. Project-induced flow reductions during summer low-flow periods would likely cause elevated water temperatures in this reach. Bovee (1982) states that water temperature is related to streamflow, and that flow reductions generally result in warmer water temperatures during the summer. The flow reduction would ultimately decrease the water depth, and during the winter, would increase the loss of heat from the streambed and decrease the water temperature (Hynes, 1972). The changes in the water temperature would be small, however, because vegetation growing along the creek would minimize solar heating of the creek during the summer and would moderate heat loss during the winter. In addition, since the temperature of the water discharged from groundwater systems is expected to equal the mean annual air temperature of the region (Freeze and Cherry, 1979), groundwater discharges would lower the temperature of Mink Creek in the summer and would raise the creek's temperature in the winter; these temperature changes would moderate any project-induced changes in the thermal regime of the creek.

Project flow diversions could reduce the recharge to groundwater systems that depend upon water losses through permeable parts of the streambed. Since these groundwater systems are believed to discharge to Croney Hollow Springs, a reduction in discharge to these systems could reduce discharge from the springs.

FS expresses concern that project operation might reduce the recharge to the Croney Hollow Spring, the source of water for the community of Mink Creek. In response to the applicant's proposal to use project water to supplement the water supply, FS states that the project waters could contain Giardia lamblia, a pathogenic protozoan, and that the applicant should ensure the potability of any project water used for the community water supply. In its section 4(e) conditions, FS would require the applicant to assess the project impacts to Croney Hollow Spring and to develop an appropriate mitigative plan to minimize adverse impacts to the springs. The applicant should follow the section 4(e) conditions stipulated by FS to minimize the effects of project operation on water quality.

Unavoidable Adverse Impacts: Project construction would cause short-term increases in the suspended sediment concentration of Mink Creek. Project operations would reduce the streamflow of the 12,000-foot-long bypass reach and would reduce the recharge to groundwater systems associated with the permeable portions of the streambed.

4. Fishery Resources

Affected Environment: The fishery of Mink Creek is comprised primarily of brook trout (Salvelinus fontinalis); however, cutthroat trout (Salmo clarki) also exist in the creek. Cutthroat trout spawning has been reported in side channels of the bypass reach (letter from Jerry Mallet, Acting Director, Idaho Department of Fish and Game, Boise, Idaho, May 6, 1986). Fish population studies conducted in October, 1984, for the bypass reach showed average adult densities of 0.06 fish per square meter and young-of-year trout densities of 0.02 fish per square meter. These densities are very low compared to salmonid densities for other streams in Caribou National Forest, which range from 0.07 to 3.10 fish per square meter (Consulting Associates, Inc., 1985a).

Mink Creek's low trout densities can be explained in part by the creek's characteristically low water temperature. According to Baldwin (1951), water temperatures from 11 to 16°C are optimum for adult brook trout; the temperature of Mink Creek is generally less than 10°C (Robert Fackrell, 1984, application, exhibit E; Consulting Associates, Inc., 1985a). The low trout densities can also be partially explained by the lack of suitable young-of-year and adult habitat. The high gradient of the project reach, the high spring flows that wash away organic debris, and the lack of boulders or rock outcroppings preclude the formation of the pool habitat favored by young-of-year and adult brook trout (Robert Fackrell, 1984, application, exhibit E). An analysis of the availability of adult brook trout habitat, conducted for the applicant in accordance with the FWS's Instream Flow Incremental Methodology, shows that suitable adult brook trout habitat increases as flow decreases from 200 cfs to 10 cfs. (Robert Fackrell, 1985).

Environmental Impacts and Recommendations: Project construction would result in an increased suspended sediment concentration in Mink Creek. Rochester et al. (1984) determined that an increase in suspended sediment could reduce the visibility and feeding of fish, disrupt spawning, and smother fish food organisms.

Operation of the project would divert up to 100 cfs from Mink Creek and would reduce flows in the 12,000-foot-long bypass reach to 10 cfs approximately 80 percent of the time. The flow reduction would increase the quantity of habitat suitable for adult brook trout, by decreasing the water velocity and creating the low-velocity pool habitat that adult brook trout favor.

FS 4(e) conditions require the applicant to release a minimum flow of 10 cfs to protect fish resources and to release additional flows over a 45-day period to preserve the integrity of the stream channel. IDFG concurs with this flow regime, and asks that the applicant install streamflow gages to verify that the stipulated minimum flows are being released from the project dam and to verify that the flows are distributed through the bypass reach side channels to protect the fish habitat those channels provide.

The applicant agrees to release the minimum flows from the project dam required by FS. Those minimum flow releases would adequately protect the aquatic resources of the bypass reach. The applicant should install streamflow gages in sufficient number to verify compliance with these minimum flow releases.

The installation of the proposed rock weirs would increase the amount of habitat available to adult trout. The weirs would be designed to create pools over 1.5 feet deep, with water velocities of less than 1 foot per second. The weirs would be installed in an approximately 1.8-mile-long reach of Mink Creek. In the one reach of Mink Creek where pool habitat occurs under existing conditions, the adult trout population density is 0.11 fish per square meter. Since the reach of Mink Creek that the project would affect has 0.06 adult trout per square meter under existing conditions, the proposed stream modifications should increase the standing crop of adult brook trout.

IDFG concurs with the applicant's proposal to install rock weirs in Mink Creek to improve trout habitat. IDFG recommends: that the applicant monitor fish population changes to determine if the weirs are effective; if trout populations do not increase as desired that the applicant install additional structures; and that the applicant maintain and repair the weirs in accordance with designs approved by IDFG.

Because trout habitat in the bypass reach of Mink Creek is limited under existing conditions, the installation of rock weirs to form pools would ultimately increase the standing crop of brook trout. The applicant should develop a habitat enhancement plan to identify the number and the location of the proposed structures and to maintain the structures. The applicant also should develop a plan to assess changes in fish populations resulting from project operation and from the installation of the rock weirs. In the event that the results indicate that project

operation has adversely affected the fish populations of Mink Creek, this plan should include provisions for altering project operation or structures (i.e., constructing additional habitat enhancement structures) to minimize adverse effects.

Unavoidable Adverse Impacts: Construction of the project and the associated increase in Mink Creek's suspended sediment concentration would produce short-term, adverse effects on fish feeding and spawning.

5. Vegetation

Affected Environment: In the proposed project area, the slopes of the Mink Creek Canyon are vegetated with an upland forest dominated by bigtooth maple (Acer grandidentatum) and trembling aspen (Populus tremuloides). Other tree species are juniper (Juniperus sp.) and chokecherry (Prunus virginiana). Typical understory species are mountain myrtle (Pachistima myrsinites) and elderberry (Sambucus caerulea). Pastures for the most part replace the forest near the proposed powerhouse site on the south side of the creek. Typical grass species of the pastures are Kentucky bluegrass (Poa pratensis), slender wheatgrass (Agropyron pauciflorum), smooth brome (Bromus inermis), and timothy (Phleum pratense).

A 2,600-foot-long stretch of the bypass reach of Mink Creek is lined with a riparian forest dominated by aspen and birch (Betula fontinalis). Other tree species include dogwood (Cornus stolonifera), willow (Salix sp.), black cottonwood (Populus trichocarpa), and chokecherry. The understory consists of shrubs such as gooseberry (Ribes sp.), wild rose (Rosa woodsii), and elderberry, and a wide variety of forbs and grasses. The vegetation adjacent to the remainder of the bypass reach is similar to the forest occupying the canyon slopes.

Environmental Impacts and Recommendations: Clearing vegetation for the installation of the pipeline would affect approximately 10 acres of upland forest and 3 acres of pasture within a 50-foot-wide corridor. During the life of the project, the applicant would maintain a 20-foot-wide pipeline corridor in low-growing vegetation, affecting 4 acres of land currently occupied by forest.

IDFG recommends that the applicant prepare a plan to revegetate the project area after construction and to control undesirable plant species. The applicant agrees to do this (Robert Fackrell, 1986).

Revegetating disturbed areas would adequately mitigate project impacts on the upland forest and pastures. The applicant should include the revegetation measures in the plan required by FS to control soil erosion.

Project flow diversions could reduce the amount of riparian vegetation along the bypass reach. Interior says that riparian vegetation is relatively scarce in the region and that there should be no net loss of riparian vegetation. Interior recommends that the applicant quantify the amount of riparian vegetation in the project area, estimate the amount lost from project construction and operation, and design a mitigative plan to replace the lost riparian vegetation in kind. The applicant did not respond to Interior's recommendation.

Because riparian forest is scarce in the region and is of high value to wildlife, the staff agrees with Interior's recommendation that the applicant should replace in kind any riparian vegetation lost as a result of project construction and operation. The applicant should consult with FWS and IDFG about ways to quantify the amount of riparian vegetation lost from project construction and operation and ways to replace in kind any vegetation lost.

Unavoidable Adverse Impacts: During project construction, clearing vegetative ground cover would affect approximately 10 acres of upland forest and 3 acres of pasture. The applicant would maintain 4 acres of land currently occupied by forest in low-growing vegetation during the life of the project.

6. Wildlife Resources

Affected Environment: The proposed project area is used by mule deer (Odocoileus hemionus) in the spring, summer, and fall. Elk (Cervus canadensis) also use the project area, and there is some calving in the upper part of the Mink Creek drainage. Because of complaints of elk depredations, 50 elk were trapped and removed from the area within the past year. Moose (Alces alces) may use the Mink Creek drainage.

Raptors such as golden eagle (Aquila chrysaetos), rough-legged hawk (Buteo lagopus), and red-tailed hawk (B. jamaicensis) occur in the project area. Ruffed grouse (Bonasa umbellus) are common in the project area. Waterfowl such as mallard duck (Anas platyrhynchos) use the habitat provided by Mink Creek to a limited extent. Beaver (Castor canadensis) have used Mink Creek, as shown by old dams, lodges, and canals along the proposed bypassed reach, but there are no signs of recent beaver activity (Robert Fackrell, 1986).

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Environmental Impacts and Recommendations: The applicant would maintain about 4 acres of upland forest habitat in low-growing vegetation to maintain and operate the project. Project flow diversions could reduce the amount of riparian vegetation along the bypass reach. The clearing of vegetative ground cover, increased noise, and human activity would cause wildlife to avoid the project area during the 18-month-long construction period.

Interior states that providing access to the Mink Creek Canyon through the proposed pipeline right-of-way, which would go further up the canyon than existing roads, might adversely affect mule deer and other wildlife. Interior recommends that the applicant mitigate the effects on wildlife of habitat loss and increased human disturbance of wildlife to the extent possible. The applicant did not respond to Interior's recommendation.

IDFG recommends that the applicant limit the use of the pipeline right-of-way to project or agency personnel and prohibit public vehicular use of the right-of-way; prohibit project personnel from carrying firearms for hunting while traveling on the pipeline right-of-way; and construct the project transmission line so as to prevent the electrocution of raptors. The applicant agrees with IDFG's recommendations (Robert Fackrell, 1986).

Revegetating the pipeline right-of-way after construction would mitigate the loss of approximately 4 acres of upland habitat. In addition, the applicant should replace the riparian habitat lost as a result of project construction and operation in kind.

FS requires the applicant to file with the Commission prior to construction a FS-approved plan to mitigate project impacts on wildlife. This plan should include measures to minimize the adverse effects that increased access would have on wildlife.

The applicant's proposal to raptor-proof the 6-mile-long project transmission line would protect raptors in the project area, and should be implemented.

Unavoidable Adverse Impacts: Wildlife would avoid the project area during the 18-month-long construction period. The long-term management of about 4 acres as right-of-way would decrease the amount of forest habitat available to some wildlife species.

7. Threatened and Endangered Species

Affected Environment: No plant or animal species federally listed as threatened or endangered is known to occur in the project area (letter from Charles Polityka, Regional Environmental Officer, Department of the Interior, Portland, Oregon, November 27, 1985).

Environmental Impacts and Recommendations: None.

Unavoidable Adverse Impacts: None.

8. Recreation and Other Land and Water Uses

Affected Environment: The proposed project would be located within a 16,300-acre area of the Cache National Forest known as the Mink Creek Roadless Area (FS No. 04176). FS states that the Mink Creek Roadless Area will be managed as a multiple-use area; the area thus will be open for uses incompatible with wilderness.

Present recreational use in the project area includes hunting and a limited amount of hiking. The annual recreational use of the Mink Creek Roadless Area is approximately 7,450 recreation-visitor-days, most of it during the fall hunting season (Robert Fackrell, 1984, application, exhibit E). Other than 15 miles of trails within the roadless area, there are no developed recreational facilities within or close to the project area.

In addition to recreation, lands and waters in the project area are used for cattle grazing, oil and gas leasing, and irrigated agriculture.

Environmental Impacts and Recommendations: Project construction would have a minor adverse impact on recreational use in the project area. The applicant does not propose any measures to mitigate that impact or to develop any new recreational facilities.

FS says the applicant should develop a plan for accommodating project-induced recreation, and would require the applicant to file with the Director of the Office of Hydropower Licensing such a plan. The plan would protect and enhance recreational resources of the project area.

Unavoidable Adverse Impacts: Dust and noise from the use of construction equipment would have a minor adverse impact on recreationists during construction.

9. Cultural Resources

Affected Environment: The applicant conducted an archeological and historic survey of the project area, and found no archeological or historic sites listed on or eligible for inclusion on the National Register of Historic Places (letter from Thomas Green, Idaho State Archeologist, Boise, Idaho, April 2, 1986).

Environmental Impacts and Recommendations: Project construction or changes in the location of project facilities could adversely affect buried or other archeological or historic sites not previously identified in the project vicinity that may be eligible for inclusion in the National Register.

If the applicant encounters any previously unidentified archeological or historic sites during construction, the applicant should halt construction in the vicinity of the sites and should consult a qualified archeologist, FS, and the Idaho State Historic Preservation Officer (SHPO) concerning the eligibility of the sites and any measures needed to avoid the sites or to mitigate effects to the sites. Before undertaking any other construction within the project boundaries, the applicant should consult with the SHPO and FS about the need to conduct an archaeological or historic survey and the need for avoidance or mitigative measures. In such instances, the applicant should file with the Commission a plan for conducting any necessary studies, together with a schedule for implementing the plan and a copy of a letter from the SHPO and FS accepting the plan and schedule, 6 months before any construction activity.

Unavoidable Adverse Impacts: None.

B. Alternative of No Action

Implementation of the no-action alternative would not change the existing physical or biological components of the area, but would preclude the use of the renewable water resources of Mink Creek to generate electricity.

C. Recommended Alternative

The proposed project is the preferred alternative because electricity generated from a renewable resource would be sold to Utah Power and Light Company, thus lessening the use of existing fossil-fueled, steam-electric generating plants, and because the environmental impacts that would result from constructing and operating the project would be minor.

VI. FINDING OF NO SIGNIFICANT IMPACT

Approximately 13 acres of vegetative cover would be cleared during construction. Such activities as the burial of the pipeline and the installation of the diversion structure and the powerhouse would cause minor, short-term increases in soil erosion and the

turbidity and sedimentation levels of Mink Creek. The increased turbidity and sedimentation levels would adversely affect fish feeding and spawning. Wildlife would avoid the project area during the 18-month-long construction period because of increased human activity and noise. Operation of the project would cause flow reductions of up to 100 cfs in the 12,000-foot-long bypass reach. The long-term management of about 4 acres as pipeline right-of-way would decrease the amount of forest habitat available to some wildlife species. Implementing the applicant's and the staff's proposed mitigative measures would ensure that the environmental effects of project construction and operation would be insignificant.

In accordance with the National Environmental Policy Act of 1969, this environmental assessment was prepared for the Mink Creek Hydroelectric Project. On the basis of this independent environmental analysis, issuance of a license for the project would not constitute a major federal action significantly affecting the quality of the human environment.

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VII. LIST OF PREPARERS

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Form L-2
(Revised October, 1975)

FEDERAL POWER 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.

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.

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

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.

August 14, 1986

RE: Amended Application for Permit No. 13-7416

Mr. Robert N. Fackrell
P.O. Box 1
Preston, ID 83263

Dear Mr. Fackrell:

This letter is to inform you that Idaho Fish and Game has withdrawn their protest against the above referenced application. The Department has now resumed the processing of this application.

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

Very truly yours,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

MICROFILMED

August 14, 1986

RE: Amended Application for Permit No. 13-7416

Mr. David Neider
Regional Supervisor
Department of Fish & Game
5205 South 5th Avenue
Pocatello, ID 83204

Dear Mr. Neider:

This letter is to acknowledge receipt of your withdrawal of protest against the above referenced application. The Department has now resumed processing of this application.

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

Very truly yours,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:CW

Region 5
5205 S. 5th Avenue
Pocatello, Idaho 83204-4229
Telephone: (208) 232-4703

RECEIVED
AUG 13 1986
Department of Water Resources
Eastern District Office

August 11, 1986

Mr. Ernie Carlson
Department of Water Resources
150 Shoupe Ave. Suite 15
Idaho Falls, ID 83401

RE: Permit #13-7416--Mink Creek, Robert Fackrell

Dear Ernie:

This is to inform you that we have been furnished the needed information on the above referenced permit and hereby withdraw our protest to it.

Sincerely,

David Neider U.T.

David Neider
Regional Supervisor

DN/vt

M E M O

TO: File

FROM: Ernest Carlsen

RE: Application for Permit No. 13-7416

DATE: August 4, 1986

On June 30, 1986, FERC issued a license for construction of the hydropower project associated with permit application No. 13-7416. Subsequent to that action Mr. Fackrell contacted John Heimer, from Region 5 of Idaho Fish & Game, and obtained a verbal commitment to withdraw their protest of the application.

To satisfy our requirement for demonstrating financial capability, Mr. Fackrell submitted a letter from Ronald Seewald, Vice President & Assistant Manager of First Security Bank in Boise. The letter, received on August 1, 1986, and marked "confidential", outlines the general terms and conditions of the loan agreement for financing construction of the project. The letter was dated May 16, 1986. At Mr. Fackrell's request, the letter was returned to him.

To further substantiate financial capability, I spoke with Dale Higer (344-8535) by telephone on August 1, 1986, and confirmed First Security's commitment to finance the project.

Mr. Fackrell has already amended application 13-7416 to reflect final design of the project. That action along with issuance of the FERC license, withdrawal of all protests, and demonstration of financial capability should be sufficient for the Department to proceed with processing of the application.

July 21, 1986

The Preston Citizen
P.O. Box 472
Preston, Idaho 83263

RE: Application No. 13-7416: Robert N. Fackrell

Gentlemen:

Would you please submit an affidavit of publication and certified bill in connection with the above referenced applications. The legal notice was to have been published in your paper on July 3, and July 10, 1986.

Your cooperation in this matter is greatly appreciated.

Very truly yours,

MICHELE DAVIS
Office Secretary

MICROFILMED

July 17, 1986

RE: Amended Application for Permit No. 13-7416
ROBERT FACKRELL

Mr. J. S. Tixier
Regional Forester
U.S. Forest Service
324 25th Street
Ogden, Utah 84401

Dear Mr. Tixier:

On July 9, 1986, I sent you a letter indicating the Department acknowledged your protest, which we received on June 18, 1976, against the above captioned application. Upon closer review of your letter, I find that its purpose was to remind the Department that a water resolution previously agreed to between yourself and Mr. Fackrell would remain in effect and be a part of the permanent record.

The Department does have a copy of this water right resolution with the application that has been filed by Mr. Fackrell. I spoke with Mr. Fackrell briefly by telephone on July 10, 1986 and he agrees that the resolution does pertain to the amended application.

Acknowledging the water right resolution is in effect, your letter of June 18, 1986, will not be recognized as a protest against Mr. Fackrell's application. If you disagree with our new interpretation of the Forest Service's position regarding this application, written notice should be submitted to this office within ten (10) days of the date of this letter.
Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

MICROFILMED

EC:cw

RECEIVED
JULY 16 1986
of Water Resources
n District Office

July 11, 1986

Mr. David Neider
Idaho Fish and Game
Regional Supervisor
5205 South 5th Avenue
Pocatello, Idaho 83204-4229

RE: Mink Creek Hydro-electric project.

Dear Mr. Neider,

With regard to your letter to the Department of Water Resources dated June 18, 1986, I offer the following:

> The assumption stated in your letter that "the minimum flow and habitat improvement agreements reached in regard to the origional application will still apply to this amended application" is a correct assumption.
>
> In order to clarify the need for the amendment process, may I explain that in the origional application for the water right I was not certain as to the exact location of the point of diversion or the point of use. After the past few years of study and planning I have been able to determine the exact locations of both of these items, as well as the quantity of water needed. Thus, at the request of the Department of Water Resources I filed the amendment to the origional application.

Hoping the above will answer any questions that you had, I respectfully request that you withdraw your objection to Amended Permit 13-7416. Your promp action on this matter would be sincerely appreciated.

Thank you,

Robert N. Fackrell

RNF/sk

FACKRELL CONSTRUCTION CO., INC.

P. O. Box #1 • Preston, Idaho 83263 • (208) 852-1320
P. O. Box 345 • Richmond, Utah 84333 • (801) 723-2177

July 9, 1986

RE: Amended Application No. 13-7416

Mr. Robert N. Fackrell
P.O. Box 1
Preston, ID 83263

Dear Mr. Fackrell:

Please find enclosed protests submitted against approval of your amended application.

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

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:CW

Enclosures

MICROFILMED

July 9, 1986

RE: Amended Application for Permit No. 13-7416
ROBERT FACKRELL

Mr. David Neider
Regional Supervisor
Department of Fish & Game
5205 South 5th Avenue
Pocatello, ID 83204-4229

Dear Mr. Neider:

This letter is to acknowledge your protest against approval of the above proposed amended application, a copy of which has been sent to the applicant. Your protest will be placed in the file for consideration at a water right conference and/or hearing.

Very truly yours,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:CW

MICROFILMED

July 9, 1986

RE: Amended Application for Permit No. 13-7416
ROBERT FACKRELL

Mr. J. S. Tixier
Regional Forester
U.S. Forest Service
324 25th Street
Ogden, Utah 84401

Dear Mr. Tixier:

This letter is to acknowledge your protest against approval of the above proposed amended application, a copy of which has been sent to the applicant. Your protest will be placed in the file for consideration at a water right conference and/or hearing.

Very truly yours,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:CW

MICROFILMED

June 25, 1986

The Lewiston Tribune
505 C Street
Lewiston, Idaho 83501

Gentlemen:

We are resubmitting a legal notice to be published on July 3, and July 10, 1986. This notice was originally published in your paper on May 29, and June 5, 1986. Unfortunetely, it was advertised incorrectly. The amended point of diversion should have been printed as SW1/4NE1/4, Sec. 23, T. 13S, R. 41E, B.M. We therefore, request these be readvertised at your expense.

To prevent future problems in this matter, please submit a galley proof before the first date of publication. If we have any corrections, we will notify you; otherwise, assume the notice is correct. If the administrative procedures of your paper will not allow time for making corrections by submitting a galley proof, we will be glad to review the notice with you by telephone prior to publication. If you cannot publish the notice on the proposed dates, please contact us immedietely.

An affidavit of publication must be submitted to this office by July 21, 1986. Your cooperation in this matter is greatly appreciated.

Very truly yours,

Michele Davis
Secretary

Enclosure

MICROFILMED

NOTICE OF CORRECTION

Notice is hereby given that Application No. 13-7416 in the name of Robert N. Fackrell, Preston, Idaho was incorrectly advertised on May 29 and June 5, 1986. The Amended Point of Diversion was advertised as being within the SE1/4NE1/4, Sec. 23, T. 13S, R. 41E.

Whereas, the actual amended point of diversion is within the SW1/4NE1/4 Sec 23, T. 13S R. 41E, B.M.

Any protests against the granting of this permit as a result of this correction must be filed with the Idaho Department of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83402, on or before July 21, 1986.

A. Kenneth Dunn

Director

Published July 3 and July 10, 1986

LEGLPRUG-0627

80946

NOTICE OF CORRECTION

Notice is hereby given that Application No. 13-7416 in the name of Robert N. Fackrell, Preston, Idaho, was incorrectly advertised on May 29 and June 5, 1986. The Amended Point of Diversion was advertised as being within the SE¼NE¼, Sec. 23, T. 13S, R. 41E.

Whereas, the actual amended point of diversion is within the SW¼NE¼, Sec. 23, T. 13S, R. 41E, B.M.

Any protests against the granting of this permit as a result of thiscorrection must be filed with the Department of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83402, on or before July 21, 1986.

A. Kenneth Dunn
Director

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

JUNE 25, 1986

The Preston Citizen
P. O. Box 472
Preston, Idaho 83263

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 JULY 21, 1986.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

MICROFILMED

NOTICE OF AMENDED APPLICATION FOR WATER PERMIT

Notice is hereby given that Application for Permit No. 13-7416 in the name of Robert N. Fackrell, Preston, Idaho was filed for the diversion of 125.0 cfs of water from Mink Creek tributary to Bear River, with point of diversion within the SW1/4SE1/4, Sec. 13 T. 13S, R. 41E., B.M., Franklin County, the water to be used for Power generation purposes from Jan. 1 to Dec. 31, within the SE1/4SE1/4, Sec. 22, T. 13S, R.41E, B.M.

The applicant now proposes to amend Application No. 13-7416, requesting 100.0 cfs of water and amending the point of diversion to within the SW1/4NE1/4, Sec. 23, T. 13S, R. 41E, for use within the NE1/4SE1/4, Sec. 28, T. 13S, R. 41E, B.M. Franklin County.

Any protest to the proposed amending of the application must be filed with the Department of Water Resources 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83401, on or before July 21, 1986.

July 28
Preston Citizen

A. Kenneth Dunn

Director

Published 7/3/86 & 7/10/86

Recd in Preston citizen. They last pd.

MICROFILMED

Copy by phone to Preston citizen 7-24 mm

Region 5
5205 S. 5th Avenue
Pocatello, Idaho 83204-4229
Telephone: (208) 232-4703

June 18, 1986

Ernest Carlson
Assistant Regional Supervisor
Department of Water Resources
150 Shoup
Idaho Falls, ID 83402

Dear Ernest:

RE: Amended Permit 13-7416 Robert N. Fackrell, Mink Creek

We have reviewed the above referenced application and as customary, with water right applications involving hydro-power generation, object to it until we are furnished specific project details by the applicant. We assume the minimum flow and habitat improvement agreements reached in regard to the original application will still apply to this amended application. However, we would request that the applicant clarify the need for the amendment process and whether he intends to adhere to our prior project stipulations.

Sincerely,

David Neider
Regional Supervisor

DN:DS:lad

EQUAL OPPORTUNITY EMPLOYER

United States Department of Agriculture
Forest Service
Intermountain Region
324 25th Street
Ogden, UT 84401

Reply to: 2540

Date: JUN 16 1986

Mr. Ronald D. Carlson
Idaho Department of Water Resources
150 Shoup Avenue
Idaho Falls, ID 83401

Dear Mr. Carlson:

We are writing regarding amended Application for Permit No. 13-7416 filed by Robert N. Fackrell to appropriate 100 cfs from Mink Creek for power production purposes. We protested Mr. Fackrell's original application in June 1984 and subsequently withdrew the protest when a Water Right Resolution was concluded between Mr. Fackrell and the Forest Service. The purpose of this letter is to remind you that the Water Right Resolution remains in effect and to request you amend it to the application as part of the permanent record.

Thank you for your cooperation.

Sincerely,

for Kendall Wall

J. S. TIXIER
Regional Forester

RECEIVED
JUN 18 1986
Department of Water Resources
Eastern District Office

MICROFILMED

June 3, 1986

Department of Fish & Game
5205 So. 5th Ave.
Pocatello, Idaho 83205

RE: Application for Permit No. 13-7416, Robert N. Fackrell

Gentlemen:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is June 23, 1986, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:md

Enclosure

MICROFILMED

June 3, 1986

U.S. Forest Service
324 25th Street
Ogden, Utah 84401

RE: Application for Permit No. 13-7416, Robert N. Fackrell

Gentlemen:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is June 23, 1986, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:md

Enclosure

MICROFILMED

June 3, 1986

Dean Smith, Watermaster
Rt. 2, Box 433
Preston, Idaho 83263

RE: Application for Permit No. 13-7416, Robert N. Fackrell

Gentlemen:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is June 23, 1986, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:md

Enclosure

MICROFILMED

May 30, 1986

Robert Fackrell
P.O. Box 1
Preston, Idaho 83263

Re: Application for permit No. 13-7416

Dear Water Right Applicant:

The Department of Water Resources acknowledges receipt of your water right application for permit. The application has been assigned identification no. 13-7416. Please refer to this number in all further correspondence.

This office is currently in the process of advertising the application in the Preston Citizen, Idaho Statesman, Lewsiton Tribune and Times News. The advertisement will be published for two weeks, and a period of ten days following the second publication will be allowed for the submittal of protests.

If the application is protested, you will be sent a copy of the protest. The protests must be resolved before the application is approved or denied. If the protest is not resolved voluntarily, this Department will conduct a conference and/or hearing on the matter.

If the application is not protested, it will be forwarded to our state office in about five weeks. State office personnel will conduct a complete review prior to final processing of the application and will notify you of the outcome of this review. When the permit is issued, you will be sent a copy. A typical processing time for an unprotested application is about eight weeks.

Enclosed please find your receipt no. 39639 for the amount of $20.00.

Please feel free to contact this office if you have any questions regarding this procedure.

Sincerely,

Ernest Carlsen
Assistant Regional Supervisor

EC/md

MICROFILMED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

MAY 21, 1986

The Preston Citizen
P. O. Box 472
Preston, Idaho 83263

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 JUNE 16, 1986.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

RECEIVED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

MAY 21, 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 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 JUNE 16, 1986.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

MAILED

Aff. Rec'd
6-19-86

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

MAY 21, 1986

Lewiston Morning Tribune
505 C Street
Lewiston, Idaho 83501

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 JUNE 16, 1986.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

MICROFILMED

Aff Rec'd 6-09-86

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

---

150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

MAY 21, 1986

The Idaho Statesman
Box 40
Boise, Idaho 83707

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.

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Please send the affidavit of publication and publication billing to this office before JUNE 16, 1986.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

NOTICE OF AMENDED APPLICATION FOR WATER PERMIT

Notice is hereby given that Application for Permit No. 13-7416 in the name of Robert N. Fackrell, Preston, Idaho was filed for the diversion of 125.0 cfs of water from Mink Creek tributary to Bear River, with point of diversion within the SW1/4SE1/4, Sec. 13 T. 13S, R. 41E., B.M., Franklin County, the water to be used for Power generation purposes from Jan. 1 to Dec. 31, within the SE1/4SE1/4, Sec. 22, T. 13S, R.41E, B.M.

The applicant now proposes to amend Application No. 13-7416, requesting 100.0 cfs of water and amending the point of diversion to within the SW1/4NE1/4, Sec. 23, T. 13S, R. 41E, for use within the NE1/4SE1/4, Sec. 28, T. 13S, R. 41E, B.M. Franklin County.

Any protest to the proposed amending of the application must be filed with the Department of Water Resources 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83401, on or before June ~~16~~ 23, 1986.

A. Kenneth Dunn

Director

Published ~~5/29/86~~ 6-5-86 & ~~6/5/86~~ 6-12-86

Times News - PD - date = 6/23/86 recd
Teresa Tide - PC - date =

IMPORTED

STAFF SHEET FOR POWER GENERATION

I Initial Review By: KEITH C. WILSON 19 MAY 1986 Application No. 13-7416 AMENDED

Date Requested | In File

A. _____ | ✓ Form 205/206.

B. _____ | ✓ Efficiency is between 85% and 60%.

$$E = \frac{P\ (11.8)}{QH} = \frac{(3100)(11.8)}{(100)(467)} = 0.783 \times 100 = 78\ \%$$

II Post Publication Review By: _____

A. Not Protested

1. 0 to 373 kw (500 Hp)

Date Requested | Date Received (one or more)

_____ | _____ Engineering feasibility report.

_____ Preliminary design report.

_____ Contracts to construct project.

_____ Contracts to purchase power.

_____ Verification that an application has been submitted to F.E.R.C.

_____ Other: _____

2. 373 kw (500 Hp) and higher

Date Requested | Date Received (all three are required)

_____ | _____ Preliminary Engineering Report.

_____ | _____ Itemized cost estimate.

_____ | _____ Verification of financial ability.

B. Protested

1. 0 to 111 kw (150 Hp)

_____ Supplement information has been submitted.

_____ Hearing should be scheduled.

2. 111 kw (150 Hp) and higher

_____ Supplemental information has been submitted.

_____ Received verification of a F.E.R.C. ruling.

_____ Hearing should be scheduled.

ANCHORAGE

RECEIVED
MAY 15 1986
Department of Water Resources
Eastern District Office

May 13, 1986

Mr. Ernest Carlsen
Assistant Regional Supervisor
State of Idaho Department of Water Resources
150 Shoup - Suite 15
Idaho Falls, Idaho 83402

Dear Mr. Carlsen,

Please find enclosed the corrected amended application for permit on the Mink Creek Hydro Electric project. Also enclosed is the twenty dollar fee for this amendment. Should there be any additional information needed, please advise me.

Sincerely,

Robert N. Fackrell

RNF/sk
Enclosure

FACKRELL CONSTRUCTION CO., INC.

P. O. Box #1 • Preston, Idaho 83263 • (208) 852-1320
P. O. Box 345 • Richmond, Utah 84333 • (801) 723-2177

Form No. 202a
3/79

State of Idaho

Department of Water Resources

APPLICATION FOR PERMIT ANALYSIS SHEET

INITIAL REVIEW BY: G. F. RAMSEY APPLICATION NUMBER: 13-7416

CHECK: MAY 21 1984

- ☑ Source.
- ☑ Point of diversion.
- ☑ County.
- ☑ Quantity of water and period of use.
- ☑ Description of diverting works.
- ☑ Time required for beneficial use of water.
- ☑ Place of use or acres irrigated.
- ☐ Map.
- ☑ Signature.
- ☐ Fee.

Field check by: _____
Date: _____
Comments: _____

- ☐ Yes ☐ No Field check required.
- ☐ Yes ☐ No Critical groundwater area.
- ☐ Yes ☐ No Request dam safety information. Sent by: _____ Date: _____
- ☐ Yes ☐ No* In form to receipt.

*REQUEST THE FOLLOWING ADDITIONAL INFORMATION FROM THE APPLICANT:

OK MAP IS INCOMPLETE P/U & P/D NOT INDICATED Okay gmc
Financial Statement
Plans for project

13-7416

SEND COPIES TO:

☐ Idaho State Health Department.	Copies sent by:	Date:
☑ Idaho Fish and Game Department.	cw	5-24-84
☐ Idaho Department of Lands.		
☑ U.S. Bureau of Land Management.	cw	
☑ U.S. Forest Service.	cw	
☑ Other WP #13N	cw	

PROCESSING:

- ☐ Yes ☑ No Platted by: _____ Map No. _____
- ☐ Yes ☑ No Other rights on same place of use. _____
- ☑ Yes ☐ No* In form for advertising.
  Final date for protests: June 18, 1984
- ☑ Yes ☐ No Protests received. If yes, record information on 4th page of application.

FINAL REGIONAL PROCESSING REVIEW:

- ☑ Affidavit of publication received. Date: 7-5-84
- ☑ Application published correctly. If not, record action taken: _____
- ☐ Fee amount, receipt date & number, recorded on application.
- ☐ Publication dates and paper, recorded on application.
- ☐ Protests, dates, withdrawal, etc., recorded on application.
- ☐ Recommendation & initial, recorded on application.
- ☐ Yes ☐ No Measuring device required.
- ☐ Yes ☐ No Access port required.
- ☐ Yes ☐ No Will water be delivered by watermaster? If yes, what district? _____
  _____ Date of priority recommended.

Special conditions of approval or cover letter. _____

By: _____ Date: _____

STATE OFFICE REVIEW:

☐ See attached sheet for more information.

By: _____ Date: _____

CONVERSATION MEMORANDUM

DATE February 21, 1986

FILE 13-7416

NAME OF PARTY Bob Fackrell

EMPLOYEE Ernest Carlsen EMC

RE: Application 13-7416

Bob Fackrell called with a question about amending the above application so it would be consistant with his application for license filed with FERC. He indicated the location of the power house maybe changed to a point further down stream in a different ¼¼. Selection of the powerhouse site will probably not be firmed up until July, 86. He has already talked with FERC and found out their review of the new site can take place without major changes in his licensing application.

It was my recommendation that he keep the amended application until the power house site has been selected. Then return the amended application making sure the locations for the point of diversion and place of use are correctly identified.

Pull file in Aug. 86.

MICROFILMED

February 17, 1986

RE: Amendment of Application No. 13-7416

Mr. Robert N. Fackrell
P.O. Box 1
Preston, ID 83263

Dear Mr. Fackrell:

A comparison of your license application submitted to the Federal Energy Regulatory Commission and the application for permit No. 13-7416 filed with the Department of Water Resources revealed some inconsistency between the two applications. In order to rectify this matter we have prepared the enclosed amended application for permit which reflects the hydro-electric project as proposed in your FERC application.

You should carefully review the amended application to insure that it accurately describes the project. Provided there are no foreseeable changes in the location of the facility or the diversion capacity, sign the amended application and return it to this office accompanied by a check for $20.00 as payment of the statutory amendment fee.

Amendment of the application will be necessary before it can be forwarded to our State Office for final administrative action. It will also be necessary for notice of the amended application to be published for two consecutive weeks on a statewide basis. Publication of the amended application will be initiated following its return to this office.

MICROFILMED

Recently we received the withdrawal of protest agreement between yourself and the U.S. Forest Service outlining the minimum flows that are to bypass your diversion structure and remain in the Mink Creek channel. The agreement has been placed with the application as part of the Department's records. The enactment of this agreement leaves the Idaho Department of Fish & Game the only remaining protestant.

If you have any questions concerning the amended application, feel free to contact me.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

MICROFILMED

February 18, 1986

RE: Application for Permit No. 13-7416

Mr. Robert N. Fackrell
P.O. Box 1
Preston, ID 83263

Dear Mr. Fackrell:

This is to advise you that the U.S. Forest Service has withdrawn their protest against approval of the above referenced application.

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

Very truly yours,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

February 18, 1986

RE: Application for Permit No. 13-7416 ROBERT N. FACKRELL

Mr. J.S. Tixier
U.S. Forest Service
324 25th Street
Ogden, UT 84401

Dear Mr. Tixier:

This is to acknowledge receipt of your withdrawal of protest against approval of the above referenced application.

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

Very truly yours,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

United States Department of Agriculture
Forest Service
Intermountain Region
324 25th Street
Ogden, UT 84401

Reply to: 2540

Date: JAN 24 1986

RECEIVED
JAN 27 1986
Department of Water Resources

Mr. Glen Saxton
Idaho Department of Water Resources
Towers Building, 3rd Floor
450 West State Street
Boise, ID 83720

Dear Mr. Saxton:

Enclosed is the Water Right Resolution effected between Robert N. Fackrell and the Forest Service which resolves our protest of Application for Permit No. 13-7416. Please append this to Mr. Fackrell's application. In conformity with item 2 of the Resolution, we respectfully withdraw our protest of Application for Permit No. 13-7416.

Thank you for your cooperation.

Sincerely,

for J. S. TIXIER
Regional Forester

Enclosure

RECEIVED
FEB 5 1986
Department of Water Resources
Eastern District Office

WATER RIGHT RESOLUTION
between
Robert N. Fackrell
and
United States of America - USDA Forest Service

In resolution of the USDA-Forest Service protest of Application for Permit No. 13-7416, as submitted by Robert N. Fackrell, the two parties have come to the following agreement:

1. The applicant agrees to maintain in the bypassed stream reach a continuous minimum flow as defined by the attached Table 1, and as measured immediately downstream from the point of diversion on Mink Creek, for maintaining "favorable conditions of water flows" and for the protection of fish and wildlife resources. **The instream hydrograph shown in Table 1 may be proportionately adjusted to reflect the natural streamflow hydrograph at the diversion point after additional streamflow measurements have better defined the natural hydrograph, and upon mutual agreement betwen the applicant and the USDA-Forest Service.**

2. The USDA-Forest Service agrees to withdraw its protest of Application for Permit No. 13-7416.

3. Both parties agree to submit this Water Right Resolution to the State of Idaho, Department of Water Resources and to inform the State that both parties have come to agreement.

4. Both parties agree to recommend to the State of Idaho, Department of Water Resources that this Water Right Resolution be attached to the subject Application for Permit.

Nordwall 1/13/86 — Date

PAUL R. NORDWALL
Forest Supervisor
USDA - Forest Service
Caribou National Forest
250 South Fourth Avenue
Pocatello, Idaho 83201

R. N. Fackrell 12/23/85 — Date

ROBERT N. FACKRELL
P.O. Box 1,
Preston, Idaho 83263

96

1/13/86

TABLE 1

United States of America - Forest Service
324 25th Street
Ogden, Utah 84401
(801) 625-5360

1. National Forest: Caribou National Forest

2. Stream: Mink Creek (tributary to Bear River)

3. Authority: Organic Administration Act of 1897 and the Multiple-Use Sustained-Yield Act of 1960

4. Reservation Date: 3-03-1891

5. Purpose: Secure favorable conditions of water flow and accomplish other multiple-use objectives of the National Forest.

6. Location of Quantification Point:

a. General: On Mink Creek at the diversion point located several hundred feet below the Upper Springs, Franklin County, Idaho.

b. Legal: SE 1/4, NE 1/4, Section 23, Township 13 South, Range 41 East, Boise Meridian.

7. Instream Flow Claim: a continuous instream flow equivalent to an average of 17,000 acre-feet per year (39.1% of historic flow) defined and distributed as follows:

a. Minimum flow rates: the amount of water to be released to Mink Creek for Day 1 and for each and every succeeding day or period throughout the entire year as follows:

Duration	Streamflow (cfs)
Day 1 thru 4	60.0
Day 5 thru 11	75.0
Day 12 thru 18	90.0
Day 19 thru 25	105.0
Day 26 thru 32	120.0
Day 33 thru 39	150.0
Day 40	130.0
Day 41	110.0
Day 42	90.0
Day 43	70.0
Day 44	50.0
Day 45	30.0
Day 46 thru Dec. 31	10.0
Jan 1 thru day 1	10.0

b. Day 1: the day that flow from the spring attains a rate of 90.0 cfs and equals or exceeds that rate for 24 hours, but in no event earlier than April 1.

8. In the event that natural flows do not attain the rates decreed above, the United States shall be entitled to the natural flows actually occurring during the time periods described above.

The undersigned, being duly sworn, deposes and says that he is the agent of the United States of America, that he makes this certification on behalf of the United States of America, that he has read the foregoing statement of claim and knows the contents thereof, and that he has signed on behalf of the United States of America said statement, that the answers set forth therein are true to his best knowledge and belief.

Landace K. Hall

(for) J. S. TIXIER
Regional Forester

Subscribed and sworn to before me this 24th day of January 1986.

Sandra S Carlson

Notary Public

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

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

GLN ~ ALS

October 4, 1985

RECEIVED
OCT 7 1985
Department of Water Resources

Mr. A. Kenneth Dunn
Department of Water Resources
Statehouse
Boise, ID 83720

Re: Application for permit #13-7416 Robert Fackrell

Dear Ken,

Please be advised that we do not at this time represent Mr. Fackrell. We have forwarded your letter of October 1, 1985 to him. Please take our name off of the mailing list for application 13-7416.

Sincerely,

Vernon Ravenscroft

VFR:mf

cc: Rob Fackrell

AFFILIATES IN WASHINGTON D.C.
GOVERNMENTAL AFFAIRS SERVICES · POLITICAL MANAGEMENT CONSULTING · ASSOCIATION MANAGEMENT

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

October 1, 1985

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

Re: Application for Permit No. 13-7416 (Robert N. Fackrell)

Dear Mr. Ravenscroft:

The Department has recently received notice that an Application for Major License has been submitted to the Federal Energy Regulatory Commission (FERC) in connection with the above-referenced water right project.

A review of Department files shows that the application for permit has been protested. An administrative hearing before the Department may be required before the Department can act on the application.

Any permit issued by the Department will be conditioned with subordination and term language.

Sincerely,

A. KENNETH DUNN
Director

ls

cc: Eastern Region

13-7416 app

RECEIVED
SEP 23 1985
Department of Water Resources

P-8646-001

UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

Notice of Application Filed with the Commission

(September 18, 1985)

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

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

b. Project No: 8646-001

c. Date Filed: April 29, 1985

d. Applicant: Robert Fackrell

e. Name of Project: Mink Creek

f. Location: On Mink Creek in Franklin County, Idaho near the town of Preston, within the Caribou National Forest

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

h. Contact Person: Mr. Vernon Ravenscroft
Ms. Helen Chenoweth
Consulting Associates, Inc.
P.O. Box 893
Boise, ID 83701

i. Comment Date: NOV 22 1985

j. Description of Project: The proposed project would consist of: (1) a 5-foot-high, 280-foot-long rock rubble core diversion dam at elevation 5,830 feet consisting of; (2) a 40-foot-wide reinforced concrete spillway; (3) a 14-foot-high, 30-foot-long reinforced intake structure having a steel trashrack and two 6-foot by 6-foot roller gates to control the flow; (4) a 60-inch-diameter steel bypass pipe located adjacent to the penstock, to convey excess water back into the stream; (5) a 4-foot-diameter, 8,500-foot-long buried steel penstock bifurcating into a 24-inch-diameter and a 40-inch-diameter penstock terminating at two Francis turbines: (6) a 24-foot-wide, 30-foot-long metal powerhouse at elevation 5,443 feet containing one 2.75 MW generating unit with a total average annual energy output of 9,378,300 KWh, operating under a head of 365 feet; (7) a 500-foot-long earthen tailrace, (8) a six-mile long, 14-kV transmission line tying into an existing Utah Power & Light Company line. The estimated cost of the project is $2,400,000 in 1984 dollars.

k. Purpose of Project: Project power would be sold to Utah Power & Light Company.

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

MICROFILMED

A3. Development Application -- Any qualified development applicant desiring to file a competing application must submit to the Commission, on or before the specified comment date for the particular application, a competing development 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 development 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.

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 development application (specify which type of application), and be served on the applicant(s) named in this public notice.

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 particular application to which the filing is in response. Any of the above named documents must be filed by providing the original and the number of 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: Mr. Fred E. Springer, Director, Division of Project Management, Federal Energy Regulatory Commission, Room 203-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 statutes. 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 set to the Applicants representatives.

Lois D. Cashell
Acting Secretary

Cert. of Mailing

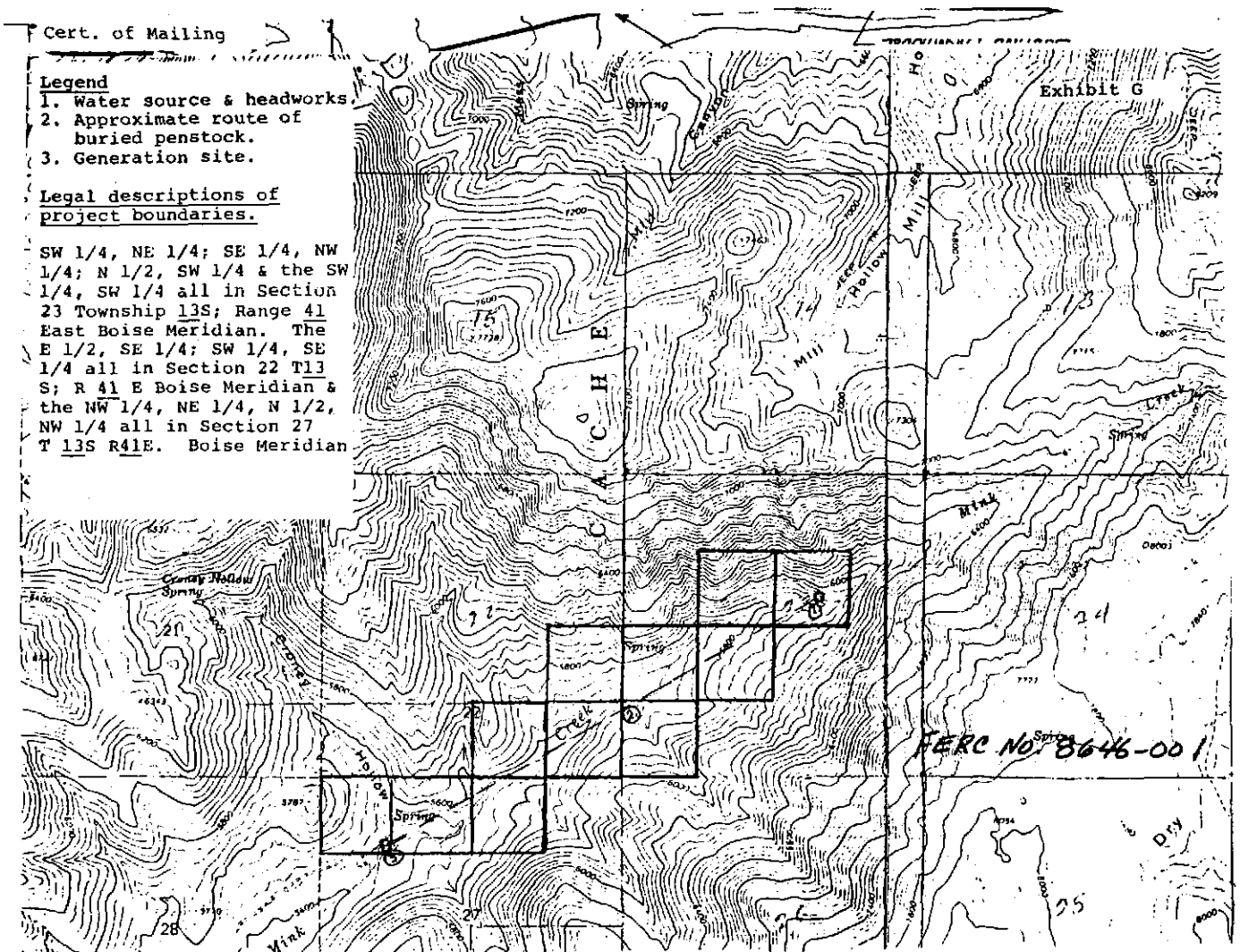
Exhibit G

Legend

1. Water source & headworks.
2. Approximate route of buried penstock.
3. Generation site.

Legal descriptions of project boundaries.

SW 1/4, NE 1/4; SE 1/4, NW 1/4; N 1/2, SW 1/4 & the SW 1/4, SW 1/4 all in Section 23 Township 13S; Range 41 East Boise Meridian. The E 1/2, SE 1/4; SW 1/4, SE 1/4 all in Section 22 T13 S; R 41 E Boise Meridian & the NW 1/4, NE 1/4, N 1/2, NW 1/4 all in Section 27 T 13S R41E. Boise Meridian



FERC No. 8646-001

STATE OF IDAHO

DEPARTMENT OF HEALTH AND WELFARE

RECEIVED
JUL 5 1984
Department of Water Resources
Eastern District Office

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

July 2, 1984

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

RE: Competing Application for
FERC Project 7957-000
Mink Creek Hydroelectric Project

Dear Mr. Ravenscroft:

We will comment on this project when we receive a copy of EXHIBIT "E".

The following should be addressed during and after construction:

1. Turbidity and siltation associated with the headworks.

2. Turbidity and siltation associated with the relief valve.

3. Turbidity, siltation and dissolved oxygen associated with the tailrace.

We notice discrepancies between EXHIBIT "A" and the Department of Water Resources Application:

A. Exhibit "A" turbine capacity is 60 cfs with no plans for expansion, but water right application is for 125 cfs.

B. Exhibit "A" describes a 26 inch penstock, but water right application describes a 42 inch penstock.

If you have any questions, or if we can be of help, please call 236-6160.

Sincerely,

Elmer W. Smith

Elmer W. "Bill" Smith, P.E.
Environmental Engineer

ES/nn
cc: Gerald Ramsey, Dept. of Water Resources
Robert Fackrell, Rt. 1, Preston
Jerry Yoder, IDHW-DOE, Boise
Gordon Hopson, IDHW-DOE, Pocatello
John Southerland, S.E. District Health, Pocatello

MICROFILMED

June 19, 1984

Robert N. Fackrell
P.O. Box 1
Preston, ID 83263

Dear Mr. Faccrell:

Enclosed is a copy of a protest filed against the issuance of a permit pursuant to your Application No. 13-7416. The Department suggests you contact the protestant directly in an effort to determine the nature of the protest and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for permit (Section 42-203, Idaho Code):

1. Will the proposed use reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

Enclosure

cc: IDWR - State Office

June 19, 1984

RE: Application for Permit No. 13-7416 FACKRELL

J. S. Tixier
Regional Rorester
U.S. Forest Service
324 25th Street
Ogden, UT 84401

Dear Mr. Tixier:

Your protest against the approval of the above referenced application has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying an application for permit (Section 42-203, Idaho Code):

1. Will the proposed use reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

cc: ID[illegible] [illegible]

June 19, 1984

RE: Application for Permit No. 13-7416 FACKRELL

Chris Chaffin
Acting Supervisor, Region 5
Idaho Fish & Game Department
B.O. Box 4229
Pocatello, ID 83201

Dear Mr. Chaffin:

Your protest against the approval of the above referenced application has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying an application for permit (Section 42-203, Idaho Code):

1. Will the proposed use reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

cc: IDWR - State Office

June 19, 1984

RE: Application for Permit No. 13-7416 FACKRELL

Preston Citizen
P.O. Box 472
Preston, ID 83263

Gentlemen:

Would you please submit an affidavit of publication and certified bill in connection with the above referenced application(s). The legal notice was to have been published in your paper on May 31 and June 7, 1984.

Your cooperation in this matter is greatly appreciated.

Very truly yours,

COLLEEN WRAY
Adm. Secretary

United States Department of Agriculture
Forest Service
Intermountain Region
324 25th Street
Ogden, UT 84401

Reply to: 2540

Date: JUN 13 1984

RECEIVED
JUN 14 1984
Department of Water Resources
Eastern District Office

Mr. Ronald D. Carlson
Eastern Region Supervisor
Idaho Department of Water Resources
150 Shoup Avenue
Idaho Falls, ID 83401

Dear Mr. Carlson:

This is to protest Application for Permit No. 13-7416, submitted by Mr. Robert N. Fackrell of Preston, Idaho. The application proposes to divert 125 cfs from Mink Creek for power generation purposes from January 1 to December 31 annually. The proposed concrete diversion structure, 2-mile, 42-inch penstock, power generation facility, and associated roads and power lines are all located on National Forest System lands within the Wasatch National Forest near Preston.

Examination of the streamflow records for USGS Station No. 10087500, located on Mink Creek approximately 5 miles below the proposed point of diversion, indicates that the 125 second-feet of water applied for would completely dewater the stream at least 85 percent of the time. Our protest is based on four factors:

1. The United States has Federal reserved rights to a minimum instream flow necessary to secure favorable conditions of water flow as mandated by the Organic Administration Act of 1897. Permitting this diversion would interfere with that right. The reserved right has not yet been quantified.

2. The Forest Service has been given the responsibility of managing National Forest System lands for timber, watershed, range, recreation, and wildlife and fish through the Multiple-Use Sustained-Yield Act of 1960. If this application is granted, the Forest Service will be unable to redeem its responsibilities under Federal law.

3. It is believed that the stream is a source of recharge for Mink Creek spring which supplies municipal water to downstream residents.

4. The entire project is within the Mink Creek Roadless Area and at the present time, no occupancy is permitted.

Based on the above, we respectfully request the application be denied.

Sincerely,

Ted V Rinker

J. S. TIXIER
Regional Forester

MICROFILMED

FS-6200-11b (7/81)

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

RECEIVED
JUN 8 1984
Department of Water Resources
Eastern District Office

June 7, 1984

Mr. Ron Carlsen
State of Idaho
Department of Water Resources
Eastern District Office
150 Shoup - Suite 15
Idaho Falls, Idaho 83402

Dear Ron,

Just a note for the purpose of confirming our telephone conversation of today. I called to see that you had in fact received my letter of May 24, 1984, and you indicated that you had received it and had forwarded it to Mr. Gerald Ramsey for processing. I also asked that you have your secretary send me a copy of my May 18, 1984 filing on 125 CFS of Mink Creek water and you indicated that you would do that.

Your help is sincerely appreciated, and if there is any additional information needed by your department, please do not hesitate to advise me and I will promptly respond to your request.

Sincerely,

Robert N. Fackrell

APPROPRIATE PAPERS

IDAHO DEPARTMENT OF FISH AND GAME
REGION 5 Phone 232-4703
South Fifth Avenue • P.O. Box 4229
Pocatello, Idaho 83201

RECEIVED
JUN 5 1984
Department of Water Resources
Eastern District Office

June 4, 1984

Mr. Ernest Carlson
Assistant Regional Supervisor
Idaho Department of Water Resources
150 Shoup, Suite 16
Idaho Falls, Idaho 83402

Dear Mr. Carlson:

SUBJECT: Application for Permit No. 13-7416
by Robert N. Fackrell for Mink Creek

As is customary with water right applications involving hydropower projects, we protest this application until we are furnished project details by the applicant.

Sincerely,

Chris Chaffin

Chris Chaffin
Acting Supervisor, Region 5

MICROFILMED

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

RECEIVED
MAY 29 1984
Department of Water Resources
Eastern District Office

May 24, 1984

Mr. Ron Carlsen
State of Idaho
Department of Water Resources
Eastern district Office
150 Shoup - Suite 15
Idaho falls, Idaho 83402

Dear Ron,

As per our telephone conversation of this afternoon, I am writing this letter in responce to a letter that I received from Gerald Ramsey dated May 22, 1984. Mr. Ramsey advised me that I neede to submit to your office a financial statement on myself as well as a set of drawings outlining the proposed Mink Creek project referenced in his letter.

In responce to his first request, I have enclosed a copy of the financial statement that was submitted to the State of Idaho Public Works Contractors Licensing Board. By way of comment concerning the resourses that I have available for, or committed to this project, I have discussed funding of this project with four individuals who are at the very least able to fund a project of this size and have received positive responces from all of them. In addition, I have discussed this project with a commercial lender who has as well expressed interest in considering it. Until more information is available from the feasability study presently underway, I am not in a position to committ any lender to a project such as this.

With reference to the second request of Mr. Ramsey, I have retained Mr. Ted Sorenson of Idaho Falls as a consulting engineer to assemble the pertinant data for F.E.R.C. as well as the money sources mentioned above. As soon as we receive the "Hydrological Curve" information from your department, we will be well underway on assembling the engineering drawings requested. As soon as thes drawings are complete, I will supply you with as many sets as you require.

In closing, I do appreciate the time that you extended to me on the telephone and I hope to be able to comply with any and all requirements that you may have.

Sincerely,

MICROFILMED

Robert N. Fackrell

APPLICANT'S CURRENT FINANCIAL STATEMENT

as of [redacted]01/84
Date

Name Robert N. Fackrell
Principal Banker First Security Bank - Preston, Idaho 83263
Surety Fred A. Moreton & Co. - Kent Bills, Agent

ASSETS

Current Assets:		
Cash	$263,000.00	
Accounts Receivable from Completed Contracts	3,500.00	
Sums Earned on Incomplete Contracts	36,758.00	
Amounts due from Officers, Stockholders, Affiliated Companies & Employees		
Notes Receivable		
Other Accounts Receivable		
Materials in Stock not Included Above	24,000.00	
Negotiable Securities		
Other Current Assets		
Total Current Assets		$327,258.00
Fixed and Other Assets:		
Real Estate:		
Used for Business Purposes	25,000.00	
Not Used for Business	295,600.00	
Construction Plant and Equipment (Net book value from Item 9, Page 5)	99,000.00	
Furniture & Fixtures	12,000.00	
Other Non-Current Assets		
Total Fixed & Other Assets		$431,600.00
TOTAL ASSETS		$758,858.00

LIABILITIES AND CAPITAL

	Due Within Year	Due After One Year	Total
Liabilities:			
Accounts Payable	$196,000.00	0	$196,000.00
Other Current Liabilities	0	0	0
Notes Payable Exclusive of Equipment & Real Estate	0	0	0
Real Estate Encumbrances	0	0	0
Equipment Obligations Secured by Equipment	0	0	0
Other Non-Current Liabilities and Reserves	0	0	0
Total Liabilities	$196,000.00	0	$196,000.00

Capital and Surplus:		
Capital Stock Paid Up		
Net Worth or Surplus		
Earned	$562,858.00	
Unearned		
Total Capital & Surplus		
TOTAL LIABILITIES AND CAPITAL		

CONTINGENT LIABILITIES

Liability as Bondsman	0
Liability as Guarantor on Contracts or Accounts of Others	0
Other Contingent Liabilities	0

May 24, 1984

RE: Application for Permit No. 13-7416 FACKRELL

Dean C. Smith, Watermaster
Water District No. 13-N
Rt. #2, Box 433
Preston, ID 83263

Dear Mr. Smith:

We are enclosing a copy of an application that may be of interest to your water district. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is June 18, 1984, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

May 24, 1984

RE: Application for Permit No. 13-7416 FACKRELL

Idaho Department of Fish & Game
P.O. Box 4299
Pocatello, ID 83201

Gentlemen:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is June 18, 1984, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

May 24, 1984

RE: Application for Permit No. 13-7416 FACKRELL

U.S. Forest Service
324 25th Street
Ogden, Utah 84401

Gentlemen:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is June 18, 1984, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

---

150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

MAY 23, 1984

The Preston Citizen
P. O. Box 472
Preston, Idaho 83263

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 JUNE 18, 1984.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

MICROFILMED

NOTICE OF APPLICATION FOR WATER RIGHT

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

The permit(s) will be subject to all prior water rights. Protests must be filed with the Director, Dept. of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83402 on or before JUNE 18, 1984.

KEN DUNN, Dir.

Published 5/31 & 6/7/84.

13-7416

FRCKRELL, ROBERT N.

P.O. BOX 1, PRESTON, ID 83263

Source: MINK CREEK trib. to BEAR RIVER

Date Filed: 05/18/1984

Diversion Pt: SWSE Sec 13 T 13S R 41E

Use: POWER (125.00 CFS)

In: SESE Sec 22 T 13S R 41E

Proofed by Phone
3-29-94
JR

May 22, 1984

Robert Fackrell
P.O. Box #1
Preston, ID 83263

Dear Mr. Fackrell:

Prior to processing your application for 125 cfs from Mink Creek Water for power generation, it is necessary to have on file with the Department a copy of the plans for your project and a financial statement which indicates that you have sufficient resources to complete such a project.

The plans should be engineering drawings and plans of both the point of diversion and place of use including the generation facilities. The financial statement may be in any form or format which will show that sufficient resources are available and are committed to this project. Financial information will be treated as confidential information.

If you have any questions please call (525-7161) or come to the Idaho Falls office.

Sincerely,

GERALD F. RAMSEY
Radiologic Specialist

GFR:jk

STAFF SHEET FOR POWER GENERATION

INITIAL REVIEW BY G. F. RAMSEY
MAY 21 1984

APPLICATION NO. 13 7416

DATE REQUESTED	IN FILE	
_____	YES	Form 205/206 ~~NOT NEEDED~~
_____	_____	Financial statement if NEEDED operating capacity is more than 500 HP 0.37 MW 373 KW
_____	NO	Statement declaring what the applicant proposes to do with the generated power. (NOT MANDATORY)
_____	78 %	Efficiency is between 85% and 60%

P = kilowatts .74 x hp

Q = c.f.s.

H = feet

e = efficiency

$$e = \frac{P\ (11.8)}{QH} = \frac{(9900)\ (11.8)}{(125)\ (1200)} = 78\ \% = \_\_\_\_$$

$P = .74 \times hp$

$\frac{}{.74}$

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

COMPETING APPLICATION

TO

PROJECT #7957-000

AND

APPLICATION FOR LICENSE

FOR THE

MINK CREEK HYDROPOWER PROJECT

A MINOR WATER POWER PROJECT

(5 megawatts or less)

FRANKLIN COUNTY

IDAHO

Prepared by:

Consulting Associates, Inc.

Boise, Idaho

October 5, 1984

MICROFILMED
AUG 19 1991
Land Order
only.

COMPETING APPLICATION

TO

PROJECT #7957-000

AND

APPLICATION FOR LICENSE

FOR THE

MINK CREEK HYDROPOWER PROJECT

1. Mr. Robert Fackrell of Preston, Idaho, pursuant to Part 4 of the Federal Power Act, Subpart G, Sections 4.31, (a) and (b) 4.60 and 4.61, applies to the Federal Energy Regulatory Commission for a license for the Mink Creek Hydropower Project as described hereinafter.

This competing application for license for the Mink Creek Hydropower project is made after the applicant has properly and duly notified Cook Electric and all relevant agencies as required.

2. Location of the project is:

State: Idaho

County: Franklin

Nearby Town: Preston

Stream: Mink Creek, a tributary to Bear River

3. The exact name and business address of each applicant:

Robert Fackrell
Box 1
Preston, Idaho 83263
Phone: (208) 852-1320

4. The exact name and business address of persons authorized to act as agent for the Applicant in this application:

Vernon Ravenscroft
Helen Chenoweth
Consulting Associates, Inc.
P. O. Box 893
Boise, Idaho 83701
Phone: (208) 345-2670

5. Robert Fackrell is a citizen of the United States and is living and doing business in the state of Idaho as an individual.

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

FILED
84 JUN 15 PM 2:39
FEDERAL ENERGY
REGULATORY COMMISSION

June 13, 1984

NOTICE OF INTENT TO FILE COMPETING APPLICATION

PROJECT NUMBER 7957-000

Kenneth F. Plumb, Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Dear Kenneth,

Please accept this letter as my formal notice of intent to file a competing application in the form of a license application on the above referenced project.

Sincerely,

Robert N. Fackrell

cc: Fred E. Springer
Deputy Director
Project Management
Division of Hydropower Licensing
F.E.R.C.
Room 208 RB
825 North Capitol Street, N.E.
Washington, D.C. 20426

Dale Hatch and Warren P. Chapman
Cook Electric, Inc.
P.O. Box 1071
Twin Falls, Idaho 83303

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

Enclosure: 20 copies of this document

COMPETING APPLICATION

The Applicant wishes to elaborate on the competing Preliminary Permit pending before the Federal Energy Regulatory Commission for this same hydro site. It is the Applicant's position that:

1. He can make a more comprehensive development of the site as compared to the competing Preliminary Permit application. Applicant has adjoining downstream private property rights which will enable an increased head of 31% as compared to a project which terminates at the U.S. National Forest Boundary. See attached Property Agreement between Robert Fackrell and Valdo Benson. Supporting data:

   Elevation first continuous spring....5,830' msl

   Elevation Forest boundary.....5,560' msl

   Fackrell power site on private (Benson) property.....5,440' msl,

2. That he has private property access rights for ingress and egress to the power site which are not available to the competing applicant. Any other access would necessitate extensive and expensive construction over public controlled (U.S.F.S.) property, built down steep canyon sides. This would add significant soil disturbance to the Mink Creek canyon. This disturbance would jeopardize and degrade water quality and also degradate the canyon side vegetation. This vegetation provides control over soil erosion, and enhances wildlife habitat and local grazing value.

   Construction of an extensive road system would add expense and delay that could seriously jeopardize the feasibility of a project at this site and may not be in the public interest.

3. Applicant has private property rights for the transmission of generated energy over the adjoining (downstream) property that are not available to the competing applicant without cost and delay which could further jeopardize the feasibility of the project.

4. Applicant is first in time in making an application for the appropriation of water under the laws of the State of Idaho. An award of a F.E.R.C. license to any other applicant would serve to allow him to build a plant with no available fuel (water) and could also create a conflict of jurisdiction between State and Federal agencies.

5. The competing applicant has not made an adequate field examination of the site or the property limitation of that site. His Preliminary permit application makes assumptions as to total head, water sources and access which simply are not correct or are not available to said competing applicant.

a) Springs at elevation 6,880' msl, which were indicated in the competing Preliminary Permit application are intermittent in nature and do not flow other than during spring run-off periods (primarily May and June).

The system (Utah Power & Light Company) into which this project will deliver power is a winter/summer peaking system to the needs of that system.

b) Natural run-off above elevation 5,830' msl is intermittent and flows only during the early summer run-off period of 60 to 70 days.

c) The first reliable year around water source in the Mink Creek canyon is located at an extensive system of natural springs emerging at elevation 5,830' msl.

d) Total available head from reliable year-around water sources (F.S. controlled property) is only 270 feet. The potential energy from that site, using the maximum volume of water (100 cfs) is 1.89 megawatts or 19% of the 10 megawatts listed in the competing Preliminary Permit application.

e) The competing Preliminary Permit applicant is assuming rights of ingress and egress which already belong to this applicant.

6. This Applicant, Robert Fackrell, is a local Franklin County resident. He has acquired the participation of local land owners. The competing preliminary permit applicant is from outside the community. The competing preliminary permit application has so badly oversized

the project's potential that there is no assurance that the competing application would ever mature into an actual project license application.

Because the competing Preliminary Permit application so totally demonstrates a lack of knowledge and field examination on the part of the competing applicant, it is the contention of Robert Fackrell that the competing application is frivalous and speculative in nature and should be dismissed by the Federal Energy Regulatory Commission.

6. (i) The statutory or regulatory requirements of Idaho and Franklin County that effect 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 hydropower development will be processed, but it is the present policy of the Department not to take final action on an application for water

until a license 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 use for hydropower purposes 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. A permit to appropriate water from a stream carries with it the right to alter the streambed and bank to accomplish the diversion. Thus, no separate application for a stream channel alteration permit is necessary when the alteration is intended to divert appropriate water from a stream.

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 fishways 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 Franklin 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, Mr. Fackrell has an accepted application from the Department of Water Resources which will allow use of the water for hydropower purposes.

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

C. Regarding the protection of fish in Idaho waters, the client will take all reasonable steps to protect. However, it should be noted, there is no sports fishery present in the project area.

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 Franklin County planning and zoning committee for approval. This is a final pre-requisite before construction may take place.

No other specific approvals or actions are required apart from licensure of the project by the 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: Mink Creek is a unique watershed in that the measured water from the Mink Creek springs is in excess of the theoretical yield from the watershed in the Mink Creek Canyon. The Springs emerge from a limestone formation which, geologists believe to be piping water from adjacent basins, which have limited direct run-off. This condition is very clearly described by hydrologist, Cecil Thomas in his report contained herein.

(i) Installed generating capacity - 2.240 mW

(ii) __ Existing Dam. __ Unconstructed dam.

xx Unconstructed diversion structure 6' or less.

__ Existing dam, major modified project.

8. Lands of the United States affected:

(i) National Forest: 7 Acres

(ii) Indian Reservation: None

(iii) Public Lands Under Other Jurisdiction: None

(iv) Other (public land): None

(v) Total U.S. Lands: 7 Acres

(vi) __ Surveyed lands xx Unsurveyed Lands

9. Construction of the project is planned to start within 18 months, and is planned to be completed within 36 months from the date of issuance of license.

10. This application is executed in the State of Idaho, County of Ada, ss:

Robert Fackrell, Box 1, Preston, 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 1 day of October, 1984

Robert Fackrell, Applicant

Subscribed and sworn to before me, a Notary Public of the state of Idaho this 1 day of October, 1984.

Margie Freeland, Notary Public

(seal)

EXHIBIT A

EXHIBIT A

PROJECT DESCRIPTION AND MODE OF OPERATION

The mode of operation for this project will be strictly run-of-the-river with no storage capabilities.

There are no existing impoundments in the project.

The diversion will be accomplished by the construction of a rock rubble barrier with a cement catchment structure to gather the water from the springs and to then serve as headworks for the penstocks. Constructed over the rock rubble core will be the following layers: 1) Optional filter fabric to prevent silt from seeping through the rock, and 2) A clay seal for a sealant, and 3) Another layer of rock rubble to secure the sealant and fabric. This diversion will be a maximum of five feet (5') from the base to the crest and twelve feet (12') across the top of the structure. The width of the structure from streambank to stream-bank will be two-hundred, eighty feet (280').

Spillway will be constructed of welded wire fabric reinforced concrete and will crest three feet (3') below the crest of the diversion structure. Width of the spillway will be forty feet (40'). In addition to the spillway, a bypass pipe of 12 gauge steel, measuring 60" in diameter, will be installed in the headworks, adjacent to the penstock, to convey excess water back into the streambank. With these two facilities, there will be very little occasion in which the run-off will be forced over the top of the diversion structure. Engineering design has considered the

extreme run-off situation and the diversion structure's 2.5:1 slope on the upstream side and 2:1 slope on the downstream side, coupled with the mass and weight of the rock rubble structure will assure stability of the structure.

The steel reinforced cement headworks will be fourteen feet (14') in height and eighteen feet (18') across and thirty feet (30') in length and will be constructed with two water containment sections. One section will feed water into the penstock and the other will feed water into the bypass pipe. Water flow will be controlled by two manually operated 6' x 6' roller gates. Steel bar trash rack will be installed with 1" openings. Steel mesh grating will cover the entire headworks for safety.

There will be a metal constructed powerhouse enclosing the turbine, generator and switchgear/control panels. A traveling bridge hoist will be installed for service in maintenance and servicing the equipment. Exterior will be natural tones to blend in with the surrounding landscape. Steel safety doors will be used.

A transmission powerline will lead from the powerhouse to the Utah Power Company feeder line of 14 kV, located six (6) miles west of the powerplant. This will include a newly constructed powerline for one mile, down to the Utah Power & Light's two-phase powerline, then a rebuild and up-grading of the existing two-phase, to the proper three-phase capacity line for an additional five (5) miles to the U.P. & L. substation.

One steel welded penstock, eight-thousand, five-hundred feet (8,500') in length will be installed with a diameter of 48". Dresser couplings will be installed for expansion and contraction of the pipe. Penstock will be buried and thus assure protection from snow avalanche, treefall, earthquake, freezing temperatures, thus preventing penstock rupture and reasurring restoration of the natural vegetation over the buried penstock.

There will be no other pipelines.

There will be no canal in this project, with the exception of the tailrace which will be constructed by means of an earthen canal structure, capable of handling 100 cfs of water, exhausting from the powerhouse and running 500 feet to the Mink Creek stream-channel.

The anticipated development for the Mink Creek power plant would be that of a horizontal shaft, hydraulic turbine, Francis type, manufactured by Gilkes, Barber or equivalent. The turbine capacity will be 100 cfs.

One new generating unit will be installed, manufactured by General Electric or equivalent. Installed capacity - 2.50 mW.

The flow duration curve is contained herein. The source of

One steel welded penstock, eight-thousand, five-hundred feet (8,500') in length will be installed with a diameter of 48". Dresser couplings will be installed for expansion and contraction of the pipe. Penstock will be buried and thus assure protection from snow avalanche, treefall, earthquake, freezing temperatures, thus preventing penstock rputure and reasurring restoration of the natural vegetation over the buried penstock.

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One new generating unit will be installed, manufactured by General Electric or equivalent. Installed capacity - 2.50 mW.

The flow duration curve is contained herein. The source of

this information is two studies conducted by professional hydrologists, Dr. C.E. Brockway and Cecil Thomas. For their base data, they used the U.S.G.S. Gaging Station located downstream from the project.

The design head of the power plant is 390' gross drop. The hydraulic capacity of the turbine of the powerplant is 100 cfs. The installed capacity will be 2.50 mW.

Elevation at the point of diversion is 5,830' msl. The elevation at the point of generation will be 5,440' msl.

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

Application, minor license 1984

Construction.....1986

Production on-line last quarter.....1986

Delivery of capacity and energy
1st quarter.....1987.

GENERAL TECHNICAL INFORMATION

1. Proposed Installed Capacity:	2.50 mW
(i) Generating Units:	One Manufacturer - General Electric or equivalent.
Provisions for future units:	None
Flow capacity of unit:	100 cfs
Installed capacity:	2.50 mW
(ii) Turbines:	Type - Horizontal Francis Manufacturer - Gilkes, Barber or equivalent. Age - New
(iii) Plant Operation:	No storage, strictly run-of-the-river.
(iv) Estimated average generation:	13,6000,000 kWh
(v) Net head:	365 feet.
(vi) Impoundments:	None.
Forebay	None.
Net storage capacity:	None
Gross storage capacity:	None
(vii) Hydraulic capacity of the plant:	100 cfs
Average flow of the stream at the point of diversion:	35 cfs
Flow duration curve:	See attached.
Median Day Hydrologic Log Values:	See attached.

	Description of drainage area:	Features of the Mink Creek drainarea are covered in depth by the Cecil Thomas report contained herein. Basically, the drainage provides water from a high mountain watershed and the geologic limestone formation pipes water from other basins into the Mink Creek springs.
(viii)	Pipeline:	12 gauge steel bypass pipeline, 60" in diameter.
	Ditches:	None
	Flumes:	None
	Culverts:	None
	Canal:	No canals will be constructed with the exception of the tailrace. Hydraulic capacity - 100 cfs Length - 500 ft. Material - Earthen canal w/clay sealant
	Intake facilities:	Material - cement, steel web reinforced. Capacity - 280 cfs. Hand operated flow control gates. Size: Height 14' Width - 18' Length - 30'
	Penstock:	Length - 8,500' Diameter - 48" Wall thickness -.281" Material - Welded steel w/Dresser couplings. Pressure - 210 psi
	Powerhouse:	Size - 24' x 30' Materials - Metal building with security door. Suitable station service power and lighting and overhead hoist system. Exterior painted a suitable color for concealment w/landscape.

Diversion:	Height - less than 6' from center of streambed to crest. Width at crest - 12'. Length - 280' Materials - Rock rubble core w/ filter fabric topped w/clay sealant and overtopped with rock-rubble for security
Primary Transmission Line:	Existing 3-phase 14 kV service of Utah Power connecting six miles west of the powerplant. The plant will be connected through suitable transformers and switching devices per utility standards to the U.P. line.
Other -	None

(ix) Estimated cost of project: $2,400,000

II. Purpose of Project: Generation and sale of electricity under the Public Utility Regulatory Policy Act to the Utah Power Company, or other suitable utility.

CAPITAL COST ESTIMATE

FACKRELL - MINK CREEK HYDRO - CRONEY HOLLOW SITE
OCTOBER 1, 1984

TED S. SORENSON, P.E.

1)	Penstock 8500 L.F. @ $70.00	$595,000
2)	Intake Structure & Diversion Dam	75,000
3)	Powerhouse	100,000
4)	Turbine, Generator, Switch Gear	600,000
5)	Electrical	40,000
6)	Butterfly Valve	18,000
7)	Mechanical Installation	26,000
8)	Transformer & Electrical Interconnect	60,000
9)	Transmission Line 1.0 mile	15,000
	Retrofit 5 mi @ 8,000	40,000
		$1,569,000
	Contingency	171,000
	Engineer	185,000
	Consulting	140,000
TOTAL ESTIMATED CAPITAL COST		$2,065,000

ENERGY ANALYSIS

FACKRELL - MINK CREEK HYDRO

CRONEY HOLLOW SITE

TED S. SORENSON, P.E.

Gross Head - 390 ft.

8500 L.F. - 48" Ø

Month	Flow cfs*	Net Head ft	KW	KW-HR x 10^3
J	18	384	491	359.4
F	19	384	518	379.2
M	26	384	710	519.7
A	62	377	1662	1216.6
M	100	356	2530	1852.0
J	100	356	2530	1852.0
J	72	377	1930	1413.0
A	28	384	765	560.0
S	23	384	628	460.0
O	23	384	628	460.0
N	21	384	574	420.0
D	19	384	518	380.0
				9871.9
			5% Down Time	9378.3
			Revenue @ 56 mills/KW-HR	$525,185/yr

*Allow 8 cfs bypass flow

Brockway Flow Data

Thomas Flow Data - Add 47,000 Annual

HYDROLOGY OF MINK CREEK BELOW UPPER SPRINGS

Description

Mink Creek flows southwesterly entering the east bank of Bear River six miles northeast of Preston, at elevation near 4700 feet. The basin is relatively flat on the valley floor along the lower 6 miles of the basin, but the upper end is steep and rugged. The creek heads on the ridges of the north-south trending Bear River Range. Highest point is 9328 feet on top of Midnight Mountain and most of the ridge is above 8000 feet.

Records

A gauging station was operated on Mink Creek below Dry Creek, where the drainage area is 19.3 square miles, from April 1917 to August 1951 and November 1958 to December 1962 and another gauge, Mink Creek near Mink Creek was operated six miles farther downstream from 1943 to 1952. Many diversions upstream made the record at Mink Creek near the city of Mink Creek, not directly useable to determine flow at the upper springs. In June, 1950, Mink Creek canal began diverting from Mink Creek, upstream from the gauging station, Mink Creek below Dry Creek. This diversion carried as much as 30 cfs around the gauging station from June to September. In addition, diversions upstream irrigate as much as 2,000 acres. The records are not representative of natural flow in the creek for long periods without adjustment.

Geology

Based on the geologic map of the Preston Quadrangle, the headwaters areas of the basin is unconsolidated, unsorted detritus, limestone, and quartzite. The central portion of the basin is limestone, dolomite, quartzite, mudstone, and claystone. Bedrocks in the lower valley are of limestone and poorly sorted and partly conglomerate quartzite.

Runoff

The stream channel above the upper springs is dry even during the high water season. Above these springs, the upper basin constitutes only 5.5 square miles of drainage basin. Above this dry basin, which includes several square miles, is a closed basin with no surface outlets, which is all above 7,840 feet in elevation. It is apparent that the basin feeding the upper springs is much greater than the surface drainage area. Yield from the springs is estimated to average 63.9 cfs which is equivalent to 158 inches over the surface area per year. This is considerably greater than the precipitation. Groundwater storage maintains minimum flows which greately exceed minimum flows in most basins. Estimated flows which are exceeded 90% of the time is more than 5 cubic feet

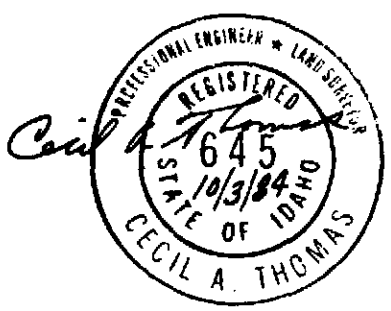
per square mile, whereas many streams flow less than 0.25 cubic feet per square mile in low water seasons.

Estimates of Flow in Upper Springs

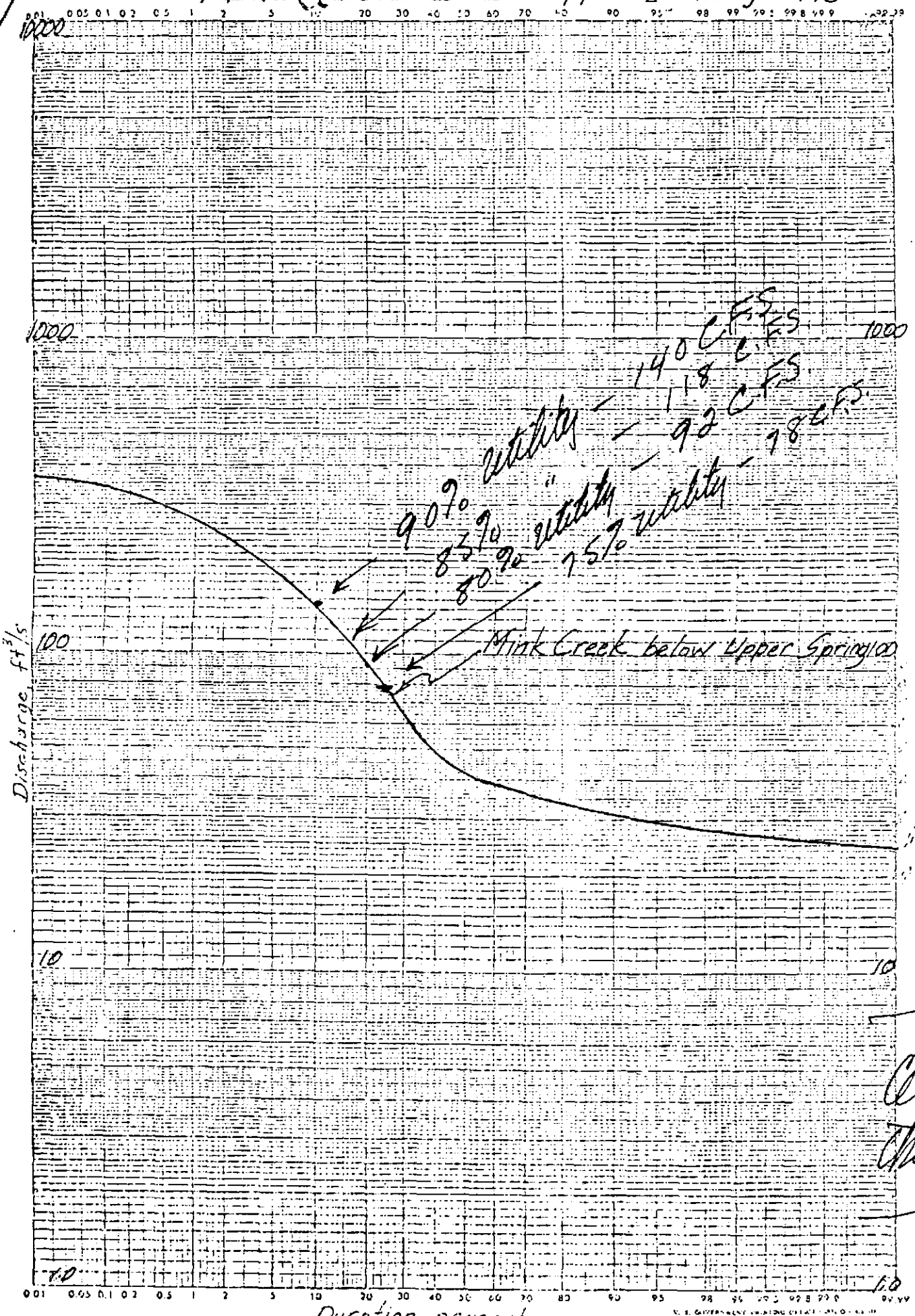
No precise basis for estimates of flow is available for the upper springs. The nearest gauging station is on Mink Creek, below Dry Creek. Diversions between the upper springs and the gauging site affect their credibility for estimating the flows without adjustment. The best basis of estimates of flow characteristics in the upper springs for a long representative period, appears to be the forty years of record for Cub River near Preston. Correlation of concurrent flows in Cub River near Preston, and in Mink Creek, below Dry Creek, for periods of negligible diversions above the gauge shows a low standard error. The relation of the flows is Qm = .80 Qc + 16 where Qm is discharge in cfs of Mink Creek below Dry Creek and Qc is discharge in cfs of Cub River near Preston.

Using this equation values for the duration curve and median hydrograph for Cub River near Preston can be converted to duration curves and median hydrographs for Mink Creek below Dry Creek for a representative long period. Discharge for Mink Creek below upper springs can then be estimated using the following assumptions which are based on unpublished communication: Dry and other inflows between the upper springs and the gauging station below Dry Creek are practically dry during the low flow seasons. Practically all of the flow gauged below Dry Creek including flow bypassing in canals then comes from the upper springs. This should be verified by measurements. Flows in four inflow channels: Dry Creek, Croney Hollow Spring, and two other springs between the gauging station below Dry Creek and the upper springs were estimated on June 7, 1984 to be flowing 270, 40, 5 and 2 cfs., respectively. These estimates were considered in estimating the duration curve and the median hydrograph for Mink Creek below the upper springs. The duration curve and the hydrograph, showing the median day values below the upper springs are attached."

Cecil A Thomas, P.E.
Cecil Thomas, Hydrologist



Duration curve of Mink Creek below Upper Springs near Mink Creek



Cecil Thomas

Sheet No. ..... of ..... Sheets. Prepared by CAT Date 6/13/84 Checked by ..... Date .....

Form 9-285 (9-77)

SEMI-LOG PLOT OF DAILY VALUES

Station Name Estimated Median day values for Mink Creek below upper springs near Mink Creek, Idaho

Station Number _____ Year _____

October | November | December | January | February | March | April | May | June | July | August | September

1000

100

10

1

Plotted by CAB Checked by _____ Date June 13, 1984

C. E. BROCKWAY P. E.
ENGINEERING CONSULTANT

Groundwater, Hydrology,
and Hydraulic Engineering

706 Sunrise Blvd. N.
Twin Falls, Idaho 83301 733-0938

July 26, 1984

Mr. Robert Fackrell
P. O. Box 1
Preston, ID

Dear Mr. Fackrell:

In response to your telephone call of July 5, 1984, and subsequent calls to Mr. Vern Ravenscroft, I have made an evaluation of the hydrologic study which Mr. Cecil Thomas performed in aid of the FERC permit.

I called Mr. Thomas on June 26, 1984, and discussed the approach, assumptions, and data which he used to estimate the median day values for Mink Creek below the upper springs and the flow duration curve. Mr. Thomas requested consulting associates to furnish his report and data. I received the computed median day value curve and estimated flow duration curve for Mink Creek below the upper springs and Idaho Department of Water Resources flow records and frequency analysis for Mink Creek below Dry Fork near Mink Creek, Idaho.

Only July 20, 1984, I inspected the Dry Fork and the reach of Mink Creek from below Dry Fork to the upper springs and estimated flows in major tributaries and canals.

Mr. Thomas' description of the Mink Creek watershed, records available, and geology and runoff synopsis is accurate. The most anomalous characteristic of the watershed is the high water yield per unit area. This phenomenon precludes the use of runoff analysis utilizing procedures adapted to primarily surface runoff watersheds with low base flows. Mr. Thomas' selection of a correlation approach utilizing Cub River records is appropriate in light of the relatively long period of record on Cub River, concurrent with Mink Creek below Dry Fork and Cub River flow data and similar geology.

Correlation of concurrent flow records of Mink Creek below Dry Fork with Cub River near Preston results in reasonable long term estimates of Mink Creek below Dry Fork only for periods when all or nearly all of the irrigation canals are not diverting and Dry Fork is not flowing. Two major canals on Dry Fork and one major canal on Mink Creek divert above the guage Mink Creek below Dry Fork.

RECEIVED
JUL 30 19

Mr. Thomas used a lumped correlation using all concurrent low flows for Mink Creek and Cub River. I believe a more realistic approach is to use individual monthly correlations for the non-irrigation months which account for deviations from a general correlation. This procedure produces results similar to but not identical to Mr. Thomas' for the non-irrigation months.

Adjustments to the correlated Mink Creek below Dry Fork flows for upstream irrigation diversions and natural inflow below the upper springs is critical for determination of flows available for power generation. Mr. Thomas estimated flows in Craney Hollow Springs and two other Springs between the gauging station below Dry Creek and the upper springs at 40, 5, and 2 cfs on June 7, 1984. On July 20, 1984, I estimated Craney Hollow Spring at 62 cfs and the other springs at 4 and 1 cfs. The main canal diversion on the west side of Mink Creek was estimated at 16 cfs.

Mr. Thomas estimated, based on 'unpublished communication', that Craney Hollow Springs would be dry during the low flow period. Based on the size of the well-defined channel, the fact that the spring is at a relatively low elevation in the watershed, and the current (July) flow, I don't believe this spring is dry a significant period of the year, if at all. A collection structure for the Mink Creek community domestic water supply is located in the spring outlet. Since the community requires water all year long and the structure will operate only with a reasonable flow in the spring, I believe it must be perennial. I have, therefore, assumed that Craney Hollow Spring flows all year long with maximum mean daily flow of 30 cfs in June and a minimum of 5 cfs.

Based on a correlation analysis and adjustments for inflows, I have computed a revised estimated median day flow curve for Mink Creek below the upper springs and an estimated flow duration curve.

The median day value curve differs from Mr. Thomas' curve during the low flow period, primarily because it is adjusted for flow in Craney Hollow Spring. Also, the estimated peak for the median day is higher.

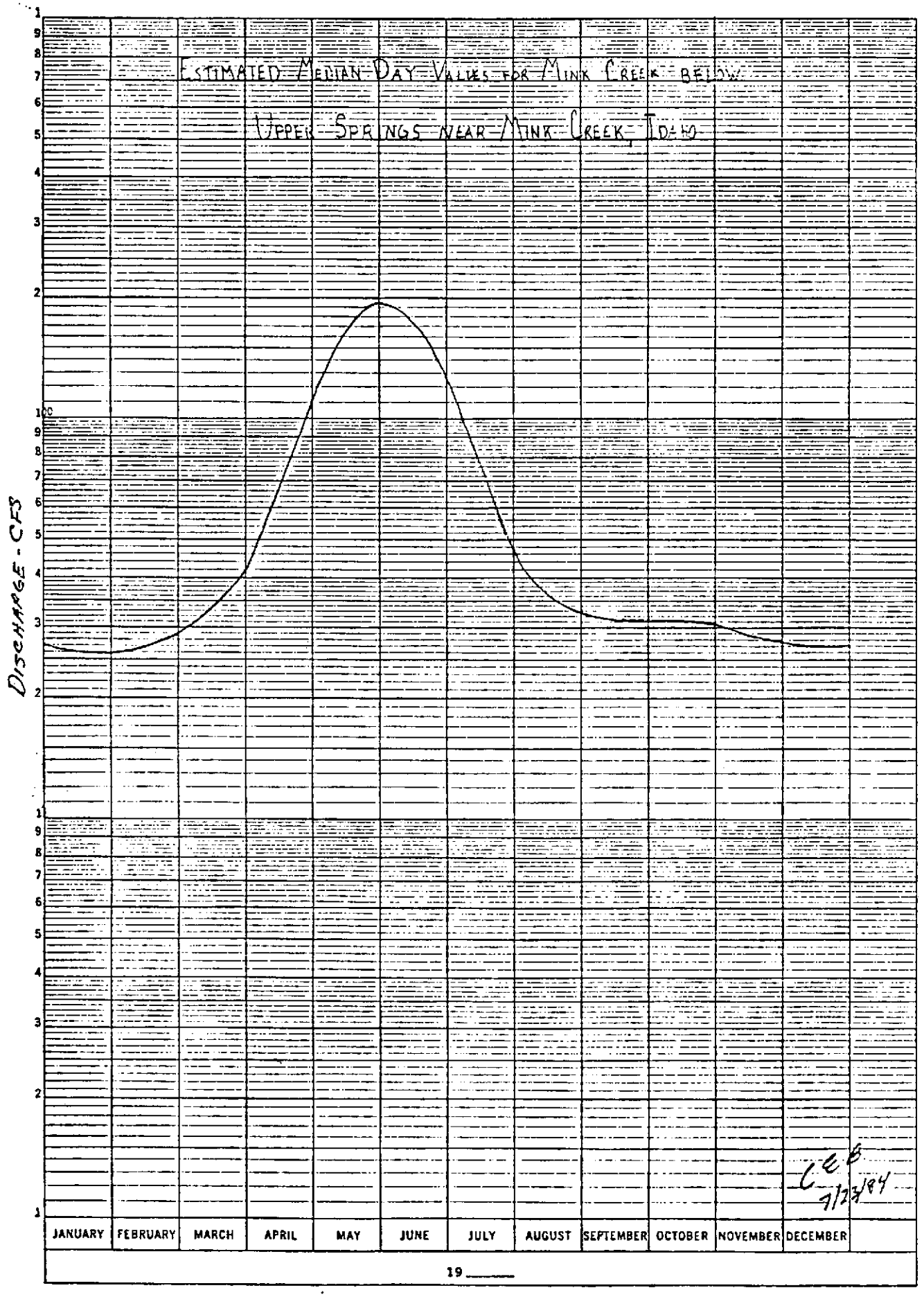
The flow duration curve differs in the lower flows, primarily due to the adjustment for Craney Hollow Springs. For instance, the 70% exceedance value from Mr. Thomas' curve is approximately 65 cfs. The revised curve which I am submitting shows a 70% exceedance of 55 cfs.

Sincerely,

C. E. BROCKWAY, P.E.

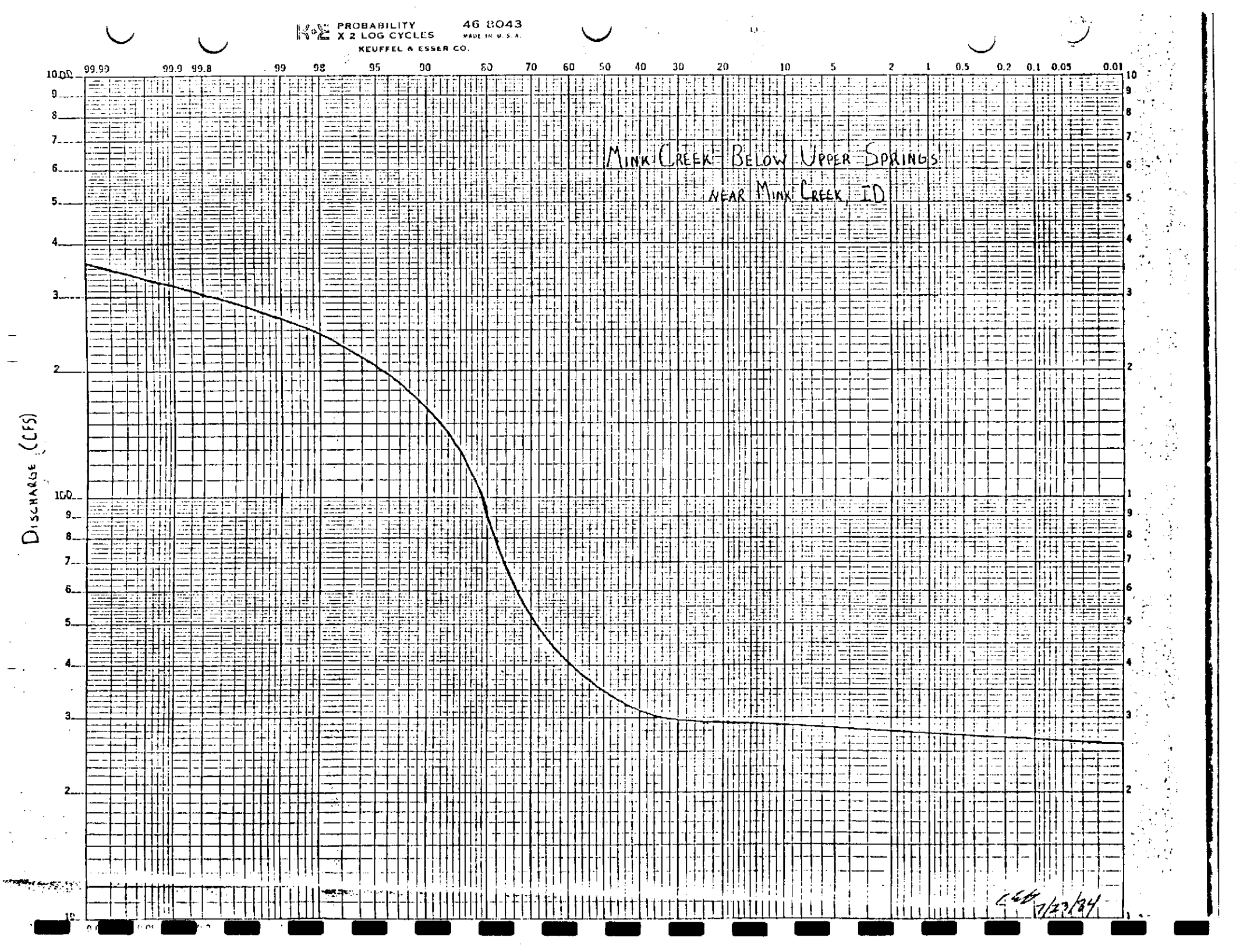
cc: ✓Consulting Associates, Inc., Boise, ID
Mr. Carl Myers, Boise, ID

ESTIMATED MEDIAN-DAY VALUES FOR MINK CREEK BELOW UPPER SPRINGS NEAR MINK CREEK, IDAHO



CEB 7/27/84

KEUFFEL & ESSER CO. MADE IN U.S.A.
K&E X 3 LOG CYCLES


K+E PROBABILITY
X 2 LOG CYCLES
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KEUFFEL & ESSER CO.
99.99 99.9 99.8 99 98 95 90 80 70 60 50 40 30 20 10 5 2 1 0.5 0.2 0.1 0.05 0.01
DISCHARGE (CFS)
MINK CREEK BELOW UPPER SPRINGS
NEAR MINK CREEK, ID
7/23/84

PROPERTY

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
EASTERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

150 Shoup — Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

May 22, 1984

Robert Fackrell
P.O. Box #1
Preston, ID 83263

Dear Mr. Fackrell:

Prior to processing your application for 125 cfs of Mink Creek water for power generation, it is necessary to have on file with the Department a copy of the plans for your project and a financial statement which indicates that you have sufficient resources to complete such a project.

The plans should be engineering drawings and plans of both the point of diversion and place of use including the generation facilities. The financial statement may be in any form or format which will show that sufficient resources are available and are committed to this project. Financial information will be treated as confidential information.

If you have any questions please call (525-7161) or come to the Idaho Falls office.

Sincerely,

Gerald Ramsey

GERALD F. RAMSEY
Radiologic Specialist

GFR:jk

Responded — May 24, 5:05 p.m. — [illegible]

Form 202
3/78

Ident. No. 13-7416

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

1. Name of applicant Robert N. Fackrell Phone 208-852-1522

Post office address P.O. Box 1, Preston, ID 83263

2. Source of water supply Mink Creek which is a tributary of Bear River

3. Location of point of diversion is SW ¼ of SE ¼ of Section 13 Township 13S

Range 41E B.M. Franklin County, additional points of diversion if any:

(unsurveyed)

4. Water will be used for the following purposes:

Amount 125.0 cfs (cfs or acre-feet per annum) for Power Generation purposes from 1/1 to 12/31 (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. 125.0 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. concrete diversion into 42" penstock

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: SE ¼ of SE ¼ of Section 22 Township 13S

Range 41E B.M.

(2) Amount of power to be generated: 9900kw ~~horsepower~~ under 1200 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. None

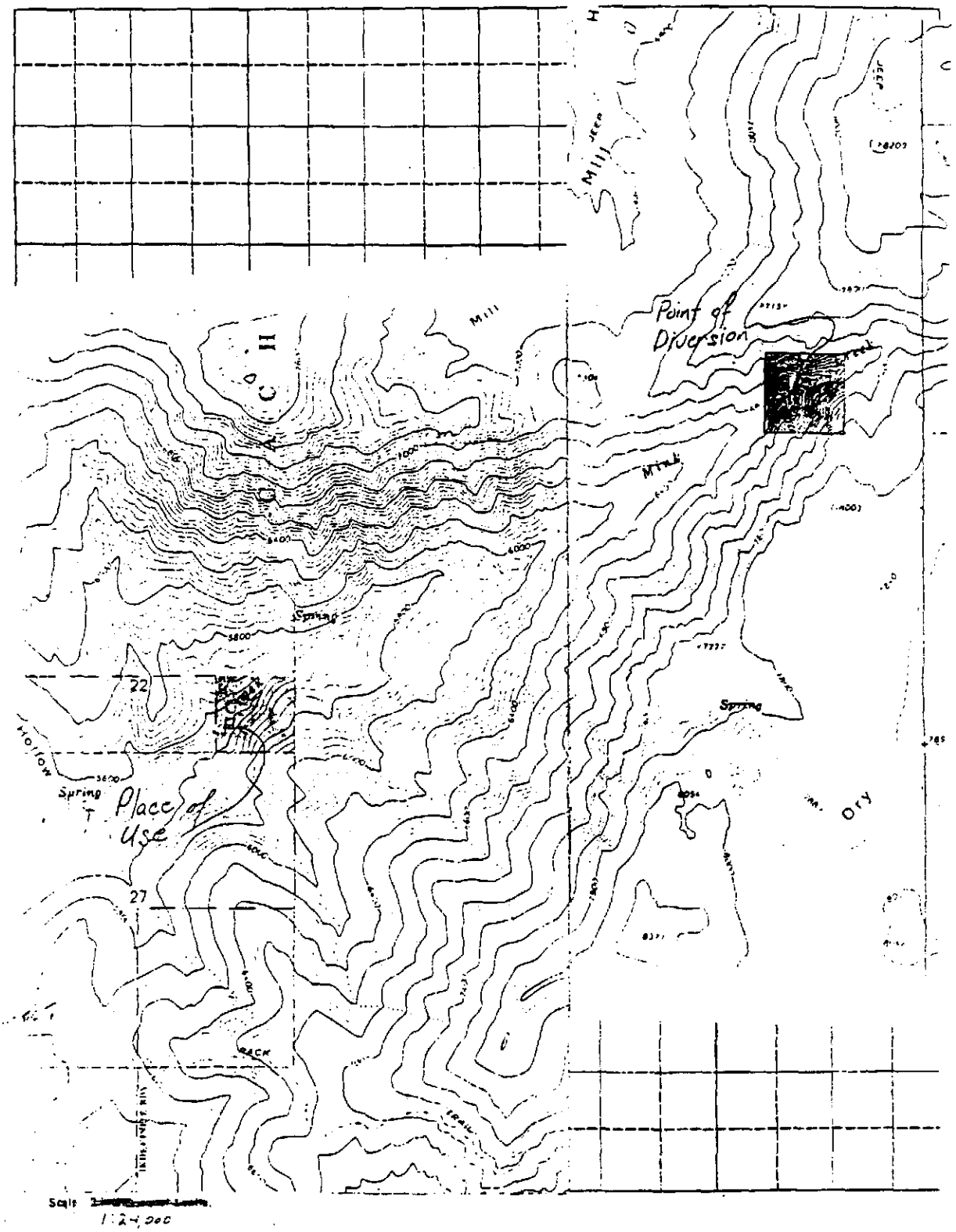
9. a. Who owns the property at the point of diversion US Forest Service (Cache National Fore

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

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing Applicant will have to acquire a special use permit from the Forest Service.

10. Remarks

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



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.

(Applicant)

Received by EMC Date 5/18/84 Time 1:45 p.m.

Preliminary check by GFR Fee $ 1550.00

Receipted by [illegible] Date 5-18-84 #33548

Publication prepared by [illegible] Date 5-23-84

Published in Preston Citizen

Publication dates 5/31 + 6/07/84

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:

LICENSE AGREEMENT

THIS AGREEMENT is made and entered into this 2nd day of October, 1984, by and between VALDO BENSON and RUTH BENSON, husband and wife, hereinafter referred to as "Benson", and ROBERT FACKRELL and STEPHANIE FACKRELL, husband and wife, hereinafter referred to as "Fackrell".

W I T N E S S E T H:

WHEREAS, Benson owns certain real property; and

WHEREAS, Fackrell desires to install a three (3) megawatt power generator on the Benson property;

NOW THEREFORE, the parties hereto agree as follows:

1. **LICENSE:** Benson grants a license to Fackrell for the construction and operation of a three (3) megawatt generator, powerlines, burried pipeline, penstock and related equipment and buildings, (hereinafter the "facility"), upon the terms and conditions as set forth in this Agreement. The facility shall be located in the proximity of Croney Hollow Spring. Fackrell's engineering advisors indicate a preferred location which is approximately 800 feet upstream from Benson's shed site. The exact location of the facility shall be agreed upon by Fackrell and Benson. The facility shall be located on approximately 1/2 acre of property. Benson owns

the following described real property upon which the facility shall be located and to which this agreement relates, to wit:

Township 13 South, Range 41 East, B.M.,
Franklin County, Idaho
Section 21: SE1/4 SE1/4
Section 22: S1/2 SW1/4, SW1/4 SE1/4
Section 27: N1/2
Section 28: N1/2 NE1/4, SE1/4 NE1/4

2. **TERM:** The term of this license shall be until Fackrell ceases the production of power and all payments are current. At such time, Fackrell shall return the area to its original condition as exists at the commencement of this Agreement, or to such other lesser condition as Benson, at his option, may designate.

3. **PAYMENT:** Fackrell agrees to pay the sum of $500.00 per month commencing on January 1, 1985 and on the first day of each month thereafter prior to the commencement of production, provided however, that if production has not commenced by January 1, 1987, that Fackrell shall pay to Benson the sum of $1,500.00 per month commencing January 1, 1987, and each succeeding month until production commences. Upon commencement of production Fackrell agrees to pay Benson the greater of the sum of $3,000 per month or 6 1/2% of Fackrell's gross revenues. After commencement of production, Fackrell shall supply monthly production revenue receipts to Benson.

4. **SUPPLY OF WATER:** As and for additional consideration for said license, Fackrell agrees to provide at his expense, an 8" valve outlet off the penstock. Benson is to have continuous access to pressurized water via the penstock at all times. While Benson shall be allowed use of water from the pipeline at all times, repairs of the Fackrell's generating equipment, pipeline, and other facilities may result in there being brief periods during which no water is available from the valve. Fackrell will use his best efforts to minimize the time when water is unavailable, but Fackrell shall, nevertheless, not be liable for any injury which may be suffered to Benson or Benson's property as a result of temporary unavailability of water from the valve. Construction, maintenance and pumping costs shall all be at Fackrell's expense. Benson shall approve the location of said valve.

5. **PIPELINE, POWERLINE AND BUILDING CONSTRUCTION:** The external facade of all buildings, landscaping and fencing shall be constructed and maintained by Fackrell with the intent and goal of maintaining the current pristine appearance of the area. The choice of external facade, landscaping and fencing are all subject to Benson's approval. The pipeline shall be buried with the surface condition

restored as set forth above and Benson additionally has the right to approve the location. The power pole transmission lines shall be no more than a single wood pole for three wires with eagle perches together with the conditions set forth above and provided further Benson shall have the right to approve the location of said poles and wires.

Fackrell shall so construct the electrical power house and related equipment so that the noise level attributable to the equipment, when operating, shall not exceed _____ decibels at a distance of _____ feet from said powerhouse. The decibel level shall be as measured by a decibel meter, or comparable noise level measuring device that has been calibrated by an independent commercial testing laboratory.

6. **SUPPLY OF POWER:** As and for additional consideration for said license, Fackrell agrees to use his best efforts to cause Utah Power and Light to provide three phase power to Benson's property for domestic and ranch use without the payments of a surcharge to Utah Power and Light by Benson for hookup.

7. **MAINTENANCE:** Fackrell shall be responsible for the maintenance of all facilities, fences and related

construction, improvements, access roads and the like as set forth in paragraph 5 during the term of this Agreement.

8. **ACCESS:** Access to the facility shall be limited to Fackrell and his agents, employees, inspectors and independent contractors for the construction, operation, inspection, and maintenance of the facility. The general public, by this License Agreement, shall not have any rights of access to the property except as approved by Benson.

9. **FISH SPAWNING:** Fackrell agrees to upgrade the stream to improve fish spawning from its current levels.

10. **TERMINATION BY FACKRELL:** Fackrell may terminate this License Agreement by giving a written 30-day Notice of Intent to Terminate, including with said Notice all payments due to date of termination. Fackrell shall further comply with the terms of paragraph 2 as may be required by Benson.

11. **DEFAULT:** Benson shall have no right to terminate this Agreement unless Fackrell shall be in breach of any of the terms of this Agreement. Benson shall further have the option to enforce, without terminating this Agreement, any specific term or terms. Benson shall give 30 days written notice, certified mail, return receipt requested, to Fackrell of any item of default. Said notice,

in addition to specifying all defaults, shall further provide Fackrell shall have 30 days to cure said defaults. After 30 days have elapsed from the giving of said notice and Fackrell having failed to cure the same, Benson may elect to terminate this Agreement, enforce the Agreement by court action without termination, or any other remedy at law or equity.

12. **ATTORNEYS FEES:** In the event an action is brought to enforce any of the terms or provisions of this Agreement, or enforce forfeiture thereof for default thereof by either of the parties hereto, the successful party to such action or collection shall be entitled to recover from the losing party a reasonable attorney's fee, together with such other costs as may be authorized by law. In addition, the defaulting party agrees to pay all costs and reasonable attorney fees for any and all notices of default which the other party causes to be served upon the defaulting party for the defaulting party's failure to perform any required duty under this Agreement, and the said costs and attorney's fees thereof shall be paid by the defaulting party, and failure to pay said costs and attorney's fees shall be a material and substantial breach of this Agreement.

13. **CONTINGENCY:** Fackrell agrees to pay Benson the sum of $3,000.00 as and for earnest money on the signing

of this Agreement. The closing of this agreement shall be held on January 1, 1985, or the first working day thereafter. If Fackrell elects not to proceed with closing, the $3,000.00 earnest money shall be forfeited to Benson. If closing timely occurs the $3,000.00 earnest money payment shall be applied as the first $3,000.00 due to Benson as in for monthly payments. The parties shall divide all closing costs including reimbursement to Benson by Fackrell of one-half of the legal drafting fees.

14. **PRELIMINARY AGREEMENT:** This agreement is a preliminary agreement and contemplates a more specific final agreement to be executed upon closing. The final agreement shall set forth terms and provisions wherein Fackrell shall indemnify Benson for any and all claims and liability, including naming Benson as a co-insured on policies of insurance. The final agreement shall provide for adequate indemnification by Fackrell against any materialman's or other claims arising out of construction of the facilities. The final agreement shall further specify the exact location of the facilities, architectural design and landscaping of the facilities and pipeline and all other matters which are subject to Benson's approval.

15. **CHANGES AND MODIFICATIONS.** No change or modification of this Agreement shall be valid unless the same be in writing and signed by the party to be charged.

16. **WAIVER.** No waiver of any provision of this Agreement shall be valid unless in writing and signed by the party to whom compliance is owed.

17. **BINDING EFFECT.** This Agreement shall be binding upon and inure to the benefit of the parties and their respective heirs, legal representatives, executors, administrators, successors and assigns.

18. **GOVERNING LAW.** This Agreement shall be subject to and governed by the laws of the State of Idaho.

19. **NOTICES:** All notices provided for in this Agreement shall be sent by certified mail, return receipt requested, to the addresses given in this Agreement or to such other address as either party may designate in writing to the other. The date of mailing shall be deemed the effective date of such notice. The addresses of the parties, as of the date of this Agreement, are as follows:

Benson: 58 South 400 East
Logan, Utah 84321

Fackrell: 119 South 200 East
Preston, Idaho 83263

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

Valdo Benson

Ruth Benson

"BENSON"

Robert Fackrell

"FACKRELL"

STATE OF IDAHO)
:ss
County of CANYON)

On this 2nd day of October, 1984, before me, the undersigned, a Notary Public in and for said State, personally appeared VALDO BENSON and RUTH BENSON, husband and wife, known to me or identified to me to be the persons whose names are subscribed to the foregoing instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

Edward D. Ahrens
Notary Public for Idaho
Residing at Nampa, Idaho

(SEAL)

STATE OF IDAHO)
:ss
County of CANYON)

On this 2nd day of October, 1984, before me, the undersigned, a Notary Public in and for said State, personally appeared ROBERT FACKRELL, known to me or identified to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

Edward D. Ahrens
Notary Public for Idaho
Residing at Nampa, Idaho

(SEAL)

EXHIBIT E

EXHIBIT E

The Mink Creek Hydropower Project is located on Mink Creek which heads in the Bear River Range, approximately six miles due east of the Oneida Narrows Reservoir on the Bear River. The creek flows southwestward towards the northeastern corner of Cache Valley and the Bear River in Franklin County, Idaho.

The project is wholly contained on two properties, approximately three-quarters on property controlled by the U.S. Forest Service (Caribou National Forest), and the balance will be located on adjoining private property for which the applicant is obtaining permanent use rights.

A major state highway - Highway 36 - leads from the small town of Mink Creek, just downstream from the project, through Strawberry Canyon, over the Wasatch Mountain Range and into the town of Montpelier, Idaho.

Snowpack in those mountains governs the spring run-off from mid-March until approximately July 10th each year. However, the main source of flow in Mink Creek is governed by subterranian springs which alternately emerge and submerge in the upper reaches of Mink Creek. The Spring flow, at the point of diversion, is steady and more than sufficient for use for hydropower purposes.

Contrary to this, however, the springs shown on the U.S.G.S. map, Section 19 of the Midnight Mountain Quadrangle, have been found to be completely dry in the summer and fall months, and entirely inadequate for reliable development for hydropower purposes. The water issue will be discussed in greater detail in reports contained herein prepared by Dr. Charles Brockway and Cecil Thomas, both of whom are respected and renowned hydrologists.

MODE OF OPERATION

The mode-of-operation of this plant will be strictly run-of-the-river with no storage capabilities planned for this facility.

GEOLOGIC SETTING

The Bear River Range west portion, where the Mink Creek project is located, is a relatively large, uplifted fault block mountain range. It is a north-south trending ridge system that is separated from the adjacent valleys by fault zones to the east and the west. This faulting is primarily responsible for the present relief. Many subsequent faults and foldings have occurred since the mountain range was first uplifted or formed by the Idaho-Wyoming arc of ovethrust faulting. Local glaciation of the mountain range is present at the highest elevations.

The landforms have been sculptured mostly by erosion, with some glaciation and a minor amount of solution activity.

The geologic classification has been termed by the Forest Service as "Canyonlands Landtype Association". These lands have been described by the Forest Service geologists as characterized by steep, moderately to strongly dissected, V-shaped canyons. Rock outcrops are numerous and common, with more outcrops occurring on south aspects than on north aspects. Slope gradients range from 45 to 75 percent. The inherent surface erosion hazard is high. The forage-vegetative productivity on the north aspects is moderate to low. The revegetation potential is low.

The Forest Service has classified the lands within their planning unit in their "Land Capability Classes". The land invol-

ved around the proposed Mink Creek project has been classified as moderate, where they describe this classification as follows: "Most surface-disturbing activities and use will have a moderate, adverse impact upon the present soil and water resource."

VEGETATIVE COVER

Because of the steep profile of the Mink Creek Canyon, and the equally steep gradient of the stream, the riparian zone is very narrow and confined, primarily to the exact area of the streambank.

Quaking aspen trees are the dominent species making up the vegetative community. A variety of plant species are commonly associated with the aspen forests and understory vegetation and are very important areas for the production of grass and forbes.

Dominent riparian species are:

Willow	Salix spp.
Alder	Alnus tenuifolia
Red stemmed Dogwood	Cornus stolonifera
Cottonwood	Populus spp.
Aspen	Populus tremuloides

Lesser riparian species include:

Stinging nettle	Urtica dioica
Cattails	Typha latifolia
Wild Columbine	Aquilegia canadensis

Vegetation on the south facing slope is broken with clumps of trees interspersed with open sage and grassland vegetation.

Dominent species are:

Utah Juniper	Juniperous utahensis
Rocky Mountain Juniper	Juniperous scopulorum
Dwarf Maple	Acer glabrum
Gambel Oak	Quercus gambelii
Quaking Aspen	Populus tremuloides

Secondary Species:

Big Sage	Artemesia tridentata
Bitterbrush	Purshia tridentata

Understory species:

Balsamroot	Balsamoriza sagutata
Snowberry	Symphorocarpus alba
Snowbrush	Crataegus sanguineius

Also various grasses & weed species.

CANYON SLOPE - North face:

The north face of the canyon is very heavily covered with a dense stand of broadleaf trees. There are almost no open spaces. There is very little ranking of species with all plants competing for sunllight with a dense leaf cover wich eliminates lesser plants than those which are in competition for the dominant position.

There is some difference in the compostion and a decided difference in the proportion of species as compared to the much

drier southfacing slope on the other side of the canyon. Ultimately, the south side (north facing slope) will support evergreen forest trees, particularly Douglas fir. At this time, that ecological climax has not been achieved and the broadleaf trees are totally dominant. Primary species are:

Dwarf maple	Acer glabrum
Quaking aspen	Populus tremuloides

Other species in limited numbers are:

Mountain ash	Sorbus Americana
Rocky Mountain juniper	Juniperous scopulorum
Gambel oak	Quercus gambelii
Bitterbrush	Purshia tridentata

Understory plants are limited by shade and by the residual of decaying leaves and other forest residue.

FISHERIES

The fishery analysis has been conducted by Dr. Jack Griffith, Division Head of the Fisheries Department at Idaho State University in Pocatello, Idaho. His complete report is contained herein.

Don Chapman Consultants, Inc.

FISHERY ASSESSMENT
ENVIRONMENTAL IMPACTS
AQUATIC ECOLOGY
FISHERY DEVELOPMENT

P.O. BOX AL
McCALL, IDAHO 83638
USA
TEL: 208-634-2286

26 September 1984

Mink Creek (Franklin County, Idaho): Existing aquatic habitat and fish populations

Aquatic environment:

The Mink Creek watershed has apparently not been impacted by human activities, at least in the upper portion of the watershed. Systematic water quality data are lacking, but water quality in the upper watershed appears excellent, with turbidity low and dissolved oxygen undoubtedly at saturation. Riparian vegetation is well developed and heavily shades the stream. Water temperatures at mid-day in early August averaged 8°C and are actually on the cool side for good trout growth.

The gradient of the portion of the stream that would be partially dewatered by the hydroelectric project is high, approximately 5%. Normal spring flows serve to keep this portion of the stream completely flushed of large organic debris such as submerged logs. This, combined with a lack of boulders or bedrock ledges that would act as hydraulic knickpoints and enable the establishment of pools, results in a relatively low-quality physical habitat for trout. Spawning gravel appears adequate, as does rearing habitat for small trout, but the pools used for larger fish both for summer cover and for overwinter survival are virtually nonexistent. Although beaver are present in the drainage, none are found in the project portion, apparently because the stream gradient preclude the construction of dams capable of surviving spring flows.

Aquatic invertebrate populations are very good in the area, with preliminary inspection indicating strong diversity and abundance.

Fish Populations:

Mink Creek is listed by the Idaho Department of Fish & Game as Class III, with "habitat that is occasionally used by a highly-valued population of high interest or an essential habitat for maintaining a relatively low-valued population of a species of high interest. Occasionally-used habitat implies that reduction of that habitat would

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not seriously impair the continued existence of the population". Further, "moderate potential exists for either restoration to an equal or higher valued fishery, or total compensation options can be defined".

The only existing fish population data were taken by Idaho Fish & Game personnel in August 1973 approximately one mile below the project area. Sixteen hatchery rainbow trout, eight cutthroat trout, and five brook trout were taken by electroshocking in a 200-yard section. No threatened/endangered species are known or are expected to be present in the watershed.

It should be possible to substantially increase trout populations in the stream portion that would be partially dewatered by the project. By reducing the spring peak flow, it will be possible to install and maintain stream structures such as wing deflectors that will establish pools adequate for cover and overwintering of larger trout.

Although anglers do use lower portions of Mink Creek, no fishermen were observed on the upper portion during several visits to the area during the summer of 1984, and there were no indications of fisherman use there.

J. S. Griffith

Jack Griffith, Ph. D.
Fishery Biologist

WILDLIFE

According to the Bear River E.I.S., "Important big game species in the general area are deer and elk. Bear and cougar are present in limited numbers." The project is located within an area designated as Big Game Winter Range. Please see enclosed map.

The following list of wildlife species found in the general area of the project is compiled from records at the Idaho Department of Fish and Game:

Species	Count	Species	Count
Elk	L	Mountain Goat	P
Wolf	P	Bobcat	L
Raccoon	L	Spotted Skunk	M
Muscrat	H	Mink	H
Cottontail Rabbit	H	White Tail Jack Rabbit	M
Flying Squirrel	L	White Tail Antelope Squirrel	A
Pocket Gopher	H	Grasshopper Mice	M
Grasshopper Mice	M	Short Tail Voles	H
White Footed Mice	H	Bats	M
Hungarian Partridge	H	Spruce Grouse	L
Morning Dove	P	American Widgeon	H
Cinnamon Teal	L	Wood Duck	P
Lesser Scaup	L	American Goldeneye	M
Snow Goose	L	Whistling Swan	P
American Merganser	L	Long Billed Curlew	P

American Avocet	P	Eared Brebe	L
White Pelican	L	Franklin's Gull	L
Black Tern	P	Snowy Egret	L
Turkey Vulture	H	Marsh Hawk	H
Peregrine Falcon	M	Sharp-Shinned Hawk	L
Swainson's Hawk	L	Barn Owl	L
Burrowing Owl	M	Short-eared Owl	L
Common Nighthawk	L	Broadtailed Hummingbird	P
Hairy Woodpecker	L	Western Kingbird	L
Olive-sided Flycatcher	P	Violet-Green Swallow	P
Mule Deer	H	Black Bear	L
Coyote	H	Red Fox	H
Weasel	M	Striped Skumk	H
Nutria	L	Porcupine	H
Pigmy Rabbit	L	Black-tail Jack Rabbit	M
Marmot	L	Golden Mantel Ground Squirrel	L
Kangaroo Rat	L	Harvest Mice	H
Red-backed Mice	M	Meadow Mice	H
Ringneck Pheasant	H	Blue Grouse	M
Sage Grouse	M	Mallard	H
Green-winged Teal	L	Shoveler	L
Redhead	L	Greater Scaup	L
Ruffelhead	M	White-fronted Goose	U
Trumpeter Swan	M	Red-breasted Merganser	L
Spotted Sandpiper	M	Millet	P.
Wester Grebe	L	California Gull	P
Forester's Gull	P	Greater Sandhill Crane	M
Black-crowned Night Heron	M	Golden Eagl	H

Osprey	L	Sparrow Hawk	M
Cooper's Hawk	L	Rough-Legged Hawk	M
Screech Owl	L	Great Gray Owl	A
Saw-Whet Owl	L	Belted Kingfisher	M
Rufous Hummingbird	P	Downy Woodpecker	L
Say's Phoebe	P	Western Wood Pewee	P
Tree Swallow	P	Moose	M
Mountain Lion	L	Lynx	L
Kit Fox	A	Badger	M
Beaver	H	Marten	L
Pika	M	Snowshoe Rabbit	H
Red Squirrel	H	Chipmunk	H
Townsend's Ground Squirrel	H	Wood Rat	M
Mountain Vole	L	Jumping Mice	M
Shrews	M	Chukar Patridge	M
Ruffed Grouse	H	Sharp-tailed Grouse	M
Gadwall	M	Blue-winged Teal	L
Pintail	M	Canvasback	L
Ring-necked Duck	L	Ruddy Duck	L
Canada Goose	M	Hooded Merganser	L
Killdeer	M	Short-billed Dowitcher	P
Sora	P	Pied-billed Grebe	A
Ring-billed Gull	P	Common Tern	P
Great Blue Heron	M	American Bittern	M
Bald Eagle	H	Prairie Falcon	M
Goshawk	M	Red-tailed Hawk	H
Long Eared Owl	M	Poor-Will	P

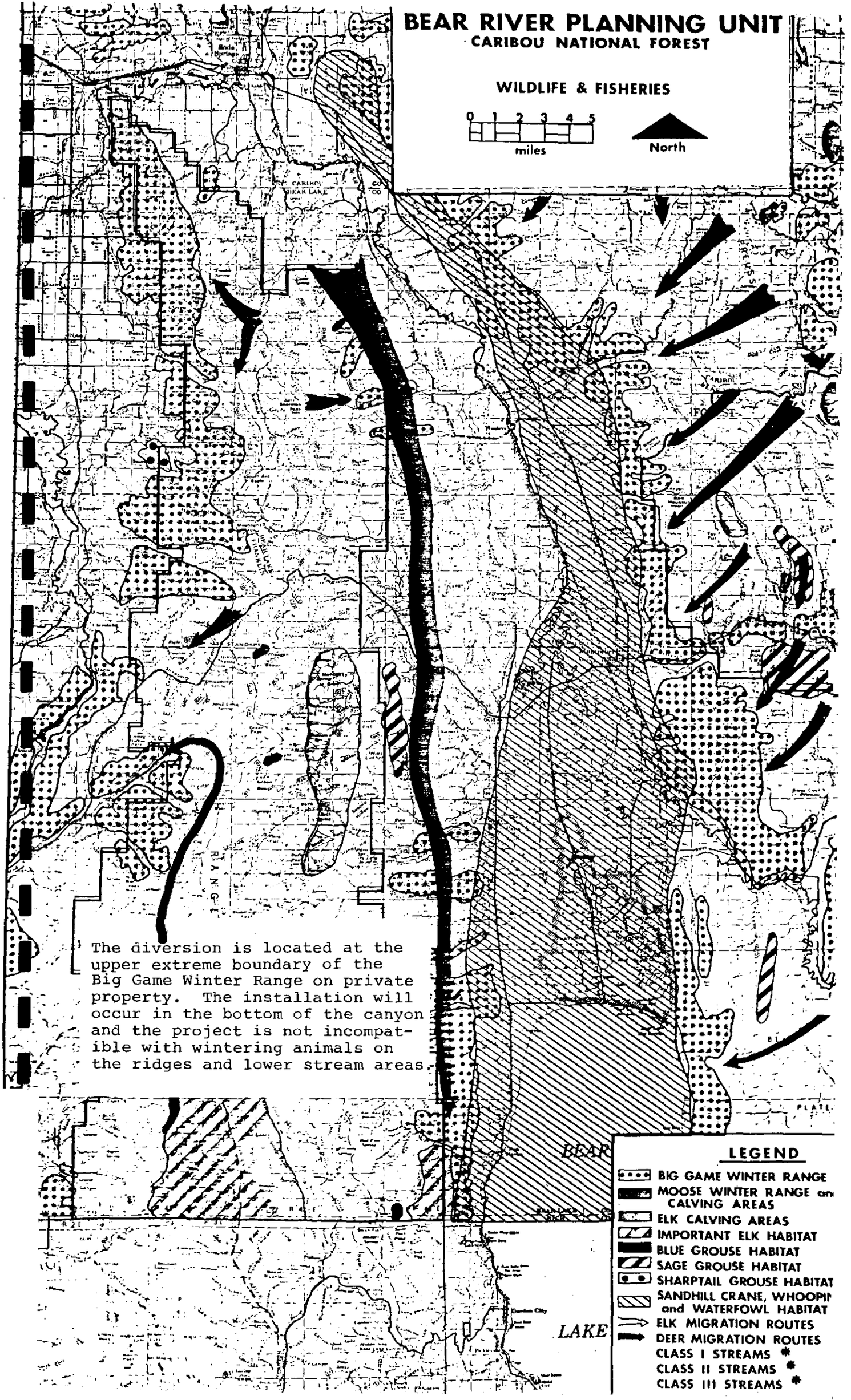
Water Ouzel	M	Red Shafted Flicker	M
Eastern Kingbird	L	Trail's Flycatcher	P
Horned Lark	H	Bank Swallow	P
Rough Winged Swallow	P	Steller's Jay	L
Common Crow	H	Black--Capped Chickadee	L
Plain Titmouse	P	Pygmy Nuthatch	L
Winter Wren	P	Catbird	P
Hermit Thrush	P	Mountain Bluebird	M
Ruby Crowned Kinglet	P	Northern Shrike	L
Warbling Vireo	P	Townsen's Warbler	M
Yellow Breasted Chat	P	Bobolink	P
Redwinged Blackbird	M	Common Grackle	L
Blackheaded Grosbeak	L	Evening Grosbeak	L
Pine Siskin	P	Whitewinged Crossbill	P
Savannah Sparrow	P	Lark Sparrow	P
White-Crowned Sparrow	L	Oregon Junco	L
Leopard Frog	H	Western Spadefoot	L
Long-Toed Salamander	A	Van Dyke's Salamander	A
Eastern Ring-Necked Snake	H	Pine Snake	A
Common Garter Snake	H	Western Rattlesnak	H
Western Fence Lizard	U	Western Skink	L
Desert Horned Lizard	M	Barn Swallow	P
Black-billed Magpie	H	Pinon Jay	L
Mountain Chickadee	M	White-Breasted Nuthatch	M
Brown Creeper	M	Long-billed Marsh Wren	M
Sage Thrasher	M	Swainson's Thrush	L
Townsen's Solitaire	L	Bohemian Waxwing	M
Loggerhead Shrike	L	Yellow Warbler	M

Macgillivary's Warbler	M	Wilson's Warbler	L
Bullock's Oriole	L	Western Meadowlark	H
Brown-Headed Cowbird	H	Lazuli Bunting	L
Cassin's Finch	L	American Goldfinch	M
Green-Tailed Towhee	L	Grasshopper Sparrow	M
Chipping Sparrow	M	Fox Sparrow	M
Swamp Cricket Frog	H	Spotted Frog	M
Moodhouse's Toad	l	Tiger Salamander	L
Rubber Boa	L	Racer	M
Lon-nosed Snake	A	Western Ground Snake	A
Collard Lizard	A	Sagebrush Lizard	H
Western Whiptail	A	Short Horned Lizard	M
Cliff Swallow	M	Common Raven	M
Clark's Nutcracker	L	Chestnut-backed Chickadee	L
Red=breasted Nuthatch	M	House Wren	M
Robin	H	Veery	L
Golden-crowned Kinglet	M	Cedar Waxwing	P
Starling	H	Audubon's Warbler	M
Yellowthroat	M	House Sparrow	H
Yellow-headed Blackbird	H	Brewer's Blackbrid	H
Western Tanager	M	Lark Bunting	L
House Finch	M	Red Crossbill	L
Rofous-sided Towhee	L	Vesper Sparrow	M
Brewer's Sparrow	M	Song Sparrow	M
Wood Frog	A	Western Toad	M
Western Ring-Necked Snake	L	Desert Strirped Whipsnake	A
Western Garter Snake	H	Night Snake	L

Leopard Lizard	H	Side-blotched Lizard	H
Northern Alligator Lizard	P		

H = HIGH M = MEDIUM L = LOW A = ABSENT

P = POPULATION LEVELL UNKNOWN U = PRESENCE UNKNOWN


BEAR RIVER PLANNING UNIT
CARIBOU NATIONAL FOREST
WILDLIFE & FISHERIES
0 1 2 3 4 5
miles
North
The diversion is located at the upper extreme boundary of the Big Game Winter Range on private property. The installation will occur in the bottom of the canyon and the project is not incompatible with wintering animals on the ridges and lower stream areas.
LEGEND
BIG GAME WINTER RANGE
MOOSE WINTER RANGE on CALVING AREAS
ELK CALVING AREAS
IMPORTANT ELK HABITAT
BLUE GROUSE HABITAT
SAGE GROUSE HABITAT
SHARPTAIL GROUSE HABITAT
SANDHILL CRANE, WHOOPI and WATERFOWL HABITAT
ELK MIGRATION ROUTES
DEER MIGRATION ROUTES
CLASS I STREAMS *
CLASS II STREAMS *
CLASS III STREAMS *

WATER QUALITY AND WATER QUANTITY

As reported in the Bear River Unit E.I.S., "The Atlas of The Hydrologic Inventory of the State of Idaho (1968) shows that the Bear River Planning Unit receives about 892,500 acre feet of water as precipitation and about 230,000 acre feet runs off as streamflow. The difference, 622,000 acre feet, is evaporated, transpired by plants, or enters deep flow groundwater systems. This is particularly the case in the canyon where the Mink Creek is contained. See reports from hydrologists Thomas and Brockway.

The report further states, "Precipitation generally falls during the winter as snow, which melts to cause springtime high water conditions in the streams. This snowmelt condition ranges from May through June with the lower elevations melting first. Some snowdrifts in high altitude, shaded areas may last until mid-July or later. Summer thunderstorms often cause short-term increases in streamflow, bvut these are usually relatively small in volume and duration. When peak flow will occur on any given stream depends upon the size of the watershed, elevation and the amount and nature of groundwater flow influences,"

The E.I.S. further states in the Hydrologic Function section, "The Bear River Range is a complex geologic structure containing thick limestone strata whose surfaces expose a classic karst topography....(which) is more subtly expressed by the gravelly groundwater recharge zones in high elevation, low relief basins, by stream channels that rarely flow water, and by large

springs flowing 10's of cubic feet per second that well out of the mountain toeslopes and at the foot of massive cliffs. This limestone structure is shattered by many geologic faults, making the identification of the water sources for any particular spring very difficult."

"The pattern of water movement across the surface, through the Karst, and out of the springs is controlled by the topography, geologic faulting, and tubular springs which have not been mapped or have not been studied sufficiently to explain the water flow patterns."

LAND AND WATER USES

The Bear River EIS, Page 39, addresses the land and water use as follows: "The determination of feasibility is influenced by management costs, prudent management constraints, available technology, anticipated budgetary limitations, the desirability of the resource and anticipated demand levels. There is a total of 3,629 acres of State and private land within the boundary of this Planning Unit. . . and about 217 acres of patented mining claims. The remainder is made up of one homestead, one land exchange tract, and three other tracts of privately owned land and predate the establishment of the Forest.

The homestead entry and the land exchange parcel are contiguous. This land, about 357 acres, is located on Management Unit 5.5 and is owned by the Boy Scouts of America.

Special Uses

There are forty-two special land uses in effect on the Planning Unit. These are in the form of permits, road and trail grants, memoranda of understanding, and Federal Power Commission licenses. (Emphasis added)

Electric power transmission linces have the greatest area of impact, over 657 acres, and the greatest visual impact with three power lines crossing over the Bear River Range in the Western Portion of the Planning Unit.

Water storage and water-handling facilities account for the second largest category of uses. The Montpelier Reservoir owned by the Montpelier Irrigation Company occupies 161 acres. Canals, ditches, pipe lines, and ancillary facilities account for about 50 acres.

Other uses include a telephone line right-of-way, two Boy Scout camp sites, a hunting guides' camp site, a corral for pack animals and reseach areas."

Land and water use on the Benson Property, the site of generation, is primarily that of ranching, and irrigated pasture land.

RECREATIONAL USE

Hunting

Moderate big game hunting.

Fishing

Except for opening day and holiday weekends, fishing pressure is moderate throughout most of the season, according to the Forest Service E.I.S., Bear River Planning Unit, Page 43, Para. 6.

Water Sports

None in or near the project area.

Collecting

None

Off-Road Vehicle Use

There is some recreational use of trails by motorbike riders. Most trails have developed through use and are a product of the livestock industry. Bear River E.I.S. Page 59, Para.7.

General Leisure and Sightseeing

Due to the lack of roads, there is virtually none of this recreational activity within the general area of the proposed project.

Hiking and Backpacking

Again, there may be a minimal amount of this activity, however, because of the heavy brush condition, the massive amount of sting nettles, large boulders and rattlesnakes encountered in the canyon, it is doubtful that this aarea would be an attractive one for hiking and backpacking.

SOCIO-ECONOMIC ASPECTS

For detailed analysis of the socio-economic aspects of the Franklin County area, we sought information from the Division of Economic and Community Affairs on Statistical Indicators of Change in Idaho. This is a very inclusive report, and we include the information on Franklin County in toto.

COUNTY: Franklin

COUNTY SEAT: Preston

I. PEOPLE

County's population as percentage of the state total - 1980: 0.9 %

Population: 1950 9,867 1960 8,457 1970 7,373 1980 8,895

Percent of population change - 1970-80: 20.6 % Idaho - 1970-80: 32.4 %

Population per square mile: 1950 14.0 1960 12.7 1970 11.1 1980 13.4

Percent of 1980 population*: rural 57.7% urban 42.3 %

*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 1,900 Deaths 700 Net migration 400 Percent migration 4.9 %

Persons per household: 1960 3.77 1970 3.38 1980 3.33

Median age: 1970 27.8 Idaho median age: 1970 26.4

Birth rate: 1970 21.7 Fertility rate: 1970 135.0

Birth rate: 1980** 15.6 Fertility rate: 1980** 82.1

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: 2,465 1980: 3,047

Number of mobile homes or trailers: 20 1980: 114

Number of overcrowded units (1.5+ persons per room): 43 1980: 28

Number of units lacking some or all plumbing facilities: 77 1980: 42

Household composition (% of households by size): 1-2 47.1 % 3-5 36.6 % 6+ 16.3 %

Households eligible for assistance:		Elderly		Families
1980:		45.5	39.7	14.8
	1970	163		114
	1978	15		42

Year structure built:

1969 to March 1970	23	1950 to 1959	284
1965 to 1968	97	1940 to 1949	237
1960 to 1964	83	1939 or earlier	1,720

New housing units authorized in permit issuing places*:

Place	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Preston	6	10	21	20	21	19	--	52	17	13
Clifton								1	1	1

*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.	8.0 %	Feb.	8.1 %	Mar.	7.5 %	Apr.	6.0 %	May	5.1 %	Jun.	5.3 %
Jul.	4.5 %	Aug.	3.7 %	Sep.	3.0 %	Oct.	3.1 %	Nov.	3.3 %	Dec.	4.8 %

Percent of labor force unemployed: 1970 6.3 % 1975 9.0 % 1979 5.1 %

Month and percentage of highest unemployment: 1975 Feb. - 12.9% 1979 Feb. - 8.1%

Month and percentage of lowest unemployment: 1975 Aug. - 4.7% 1979 Sep. - 3.0%

Percent of females (16+) in labor force: 1960 (14+) 21.7% 1970 30.1 %

Employment - full and part time by place of work (B. E. A. data):

	1967	1970	1977	1979
Total employment	2,687	2,817	2,896	3,031
Farm proprietors	896	881	788	755
Non-farm proprietors	299	437	297	327
Wage and salary employment				
Federal civilian	46	47	41	41
Military	2	3	56	59
State and local	326	347	429	452
Manufacturing	184	191	201	212
Mining	(D)	(D)	12	13
Construction	50	36	51	60
Trans., Comm. & Pub. Util.	98	(D)	105	109
Trade	418	408	283*	330*
Finance, Insurance & Real Estate	37	30	55	71
Services	116	107	(D)	(D)
Other	(D)	(D)	26	28
Farm	183	197	208	191

(D) Not shown to avoid disclosing confidential information
* Includes only retail trade

Average Idaho tax return (county) - 1980: $ 342

Average Idaho tax return (state) - 1980: $ 531

Sales tax: 1975* $ 354,456 1979* $ 600,357 1980* $ 660,165

Market value of all property** - 1980: $ 175,850,688

Total property tax collected** - 1980: $ 1,778,072

Property tax as percent of market value**: County - 1980 1.011 % State - 1980 1.064%

Highest tax code area and tax as % of market value** - 1980: Area (01-01) - 1,334 %

*Fiscal Year **after homeowner exemption

Per capita income:	1970	$ 2,673	1979	$ 5,481
% of national average:	1970	67.4 %	1979	62.6 %
% of state average:	1970	81.2 %	1979	71.8 %

Median family income - 1969: $ 6,456 Median family income* - 1980: $ 13,000
*HUD estimate

Transfer payments (thousands of dollars - county):
1970 $ 2,465 1975 $ 5,175 1979 $ 7,773

Number of business establishments - 1979: 141

III. EDUCATION AND SOCIAL INDICATORS

Percent of families below poverty level: 1969 10.7 %

Welfare - average number of persons per month in 1980 who utilized:

Old age 13.4 ADC* 56.4 Aid to blind -- APTD** 6.8
*aid to dependent children **aid to permanently or totally disabled

Educational funding levels - FY 80:

State funds per Average Daily Attendance (ADA): Preston, Jt. - $1,201; West Side, Jt. - $1,656

All fund expenditures per ADA: Preston, Jt. - $1,467; West Side, Jt. - $1,884

All fund expenditures per ADA (state average): $ 1,760

Median school years completed (persons over 25): 1970 12.3

Teacher's average salary - 1980:	Male	Female
Elementary	$ 16,155	$ 14,489
Secondary	16,031	14,559
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. 1,720 Number of hospitals 1

Number of persons per M. D. (state average) 838.6

Ambulance services 1 Total hospital beds 14

Crime - number of offenses:	1973	1976	1978	1979
Murder	--	1	--	--
Rape	--	--	--	--
Robbery	--	1	--	1
Aggravated Assault	3	7	9	10
Burglary	29	18	20	34
Larceny	86	96	72	69
Motor Vehicle Theft	2	10	6	8

Suicide rate per 100,000 persons - 1979: 10.6 state average: 13.8

Marriage rate per 1,000 persons - 1979: 4.8 state average: 14.8

Divorce rate per 1,000 persons - 1979: 1.2 state average: 7.1

IV. NATURAL RESOURCES

Land Ownership - 1979:	Acres	% Total
Federal land	139,347	32.8
BLM	15,733	11.3
National Forests	121,513	87.2
Other	2,101	1.5
State land	13,349	3.1
Endowment land	13,344	100.0
Fish & Game	5	--
Parks and Recreation	--	--
Private land	272,328	64.1
County land	--	--
Municipal land	--	--
Total land ownership acres	425,024	100.0

Land use* - 1976	Acres	% Total
Urban or built-up land	1,300	.3
Agricultural land	199,400	46.6
Rangeland	105,300	24.7
Forest land	112,600	26.3
Water	3,200	.5
Wetland	3,900	.9
Barren land	2,800	.7
Tundra	--	--
Perennial snow or ice	--	--
Total land use acres	428,500	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	667	652
Land in farms . . . . . .acres	258,469	253,123
Average size of farm . . . . . .acres	388	388
Total cropland . . . . . .farms	616	617
acres	151,852	142,105
Average per farm, value products sold . .dollars	43,637	35,706
Cattle & calves, inventory . . . . . number	33,335	37,665
Hogs & pigs, inventory . . . . . number	2,553	1,065

(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	67	42	47	33
10 to 49 acres . . . . . farms	92	70	63	50
50 to 179 acres . . . . . farms	177	207	159	191
180 to 499 acres . . . . . farms	187	185	182	175
500 to 999 acres . . . . . farms	77	91	77	89
1,000 to 1,999 acres . . . . . farms	46	43	46	43
2,000 acres and over . . . . . farms	21	14	21	14
Farms, value of land & buildings				
Average per farm . . . . . dollars	234,189	134,775	256,130	143,173
Average per acre . . . . . dollars	555	347	550	346
Tenure of operator				
Full owner . . . . . farms	438	444	380	394
Part owner . . . . . farms	190	181	183	177
Tenant . . . . . farms	39	27	32	24
Principal occupation				
Farming . . . . . farms	430	468	414	449
Other than farming . . . . . farms	237	179	181	143

Planning/zoning commission - 1979: yes County comprehensive plan - 1979: yes

Subdivision ordinance - 1979: yes Zoning ordinance - 1979: no

Miles of road - 1979: interstate -- state 77.98 local 400.40

Motor vehicles registered - 1980: cars 6,427 Other 1,406

Per capita total vehicles .88

CITY POPULATION

	1970 Census	1980 Census	% Change
Clifton	137	208	51.8%
Dayton	198	368	85.9%
Franklin	402	423	5.2%
Oxford	75	66	-12.0%
Preston	3,310	3,759	13.6%
Weston	230	310	34.8%

COUNTY: Fremont

COUNTY SEAT: St. Anthony

I. PEOPLE

County's population as percentage of the state total - 1980: 1.1 %

Population: 1950 9,351 1960 8,679 1970 8,710 1980 10,813

Percent of population change - 1970-80: 24.1 % Idaho - 1970-80: 32.4 %

Population per square mile: 1950 5.0 1960 4.7 1970 4.7 1980 5.8

Percent of 1980 population*: rural 70.3 % urban 29.7 %

*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 2,400 Deaths 800 Net migration 500 Percent migration 6.0 %

Persons per household: 1960 3.57 1970 3.41 1980 3.23

Median age: 1970 24.2 Idaho median age: 1970 26.4

Birth rate: 1970 19.7 Fertility rate: 1970 103.7

Birth rate: 1980** 25.3 Fertility rate: 1980** 118.4

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: 3,655 1980: 5,376

Number of mobile homes or trailers: 163 1980: 517

Number of overcrowded units (1.5+ persons per room): 45 1980: 54

Number of units lacking some or all plumbing facilities: 289 1980: 112

Household composition (% of households by size): 1-2 44.4 % 3-5 38.6 % 6+ 17.0 %

Households eligible for assistance:

		Elderly	Families
1980:		46.4	41.0	12.6
1970		158	183
1978		30	74

Year structure built:

1969 to March 1970	155	1950 to 1959	460
1965 to 1968	512	1940 to 1949	398
1960 to 1964	292	1939 or earlier	1,793

New housing units authorized in permit issuing places*:

Place	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Ashton	3	2	4	2	6	4	1	12	3	3
St. Anthony	5	12	33	10	24	19	13	22	N/A	15

*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.	8.5 %	Feb.	8.4 %	Mar.	7.8 %	Apr.	5.6 %	May	3.1 %	Jun.	2.7 %
Jul.	3.9 %	Aug.	5.8 %	Sep.	5.2 %	Oct.	3.5 %	Nov.	4.2 %	Dec.	7.0 %

Percent of labor force unemployed: 1970 5.6 % 1975 8.8 % 1979 5.3 %

Month and percentage of highest unemployment: 1975 Dec. - 12.2% 1979 Jan. - 8.5%

Month and percentage of lowest unemployment: 1975 May - 5.8% 1979 May - 3.1%

Percent of females (16+) in labor force: 1960 (14+) 28.9% 1970 38.5%

Employment - full and part time by place of work (B. E. A. data):

	1967	1970	1977	1979
Total employment	2,929	3,217	4,136	4,493
Farm proprietors	766	748	671	644
Non-farm proprietors	369	510	423	467
Wage and salary employment				
Federal civilian	190	188	203	271
Military	--	--	68	73
State and local	384	484	591	678
Manufacturing	117	200	240	279
Mining	--	--	0	0
Construction	31	60	100	102
Trans., Comm. & Pub. Util.	100	95	139	166
Trade	371	367	686	831
Finance, Insurance & Real Estate	23	18	65	88
Services	249	261	376	400
Other	39	31	124	80
Farm	290	255	450	414

Average Idaho tax return (county) - 1980: $ 366

Average Idaho tax return (state) - 1980: $ 531

Sales tax: 1975* $ 510,665 1979* $ 740,500 1980* $ 636,548

Market value of all property** - 1980: $ 216,192,152

Total property tax collected** - 1980: $ 2,443,433

Property tax as percent of market value**: County - 1980 1.130 % State - 1980 1.064%

Highest tax code area and tax as % of market value** - 1980: Area (03) - 1.654 %

*Fiscal Year **after homeowner exemption

Per capita income:	1970	$ 2,525	1979	$ 5,750
% of national average:	1970	63.7 %	1979	65.7 %
% of state average:	1970	76.7 %	1979	75.7 %

Median family income - 1969: $ 7,822 Median family income* - 1980: $ 15,100
*HUD estimate

Transfer payments (thousands of dollars - county):
1970 $ 2,427 1975 $ 5,387 1979 $ 8,344

Number of business establishments - 1979: 189

III. EDUCATION AND SOCIAL INDICATORS

Percent of families below poverty level: 1969 11.7 %

Welfare - average number of persons per month in 1980 who utilized:

Old age 2.9 ADC* 92.3 Aid to blind 1.0 APTD** 8.3
*aid to dependent children **aid to permanently or totally disabled

Educational funding levels - FY 80:

State funds per Average Daily Attendance (ADA): Fremont County, Jt. - $1,383

All fund expenditures per ADA: Fremont County, Jt. - $1,743

All fund expenditures per ADA (state average): $ 1,760

Median school years completed (persons over 25): 1970 12.3

Teacher's average salary - 1980:	Male		Female
Elementary	$ 14,243		$ 14,596
Secondary	16,667		14,390
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. 1,850.0 Number of hospitals 2

Number of persons per M. D. (state average) 838.6

Ambulance services 1 Total hospital beds 26

Crime - number of offenses:	1973	1976	1978	1979
Murder	--	1	1	1
Rape	1	--	1	6
Robbery	1	1	2	1
Aggravated Assault	8	3	14	2
Burglary	78	5	42	69
Larceny	103	5	117	162
Motor Vehicle Theft	9	11	15	28

Suicide rate per 100,000 persons - 1979: 8.8 state average: 13.8

Marriage rate per 1,000 persons - 1979: 9.5 state average: 14.8

Divorce rate per 1,000 persons - 1979: 1.6 state average: 7.1

IV. NATURAL RESOURCES

Land Ownership - 1979:	Acres	% Total
Federal land	709,734	59.5
BLM	140,016	19.7
National Forests	525,940	74.1
Other	43,778	6.2
State land	119,088	10.0
Endowment land	90,724	76.2
Fish & Game	15,807	13.3
Parks and Recreation	12,557*	10.5
Private land	363,552	30.5
County land	486	--
Municipal land	100	--
Total land ownership acres	1,192,960	100.0

* Part of parks and recreation land is submerged under water part of the year.

Land use* - 1976	Acres	% Total
Urban or built-up land	1,100	.1
Agricultural land	210,200	17.2
Rangeland	397,500	32.6
Forest land	547,900	44.9
Water	19,200	1.6
Wetland	--	--
Barren land	44,600	3.6
Tundra	--	--
Perennial snow or ice	--	--
Total land use acres	1,220,500	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	532	560
Land in farms	acres	425,317	391,997
Average size of farm	acres	799	700
Total cropland	farms	481	527
	acres	206,404	180,174
Average per farm, value products sold	dollars	79,909	59,073
Cattle & calves, inventory	number	31,154	38,121
Hogs & pigs, inventory	number	746	583

(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	34	23	15	11
10 to 49 acres	farms	53	68	28	44
50 to 179 acres	farms	116	146	105	135
180 to 499 acres	farms	148	156	146	146
500 to 999 acres	farms	85	81	84	80
1,000 to 1,999 acres	farms	60	55	60	53
2,000 acres and over	farms	36	31	32	28
Farms, value of land & buildings					
Average per farm	dollars	388,876	224,639	417,089	234,646
Average per acre	dollars	522	321	617	362
Tenure of operator					
Full owner	farms	254	295	202	241
Part owner	farms	217	201	208	195
Tenant	farms	61	64	60	61
Principal occupation					
Farming	farms	394	422	370	401
Other than farming	farms	138	110	100	73

Planning/zoning commission - 1979: yes County comprehensive plan - 1979: yes

Subdivision ordinance - 1979: yes Zoning ordinance - 1979: no

Miles of road - 1979: interstate -- state 118.92 local 542.52

Motor vehicles registered - 1980: cars 7,096 Other 1,209

Per capita total vehicles .77

CITY POPULATION

	1970 Census	1980 Census	% Change		1970 Census	1980 Census	% Change
Ashton	1,187	1,219	2.7%	Parker	266	262	-1.5%
Drummond	13	25	92.3%	St. Anthony	2,877	3,212	11.6%
Island Park	136	154	13.2%	Teton	390	559	43.3%
Newdale	267	329	23.2%	Warm River	10	2	-80.0%

HISTORICAL AND ARCHAEOLOGICAL REPORT

A detailed archaeological study was conducted by Dr. B. Robert Butler & Associates of Pocatello, Idaho in August, 1984. His report is contained herein.

Mink Creek was first settled by white settlers in 1871 by Morman settlers from Mantua, Utah who were searching for land to make a new home. They were attracted to Mink Creek because it reminded them of their home in Utah. Mr. James Morgan Keller II, his sons, William and Janeus, went north to lay claim on the land. They built a log cabing with dirt roof, and cut the tall grass for hay for their animals for the coming winter.

After the cabins were finished and the grass cut, James Morgan II returned to Mantua, leaving William, age 14 and Janues 12, to look after the claim.

During the later part of December, the boy Janues got so homesick, he left on snowshoes over the crusted snow and frozen streams, walked to Mantua, Utah, about 60 miles distance. This left William to face the lineliness and rigors of winter alone with the nearest neighbors 14 miles away!

That spring, other families arrived. Soon, imigrants and others traveling from Logan, Utah to Franklin, Idaho and on to Bear Lake, would stop there to feed and water their oxen and horses, and sometimes, cap there overnight.

The history of Mink Creek really commenced with the early trappers who came up through Mink Creek with their pack horses to trap mink and wild animals. There were many mink in Mink Creek and the trappers trapped them by building little rock houses that had a door in them and trap in them. They placed the baited traps all along the edge of the creek.

Most of the early families were originally from Denmark and spoke the Danish language exclusively. There was no money in circulation in Mink Creek until after 1893. Until then goods and services were exchanged on the "barter" system.

These early families lived in dugouts, dug into hillsides and as cellars. Inside these dugouts, they would build a platform to make their bonfire on, and cooked on the hot coals in big iron kettles. The first houses were made of logs with the cracks plastered with clay and chaff, and dirt roofs.

About 1916, a water system was built with good spring water being piped to the homes in the village from springs. Because World War I was on, steel pipe was unavailable, so they built the water conveyance system from wood stave canals. This opened up more argicultural development and prompted the further development of Mink Creek as an independent small southeastern town.

September 17, 1984

Consulting Associates
c/o Vern Ravenscroft
Box 893
Boise, Idaho 83701

Dear Mr. Ravenscroft:

Mr. Robert Fackrell, General Contractor, Preston, Idaho requested that I send you a copy of the enclosed report of a cultural resource inventory carried out on 9-8-84, for a minor hydroelectric project along the upper part of Mink Creek, a tributary of the Bear River.

Sincerely yours,

B. Robert Butler
B.R. Butler Associates
1406 Golden Gate
Pocatello, Idaho 83201

BRB/lr

Enclosure

RECEIVED
SEP

CULTURAL RESOURCE SUMMARY REPORT FORM

FSM 2360

USDA-Forest Service - Intermountain Region

Type all information except the small encoding blocks.

Cards

(I) 1 Report Number: [ ]

2 Project Title (max. 69) (Typewritten): Minor hydroelectric project, head of Mink Creek

(II) 3 Author's Last Name, Initial (max. 30) (Typewritten): Butler, B.R.

4 Survey Institution: B.R. Butler Associates

5 Month / Day / Year: 09 - 17 - 84

6 Forest: 05 Caribou

7 USFS District: 18 Montpelier

8 State: 10 Idaho (#1) [ ] (#2)

9 County: FR Franklin (#1) [ ] (#2)

(III) 10 Mer. Township / Range / Sections: 13S 41E 22,23

(IV) 11 (T0) UTM Zone / Easting / Northing:

	Zone	Easting	Northing	
(T0)	12	448668	4679920	(T0
	12	448100	4650000	
	12		4680700	(T0
	12		4680820	

(V) 12 Investigation Type: 8 Intensive - complete

13 Project Function: [ ]

14 Total Costs: 191

Man-Hours

15 Field: 8

16 Travel: 6

17 Admin.:

18 Lab.:

Acres

19 Total Project: 12

20 Impact: 12

21 Cleared: 12

Acres Surveyed

22 Intensive-Complete: 12

23 Intuitive-Complete:

24 Miles Surveyed: 01

25 Project Effect: 1

26 Total No. Sites: 0

(VI)

27 USFS Site No.	28 State Site No.	29 N.R.	30 Effect	31 Old/New	32 Relation to Project

If more than 6 sites, continue on another form.

33 Comments - Conclusions - Recommendations

Proposed pipeline route for minor hydroelectric project appears to lie within modern floodplain/erosional zone towards head of high velocity, spring-fed creek. Densely vegetated, shallow surface soil mantles subangular to fully rounded cobbles and boulders in which buried cultural materials are not likely to be found. No indications of either historic or prehistoric cultural resources were observed in the course of the inventory. Cultural resource clearance is recommended.

Author's Signature	Date	Reviewer's Signature	Date
B. Robert Butler	9-17-84		

[ ] Check if form continued.

R-4 2300-3 (3/84)

CULTURAL RESOURCE REPORT NARRATIVE

U.S. FOREST SERVICE - INTERMOUNTAIN REGION
(Version 4/83, Ref. FSM 2361)

A. NAME AND FULL DESCRIPTION OF THE PROPOSED UNDERTAKING (Key to Map)
(Be specific and describe all direct and indirect impacts expected)

Construction of a pipeline for a minor hydroelectric project along the upper part of Mink Creek, a tributary of the Bear River. All impacts, direct and indirect, are expected to be within a 100-foot-wide zone along the creek itself and extending northeastwards from the SE/4 of the SE/4 of Sec. 22, T13S, R41E to the SW/4 of the NE/4 of Sec. 23, T13S, R41E.

B. LOCATION AND GENERAL ENVIRONMENTAL SETTING (Key to Map)

Mink Creek heads in the Bear River Range approximately six miles due east of the Oneida Narrows Reservoir on the Bear River and flows southwestward towards the northeastern corner of Cache Valley and the Bear River in Franklin County, Idaho. From its very beginnings, Mink Creek is a very vigorous, swift-flowing stream with many rapids, side channels and boggy islands within the project. The vegetation in the steep valley of the creek consists of a juniper/scrub oak stand with an understory of grasses and stinging nettles and other water-loving plants along the stream. Grasses are abundant in open areas.

USGS Topographic map(s): Oneida Narrows Reservoir, Idaho, 7.5'

C. PRE-FIELD RESEARCH

1. Sources of information checked:
[ ]Forest overview [ ]Site sensitivity map [ ]GLO plats [ ]Project atlas [ ]Site atlas
[ ]Other(list) Southeastern Idaho Regional Archaeological Center files
2. Summary of previous studies in this general area, in similar terrain:

Report No./Title	Distance/Direction	Results

D. EXPECTED HISTORIC AND PREHISTORIC LAND USE AND SITE SENSITIVITY

1. Are there sites known in this area? [ ]Yes [X]No
2. Are sites expected? [X]Yes(Where?) [ ]No(Why?) Explain below:
Sites are expected around springs and along streams farther down in the valley. While records of sites are very meager from this general location and generally outdated, they do indicate some use of these locations.

FIELD METHODS (Be specific and complete)

1. Areas examined and type of coverage:(Key to Map)

The inventory effort was confined to a 100-foot-wide, one-mile-long zone along Mink Creek, as shown on the accompanying map and as prescribed in a special use permit issued 9-6-84 to the general contractor, Robert N. Fackrell of Preston, Idaho. A two-man team walked in a meandering fashion approximately 15 feet apart, parallel with the stream, and up and back along each side of the stream, beginning on the north side from the forest boundary in the SE/4 of the SE/4 of Sec. 22, T13S, R41E, to the SW/4 of the NE/4 of Sec. 23, T13S, R41E, and then along the south side of the stream as far as the NW/4 of the SW/4 of Sec. 23, T13S, R41E, by which point the proposed pipeline for the hydroelectric project will have crossed to the northern side of the stream and at which point the two-man team again crossed to the northern side of the stream and continued its survey to the forest boundary.

2. Areas not examined and Reasons Why:(Key to Map)

All of the area to be impacted was examined.

4. Personnel conducting or assisting in the survey:

B. Robert Butler and Tessa Witjens Butler

5. Dates of survey: 9-8-84

6. Surface and subsurface visibility (%): 15% to 30%

7. Problems encountered:

Steep slopes, heavy vegetation cover, stinging nettles and rattlesnakes

RESULTS

1. All cultural resources recorded for this area: (Key to Map) [ ]None

Field No.	USFS No.	State No.	Type of Site

None.

2. Cultural resources noted but not formally recorded: (Key to Map) [ ]None

Field No.	Description	Reason not Recorded

None.

G. CONCLUSIONS AND RECOMMENDATIONS

(Possible impacts, relation of sites to impacts, avoidance options, additional work needed, etc.)

There appears to be little likelihood of impacts on cultural resources that would result from the construction of this minor hydroelectric project; therefore, unconditional cultural resource clearance is recommended.

H. ATTACHMENTS

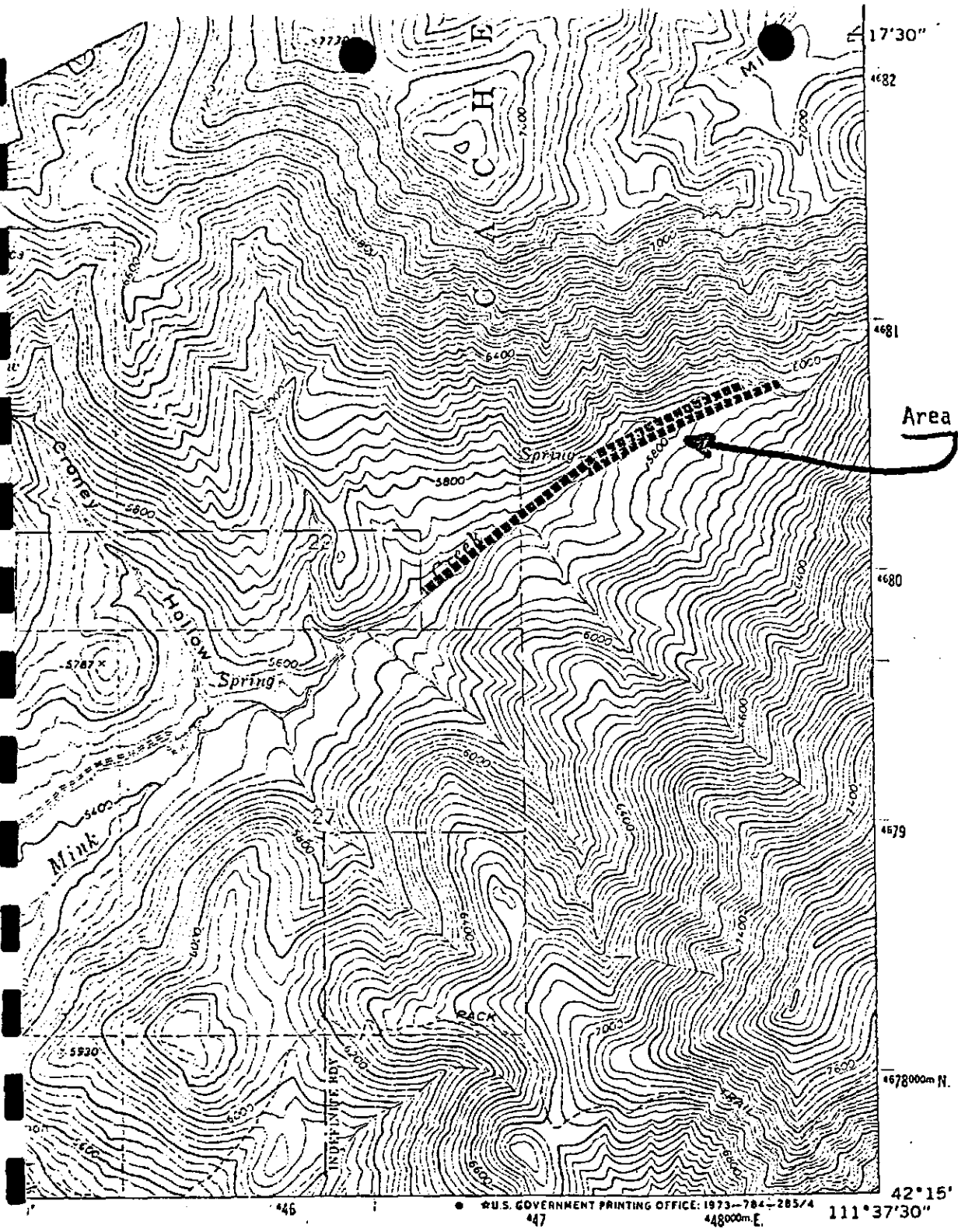
1. IMACS Site Form R4-2300-2 attached for each site? [ ]Yes N/A
2. CR Summary Report Form R4-2300-3 attached? [X]Yes
3. Determination of Significance and Effect Form R4-2300-4 attached? [ ]Yes N/A
4. Maps 1 and 2 attached? [X]Yes
5. Other attachments? (List) [ ]Yes

I. CERTIFICATION OF RESULTS

I certify that I conducted the investigation reported here, that my observations and methods are fully documented, and that this report is complete and accurate to the best of my knowledge.

B. Deborah Butler — 9/17/81

Signature of Reporter — Date



★U.S. GOVERNMENT PRINTING OFFICE: 1973—784-285/4

ROAD CLASSIFICATION

Primary highway, hard surface

Light-duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

Interstate Route U. S. Route State Route



QUADRANGLE LOCATION

(PARIS PEAK)
3668 II NE

ONEIDA NARROWS RESERVOIR, IDAHO

N4215—W11137.5/7.5

1969

AMS 3668 I SW—SERIES V893

VISUAL AND SCENIC RESOURCES

The visual quality of the general project area would be considered moderate to high. The proposed project is contained in an isolated mountain canyon which has picturesque slopes and heavy stands of broad-leaf Rocky Mountain shrubcover. In the Autumn, the canyon is vivid with fall colors from the turning leaves.

Because of the heavy vegetation and steep gradient, there are little or no water features of significance.

THREATENED OR ENDANGERED PLANT LIFE

None

THREATENED OR ENDANGERED ANIMAL LIFE

None

CRITICAL HABITATS

None

SITES ELIGIBLE FOR OR INCLUDED ON THE NATIONAL REGISTER OF HISTORIC PLACES

None

EXPECTED ENVIRONMENTAL IMPACTS

Environmental impacts of the Mink Creek Hydropower Project will be low to non-existant. The powerhouse will be located on land which is privately owned, currently by Mr. Valdo Benson. The applicant is negotiating an option to purchase land from Mr. Benson sufficient to contain the powerhouse and tailrace.

In an effort to anticipate any possible concerns, we have listed these concerns and proposed mitigation as follows:

Vegetative Cover	Riparian habitat below the point of diversion can easily be maintained by flushing flows periodically to irrigate the riparian as required in dry seasons by the F & G and Forest Service.
Sedimentation	The only sedimentation which may occur will be during the construction of the diversion struction. The penstock and powerhouse will be constructed on land that is privately owned. Tailrace construction will occur so as to minimize any impact on Mink Creek. There will be no sedimentation risk whatsoever during regular operation of the hydro plant. As noted in Dr. Butler's report, the area has experienced erosion problems in the past. The project will serve to divert sufficient amounts of water into the penstock to reduce the natural erosion problems which occur on a yearly basis during high water runoff.
Fisheries	There is presently minimal fishing within the project area because of the difficulty in access. Applicant will work with the state

	F & G on establishing all necessary and reasonable mitigation necessary to maintain and, hopefully, enhance the limited fishing in Mink Creek. Metallic pollution from the turbines will be avoided by specifying non-use of heavy metal 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. Raptor-proof power poles and transmission lines will be constructed.
Water Quality	No impact.
Land and Water Uses	No impact.
Recreational Use	Positive impact. With the implementation of Dr. Griffith's suggestions in establishing sufficient pool-riffle-ratio, an improved fishery will be established.
Socio-Economic Aspects	Positive impact. Increased tax base with reliable power source, economic benefits from construction of the project, minimal increased employment.
Historical and Archaeological Resources	Please see Dr. Butler's report.
Visual	No impacts.
Threatened or Endangered Animal Life	No impacts.
Threatened or Endangered Plant Life	No impacts.
Critical Habitats	No impacts.

ALTERNATIVE MEANS OF OBTAINING AN AMOUNT OF POWER EQUAL TO THAT PROVIDED BY THE PROJECT IF PROJECT NOT AUTHORIZED

As stated in the Bear River Planning Unit E.I.S., "The Potential for oil and gas development in Southeast Idaho is well summarized in the following quotation from a report by G.R. George of Runge and George, Geologists of Casper, Wyoming:

> Southeastern Idaho is one of the few remaining virtually unexplored areas in the Rocky Mountains. This area, however, combines known source bed and reservoir rocks with obvious surface structural trends to offer the potential of economic oil and gas accumulations. The high risk of such an exploratory area can be easily offset by an extremely rewarding payoff.
>
> Southeastern Idaho is the only portion of the state which has a large area of unmetamorphosed Paleozoic rock exposures containing both known source and reservoir quality rocks. In addition, many of the structural features are of a relatively simple style. Primarily, the Basin and Range Province contains surface anticlines and relatively simple faulting which may combine to form structural traps for the known reservoir beds.

A recent report entitled, "Assessment of Oil and Gas Resources in the Idaho-Wyoming Thrust Belt," by Mr. Richard G. Powers of the United States Geological Survey, estimates the undiscovered recoverable resources of the province range from 0.6 to 3 billion barrels of oil and from 4 to 12 trillion cubic feet of natural gas."

There is little doubt that vast reserves of oil and natural gas exist in this "Overthrust Belt" in the Rocky Mountains. However little, if any, development will occur with the present political climate in spite of the fact that serious exploration and identification of the reserves occurred. The wells are currently capped and at this date, no known commercial reservoirs of either oil or gas have been discovered.

POTENTIAL ENERGY PRODUCTION

SOUTHERN IDAHO

Oil & Gas	Low at Present	Limited exploration has occurred and wells have been capped for possible development in the distant future.
Wood biomass	Poor	There are no major sawmills situated in the general southeastern Idaho communities. Wood by-product used for gasahol proved economically unfeasible.
Uranium	Low	Environmental problems
Geothermal	Limited	Hot holes abound in Idaho, and an active geologic fault traverses the state of Utah, parallels the Wasatch front, and passes through southeast Idaho to Yellowstone National Park. The fault zone is about 60 miles wide and there are approximately 33 lease applications in the area in and around southeastern Idaho.
Solar	Moderate	Not feasible on a large scale. Being used in some home construction.

Pumped Storage	Unlikely	This is not a seriously considered alternative for this area at the present time.
Coal	Low	There are no known deposits of coal in the Bear River Area. Future coal fired plants now have an avoided cost rate of approximately 150 mills with steep escalating costs for labor and fuel as well as wheeling costs.

LITERATURE AND SOURCES OF REFERENCE

1. Environmental setting - Robert Fackrell, Applicant

   Vernon Ravenscroft, Consultant

   Ted Sorenson, Engineer

   Bear River E.I.S.

   Helen Chenoweth, Consultant

2. Geologic setting

   U.S.D.A. Forest Service, Caribou National Forest, Bear River Planning Unit, E.I.S., 1979

   Cecil Thomas, Boise, Idaho
   Hydrologist - Geologist
   Retired - United States Geological Survey

   Dr. Chas Brockway, Twin Falls, Idaho
   Hydrologist - Geologist
   University of Idaho

3. Vegetative Cover

   Vernon Ravenscroft, Boise, Idaho
   Former Extension Forester
   University of Idaho

4. Fishery

   Dr. Jack Griffith
   Head of Fisheries Development
   Idaho State University
   Pocatello, Idaho

   Associated with Don Chapman
   McCall, Idaho

5. Wildlife

   Idaho Department of Fish and Game
   Boise, Idaho

   Ibid. Bear River EIS

6. Water Quality and Quantity	Ibid. Thomas Ibid. Brockway Ibid. Bear River EIS
7. Land and Water Uses	Ibid. Bear River EIS
8. Recreational Uses	Ibid. Bear River EIS
9. Historical and Archaeological	Historical - Book of Remembrance Mink Creek Idaho Ward - 1871-1976 Available from Idaho State Library Boise, Idaho Archaeological - B. Robert Butler B.R. Butler Associates Pocatello, Idaho 83201 Idaho State University
10. Scenic and asethetic resources	Ibid. Bear River EIS Ibid. Fackrell
11. Endangered Plant and Animal	Ibid. Vernon Ravenscroft Ibid. EIS
12. Critical Habitats	Ibid. EIS
13. Sites Eligible on Historical Regis.	Ibid. EIS Consultation with Idaho Historical Society Boise, Idaho

The Bear River Planning Unit would be available from U.S.D.A. in Washington, D.C., The Library of Congress, or Caribou National Forest Office, Pocatello, Idaho. We are also including copies of the Literature Cited and Referenced from the EIS, Pages 332 - 333.

2. LITERATURE CITED

U.S.D.A. Forest Service, Northern Region, Beaverhead National Forest, Forest Management Alternatives 1975.

U.S.D.A. Forest Service Agriculture Handbook, Number 462, National Forest Landscape Management, Volume 2, Chapter 1, The Visual Management System.

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John A. DeFilippi and Kevin J. Phillips, Journal of Water Pollution Control Federation July 1976, Volume 48, Number 7, Pages 17591765.

U.S.D.A. Forest Service Roadless and Undeveloped Areas, Final Environmental Statement, October 19, 1973.

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U.S. Geological Survey, 1971, 1972, 1973, 1974, 1975. Water Resources Data for Idaho, Surface Water Records, Boise, Idaho.

U.S. Geological Survey, 1960. Compilation of Records of Surface Waters of the United States through September 1950, Part 10, The Great Basin U.S.G.S. Water Supply Paper 1314.

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Strahlor, A.N. 1957. Quantitative Analysis of Watershed Geomorphology. Transactions of the American Geophysical Union Vol 38, Number 6, PP 913-920.

U.S. Environmental Protection Agency, 1976. STORET Handbook, Vols 1, 2, and 3. Environmental Protection Agency, Washington, D.C.

Committee on Water Quality Criteria, 1973. Water Quality Criteria 1972, Environmental Studies Board, National Academy of Sciences, National Academy of Engineering, EPA-R3-73-033.

Caribou National Forest, 1976. Management Alternatives for the Diamond Creek Planning Unit, Caribou National Forest, Forest Service, U. S. Department of Agriculture, Pocatello, Idaho.

Bare, N.H., 1977. Soil Resource Inventory (An Interim Draft), Bear River Range, Montpelier Ranger District, Caribou National Forest, U.S.D.A. Forest Service.

Jenny, H., 1941. Factors of Soil Formation, McGraw-Hill Book Company, Inc., New York and London.

Mansfield, G.R., 1927. Geography, Geology, and Mineral Resources of Part of Southeastern Idaho, U.S. Geological Survey Professional Paper 152, U.S. Government Printing Office.

Selby, M.J., 1970. Slopes and Slope Processes, Waikato Branch of the New Zealand Geographical Society, Inc.

EXHIBIT E

STEPS TAKEN BY APPLICANT

IN

CONSULTING WITH AGENCIES

The following agencies have been contacted, and have had personal consultations and/or correspondence with the Applicants or a representative from Consulting Associates, Inc.:

1. U.S. Forest Service, Caribou National Forest
2. Idaho Department of Fish and Game
3. U.S. Fish & Wildlife Service
4. State of Idaho, Department of Health & Welfare
5. Idaho State Historical Society
6. Idaho Department of Water Resources

The following sections contain copies of all agency correspondence with the above listed agencies and is identified by the same numbers as listed above.

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 343-2670
P.O. BOX 883
BOISE, IDAHO 83701

June 25, 1984

Mr. Tim Burton
CARIBOU NATIONAL FOREST
Federal Building
250 S. 4th
Pocatello, ID 83201

Dear Mr. Burton:

The enclosed material is submitted at the request of Mr. Robert Fackrell.

The two charts have been prepared by Mr. Cecil Thomas, who is a retired employee of the U.S.G.S. and an acknowledged authority on high mountain stream water flow calculations.

Mr. Fackrell will soon have a copy of our notice to public agencies concerning his project. I am sure he will be providing you with a copy of that document.

Sincerely,

Vernon F. Ravenscroft

VFR:mf

Enc.

cc: Rob Fackrell

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

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

June 25, 1984

Mr. J. S. Tixier
REGIONAL FORESTER
Caribou National Forest
Federal Building
250 S. 4th
Pocatello, ID 83201

Attn: Mr. Tim Burton

Re: Fackrell Mink Creek Project
Franklin County, Idaho

Please find enclosed a draft copy of the technical information preparatory to the final major/minor license application to the Federal Energy Regulatory Commission for a proposed hydropower project located on Mink Creek.

I would appreciate your reviewing the enclosed information and returning your comments, terms and conditions at your earliest convenience.

For your convenience, we have enclosed a stamped, return addressed envelope for you to mail your signed certification of service.

Thank you for your prompt attention to this matter.

Sincerely,

Vernon F. Ravenscroft

VFR:mf

Enc.

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-3670
P.O. BOX 893
BOISE, IDAHO 83701

June 25, 1984

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Dear Sir:

This letter is to certify that on this date, June 25, 1984, we have delivered a draft copy of the technical information of the Minor License application under Part I of the Federal Power Act and the Public Utilities Regulatory Act of 1978, Sec 210 to the Caribou National Forest, Pocatello Idaho.

Said License Application applies to the Mink Creek hydroelectric project located in Franklin County, Idaho.

We are opening the opportunity for evaluation by the Division of Environment relative to the water quality certificate as described in Section 401 of the Federal Water Pollution Control Act.

Vernon Ravenscroft

Vernon Ravenscroft, President
Consulting Associates, Inc.

Receipt acknowledged:

Frank G Zeitia
Agent, Caribou National Forest

Supervisor's Office Pocatello, Idaho
Office Location

7/11/84
Date

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

July 10, 1984

Vernon Ravenscroft
Consulting Associates, Inc.
PO Box 893
Boise, ID 83701

Dear Vern:

Just a note to advise you of the results of our meeting of July9, 9 a.m., with the United States Forest Service personnel. Jack Griffith, myself and four people from the U.S. Forest Service met to discuss the concerns they had mentioned with reference to the water right application.

Their first concern was the municipal water shed. They were concerned that Mink Creek may serve as a recharge for the spring that services a portion of the community of Mink Creek. The only way to determine this will be through dye testing and I assume that Cecil Thomas would be the man to contact to have those tests performed.

The second item they were concerned with dealt with the minimum flow to be left in the creek. They indicated that the Forest Service has certain requirements that are necessary, but Mr. Tim Burton, their hydrologist, felt that the spillage that is indicated by the computer printout done by Carl Myers would be adequate to take care of their requirements.

The third concern was that the point of diversion is actually located within what is defined as a roadless area. That didn't appear to be too big of a concern.

The fourth concern was with reference to the discrepancy in the filing for 125 cubic ft. p/second of water on the original water right filing. The information that you supplied to the Forest Service indicated that we would only be using 60 to 70 cfs of water.

I was advised by Mr. Dahl Zohner of the United States Forest Service that an archeological study must be performed on the area between the Forest Service

Boundaries and the point of diversion. He advised me that I could use anyone that I chose to do that study. Jack Griffith suggested that I contact Bob Butler of Idaho State University to do that study. If you have no objections or if you choose to recommentd someone else, please advise me.

I was also advised that I will need a Special Use Permit to conduct the studies that we are presently conducting. After informing Mr. Zohner of the fact that I had requested a Special Use Permit on June 7, he called the ranger district in Montpelier to find out why they had not yet acted on the Special Use Permit. At his request they changed the Special Use Permit that I submitted to read under item seven on the permit "Permit for preliminary studies". He advised me that we will need to request another Special Use Permit for the actual construction. I am including along with this letter a note that was given to me at the meeting that has reference to fees for Special Use Permits, specifically the Hydroelectric Special Use Permits. It indicates here that we should make comments on this by August7, so if you have any comments on this the note tells where they sould be sent. Please send me a copy of any comments you may submit and I will do the same.

Also In this meeting, concern was expressed with reference to Exhibit E, not only by the members of the Forest Service there in Pocatello, but also by Jack Griffith. Jack indicated that you, he and Ted Sorensen should very quickly arrange to begin to assemble that information. The Forest Service indicated that their comments would relate directly to the Exhibit E. I Asked them to please send a letter to you yesterday indicating what had taken place in our discussion. Their response was that they would send a letter, but the letter would state basically that they had received the packet that you sent and that there was not adequate information contained within the packet for them to make a complete set of comments. They stated that they would specify what additional information would be needed for them to comment.

The general air of the meeting was an air of cooperation. At the beginning of the meeting they were quite firm with response to most of my comments. Jack did not arrive at the meeting until about 15 minutes before we finished, but I think that we've made good

strides in establishing a working relationship with the Forest Service.

Thank you for your help. I will be in touch, probably by telephone.

Sincerely,

Robert N. Fackrell

st

Encl

file.

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

July 10, 1984

Mr. Frank Beitia
c/o The United States Forest Service
Suite 294
Federal Building
Pocatello, ID 83201

Dear Frank:

Just a note to thank you for the time you extended to me during our meeting of July 9 with reference to the Mink Creek Hydroelectric Project. After having met with you and your constituents, I became aware of some of the additional requirements that would be necessary of me. I do appreciate you taking the time to advise and inform me of these requirement.

I am looking to a good working relationship with you and your agency and am hoping to be able to put together a successful project.

Sincerely,

Robert N. Fackrell

st

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

Frank
Tim TB
Dahl

July 10, 1984

Sherm Boyce
c/o The United States Forest Service
Suite 294
Federal Building
250 So. 4th
Pocatello ID 83201

Dear Sherm:

Just a note to thank you for the time extendeded to me yesterday, July 9, with reference to the Mink Creek Hydroelectric Project. I do appreciate you supplying for me a copy of the scope of work for the Smokey Canyon Mine Plan and I am in the process of having it reworded so it would be appropriate for publication with reference to our project.

I will be contacting and working with Gary Holsten out of the Montpelier ranger office. Once we have repaired a news release I will send a copy to you for your review prior to having it released in the newpapers.

If there is anything that you may wish to offer as far as comments on this project, your comments will be sincerely appreciated.

Once again, I do appreciate the time that was extended to me and I am looking forward to a successful project with you.

Sincerely,

Robert N. Fackrell

st

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

July 16, 1983

Heber,

For your file —

Rob

Note: The preliminary report referred to was inadvertantly left out. I have called and they are sending it out today.

United States Department of Agriculture
Forest Service
Caribou National Forest
Federal Building, Suite 282
250 South Fourth Avenue
Pocatello, Idaho 83201

Reply to 2170

Date July 10, 1984

Mr. Robert Fackrell
P.O. Box 1
Preston, Idaho 83263

Dear Robert:

In follow-up to our meeting this morning, I checked with the District and they will submit the report on your application for a special use permit with the changes we discussed. The one stipulation was that you will need to meet with Gary Holsten and work out a detailed study plan so the district can participate as needed in the studies you will be making. In connection with this, all of contact for work on the Forest system lands should be with Gary or Wendell.

I am enclosing a copy of our preliminary report on Cooks application to Ferc (FERC # 7957-000) which we discussed with you for your information.

In addition to this you will need a archeology survey of the area. This will require a permit also.

You should be aware that the permit for preliminary studies is no indication that a permit for construction will be forthcoming. As we explained to you there are a number of things which may require us to disapprove the project.

You will recall Mr. Boyce explained that the proposed project area is within a proposed roadless area and as such is subject to the decision of the ninth Circuit Courts ruling. In other words if the project was approved for construction and then challenged under the Ninth Circuit Court ruling the permit would be cancelled.

In addition to this we just received a draft copy of proposed regulations for small hydro projects which states that proposed projects within roadless areas will be treated as if they were in wilderness areas. Therefore until the Forest Plan is approved or special wilderness legislation is passed, your project could not be approved for construction even if it received approval otherwise.

This proposed policy could become final in the near future so you should consider the possibility in your decision concerning this project.

We encourage you to work closely with the District as you proceed with the studies for this proposed project.

Sincerely,

for Boyd H. Carpenter
Branch Chief Lands

Enclosure

Robert. My phone # 208-236-6763
One other thing you should be aware
of so that you will be required to
obtain a R.O.W. from the County Road
& the Forest Boundary in the name of
the United State if the project is
approved. Please give me a call
after the 30 of July & I will be
glad to give you

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

July 10, 1984

Sherm Boyce
c/o The United States Forest Service
Suite 294
Federal Building
250 So. 4th
Pocatello ID 83201

Dear Sherm:

Just a note to thank you for the time extendeded to me yesterday, July 9, with reference to the Mink Creek Hydroelectric Project. I do appreciate you supplying for me a copy of the scope of work for the Smokey Canyon Mine Plan and I am in the process of having it reworded so it would be appropriate for publication with reference to our project.

I will be contacting and working with Gary Holsten out of the Montpelier ranger office. Once we have repaired a news release I will send a copy to you for your review prior to having it released in the newpapers.

If there is anything that you may wish to offer as far as comments on this project, your comments will be sincerely appreciated.

Once again, I do appreciate the time that was extended to me and I am looking forward to a successful project with you.

Sincerely,

Robert N. Fackrell

st

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

July 10, 1984

Mr. Tim Burton
c/o The United States Forest Service
Suite 294
Federal Building
250 South 4th
Pocatello ID 83201

Dear Tim:

Just a note to express to you my appreciation for the time extended yesterday, July 9, with reference to the Mink Creek Hydroelectric Project. In looking at your concerns, I find that I share the same concerns and will proceed with adequate testing to make certain that these concerns are addressed.

I appears to me that probably the greatest concern would be with the effect of the proposed facility on the municipal water supply for a portion of Mink Creek. We will get some dye testing done on the Mink Creek flow as soon as we receive a Special Use Permit so we can have access to the forest area. With reference to the minimum flow requirement of the Forest Service, if you will, as you mentioned you would, check your regulations and determine what minimum flow will be required I certainly will appreciate it.

I will be in touch with Bob Butler of Idaho State Universtiy for an archeological survey of the area. I will be certain to mention to Mr. Butler that a Special Use Permit is required for him to have access to the Forest Service area and that that permit is to be obtained by him personally.

Once again, thank you very much for your time. I am looking forward to a successful relationship on this particular project.

Sincerely,

Robert N. Fackrell

st

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

July 10, 1984

Mr. Dahl Zohner
c/o The United States Forest Service
Suite 294
Federal Building
250 South 4th
Pocatello ID 83201

Dear Dahl:

Thank you very much for the time extended to me yesterday morning, July 9, with reference to the proposed Mink Creek Hydroelectric Project. I sincerely appreciate the time that you took to go through some of the regulations and requirements with me.

I will be in touch with Gary out of the Montpelier office as soon as possible, probably within the next day or two. I will be working with him in preparation of a press release to get public input to this proposed project prior our continuing too much further.

I appreciate you helping me expedite the issue of a Special Use Permit for the purpose of collecting data on this project. I have asked Jack Griffith of Idaho State University, who was at the meeting, to contact Gary and schedule the testing that is to be done with Gary so that he can be present at the time the population studies are done on the trout in Mink Creek. I also have asked that Jack Griffith contact Bob Butler, who is the archeologist at Idaho State University, and advise him that we would like him to do an archeological study on this project from the Forest Service boundary to the point of diversion. I will be in touch with Mr. Butler and will advise him that he needs a Special Use Permit as per our conversation yesterday.

Dahl, if there are any additional items that you would like to comment on or if you have any suggestions that may be of help to me I would sincerely appreciate hearing them. Once again, thank you for your time.

Sincerely,

Robert N. Fackrell

st

Fackrell

United States Department of Agriculture
Forest Service
Caribou National Forest
Federal Building, Suite 282
250 South Fourth Ave.
Pocatello, Idaho 83201

Reply to: 2500

Date: July 12, 1984

Consulting Associates Inc.
Box 893
Boise, Idaho 83701

Dear Mr. Ravenscroft:

Enclosed is the acknowledgment that we have received information on the proposed Mink Creek Hydroelectric Project. The outline of the proposed project needs considerably more information before it can be considered technical data. There is more involvement necessary at the District Ranger's level to obtain a study permit for this commercial venture, and Mr. Fackrell has been advised that a special use permit is required prior to proceeding with inventory activities on National Forest lands. The technical inventory data for the project will be needed before we can make recommendations to FERC in regards to a license for the project.

The proposal is within a roadless area which may delay or limit any construction pending Idaho wilderness legislation or completion of the Forest Land and Resource Management Plan.

Please provide us with a copy of the required technical data for the FERC application. Your representative or Mr. Fackrell should contact Ranger Wendell Johnson to work out the special use application requirements if this has not already been done.

Sincerely,

Shannon D. Boyce

FOR Charles J. Hendricks
Forest Supervisor

Enclosure

RECEIVED
JUL 19 1984

FS-6200-11b (7/81)

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

July 16, 1984

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

Dear Helen,

Enclosed you will find a copy of the "preliminary write up for Mink Creek" that is being evaluated in the "Forest Plan" as one of 34 roadless areas on the Forest.

This information was supplied to me by Mr. Sherm Boyce of the Forest Service in Pocatello.

In conversation with Mr. Boyce on Friday of last week, he indicated to me that he felt we were "home free" with reference to being able to have access to this area for the purpose on the proposed hydro project.

Mr. Boyce has been very helpful, and has offered some good suggestions.

Sincerely,

Robert N. Fackrell

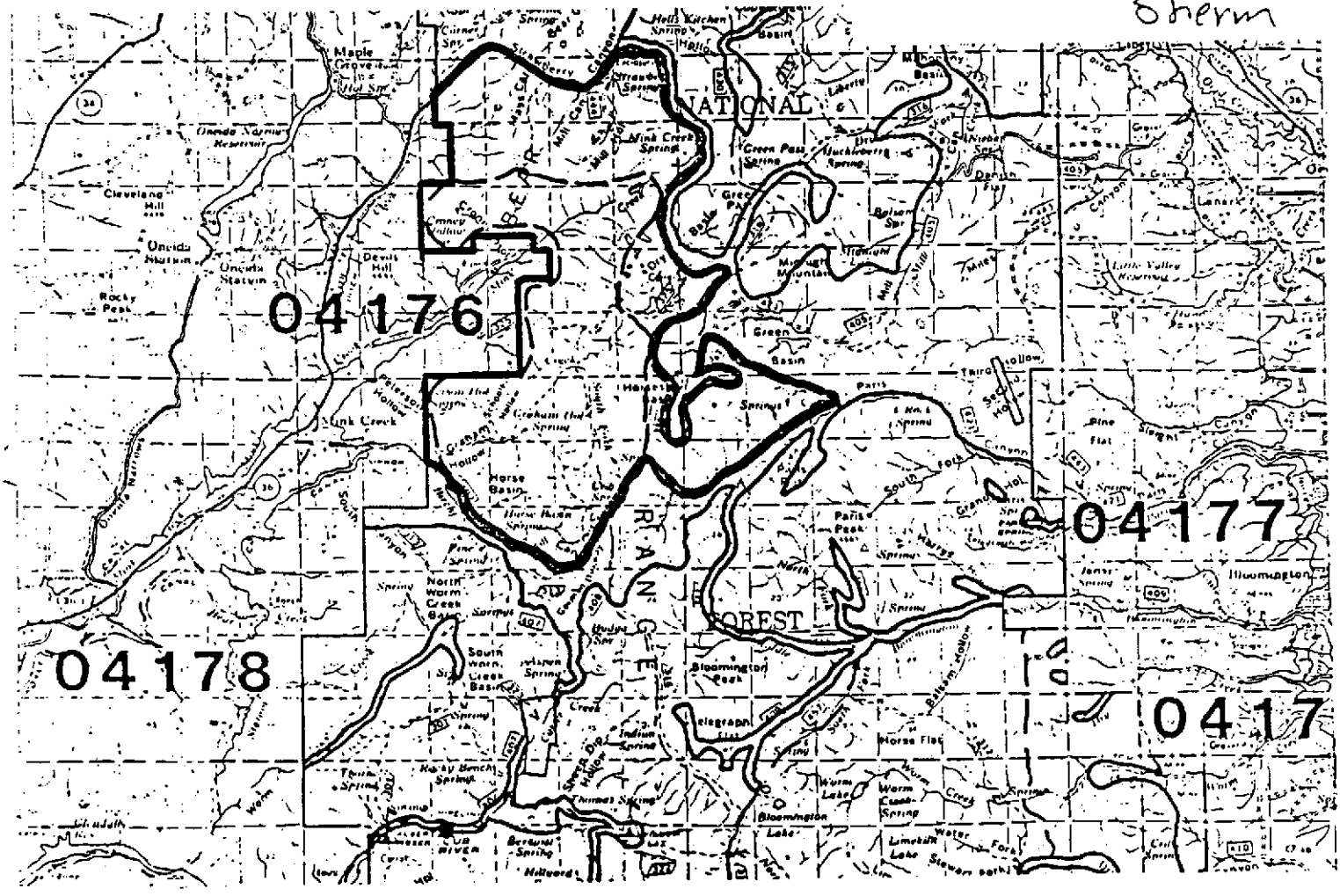
Enclosure:

Robert

Enclosed is the Preliminary write up for mink creek that is being evaluated in the Forest Plan as one of 34 roadless areas on The Forest

Sherm

04176 MINK CREEK



LEGEND:

Roadless Area Boundary

04173 — Roadless Area Identification Number

Lands inventoried as roadless during RARE II that have been developed and no longer meet roadless area criteria.

Scheduled for treatment or timber harvest in 1984 or 1985 under existing land management plans.

Maximum Wilderness/Maximum Market - Alternative #11.

04176 - MINK CREEK ROADLESS AREA - 16,300 ACRES (16,300 Net Acres)

1. DESCRIPTION: This unit lies in Franklin and Bear Lake Counties, Idaho, on the Cache National Forest that is now administered by the Montpelier Ranger District of the Caribou National Forest. It is located about 20 miles northeast of Preston, Idaho.

   Access from the north is on State Highway 36 and Mill Hollow Road, which penetrates the north border. Dry Basin Road is the northeastern border, and the Horseshoe Basin Road forms most of the rest of the eastern border and also penetrates into the unit. Birch Creek and Paris Canyon Roads are the southern border. There are no access roads on the west side, which is the Forest boundary. There are about 15 miles of trails within the area.

   The elevations vary from about 8,000 feet down to 5,500 feet. The topography in this unit is quite steep and rocky but is more gentle on upper slopes. Major vegetation cover types are mountain maple, aspen, mahogany, Douglas-fir, and sage grass. There are a few stands of commercial timber. Extensive logging has occurred immediately south and east of the unit. The potential natural vegetation ecosystem types identified by Bailey and Kuchler are M3110-49-Sagebrush Steppe and M3110-11-Douglas-fir Forest.

   Deer and a few elk use the area. Deer winter near the west boundary, but most of the elk migrate south to Utah during the winter months. The higher ridges are good grouse habitat.

   The small community of Mink Creek and a number of individual farms depend on culinary water which originates on the unit. In addition, several irrigation systems use water from the area.

   Cattle grazing occurs throughout most of the unit, and most of the area has been leased for oil and gas.

   Most of the recreation associated with the area relates to hunting.

2. CAPABILITY: The manageability of the area along inventoried boundaries would be poor but could be improved slightly by moving it to the main ridge in Paris Canyon. The present boundaries follow man-made features and surveys including road intrusions into the area and the exterior Forest boundary. The distance around the perimeter is about 50 miles. A core area perimeter of about 35 miles could be achieved by locating the boundary on some natural features and it would still contain about 14,000 acres.

   The factors described below are based on the original size and boundary of the inventoried roadless area and would generally show improved wilderness characteristics if adjusted to natural topographic features where possible.

   Natural integrity is very high but has been affected by the following physical or man-caused impacts: grazing, recreation, fire history, and unimproved roads.

The appearance of man-made facilities or management activities on the area minimally detract from the natural appearance because of the existence of watering troughs, fixed site facilities, trails, fences, and unimproved roads.

The opportunity for solitude is moderate because of the small size, minimal topographic and vegetative screening and moderate distances from the perimeter to the center of the area.

The opportunity for primitive recreation is low because of the small area size, road corridors projecting into the area, minimal topographic and vegetative screening and because limited facilities are present.

There are some opportunities for challenging experiences in steep, rocky terrain in the area.

Unique or special features are not represented.

3. AVAILABILITY: Currently the Mink Creek Roadless Area receives approximately 7,450 RVDs of recreation use annually. It is estimated that 17 percent of the dispersed use and all the developed use will be foregone if this area is classified as wilderness. It is believed that there would be an increase in nonmotorized dispersed use due to wilderness classification.

The area supports a base population of approximately 195 deer a year. It is estimated that management improvements to the habitat could increase populations up to 4 percent.

Approximately 8,475 acre feet of water is generated from this area annually. Under all management options that have been considered, the water delivered to active stream channels would be within established quality standards. The opportunity to increase water yield through vegetation cover manipulation is minimal.

The area currently receives approximately 1,430 AUMs of livestock grazing a year. It is estimated that 3 to 6 percent of the annual AUMs would be lost if range improvement activities were ceased.

There are approximately 2,830 acres of commercial Forest land capable of sustaining timber management activities in the area. No timber harvest activity is planned for this area within the next five years.

This area is adjacent to the geologic formation known as the Overthrust Belt and receives major interest in oil and gas exploration. Oil and gas leases cover most of the area and the geologic potential is high. There is no known leasable and low locatable mineral potential. For a complete minerals opportunity analysis summary see Appendix L.

No cultural resources have been identified in this area.

There is one existing special use within this area which involves about 1 acre; a water transmission system.

This area is no more susceptible to fire than any other area on the Forest. Wilderness classification could result in the buildup of fuels due to dying timber and probably an upward trend in fire occurrence. The elimination of motorized uses should reduce fire risk.

Dyer's woad and musk thistle are noxious weeds found in this area. Continued control efforts will be necessary to keep these plants from spreading.

This area has approximately 190 acres of mature and overmature commercial timber land that could sustain insect damage if the stands are not managed.

There are no State or private lands within this roadless area.

4. NEED: The Mink Creek Roadless Area is 54 miles from Pocatello, Idaho and 72 miles from the Wasatch Front, the closest significant population centers. It is 115 miles from the Lone Peak and the Bridger, the nearest existing classified wilderness.

Depicted below are the ten most frequently stated "pro-wilderness" and "non-wilderness" preferences for this roadless area and the number of people making each response as determined during the RARE II process.

Wilderness	Non-Wilderness
5 Preserve For Future Generation	476 Favor Multiple Use
4 Wild Restrcts Energy Develmt	375 Only A Few Can Use Wild
4 High Graze Values/Will Restrct	372 High Graze Values/Will Restrct
4 Few Areas/Last Chance Preserve	369 Allows Roads
3 No More Wild Needed	350 Neg Impact Economy
3 Favor Multiple Use	319 High Timber Value/Needs Mgt
3 Preserve Lifestyle	301 Preserve Lifestyle
3 Neg Impact Economy	287 Evidence of Man's Activities
3 Won't Restrct Mine/Don't Lock U	279 Restrcts Mining/No Mining
3 Only A Few Can Use Wild	157 Suitable For Motorized Rec

This roadless area was not recommeded by the State of Idaho or included in the wilderness legislation for Idaho. During the roadless area reevaluation, no input was received specific to this area that recommended wilderness classification.

5. EFFECTS OF WILDERNESS/NONWILDERNESS PRESCRIPTIONS: MINK CREEK

A. Table C-I Management Prescriptions Assigned to Roadless Area, by Alternatives by M Acres

Management Prescription	Alt. #1	Alt. #2	Alt. #3	Alt. #4	Alt. #5	Alt. #6	Alt. #7	Alt. #8	Alt. #9	Alt. #10	Alt. #11	Alt. #12	Alt. #13
Wilderness	0	0	0	0	0	16.30	0	0	0	0	9.07	16.30	0
Semi-Primitive Recreation	6.61	6.26	6.30	6.30	5.44	0	6.33	6.56	7.85	6.19	1.59	0	0
Semi-Prim. Rec. w/Timber	.63	.63	.65	.65	.18	0	.65	.60	.20	.63	.08	0	.21
Roaded Natural Recreation	.20	.21	.67	.67	.16	0	.32	.66	1.33	.20	1.07	0	0
Wildlife Habitat	.41	.42	1.10	1.10	.65	0	.05	.05	.90	.41	.06	0	0
Range	1.74	2.22	1.30	1.30	2.35	0	2.35	1.93	0	2.19	1.50	0	2.19
Timber	1.63	1.60	1.59	1.59	1.53	0	1.59	1.45	.26	1.66	.50	0	1.66
Water	.06	.09	0	0	1.21	0	0	0	0	.09	0	0	.14
Minerals/Energy						*					*	*	
Research Natural Areas	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Level (Custodial)	5.02	4.87	4.69	4.69	4.78	0	5.01	5.05	5.26	4.93	2.43	0	12.10

TOTAL ACRES - 16.30

*See narrative for mineral and oil and gas geologic potential and Appendix L (Minerals Opportunity Analysis) for values foregone on acres included in the Wilderness Management Prescription.

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

Helen,

Just received this in the mail this morning -

Rob

United States Department of Agriculture
Forest Service
Caribou National Forest
Federal Building, Suite 282
250 South Fourth Avenue
Pocatello, Idaho 83201

Reply to 2170

Date July 16, 1984

Mr. Robert Fackrell
P.O. Box 1
Preston, ID 83263

Dear Robert:

Enclosed is the preliminary report that was not included with the letter we sent you on July 10, 1984.

Also enclosed is the cover letter that transmitted the report from our Washington Office to FERC. The cover letter includes some information we discussed and special conditions recommended to FERC.

Sorry this information was not enclosed with the first letter.

Thomas D Boyce

for CHARLES J. HENDRICKS
Forest Supervisor

Enclosures (2)

Pumped Storage	Unlikely	This is not a seriously considered alternative for this area at the present time.
Coal	Low	There are no known deposits of coal in the Bear River Area. Future coal fired plants now have an avoided cost rate of approximately 150 mills with steep escalating costs for labor and fuel as well as wheeling costs.

LITERATURE AND SOURCES OF REFERENCE

1. Environmental setting - Robert Fackrell, Applicant

   Vernon Ravenscroft, Consultant

   Ted Sorenson, Engineer

   Bear River E.I.S.

   Helen Chenoweth, Consultant

2. Geologic setting

   U.S.D.A. Forest Service, Caribou National Forest, Bear River Planning Unit, E.I.S., 1979

   Cecil Thomas, Boise, Idaho
   Hydrologist - Geologist
   Retired - United States Geological Survey

   Dr. Chas Brockway, Twin Falls, Idaho
   Hydrologist - Geologist
   University of Idaho

3. Vegetative Cover

   Vernon Ravenscroft, Boise, Idaho
   Former Extension Forester
   University of Idaho

4. Fishery

   Dr. Jack Griffith
   Head of Fisheries Development
   Idaho State University
   Pocatello, Idaho

   Associated with Don Chapman
   McCall, Idaho

5. Wildlife

   Idaho Department of Fish and Game
   Boise, Idaho

   Ibid. Bear River EIS

6. Water Quality and Quantity	Ibid. Thomas Ibid. Brockway Ibid. Bear River EIS
7. Land and Water Uses	Ibid. Bear River EIS
8. Recreational Uses	Ibid. Bear River EIS
9. Historical and Archaeological	Historical - Book of Remembrance Mink Creek Idaho Ward - 1871-1976 Available from Idaho State Library Boise, Idaho Archaeological - B. Robert Butler B.R. Butler Associates Pocatello, Idaho 83201 Idaho State University
10. Scenic and asethetic resources	Ibid. Bear River EIS Ibid. Fackrell
11. Endangered Plant and Animal	Ibid. Vernon Ravenscroft Ibid. EIS
12. Critical Habitats	Ibid. EIS
13. Sites Eligible on Historical Regis.	Ibid. EIS Consultation with Idaho Historical Society Boise, Idaho

The Bear River Planning Unit would be available from U.S.D.A. in Washington, D.C., The Library of Congress, or Caribou National Forest Office, Pocatello, Idaho. We are also including copies of the Literature Cited and Referenced from the EIS, Pages 332 - 333.

2. LITERATURE CITED

U.S.D.A. Forest Service, Northern Region, Beaverhead National Forest, Forest Management Alternatives 1975.

U.S.D.A. Forest Service Agriculture Handbook, Number 462, National Forest Landscape Management, Volume 2, Chapter 1, The Visual Management System.

U.S.D.A Forest Service, Northern Region, Recreation Opportunity Inventory and Evaluation, Rl 74 006 June 1974.

U.S.D.A. Forest Service, California Region, VRM LUP and The Nine Milestones, November 1975.

Shirl C. Boyce, Jr., Idaho State Bureau of Planning and Community Affairs, SICOG Report II 1975 with updating.

U.S.D.I., Bureau of Land Management.

John A. DeFilippi and Kevin J. Phillips, Journal of Water Pollution Control Federation July 1976, Volume 48, Number 7, Pages 17591765.

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United States Department of Agriculture
Forest Service
Washington Office
12th & Independence, SW
P.O. Box 2417
Washington, DC 20013

cc. Fackrell

Reply to 2770

Date JUN 26 1984

Mr. Kenneth F. Plumb
Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

F.S. R-4
RECEIVED
JUN 28 1984
R L & M

Dear Mr. Plumb:

This letter is in response to the Notice of Application for Preliminary Permit dated April 13 for the Mink Creek Water Power Project No. 7957 on Mink Creek in Franklin County, Idaho.

This proposed project will impact lands and resources within the Cache National Forest. Some of these impacts are discussed in the enclosed letter. It is evident, however, that additional data must be gathered before we can quantify these impacts and their effect upon National Forest management objectives. Accordingly, the Forest Service has no objection to the issuance of a preliminary permit containing the standard terms and conditions of the most recent revision of the Commission's Form P-1, supplemented by the following special condition:

"Prior to undertaking any entry or work on National Forest System lands pursuant to a preliminary permit, the Permittee shall prepare and file with the Forest Service a plan of studies to be conducted under the permit; and, the Permittee shall secure a Forest Service special-use authorization and if appropriate enter into a memorandum of understanding with the Forest Service.

"The special-use authorization shall include Forest Service requirements for fire prevention and control, prevention of damage to Federal property and natural resources, and any requirements for repair or rehabilitation of damage resulting from project activities. The memorandum of understanding between the Forest Service and the Permittee will document agreement on recreation management, cultural resource evaluation, and arrangements for consultation and cooperation not included in the special-use permit.

DRI FILE COPY

"Copies of the special-use permit and if appropriate the memorandum of understanding shall be filed by the Applicant with the Commission within 90 days of the issuance of this preliminary permit."

Sincerely,

RICHARD D. HULL
Director of Lands

Enclosure

MINK CREEK WATER POWER PROJECT FERC #7957-000

This report documents the Caribou-Cache National Forest response to Cook Electric Inc.'s request for comment on the Draft Application for preliminary permit for the Mink Creek Water Power Project (FERC No. 7957).

As you are aware, an Environmental Assessment (EA) must be prepared before the Forest Service can issue a Special Use Permit for the project. A number of significant management concerns have been identified, but further evaluation by the Forest's interdisciplinary team will be necessary.

It is strongly recommended that the application for license address all the concerns. The Forest Service, under current funding constraints and workloads, may not be able to prepare an Environmental Assessment. A project license that has addressed the issues and concerns will greatly reduce the work involved in preparation of the EA. Additionally, the project is much less likely to require significant changes after licensing, thus reducing the probability that the license will need to be amended.

Management Concerns:

1. Engineering - Location of the proposed project is in very steep, mountainous terrain. The EA must address design considerations such as access, rights-of-way, provision for landslide, snow avalanches, earthquakes, treefall, potential penstock failure and consequences, shutdown mechanisms, etc., prior to issuance of the Special Use Permit. A Preliminary Special Use Permit will be required prior to feasibility studies.

2. Soil and Water - Mink Creek serves as a municipal watershed to residents in the valley below. The principle source of water comes from a spring located near the National Forest boundary in Mink Creek Canyon. The carbonate rocks in Mink Creek watershed above the spring and in the vicinity of this proposal are very possibly the source area for spring water supplies. The assessment must address the potential for dewatering Mink Creek Spring and project effects on municipal water quality. The Forest Service claims reserved water rights on the instream flow of Mink Creek adequate to secure favorable conditions of flow as authorized in the Organic Act of 1897. Instream flows for protecting channel condition, such as the flushing of sediments and prevention of channel encroachment by bankside vegetation, will be quantified by the Forest Service.

   The Forest Service cannot issue a Special Use Permit until water rights have been obtained by the permittee from the State of Idaho.

3. Wildlife - Mink Creek is a Class 3 fisheries, which means that it supports fish populations of importance to local anglers and sustains considerable fishing use. Minimum flows maintained after diversion must meet the approval of the Forest Service and Idaho Department of Fish and Game so that minimum viable populations of trout can sustain recreation demands in Mink Creek.

4. Recreation - The proposal is located within Roadless Area No. 176, Mink Creek. At the present time, no occupancy is allowed. The Caribou National Forest Land Use Plan will define status on all roadless areas. At present, Mink Creek has not recieved strong support for wilderness status. Assuming no changes through the review process, it would appear that multiple use status will probably be applied at the time of planning implementation. The current schedule calls for completion of the Forest Plan by June of 1985.

5. Public Issues - Additional issues of major importance may be generated through public review. Such issues will also need to be addressed in the environmental document.

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2870
P.O. BOX 893
BOISE, IDAHO 83701

June 25, 1984

Mr. Chris Chaffin
REGIONAL SUPERVISOR
Idaho Department of Fish and Game
5205 So. 5th Ave.
Pocatello, Idaho 83205

Re: Fackrell Mink Creek Project
Franklin County, Idaho

Dear Mr. Chaffin,

Please find enclosed a draft copy of the technical information preparatory to the final major/minor license application to the Federal Energy Regulatory Commission for a proposed hydropower project located on Mink Creek.

I would appreciate your reviewing the enclosed information and returning your comments, terms and conditions at your earliest convenience.

For your convenience, we have enclosed a stamped, return addressed envelope for you to mail your signed certification of service.

Thank you for your prompt attention to this matter.

Sincerely,

Vernon F. Ravenscroft

VFR:hc
Enc.

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2870
P.O. BOX 893
BOISE, IDAHO 83701

June 25, 1984

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Dear Sir:

This letter is to certify that on this date June 25, 1984, we have delivered a draft copy of the technical information of the Minor License application under Part I of the Federal Power Act and the Public Utilities Regulatory Act of 1978, Sec 210 to the Idaho Dept. of Fish & Game in Boise, Idaho.

Said License Application applies to the Mink Creek hydroelectric project located in Franklin County, Idaho.

We are opening the opportunity for evaluation by the Division of Encironment relative to the water quality certificate as described in Section 401 of the Federal Water Pollution Control Act.

Vernon Ravenscroft

Vernon Ravenscroft, President
Consulting Associates, Inc.

Receipt acknowledged:

Nancy L. Ecrale
Agent, Idaho Department of Fish & Game

600 S. Walnut St., Boise, Id
Office Location

June 26, 1984
Date

IDAHO DEPARTMENT OF FISH AND GAME
REGION 5 Phone 232-4703
South Fifth Avenue • P.O. Box 4229
Pocatello, Idaho 83201

July 10, 1984

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

Dear Mr. Ravenscroft:

SUBJECT: Bob Fackrell, Mink Creek Project. Early Consultation.
Application for Exemption from FERC Licensing

Based on the descriptive narrative and location map provided with your letter of June 25, 1984 we suggest you be prepared to address the following concerns regarding the referenced project:

Mink Creek supports a viable trout population. It is one of several streams in Bear River and Franklin counties that, in total, comprise a popular local fishery.

Based on our present information, any small hydropower project in Mink Creek would require the following: (1) self-cleaning screens to prevent fish from entering the penstock; (2) upstream fish passage facilities; (3) maintenance flows sufficient to maintain existing fish production and passage; (4) diversion and inlet design to prevent air entrainment in the penstock; (5) transmission lines would have to be buried or designed to prevent raptor mortalities; (6) project construction would have to avoid creating short- and long-term erosion and undue disturbance of riparian habitat. Replacement of vegetation may be required.

Required facilities will have to be constructed according to design criteria approved by the Idaho Department of Fish and Game (IDFG).

Acceptable design criteria for traveling screens, upstream fish passage facilities and transmission lines are available from IDFG.

We have no instream resource maintenance flow data for Mink Creek. In such instances we are recommending that applicant arrange for the necessary, technically acceptable studies to provide data so appropriate flows can be precisely determined by IDFG. "Instream Flow Incremental Methodology for Methods IFG-4/IFG-3 (Habitat)" are available from IDFG and are technically acceptable. The names of consultants technically qualified to conduct these studies are also available from IDFG.

RECEIVED
JUL 11 1984

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).

As required by Section 4.107(a)(2) of FERC Order No. 106, please forward a copy of the exemption application to this office at the time it is submitted to the Federal Energy Regulatory Commission.

Sincerely,

Dave Neider by RFS

David Neider
Supervisor, Region 5

cc: USFWS
Robert Packrell

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

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

6-25-84

Mr. John P. Wolfin
U.S. Fish & Wildlife Service
4620 Overland Road
Boise, ID 83705

Dear Mr. Wolfin:

Please find enclosed a draft copy of the license application for the Fackrell Mink Creek hydro project near Preston, Idaho. This draft copy is being provided for your evaluation and comment.

Regards,

Vernon Ravenscroft

Vernon F. Ravenscroft

Enc.

cc: Robert Fackrell

Consulting Associates Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-8570
P.O. BOX 893
BOISE, IDAHO 83701

June 25, 1984

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Dear Sir:

This letter is to certify that on this date, June 25, 1984, we have delivered a draft copy of the technical information of the Minor License application under Part I of the Federal Power Act and the Public Utilities Regulatory Act of 1978, Sec 210 to the U. S. Fish & Wildlife Service.

Said License Application applies to the Mink Creek hydroelectric project located in Franklin County, Idaho.

We are opening the opportunity for evaluation by the Division of Environment relative to the water quality certificate as described in Section 401 of the Federal Water Pollution Control Act.

Vernon Ravenscroft

Vernon Ravenscroft, President
Consulting Associates, Inc.

Receipt acknowledged:

Cathy Hamman
Agent, U.S. Fish & Wildlife Service

4620 Overland
Office Location

6-26-84
Date

June 24, 1991
Hand delivered by Rob Fackrell

Margie,

I got this from Fish & Wildlife - There formal letter will come in a couple of weeks -

Rob

FISH AND WILDLIFE SERVICE

INTER-OFFICE TRANSMITTAL

☐ Director, MR Rob Fackrell
☐ Denver Service Center, Mink Creek Hydro
☐ Regional Director,
☐ Project Leader,
☐ Area Office,

☐ Regular Mail
☐ Air Mail
☐ Action
☐ Information

From | Office | Date

Subject: Note to acknowledge Mr Fackrell's visit to Boise Field Office to discuss project. I informed him that BoR will take no action on his project w/exception of Endangered Species review - std procedure of the Office -

Roy Huberg

3-1908 (Attach securely to material to be transmitted & mail through regular channels)

United States Department of the Interior

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

July 17, 1984

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

Re: Fackrell Mink Hydro Project
Franklin County, Idaho

Dear Mr. Ravenscroft:

The Fish and Wildlife Service (Service) has determined, to the best of its present knowledge, that there are no Federally listed or proposed threatened or endangered species occurring within the project area.

The project could kill or cripple raptors and other birds through electrocution or collision from improperly designed or located powerlines or poles. The power transmission system should be designed and constructed to prevent these losses. A suggested reference is, Suggested Practices for Raptor Protection on Powerlines, published by the Edison Electric Institute, 1981.

Due to staffing constraints, the Service will take no further action on the subject license application. The Idaho Department of Fish and Game may have recommendations to protect fish, wildlife, and their habitats.

Sincerely yours,

for John P. Wolflin
Field Supervisor

cc: IDFG, Hdqtrs., Boise, (Richards)
IDFG, Region 5, Pocatello (Neider)
FWS, SE, Boise (1-4-84-SP-331)
FWS, AFA, SE, Portland

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2870
P.O. BOX 893
BOISE IDAHO 83701

June 25, 1984

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Dear Sir:

This letter is to certify that on this date, June 25, 1984, we have delivered a draft copy of the technical information of the Minor License application under Part I of the Federal Power Act and the Public Utilities Regulatory Act of 1978, Sec 210 to the Idaho Department of Health and Welfare at Boise, Idaho.

Said License Application applies to the Mink Creek hydroelectric project located in Franklin County, Idaho.

We are opening the opportunity for evaluation by the Division of Environment relative to the water quality certificate as described in Section 401 of the Federal Water Pollution Control Act.

Vernon Ravenscroft, President
Consulting Associates, Inc.

Receipt acknowledged:

Kyle Sturgis
Agent, Idaho Department of Environment

450 W. State, Boise
Office Location

6/26/84
Date

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

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

June 28, 1984

Mr. Larry L. Koenig, Manager
Idaho Department of Health & Welfare
Division of Environment
Statehouse Mall
Boise, Idaho 83720

Att: Jerry Yoder

Re: Mink Creek Hydroelectric Project
Franklin County

Dear Sir:

This letter will introduce Mr. Robert Fackrell of Preston, Idaho who wishes to discuss the above mentioned project with you or answer any questions you may have. As you recall, this office delivered the draft copy of the technical information for the application to the F.E.R.C. to you on Tuesday of this week.

By Mr. Fackrell's visit, we are initiating the consultation process in an effort to acquire a water quality certificate as described in Section 401 of the Federal Water Pollution Control Act (Clean Water Act, 33, USC 1341).

It is understood per my conversation with Mr. Yoder today, that you may wish to have the onsite and follow-up work for your department conducted by your office in Pocatello, Idaho. We would appreciate your furnishing Mr. Fackrell with the necessary names of contact persons at your district office.

We will be filing for a minor license on this project, which procedure allows time for on-going project review. However, we would appreciate your initial response as quickly as possible so we may include said response in the initial application to the Federal Energy Regulatory Commission.

Sincerely,

Helen Chenoweth

Helen Chenoweth
Vice President

HC:mf

STATE OF IDAHO

DEPARTMENT OF HEALTH AND WELFARE

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

July 2, 1984

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

RE: Competing Application for
FERC Project 7957-000
Mink Creek Hydroelectric Project

Dear Mr. Ravenscroft:

We will comment on this project when we receive a copy of EXHIBIT "E".

The following should be addressed during and after construction:

1. Turbidity and siltation associated with the headworks.

2. Turbidity and siltation associated with the relief valve.

3. Turbidity, siltation and dissolved oxygen associated with the tailrace.

We notice discrepancies between EXHIBIT "A" and the Department of Water Resources Application:

A. Exhibit "A" turbine capacity is 60 cfs with no plans for expansion, but water right application is for 125 cfs.

B. Exhibit "A" describes a 26 inch penstock, but water right application describes a 42 inch penstock.

If you have any questions, or if we can be of help, please call 236-6160.

Sincerely,

Elmer W. Smith

Elmer W. "Bill" Smith, P.E.
Environmental Engineer

ES/nn
cc: Gerald Ramsey, Dept. of Water Resources
Robert Fackrell, Rt. 1, Preston
Jerry Yoder, IDHW-DOE, Boise
Gordon Hopson, IDHW-DOE, Pocatello
John Southerland, S.E. District Health, Pocatello

RECEIVED
JUL 6 1984

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-3670
P.O. BOX 893
BOISE, IDAHO 83701

6-25-84

Mr. Thomas Green
Idaho Historical Society
610 N. Julia Davis Drive
Boise, ID 83702

Dear Mr. Green,

Please find enclosed a draft copy of the license application for the Fackrell Mink Creek project near Preston, Idaho. This draft copy is being provided for your evaluation and comment.

Regards,

Vernon

Vernon F. Ravenscroft

Enc.

cc: Robert Fackrell

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2470
P.O. BOX 893
BOISE, IDAHO 83701

June 25, 1984

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, NE
Washington, DC 20426

Dear Sir:

This letter is to certify that on this date, June 25, 1984, we have delivered a draft copy of the technical information of the Minor License application under Part I of the Federal Power Act and the Public Utilities Regulatory Act of 1978, Sec 210 to the Idaho Historical Society, Boise, Idaho.

Said License Application applies to the Mink Creek hydroelectric project located in Franklin County, Idaho.

We are opening the opportunity for evaluation by the Division of Environment relative to the water quality certificate as described in Section 401 of the Federal Water Pollution Control Act.

Vernon Ravenscroft

Vernon Ravenscroft, President
Consulting Associates, Inc.

Receipt acknowledged:

Glenda King
Agent, Idaho Historical Society

Cassia Office
Office Location

June 26, 1984
Date

Jackrell

IDAHO STATE HISTORICAL SOCIETY
610 NORTH JULIA DAVIS DRIVE BOISE, 83702
June 29, 1984

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

RE: License Application for Project 7957-000, Mink Creek

Dear Mr. Ravenscroft:

Thank you for sending us the information regarding the Mink Creek Hydroelectric Project in Franklin County, Idaho.

Our only area of concern is that around the site of generation in Section 27. We feel there is a possibility of sites in that area and that it should be surveyed by an archaeologist. If it is on private land, we would be quite willing to do the survey for you. However, we will not be able to do it until August or September. If that area is within the Forest boundary, you should contact the Forest Service archaeologist for their assessment of archaeological site potential.

Please feel free to call us if you have any questions.

Sincerely,

Thomas Green GK

Thomas J. Green
State Archaeologist
State Historic Preservation Office

RECEIVED
JUL 2 1984

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-3670
P O BOX 893
BOISE, IDAHO 83701

July 2, 1984

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

Dear Tom,

Thank you for the prompt reply in relation to the Mink Creek (Franklin County) Project.

The site of generation is on private property. Mr. Fackrell would be pleased to work with your department to obtain the necessary field examination.

Since there is a degree of urgency to get this competing filing in place in a timely manner we will word the application to F.E.R.C. so as to provide the stipulation that your department will make the examination and if needed you will make provision for salvage, site adjustment or mitigation as a part of the project construction effort.

Regards,

Vernon F. Ravenscroft

VFR:mf

cc: Rob Fackrell

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

June 7, 1984

Mr. Ron Carlsen
State of Idaho
Department of Water Resources
Eastern District Office
150 Shoup - Suite 15
Idaho Falls, Idaho 83402

Dear Ron,

Just a note for the purpose of confirming our telephone conversation of today. I called to see that you had in fact received my letter of May 24, 1984, and you indicated that you had received it and had forwarded it to Mr. Gerald Ramsey for processing. I also asked that you have your secretary send me a copy of my May 18, 1984 filing on 125 CFS of Mink Creek water and you indicated that you would do that.

Your help is sincerely appreciated, and if there is any additional information needed by your department, please do not hesitate to advise me and I will promptly respond to your request.

Sincerely,

Robert N. Fackrell

ROBERT N. FACKRELL
GENERAL CONTRACTOR
P.O. BOX 1
PRESTON, IDAHO 83263

Mr. Ron Carlsen
State of Idaho Department of Wa
Eastern District Office
150 Shoup - Suite 15
Idaho Falls, Idaho 83402

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
EASTERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

150 Shoup
Idaho Falls, Idaho 83401
(208) 525-7161

June 19, 1984

Robert N. Fackrell
P.O. Box 1
Preston, ID 83263

Dear Mr. Faccrell:

Enclosed is a copy of a protest filed against the issuance of a permit pursuant to your Application No. 13-7416. The Department suggests you contact the protestant directly in an effort to determine the nature of the protest and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for permit (Section 42-203, Idaho Code):

1. Will the proposed use reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

Ronald D. Carlson

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

Enclosure

cc: IDWR - State Office

RECEIVED
JUN 25 1984

401-625-5104

United States Department of Agriculture

Forest Service

Intermountain Region

324 25th Street
Ogden, UT 84401

Reply to 2540

Date JUN 13

Mr. Ronald D. Carlson
Eastern Region Supervisor
Idaho Department of Water Resources
150 Shoup Avenue
Idaho Falls, ID 83401

RECEIVED
JUN 14 1984
Department of Water Resources
Eastern District Office

Dear Mr. Carlson:

This is to protest Application for Permit No. 13-7416, submitted by Mr. Robert N. Fackrell of Preston, Idaho. The application proposes to divert 125 cfs from Mink Creek for power generation purposes from January 1 to December 31 annually. The proposed concrete diversion structure, 2-mile, 42-inch penstock, power generation facility, and associated roads and power lines are all located on National Forest System lands within the Wasatch National Forest near Preston.

Examination of the streamflow records for USGS Station No. 10087500, located on Mink Creek approximately 5 miles below the proposed point of diversion, indicates that the 125 second-feet of water applied for would completely dewater the stream at least 85 percent of the time. Our protest is based on four factors:

1. The United States has Federal reserved rights to a minimum instream flow necessary to secure favorable conditions of water flow as mandated by the Organic Administration Act of 1897. Permitting this diversion would interfere with that right. The reserved right has not yet been quantified.

2. The Forest Service has been given the responsibility of managing National Forest System lands for timber, watershed, range, recreation, and wildlife and fish through the Multiple-Use Sustained-Yield Act of 1960. If this application is granted, the Forest Service will be unable to redeem its responsibilities under Federal law.

3. It is believed that the stream is a source of recharge for Mink Creek spring which supplies municipal water to downstream residents.

4. The entire project is within the Mink Creek Roadless Area and at the present time, no occupancy is permitted.

Based on the above, we respectfully request the application be denied.

Sincerely,

J. S. TIXIER
Regional Forester

Ted Russell - call before 4:15

Touche

FS-0200-11b (7-81)

IDAHO DEPARTMENT OF FISH AND GAME
REGION 5 Phone 232-4703
South Fifth Avenue • P.O. Box 4229
Pocatello, Idaho 83201

RECEIVED
JUN 5 1984
Department of Water Resources
Eastern District Office

June 4, 1984

Mr. Ernest Carlson
Assistant Regional Supervisor
Idaho Department of Water Resources
150 Shoup, Suite 16
Idaho Falls, Idaho 83402

Dear Mr. Carlson:

SUBJECT: Application for Permit No. 13-7416
by Robert N. Fackrell for Mink Creek

As is customary with water right applications involving hydropower projects, we protest this application until we are furnished project details by the applicant.

Sincerely,

Chris Chaffin

Chris Chaffin
Acting Supervisor, Region 5

Agency Response

ANSWER TO AGENCY CONCERNS

U.S. FOREST SERVICE
(Letter of 7/10/84)

1. Municipal watershed.	This project will not effect the municipal watershed because it does not utilize water from the same water source as does the City of Mink Creek which obtains its water from Croney Hollow Springs which are located at elevation 5,480' msl. The diversion for this project is at elevation 5,830' msl. The Mink Creek project penstock is so situated that it can supplement the Mink Creek water system if that should prove necessary.
2. Minimum streamflow.	This will be worked out with consultant, Dr. Jack Griffith and State F & G and Forest Service personnel. Applicant will be happy to work with any reasonable minimum streamflow.
3. Roadless area.	The project is located in an area which has been recommended for roadless consideration. However, the enclosed exhibits will show the EIS stated this area would not be suitable for wilderness classification. The Mink Creek roadless recommendation and land use planning procedure of the U.S.F.S. (Caribou National Forest) and is still subject to revision and final action. A hydro project near the boundary of the forest with the generation site well removed on private property does not pose a major conflict with any management form eventually adopted for the balance of the drainage. It is the contention of the applicant that needed hydro energy generation is a higher and better resource use for the area and need not interfer with the limited wildlife and grazing values now evident in the canyon.

The inside of the cover page of the Bear River Planning Unit EIS states: "Preparation of this draft environmental statement and proposed land management plan began prior to the adoption of the National Forest Management Act of 1976 ....the statement recommends nonwilderness management for fourteen roadless areas", of which Mink Creek was one of those recommendations.

4. Concern on water right filing.

Applicant originally filed for 125 cfs of water for this project, however, after careful hydrologic analysis by two eminent hydrologists, it was decided the responsible amount of water to utilize in this project would be 100 cfs. To file for less than the project would utilize could possibly be viewed by the F.E.R.C. and the Idaho Department of Water Resources as a nuisance filing.

5. Archaeological study

A complete archaeological study was conducted Dr. Butler whose report is enclosed.

U.S.F.S. Letter
(Letter of 7/10/84)

1. Roadless areas treated as wilderness re: small hydro development.

This is a policy decision of the U.S. Forest Service and as yet, still in draft form. The Applicant understands that he will need seek the necessary permits from the Caribou National Forest Administration.

It need be clearly understood, that the applicant is willing to spend as much effort as is reasonably necessary to satisfy the U.S.F.S. that this project will be constructed and operated in such a way that the positive aspects will far outweigh any possible negative aspects.

U.S.F.S.
(Letter of 6/26/84)
Special Use Permit

Applicant will apply for a Special Use Permit immediately after project is noticed by the F.E.R.C.

U.S.F.S.
(Letter of 7/16/84)
Proposed Roadless Classification.

Please see copies of F.S. comment on Mink Creek Wilderness characteristics. These comments are found in the enclosed exhibits, C-168, C-169, C-170, and Table C-1. Preliminary Write-Up for Mink Creek which is currently being evaluated in the Forest Plan, and Page 57 of the Bear River Planning EIS.

Idaho Department of Fish & Game
(Letter of 7/10/84)

1 Mink Creek supports a viable trout population.

Studies presently available do not bear out the statement that Mink Creek does support a viable trout population within the project boundaries. Dr. Griffith's observations indicated that because of the steepness of the fall, and the scouring which occurs in the creek during high run-off, very little occasion exists where proper pooling can occur. Thus at this time, there is no opportunity for a viable trout population to exist. Records obtained from the State Fish and Game show there never has been a game fish planting program on Mink Creek. That report is contained elsewhere in this Exhibit. Applicant is willing to abide by the recommendations of Dr. Griffith and all reasonable recommendations of the agencies to enhance the trout population, and, in fact, build one where none now exists.

2. Mink Creek is a popular local fishery.

At present, Mink Creek, past the Forest boundary, is totally inaccessible by motorized vehicle because there are no roads and the existing conditions of the streambanks is one of huge boulders with large amounts of stinging nettles. Also the survey crews, the archaeological crew and the survey crews reported encounters with rattlesnakes in the canyon. It is somewhat doubtful, that in its present condition, the creek is a popular fishery.

3. Self cleaning screens to prevent fish from entering the penstock.	The diversion on this project is located at the point where the main springs on Mink Creek emerge. Springs indicated above the proposed point of diversion are only intermittent, and, in fact, are dry in the summer and fall. The terrain is steep and tumbling and does not support any pooling in the stream for fish to survive the winter or the scouring that occurs during high water. It is safe to say that no fish exist above the diversion, and self screening screens would serve no purpose in this case.
4. Upstream fish passage facilities be constructed.	This requirement also would serve no useful purpose for the above stated reasons.
5. Maintenance flows sufficient to maintain existing fish production and passage.	Applicant is willing to maintain reasonable flows for the fishery.
6. Diversion and inlet design to prevent air entrainment in the penstock.	Agreed
7. Transmission lines buried or designed to prevent raptor mortality.	Agreed.
8. Project construction to avoid creating erosion and undue disturbance of riparian habitat.	Agreed. Some erosion will occur during construction, however, reasonable precaution will be exercised to keep it to a bare minimum. Penstock will be buried and the disturbed ground will be restored to its normal groundcover as quickly as possible with replacement of vegetation.
9. Facilities designed by F & G criteria.	Applicant and project engineer are willing to submit final designs to F & G for the examination. Project

	engineer will use F & G designs for raptor proof transmission lines.
10. Applicant conduct the instream resource maintenance flow study and provide F & G with the results.	The "Instream Flow Incremental Methodology for Methods IFG-4/Ifg-3 (Habitat)" involves an extremely costly procedure which, under the circumstances with a minimal fishery and hazardous streambed condition, as described above, would prove to be a useless procedure. Under the above mentioned procedure, an evaluation of the stream must occur at every spot where the stream drops. This may be an efficient manner in evaluating slow moving rivers with occasional riffles and drops as one finds in the mid-West and East. However, here in the fast moving streams which continually cascade over boulders, evaluations would need be made at every boulder. This would take an immense amount of time and would be extremely costly, as well as producing questionable results because of the lack of a fishery at the present time in the Mink Creek. Dr. Griffith is making a stream examination based on a high water, medium water and low water comparison. That study, by qualified experts, is understood by the Applicant to be a practical, feasible and acceptable substitute for the incremental stream analysis listed by Idaho F & G Dept.
11. Concern in engineering that precautions be taken for landslide, snow avalanches, earthquake, treefall and potential penstock failure.	Penstock will be buried, and thus will eliminate these concerns.
Fish and Wildlife Service (Letter of 7/17/84)	Applicant agrees to construct raptor-proof power poles.
Department of Health and Welfare, Division of Environment. (Letter of 7/2/84)	A discrepancy does appear between the amount of water utilized in the Exhibit A and the amount of water applied for with Department of Water

	Resources. Evaluation of the water which appeared to be available to the project was initially taken from the Mink Creek gaging station, located downstream from the proposed project. The Applicant filed for the maximun amount first determined to be needed for the project. To file for a lesser amount would appear to be a "nuisance filing" for speculation purposes, and would allow reason for protest on that basis by intervenors, and possible disallowance of the application on the part of the Director of Department of Water Resources. When hydrologists were asked to evaluate the flow conditions, indeed much less water was found to be at the site at a lower elevation than was originally represented on the U.S.G.S. map.
2. Penstock size was different on Ex. A than on Water Right Application.	The penstock size was scaled down when it was realized we were not dealing with the volume of water first anticipated by the Applicant when he first filed the water application.
Historical and Archaeological Society (Letter of 9/17/84)	Agreed. Archaeological evaluation was performed and report enclosed.
Department of Water Resources (Letter of protest dated 6/13/84 from J.S. Tixier, Reg. Forester, Intermountain Region, U.S.F.S., Ogden Utah.)	Protestant claims the water would completely dewater the stream at least 85% of the time. Project is designed to the 80 percentile of water availability per the F.E.R.C. preferred standards. As such, the stream will not be completely dewatered. Any final minimum flow will be a deduction from this 80(100 cfs) useable flow. Protestant claims the U.S. has Federal reserved water rights to a minimum instream flow per the Organic Act of 1897. Applicants disagree. As interpreted by the courts, the reserved rights must be for specific uses. Any instream flow will protect the riparian habitat and also provide livestock and game water. There are

no camp grounds or other uses for specific "implied" rights.

The Bear River Planning Unit EIS, which was heavily relied on for information in composing Exhibit E, states on page 46 the following:

The Bear River Compact, ratified in 1955, provides for the apportionment of waters of the Bear River basin among the States of Idaho, Utah, and Wyoming. All the waters of this basin that are apportioned to Idaho have been allocated except for a part of the high flood flows.

A summary of the undated statement of the Idaho Department of Water Resources regarding constitutional and statutory water law follows:

"The right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses shall never be denied, except that the State may regulate and limit the use thereof for power purposes. Priority of appropriation shall give the better right as between those using the water; but when the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall (subject to such limitations as may be prescribed by law) have the preference over those claiming for any other purpose; and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes. And in any organized mining district, those using the water for mining purposes or milling purposes connected with mining shall have preference over those using the same for manufacturing or agricultural purposes."

Protestant claims that Applicant's diverting the water would interfere with the Federal water right. Applicant's right is clearly stated above in the quote directly from the EIS which protestant's own Forest has issued. Secondly the supremacy of state water rights is still in effect until altered by a decision of the Courts or the Congress.

Protestant claims that he can not discharge his duties under the Multiple Use Sustained-Yield Act of 1960 if applicant is granted a water right. Applicant disagrees. Protestant has not claimed or even indicated which other use under existing law could be contemplated for the water.

The Multiple-Use Sustained-Yield Act of 1960 in no way precludes the use of water for hydropower purposes as incompatible with the law.

Protestant claims the involved stream (Mink Creek) is a recharge for Mink Creek springs which supplies the municipal water for downstream use. This is inaccurate for this reason:

The Croney Hollow Springs is the municipal water source, not Mink Creek springs. Croney Springs is located north and west of Mink Creek springs, and as such are two entirely different water sources. Please see enclosed map.

Applicant claims the entire project is within the Mink Creek Roadless Area, and no occupancy is permitted. That issue has been addressed previously in this application. The U.S.F.S.'s latest Forest Plan for Mink Creek states the following on C-169:

"The area currently receives approximately 1,430 AUMs of livestock grazing a year. There are approximately 2,830 acres of commercial Forest land capable of sustaining timber management activities in the area.....(Pg C170) This area has approximately 190 acres of mature and overmature commercial timber land that could sustain insect damage if the stands are not managed. ...This roadless area was not recommended by the State of Idaho or included in the wilderness legislation for Idaho. During the roadless area reevaluation, no input was received specific to this area that recommended wilderness classification."

F-9

FISH PRODUCTION AND/OR DISTRIBUTION REPORT

YEAR 1981 COUNTY PLANTED - FRANKLIN

DATE MO.	DAY	YR.	CATALOG NUMBER	NAME OF WATER (ETC.)	SPECIES	SPECIES	SPECIES	SIZE	SPECIES	SPECIES	SPECIES	TRUCK HC. NO.	METHOD	LBS. OF FISH	*	NO. OF FISH
03	24	81	14 00 00 0121	GLENDALE	10	10	RB	4 - Eyed Eggs	21	51		936	3	1,000.00		2,900
04	23	81	14 00 00 0121	GLENDALE	10	10	RB		21	51		921	3	2,050.00		5,425
04	23	81	14 00 00 0123	FOSTER	10	10	RB		21	51		906	3	3,000.00		7,500
03	25	81	14 00 00 0125	JOHNSON	10	10	RB		21	51		936	3	1,000.00		2,900
04	23	81	14 00 00 0126	LAMONT	10	10	RB		21	51		921	3	1,200.00		3,600
03	18	81	14 00 00 0128	TWIN LAKES	10	10	RB		21	51		936	3	1,000.00		2,900
04	23	81	14 00 00 0128	TWIN LAKES	10	10	RB		21	51		921	3	3,000.00		7,500
06	24	81	14 00 00 0128	TWIN LAKES	10	10	RB		21	51		936	3	850.00		2,295
07	13	81	14 00 00 0128	TWIN LAKES	10	10	RB		21	51		936	3	1,000.00		3,000
04	23	81	14 00 00 0130	CONDIE	10	10	RB		21	51		921	3	3,600.00		9,000
05	05	81	14 00 00 0130	CONDIE	10	10	RB		21	51		936	3	950.00		3,515
03	18	81	14 00 00 0132	TREASURETON	10	10	RB		21	51		936	3	1,000.00		2,900
04	24	81	14 00 00 0132	TREASURETON	10	10	RB		21	51		921	3	3,600.00		9,000
05	19	81	14 00 00 0144	WINDER	10	10	RB		21	51		936	3	1,200.00		4,000
03	03	81	14 00 01 0000	RED POINT	10	10	RB		21	51		936	3	175.00		508
06	24	81	14 00 01 0000	RED POINT	10	10	RB		21	51		936	3	185.00		500
03	03	81	14 00 02 0000	BRIDGE BELOW ONEIDA	10	10	RB		21	51		936	3	525.00		1,622
06	24	81	14 00 02 0000	BRIDGE BELOW ONEIDA	10	10	RB		21	51		936	3	565.00		1,625
06	15	81	14 02 00 0000	CUB	10	10	RB		21	51		906	3	500.00		1,450
07	14	81	14 02 00 0000	CUB	10	10	RB		21	51		906	3	550.00		1,650
												TOTAL		26,950.00		72,970

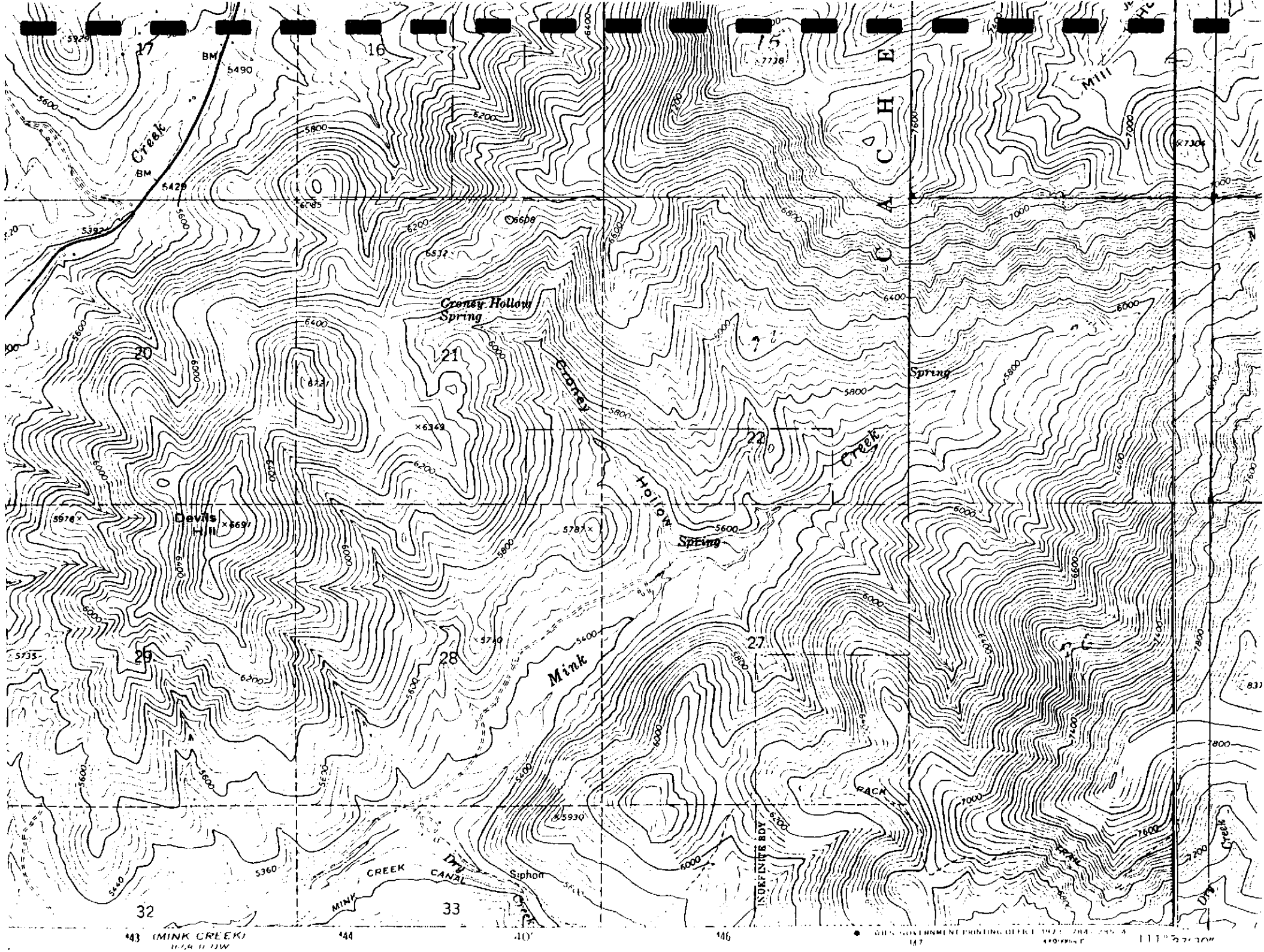
SIZE: 1 - Fry (0"-3") 2 - Fing (3"-6") 3 - Catchable (6"+) 4 - Eyed Eggs

SPECIES: RB Rainbow, CT Cutthroat, BK Brook, DV Dolly Varden, CO Coho, BN Brown, KM Kamloops, KO Kokanee, MA Mackinaw, SH Steelhead, SC Spring Chinook, FC Fall Chinook

METHOD PLANTED: 1 - Truck, 2 - Air, 3 - Horse, 4 - Backpack

USAFCO Standard Forms - Benjamin Camp, 370001

85900

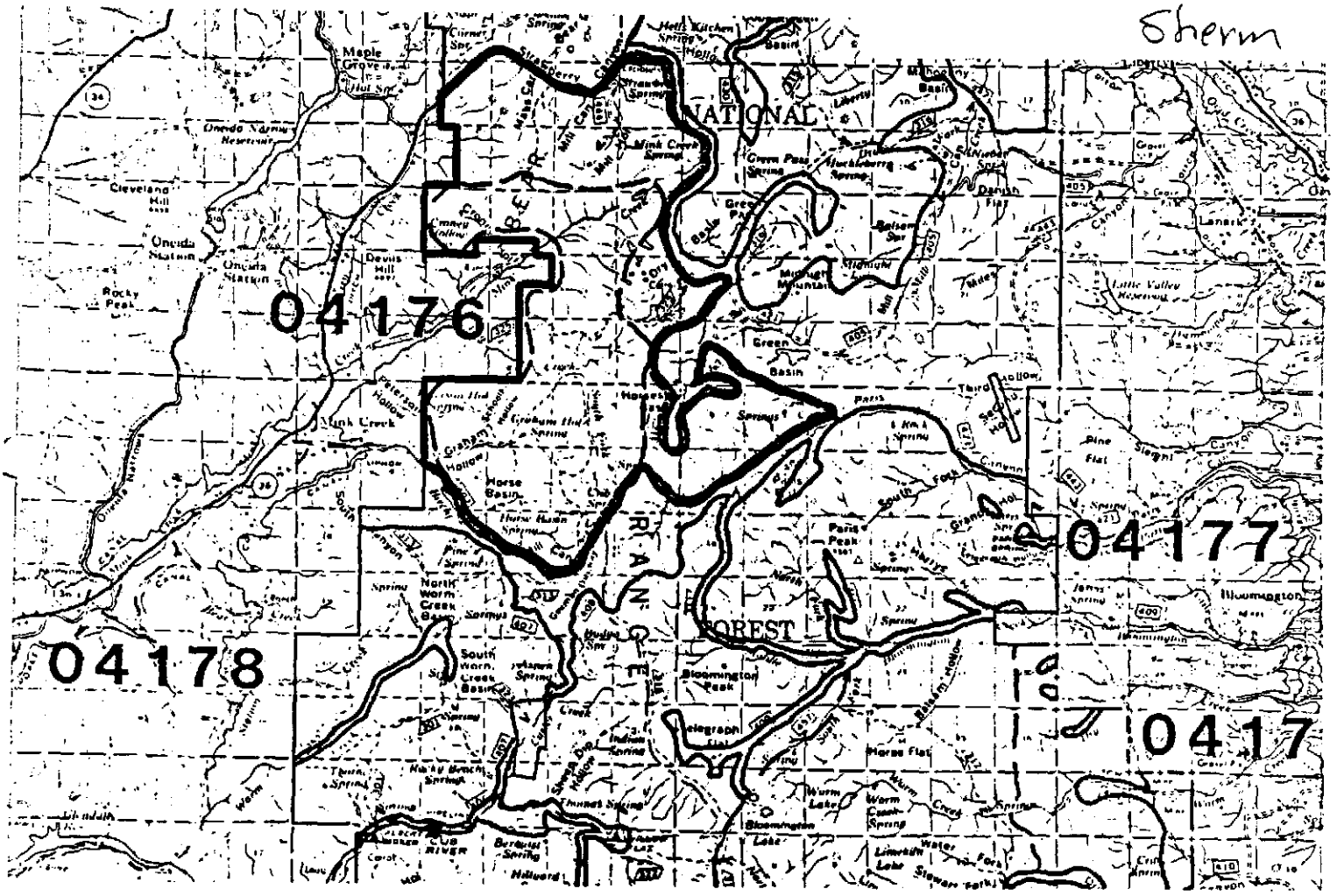

Creney Hollow Spring
Creney Creek
Devils Hill
Mink Creek
Dry Creek Canal
Siphon
Spring
Hollow
Creek
Mink
Dry Creek
BM
5490
5429
5392
6685
6609
6512
6343
5781
5930
5735
5976
5710
5360
5440
6697
6721
7738
7304
5600
5800
6000
6200
6400
6600
6800
7000
7200
7400
7600
7800
20
21
22
27
28
29
32
33
15
16
17
INDEFINITE BDY
(MINK CREEK)
40'

Robert

Enclosed is the Preliminary write up for mink creek That is being evaluated in the Forest Plan as one of 34 roadless areas on The Forest

Sherm

04176 MINK CREEK



LEGEND:

Roadless Area Boundary

04173 — Roadless Area Identification Number

Lands inventoried as roadless during RARE II that have been developed and no longer meet roadless area criteria.

Scheduled for treatment or timber harvest in 1984 or 1985 under existing land management plans.

Maximum Wilderness/Maximum Market - Alternative #11.

04176 - MINK CREEK ROADLESS AREA - 16,300 ACRES (16,300 Net Acres)

1. DESCRIPTION: This unit lies in Franklin and Bear Lake Counties, Idaho, on the Cache National Forest that is now administered by the Montpelier Ranger District of the Caribou National Forest. It is located about 20 miles northeast of Preston, Idaho.

   Access from the north is on State Highway 36 and Mill Hollow Road, which penetrates the north border. Dry Basin Road is the northeastern border, and the Horseshoe Basin Road forms most of the rest of the eastern border and also penetrates into the unit. Birch Creek and Paris Canyon Roads are the southern border. There are no access roads on the west side, which is the Forest boundary. There are about 15 miles of trails within the area.

   The elevations vary from about 8,000 feet down to 5,500 feet. The topography in this unit is quite steep and rocky but is more gentle on upper slopes. Major vegetation cover types are mountain maple, aspen, mahogany, Douglas-fir, and sage grass. There are a few stands of commercial timber. Extensive logging has occurred immediately south and east of the unit. The potential natural vegetation ecosystem types identified by Bailey and Kuchler are M3110-49-Sagebrush Steppe and M3110-11-Douglas-fir Forest.

   Deer and a few elk use the area. Deer winter near the west boundary, but most of the elk migrate south to Utah during the winter months. The higher ridges are good grouse habitat.

   The small community of Mink Creek and a number of individual farms depend on culinary water which originates on the unit. In addition, several irrigation systems use water from the area.

   Cattle grazing occurs throughout most of the unit, and most of the area has been leased for oil and gas.

   Most of the recreation associated with the area relates to hunting.

2. CAPABILITY: The manageability of the area along inventoried boundaries would be poor but could be improved slightly by moving it to the main ridge in Paris Canyon. The present boundaries follow man-made features and surveys including road intrusions into the area and the exterior Forest boundary. The distance around the perimeter is about 50 miles. A core area perimeter of about 35 miles could be achieved by locating the boundary on some natural features and it would still contain about 14,000 acres.

   The factors described below are based on the original size and boundary of the inventoried roadless area and would generally show improved wilderness characteristics if adjusted to natural topographic features where possible.

   Natural integrity is very high but has been affected by the following physical or man-caused impacts: grazing, recreation, fire history, and unimproved roads.

The appearance of man-made facilities or management activities on the area minimally detract from the natural appearance because of the existence of watering troughs, fixed site facilities, trails, fences, and unimproved roads.

The opportunity for solitude is moderate because of the small size, minimal topographic and vegetative screening and moderate distances from the perimeter to the center of the area.

The opportunity for primitive recreation is low because of the small area size, road corridors projecting into the area, minimal topographic and vegetative screening and because limited facilities are present.

There are some opportunities for challenging experiences in steep, rocky terrain in the area.

Unique or special features are not represented.

3. AVAILABILITY: Currently the Mink Creek Roadless Area receives approximately 7,450 RVDs of recreation use annually. It is estimated that 17 percent of the dispersed use and all the developed use will be foregone if this area is classified as wilderness. It is believed that there would be an increase in nonmotorized dispersed use due to wilderness classification.

The area supports a base population of approximately 195 deer a year. It is estimated that management improvements to the habitat could increase populations up to 4 percent.

Approximately 8,475 acre feet of water is generated from this area annually. Under all management options that have been considered, the water delivered to active stream channels would be within established quality standards. The opportunity to increase water yield through vegetation cover manipulation is minimal.

The area currently receives approximately 1,430 AUMs of livestock grazing a year. It is estimated that 3 to 6 percent of the annual AUMs would be lost if range improvement activities were ceased.

There are approximately 2,830 acres of commercial Forest land capable of sustaining timber management activities in the area. No timber harvest activity is planned for this area within the next five years.

This area is adjacent to the geologic formation known as the Overthrust Belt and receives major interest in oil and gas exploration. Oil and gas leases cover most of the area and the geologic potential is high. There is no known leasable and low locatable mineral potential. For a complete minerals opportunity analysis summary see Appendix L.

No cultural resources have been identified in this area.

There is one existing special use within this area which involves about 1 acre; a water transmission system.

This area is no more susceptible to fire than any other area on the Forest. Wilderness classification could result in the buildup of fuels due to dying timber and probably an upward trend in fire occurrence. The elimination of motorized uses should reduce fire risk.

Dyer's woad and musk thistle are noxious weeds found in this area. Continued control efforts will be necessary to keep these plants from spreading.

This area has approximately 190 acres of mature and overmature commercial timber land that could sustain insect damage if the stands are not managed.

There are no State or private lands within this roadless area.

4. NEED: The Mink Creek Roadless Area is 54 miles from Pocatello, Idaho and 72 miles from the Wasatch Front, the closest significant population centers. It is 115 miles from the Lone Peak and the Bridger, the nearest existing classified wilderness.

Depicted below are the ten most frequently stated "pro-wilderness" and "non-wilderness" preferences for this roadless area and the number of people making each response as determined during the RARE II process.

Wilderness	Non-Wilderness
5 Preserve For Future Generation	476 Favor Multiple Use
4 Wild Restrcts Energy Develmt	375 Only A Few Can Use Wild
4 High Graze Values/Will Restrct	372 High Graze Values/Will Restrct
4 Few Areas/Last Chance Preserve	369 Allows Roads
3 No More Wild Needed	350 Neg Impact Economy
3 Favor Multiple Use	319 High Timber Value/Needs Mgt
3 Preserve Lifestyle	301 Preserve Lifestyle
3 Neg Impact Economy	287 Evidence of Man's Activities
3 Won't Restrct Mine/Don't Lock U	279 Restrcts Mining/No Mining
3 Only A Few Can Use Wild	157 Suitable For Motorized Rec

This roadless area was not recommeded by the State of Idaho or included in the wilderness legislation for Idaho. During the roadless area reevaluation, no input was received specific to this area that recommended wilderness classification.

5. EFFECTS OF WILDERNESS/NONWILDERNESS PRESCRIPTIONS: MINK CREEK

A. Table C-I Management Prescriptions Assigned to Roadless Area, by Alternatives by M Acres

Management Prescription	Alt. #1	Alt. #2	Alt. #3	Alt. #4	Alt. #5	Alt. #6	Alt. #7	Alt. #8	Alt. #9	Alt. #10	Alt. #11	Alt. #12	Alt. #13
Wilderness	0	0	0	0	0	16.30	0	0	0	0	9.07	16.30	0
Semi-Primitive Recreation	6.61	6.26	6.30	6.30	5.44	0	6.33	6.56	7.85	6.19	1.59	0	0
Semi-Prim. Rec. w/Timber	.63	.63	.65	.65	.18	0	.65	.60	.20	.63	.08	0	.21
Roaded Natural Recreation	.20	.21	.67	.67	.16	0	.32	.66	1.33	.20	1.07	0	0
Wildlife Habitat	.41	.42	1.10	1.10	.65	0	.05	.05	.90	.41	.06	0	0
Range	1.74	2.22	1.30	1.30	2.35	0	2.35	1.93	0	2.19	1.50	0	2.19
Timber	1.63	1.60	1.59	1.59	1.53	0	1.59	1.45	.76	1.66	.50	0	1.66
Water	.06	.09	0	0	1.21	0	0	0	0	.09	0	0	.14
Minerals/Energy						*					*	*	
Research Natural Areas	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Level (Custodial)	5.02	4.87	4.69	4.69	4.78	0	5.01	5.05	5.26	4.93	2.43	0	12.10

TOTAL ACRES - 16.30

*See narrative for mineral and oil and gas geologic potential and Appendix L (Minerals Opportunity Analysis) for values foregone on acres included in the Wilderness Management prescription.

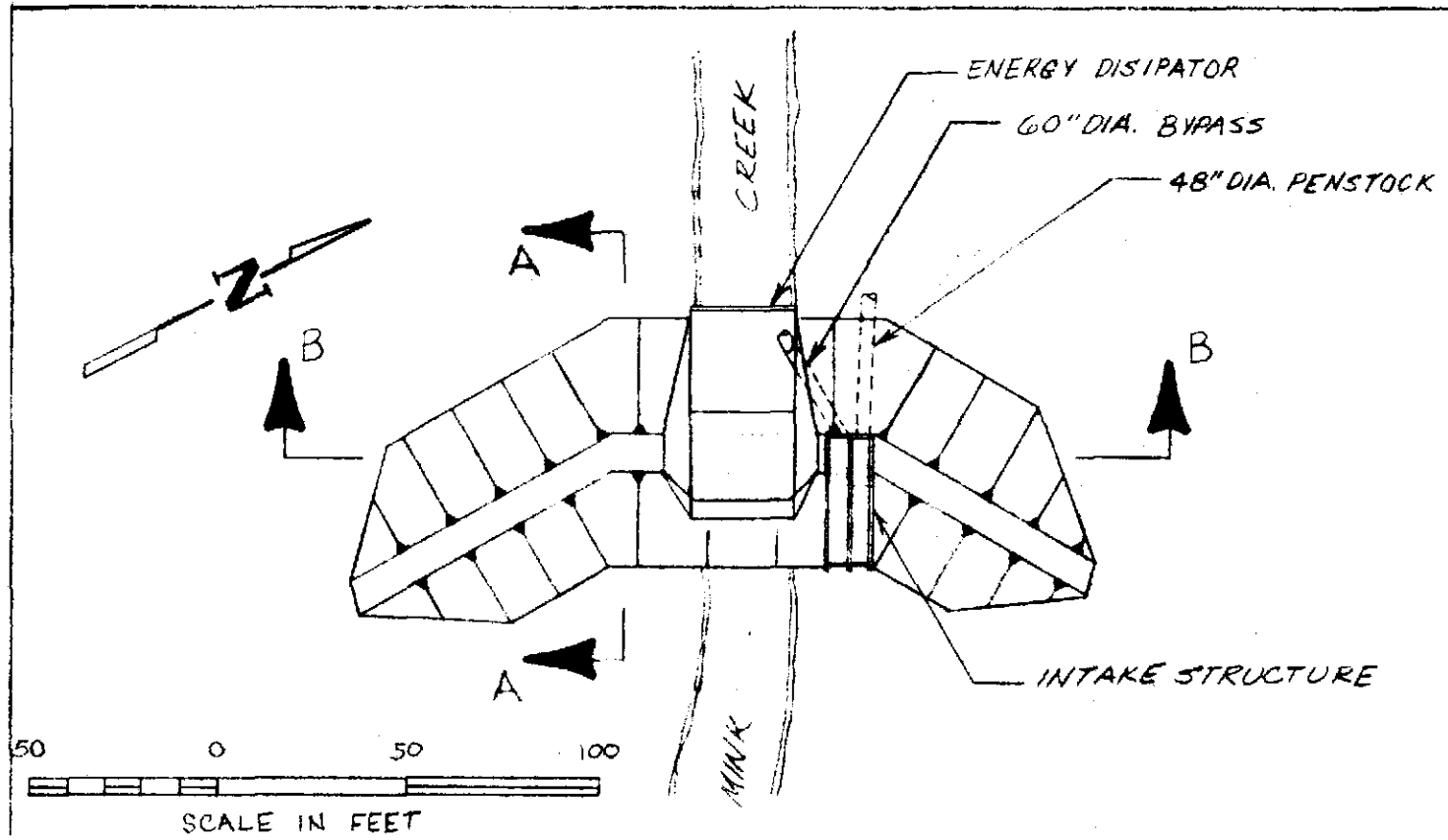
Area No. 167 is an extension to the south of the RARE I Snowdrift Ridge-Crow Creek Roadless Area, which was evaluated in the Draft Management Alternatives for the Diamond Creek Planning Unit. The entire area was reevaluated as one Roadless Area, Area No. 167, and renamed Meade Peak. The acreage and ratings have been changed to fit the new area. Further evaluation of Area No. 167 was covered by the Diamond Creek Environmental Statement and Land Management Plan.

Areas numbered 171, 172, 173, 174, 175, 176, 177, 180, 181, 111, 170, 169, 167, and 168 were rated from 49 to 92 by the RARE I rating system. Most areas found suitable for wilderness study during the original RARE process had ratings higher than 155. Since the above areas rated much lower, they were considered to be too low in suitability to warrant further consideration as possible wilderness study areas.

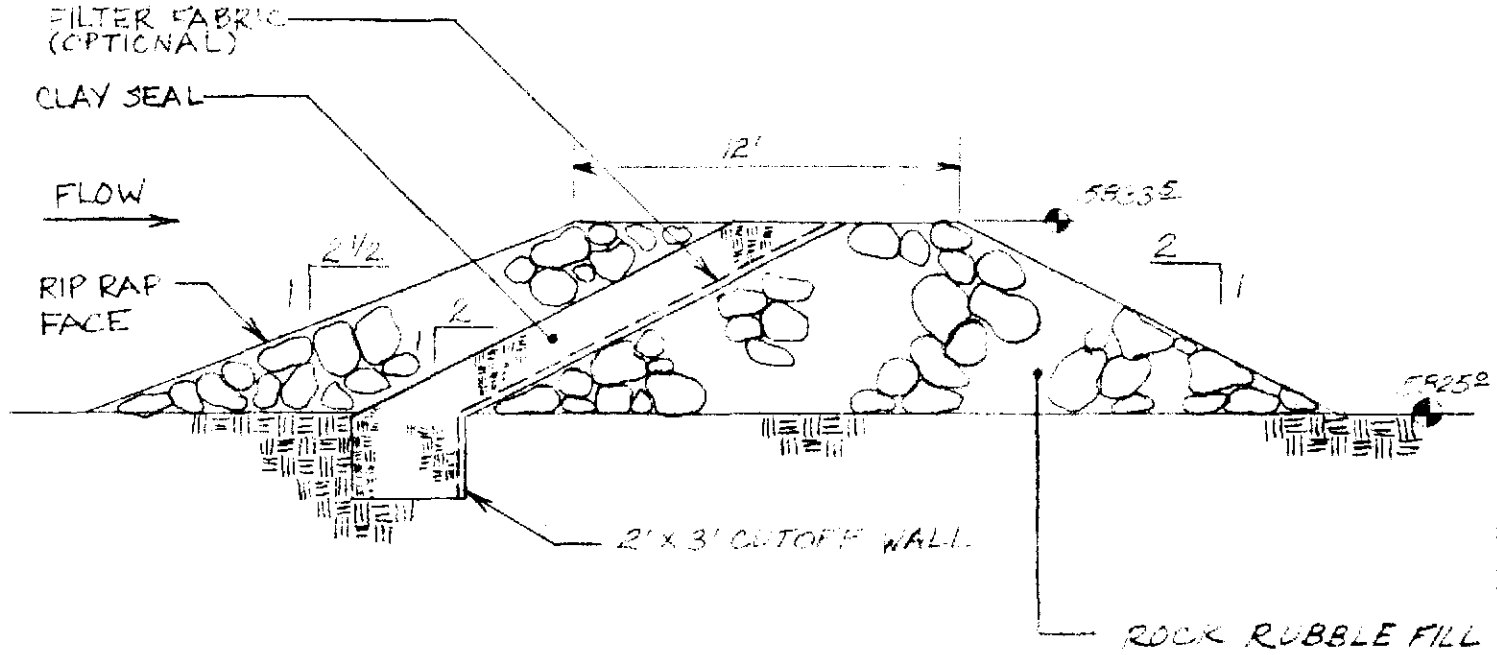
Area No. 179, Worm Creek, with a rating of 122, stands out as having qualities superior to those of most of the other areas inventoried in this Planning Unit. Special protective measures for this area are described in the writeup for Management Unit 7.1.

Further descriptions of the Roadless Areas and the inventory process are found in Appendix B. Individual quality rating forms for each area are on file in the Caribou Forest Supervisor's Office.

EXHIBIT F

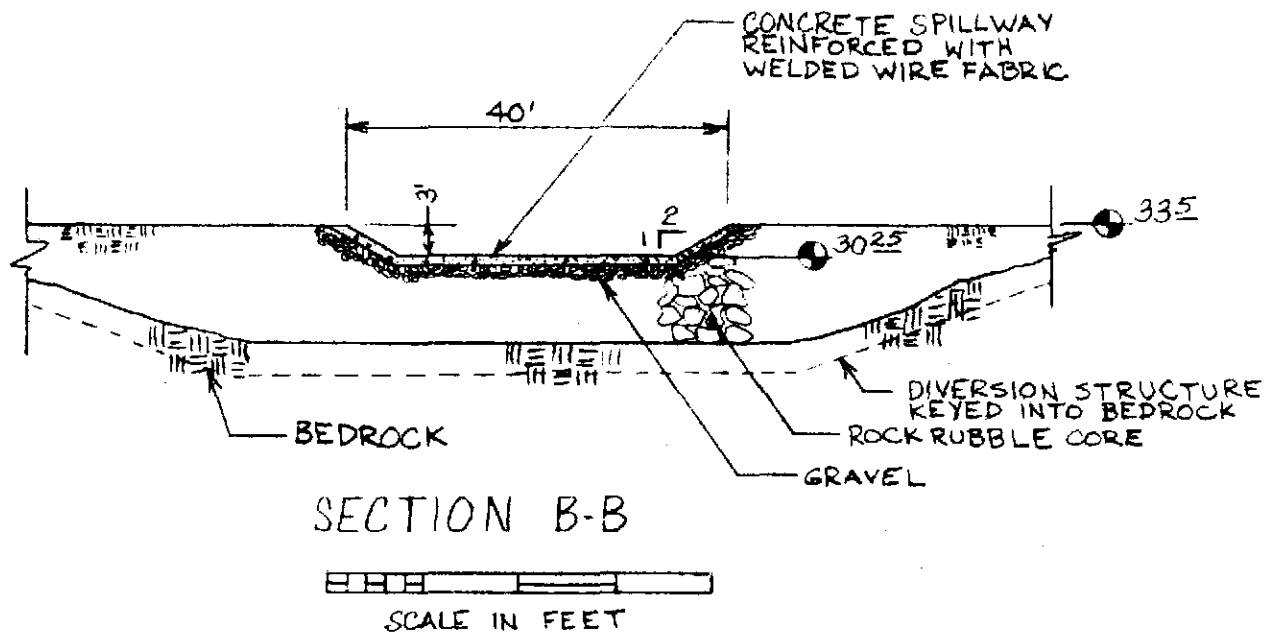


GENERAL ARRANGEMENT
DIVERSION STRUCTURE



SECTION A-A

5 0 5 10
SCALE IN FEET



SECTION B-B

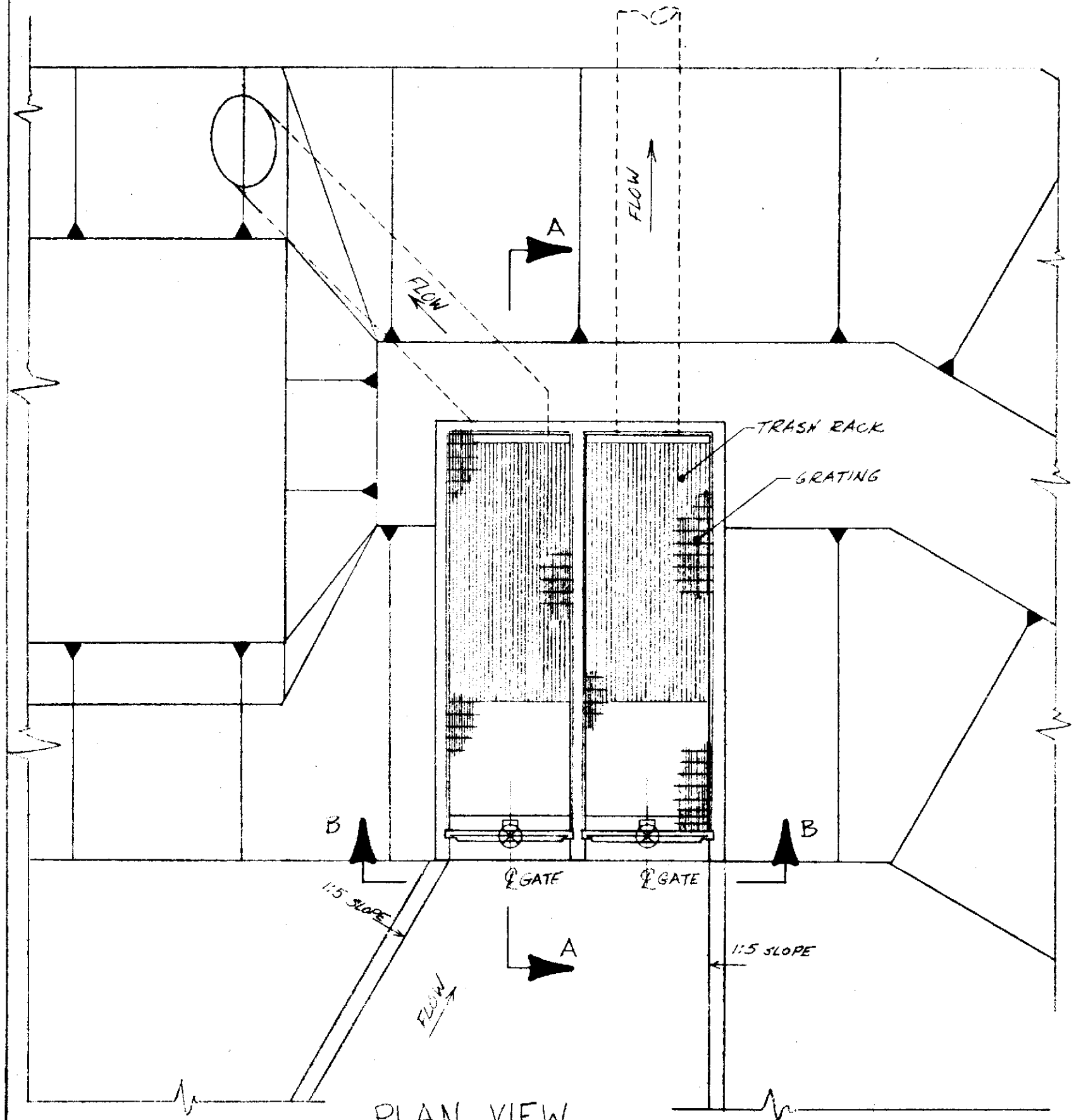
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER
10/1/84
STATE OF IDAHO
TED S. SORENSON

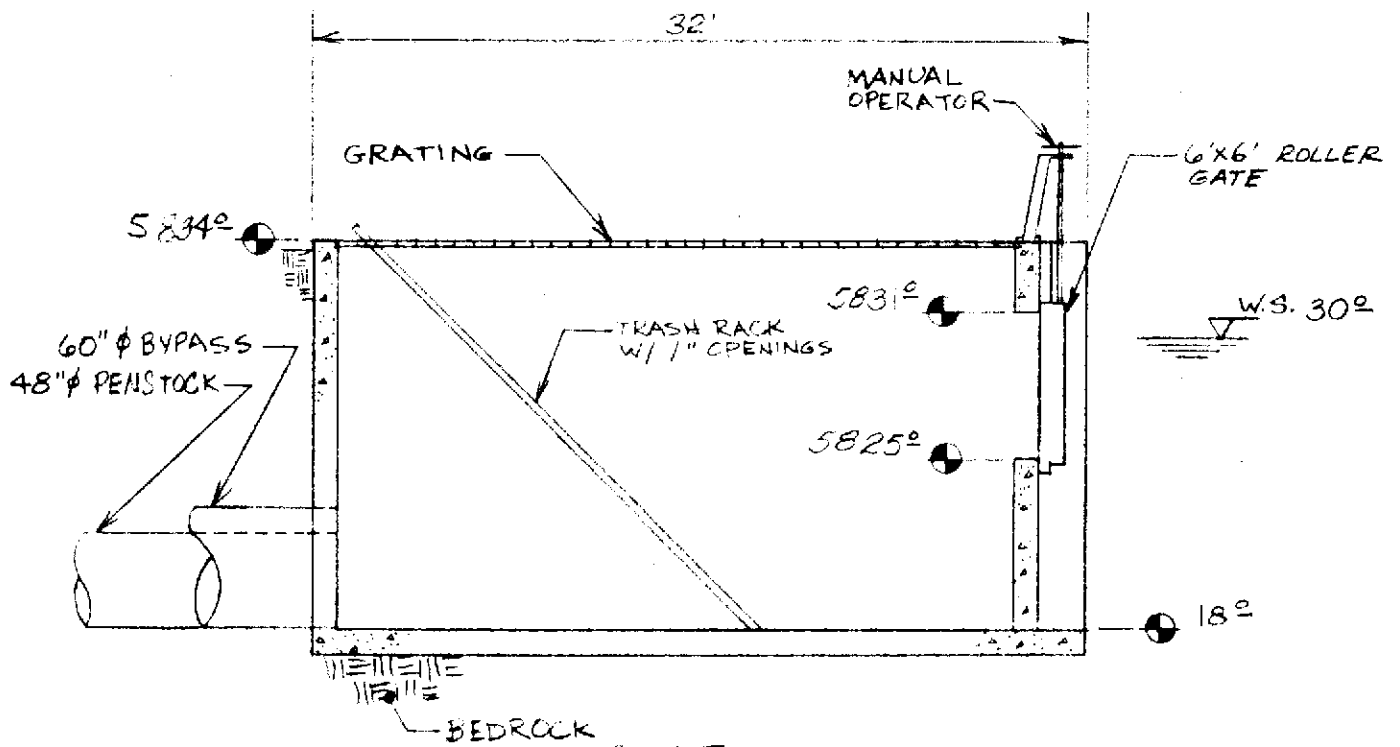
THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 1 DAY OF October, 1984.

Robert N. Fackrell
ROBERT N. FACKRELL

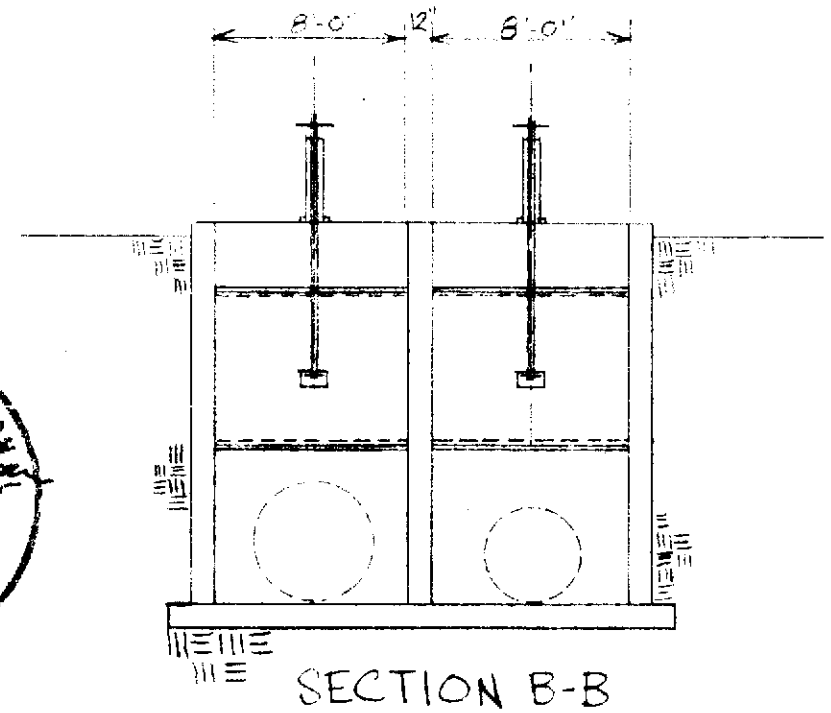
EXHIBIT F
FERC #
MINK CREEK HYDROELECTRIC FACILITY
HEADWORKS



PLAN VIEW



SECTION A-A



SECTION B-B

5 0 5 10

SCALE IN FEET

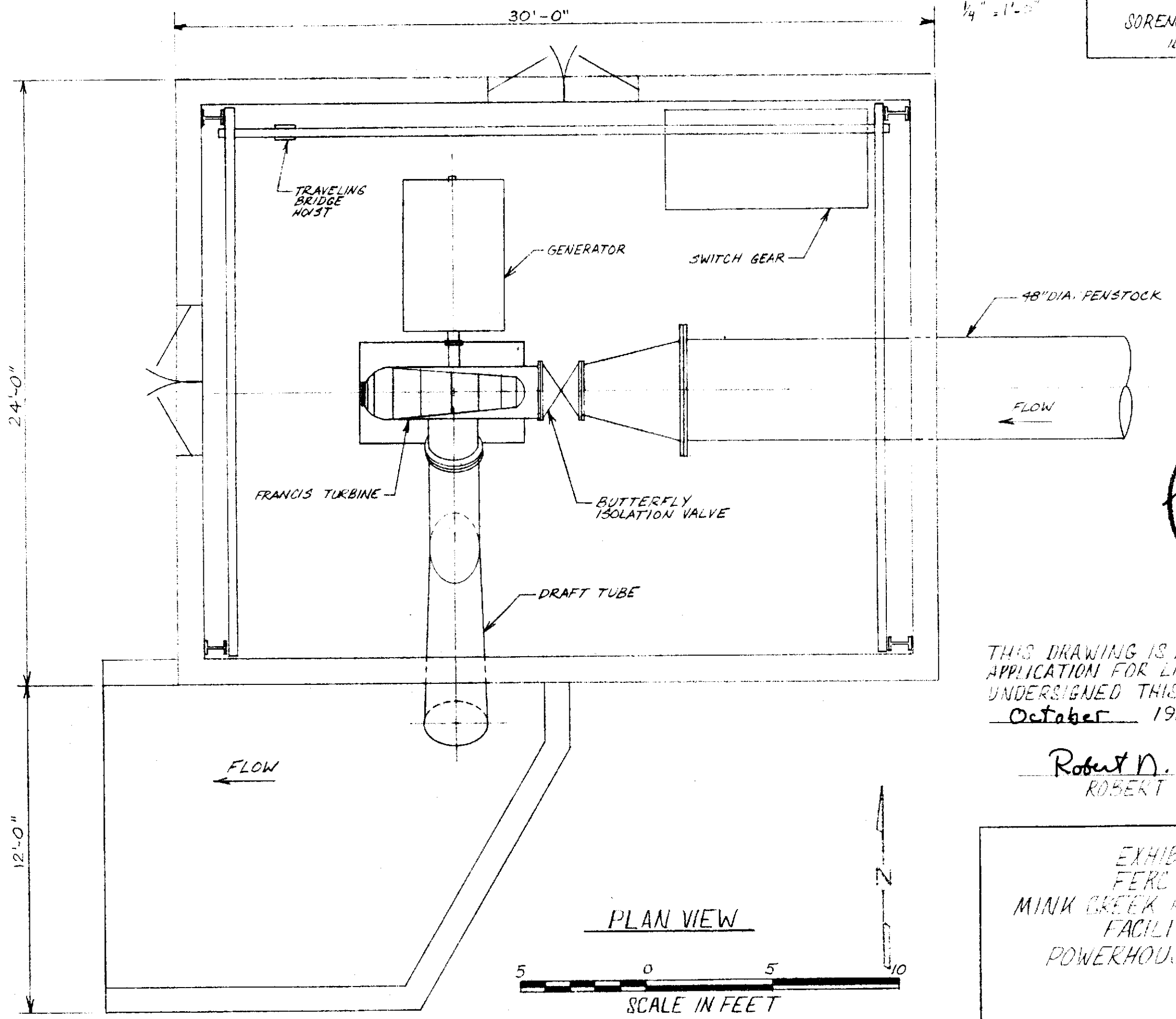
REGISTERED PROFESSIONAL ENGINEER
Ted S. Sorenson
5468
10/1/84
STATE OF IDAHO
TED S. SORENSON

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 1 DAY OF October, 1984.

Robert N. Fackrell

ROBERT N. FACKRELL

EXHIBIT F
FERC #
MINK CREEK
HYDROELECTRIC FACILITY
INTAKE STRUCTURE



1/4" = 1'-0"

SORENSON ENGINEERING, P.A.
IDAHO FALLS, IDAHO

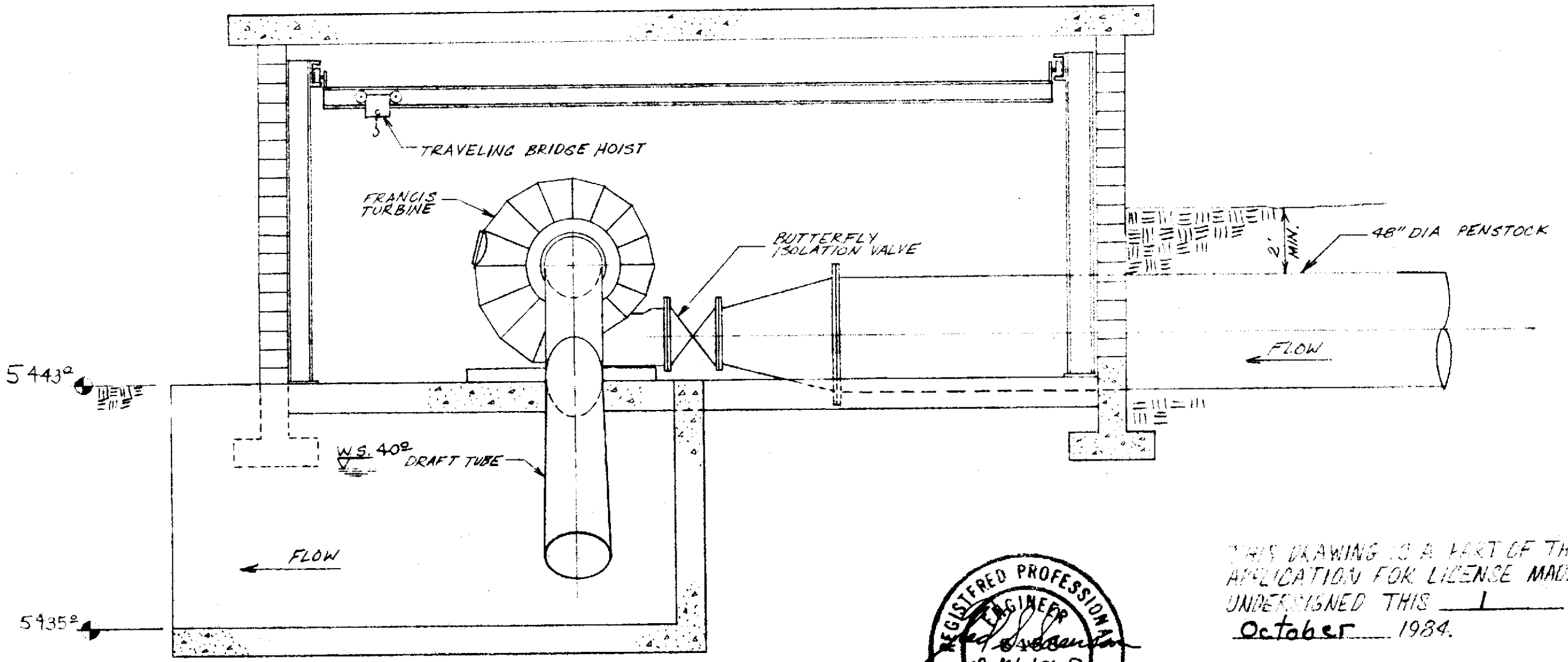
REGISTERED PROFESSIONAL ENGINEER
10/11/84
STATE OF IDAHO
TED S. SORENSON

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 1 DAY OF October 1984.

Robert N. Fackrell
ROBERT N. FACKRELL

EXHIBIT F
FERC #
MINK CREEK HYDROELECTRIC FACILITY
POWERHOUSE LAYOUT

SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO



5 0 5 10
SCALE IN FEET

ELEVATION VIEW

REGISTERED PROFESSIONAL ENGINEER
10/1/84
STATE OF IDAHO
TED S. SORENSON

THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 1 DAY OF October 1984.

Robert N. Fackrell
ROBERT N. FACKRELL

EXHIBIT F
FERC #
MINK CREEK HYDROELECTRIC FACILITY
POWERHOUSE LAYOUT

EXHIBIT G

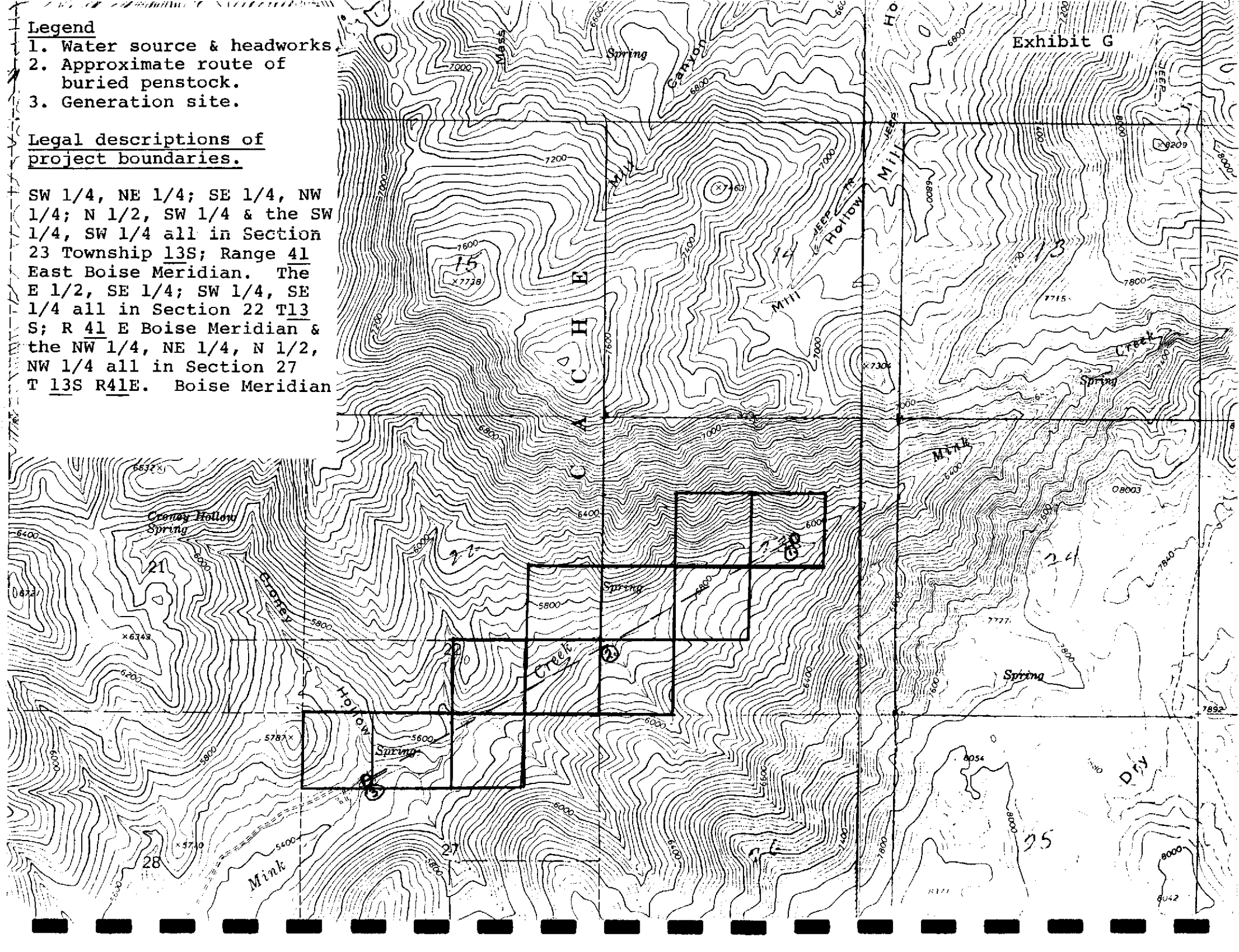
Exhibit G

Legend

1. Water source & headworks.
2. Approximate route of buried penstock.
3. Generation site.

Legal descriptions of project boundaries.

SW 1/4, NE 1/4; SE 1/4, NW 1/4; N 1/2, SW 1/4 & the SW 1/4, SW 1/4 all in Section 23 Township 13S; Range 41 East Boise Meridian. The E 1/2, SE 1/4; SW 1/4, SE 1/4 all in Section 22 T13 S; R 41 E Boise Meridian & the NW 1/4, NE 1/4, N 1/2, NW 1/4 all in Section 27 T 13S R41E. Boise Meridian



THIS DRAWING IS A PART OF THE FERC APPLICATION FOR LICENSE MADE BY THE UNDERSIGNED THIS 1 DAY OF October, 1984
Robert N. Foskett

EXHIBIT G
PROJECT LANDS & BOUNDARIES

SCALE IN FEET

N

8 | 7

17 | 16 | 18

T. 13 S. R. 41 E
BOISE, IDA. MERIDIAN

S. 28°00'00"E 6300'±

S. 76°30'00"E 8900'±

U.S. GOVT.
CACHE NATIONAL FOREST
(UNSURVEYED)

POWERHOUSE

Springs

INTAKE STRUCTURE

CREEK

V. BENSON

(UNSURVEYED)

20 | 21 | 19

V. BENSON

29 | 28 | 27 | 30

MINK

32 | 33 | 31

SORENSON ENGINEERING P.A.
IDAHO FALLS, IDAHO

T. 13 S.

R. 41 E | R. 42 E

CERT. OF MAILING

CERTIFICATION OF MAILING

I hereby certify that on the 5th day of October, 1984, I served a copy of the foregoing Application for Minor License for the Mink Creek Hydropower Project by Certified Mail or by Federal Express, properly addressed with postage prepaid, to the following parties:

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

Mr. Arthur C. Martin
Regional Engineer
FEDERAL ENERGY REGULATORY COMMISSION
819 Taylor Street
Fort Worth, Texas 76102

Fred E. Springer, Deputy Director
Project Management
Division of Hydropower Licensing
FEDERAL ENERGY REGULATORY COMMISSION
Room 208 RB
825 N. Capitol Street, N.E.
Washington, D.C. 20426

Richard D. Hull, Director of Lands
U.S. DEPARTMENT OF AGRICULTURE
P.O. Box 2417
Washington, D.C. 20013

Mr. Charles J. Hendricks, Forest Supervisor
U.S. FOREST SERVICE
Federal Building, Suite 294
250 So. 4th
Pocatello, Idaho 83201

Mr. John P. Wolflin, District Supervisor
U.S. FISH & WILDLIFE SERVICE
4620 Overland Road
Boise, Idaho 83705

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 Building, Rm. 365
550 West Fort St.
Boise, Idaho 83724

Jerry Conley, Director
IDAHO DEPARTMENT OF FISH & GAME
P.O. Box 25
Boise, Idaho 83707

David Neider
Supervisor, Region 5
IDAHO FISH AND GAME DEPARTMENT
P.O. Box 4229
Pocatello, Idaho 83201

Mr. Thomas J. Green
State Archaeologist
IDAHO HISTORICAL SOCIETY
210 Main Street
Boise, Idaho 83702

Mr. Ronald D. Carlson
IDAHO DEPARTMENT OF WATER RESOURCES
150 Shoup
Idaho Falls, Idaho 83401

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

Mr. Elmer W. "Bill" Smith, P.E.
Environmental Engineer
IDAHO DEPARTMENT OF HEALTH & WELFARE
Division of Environment
150 North 3rd Avenue
Pocatello, Idaho 83201

Environmental Impact Review Officer
ENVIRONMENTAL PROTECTION AGENCY
1200 Sixth Ave
Seattle, Washington 98101

State of Idaho
DEPARTMENT OF PARKS AND RECREATION
Statehouse
Boise, Idaho 83702

Mr. Gordan Garland
NATIONAL PARK SERVICE
450 Golden Gate Avenue
San Francisco, California 94102

Mr. Warren Chapman
COOK ELECTRIC
P.O. Box 1071
Twin Falls, Idaho 83303

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

October 5, 1984

RECEIVED
OCT 9 1984
Department of Water Resources
Eastern District Office

Mr. Ronald D. Carlson
IDAHO DEPARTMENT OF WATER RESOURCES
150 Shoup
Idaho Falls, ID 83401

Dear Mr. Carlson:

Please find enclosed the application for minor license to the Federal Energy Regulatory Commission for the proposed Mink Creek Hydropower Project located near Preston, Idaho, in Franklin County.

If you have any questions please don't hesitate to call me.

Sincerely,

Helen Chenoweth

Helen Chenoweth

HC:mf

Enclosure

FILED
AUG 19 1991

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

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

May 10, 1985

RECEIVED
MAY 13 1985
Department of Water Resources
Eastern District Office

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

Ref: Mink Creek Project #8646-000

Dear Mr. Plumb:

Per your request of letter dated January 8, 1985 requesting additional information on vegetation within the project area (4.61 (d) (2) (i), we transmit herewith a vegetative survey and an additional set of maps on which the vegetative types have been indicated.

We believe this now fully completes the additional information requested in the FERC letter of January 8, 1985.

All other materials were previously submitted timely on March 26, 1985. Because of winter snow conditions this material is just now available.

Sincerely,

Vernon Ravenscroft

Vernon F. Ravenscroft

VFR:mf

cc: Rob Fackrell
Ted Sorenson

RECLAIMED
AUG 19 1991

VEGETATION SURVEY FOR THE FACKRELL HYDROELECTRIC FACILITY
ON MINK CREEK

This survey was made April 27,1985,by Basil K.Crane Rt 2 Box 593 Preston, Id 83263

The new power line,about 1000 feet in length,from the existing power line to the powerhouse;the powerhouse and tailrace;and approximately the first 1200 feet of the penstock upstream from the powerhouse are within the riparian zone of Mink Creek.In this area this is a distinct vegetative type.

The vegetation was checked on three,one tenth acre plots in this zone.Plot No.1 was located midway between the existing power line and the powerhouse.Plot No.2 was located where the powerhouse is planned.Plot No.3 was about midway between the powerhouse and the point where the penstock leaves the riparian zone.
The vegetation was very similar on the three plots.The main difference was that the most abundant tree species on plot No.1 is birch while on plot No.3 it is aspen.The following plants were observed on these plots.

Birch	Betula fontinalis
Willow	Salix sp.
Aspen	Populus tremuloides
Dogwood	Cornus stolonifera
Chokecherry	Prunus virginiana
Elderberry	Sambucus caerulea
Black Cottonwood	Populus trichocarpa
Bigtooth maple	Acer grandidentatum
Hawthorne	Crataegus rivularis
Gooseberry	Ribes sp.
Wild rose	Rosa woodsii
Kentucky bluegrass	Poa pratensis
Slender wheatgrass	Agropyron pauciflorum
Smooth brome	Bromus inermis
Orchard grass	Dactylis glomerata
Wildrye	Elymus canadensis
Timothy	Phleum pratense

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MAY 1 1985

Sedge	Carex sp.
Baltic rush	Juncus balticus
Canada thistle	Cirsium arvense
Goldenpea	Thermopsis montana
Larkspur	Delphinium sp.
Western coneflower	Rudbeckia occidentalis
Stinging nettle	Urtica gracilis
Yarrow	Achillea lanulosa
Dandelion	Leontodon taraxacum
White clover	Trifolium repens
Cowparsnip	Heracleum lanatum
Burdock	Arctium minus
Geranium	Geranium sp.
Sweet anise	Osmorhiza occidentalis
Houndstongue	Cynoglossum officinale
Waterleaf	Hydrophyllum capitatum
False solomonseal	Vagnera amplexicaulis
Sourdock	Rumex occidentalis
Aster	Aster sp.

The riparian zone,as a distinct vegetative type,ends a few hundred feet upstream from where the penstock leaves it.Stream-side vegetation from here to the upper spring is practically the same as it is along the route of the penstock.

The route of the penstock is through a rather uniform decidious forest of maple and aspen.This was once a douglas fir forest. It was logged and burned almost a hundred years ago and was replaced by the present vegetation.A detailed check of the vegetation on four,one tenth acre plots,spaced at approximately 1400 foot intervals along the proposed penstock route,showed the following plants present.The vegetation along the entire route is rather uniform.Aspen tends to be somewhat patchy.Near the upper plot

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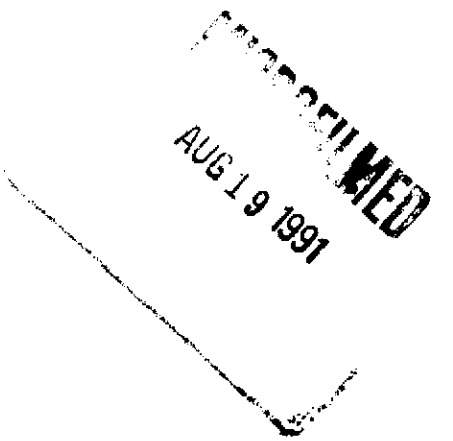
some scattered douglas fir reproduction is beginning to appear.

Bigtooth maple	Acer grandidentatum
Aspen	Populus tremuloides
Juniper	Juniperus scopulorum
Chokecherry	Prunus virginiana
Kentucky bluegrass	Poa pratensis
Slender wheatgrass	Agropyron pauciflorum
Mt.brome	Bromus marginatus
Wildrye	Elymus canadensis
Oregon grape	Berberis repens
Sweet anise	Osmorhiza occidentalis
Thistle	Cirsium sp.
Larkspur	Delphinium sp.
Geranium	Geranium sp.
Snowberry	Symphoriocarpos oreophilus
Valerian	Valeriana occidentalis
Spring beauty	Claytonia lanceolata
Buttercup	Ranunculus sp.
Horsemint	Agastache urticifolia
Engelman aster	Aster engelmanii
Dandelion	Leontodon taraxacum
Sagebrush	Artemisia tridentata
Mulesear	Wyethia amplexicaulis
Gooseberry	Ribes sp.
Violet	Viola sp.
Waterleaf	Hydrophyllum capitatum
False solomonseal	Vagnera amplexicaulis
Houndstongue	Cynoglossum officinale
Western coneflower	Rudbeckia occidentalis
Serviceberry	Amelanchier alnifolia
Mt.myrtle	Pachistima myrsinites
Elderberry	Sambucus caerulea

AUG 19 1991

To revegetate disturbed areas I would recommend pubescent wheatgrass and orchard grass in the decidious forest area. In the riparian zone if you are mainly concerned with ground cover,Kentucky bluegrass would do very well.If you want more forage production orchard grass and smooth brome would be better.

Basil R. Crane



Resume for ... BASIL K.CRANE

Education;

1935,B.S.degree,forestry,Utah State Agric.College.Some Post-graduate study.

Work Experience; all with the U.S.Forest Service

1937,Chief-of Party,range survey,Humboldt National Forest, Nevada.

1938 to 1945,Forest Ranger,Toiyabe National Forest,Nevada.

1946 to 1950,Forest Supervisor's staff,range and wildlife mgnt.,Toiyabe National Forest,Nevada.

1950 to 1952,supervised the intermountian region's range revegetation program,Ogden,Utah.

1952 to 1953,Assistant Chief division of range and wildlife mgnt.,Ogden Utah.

1953 to 1955,Forest Supervisor,Uncompahgre and Grand Mesa National Forests,Delta,Colorado.

1955 to 1962,Assistant Regional Forester,range and wildlife mgnt.,Rocky Mt.Region,Denver,Colorado.

1962 to 1974,Deputy Regional Forester,Rocky Mt.Region, Denver,Colorado.

Dec.1974,Retired.

Publications;

October 1950,Journal of Range Management,"Condition and Grazing Capacity of Wet Meadows on the East Slope of the Sierra Nevada Mountains".

1984,University of Nevada Press,book,"Dust From an Alkali Flat."

RECEIVED
AUG 19 1991

I hereby certify that on the 10th day of May, 1985, I served a copy of the foregoing additional information for the Mink Creek Hydropower Project by Certified Mail, properly addressed with postage prepaid, to the following parties:

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

Mr. Arthur C. Martin
Regional Engineer
FEDERAL ENERGY REGULATORY COMMISSION
819 Taylor Street
Fort Worth, Texas 76102

Mr. Charles J. Hendricks, Forest Supervisor
U.S. FOREST SERVICE
Federal Building, Suite 294
250 So. 4th
Pocatello, Idaho 83201

Mr. John P. Wolflin, District Supervisor
U.S. FISH & WILDLIFE SERVICE
4620 Overland Road
Boise, Idaho 83705

U.S. ARMY CORPS OF ENGINEERS
Building 602
City/County Airport
Walla Walla, Washington 99362

Jerry Conley, Director
IDAHO DEPARTMENT OF FISH & GAME
P.O. Box 25
Boise, Idaho 83707

MICROFILMED
AUG 19 1991

David Neider
Supervisor, Region 5
IDAHO FISH & GAME DEPARTMENT
P.O. Box 4229
Pocatello, Idaho 83201

Mr. Ronald D. Carlson
IDAHO DEPARTMENT OF WATER RESOURCES
150 Shoup
Idaho Falls, Idaho 83401

Mr. Elmer W. "Bill" Smith, P.E.
Environmental Engineer
IDAHO DEPARTMENT OF HEALTH & WELFARE
Division of Environment
150 North 3rd Avenue
Pocatello, Idaho 83201

State of Idaho
DEPARTMENT OF PARKS AND RECREATION
Statehouse
Boise, Idaho 83702

Mr. Gordan Garland
NATIONAL PARK SERVICE
450 Golden Gate Avenue
San Francisco, California 94102

Mr. Warren Chapman
COOK ELECTRIC
P.O. Box 1071
Twin Falls, Idaho 83303

Helen Chenoweth
Consulting Associates, Inc.

MICROFILMED
AUG 19 1991

Consulting Associates, Incorporated

BOISE OFFICE
VERNON RAVENSCROFT
HELEN CHENOWETH

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

March 26, 1985

RECEIVED
APR 1985
Department of Water Resources
Eastern District Office

Kenneth F. Plumb, Secretary
FEDERAL ENERGY REGULATORY COMMISSION
825 North Capitol Street, N.E.,
Washington, D.C. 20426

Re: Project No 8646-000-Idaho
Mink Creek Hydropower Project

Dear Sir:

The letter of January 8, 1985 in which requests were made for additional materials regarding environmental Exhibit E deficiencies in this project and additional information on the general features of the project will be addressed in this reply on the same two part basis:

1. Environmental Supplement

A. Vegetative Cover: We respectfully request an additional 60 day period for the submission of a specific survey to map the vegetative types on which the project features will be situated. The original application identified the vegetative cover for the area by exposure position. If this was not adequate, then we must again make a specific effort which work cannot be accomplished until the snow has melted in this canyon - high elevation area. The area was snowed in when your request was made (January 8, 1985) and remains inaccessible as of the date of this report (March 26, 1985).

The specific vegetative mapping will also include evaluation of the grazing pattern of the principal wildlife specie (Mule deer) and the domestic livestock which has had grazing rights in the area for many years.

B. Fishery Resources: Extensive fisheries work has been completed on the site and supplemental reports from the firm of Don Chapman, Consultants, Inc. is attached as Exhibit 1-A. These studies were coordinated with the Idaho Fish and Game Department, and the acceptance letter from that agency is attached - Exhibit 1-B.

MICROFILMED
AUG 19 1991

The project sponsor has also coordinated repeatedly with the U.S. Forest Service and that agency's acceptance letter is attached - Exhibit 1-C.

C. Water Quality and Quantity: This is further addressed with supplemental reports from one of the two project's hydrologists, Mr. Cecil Thomas (resume attached) - Exhibit 1-D - and his report and finding of specific water quality analyses is attached - Exhibit 1-E.

It should be noted that this project collects water at the immediate point from which the springs issue out of a limestone formation and the waters are then conveyed to a lower level at a mountain meadow. The protection of the penstock will reduce natural erosion and streambed scouring which now takes place.

D. Expected Environmental Impacts: The exhibits listed above speak to the various environmental impacts which are minimal. The original application also covered these impacts in detail. Beyond the exhibits in this report and the original application, it should be reiterated here that the engineer and the federal agencies will both require reseeding of the land disturbed by the buried penstock and as per U.S. Forest Service requirements, already elaborated in the original application, any new powerlines will be raptor proof in design.

The major environmental concern to all parties has been the necessary by-pass flow to maintain the stream biota and the vegetative riparian habitat. As per the above listed exhibits, that flow has been determined to the satisfaction of all parties and will be a requirement of the state Water Resources Department permit, the special land-use permit from the U.S. Forest Service as well as the F.E.R.C. license.

E. Reasons for not undertaking measures proposed by agencies: As per exhibits listed above, it should be evident that all measures have been worked out with the principal agencies, namely, Idaho State Fish and Game and U.S. Forest Service. By reference to Exhibit 1-F of this report, it will be noted that requested information has been submitted to the Idaho Health and Welfare

Water Quality Division and to the best of our knowledge, there is no other agency deficiencies.

F. In item C of the Environmental Request, two items were stated as narrative requests. One deals with the riparian habitat (game mammals, game birds and game fish). This question will need be elaborated as a part of the vegetative mapping and we request the same 60 day extension to properly complete this work. Again, it cannot be scientifically addressed when the area is under snow.

The second narrative question deals with the stream flow by-pass. Again, this analysis, and an agreed flow, has been completed by an extensive field research program. A by-pass has been established and all involved agencies have agreed as per exhibits listed above.

2. Additional information of a general project nature pursuant to Sec. 4.31 (f) of Commission Regulations -

A. Calculations and assumptions used to derive flow duration curve:

See Exhibit 2-A, report by hydrologist Cecil Thomas
Exhibit 1-D, resume for Mr. Thomas.

B. Computation and method for average annual generation

See Exhibit 2-B from Engineer, Ted Sorenson.
Exhibit 2-E, Sorenson resume.

C. Basis of 56 mill/kWh sales price:

See Exhibit 2-C, the current prevailing Idaho PUC order governing sales to Utah Power and Light Co.

D. Generator Voltage:

See Exhibit 2-B.

E. Transmission and interconnect details:

See Exhibit 2-D, Utah Power and Light correspondence

F. Transformer data:

See Exhibit 2-B.

G. Project Profile:

The original application in the Exhibit G placed in the plastic pocket in the back of the application, contained two project plans and profiles which included the project facilities, the contours of the project area and a penstock profile listing elevations and survey stations with the survey stations presented on a scale of 1" = 200'.

One of the project engineer's advised what was needed was to relabel the maps from Exhibit G to Exhibit F. This has been done and relabeled map may be found in the manila envelope marked Exhibit 2-F.

H. Maps of the Project Area and Facilities:

See Exhibit 2-G.

I. Additional Information Submitted to the Idaho Department of Health and Welfare to further initiate processing of the 401 Water Quality Certificate:

See Exhibit 2-H.

Vernon Ravenscroft
Project Consultant

VFR:hc

Enclosure

cc: Robert Fackrell

DON CHAPMAN CONSULTANTS, INC
P.O. BOX AL
McCALL, ID 83638

December 28, 1984

Mr. Robert Fackrell
P.O. Box 1
Preston, ID 83623

Dear Mr. Fackrell:

This letter will serve as our final report on fish populations and habitat modeling on Mink Creek.

FISH POPULATIONS IN MINK CREEK

Fish populations in Mink Creek areas to be affected by the proposed hydropower project were assessed on 6 October 1984. A Smith-Root Type VII backpack shocker that produces 300 volts of direct current was used for sampling. Blocking nets with 0.6 cm mesh were set at the top and bottom of each electrofishing section, and three passes were made through each section. Populations and confidence limits were estimated with the Zippin method as outlined by Platts et al (1983). Separate estimates were made for young of the year and for older fish.

The stream sections sampled were 48-90 m in length, at the following points:

Section A - The lowest section, at an elevation of about 5450 ft MSL. It consisted of the lowermost instream flow study section plus 26 m upstream on a side channel upstream from the bridge on the Benson property. The flow in the section consisted of about half of the stream, the complement running down a parallel section (see section B).

Section B - The remaining side channel, parallel to site A at the site of an abandoned footbridge.

Section C - On the Benson property above the head of Croney Hollow Spring, elevation about 5480 ft MSL.

Section D - Immediately below the U. S. Forest Service fenceline.

Section E - Upstream from U.S.F.S. fenceline, and consisted of the upper instream flow measurement site plus 18 m immediately below it.

Section F - About 170 m upstream from the end of the unimproved access road, elevation about 5700 ft MSL.

NOTE: One site at Croney Hollow Spring and two above Section F at elevations to 6000 ft MSL were sampled but without blocking nets.

Water temperature at noon on 6 October 1984 was 6.5C. On a previous visit to the area on 5 August 1984 we found the water was 7.9C at the U.S.F.S. boundary and 8.5C in Croney Hollow Spring. Stream discharge on 10 October, 4 days after we electrofished, was 65 cfs in Mink Creek above inflow from the spring.

We found three species of fish in our sampling: brook trout (Salvelinus fontinalis), cutthroat trout (Salmo clarki), and mottled sculpin (Cottus bairdi). We captured 188 brook trout in the six sections. We took only 2 cutthroat trout, both in section C, and these were 143 and 229 mm in length. Their spotting pattern resembled that of the Bonneville cutthroat trout (S.c. utah).

Length of young-of-the-year brook trout ranged from 62 to 86 mm and averaged 71 mm. The older brook trout ranged in size from 107 to 223 mm. Of the 132 brook trout taken that were age I or older, 4 (3%) exceeded 200 mm in length. Males were ripe and had spawning colorations. We captured no ripe females, which indicates that spawning had not commenced. The habitat most used for spawning by brook trout is in Croney Hollow Spring, where the density of adult trout is greater than elsewhere in Mink Creek.

We calculated population numbers and densities per square meter for each study section (Table 1). With one exception, population estimates were identical to the total numbers taken in each section, with confidence intervals of only plus or minus 2 fish or less. This indicates that 3 electrofishing passes collected virtually every fish in the sections.

The largest number of both young-of-the-year and older trout was collected in section C, probably because of a 1-m deep hole there, the deepest in any of the study sections. The density of adult trout averaged 0.06 per square meter for all sections, and that of young trout averaged 0.02 per square meter. These densities are very low, in comparison with those in other streams in the region (Table 2). Densities of salmonids throughout the Caribou National Forest range from 0.07 to 3.10 trout per square meter. Elsewhere in Idaho, we have found densities of brook trout that averaged 0.21 fish per square meter in a small, sedimented tributary of Silver Creek in Blaine County (Griffith et al 1982) and 0.28 fish per square meter in tributaries of the Clearwater

River (Griffith 1981).

The only other fish population data available for Mink Creek were obtained by the Idaho Department of Fish and Game in August 1973, about 1 mile below the proposed project area. Sixteen hatchery rainbow trout, 8 cutthroat trout, and 5 brook trout were taken by electrofishing in a 200 yard section. We found no hatchery trout in 1984, and the Department does not now stock in the upper portion of the creek. In the non-quantitative sampling that we conducted in the upper portion of Mink Creek near the proposed project intake, we found individual brook trout in occasional pockets along the bank where water velocities moderated slightly. In 134 m of stream shocked at elevations of 5800-6000 ft MSL, we collected 3 brook trout.

HABITAT MODELING

The study sites used in instream flow modeling ("upper" and "lower") were selected by Dr. Jack Griffith and Mr. Carl Brown, field-crew chief for habitat modeling. Copies of photos of the two sites are enclosed as Figures 1-5.

The lower site lay in a split stream section that carried about 54% of total stream flow, while the upper site contained the entire stream discharge on all three dates of sampling.

Appendix 1 provides a description of the habitat modeling system. We used seven cross-stream transects on the upper site and eight on the lower site. Both sites calibrated (velocity adjustment factors of 0.85-1.05) readily within the range of flows recommended for modeling (0.7 x lowest flow to 1.3 x highest flow for a 2-flow IFG-4 and 0.4 x lowest to 2.5 x highest flow for a 3-flow IFG-4). The lower section covered 94 lineal feet of stream; the upper covered 141 lineal feet.

We determined, from contact with the Idaho Fish and Game Department and from electrofishing, that the eastern brook trout was the species of concern. Once channel geometry and hydraulics were analyzed on the two study sites, we applied suitability-of-use curves for eastern brook trout adults (Figure 6) to the cell conditions predicted at discharges from 35 to 200 cfs on the upper site and 15-65 cfs on the lower site. We show the resulting weighted usable areas for various discharges at both study sites in Figures 7 and 8.

Mink Creek is a relatively stable, but turbulent stream of high gradient, with little habitat at normal discharges. At the normal low flow period (10 October 1984), the stream still contained 65 cfs in the upper site. Recommended extrapolation limits were 26 and 18 cfs in the respective

upper and lower sites.

Because significantly lower extrapolation limits could not be developed without controlled stream diversion, we modeled discharges lower than the recommended lower limits. we provide the habitat WUA estimates at these lower flows. Velocity adjustment factors were poor at the lowest modeled flows.

It is clear that weighted usable area (square feet of usable area per 1,000 lineal feet of stream) increases as discharge decreases. This is not surprising when one examines photos of the stream (Figures 1 to 5). The optimum discharge lies at 25 cfs on the upper site and 5 cfs on the lower site (note that this is a split site), or about 10 cfs for the entire discharge at the lower site. The lowest site had 5.5 square feet of habitat per lineal foot of stream at optimum discharge, while the upper site had only about 2.4 square feet of habitat per lineal foot of stream, even though the stream was split at the lower site. If one accounts for the split at the lower site by doubling WUA per lineal foot of total stream length, the lower site provides over four times as much habitat at a combined 10 cfs as the upper site does at 25 cfs.

The Mink Creek IFG-4 model loses reliability at very low discharges, we read the data as showing that a Q of under 10 cfs provides much more WUA for brook trout than higher discharges. This is true largely because of the low velocities preferred by brook trout (Figure 6). The lower site is more representative of the best habitat in Mink Creek in the proposed project area and should be allowed to control discharge in the proposed diversion section.

On the basis of the data summarized above, we recommend that a flow of 10 cfs be considered as optimum for the lower section of Mink Creek. Given the relatively greater amount of habitat in the lower section, we suggest that flows at the intake structure could be reduced by hydro diversion to below 10 cfs by an amount governed by estimated groundwater inflow between the intake structure and the lower site.

Very truly yours,

D. W. Chapman, PhD.

J. S. Griffith, PhD.

Table 1. Population estimates, 95% confidence intervals, and densities of brook trout in Mink Creek study sections, 6 October 1984.

Section	Surface area, m^2	Trout taken in pass 1	2	3	Total collected	Population estimate	Trout/m^2
			Adult trout				
A	285	6	3	1	10	10± 0	0.04
B	336	16	6	2	24	24± 0	0.07
C	540	38	14	4	56	57± 2	0.11
D	216	13	3	1	17	17± 0	0.08
E	460	16	4	0	20	20± 0	0.04
F	455	4	1	0	5	5± 0	0.01
					132		
			Young-of-year				
A	285	5	1	0	6	6± 0	0.02
B	336	7	2	0	9	9± 0	0.03
C	540	17	3	0	20	20± 0	0.04
D	216	10	1	0	11	11± 0	0.05
E	460	5	1	0	6	6± 0	0.01
F	455	4	0	0	4	4± 0	0.01
					56		

Table 2. From Proposed Land & Resources Management Plan for the Caribou National Forest.

Table G-14 RESULTS OF ELECTROFISHING IN VARIOUS STREAMS ON THE CARIBOU NATIONAL FOREST

STREAM	YR	SECT. LENGTH (m)	FISH NUMBERS CT	Rb	EB	Br	Cott	TOTAL SALMONIDS	SALMONIDS PER m(length)	SALMONIDS PER m^2	DATA SOURCE
			Highly Productive					Critical Fisheries (6)			
Angus	76	150	2341				1	2341	15.61	3.10	4
Diamond	76	150	1496		9			1505	10.03	1.18	4
Diamond	79	100	896					896	8.96	2.48	5
Sheep	79	100	704		7			711	7.11	1.66	5
Angus	78	150	985					985	6.57	1.30	4
Diamond	79	100	517		6			523	5.23	0.92	5
Diamond	76	150	682		84		27	765	4.11	0.24	4
Diamond	76	150	354		18			372	2.48	0.29	4
			Large Fish Populations					Important Habitat (5)			
Diamond	78	150	257		23		66	280	1.87	0.30	4
E. Fk. Mink	80	114	179		9			188	1.65		6
Diamond	76	150	195		40		9	235	1.57	0.25	4
Diamond	76	150	220				84	220	1.47		4
Angus	76	150	220		1			221	1.47	0.52	4
Eightmile	72	91		129				129	1.42		1
Diamond	76	550	748		9		371	757	1.38	0.31	4
Little Beaver	72	91		103	18			116	1.27		1
Angus	76	550	641				43	641	1.17	0.24	4
Olsen	74	61	6		56			63	1.02		3
Sheep	74	61	55				3	55	0.90		3
Bacon	79	100	85					85	0.85	0.26	5
Eightmile	72	123	74		20			94	0.76		1
Mill	79	100	75		1			76	0.76	0.52	5
Gravel	72	61			42			42	0.69		3
Crow	74	61	33				7	40	0.66		3
			Above Average Production (4)								
Georgetown	72	36	4		17			21	0.58		1
Montpelier	72	60	11	23				34	0.57		1
Snowslide	72	91		1		51		52	0.57		1
Pebble	75	91	50	1			5	51	0.56		8
Diamond	78	150	79					79	0.53	0.24	4
Montpelier	72	91	33	13		2		46	0.53		1
Toponce	75	91	5	42			15	47	0.52		8
Slug	74	61			16		8	16	0.52		3
Kendall	79	100	47		1			48	0.48	0.22	5
Crow	74	61	28				8	28	0.46		3
S. Fk. Toponce	75	91	30	9			25	39	0.43		8
Angus	78	150	65				103	65	0.43	0.15	4
Crow	74	61	24				4	24	0.39		3
Montpelier	72	81	22	12		1		35	0.38		1
Georgetown	74	61			18			18	0.30		3

Table 2. continued.

Table G-14 RESULTS OF ELECTROFISHING IN VARIOUS STREAMS ON THE CARIBOU NATIONAL FOREST--Continued

STREAM	YR	SECT. LENGTH (m)	FISH NUMBERS CT	Rb	EB	Br	Cott	TOTAL SALMONIDS	SALMONIDS PER m(length)	SALMONIDS PER m^2	DATA SOURCE
								Average Production (3)			
S. Fk. Mink	75	109	32				5	32	0.29		8
Georgetown	74	61		13	4			17	0.28		3
Timothy	79	100	26					26	0.26	0.07	5
Montpelier	72	91	5	9		9			0.25		1
Whiskey	72	91	2	12	8			22	0.24		1
Crow	74	61	13			1	3	14	0.23		3
Preuss	91	230	56					56	0.23	0.10	7
E. Fk. Mink	75	100	13		8		4	21	0.21		8
Diamond	79	100	20					20	0.20	0.11	5
Tincup	78	94	16			1	2	17	0.18		2
Georgetown	74	61	3	3	5			11	0.18		3
Georgetown	74	61			10			10	0.17		3
Tincup	78	94	16					16	0.17		2
Georgetown	72	136		12	10			22	0.16		1
Pearl	72	91	1		14			15	0.16		1
Montpelier	72	91	5	5		5		15	0.16		1
Mink	75	55		8			2	8	0.15		8
Skinner	72	91	14					14	0.15		1
Gibson Jack	75	73	8				3	8	0.11		8
Coop	72	91	8	2				10	0.11		1
Giraffe	81	100	14					14	0.14		7
				Poor Production				Minor Fish Populations (2)			
Stauffer	72	91	8					8	0.09		1
Georgetown	72	91		2	4			6	0.07		1
Stewart	74	150	2					2	0.01		2

Sources of data illustrated in Table 17.

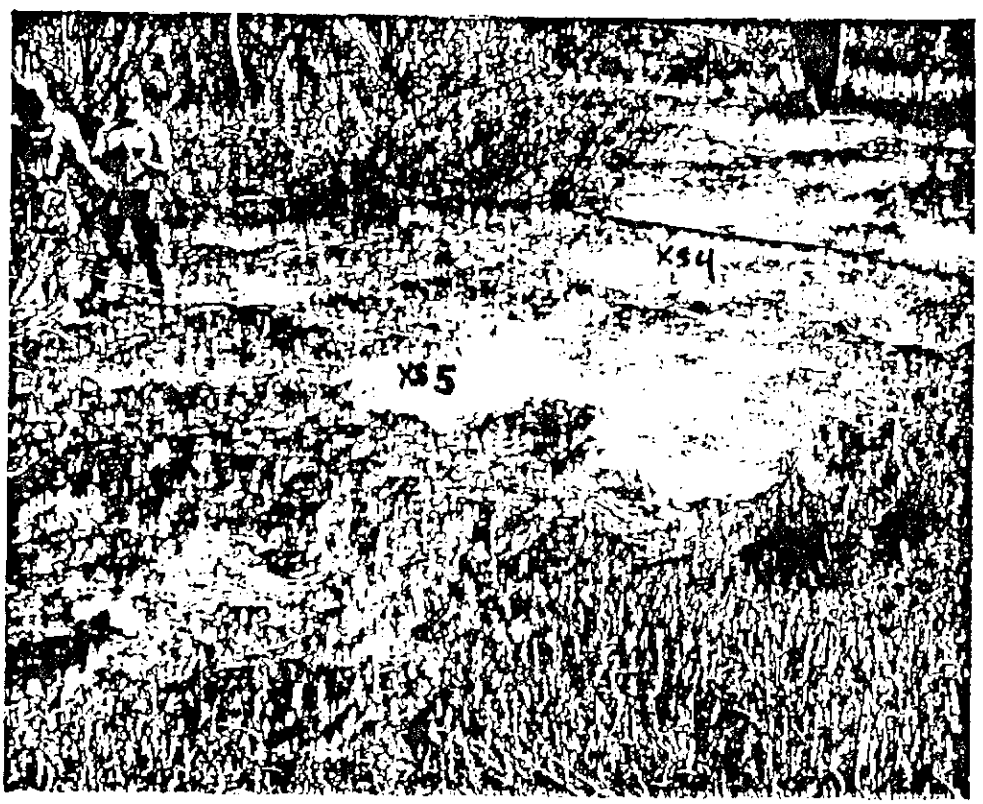
1. Heimer (1974)
2. Heimer (1979)
3. Platts (1975)
4. Platts et.al. (1980)
5. Thurow (1980)
6. Unpublished data collected by J. Griffith, Idaho State University, Pocatello, Idaho, 1980.
7. Unpublished data collected by J. Heimer, Idaho Department of Fish and Game, 1981.
8. Unpublished data collected by J. Heimer, Idaho Department of Fish and Game, 1975.

Figure 1



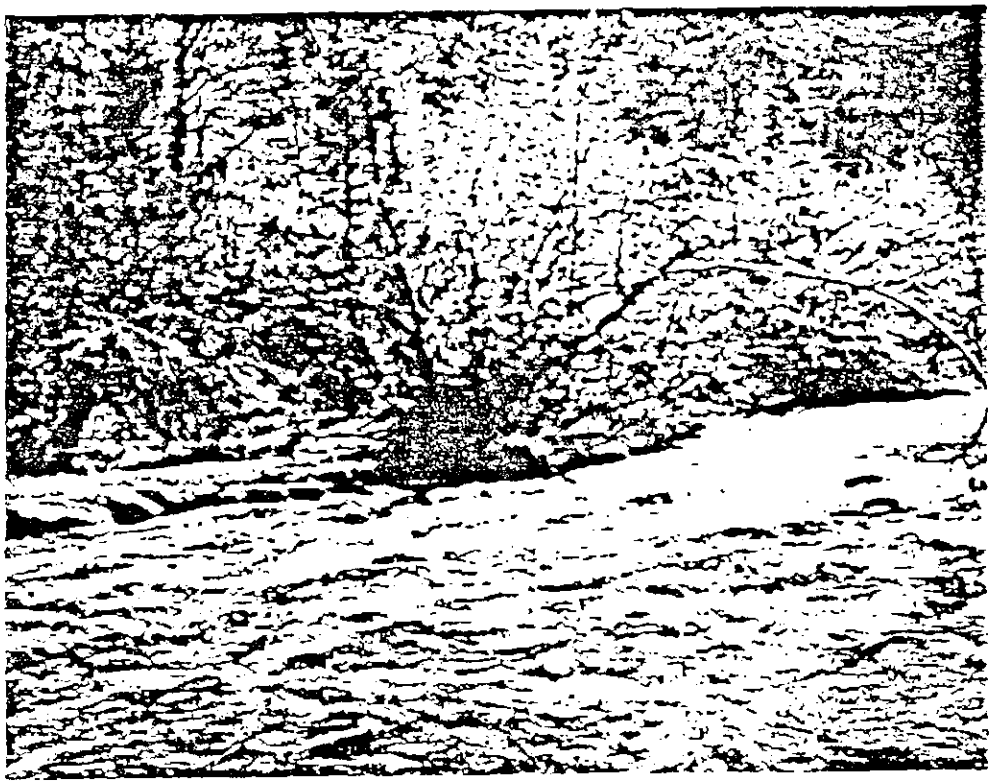
6/29/84 HIGH FLOW

Figure 2



MINK CREEK UPPER REACH

8/3/84 MID FLOW

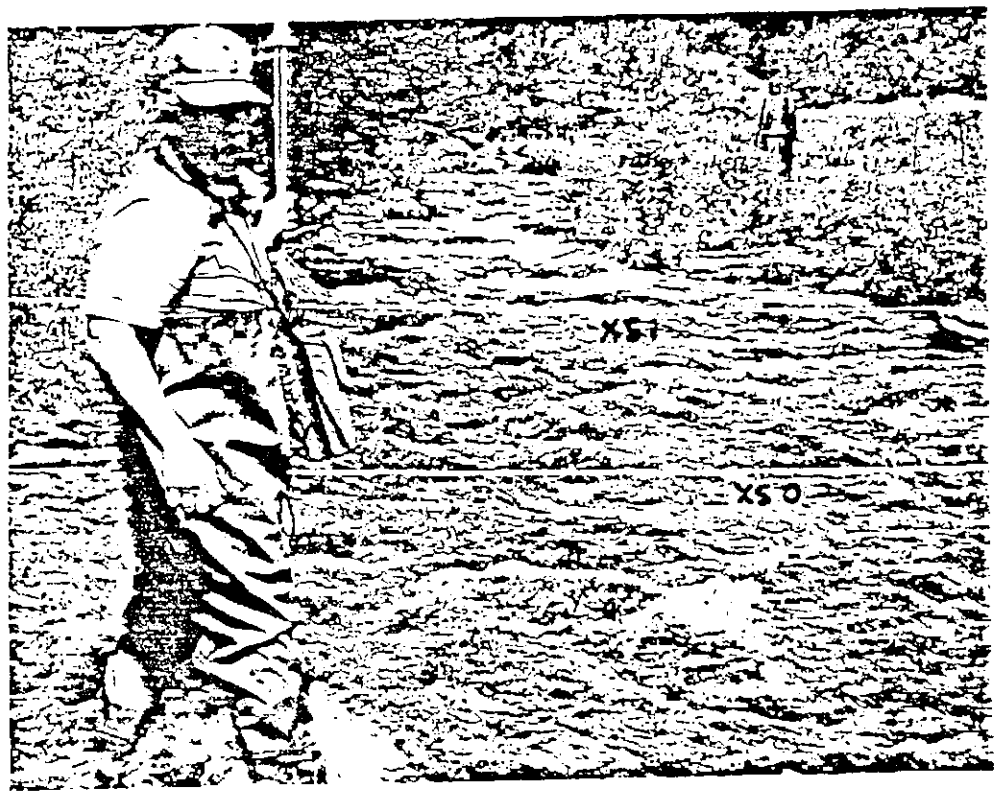


MINK CREEK 10/10/94 LOW FLOW

XS 1 & XS 2 LOOKING DOWNSTREAM

~~NOTE~~ NOTE ARMORED-OVER PIPE AT POINT OF PENETRATION

Figure 3

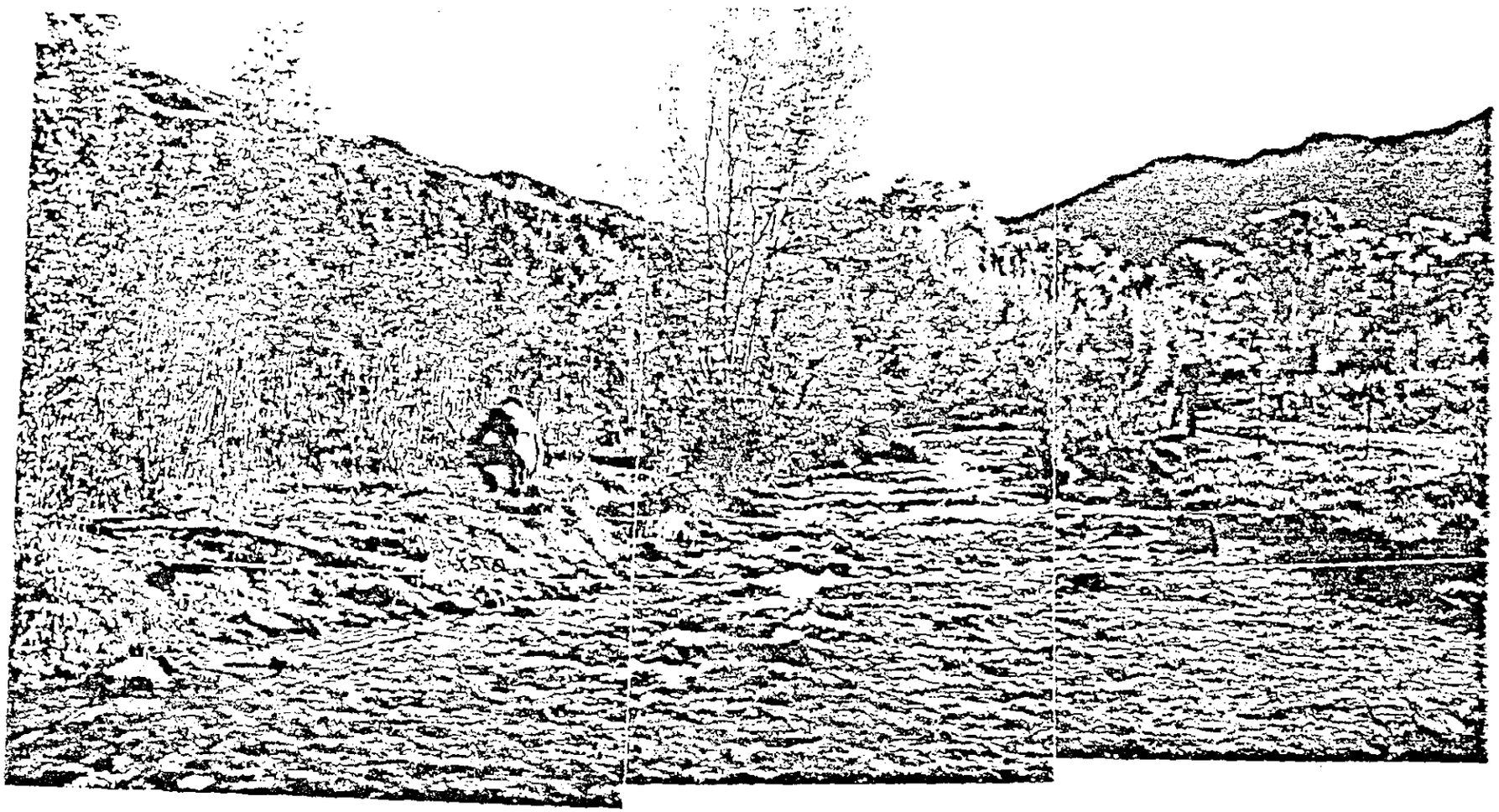


MINE CREEK LOWEST REACH @ MIDFLOW 8.4 CA

LOOKING UPSTREAM @ ENTIRE REACH FROM XS 0.00

NOTE HOW FLOW IS DISPERSED ACROSS ENTIRE STREAM WIDTH

Figure 4



MINK CREEK LOWEST REACH @ LOW FLOW 10.9.84

LOOKING UP STREAM @ ENTIRE REACH FROM XS 0.00

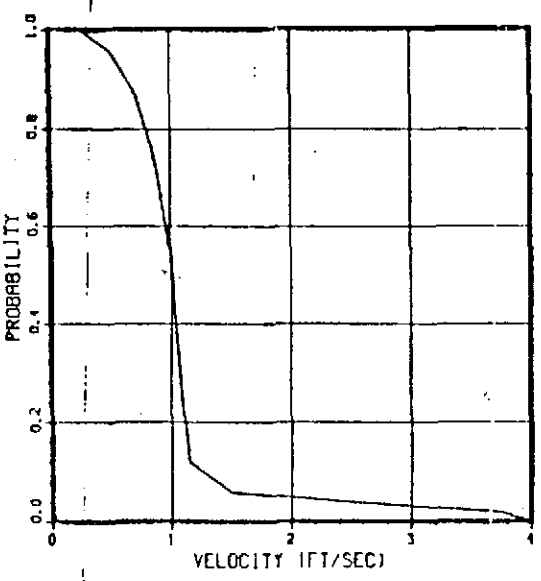
NOTE HOW FLOW IS MOSTLY CONFINED TO MIDSTREAM
BOULDERS

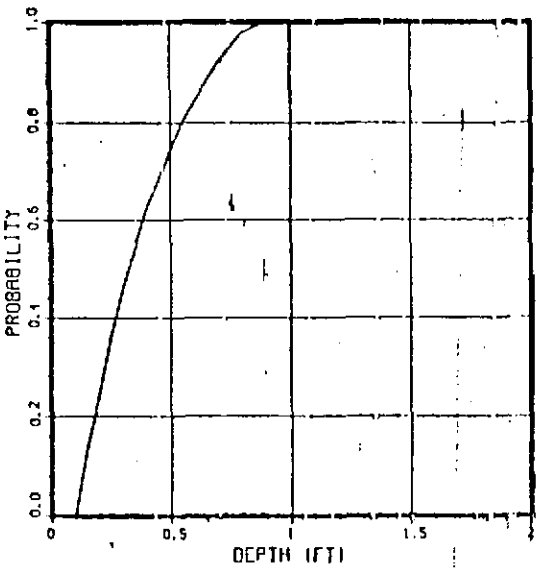
FIGURE 7

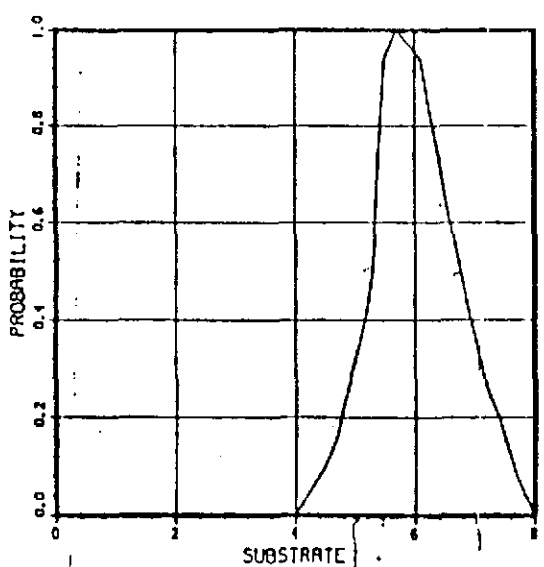
Figure 6

BROOK TROUT

11402 ADULT 78/01/24.







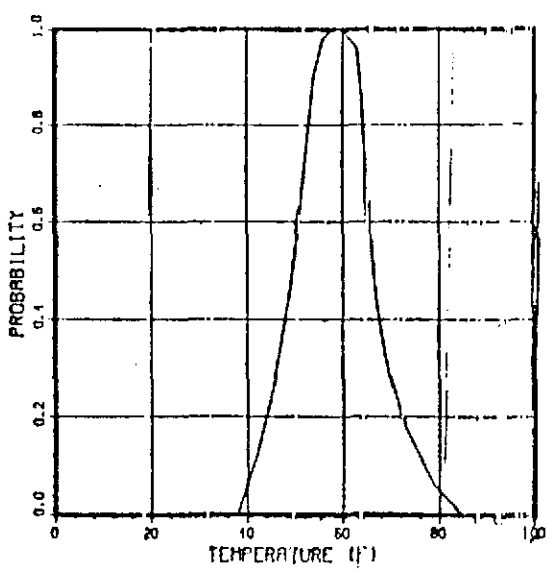


Figure 7

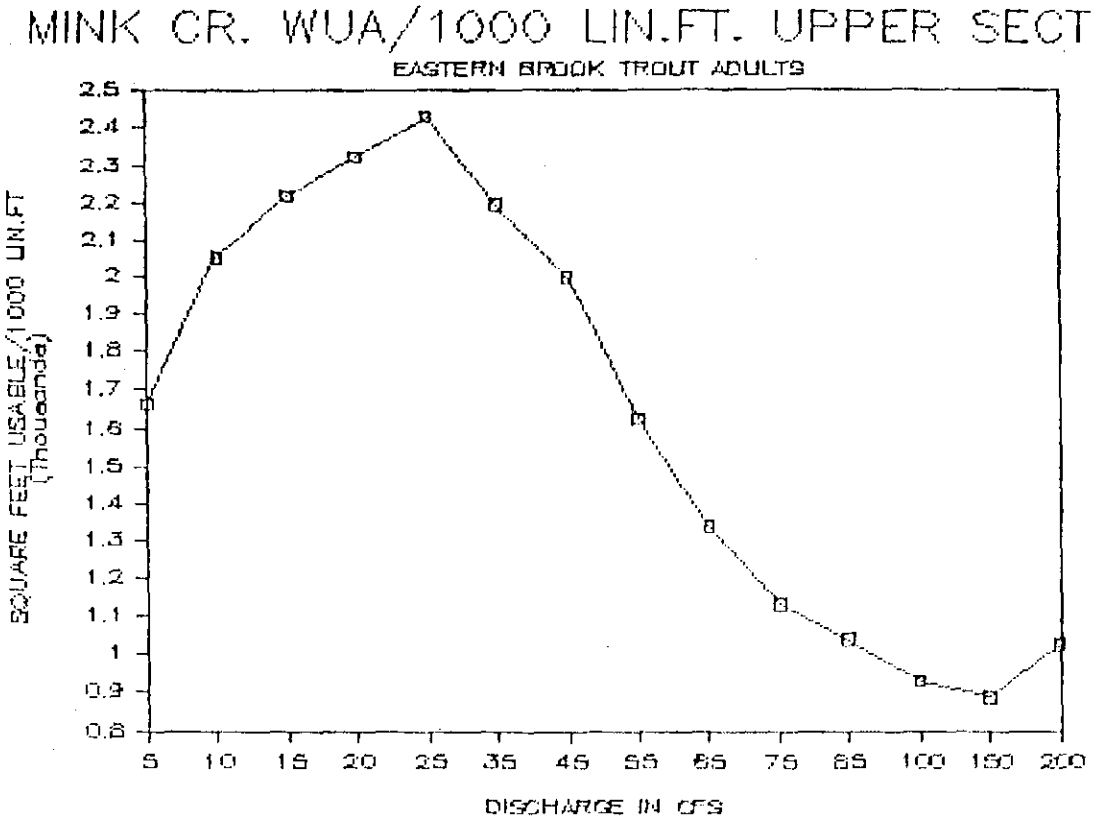
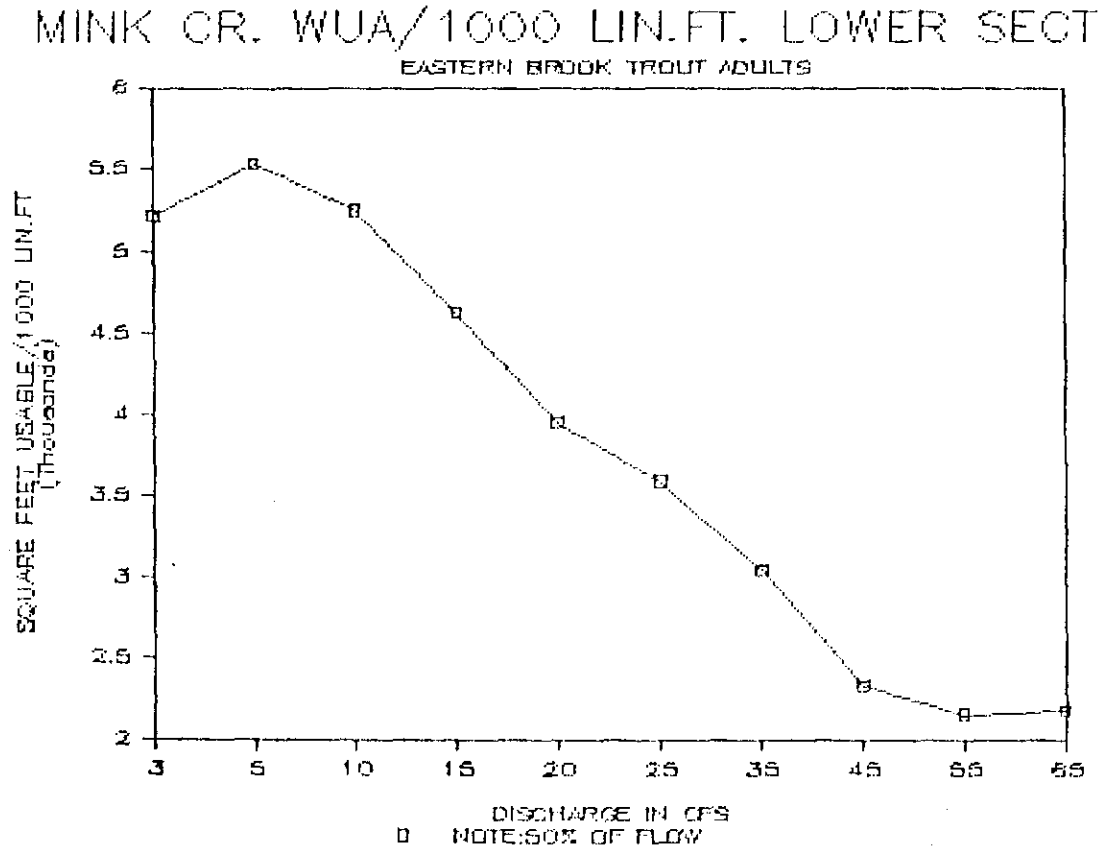


Figure 8



Literature Cited

Griffith, J.S. 1981. Estimation of the age-frequency distribution of stream-dwelling trout by underwater observation. Progressive Fish Culturist 43(1): 51-53.

Griffith, J.S., F. Rose, W. Minshall, and Y. Faler. 1982. A baseline biological study of Chaney and Mud Creeks, Blaine County Idaho. Report to the Nature Conservancy. 51 pp.

Bovee, K.D. 1978. Probability-of-use criteria for the family Salmonidae USFWS Instream Flow Info. Pop. No. 4, Ft. Collins, CO 80 p.

Platts, W.S., W.F. Megahan and G.W. Minshall. 1983. Methods for evaluating stream, riparian, and biotic conditions. Gen. Tech. Rept. INT-138, USDA, Intermountain For. & Range Exp. Sta., Odgen. 70 p.

APPENDIX 1

INSTREAM FLOW METHOD

Hydraulic simulation concepts

Hydraulic simulation for instream flow studies is the description of velocities, depths and substrates as a function of discharge. The changes described in mathematical terms to facilitate the quantification of change of a dependent variable such as velocity with an incremental change in discharge (Bovee and Milhous 1978).

Two systems can be used to simulate stream hydraulics needed to predict distribution of depth, velocity and substrate at various discharges. The first is called the method of water surface profile (WSP) or IFG-2 (for Instream Flow Group-2). It relies on Manning's equation (Bovee and Milhous 1978) to calculate velocities at various discharges and depths. Required data elements for simulation include channel measurements on several transects to assess depths, widths, slopes, velocities and discharge (at one flow). Channel segments, or cells, can then be defined along each transect in which an average velocity can be calculated. Substrate characteristics can also be determined for each cell. The WSP, or IFG-2 model, uses Manning's equation, together with segment data, to provide a multi-dimensional matrix of the calculated stream surface areas with different combinations of hydraulic parameters (depth, velocity and substrate). The total surface areas having

specific hydraulic conditions need not be contiguous (Wegner and Milhous 1980). The IFG-2 model requires careful calibration so that the model accurately predicts water surface elevations and velocities for each transect as measured in the field. Once the model is calibrated it can serve to predict matrices of hydraulic conditions at flows other than the calibration (measured) flow. Generally, it is assumed that the IFG-2 (WSP) model can serve to predict conditions (habitat) at discharges ranging from 0.4 to 2.5 times the calibration discharge.

The second simulation system (IFG-4) uses two or more sets of velocity measurements, at two or more stream discharges, to predict velocities in channel segments at various discharges. The assumption is made that the average velocity in a channel segment is related to discharge by a formula of the general form $v_i=a_iQ^{bi}$, where v_i is mean velocity of the i-th channel segment when the total discharge is Q. The empirical constants a_i and b_i are estimated from field data by the IFG-4 hydraulic simulation program, using linear regressions. When only two sets of discharge measurements are used, the recommended range of extrapolation is 0.77 times the minimum dishcarge measured, to 1.3 times the maximum discharge measured (Bovee and Milhous 1978). When three sets of data are available, good extrapolation can be made between 0.4 and 2.5 times the minimum and maximum measured discharges, respectively. The WSP model is best extrapolated only within the range 0.4 to 2.5 times the measured discharge. This is not to say that the models cannot be extrapolated outside the recommended range, but reliability

declines outside the suggested range. The IFG-4 program also provides a multi-dimensional matrix of hydraulic conditions at various flows.

Study site selection

In order for a simulation model to be useful, its output must be suitable for extrapolation in space and time. The study site to be modeled is a sample of conditions found in a larger reach, and results from specific study sites can be extended to the larger area. The study site is thus to be representative of a stream reach.

It is important that the stream reach to be represented by a study site be a reasonably homogeneous stratum. Thus, an early task in instream flow methodology is to divide the stream into strata usually defined by stream geomorphology. Maps, field inspection and published information can be used to place stratum boundaries.

Once the stratification process is completed, specific study sites are chosen. We usually chose these locations within strata by assigning a mile number to each river mile, then used a random number table to select the specific river mile to be studied. We placed the most downstream transect (of the several to be used in each study site) at the first hydraulic control upstream from the selected river mile.

When access was exceptionally difficult, we occasionally chose study sites on the basis of access points, randomly selecting one of these where more than one existed within a

stratum. Once this transect location was set, the additional transects were selected to represent the hydraulic character and habitat of the reach, usually two pool/riffle complexes or a distance of 5-7x width.

Field procedures

Once the transects were selected for the study site, a permanent bench mark was established to serve as a reference point for elevations and for relocating transects as necessary at subsequent dates. The bench mark was usually a spike driven in the base of a large tree. The ends of transects were then marked with semi-permanent headstakes.

All headstakes were tied together with surveyed distances and angles so that the reach could later be plotted. Necessary data collected for each transect included:

1. Stationing (distances between transects on either bank)
2. Headstake elevations
3. Water surface elevations
4. Bed elevations from headstake to headstake across the stream
5. Water velocities at vertical profile points across the stream
6. Substrate composition estimates
7. Discharge calculation

Methodology for field work is fully described in Bovee and Milhous (1978). The steps used were:

1. Locate all transects, drive headstakes, number transects, string out tape along transect.
2. Measure distances between transects at the water's edge along both shorelines.
3. Record magnetic bearing or measure diagonals to various headstakes; prepare a narrative description and sketch study site.
4. Establish a permanent bench mark and determine all headstake elevations.
5. Install a temporary staff gage.
6. Survey the ground and streambed profile at each transect.
7. Survey left and right bank water surface elevations at each transect.
8. Measure velocity distribution and assess substrate in each segment along the transect.
9. Recheck water height on staff gage to be sure water surface elevation had not changed significantly while data was collected.
10. Review field notes for completeness
11. Inventory equipment

For subsequent measurements at other discharges, as needed:

1. Relocate transects
2. Resurvey where necessary and replace any lost headstakes
3. Install a temporary staff gage
4. Survey water surface elevations on each transect
5. Measure velocity distribution at each transect
6. Recheck staff gage
7. Review field notes for completeness
8. Inventory equipment

Velocity measurements were taken on foot as practical; from a boat where necessary. Stationing measurements were to the nearest foot, headstakes and water surface elevations to the nearest 0.01 foot. Ded elevations were to the nearest 0.1 foot, velocities at 10 to 25 vertical stations along each transect.

A Marsh-McBirney electronic meter (model 201) was used for velocity determination, with a backup Price AA meter used rarely as necessary. Standard surveying equipment and techniques were used for distances (stadia or tape) and elevations (Sokkisha C2-C or D20-0 automatic level).

One to two crew days were spent on each flow at each representative reach; a crew normally consisted of four men, including crew chief.

Substrate characteristics were estimated at each vertical across the stream transect on the basis of the dominant particle size as follows:

Particle type/size	Code
Organic	0
Clay	1
Silt	2
Sand (under 0.25")	3
Pea gravel (0.25"-1.0")	4
Medium gravel (1.0"-2.0")	5
Coarse gravel (2.0"-3.0")	6
Cobble (3.0"-10.0")	7
Boulder (over 10.0")	8
Bedrock	9

These codes differ from IFG methodology (Bovee and Milhous 1978) by better-defining gravel sizes.

Data formatting

Data for input to the IFG-2 or IFG-4 models were extracted from field forms. When distances along the stream side between transects was not measured, and distance between headstakes on either bank differed substantially, we prepared plots on graph paper of the representative reach, using distances and bearings. On the plots we placed thalweg locations on each transect and measured thalweg distance for stationing of transects.

Data was entered to the computer for IFG-2 and IFG-4 either by using PROCFIL, a set of facilitating programs which interact (on line) with the host computer, or recorded onto floppy diskettes (DEC word processor) for transmission by phone line to the host computer.

The host computer was the Boeing EKS-1 system, which contains Instream Flow Group (Ft. Collins) IFG-2 and IFG-4

programs for hydraulic simulation.

We used DECMATE word processor to interact with the Boeing system throuh a Vadic 1200 Baud modem and a Rixon hard wire modem.

Habitat use

Modelling physical habitat is the first data analysis step in IFG methodology. Figure 1, from Wegner and Milhous (1980) traces the steps necessary to convert hydraulic simulation to habitat simulation. IFG-4 produces TP3 and TP4 automatically for the flows specified to run in the HABTAT program. For IFG-2, the TAPE 3 channel geometry is converted through SUBMOD to binary data (TP3) which includes substrate and transect weighting. Habitat input tells the HABTAT program which salmonid species and life stages will be analyzed.

FISHFIL is a key component of the HABTAT input, containing "probability-of-use" curves which describe, for each species and each life stage, the likelehood of fish using various depths, velocities and substrates. Our FISHFIL was modified from the IFG FISHFIL (Bovee and Cochnauer 1977 and Bovee 1978) by extensive literature examination, as noted in the methods section of this report.

Don Chapman Consultants, Inc.

FISHERY ASSESSMENT
ENVIRONMENTAL IMPACTS
AQUATIC ECOLOGY
FISHERY DEVELOPMENT

P.O. BOX AL
McCALL, IDAHO 83638
USA
TEL: 208-634-2266

26 February 1985

Habitat improvement and monitoring program to enhance trout populations in portions of Mink Creek (Franklin County, Idaho) affected by proposed hydro development

The following habitat modification program is designed to increase trout populations in portions of Mink Creek that would be affected by the project proposed by Robert Fackrell of Preston, Idaho. In the existing habitat, water velocities are generally too high and water depth is too shallow to support substantial populations of salmonids. The intent of this program is to increase numbers and sizes of brook trout, the dominant species now present, but the changes should also serve the same purpose for other species such as cutthroat trout.

The partial dewatering of the stream following hydro development, especially the decreasing of peak flows by 100 cfs, allows habitat modifications that will not be washed out by spring flows.

Modifications will be implemented at time of project construction on approximately 2000 meters of private land from 5385 MSL to the Forest boundary, and on approximately 1000 meters of stream on Forest land upstream to 5800 MSL. The intent is to substantially increase the amount of low-velocity ($<$ 30 cm/sec) habitat with a depth of 0.6 m or greater.

A series of rock weirs will be constructed using large angular pieces of shot rock available from local sources during projecy construction. Rock will be 0.8-1.0 m in diameter and will be put in place during low water. The ends of the weirs will extend above the high water to prevent water from flushing around the ends of the weir. The crest will be level, with only the natural irregularities of each rock providing passages for fish to swim through (see attached sketches). Each weir will create a pool of 40-50 m^2.

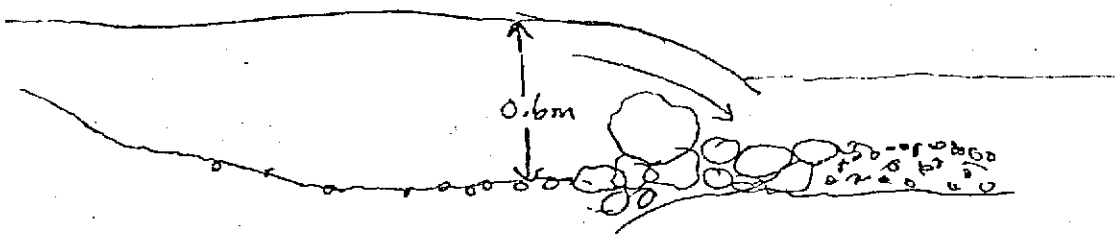
A total of 30 weirs will be located in key spots as identified by site inspection. Twenty will be on private land and the remaining ten on Forest land.

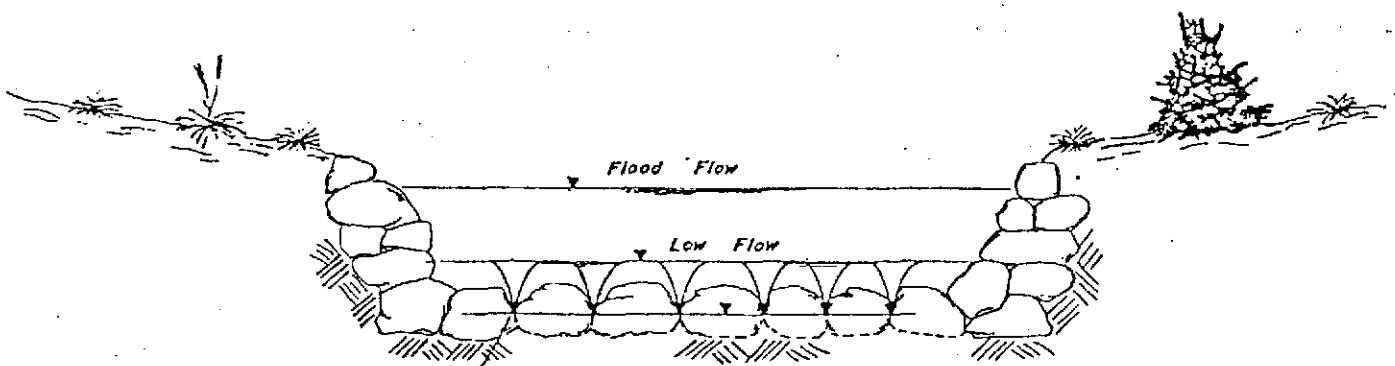
Monitoring will be conducted by DCC Inc. on an annual basis to assure the weirs are functioning properly. At the conclusion of five years, changes in habitat associated with the weirs will be documented, and fish populations will be assessed to enable comparison with pre-project levels.

J. S. Griffith, Ph. D.
Fishery Biologist

Rock weirs - Mink Creek

side view





CROSS SECTION OF STREAM CHANNEL
(looking upstream)

From: Stream Enhancement Guide by Ministry of Environment, British Columbia, Canada. 1980. 82 pp.

Don Chapman Consultants, Inc.

FISHERY ASSESSMENT
ENVIRONMENTAL IMPACTS
AQUATIC ECOLOGY
FISHERY DEVELOPMENT

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21 February 1984

TO: Tim Burton
U.S. Forest Service
Pocatello

John Heimer
Idaho Fish & Game Department
Pocatello

FROM: Jack Griffith
DCC Inc.

RE: Mink Creek Hydro Project

This memo is intended to serve as a summary of our meeting on 14 February regarding the Mink Creek hydro project in Franklin County, Idaho, as proposed by Robert Fackrell. At that meeting, the following items were agreed upon:

a) a flow of no less than 10 cfs would remain in the natural stream channel during all parts of the year from the project intake at elevation 5834 MSL to the powerhouse at 5385 MSL. Since an additional flow of 2 cfs enters in a spring at approximately 5750 MSL and 10 cfs enters from Croney Hollow Spring, actual instream flows available for fish would thus be greater than 10 cfs.

b) flushing flows would be released in a series of steps as outlined in previous Forest Service comments to FERC regarding the project.

c) the existing stream habitat will be modified by the applicant at the time of project construction on both the Benson property and the lower portion of the Forest lands, as outlined in the attached draft plan, to enhance trout populations.

d) monitoring of such habitat improvement will be conducted annually by DCC Inc. under contract to the applicant and corrective action, if required, will be undertaken by the applicant. After five years, an evaluation of change in fish habitat and trout populations will be conducted by DCC Inc. and submitted to IFG and the USFS.

If this accurately summarizes our meeting, could you please indicate that in writing to Robert Fackrell, Box 1, Preston 83623. Thank you.

Exhibit 1-B

Region 5
5205 S. 5th Avenue
Pocatello, Idaho 83201
Telephone: (208) 232-4703

March 12, 1985

Mr. Robert Fackrell
P.O. Box 1
Preston ID 83623

Subject: Mink Creek Habitat Improvements, FERC #8646-000

Dear Mr. Fackrell:

We have reviewed the revised habitat improvement and monitoring program prepared by Don Chapman Consultants, Inc., dated March 11, 1985, for your Mink Creek hydroelectric project (#8646-000) and concur with the proposal.

We are pleased to see the proposed evaluation of both the habitat structures and the trout population.

We also concur with the proposed flows which were developed with the Idaho Fish & Game methodology (21 February 1985).

Sincerely,

David Neider,
Regional Supervisor

DN:JH:sw

EQUAL OPPORTUNITY EMPLOYER

Don Chapman Consultants, Inc.

FISHERY ASSESSMENT
ENVIRONMENTAL IMPACTS
AQUATIC ECOLOGY
FISHERY DEVELOPMENT

P.O. BOX AL
McCALL, IDAHO 83638
USA
TEL: 208-634-2206

ORIGINAL 26 February 1985
Revised 11 March 1985

Habitat improvement and monitoring program to enhance trout populations in portions of Mink Creek (Franklin County, Idaho) affected by proposed hydro development (FERC # 8646-000)

The following habitat modification program is designed to increase trout populations in portions of Mink Creek that would be affected by the project proposed by Robert Fackrell of Preston, Idaho. In the existing habitat, water velocities are generally too high and water depths are too shallow to support substantial populations of salmonids. The intent of this program is to increase numbers and sizes of brook trout, the dominant species now present, but the changes should also serve the same purpose for the other species such as cutthroat trout.

The partial dewatering of the stream following hydro development, especially the decreasing of peak flows by 100 cfs, allows habitat modifications that will not be washed out by spring flows.

Modifications will be implemented at time of project construction on approximately 2000 meters of stream on private land from 5385 MSL to the Forest boundary, and on approximately 1000 meters of stream on Forest land upstream to 5800 MSL. The intent is to substantially increase the amount of low-velocity (< 30 cm/sec) habitat with a depth of 0.6 m or greater.

A series of rock weirs will be constructed using large angular pieces of shot rock available from local sources during project construction. Rock will be 0.8-1.0 m in diameter and will be put in place during the low water. The ends of the weirs will extend above high water to prevent water from flushing around the ends of the weir. The crest will be level with the natural irregularities of each rock providing space for fish passage (see attached sketches). Each weir will create a pool of 40-50 m^2 surface area.

The enhanced habitat will thus comprise approximately 10% of the total stream habitat impacted by project construction. The enhanced habitat will be similar to that in existing study site C (DCC Inc. report of 28 December 1984), where brook trout density of 0.11 adults/m^2 was double that of the average for the remainder of the habitat sampled. Thus it is anticipated that trout populations in the enhanced populations will double over pre-project densities.

A total of 30 weirs will be located in key spots as identified by site inspection. Twenty will be on private land and the remaining ten on Forest land.

Monitoring of changes in both habitat and trout populations will be conducted by DCC Inc. Habitat changes will be evaluated on 15 weirs, 10 on private land and 5 on Forest land. Immediately prior to installation of weirs, water velocity and water depth will be measured across 5 transects along the portion of the stream to be affected by the weir. Transect location will be marked with permanent stakes. These measurements of velocity and depth will be repeated annually during low flow for a period of five years following project construction. Photopoints will be established at the site of each of the 30 weirs and each will be photographed annually. A permanent staff gauge will be installed for project reference.

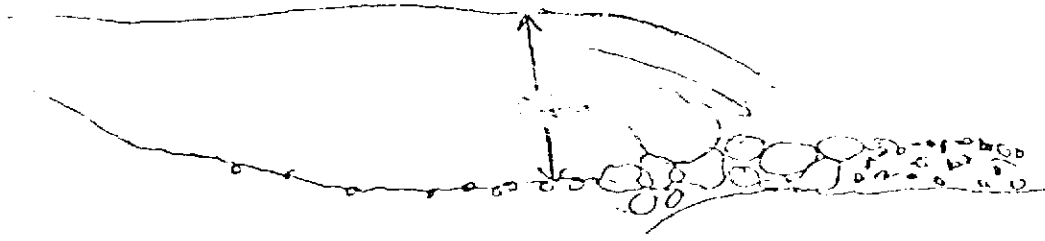
Following the habitat survey each year assessment of the need for any modifications to weir structure will be made. Need for any change will be reported to the appropriate agencies and changes will be made by the applicant.

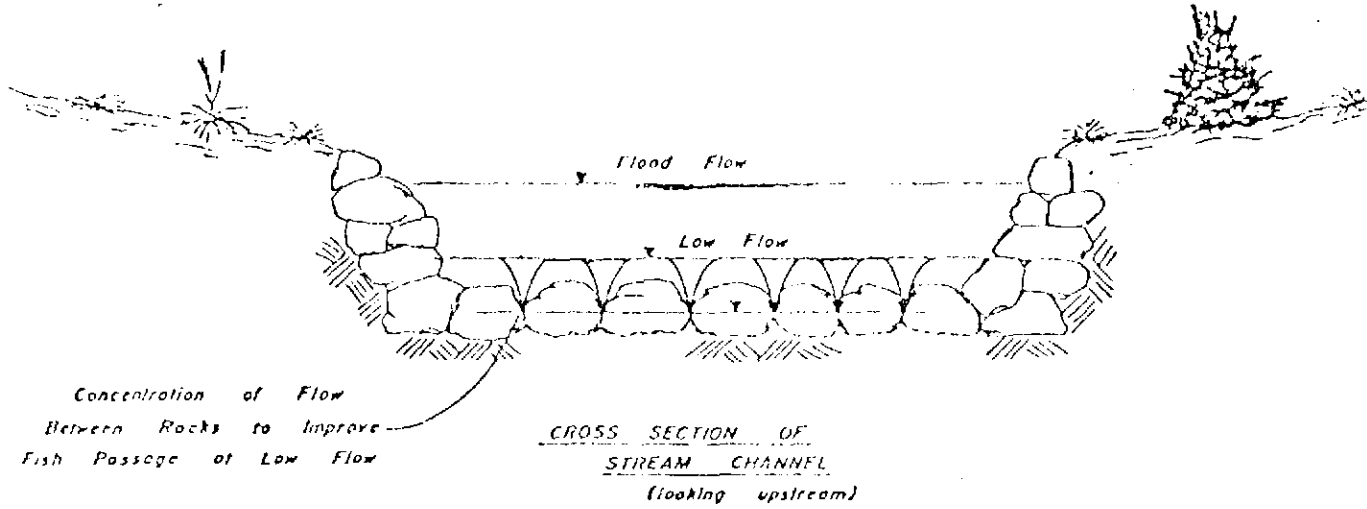
Changes in trout populations will be assessed by two-and-five-year comparisons with pre-project density data. Seven study sections were sampled by electroshocking in October 1984 (DCC Inc. report of 28 December 1984). These seven sections will be re-sampled using the same techniques in 1985 prior to project construction, and an additional eight sections will be selected for 1985 fish population sampling. Ten of these fifteen sites will be those also utilized for habitat monitoring, and weirs will be constructed at those sites. The remaining five sites will be used as controls, with no habitat enhancement occurring there. Trout populations at all 15 sites will be assessed during the second and fifth years following project construction using the sampling methods employed in 1984.

A report analyzing changes in habitat and trout populations will be prepared by DCC Inc. at the conclusion of this sampling program and will be submitted to the Idaho Department of Fish and Game and the Forest Service.

Rock weirs - Mink Creek

side view (low flow)





From: Stream Enhancement Guide by Ministry of Environment, British Columbia, Canada. 1980. 82 pp.

Don Chapman Consultants, Inc.

FISHERY ASSESSMENT
ENVIRONMENTAL IMPACTS
AQUATIC ECOLOGY
FISHERY DEVELOPMENT

P.O. BOX AL
McCALL, IDAHO 83638
USA
TEL: 208-634-2266

21 February 1984

TO: Tim Burton
U.S. Forest Service
Pocatello

John Heimert
Idaho Fish & Game Department
Pocatello

FROM: Jack Griffith
DCC Inc.

RE: Mink Creek Hydro Project

This memo is intended to serve as a summary of our meeting on 14 February regarding the Mink Creek hydro project in Franklin County, Idaho, as proposed by Robert Fackrell. At that meeting, the following items were agreed upon:

a) a flow of no less than 10 cfs would remain in the natural stream channel during all parts of the year from the project intake at elevation 5834 MSL to the powerhouse at 5385 MSL. Since an additional flow of 2 cfs enters in a spring at approximately 5750 MSL and 10 cfs enters from Croney Hollow Spring, actual instream flows available for fish would thus be greater than 10 cfs.

b) flushing flows would be released in a series of steps as outlined in previous Forest Service comments to FERC regarding the project.

c) the existing stream habitat will be modified by the applicant at the time of project construction on both the Benson property and the lower portion of the Forest lands, as outlined in the attached draft plan, to enhance trout populations.

d) monitoring of such habitat improvement will be conducted annually by DCC Inc. under contract to the applicant and corrective action, if required, will be undertaken by the applicant. After five years, an evaluation of change in fish habitat and trout populations will be conducted by DCC Inc. and submitted to IFG and the USFS.

If this accurately summarizes our meeting, could you please indicate that in writing to Robert Fackrell, Box 1, Preston 83623. Thank you.

ROBERT N. FACKRELL
GENERAL CONTRACTOR

P.O. BOX 1 • PRESTON, IDAHO 83263
(208) 852-1522

March 5, 1985

Mr. Quentin A. Edson & to whom it may concern
Directo, Office of Hydropower Licensing
F.E.R.C.
Washington, D.C. 20426

RE: OHL-PM
Project No. 8646-000-Idaho

Subject: Response to request for additional information in your letter of January 8, 1985. Application for license submitted on October 9, 1984, for the Mink Creek Hydropower Project No. 8646.

Dear Mr. Edson and all concerned:

After careful analysis of the anticipated construction processes necessary to install the proposed power project mentioned above, I am of the opinion that there will be no significant or long term impacts on the environment as it now exists.

The penstock will be buried, and will therefore not be subject to damage caused by vandalism or avalanche. The only environemental disturbance will come about as a direct result of the burying of the penstock, and this excavation scar will be healed within a few years. Of course, proper renovation and seeding techniques must be used to insure that this is the case.

The penstonck will cross the existing stream bed in only one location, and this crossing will be accomplished in a manner that will allow only minimal sediment deposits to get into the stream.

The transmission lines servicing this project will be placed on existing poles, therefore there will be no lasting evidence that anything has changed from the condition of the area as it exists presently.

In summary, this project does not present any significant challenges in construction procedure, and I anticipate no lasting impact on the existing environmental condition.

Sincerely,

Robert N. Fackrell

Exhibit 1-C

United States Department of Agriculture
Forest Service
Caribou National Forest
Federal Building, Suite 282
250 South Fourth Avenue
Pocatello, Idaho 83201

Reply to: 2540

Date: February 27, 1985

Mr. Robert Fackrell
P.O. Box 1
Preston, ID 83263

Dear Robert:

Enclosed are copies of our responses to your FERC application as you requested. These reflect the Forest's concerns and needs relative to the FERC license and our processing of the special use permit. FERC may or may not use these as conditions in the license.

The proposal appears to be compatible with the management goals prescribed in the Forest's Draft Land and Resource Management Plan for the Mink Creek area, and we feel there are many positive aspects associated with it. Additionally, your willingness to work with the Forest Service has been greatly appreciated.

We have included a copy of a memo from your fisheries consultant, Don Chapman Consultants, Inc., which accurately summarizes our meeting on February 14, 1985, and in which we concur.

Sincerely,

for PAUL R. NORDWALL
Forest Supervisor

Enclosures

United States Department of Agriculture | Forest Service | Caribou NF

Reply to:2540 Water Uses and Developement Date:February 14,1985

Subject:Mink Creek Hydropower Project,FERC
Application Number 7957-000

To:Regional Forester
ATTN: Ernie Nunn, R&L

As indicated in our 2540 letter of November 16,1984 a final determination of instreamflow needs relative to the subject project awaited completion of the fishery study conducted by Dr. Jack Griffith of Idaho State University. This study has now been completed and the Forest has finalized the instreamflow quantification. We are requesting that the subject instreamflow claim be made a condition of the FERC licence and outlined as shown on the attached form.

The final determination for the status of the Mink Creek roadless area is pending in the Forest planning documents that will be released late this summer. Mink Creek has not been included in any Idaho Wilderness legislation. There has not been any significant interest in wilderness designation for the area. However, there are indications that any development within any roadless areas will probably be appealled by at least one environmental group if the proposed activities will damage wilderness characteristics.

The Mink Creek area was not recommended for wilderness in the proposed Forest Plan and DEIS and this is not expected to change in the final documents.

The developer needs to understand that any authorizations or development activity on this proposal, pending the final resolution of the Mink Creek roadless area through the Forest Planning process or Idaho Wilderness legislation, will be subject to challenge, delay or termination.

/ to Box 1, Preston

MAINTENANCE OF INSTREAM FLOWS

Article _____.
Licensee shall maintain in the bypassed stream reach a continuous minimum flow as shown on the quantification below, and as measured immediately downstream from the point of diversion on Mink Creek, for maintaining "favorable conditions of water flows" and for the protection of fish and wildlife resources. This flow may be temporarily modified if required by operating emergencies and upon mutual agreement between licensee and the Forest Service.

National Forest : Caribou
Stream : Mink Creek
Priority Date :3-03-1891

Location of Quantification :

1. General: On Mink Creek at the diversion point located several hundred feet below the upper springs, Franklin County, Idaho.

2. Legal: SE1/4, NE1/4, Section 23, Township 13 South, Range 41 East, Boise Meridian.

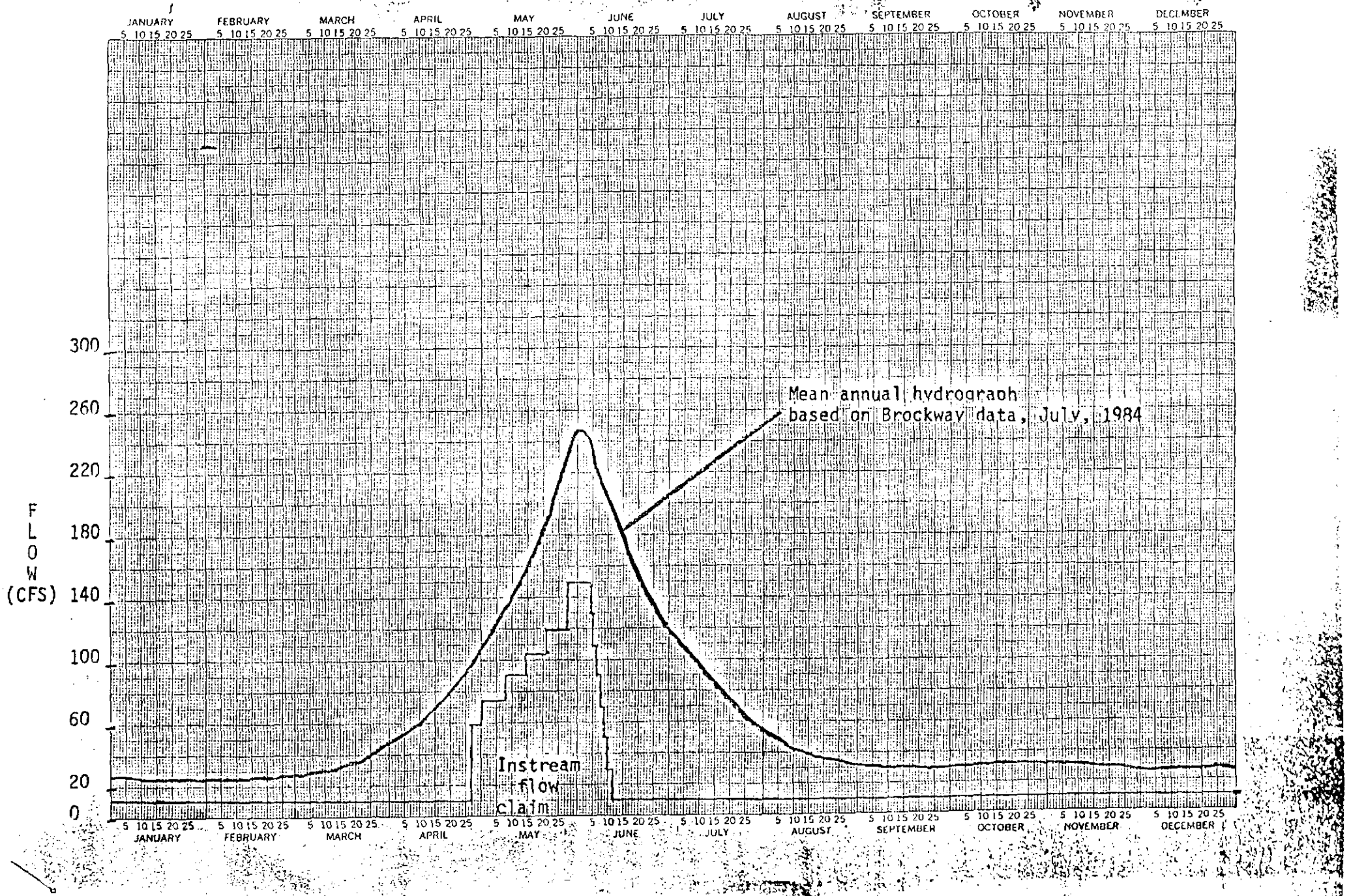
3. Instream Flow: A continuous instream flow equivalent to an average of 17004 acre-feet per year (primary instream flow volume) at the location of quantification described above, defined and distributed as follows:

   a. Day 1: The day that flow attains a rate of 90 cubic feet per second and equals or exceeds that rate for 24 hours, but in no event earlier than April 1, shall be deemed Day 1.

   b. Minimum Flow Rates: The rate for Day 1 and for each and every succeeding day or period throughout the entire year as follows:

DURATION	CFS
DAY 1 THRU 4	60.0
DAY 5 THRU 11	75.0
DAY 12 THRU 18	90.0
DAY 19 THRU 25	105.0
DAY 26 THRU 32	120.0
DAY 33 THRU 39	150.0
DAY 40	130.0
DAY 41	110.0
DAY 42	90.0
DAY 43	70.0
DAY 44	50.0
DAY 45	30.0
DAY 46 THRU DEC 31	10.0
JAN 1 THRU DAY 1	10.0

INSTREAMFLOW CLAIM HYDROGRAPH: MINK CREEK BELOW UPPER SPRINGS (at hydropower diversion)



Don Chapman Consultants, Inc.

FISHERY ASSESSMENT
ENVIRONMENTAL IMPACTS
AQUATIC ECOLOGY
FISHERY DEVELOPMENT

P.O. BOX AL
McCALL, IDAHO 83638
USA
TEL: 208-634-2266

21 February 1984

TO: Tim Burton
U.S. Forest Service
Pocatello

John Heimer
Idaho Fish & Game Department
Pocatello

FROM: Jack Griffith
DCC Inc.

RE: Mink Creek Hydro Project

This memo is intended to serve as a summary of our meeting on 14 February regarding the Mink Creek hydro project in Franklin County, Idaho, as proposed by Robert Fackrell. At that meeting, the following items were agreed upon:

a) a flow of no less than 10 cfs would remain in the natural stream channel during all parts of the year from the project intake at elevation 5834 MSL to the powerhouse at 5385 MSL. Since an additional flow of 2 cfs enters in a spring at approximately 5750 MSL and 10 cfs enters from Croney Hollow Spring, actual instream flows available for fish would thus be greater than 10 cfs.

b) flushing flows would be released in a series of steps as outlined in previous Forest Service comments to FERC regarding the project.

c) the existing stream habitat will be modified by the applicant at the time of project construction on both the Benson property and the lower portion of the Forest lands, as outlined in the attached draft plan, to enhance trout populations.

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If this accurately summarizes our meeting, could you please indicate that in writing to Robert Fackrell, Box 1, Preston 83623. Thank you.

United States Department of Agriculture

Forest Service

R-4

Reply to: 2770 Licenses

Date: NOV 23 1984

Subject: Mink Creek Hydroelectric Project, FERC No. 7957

To: Chief

Enclosed are comments on the Mink Creek Hydroelectric Project, FERC No. 7957, located on the Caribou National Forest in Idaho.

The application for license identifies the project area as located within the Mink Creek roadless area. License applications should not be considered by FERC until wilderness legislation for the State of Idaho or the Mink Creek roadless area situation is finalized.

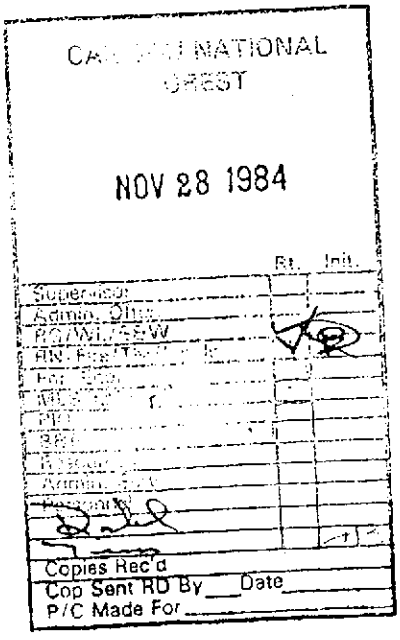
Final determination of minimum instream flow needs is pending completion of the fishery study being conducted by Idaho State University. Preliminary mimimum instream flow claims shown in Figure 1 will be, if necessary, revised to reflect the results of the fishery study.

The Caribou National Forest has done an excellent job of scoping the Mink Creek Hydroelectric Project.

J. S. TIXIER
Regional Forester

Enclosure

cc:
Caribou NF w/enclosure
OGC w/enclosure
WL w/enclosure
RW w/enclosure
WO - Schmelling w/enclosure



MINK CREEK HYDROELECTRIC PROJECT

This report documents the Caribou National Forest response to Mr. Robert N. Fackrell's competing application (to project #7957 - 000) for the Mink Creek Hydropower project submitted to the Federal Energy Regulatory Commission on October 5, 1984.

As you are aware, an environmental assessment (EA) must be prepared before the Forest Service can issue a special use permit for the project. The Caribou National Forest Interdisciplinary Team has reviewed the draft application and a number of management concerns have been identified. We would strongly suggest that in order to meet the requirements of NEPA, the applicant solicit public response so that pertinent issues also be considered in the environmental assessment.

The Forest Service under current funding constraints and work loads, may not be able to prepare an environmental assessment within the time constraints desired by both Mr. Fackrell and the FERC. A project license that fully addresses the public issues and agency's concerns will greatly reduce the work involved in preparation of the project environmental assessment.

This report addresses Forest Service management concerns identified during the interdisciplinary review of the draft application and includes general comments on the content and accuracy of that document.

A. WATER RESOURCES

1. Water Yield and Quality

The Organic Administration Act of June 4, 1897 (16 U.S.C. 475) authorized the establishment of National Forests to improve and protect them for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber. This authorization recognized that Forests exert a most important resulting influence upon the flow of rivers. An important aspect of management in "securing favorable conditions of water flow" is the maintenance of stream channel stability and equilibrium.

Alterations in natural streamflow can change inherent stream channel stability, setting up both short and long-term adjustments in the conveyance system. When disequilibrium conditions occur as a result of alterations in the frequency and magnitude of natural discharges, a series of adjustments are likely to occur. These include:

a. Reduced flood flow capacity

b. Floodplain encroachment

c. Building of new floodplains

d. Lateral migration of channels and/or evulsion

e. Increased channel erosion with an associated increase in sedimentation

f. Damage to structures such as roads and bridges or property adjacent to the floodplain

g. Reduced surface water available at base flow discharges creating intermittent and/or subterranean flow

h. Damage to riparian vegetation

i. Increased downstream hazards due to flooding from lower magnitude flows

The Forest Service, therefore, has reserved instream flow water rights for protection of channel stability. Without proper functioning of the stream channel, severe floods such as occurred in this area in 1984, would create serious damage to resources and properties both on and off National Forest system lands. The discharge at which a large portion of effective channel maintenance occurs is that which is termed bankfull stage. This discharge flushes sediment and debris, maintains bends and channel bars and generally does the work necessary to create the average morphological character of the stream channel. Experience has shown that over channel floods are normally too short-lived to have major impact on average channel morphology.

Many studies have indicated that natural bankfull discharge occurs at the 1.5 year high flow recurrence interval. Currently, Region 4 interprets bankfull discharge as the 1.5 year mean daily maximum discharge. After construction of the current proposal however, natural channel discharge can be reduced by the capacity of the penstock or 100 cfs. Hence, we have interpreted bankfull discharge as the 1.5 year mean daily bankfull discharge minus 100 cfs. This will maintain a stream channel more appropriately fit to post project dominant discharge. The duration of natural bankfull discharge based on the Brockway flow duration curve is 7 days.

In order to prevent channel encroachment by riparian vegetation, a minimum streamflow must also be maintained. Such a minimum generally covers most of the wetted perimeter and primarily bottom, not banks. This flow is often very close to that which is required to maintain optimum populations of wild trout relative to the wetted perimeter methodology. Currently, however Region 4 interprets minimum flow as the 1.5 year 7-day low flow. For this proposal, however, we have incorporated the minimum flows recommended by Dr. Jack Giffith, Fishery Biologist who investigated instream flows for the applicant. We feel such flows will, in addition to maintaining trout habitat, accomplish the goal of channel encroachment protection. Duration of minimum flows is year-long.

Rising and recession streamflows before and after bankfull conditions in springtime also help to inundate the wetted perimeter long enough to prevent encroachment. We have, therefore, recommended intermediate flows for short durations leading up to and following bankfull discharge as shown on the hydrograph in Figure 1.

These instream flows (Figure 1) should be agreed upon in writing by Mr. Fackrell and addressed in the application for license. The applicants response to the U.S. Forest Service water rights protest letter as contained in the "Agency Response" section of the draft application is totally unacceptable.

2. Mink Creek Municipal Watershed

The Forest Service has previously stated its concern for the protection of water quality and quantity in the Mink Creek municipal water supply. The applicant has inadequately responded to this concern. Hydrogeologic investigations in the Bear River Range in recent years have confirmed the fact the nonthermal groundwater systems, such as those contributing to Croney Hollow Springs, are controlled predominantly by Karstic conditions and discharge from carbonate formations, especially the Cambrian Nounan and Bloomington limestone formations which outcrop in the subject area. The applicant has not investigated the source of recharge to the municipal supply which very possibly could be located in Mink Creek. He has stated that project water could be provided as supplement to the municipal system if necessary, but has not stated how such supplementary supply would be protected from contaminants,

especially Giardia. The presence of Giardia has been discovered in nearby surface waters. The applicant should make provisions to protect both quality and quantity of municipal supplies unless he can prove that recharge to the system will not be excessively reduced by the proposed hydropower diversion.

3. Floodplains and Wetlands

Executive Order 11988, Floodplain Management and Executive Order 11990 require that effects on flood plains and wetlands be considered for all projects on Federal Land. The application should identify and address floodplains or wetlands within the project area, locate these areas on a map, and discuss any impacts of the project on these areas.

B. SOILS

1. Erosion, Sedimentation and Stability

Information is needed on the estimated acreage of soils that will be disturbed, vegetation recovered, and other, that will be susceptible to erosion. How much erosion will become sedimentation?

A breakdown of disturbed acres within the riparian areas and those which are nonriparian should be shown with mitigation measures.

Buffer zones or strips are required to protect live streams from nearly all soil disturbing activities. In the riparian area, suggest a 100-foot buffer zone be required between soil disturbance and live water.

Diversion Dam - A rock and earth fill constructed diversion dam will have a high short-term sediment impact to the stream. Dam construction should be restricted to the lowest flow period, normally in September and October.

No on-site or native rock, soil, or earthen material will be allowed for dam construction.

Debris, rock, gravel, and other sediments collected by the dam will be hauled off-site to a selected storage site on-Forest, or to off-Forest sites.

Road construction and penstock trenching along and through this canyon will require a soil stability (landslide hazard analysis) to be prepared and approved by the Forest Service prior to construction. The survey will need to cover only areas disturbed by project construction. This should be addressed in the application for license.

2. Revegetation and Reclamation

A revegetation and reclamation plan for all soil or vegetative site disturbances will be prepared and approved by the Forest Service prior to construction. This plan should address stockpiling of topsoil, methods of seeding, fertilizer requirements, and seed mixtures as approved by the Forest Service.

Road reclamation, if closed, should be addressed, as to exact methods and shape of land after use.

3. Construction Timing

No soil disturbing activities or construction will start before July 10 or after spring runoff. Timing of construction should be addressed as this is a major influence on erosion and sedimentation.

C. WILDLIFE

1. Project Effects on Mule Deer and Elk

Insofar as is know, the project area is used neither as a mule deer fawning area nor an elk calving area. However, it serves as spring-summer-fall range for mule deer and to a lesser extend during these seasons by elk. The design and location of the penstock should not present a barrier for wildlife, but the construction of a road into what, until now, has been a non-roaded area could significantly impact wildlife. Whether or not the proposed road into the project area will be open to use by hunters and other recreationists is not addressed in the proposal. This should be addressed.

2. Project Effects on Threatened and Endangered Species

The wildlife species listed for the project area in the proposal includes the bald eagle--an endangered species. It also is stated that the probability of this species occurring on the project area is "high"--but then states there are no T&E species on the area and the project will not affect such. This is inconsistent and a discussion of the determination of no effect and the bald eagle should be addressed.

3. Gambel oak is presented in two places within the project proposal as a dominant plant species on the project area. There is no Gambel oak in the Mink Creek drainage. The closest Gambel oak is approximately 40 air miles to the south in the Ogden Canyon area. Norman Ravenscroft (former Extension Forester as the University of Idaho) supposedly surveyed the vegetative cover and the T&E species on the project area. Based upon what is presented in the project proposal, it appears no "on-the-ground" work was done in regards to either vegetation (habitat) nor wildlife. These (what presently is on or uses the project area) and the potential effects of the project upon them should be addressed.

4. Project Effects on Fisheries

The application should incorporate Dr. Jack Griffith's final instream flow report. A discussion of the limiting factors affecting trout survival and reproduction relative to stream dewatering and the expected positive or negative impacts should be addressed in Exhibit E.

D. ENGINEERING

The barrier structure proposed as headworks for the penstock will require at minimum, annual heavy equipment access for maintenance. Such maintenance requirements are common to all of these types of diversion structures on the Caribou National Forest because heavy gravel discharge is a natural occurrence within these mountains. The applicant should address provisions for such maintenance and the details of permanent road design that will be required for maintenance. In recent years, we have recommended run-of-the-river type diversions because they generally require much less maintenance. Such diversions bypass gravel flows, allow for fish passage, and require little excavation and hauling.

1. The plans do not identify all of the engineering materials to be used in the diversion dam. We need a more detailed design of the pickup and conveyance structures in order to evaluate them for adequacy and safety.

   The method of construction and construction specifications are not available. To what standards are the diversion works to be constructed? How will quality control be accomplished? Will the penstock be buried or remain on top of the ground? If buried, what safety precautions are to be taken while trenching and placement.

   Further concerns are:

   a. Snow creep and avalanche
   b. Earth movements and settling
   c. Hunter shooting penstock
   d. Access to penstock for maintenance
   e. Penstock leak or rupture
   f. Shut down mechanism for repair of penstock
   g. Maintenance schedule for diversion dam and trash pile

   The road on Forest land, whether it is to remain or be obliterated must be constructed to Forest Service standards, with sufficient design information so that the Forest Service can monitor the construction against specific plans and specifications.

   There are several design considerations that need to be addressed before the special use permit is issued. There have recently been a number of problems involving nearby buried pipeline failures caused by landslides. This, along with those already mentioned, should be thoroughly described in the application.

F. RECREATION

1. Visual Resources

The application for license should address the current recreation opportunity spectrum (ROS) and the Visual Quality Objectives (VQO) for the project area. Since the Bear River Planning Unit FEIS was completed there has been a much more intense analysis, which is a part of the Forest Land and Resource Management Planning effort. Effect of the project on the ROS and VQO of the area should be discussed. Sensitive viewing locations should be identified and visual mitigation measures designed accordingly. The Visual Quality Objective for the project area is partial retention. The VQO or the implications of such an objective on this project are not discussed in Exhibit E. This discussion is necessary to make an evaluation of the proposal.

Information as to the width of the vegetative clearing proposed for the project area and the access road to it, and the visual contrast created by the proposed development should be presented.

The application should mention that the Forest Service will review and approve all plans prior to construction.

2. The Roadless Area Inventory

The application for license identifies the project area as located within the Mink Creek Roadless Area. No wilderness management is proposed for the area in the Caribou National Forest Land and Resource Management Draft Plan and DEIS which is now available for public comment. Reference to this Plan would be appropriate. It should also be realized that because the Idaho Wilderness Bill did not pass, management direction on the Mink Creek Roadless Area could be withheld until Forest Plan implementation, or Wilderness Legislation is finalized.

The information presented in Exhibit E entitled Recreation Use is inadequate. Non-intensive uses related to hunting, fishing, gathering forest products, snowmobiling and trail biking are all options for use within the project area. The use of the access road for this project to enhance these uses should be presented. Impacts by and to the proposed project should be discussed and mitigation for such impacts should be presented.

GENERAL COMMENTS

Much material included in the project proposal is not relevant (i.e., information for Fremont County, Idaho: literature citations which are not cited nor used in the text; etc.).

The project proposal does not follow a sequential nor reasonable outline. At least a Table of Contents and the numbering of pages would be very helpful.

Titles or qualifications for people involved in developing the project proposal oftentimes are in error, i.e., Dr. Jack Griffith is listed as "Division Head of the Fisheries Department at Idaho State University". There is no Fisheries Department at ISU, and Dr. Griffith is a member of the Biology Department.

The "Energy Analysis" table in the costs section of Exhibit A assumes a minimum instream flow of 8 cfs without justification. This table should be adjusted to reflect the minimum flows described in Figure 1.

In Exhibit E, Expected Environmental Impacts section under Sedimentation, reference is made to a note in Dr. Butler's report that the area has experienced past erosion problems in this roadless area. As stated earlier, natural channel erosion is desirable to maintain channel stability conditions on the stream.

EXHIBIT 1

K&E 1 YEAR BY DAYS X 250 DIVISIONS KEUFFEL & ESSER CO. MADE IN U.S.A. 46 2893

Stream: Mink Creek below Upper Springs near Mink Creek, Idaho

Instream Flow Claim Hydrograph – Caribou NF

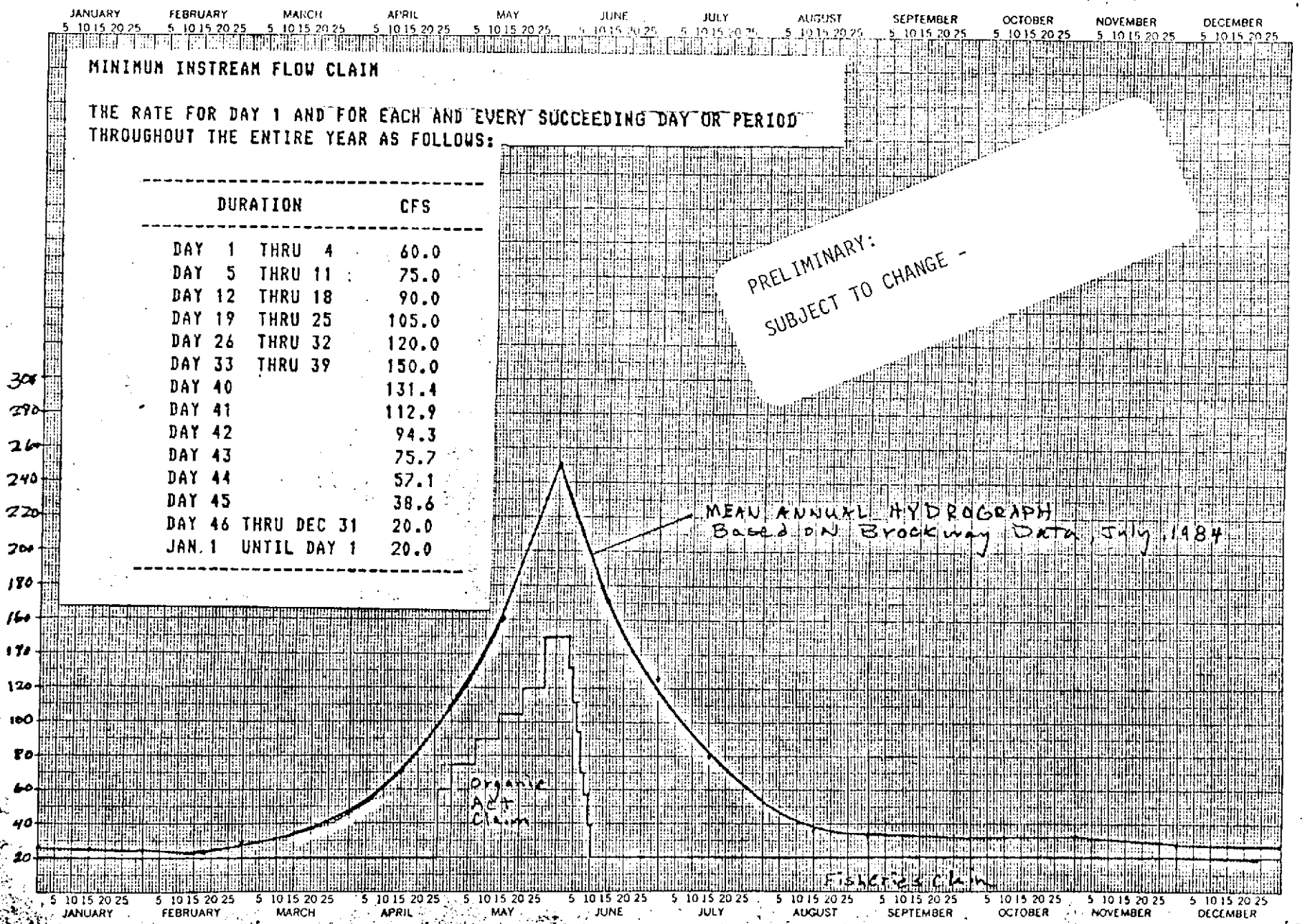
MINIMUM INSTREAM FLOW CLAIM

THE RATE FOR DAY 1 AND FOR EACH AND EVERY SUCCEEDING DAY OR PERIOD THROUGHOUT THE ENTIRE YEAR AS FOLLOWS:

DURATION	CFS
DAY 1 THRU 4	60.0
DAY 5 THRU 11	75.0
DAY 12 THRU 18	90.0
DAY 19 THRU 25	105.0
DAY 26 THRU 32	120.0
DAY 33 THRU 39	150.0
DAY 40	131.4
DAY 41	112.9
DAY 42	94.3
DAY 43	75.7
DAY 44	57.1
DAY 45	38.6
DAY 46 THRU DEC 31	20.0
JAN. 1 UNTIL DAY 1	20.0

PRELIMINARY:

SUBJECT TO CHANGE -



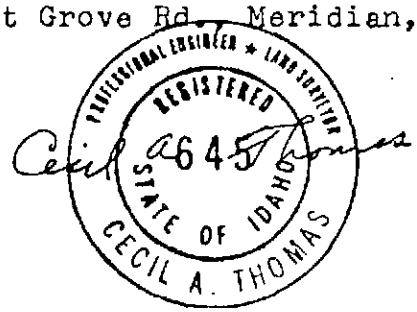
Tim Burton
11-14-84

Resume, Cecil A. Thomas, Consulting Hydrologist and Civil Engineer

The following is an update of the resume published in "Who's Who in Technology", Second Edition, 1981.

THOMAS, CECIL A.

Consulting Hydrologist and Civil Engineer, 3775 N. Locust Grove, Meridian, Idaho 83642, 1980 to date. Hydrologist, U.S. Geological Survey, 550 W. Fort St., Boise Idaho 83702 1939 to 1980-- Surveyor, Rodman, Chainman, U.S. Bureau of Public Rd., 1937-39 EDUCATION: Bachelor of Science in Civil Engineering, Utah State Agricultural College, 1937. PUBLICATIONS: 25 primarily in Hydrology of Idaho. Books: Author of 5, Co-author of 10 and Editor of 2. Most significant book, "Magnitude and Frequency of Floods in Small Drainage Basins in Idaho", U.S. Geological Survey Water Resources Investigations, 1973. ACHIEVEMENTS: Publication of Historic Streamflow Data for Planning and Management; Licensed Professional Engineer and Land Surveyor in Idaho. ORGANIZATIONS: American Society of Civil Engineers. HONORS/AWARDS: President of Southern Idaho Section of ASCE, 1976-77. PRINCIPAL EXPERTISE: CHARACTERISTICS OF STREAM FLOW IN IDAHO. Primary contributions have been in the field of Hydrology. Also experienced in Environmental Sciences and Geology. PERSONAL: Born May 5, 1915, Swan Lake, Idaho; Married July 23, 1940, Margie; Children: Trina, Eileen, Richard, Diane, Gary, Michael; Residence: 3775 N. Locust Grove Rd., Meridian, Idaho 83642.



Cecil A. Thomas
Consulting Hydrologist, Civil Engineer, Land Surveyor
Idaho License No. 645

3775 N. Locust Grove
Meridian, ID 83642
Ph. (208) 888-3087

Water Quality

Quality data for Mink Creek at the study reach were found in files of U. S. Geological Survey. Analyses of the water in the stream are recorded for Feb.9 andJuly 25, 1961. Constituents found by the analyses are recorded in the table.Considerable more data are available for Cub River near Preston, which is similar in characteristics to Mink Creek at the study site. Results of analyses of the the two streams can be compared in the table for Feb.9, 1961.Differences of some of the constituents are relatively small, and it is believed that the summary data of the table for Cub River is representative of constituents in Mink Creek in the study reach. Number of samples analyzed and summarized for Cub River varied from 130 temperature andspecific conductance determinations to 5 samples of dissolved silica. No sediment analyses are available, but overland flow in this basin is minimal because most of the flow is from springs.Water is sometimes murky, rarely muddy, and clear most of the time.

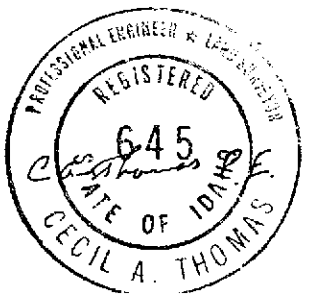


Cecil A Thomas, P.E.
3/18/85

10087500 - MINK C B DRY FORK, NR MINK C, IDAHO

WATER QUALITY DATA, WATER YEAR OCTOBER 1960 TO SEPTEMBER 1961

DATE	TEMPERATURE (DEG C)	DISCHARGE, IN CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	ALKALINITY FIELD (MG/L AS CACO3)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	HARDNESS (MG/L AS CACO3)
FEB 09...	7.0	24	280	7.8	144	180	0	150
JUL 25...	12.0	19	280	8.1	149	180	0	150
			CUB RIVER NEAR PRESTON					
FEB 9,1961	6.0	16	292	8.1	158	190	0	160
Average of samples	6.8	139	275	8.3	150	176	4.4	157
Maximum of samples	14	670	454	8.6	217	240	10	230
Minimum of samples	0	14	165	7.4	112	130	0	120



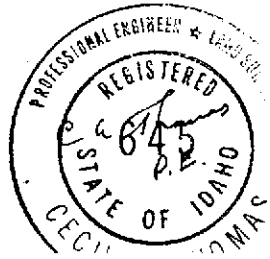
10037500 - MINK C & DRY FORK, NR MINK C, IDAHO

WATER QUALITY DATA, WATER YEAR OCTOBER 1960 TO SEPTEMBER 1961

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	PERCENT SODIUM	POTASSIUM, DISSOLVED (MG/L AS K)	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)
FEB 09...	3	52	4.1	2.0	.1	3	2.1	3.0	7.4
JUL 25...	3	43	11	2.3	.1	3	.60	4.0	4.9

CUB RIVER NEAR PRESTON

FEB 09 1961	6	44	13	1.7	.1	2	.70	2.5	6.4
Average of samples	18	42	12	4.2	.14	5.2	.91	2.7	9.6
Maximum of samples	72	63	17	9.2	.3	9	2.1	7.4	21
Minimum of samples	0	21	4.1	1.7	.2	1	.4	1.2	3.0



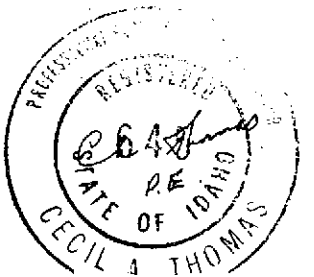
10087500 - MINK C & DRY FORK, NR MINK C, IDAHO

WATER QUALITY DATA, WATER YEAR OCTOBER 1960 TO SEPTEMBER 1961

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	BORON, DIS-SOLVED (UG/L AS B)	PHENOLS TOTAL (UG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	IRON (UG/L AS FE)
FEB 09...	4.1	--	7800	150	9.7	.20	1.7	0
JUL 25...	5.2	150	8100	152	7.8	.21	1.6	--

CUB RIVER NEAR PRESTON

FEB 09 1961	4.3		8100	155		.21	1.3	10
Average of samples	4.1	77	8350	155		.21		
Maximum of samples	5.0	280	8600	263		.36		
Minimum of samples	2.9	0	7400	111		.15		



Estimate of Flow in Upper Springs

The best data available for determining streamflow characteristics of Mink Creek at the proposed diversion point below the Upper Springs appears to be the long record,40 years, on Cub River at Preston, Idaho. Figure Exhibit A shows the correlation of concurrent discharges for Cub River near Preston and Mink Creek below Dry Creek.This relation, based on mean monthly discharges can be used to estimate discharges for the site Mink Creek below Dry Creek with some assurance, using the formulas on the figure Exhibit A. of discharge,

Having these figures, they then should be adjusted for the inflow to Mink Creek between the gaging site and the proposed diversion point below the Upper Springs. Discharge of Dry Creek,above the gaging site and below the proposed diversion, was estimated to be flowing 270 cfs during a field visit on June 7,1984and is dry for long periods each year, after the annual flush from snowmelt. Principally, Dry Creek is fed by a spring which drys up shortly after the major snowmelt has occurred.Inflow to Mink Creek between Dry Creek and the proposed diversion point consists principally of several springs. On Nov.27,1984, when Dry Creek was not flowing,discharge measurements were made by current meter as follows: 50.2 cfs below and near the Upper Springs; 44.4 cfs (a loss of 5.8 cfs) at the U. S. Forest Boundary,and above Croney Hollow Spring(see map).Croney Hollow Springs was measured at 10.9 cfs at the point of entry to Mink Creek..Apparently,Mink Creek loses flow,possibly in permeable reaches of streambed or banks and returns in Croney Hollow Spring. Total flow at the forest boundary plus the Croney Hollow Springs flow was 55.3 cfs. Flow below the Upper Springs is 50.2 cfs or 91 percent of 55.3,as above.

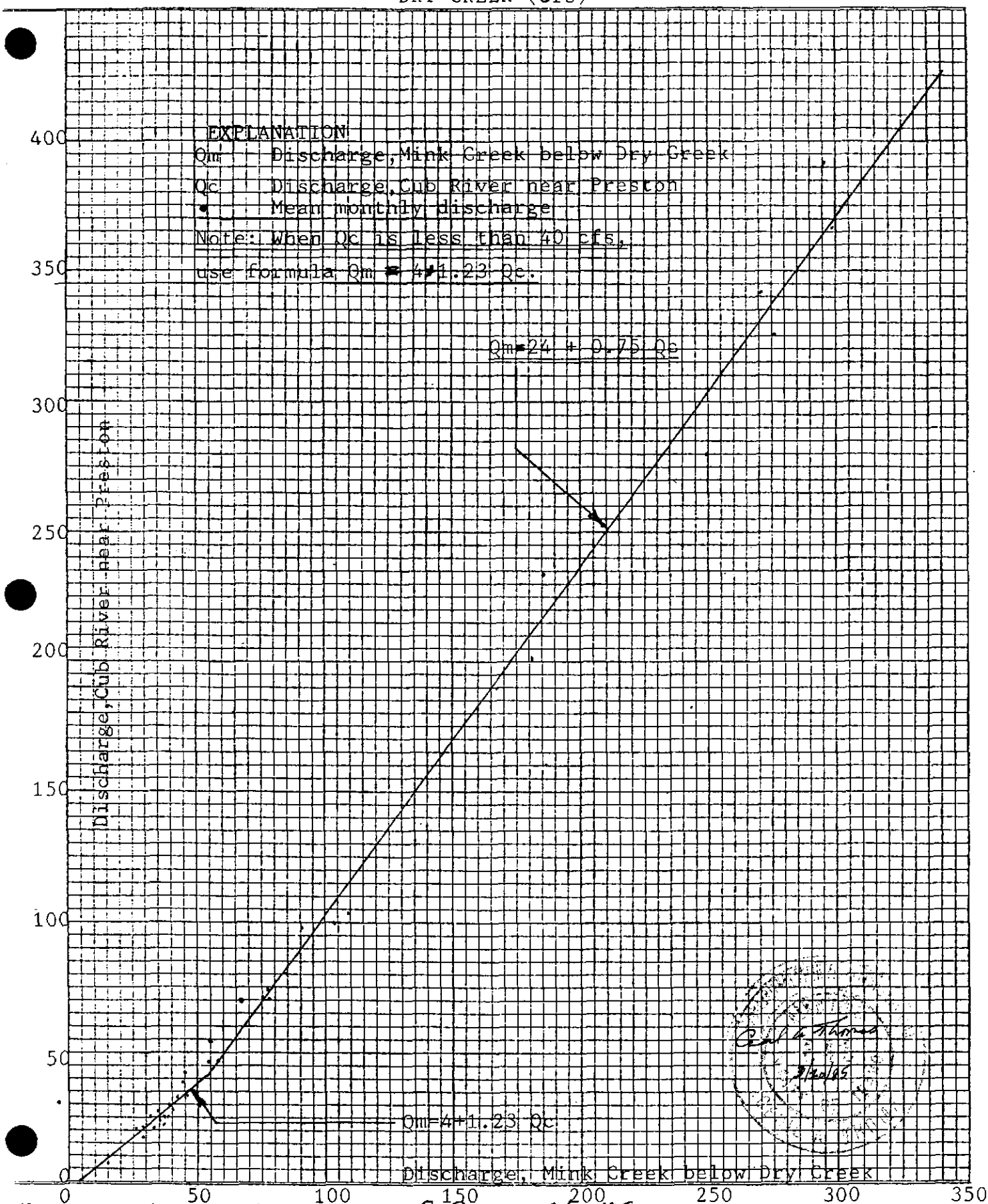
The duration curve for the proposed diversion site below Upper Springs, then, was computed from the duration curve for Cub River near Preston, using the duration curve furnished by the U. S. Geological Survey, based on the 40 years of record.The curves of Figure Exhibit A were used to convert to a duration curve at the Mink Creek below Dry Creek site. These figures were then adjusted to the site below Upper Springs by multiplying by 0.90 and subtracting an estimated flow for Dry Creek when it was beiieved to be contributing. A similar adjustment process was applied to the computerized computation of median day values for Cub River to derive median day values for Mink Creek below Upper Springs.

PROFESSIONAL ENGINEER & LAND SURVEYOR
REGISTERED
645
3/18/85
STATE OF IDAHO
CECIL A. THOMAS

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

Station Number _____

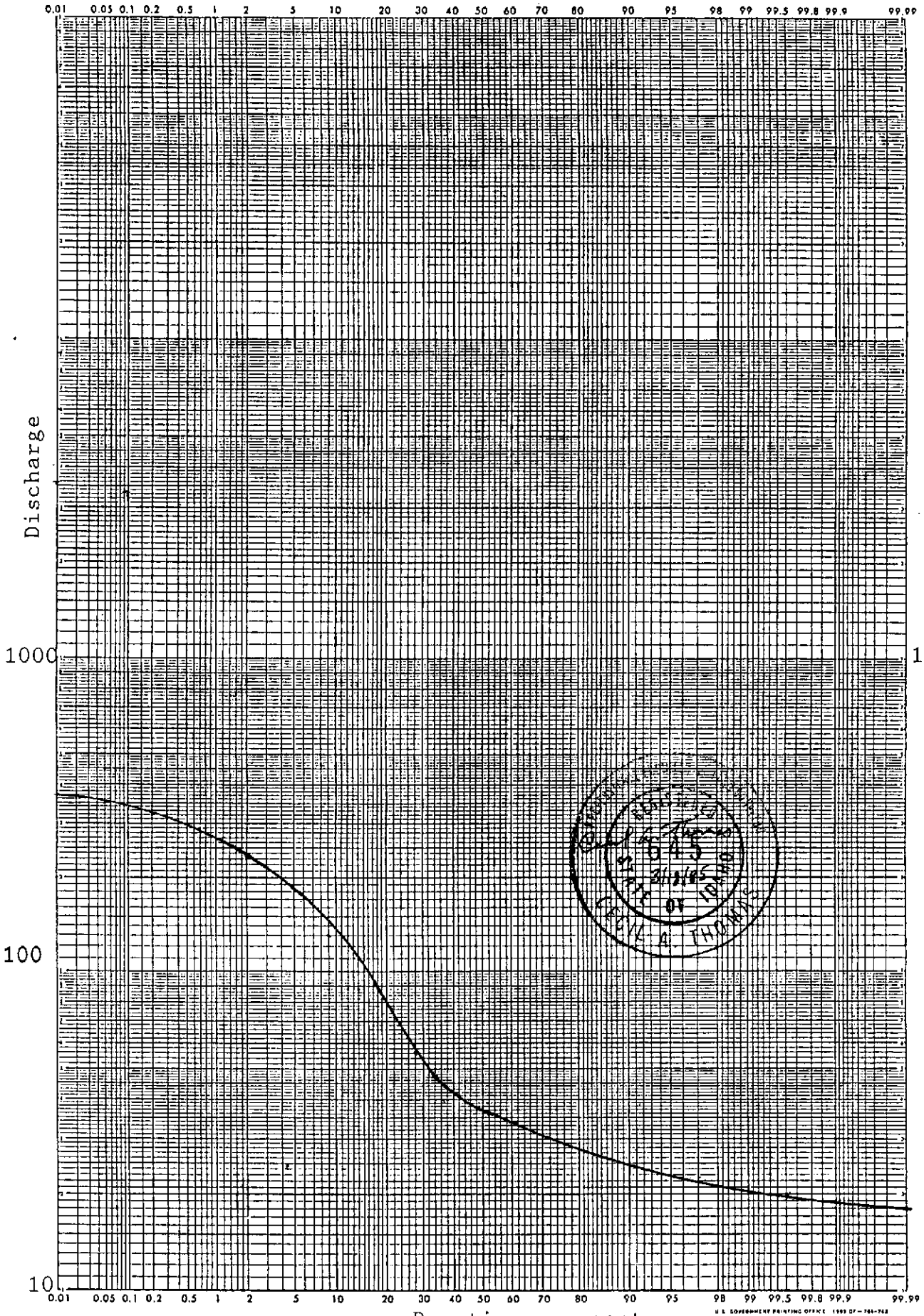
COMPARISON OF DISCHARGE, CUB RIVER PRESTON AND MINK CREEK BELOW DRY CREEK (cfs)



No. _____ of _____ sheets. Prepared by Cds Date 3/20/85 Checked by _____ Date _____

File_____

Duration curve of MINK CREEK BELOW UPPER SPRINGS NEAR MINK CREEK (cfs)



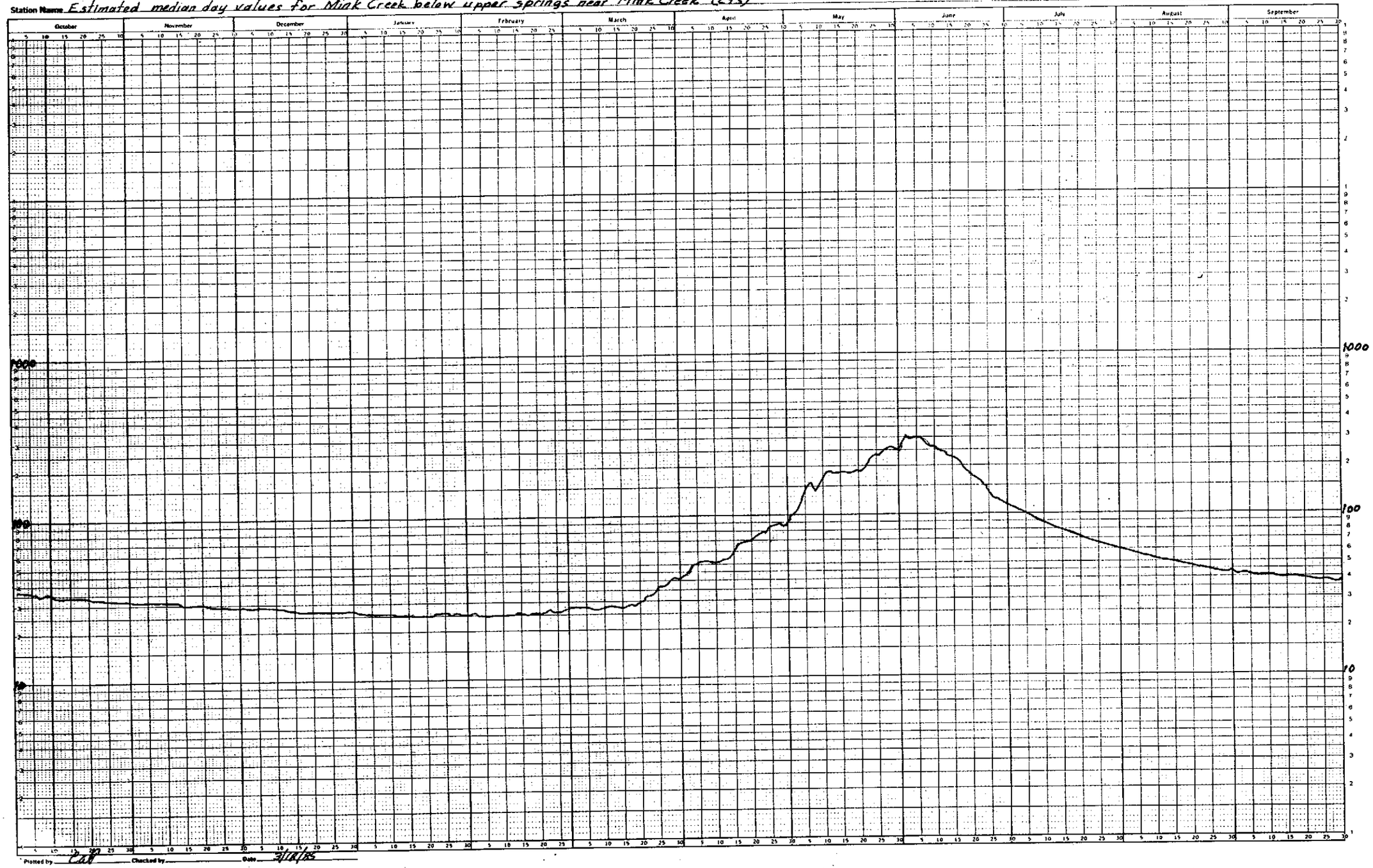
Sheet No.____of____Sheets. Prepared by CAG Date 3/20/85 Checked by_____ Date_____

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY (WATER RESOURCES DIVISION)
SEMI-LOG PLOT OF DAILY VALUES

Form 9-285 (9-77)

Station Name Estimated median day values for Mink Creek below upper springs near Mink Creek (cfs)

Station Number _____ Year _____



Plotted by Cal Checked by _____ Date 3/18/85

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

March 1, 1985

Mr. Quinton Edison
Director of Hydro Power Licensing
Federal Energy Regulatory Commission
Washington, D.C. 20426

RE: PROJECT #8646-00-IDAHO MINK CREEK HYDRO - MR. ROBERT FACKRELL

Dear Mr. Edison,

Pursuant to your letter of January 8, 1985, the following comments are offered with respect to the additional information needed:

2. Computation by which annual generation was derived: Attached is a sheet showing the energy analysis for the project. The first colum lists the month of each year. The second column lists the flow for each month which is derived by subtracting the bypass flow from the average monthly flow for each month. The third column lists the net head which allows for the friction loss in the 48" diameter pipe over a length of approximately 8,500 feet. The next column tabulates the kilowatt production at the head and flow range for each month. The last column tabulates the kilowatt hours per month at the average generation production. The total is then listed at the bottom as 9,871,900 KW-HRS with an allowance of 5% down time the total annual energy production is 9,378,300 KW-HRS.

4. The transformer will be a pad mounted transformer to step the generator voltage of 4,100 volts up to a line voltage of 12,470 volts.

   Attached is an aerial map of the layout of the facilities with respect to important resources of the area. Please note this layout has been worked out with the local Forest Service. The local Forest Service has requested that the penstock be located on the south side of Mink Creek in lieu of the north side. This attached map reflects that request.

   Also enclosed is a typical cross section of the road.

Trusting this information to be of value. If you have further questions, please do not hesitate to contact me.

Very truly yours,

Ted S. Sorenson, P.E.
Project Engineer

TSS:kw
encs
cc: Rob Fackrell

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF RULEMAKING PROCEEDINGS AS REQUIRED BY THE PUBLIC UTILITY REGULATORY POLICIES ACT OF 1978 FOR THE CONSIDERATION OF COGENERATION AND SMALL POWER PRODUCTION.....	CASE NO. P-300-12 ORDER NO. 16048

On December 2, 1980, the Idaho Public Utilities Commission issued Order No. 16025 resolving all final questions regarding the rates and contracts offered by Idaho Power Company and The Washington Water Power Company for purchase of power from cogenerators and small power producers. At the time of issuance of that Order, the Commission Staff had not yet completed review of the similar rates and contracts filed by Utah Power & Light Company. Upon review of that filing, it is clear that no purpose would be served by another order detailing Commission response to UP&L's proposal. Order No. 16025 provides adequate guidance for necessary revisions. UP&L is directed to file such revised rates and contracts by December 29, 1980.

An exhibit setting forth the final rates to be paid by UP&L for avoided capacity payments is appended to this Order. These payments, though lower than those of either Idaho Power or Washington Water Power, are significantly higher than those offered by Utah Power & Light Company in its contract submittal. The number chosen here corresponds roughly to the amount referenced in the Company's work papers as the cost of Hunter Units #3 and #4 and stated elsewhere in Company testimony as today's avoided capacity cost. The Company now maintains that those numbers were not stated in 1980 dollars and thus should be reduced to present value. Suffice it to say that the correct payment amount is in dispute and must await the outcome of Commission proceedings to arrive at more precise calculations. As mentioned in Order No. 16025, the Commission will convene these proceedings in the

spring of 1981. At issue will be such questions as the choice of a truly "avoidable" unit; the accuracy of utility engineering estimates; the propriety of inflation projections; the treatment of common facilities in arriving at the cost of individual units; and the inclusion of transmission cost savings in computation of system avoided capacity costs. It follows that the rates ordered here are interim in nature. Contracts entered into while these rates are in effect may be raised but not lowered depending on the outcome of the audit. This result is dictated by the need to set a secure minimum amount for the planning of projects. If, upon review, it is determined that Utah Power & Light Company's calculations are correct and that its avoided costs are insufficient to provide adequate incentives for cogeneration and small power production projects, parties to these proceedings should be ready to provide imaginative alternatives. In particular, the possibility of wheeling power to other Idaho utilities should be explored if such utilities offer more attractive avoided costs.

A word of clarification is necessary regarding the treatment of "Penalties" in Order No. 16025.[1] The Order notes that the damages provisions in the utilities' proposed contracts do have a basis in logic. The Commission determined however, that sizable repayments for defaults by cogenerators and small power producers would probably be both fruitless and unnecessary

---

1. In Order No. 16025, the Commission's references to the contract repayment provisions as "penalties" were not meant to be taken in a strict legal sense. A court of law would, of course, refuse to enforce a "penalty." The contracts correctly identify these repayments as "liquidated damages." In the Commission's expert opinion, it would be entirely proper for the uitlity to collect, as liquidated damages, the full amount overpaid to a cogenerator or small power producer that had defaulted on a contract. Given today's lead times for bringing new capacity on line, one cannot underestimate the damages incurred by a utility that plans, for example, on a twenty year firm power source only to find that the facility defaults after ten years of delivery. As mentioned in today's Order, our reason for reducing these repayment provisions stems from a public policy commitment to create the maximum possible incentive for bringing such projects on line, not from any sense that a 100% return of overcollected payments would be unjust between the contracting parties. *A fortiori*, the repayment limits set forth in this Order are entirely reasonable as "liquidated damages" and cannot be considered "penalties" in the legal connotation of that term.

for protection of the utility and would be a major disincentive to potential projects. Consequently, we held that repayments by projects over 1 mW in size should be reduced to one-half of the proposed levels and that projects less than 1 mW in size "should have no penalties of this sort at all." The language was intended to refer to amounts so "enormous" as to "constitute a serious disincentive to undertaking long-term firm power commitments." (Order No. 16025, p.9) It was not intended to let projects less than 1 mW in size off scot-free in case of default. A repayment in the amount of 5% of overcollected capacity payments would not appear unreasonable for these smaller projects. Finally, it should also be noted that defaults on contracts can never be justified simply to take advantage of higher contract prices that may possibly be in effect at some future date. The Commission would not permit any utility subject to this jurisdiction to contract with a cogenerator or small power producer who had reneged on a previous contract in order to take advantage of later more favorable rates.

DONE by Order of the Idaho Public Utilities Commission at Boise, Idaho, this 11th day of December.

PRESIDENT

COMMISSIONER

COMMISSIONER

ATTEST:

SECRETARY

22i

APPENDIX

UTAH POWER & LIGHT COMPANY

TABLE A

System Avoided Energy Costs*
(cents/kwh)

January, 1981	2.20
February, 1981	2.20
March	2.20
April	2.20
May	2.20
June	2.20
July	2.20
August	2.20
September	2.20
October	2.20
November	2.20
December	2.20

TABLE B

Avoided Capacity Costs
($/kW-yr)

	Length of Contract							
Operation Date	4 yrs	6 yrs	10 yrs	15 yrs	20 yrs	25 yrs	30 yrs	35 yrs
1981	88	95	112	133	155	177	199	220
1982	96	105	123	146	171	195	219	242
1983	106	115	133	161	188	215	241	266

Unit Avoided Energy Costs**
(¢/kwh)

1981	1.20

* These energy cost figures do not reflect inclusion of a minimal payment toward capacity deferred by non-firm energy as has been ordered by the Commission. Utah Power & Light, at the time of filing, will propose a reasonable capacity cost figure to include with their system avoided energy costs. Idaho Power must also do the same. On the other hand, Washington Water Power's energy cost figure already includes .3¢ per kwh toward deferred capacity.

** These cost figures will be updated annually to reflect the current price of coal.

IDAHO DIVISION

utah power & LIGHT COMPANY

P.O. Box 432
Preston, Idaho 83263

February 28, 1985

Mr. Robert Fackrell
P.O. Box 1
Preston, Idaho 83263

Dear Sir:

The information you requested from us about your proposed generation facility is as follows:

Substation: Tanner

Circuit Name: None

Circuit #11

The approximate distance from Tanner Substation to your intertie point will be 10.5 miles. If there is any other assistance you need, please feel free to contact me.

Sincerely,

D. Allen Averill
District Engineer

RESUME

TED S. SORENSON P.E.

Address: 550 Linden Drive
Idaho Falls, ID 83401

Phone: Bus. (208) 522-8069
Home (208) 529-2469

Personal Information

Birth: January 11, 1950
Weight: 160 lbs
Height: 6'0"

Health: Excellent
Status: Married with 2 children
Hobbies: Backpacking, Jogging, Auto Mechanics

Education

Madison High School, Rexburg, Idaho - Diploma in 1968

University of Idaho, Moscow, Idaho:
Degree: Bachelor of Science in Civil Engineering, December 1974
Graduate Degree: Master of Engineering in Civil Engineering, January 1976
Special Emphasis in University - Sanitary Engineering & Project Management

Experience

(Relating to Civil Engineering)

September 1, 1980 to present	Principal with Sorenson Engineering, P.A., 550 Linden Drive, Idaho Falls, ID. For projects and references see Attachments A, B and C.
January 1976 to Sept. 1, 1980	Project Engineer with Interwest Engineers, Moscow, Idaho. Projects are listed on Attachments A and B.
3 Months (full time)	Engineer with U.S. Public Health Service, Indian Health Service, Nespelem, Washington. Prepared preliminary report, final design and specifications for upgrading two small municipal water systems. Analyzed scattered sites for on-site wastewater absorption fields. Prepared report for U.S. Public Health Service.
February 1975 to May 1975 (part time)	Research Assistant with University of Idaho Sanitary Engineering Department. Conducted laboratory analysis of water, biochemical oxygen demand, phenol, suspended solids, chemical oxygen demand, nitrogen, etc.
May 1975 to Sept. 1974 (full time)	Project Engineer for Forsgren & Perkins, P.A., Consulting Engineers, Rexburg, ID. Responsible for supervision, layout and coordination of survey work for three field crews.
September 1973 to May 1974 (part time)	Engineer for Wester Consultants, Inc., Moscow, Idaho. Did survey work - research, computation and crew chief.
June 1973 to August 1973	Engineering Aide for Blakely Consulting Engineers, Payette, Idaho. Design draftsman and survey instrumentation.

March 1971 to July 1971	Survey Crew Member, Trico International, Inc., Elko, Nevada. Instrumentman.

Professional Organizations

Water Pollution Control Federation

National Society of Professional Engineers

Idaho Society of Professional Engineers (Chairman of Engineer's Week, 1984)

Registration

Professional Engineer (Civil Engineering), Idaho #3458

Land Surveyor, Idaho #3458

Professional Engineer, State of Washington #18879

Professional Engineer, State of Wyoming #3508

Professional Engineer, State of Utah (pending)

Details of projects worked on, location, etc. available on request.

ATTACHMENT A

Project Location	Preliminary Engineering	Plans and Specifications	Construction Supervision	Project Description	Construction Cost & Date
Northern Idaho and Eastern Washington	X	X	X	Numerous individual wastewater disposal system (septic tanks, drainfields, evapotranspiration systems, Wisconsin mounds, etc.)	15,000 - 20,000 (1976 - 1978)
Buhl, Idaho	X	X	X	Snedigar Ranch Hydroelectric Facility 300 KW	1983 - 1984 Cost - $500,000
Tetonia, Idaho	X			Investigate alternatives to failing individual septic tank/drainfield systems.	1981
Aberdeen, Idaho	X	X	X	Upgrade Wastewater Collection & Treatment System	$400,000 1981 - 1983
Springfield, Idaho	X	X	X	Provide community potable water supply and distribution system	$175,000 1981 - 1982
Gooding, Idaho	X	X		Arkoosh Ranch Hydroelectric Facilities 1300KW	$1,800,000 1983 - 1985
Colfax, Washington	X	X	X	Water System Improvements - 100,000 gallon water tank, booster pump, instrumentation and control	$200,000 1977 - 1978
Stites, Idaho	X			Potable Water System, Refurbish Water, New well, pump system and distribution system.	$230,000 1978
Inchelium, WA	X	X		Water Supply and Distribution System	$200,000 1975
Preston, Idaho	X	X	X	Wastewater Collection System Rehabilitation	$339,000 1983
Malad, Idaho	X	X	X	Wastewater Collection System Expansion	$220,000 1983
Carey, Idaho	X	X	X	Wastewater Collection & Treatment System	$800,000 1983 - 1984
Clark County, Idaho	X	X	X	Birch Creek Hydroelectric Facility 2000 KW	$2,600,000

ATTACHMENT A

Project Location	Preliminary Engineering	Plans and Specifications	Construction Supervision	Project Description	Construction Cost and Date
Plummer, Idaho	X	X	X	Wastewater Collection System	$175,000 1976
Colfax, Washington		X	X	Wastewater collection rehabilitation, regional laboratory & treatment (aerated lagoon, rapid infiltration land disposal system)	$1,300,000 1977 - 1978
White Bird, Idaho	X	X	X	Wastewater collection and treatment system (aerated lagoon followed by filtration)	$260,000 1978 - 1979
Spirit Lake, Idaho	X	X	X	Wastewater collection and treatment system (aerobic lagoon and spray irrigation, land disposal)	$885,000 1977 - 1978
Plummer, Idaho	X	X	X	Wastewater treatment (aerobic lagoon, spray irrigation and land disposal)	$1,200,000 1980
St. Maries, Idaho	X	X	X	Regional wastewater treatment system (aerated lagoon, filtration followed by spray irrigation)	$4,000,000 1979 - 1984
Tensed, Idaho	X	X		Wastewater collection and treatment system (intermittent discharge lagoon)	$310,000 1978
Princeton, Idaho	X			Wastewater collection and treatment system (intermittent discharge lagoon)	$275,000 1979
Soda Springs, Idaho	X	X	X	Wastewater treatment system including modification and enlargement of Anaerobic Sludge Digestion	$1,800,000 1980 - 1985
Georgetown, Idaho	X	X	X	Georgetown Irrigation Company, Hydroelectric Cogeneration 300 KW	$425,000 1983 - 1984
Wells, Nevada		X		Wastewater treatment system (stabilization lagoons followed by spray irrigation land disposal)	$1,200,000 1980 - 1981

ATTACHMENT B

SPECIAL STUDIES AND REPORTS

1. Process analysis through computer model of Rupert, Idaho municipal and industrial wastewater treatment plant.

2. Process control chapter Rupert, Idaho wastewater treatment plant.

3. Operational analysis of industrial and domestic wastewater lagoon system at Westinghouse Corporation, Naval Reactors Facility, Idaho Falls, Idaho.

4. Operational analysis, hydrogen sulfide generation with regard to sewer pipe corrosion and odor for Twin Falls, Idaho, wastewater collection system.

5. Two chapters Twin Falls WWTP, O & M Manual - Air Flotation and Process Control.

6. Stites, Idaho, water system analysis.

7. Analysis of submersible mixers in oxidation ditch process for Flyght Pump, Inc., Stockholm, Sweden.

8. Advised U.S. Public Health Service - Indian Health Service on applicability of evapotranspiration and mound, individual systems for use on scattered sites in Idaho and Washington.

9. City of American Falls, Pretreatment Study.

10. Analyzed approximately fifteen to twenty sites in Eastern Idaho and Wyoming for Hydroelectric Development Feasibility.

ATTACHMENT

REFERENCE	POPULATION	PERSON/TITLE	PHONE NUMBER
Soda Springs, Idaho	4,000	Mayor David Clegg	1-208-547-2151
Aberdeen, Idaho	1,800	Jerry Giesbrecht, Public Works Director	1-208-397-4622
Arkoosh Ranch Hydroelectric		Mitch Arkoosh	1-208-934-4817
Carey, Idaho	500	Robert Adamson, Chairman	1-208-823-4314
Corps of Engineers		David Mitchell, Project Engineer	1-208-334-1450
Environmental Protection Agency		Mike Silverman, Project Engineer	1-208-334-1450
Colfax, Washington	3,000	Art Anderson, Ex-City Supervisor	1-509-397-3084
St. Maries, Idaho	4,000	Ernest Pendell, Mayor	1-208-245-2711
Malad City, Idaho	2,000	Rick Goddard, Public Works Director	1-208-766-2812
White Bird, Idaho	175	Cedric Chamberlin, Mayor	1-208-839-2228
Plummer, Idaho	1,000	Harold Whitley, Mayor	1-208-686-1411
Snedigar Ranch Hydroelectric		Dave Snedigar, Owner	1-208-543-6842
Rawlins, Wyoming	14,000	John C. Darrington, City Super.	1-307-324-2421
Georgetown Irrigation Co.		Carl Stoddard, President	1-208-847-1622
City of Preston, Idaho	4,000	Mayor Richard Bowman	1-208-852-1916
Bingham County		Commissioner Vincent O'Brien	1-208-785-5005
Idaho Department of Health		Henry Moran, Regional Engineer	1-208-236-6160
Bloomington, Idaho		Donald White, Councilman	1-208-945-2731

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March 26, 1985

Mr. Elmer W. Smith, P.C.
Environmental Engineer
DEPARTMENT OF HEALTH AND WELFARE
Division of Environment
150 North 3rd Avenue
Pocatello, Idaho 83201

Re: Mink Creek Hydropower Project
Project #8646-000-Idaho

Dear Mr. Smith:

In supplying additional information in regard to your eventual processing of a 401 Water Quality Permit for the Mink Creek Hydropower Project, please refer to your letter of July 2, 1984. I will follow your outline.

1. Turbidity and siltation associated with the headworks:

The diversion structure and headworks will be confined to the reinforced, concrete structures necessary to accumulate the outflow from a substantial spring formation which issues out of a particular limestone layer. The agreed by-pass will be allowed to enter the regular stream channel and there will be no interference with the run-off water which occurs from the drainage upstream, above the spring formation. As such, turbidity and siltation will be negligible at the point of the headworks.

I would also add, even though you have not inquired, that the penstock will be buried and the ground above the penstock will be reseeded.

2. Turbidity and siltation associated with the relief valve:

With the total head available at this site, the relief valve will be located immediately ahead of the turbine and will discharge into an enclosed energy dissipation chamber, constructed of reinforced concrete and designed to totally take the turbulence out of the water before it is discharged into the tailrace of the turbine itself. Your Department may examine plans for this dissipation chamber if they desire.

3. Turbidity siltation and dissolved oxygen associated with the tailrace:

The design of the turbine provides for a velocity of 3 - 4 feet per second and the exit from the tailrace to the stream will be approximately 2 feet per second. The tailrace will be riprapped for the first section after the water leaves the turbine. These are not scouring velocities. There should be no erosion or turbidity added to the water after it leaves the turbine. A fast tailrace means a loss of total head and a reduction in project earnings.

Concerning dissolved oxygen - this water is accumulated from the springs at the point where the water issues forth from the limestone formation. There is no opportunity for a warming of the water or any accumulation of algae or other factors which reduce the natural level of the dissolved oxygen in the water. Again, the efficient design of the project will necessitate a headworks which entrains no oxygen. To do so would cause cavitation on the turbine and lead to excessive maintenance expense.

The penstock will be equipped at definite intervals with air relief valves so as to exhaust any air that is accumulated from any source.

The brief answer to your question is there will be no impact or alteration of the natural dissolved oxygen levels. I would also add that there is no deep plunging for a spillway or the exhaust at the turbine, consequently there is no supersaturation of nitrogen possible at this project.

Please disregard any discrepencies between the inital water rights application and the F.E.R.C. application. The project sponsor made his water application before the project had final engineering. The final design on the penstock, in order to avoid friction in that penstock will be 48" and this is consistent with the final drawings submitted to F.E.R.C.

It should also be noted that the project sponsor, the Idaho Fish and Game Department and the U.S. Forest Service have all coordinated and accepted a by-pass flow for the project.

March 26, 1985

We trust that this additional information will assist your processing of the Water Quality Permits (401) at such time as the project is accomplished.

Sincerely,

Vernon Ravenscroft

VFR:mf

cc: Robert Fackrell
Ted Sorenson