

R-993

State of Idaho

LICENSE AND CERTIFICATE
OF WATER RIGHT

Water License No. R-993

To Thorn Creek Cattle Assoc., Inc.

Gooding, Idaho

Source of Supply Thorn Creek, a

tributary of Big Wood River

Gooding County

Amount 950 AF. per annum ~~XXXXXX~~

Point of Diversion NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6,

T. 3 S., R. 16 E., B.M.

Place of Use NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6, T. 3 S.,

R. 16 E., B.M.

Purpose Stock watering

Date of Priority June 1, 1956

Recorded March 15, 1967

In Book 14 of Licenses, Page 8703

+8704
K.O.
Turns #1088

State of Idaho
License and Certificate of Water Right

Water License No. G-28687 Amount 7.13 c.f.s.
Water District No. _____ Priority May 10, 1960

THIS IS TO CERTIFY that **DUANE ASLETT**
of **Dietrich, Idaho**, made application for a permit to appropriate the
public waters of the State of Idaho, dated **May 9**, 19**60**; that Permit No. **G-28687**
was issued under said application; that Certificate of Completion of works, with a carrying capacity of
7.13 second feet, was issued thereunder on **March 10**, 19**67**, showing that said works
were completed on the **2nd** day of **December**, 19**66**; and that on the **2nd**
day of **December**, 19**66**, **Duane Aslett**,

of **Dietrich**, State of **Idaho**, made proof to the satisfaction of the
State Reclamation Engineer of Idaho, of the right to use the waters of **2 wells**,
a tributary of **subterranean flow**, for the purpose of **irrigation**
under Use Permit No. **G-28687** of the **Department of Reclamation**,
and that said right to the use of said waters has been perfected in accordance with the laws of Idaho,
and is hereby confirmed by the State Reclamation Engineer of Idaho and entered of record in Volume
14 of Licenses at page **8704**, on the **10** day of **March**, 19**67**;
The right hereby confirmed dates from **May 10**, 19**60**;
The Point of Diversion is located **SE $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ N $\frac{1}{2}$** ,
in the **-- $\frac{1}{4}$ -- $\frac{1}{4}$** , Sec. **6**, Tp. **7 S.**, R. **21 E.**, B. M. **Lincoln** County.

That the amount of water to which such right is entitled and hereby confirmed, for the purposes
aforesaid, is limited to an amount actually needed and beneficially used for said purposes, and shall
not exceed **7.13** cubic feet per second.

Description and location of use:

Twp.	Range	Sec.	Forty-acre Tract	No. Acres Described in Permit	No. Acres Actually Irrigated
7 S.	20 E.	1	Lot 1	20	32
			Lot 2	20	25
			SW $\frac{1}{4}$ NE $\frac{1}{4}$	40	34
			SE $\frac{1}{4}$ NE $\frac{1}{4}$	40	32
			SE $\frac{1}{4}$ NW $\frac{1}{4}$	40	30
			NE $\frac{1}{4}$ SE $\frac{1}{4}$	40	34
			NW $\frac{1}{4}$ SE $\frac{1}{4}$	40	34
			SW $\frac{1}{4}$ SE $\frac{1}{4}$	40	25
	21 E.	6	SW $\frac{1}{4}$ NE $\frac{1}{4}$	40	30
			SE $\frac{1}{4}$ NE $\frac{1}{4}$	40	30
			Lot 3	20	25
			Lot 4	20	34
			Lot 5	40	34
			SE $\frac{1}{4}$ NW $\frac{1}{4}$	40	36
			NE $\frac{1}{4}$ SE $\frac{1}{4}$	40	32
			NW $\frac{1}{4}$ SE $\frac{1}{4}$ (Lot 6)	40	34

Total number of acres to be irrigated: **501**

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place
of use herein described, as provided by the laws of Idaho.

WITNESS the seal and signature of the State Reclamation Engineer, affixed at Boise, Idaho, this
10th day of **March**, 19**67**.

s/ **R. Keith Higginson**
State Reclamation Engineer.

(SEAL)

APPLICATION FOR PERMIT

To Construct a Reservoir and Store and Appropriate
The Public Waters of the State of Idaho

Application No. R 34270
Permit No. R 993

Don Frederickson
Rt. 1
Gooding, Idaho

37-2781

1. Name of Applicant: THORN CREEK CATTLE ASS'N., INC.

Postoffice address: Shoshone

County Lincoln

State Idaho

I. If applicant is a corporation, give:

(a) Date and place of incorporation: June 30, 1950 / Shoshone, Idaho.

(b) Amount of Capital Stock: \$ None

(c) Amount paid in: \$

(d) Names and addresses of directors: Don Frederickson, Gooding, Rt. 1;

Dean Gooding, Gooding, Rt. 1; Donald Sandy, Shoshone, Evert Sant, Shoshone; Cliff Stutsman, Shoshone, Idaho.

II. The financial resources of the corporation are:

(a) Cash on hand: \$ Non-profit Corp.

(b) Treasury Stock: \$

(c) Bonds to be issued: \$

(d) Other resources:

2. Quantity of water to be stored: 950 acre feet per annum.

3. Source of water supply is Thorn (Creek) ~~(River)~~ a tributary of Big Wood River.

4. The outlet of the proposed reservoir is located (bearing) feet, distant from the corner of Section , Township , Range , B. M. and is in the NE ¼ of SE ¼ of Section 6 , Township 3 S. , Range 16 E. , B. M. County of Gooding

5. Fill out either (a) or (b).

(a) The reservoir is located in the channel of Thorn (Creek) ~~(River)~~

(b) The reservoir is to be filled through a feeder canal, the point of diversion for which is located (bearing) feet distant from

the corner of Section , Township , Range , B. M., and is in the ¼ of ¼ of

Section , Township , Range , B. M.; width at bottom feet, width at top

feet, depth of water feet; average grade per mile feet; Capacity cubic feet per second.

6. (a) The area of the high water line of the reservoir is 126 acres.

(b) The reservoir capacity is 950 acre feet.

7. Height of reservoir dam 24.7 feet, length at top 254 feet, length at bottom 150 feet, size of outlet 3" ~~1200~~

~~xxx~~ The dam is to be constructed of materials as follows: Earth

(If height will exceed 10 feet, plans must be approved by Department of Reclamation, before beginning construction.)

8. (a) Will water stored in reservoir be diverted to canal or aqueduct, thence to land to be irrigated without commingling with natural flow of

Thorn (Creek) ~~(River)~~ No.

(b) Water stored in reservoir will be carried in the channel of Thorn (Creek) ~~(River)~~ a distance

of miles to point of diversion located (bearing) feet, distant from the corner of Section

Township , Range , B. M., and in the ¼ of ¼ of Section , Township , Range

B. M.

9. ~~XXXXXX~~ (a) Area of watershed above dam site Nine square miles.

~~XXXXXX~~ (b) Estimated maximum flow of stream Forty cubic feet per second.

10. Water is to be used for Stock watering purposes.

11. If for mining, milling, power or manufacturing purposes give:

(a) Point of use of water Stock watering out of Reservoir. Corner of Section , Township , Range

(bearing) feet, distant from B. M. and is in the ¼ of ¼ of Section , Township , Range , B. M.

(b) Amount of power generated: H. P., under feet head.

(c) Water is to be returned to (Creek) (River) (Spring) at a point (bearing) feet

distant from the corner of Section , Township , Range , B. M., in

the ¼ of ¼ of Section , Township , Range B. M.

12. Water stored in accordance with this Permit will be carried to place of use through a canal heretofore constructed under the terms of Permit No.

, which is hereby referred to and made a part hereof.

13. Kind of diversion works: Spillway adequate to carry full flow of Stream
(Dam, canal, flume, pipe, etc.)

14. Height of diversion dam: feet, length at top feet, length at bottom feet. The dam is to be constructed of materials as follows:

(If height will exceed 10 feet, plans must be approved by Department of Reclamation, before beginning construction.)

15. Size of headgate: Width feet, Height feet.

16. Diversion Canal: Width at bottom feet, width at water line feet, depth of water feet, Dimensions of Flume
Diameter of Pipe inches; Length of Conduit miles. Average grade per mile feet.

17. Estimated cost of Works: Storage Works: \$ 2500.00 Diversion Works: \$

18. Time required for completion of work Five years .

19. Time required for complete application of water to proposed beneficial use is None years.

20. The land to be irrigated is described in the following tabulation:

(Give Irrigable acreage in each 40-acre subdivision.)

Twp.	Range	Sec.	NE ¹ / ₄				NW ¹ / ₄				SW ¹ / ₄				SE ¹ / ₄				Totals
			NE ¹ / ₄	NW ¹ / ₄	SW ¹ / ₄	SE ¹ / ₄	NE ¹ / ₄	NW ¹ / ₄	SW ¹ / ₄	SE ¹ / ₄	NE ¹ / ₄	NW ¹ / ₄	SW ¹ / ₄	SE ¹ / ₄	NE ¹ / ₄	NW ¹ / ₄	SW ¹ / ₄	SE ¹ / ₄	

Total Number of Acres to be Irrigated

Remarks:

BE IT KNOWN That the undersigned hereby makes application for permit to construct a reservoir and store and appropriate the public waters of Idaho as herein set forth, and that the enclosed map is hereby made a part of this application.

Thorn Creek Cattle Ass'n. Inc. Applicant.

By DON FREDERICKSEN, President Agent.

Date of first receipt at office of Commissioner of Reclamation 1:00 P.M. May 31, 1956

Returned to applicant for correction

Corrected application received

STATE RECLAMATION ENGINEER

APPROVAL OF ~~COMMISSIONER OF RECLAMATION~~

The number of this permit is R 993

Recorded in book R 4 , page 993 Approved June 4, 1956

This is to certify that I have examined the within application for a permit to construct a reservoir and store and appropriate the public waters of the State of Idaho, and hereby approve the same, subject to the following limitations and conditions:

Bond in the sum of \$, to be filed on or before

Work to begin on or before August 4, 1956 and to continue diligently and uninterruptedly to completion, unless temporarily interrupted by circumstances over which the permit holder has no control.

One fifth of the work above specified to be completed on or before December 4, 1958

The whole of said work to be completed on or before June 4, 1961

Beneficial use of water stored in accordance herewith, to be made on or before June 4, 1961

Witness my hand this 4th day of June

. 1956 .
MARK R. KULP
~~Commissioner of Reclamation~~
State Reclamation Engineer

IN TESTIMONY WHEREOF, We, ROBERT E. SMYLLIE, Governor of the State of Idaho, and JAS. H. YOUNG, Secretary of State of the State of Idaho, have caused this instrument to be executed in the name of the State of Idaho and caused the Great Seal of the State of Idaho to be hereunto affixed, this 4th day of June, 1956.

Countersigned
(SEAL)
By JAS. H. YOUNG
Secretary of State.

STATE OF IDAHO
By ROBERT E. SMYLLIE
Governor.

Permit No. R-993 +
CERTIFICATE OF COMPLETION OF WORKS

TO ALL WHOM IT MAY CONCERN:

This is to certify that THORN CREEK CATTLE ASSOCIATION, INC. of Shoshone, County of Lincoln, and State of Idaho, the holder of Permit No. R-993, issued upon Application No. R-34270, bearing date of priority of June 1, 1956 (late proof), authorizing the construction of a reservoir, with the right to appropriate and store 950 acre feet per annum of the waters of Thorn Creek, a tributary of Big Wood River, in the County of Gooding, State of Idaho, for stock watering purposes, has fully complied with the provisions of the laws of the State of Idaho relating to the proof of completion of the works set out and described in said Permit; that said works include a dam and reservoir adequate for the storage of 950 acre feet of water per annum, with adequate diversion works and conduit to the reservoir, and a conduit capable of conducting said water to the place of intended use; that the point of outlet of said reservoir is located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 6, Township 3 S, Range 16 EBM. and that the place of use, or the lands proposed to be irrigated by the use of said water, are described as follows, to-wit:

Water is used at point of storage: NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6, T. 3 S., R. 16 E., B.M.

Witness my hand this 15th day of March, 1967.

s/ R. KEITH HIGGINSON
State Reclamation Engineer

PERMIT ISSUED FOR 950 ^{AF} ~~SEC.~~ FT.
LICENSE PAG. NO. 8703

WATER RIGHT NUMBER 37-2781

OWNER LAST NAME - THORN CREEK CATTLE ASSN. INC. FIRST NAME - ORIG OWNER -
ADDRESS LINE 1 - RT. 1 ADDRESS LINE 2 -
ADDRESS LINE 3 - CITY - SHOSHONE STATE - ID ZIP CODE - 83352
SOURCE - THORN CREEK TRIBUTARY OF - BIG WOOD RIVER
STAGE - LICENSE STATUS - PRIORITY - 06-01-1956 COUNTY - GOODING TOTAL DIV. RATE - .0000 -CFS
TOTAL DIV. VOLUME - 950.00 AFA TRFR/AMEND - WATER DIST. - 37 DLE/CAREY ACT - RIGHT BASIS -
DIVERSION POINT - NESE 06 03S 16E LOT REDIV - 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
FROM - TO - USE - STOCKWATER STORAGE USE DIV. RATE - .0000 CFS USE DIV. VOLUME - 950.00 AFA
FROM - TO - USE - STOCKWATER FROM STOR USE DIV. RATE - .0000 CFS USE DIV. VOLUME - 950.00 AFA
USE - STOCKWATER STORAGE PLACE OF USE - TWN 03S RNG 16E SEC 06 TRACT NESE LOT AC
DECREE NAME - DATE - TOTAL ACRES 0
REMARKS -
NON IRRIG USE -
OTHER RIGHTS FOR SAME USE -
PROOF DUE - PERMIT/DENIED - PROTESTED - HEARING - OLD NO. - R993
PROOF MADE - FLD EXAM - COND. OF APPROVAL -
DIVERSION MEANS -

VERIFIED JDC

ACT
ION

N OWNER LAST NAME - THORN CREEK CATTLE ASSN. INC.

N

CITY - SHOSHONE

STATE - ID

N SOURCE - THORN CREEK

TRIBUTARY OF - BIG WOOD RIVER

N STAGE - LICENSE

PRIORITY - 06-01-1956 COUNTY - GOODING

N TOTAL DIV. VOLUME - 950.00 AFA

N DIVERSION POINT - NESE 06 03S 16E

N

USE - IRRIGATION STORAGE

USE DIV. VOLUME - 950.00 AFA

N

USE - IRRIGATION FROM STORAGE

USE DIV. VOLUME - 950.00 AFA

N

USE - IRRIGATION STORAGE

PLACE OF USE - TWN 03S RNG 16E SEC 06 TRACT NESE

OLD NO. - R993

N

IDENT. NO. 37 2781

I D A H O D E P A R T M E N T O F W A T E R R E S O U R C E S

WATER RIGHT
DATA ENTRY LOG

[illegible]

WATER RIGHT ANALYSIS FORM

- DATA ENTRY -

Identification No. R-993 / 37-2781
OTd No. New No.

Record

1. Original Owner: Thorn Creek Cattle Assn. Inc.

Present Owner: _____

2. Address:

3. City: Shoshone State: Id Zip: _____4. A. Source of Water: Thorn CreekB. Tributary of: Big Wood River5. A. Stage (A,P,L,D,S,J): L

B. Status (D,L,R,C,A,I,F - leave blank if valid):

C. Priority Date: 6-1-1956D. County: Ln

E. Total Diversion Rate:

F. Total Diversion Volume: 950.

G. Transfer/Amendment (P,T of A or blank):

H. Water District:

I. DLE/Carey Act (D,C or blank):

J. Right Basis (for adjudication claims A,B,C only):

	Tract	Sec.	Twp.	Rge.	Gov't Lot	Rediv.
6. A. Point of Diversion	<u>NESE</u>	<u>6</u>	<u>3S</u>	<u>16E</u>		

7. Period of Use, Use, Diversion Rate/Volume:

from _____ to _____	for <u>AG</u> purposes.	Amount <u>950.</u> (cfs or <u>AG-FT/yr</u>)
from _____ to _____	for <u>AR</u> purposes.	Amount <u>950 AF</u>
from _____ to _____	for _____ purposes.	Amount _____
from _____ to _____	for _____ purposes.	Amount _____
from _____ to _____	for _____ purposes.	Amount _____
from _____ to _____	for _____ purposes.	Amount _____

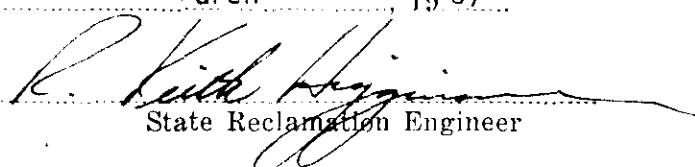
PERMIT NO. R-993

Certificate of Completion of Works

To All Whom It May Concern:

This is to certify that Thorn Creek Cattle Association, Inc.
of Shoshone, County of Lincoln and State of
Idaho, the holder of Permit No. R-993, issued upon
Application No. R-34270, bearing date of priority of June 1, 1956,
(late proof)
authorizing the construction of a reservoir, with the right to appropriate and store 950
acre feet per annum of the waters of Thorn Creek,
a tributary of Big Wood River, in the County of Gooding,
State of Idaho, for stock watering purposes,
has fully complied with the provisions of the laws of the State of Idaho relating to the proof
of completion of the works set out and described in said Permit; that said works include a
dam and reservoir adequate for the storage of 950 acre feet of water per
annum, with adequate diversion works and conduit to the reservoir, and a conduit capable
of conducting said water to the place of intended use; that the point of outlet of said res-
ervoir is located in the NE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 6, Township
3 S., Range 16 E., B.M., and that the place of use, or the lands proposed
to be irrigated by the use of said water, are described as follows, to-wit: Water is used
at point of storage.; NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6, T. 3 S., R. 16 E., B.M.

Witness my hand this 15th day of March, 19 67


State Reclamation Engineer

R-993

March 15, 1967

Re: Permit No. R-993

Don Fredericksen, Vice President
Thorn Creek Cattle Association, Inc.
Route 1
Gooding, Idaho

Dear Mr. Fredericksen:

Enclosed is your Certificate of Completion of Works and License and Certificate of Water Right on the above numbered permit. Also included is departmental receipt No. 33616 in the amount of \$5.00 covering the fees.

Very truly yours,

M. Russell Bosch
Office Manager

MRB:dj

Enc.: Certificate of Completion of Works
License and Certificate of Water Right No. R-993
Receipt for \$5.00

R.993

DON SAMUELSON
GOVERNOR



R. KEITH HIGGINSON
State Reclamation Engineer

STATE OF IDAHO

DEPARTMENT OF RECLAMATION
107 STATE HOUSE
BOISE, IDAHO 83701

January 24, 1967

Re: Permit No. R-993

RECEIVED
JAN 1 1967

Department of Reclamation

Don Fredericksen, Vice President
Thorn Creek Cattle Association
Route 1
Gooding, Idaho

Dear Mr. Fredericksen:

Our field examiner's report on his inspection of proof of completion of works and application of water to beneficial use under the terms of Permit No. R-993 shows the reservoir and ditches are capable of conveying 950 acre feet or 190 miner's inches for stock watering.

Upon receipt of the statutory fees, totaling \$5.00, we will issue the Certificate of Completion of Works for 950 acre feet and the License and Certificate of Water Right for 950 acre feet confirming the right, with priority of June 1, 1956, to the use of surface water from Thorn Creek with the outlet of the reservoir in the NE1/4SE1/4, Sec. 6, T. 3 S, R. 16 E, B.M., for stock watering.

Very truly yours,

A handwritten signature in cursive script, reading "M. Russell Bosch".

M. Russell Bosch
Office Manager

MRB:nw

Cliff Stutzman - Sect.

Response to Mr.

Route 1

R-993

January 24, 1967

Re: Permit No. R-993

Don Fredericksen, Vice President
Thorn Creek Cattle Association
Route 1
Gooding, Idaho

Dear Mr. Fredericksen:

Our field examiner's report on his inspection of proof of completion of works and application of water to beneficial use under the terms of Permit No. R-993 shows the reservoir and ditches are capable of conveying 950 acre feet or 190 miner's inches for stock watering.

Upon receipt of the statutory fees, totaling \$5.00, we will issue the Certificate of Completion of Works for 950 acre feet and the License and Certificate of Water Right for 950 acre feet confirming the right, with priority of June 1, 1956, to the use of surface water from Thorn Creek with the outlet of the reservoir in the NE1/4SE1/4, Sec. 6, T. 3 S, R. 16 E, B.M., for stock watering.

Very truly yours,

M. Russell Bosch
Office Manager



MRB:nw

R- 993

Permit # R-993 Thorn Creek Res.

481



Note Erosion

11/7/63

Erosion has not increased
noticeably 8/66

DM

N/7/63

R-993 Tugm Creek Res

Crest and roadway

Sloughed
section

and young willow
growth

Marsh

AREA

Water closed

channel from
Outlet



No further sloughing
in this area 8/66

D. W.

R-993 THORN CREEK

11/7/63

#3



STATE OF IDAHO
DEPARTMENT OF RECLAMATION
BOISE

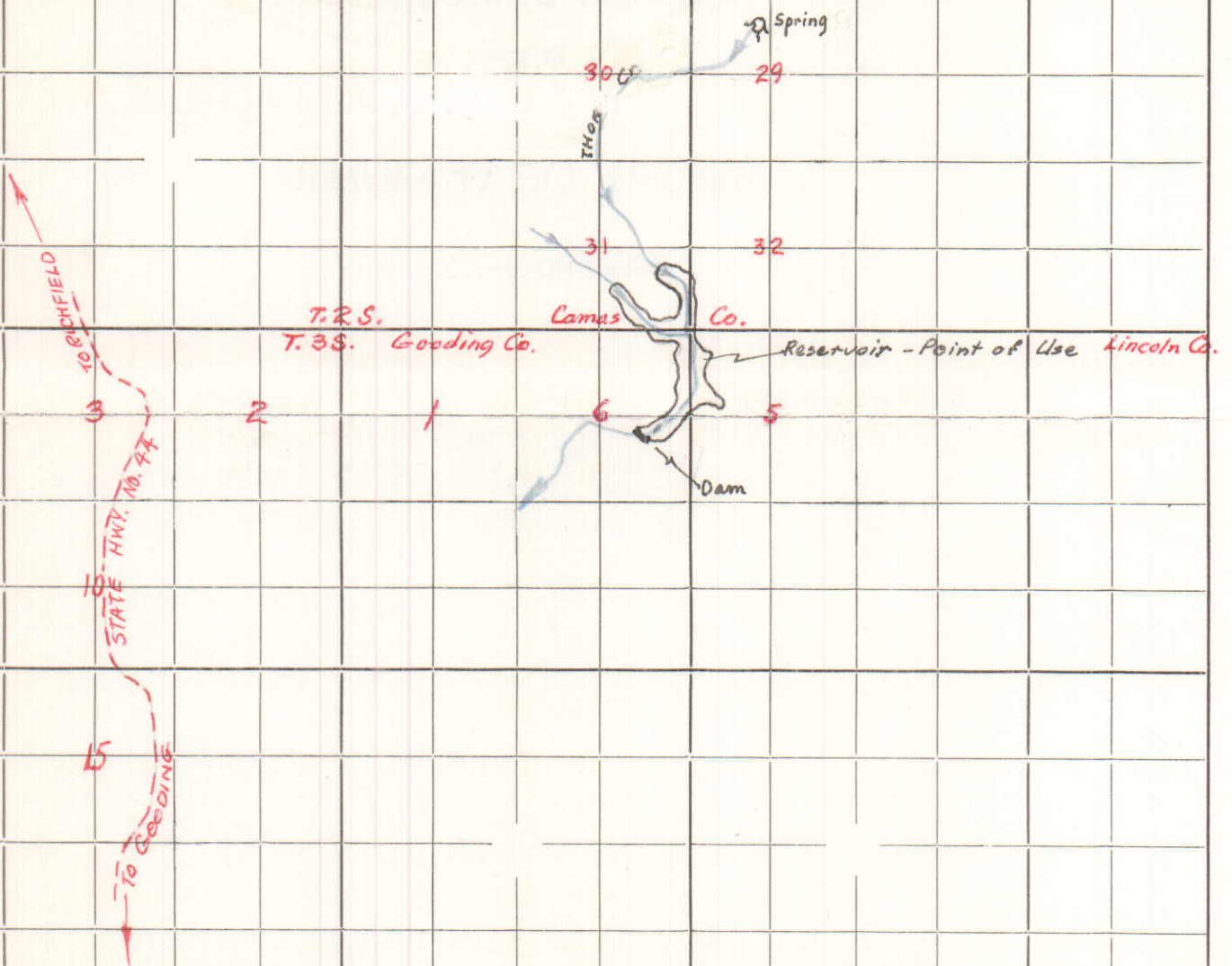
REPORT OF ENGINEER

PERMIT NO. R-993

REPORT ON PROOF OF Completion of Works & Beneficial Use
Don Fredericksen, Vice President
Thorn Creek Cattle Association
Rt 1
Gooding, Idaho

R-993

R-16E.



Storage for Stock Water

Q 950 A.F.

190"

STATE OF IDAHO
DEPARTMENT OF RECLAMATION
BOISE, IDAHO
REPORT OF ENGINEER

Permit No. R-993This proof is for Completion of Works & Beneficial Use In Water District No. _____

1. Name of applicant Don Fredericksen, Vice President, Thorn Creek Cattle Assn
2. Source of water supply: Thorn Creek, tributary of Big Wood River
3. Location of point of diversion: Is in the NE₄SE₄ of Section 6
T. 3 S R. 16 E., B.M. County of Gooding
4. Describe works as they exist, giving dimensions and capacities of same: _____

Slightly arched earth fill dam. Crest length 291' long from south edge of spillway embankment to where crest contacts natural embankment on south side. Crest width is 12'; height, 24' with a 4' freeboard. Upstream slope - 40% or 22°. Sloping outlet gate with 1" control stem in a 1½" G.I.P. oil tube. 1" vent tube paralleling stem tube on same anchor support piers. Conduit inlet submerged; could not inspect. Rock rip rap around and over stem tube, top 8' to 10' exposed with rock underneath. Slope eroded by wave action. No rip rap. Upstream face should be rip rapped. (See photo No. 1).

Down stream slope 35% or 19°30", slope length 60' (crest edge to toe.) A sagebrush growth is starting on face. Right abutment, looking upstream, has a depression and channel leading from it. Could be drainage water from higher ground to right flowing down that side of roadway that crosses crest of dam. I believe it is a seepage condition from the rock fracture on that side of the abutment, because of the young willow growth in bottom of depression (see photo No. 2.) Also note marshy condition at toe on right side of outlet. This could be because of the ponding effect from the submergence of the end of the outlet.

Concrete head wall at outlet end of conduit is in good condition, but channel has sloughed in and submerged the opening. Channel should be cleaned so outlet has a free discharge. Freezing could cause severe damage to outlet.

Impoundment - 126 surface acres, rated at 950 AF; SCS survey.

Spillway - north end of dam 24' x 4' x 30' cut through solid rock and flows over a solid rock floor to creek channel 50' to 100' below toe of dam. This does not endanger the dam structure. (See photo No. 3.)

ct number
e if other

*OK to license but repairs needed for
Department's approval for storage. DW*

This examination was made on the 7th day of November, 1963
(Signed) Loys J. Pearson Examiner.

Don Watts

plat R-993

1. Name of the project: Stock Watering

2. Location of the project: Stock Watering

3. Description of the project: Stock Watering

4. Water is used for: Stock Watering

5. State whether or not water has been turned into works of diversion:

6. List legal subdivisions of lands to be irrigated. If proof is for beneficial use, give exact number of acres under cultivation in each forty-acre tract. (Describe manner and place of use if other than irrigation):

Water is used at point of storage

(Submit map on attached plat, showing location and details of above description.)

8. What large stream would the water here appropriated finally reach?

Remarks: No one present at time of examination

OK to license but repairs needed for Department's approval for storage. DW

This examination was made on the

7th
31st
(Signed)

day of

November

1963

Examiner.

Lois Johnson
Don Watts

Plat ✓
2-9-63

27
145
25

INSTRUCTIONS TO EXAMINERS

1. Always carefully note the location of the point of diversion and accurately plat same.
2. When proof is for beneficial use, carefully check up the number of acres actually irrigated in each forty and accurately plat same.
3. Make a map showing the correct location of streams and ditches, and the irrigated lands, and any adjacent permanent landmarks, such as towns, lakes, large streams and public roads.
4. If any unusual conditions are discovered, make plain statement of them under remarks.
5. Always see the holder, if possible, and go over the whole ground with him and make your report only upon actual existing facts and conditions.
6. Give general characteristics of soils, topography, and crops raised.

RECEIVED
DEC 10 1963
Department of Reclamation

934.525 Don Fredericksen, Vice President
Thorn Creek Cattle Assn
Rt 1, Gooding, Idaho
Permit No. R-993

Examination for Completion of Works & Beneficial Use

County Gooding

Sec. 6 T. 3 S R. 16 E B.M.

Quantity: 950 A.F.

Source: Thorn Cr.

P.D.: NE. SE, Sec. 6, T. 3 S. R. 16 E.

Use: Stock water

Filed: May 31, 1956

Due: June 4, 1961

Extension:

Made: June 5, 1961

Priority: June 1, 1956

Completion of Works:

Other Rights: none stated

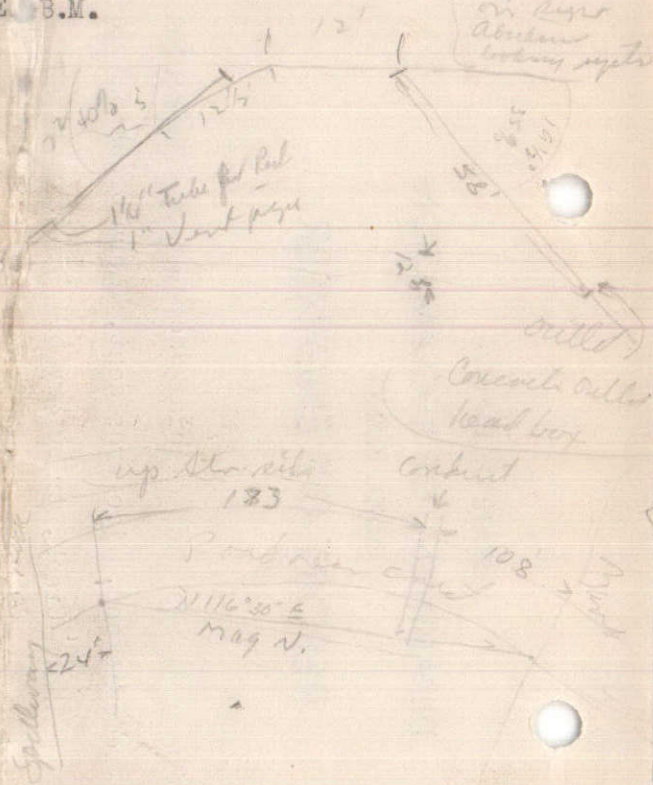
Can't get thru snow & mud
2 or 3 weeks 5/10/62

up the slope 45% - 22°

5' freboard

Book 3 pictures

uptn of D
Spillway
Quarry
on edge
Abandon
looking up



December 17, 1963

Re: Permit No. R-993

Don Fredericksen, Vice President
Thorn Creek Cattle Association
Route #1
Gooding, Idaho

Dear Mr. Fredericksen:

The inspection of the Thorn Creek Reservoir shows lack of rip-rap on the upstream slope and a seeped area above the outlet. The channel from the outlet was filled in from the seeped area.

Damage from lack of rip-rap on the upstream side is not serious at this time, however it should be watched.

The seeped area is serious and could develop to point where the dam would wash out.

The Soil Conservation Service has recommended a blanket on the upstream side and drainage of the seep area.

No certificates of water right can be issued until this seepage is properly controlled.

This office must issued order that the reservoir be drained and not refilled if the dam appears to be in danger of washing.

Very truly yours,

RALPH W. THOMAS, Deputy
State Reclamation Engineer

RT:ew

R-993

June 23, 1961

Re: Permit No. R-993

Don Fredericksen, Vice President
Thorn Creek Cattle Association
Rt 1
Gooding, Idaho

Dear Mr. Fredericksen:

We acknowledge receipt of the depositions of holder and two witnesses, also affidavit of publication in the Gooding Leader, all submitted in proof of completion of works and beneficial use on Permit No. R-993

Before final action is taken in the matter, the law requires that a field examination be made by an engineer from this department.

We cannot tell just when this examination will be made, but our field engineer will try and contact you at the time he makes the examination so that arrangements may be made to show him over the grounds.

Very truly yours,

GEO. N. CARTER
State Reclamation Engineer

By:

(Mrs.) Edna P. Rule
Chief Clerk

EPR:mr

P.S. Returned herewith is the publishers statement of the legal notice as we have no need of it in our files.

R-993

STATE OF IDAHO
DEPARTMENT OF RECLAMATION
BOISE, IDAHO

Permit No. R 993

Proof of Application of Water to Beneficial Use

and Completion of Works

Deposition of Holder

Ques. 1. State your name, residence, occupation and postoffice address.

Ans. Don Fredericksen, Gooding, Idaho, rancher

Ques. 2. If acting in behalf of corporation, state its name, principal place of business (if a foreign corporation, give name of postoffice of statutory agent), your position with reference to same, and your authority for appearing in its behalf.

Ans. Thorn Creek Cattle Assn., Inc., Shoshone, Lincoln County, Idaho.
Vice president of corporation.

Ques. 3. State number and date of permit, and date of priority you propose to establish under the permit.

Ans. R 993, June 4, 1956;

Ques. 4. State source of water supply and give exact location of point of diversion.

Ans. Thorn Creek, a tributary of Big Wood River; NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6,
Township 3 South, Range 16 E.B.M., Gooding County, Idaho

Ques. 5. Describe your works of diversion, and state amount of water they are capable of conveying from point of diversion to place of use, and give name of canal or ditch or other works by which water is conducted to such place of use. If a well, state depth of well, depth and size of casing and depth to water. If pump is used, state discharge of pump and tell how it was measured or determined. If sprinkler irrigation, give number and size of nozzles and operating pressure.

Ans. Reservoir with capacity of 950 acre feet formed in main channel
of Thorn Creek by earthfilled dam constructed across creek, with
spillway adequate to carry full flow of stream.

Ques. 6. State for what purpose water is used and describe place of use. (If for irrigation, name each subdivision in which used, and number of acres in each subdivision that have actually been irrigated with said water.) State whether cultivated or natural meadow land and the nature of all improvements which have been made as a direct result of said use.

Ans. Stock watering from reservoir.

R-993

Ques. 7. If for other than irrigation purposes; state how applied, amount of horse power generated, etc.

Ans. Stock watering.

Ques. 8. What is the minimum amount of water required for the purpose specified above?

Ans. 950 acre feet

Ques. 9. If you are not the person or representative of the corporation to whom above mentioned permit was originally issued, please state how ownership was acquired by present holder.

Ans. ---

Ques. 10. State when, how, in what amount and to what extent the water diverted under above mentioned permit has been used.

Ans. All has been used for stock watering.

Ques. 11. State when, how, in what amount and to what extent waters other than those diverted under the above mentioned permit have been diverted and applied to beneficial use upon the lands herein described. Give full particulars regarding such other appropriations and rights claimed thereunder.

Ans. ----

(Sign) *D. J. Fredericks*
Vice President of Thorn Creek Cattle Assn., Inc.

I hereby certify that the foregoing testimony was read to the above subscribed before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in Gooding, County of Gooding, State of Idaho, on this 5th day of June, A. D. 1961.

Andrew James
Notary Public for the State of Idaho
Residing at Gooding, Idaho

My commission expires Nov. 1, 1962

STATE OF IDAHO
DEPARTMENT OF RECLAMATION
BOISE, IDAHO

RECEIVED
JUN 21 1921
Department of Reclamation

PERMIT NO. R 993

**Proof of Application of Water to Beneficial Use
and Completion of Works
Deposition of Witness**

The deposition of two witnesses, on this form, taken separately, required in each case.

Ques. 1. State your name, age, residence, occupation and postoffice address.

Ans. Zern Mull, age 50 years, Gooding, Idaho,

Ques. 2. Are you acquainted with Thorn Creek Cattle Ass'n. Inc., the holder of Permit No. R 993? How long have you known him and where does he reside?

Ans. Yes. Abt. 10yrs. Corporation address: Shoshone, Lincoln Co., Idaho.

Ques. 3. Have you read or heard read said Permit No. R 993, and are you familiar with its provisions and conditions?

Ans. Yes

Ques. 4. State source of water supply, place of diversion, and describe works for conveying water from point of diversion to place of use.

Ans. Thorn Creek, a tributary of Big Wood River; NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6, T. 3 S., R. 16 E.B.M., Gooding County, Idaho; reservoir on Thorn Creek for the purpose stock watering.

Ques. 5. How many second feet of water do you estimate said works will safely conduct to place of use, and how much water have you seen being so conveyed?

Ans. Reservoir capacity 950 acre feet per annum

Ques. 6. State for what purpose water is used and at what place. (If for irrigation, give each subdivision in which water has been used and number of acres irrigated in each subdivision.) State whether cultivated or natural meadow land and the nature of all improvements which have been made as a direct result of said use.

Ans. Stock watering from reservoir situate in the NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6, T. 3 S., R. 16 E.B.M., Gooding County, Idaho

R-993

Ques. 7. If for power or other purposes than irrigation, state how water has been applied and to what extent.

Ans. No purposes other than stock watering from reservoir.

Ques. 8. (If for irrigation) state character of land that has been reclaimed, and give your estimate of the amount of water required for its profitable cultivation.

Ans. Not for irrigation.

Ques. 9. Have you any interest in the works, water or lands above mentioned? If so, in what way and to what extent?

Ans. No

Ques. 10. State when, how, in what amount and to what extent you have witnessed the application to beneficial use of water diverted under said permit.

Ans. once or twice a month during summer season since reservoir construction began.

(Signed) Zerr Mull

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me in Gooding, County of Gooding, State of Idaho, on this 5th day of June, A. D. 1961.

My commission expires Nov. 1, 1962

Andrew James
Notary Public.

STATE OF IDAHO
DEPARTMENT OF RECLAMATION
BOISE, IDAHO

PERMIT NO. R 993

**Proof of Application of Water to Beneficial Use
and Completion of Works
Deposition of Witness**

The deposition of two witnesses, on this form, taken separately, required in each case.

Ques. 1. State your name, age, residence, occupation and postoffice address.

Ans. Harry Patterson, age 53 years, Gooding, Idaho; rancher

Ques. 2. Are you acquainted with Thorn Creek Cattle Ass'n., Inc., the holder of Permit No. R 993? How long have you known him and where does he reside?

Ans. Yes. Abt. 10 yrs. Corporation address: Shoshone, Lincoln County, Idaho.

Ques. 3. Have you read or heard read said Permit No. R 993, and are you familiar with its provisions and conditions?

Ans. Yes.

Ques. 4. State source of water supply, place of diversion, and describe works for conveying water from point of diversion to place of use.

Ans. Thorn Creek, a tributary of Big Wood River; NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6, T., 3 S., R. 16 E.B.M., Gooding County, Idaho; reservoir on Thorn Creek for the purpose of stock watering.

Ques. 5. How many second feet of water do you estimate said works will safely conduct to place of use, and how much water have you seen being so conveyed?

Ans. Reservoir capacity 950 acre feet per annum

Ques. 6. State for what purpose water is used and at what place. (If for irrigation, give each subdivision in which water has been used and number of acres irrigated in each subdivision.) State whether cultivated or natural meadow land and the nature of all improvements which have been made as a direct result of said use.

Ans. Stock watering from reservoir situate in the NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6, T. 3 S., R. 16 E.B.M., Gooding County, Idaho

Ques. 7. If for power or other purposes than irrigation, state how water has been applied and to what extent.

Ans. No purposes other than stock watering from reservoir.

Ques. 8. (If for irrigation) state character of land that has been reclaimed, and give your estimate of the amount of water required for its profitable cultivation.

Ans. Not for irrigation.

Ques. 9. Have you any interest in the works, water or lands above mentioned? If so, in what way and to what extent?

Ans. No

Ques. 10. State when, how, in what amount and to what extent you have witnessed the application to beneficial use of water diverted under said permit.

Ans. I helped build reservoir in 1956 and have run cattle since then which have watered there.

(Signed) Harry Patterson

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me in Gooding,
County of Gooding, State of Idaho, on this 5th day of June,
A. D. 19 61.

My commission expires Nov. 1, 1962

Andrew James
Notary Public.

STATE OF IDAHO

DEPARTMENT OF RECLAMATION

BOISE

April 17, 1961

Re: Permit No. R-993

Thorn Creek Cattle Assn., Inc.

**James, Shaw, & James,
Attorneys at Law,
Box 176,
Gooding, Idaho.**

Attention: Andrew F. James

Gentlemen:

This acknowledges the Notice of Proof of Completion of Works and Application of Water to Beneficial Use under Permit No. R-993, in the name of Thorn Creek Cattle Assn., Inc.. Final Proof is to be made before you, as Notary on the 5th day of June, 1961, ~~xxxxx~~ at 10:00 o'clock A.M., at 115-3rd Ave. West, Gooding, Idaho.

As of this date we have mailed the Notice to the Gooding Leader with instructions to publish it once a week for four consecutive weeks prior to the date set for final proof and then mail the Affidavit of Publication and statement of costs to you.

It is important that the enclosed depositions be executed by the permit holder and two disinterested witnesses who are familiar with the terms of the permit and the work done thereunder, at the time, on the date and before you, as Notary, as stated in the publication notice. It is very important and necessary that each question be answered in detail.

In returning the depositions to this office, be sure that all copies have been signed, that your Notary's seal has been placed on each and that all depositions, (Holder and two witnesses) are being returned. Also be sure to enclose the Affidavit of Publication.

Very truly yours,

GEO. N. CARTER
State Reclamation Engineer

By:

(Mrs.) Edna P. ~~xxxxxx~~ ^{Rule}
Chief Clerk

Encl.
EPR:Pk
cc: Applicant

R-993

**NOTICE OF PROOF OF
COMPLETION OF WORKS
and
APPLICATION OF WATER TO
BENEFICIAL USE**

NOTICE is hereby given that at 10:00 a.m., on the 5th day of June, 1961, at Gooding, County of Gooding, State of Idaho, before Andrew F. James, Notary Public, at 115 3rd Ave. West, proof will be submitted of the completion of works for the diversion of 950 acre feet per annum of the waters of Thorn Creek, and of the application to beneficial use of said water, in accordance with the terms and conditions of Permit No. R-993, heretofore issued by the Department of Reclamation of the State of Idaho.

1. The name and postoffice address of the person or corporation holding said permit is: Thorn Creek Cattle Assn., Inc., Shoshone, Lincoln County, Idaho.

2. Said works of diversion will be fully completed on the date set for such completion and the amount of water which said works are capable of conveying to the place of use is 950 acre feet per annum.

3. The use to which said water has been applied is stock watering purposes, and the amount applied to beneficial use is 950 acre feet per annum.

4. The point of diversion of said

water is northeast corner of the NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6., Twp 3 S., R. 16 E.B.M., Gooding County, Idaho.

5. The place where said water is used is NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6, Twp. 3 S., R. 16 E.B.M., Gooding County, Idaho, and lands immediately surrounding. Total 126 acres.

6. The date of priority which said user is prepared to establish is June 4, 1956.

Geo. N. Carter, State Reclamation Engineer 25-28

RECEIVED

Department of Reclamation

NOTICE TO ACCOMPANY THIS LETTER MUST BE MADE IN DUPLICATE

(Date) April 13, 1961

(P. O.) Shoshone, Idaho

TO THE STATE RECLAMATION ENGINEER:

Boise, Idaho

Dear Sir:

You are hereby authorized to have the attached notice published at my expense in the

Gooding Leader of Gooding, Idaho published in

the county in which the works are situated.

THORN CREEK CATTLE ASS'N. INC., a
corporation

By

President

(In case of canals or other works designed to divert and carry more than 50 cubic feet of water per second, the following certificate must be signed by a well known and competent engineer.)

I hereby certify that the facts set forth in the attached notice are true.

Engineer.

R-993

500
8-15-60

STATE OF IDAHO
DEPARTMENT OF RECLAMATION

Boise, Idaho

Re: Permit No. R-993
THORN CREEK CATTLE ASSN., INC.

Date: April 17, 1961

Gooding Leader,
Gooding, Idaho.

Gentlemen:

Enclosed you will find notice for publication, once a week for four consecutive weeks prior to June 5, 1961 the date set for proof; the expense of the publication is to be paid by the applicant

Thorn Creek Cattle Assn., Inc. of Shoshone, Idaho
to whom you should furnish proof of publication on or prior to the date set for proof.

Please acknowledge receipt of this notice and furnish this office with a copy or tear sheet of the first publication.**

Very truly yours,


GEO. N. CARTER
State Reclamation Engineer

** If the first copy is not received in this office for checking purposes and errors appear in subsequent issues, it is possible that re-publication of corrected copy will be at your own expense

Encl.

R-993

AFFIDAVIT OF PUBLICATION

RECEIVED
MAY 15 1961

Department of Reclamation

NOTICE OF PROOF OF COMPLETION OF WORKS and APPLICATION OF WATER TO BENEFICIAL USE

NOTICE is hereby given that at 10:00 a.m., on the 5th day of June, 1961, at Gooding, County of Gooding, State of Idaho, before Andrew F. James, Notary Public, at 115 3rd Ave. West, proof will be submitted of the completion of works for the diversion of 950 acre feet per annum of the waters of Thorn Creek, and of the application to beneficial use of said water, in accordance with the terms and conditions of Permit No. R-993, heretofore issued by the Department of Reclamation of the State of Idaho.

1. The name and postoffice address of the person or corporation holding said permit is: Thorn Creek Cattle Assn., Inc., Shoshone, Lincoln County, Idaho.

2. Said works of diversion will be fully completed on the date set for such completion and the amount of water which said works are capable of conveying to the place of use is 950 acre feet per annum.

3. The use to which said water has been applied is stock watering purposes, and the amount applied to beneficial use is 950 acre feet per annum.

4. The point of diversion of said

water is northeast corner of the NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6., Twp 3 S., R. 16 E.B.M., Gooding County, Idaho.

5. The place where said water is used is NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6, Twp. 3 S., R. 16 E.B.M., Gooding County, Idaho, and lands immediately surrounding. Total 126 acres.

6. The date of priority which said user is prepared to establish is June 4, 1956.

Geo. N. Carter, State Reclamation Engineer 25-28

STATE OF IDAHO,
COUNTY OF GOODING

SS.

I, *Leland G. Burress*, do solemnly swear that I am the printer and publisher of THE GOODING LEADER, a weekly newspaper of general circulation, published once each week at Gooding, Idaho; that the notice attached hereto was

published in said newspaper *four* consecutive weeks, the first publication having been made on the *20th* day of *April*, 195*6*, and the last publication having been

made on the *11th* day of *May*, 195*6*, that said notice was published in the regular and entire issue of every number of the paper during that period and time of publication, and that the said notice was published in the newspaper proper, and not in the supplement thereof.

That said newspaper; has been printed and published continuously in *Gooding, Gooding County, Idaho*, for a period of more than 78 weeks prior to the first publication of the attached notice.

Leland G. Burress

Subscribed and sworn to before me this

11th day of *May*, 195*6*.

Ruth Burress

Notary Public.

R-993

JAMES, SHAW & JAMES
ATTORNEYS AT LAW
GOODING, IDAHO

A. F. JAMES (1885-1950)
CHAS. C. SHAW
ANDREW F. JAMES

RECEIVED
JUN 22 1961
P.O. BOX 176
TELEPHONE 15

June 21, 1961

Department of Reclamation

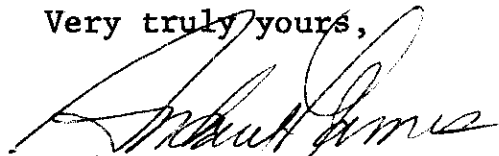
Reclamation Engineer
State of Idaho
Department of Reclamation
Boise, Idaho

Re: Thorn Creek Cattle Assn.
Permit No. R-993

Dear Sir:

Pursuant to letter of Mrs. Edna P. Rule dated April 17, 1961, in regard to the above permit, hearing was had before me on the 5th day of June, 1961, as a result of which we enclose Deposition of Holder and Depositions of two witnesses, together with "Paid" copy of statement for publication fees. We understand that the affidavit of publication was mailed to you by the Gooding Leader.

Very truly yours,



Andrew F. James

for

JAMES & SHAW

AFJ:dh
Enclosures

R-993

RECEIVED
APR 17 1961

JAMES, SHAW & JAMES

ATTORNEYS AT LAW
GOODING, IDAHO

A. F. JAMES (1888-1980)
CHAS. C. SHAW
ANDREW F. JAMES

Department of Reclamation

P. O. BOX 178
TELEPHONE 15

April 14, 1961

Commissioner of Reclamation
State of Idaho
Boise, Idaho

Attention: Mr. Ralph W. Thomas

Dear Sir:

Re: Permit No. R-993
Thorn Creek Cattle
Assn. Inc.

In accordance with your letter of March 29 relative to the above matter, please find enclosed form No. 11 signed by Mr. Frederickson, President.

Very truly yours,

JAMES & SHAW

Andrew F. James
Andrew F. James

AFJ/ah

Enclosure

R-993

NOTICE OF PROOF OF COMPLETION OF WORKS
and
APPLICATION OF WATER TO BENEFICIAL USE

NOTICE is hereby given that at 10:00 M., on the 5th day of June 1961, at Gooding, County of Gooding, State of Idaho, before Andrew F. James, Notary Public, at (address) 115 3rd Ave. West, proof will be submitted of the completion of works for the diversion of 950 ~~xxxxxx~~ acre feet per annum of the waters of Thorn Creek, and of the application to beneficial use of said water, in accordance with the terms and conditions of Permit No. R-993, heretofore issued by the Department of Reclamation of the State of Idaho.

1. The name and postoffice address of the person or corporation holding said permit is: Thorn Creek Cattle Assn., Inc., Shoshone, Lincoln County, Idaho.

2. Said works of diversion will be fully completed on the date set for such completion and the amount of water which said works are capable of conveying to the place of use is 950 ~~xxxxxx~~ acre feet per annum

3. The use to which said water has been applied is stock watering purposes, and the amount applied to beneficial use is 950 ~~xxxxxx~~ acre feet per annum.

4. The point of diversion of said water is northeast corner of the NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6., Twp 3 S., R. 16 E.B.M., Gooding County, Idaho

5. The place where said water is used is NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 6, Twp. 3 S., R. 16 E.B.M., Gooding County, Idaho, and lands immediately surrounding

Total 126 acres.

6. The date of priority which said user is prepared to establish is June 4, 1956

[Signature]
State Reclamation Engineer

R. 993 RT

April 10, 1961

Re: Permit No. R-993
Thorn Creek Cattle Ass'n., Inc.

James, Shaw & James
Attorneys at Law
Box 176, Gooding, Idaho

Attn: Andrew F. James

Dear Mr. James:

We received the Forms 36-A without the Form 11. Kindly complete Form 11 and send to this office at your earliest convenience.

Form 36-A can be used to make proof of completion of works and beneficial use of the water with one operation, the same as the proofs for subterranean water. The unit of water measurement was changed correctly. We have so few storage permits that special forms have not been prepared.

Very truly yours,

GEO. N. CARTER
State Reclamation Engineer

By:

(Mrs.) Edna P. Rule
Chief Clerk

RT:
EPR:ew

R-993-1

JAMES, SHAW & JAMES
ATTORNEYS AT LAW
GOODING, IDAHO

A. F. JAMES (1883-1950)
CHAS. D. SHAW
ANDREW F. JAMES

April 6, 1961

RECEIVED
APR 10 1961

P. O. BOX 175
TELEPHONE 15

Department of Reclamation

Commissioner of Reclamation
State of Idaho
Boise, Idaho

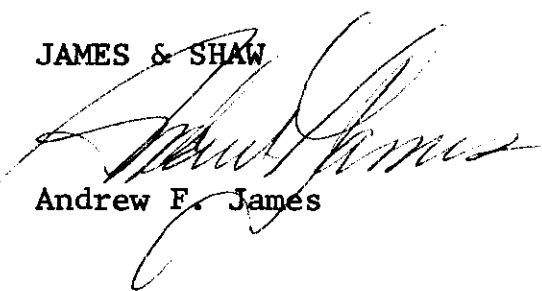
Dear Sir:

Re: Permit No. R-993
Thorn Creek Cattle Assn. Inc.

Reference is made to the above numbered permit and your letter of March 29 by which you enclosed certain forms to be completed and returned. Form 36-A would not seem to apply, since it refers to the amount of cubic feet per second applied to beneficial use, whereas the permit is a storage permit. We have, however, completed the same and enclose it herewith in case it will suffice.

Very truly yours,

JAMES & SHAW


Andrew F. James

AFJ:dh
Enclosure

R 993

March 29, 1961

Re: Permit No. R-993
Thorn Creek Cattle Ass'n., Inc.

James, Shaw and James
Attorneys at Law
Box 176, Gooding, Idaho

Attn: Andrew P. James

Dear Mr. James:

Enclosed are Forms 6, 10 and 11, and also Forms 36-A. We assume your letter of March 28 refers to the storage Permit R-993.

You may use the Form 6 to prove completion of works and return the fee of \$5.00 with the form, or make both proofs by completing Form 36-A, Notice of Proof of Completion of Works and Beneficial Use of the water. Forms 36-A should not be used if the date of making proofs is after the date the proof of completion of works is due.

Very truly yours,

GEO. N. CARTER
State Reclamation Engineer

By:

RALPH W. THOMAS, Deputy
State Reclamation Engineer

RT:ew

Enc. Forms 6, 10, 11-36A

R-993

JAMES, SHAW & JAMES

ATTORNEYS AT LAW

GOODING, IDAHO

A. F. JAMES (1893-1950)

CHAS. C. SHAW

ANDREW F. JAMES

P. O. BOX 176

TELEPHONE 16

March 28, 1961

Commissioner of Reclamation
State of Idaho
Boise, Idaho

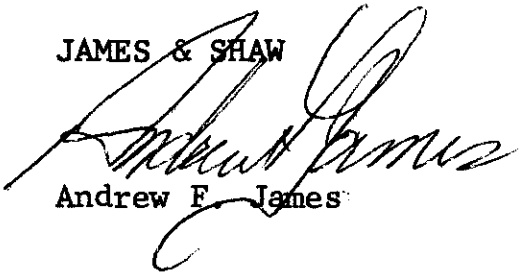
RECEIVED
MAR 28 1961
Department of Reclamation

Dear Sir:

The Thorn Creek Cattle Ass'n. Inc. desires to submit proof of application of waterto beneficial use and notice of completion of works, and we wish you would send us the necessary forms for this purpose.

Very truly yours,

JAMES & SHAW


Andrew F. James

AFJ:dh

R-993

450 Ac Ft

P. 993

UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P. O. Box 2709
Boise, Idaho

RECEIVED
JUL 27 1956
Department of Reclamation

July 26, 1956

Mr. Mark R. Kulp
State Reclamation Engineer
Idaho State Reclamation Association
State House
Boise, Idaho

Dear Mr. Kulp:

The attached information on hydrology, hydraulics
and soils completes the Thorn Creek Docket.

The plans and specifications were left with
you Monday, July 23, 1956.

Very truly yours,

Meador H. Wilkins
Meador H. Wilkins
State Conservation Engineer

Attachments

R-993

MATERIALS TESTING LABORATORY REPORT

SOIL CLASSIFICATION

PROJECT Thorn Creek Stock Dam		LOCATION Gooding SCD, Twin Falls, Idaho
FIELD SAMPLE No. 3	TYPE of SAMPLE Bag	ORIGIN Boring 2 0 to 2 ft.
PROPOSED USE Fill Material	LABORATORY SAMPLE No. 228-I-56	TESTED BY JS

1: GROUP SYMBOL CL-1	2: DESCRIPTION Fine silty clay, low plasticity.
-------------------------	--

3: GRAIN SIZE DISTRIBUTION	4: PARTICLE SIZES (mm)	5: GRADING								
	<table border="1"> <tr> <td>D₁₀ 0.0014</td> <td>D₁₅ 0.0024</td> <td>D₃₀ 0.0063</td> </tr> <tr> <td>D₅₀ 0.020</td> <td>D₆₀ 0.031</td> <td>D₈₅ 0.074</td> </tr> </table>	D ₁₀ 0.0014	D ₁₅ 0.0024	D ₃₀ 0.0063	D ₅₀ 0.020	D ₆₀ 0.031	D ₈₅ 0.074	<table border="1"> <tr> <td>C_u ---</td> </tr> <tr> <td>C_c ---</td> </tr> </table>	C _u ---	C _c ---
	D ₁₀ 0.0014	D ₁₅ 0.0024	D ₃₀ 0.0063							
	D ₅₀ 0.020	D ₆₀ 0.031	D ₈₅ 0.074							
	C _u ---									
C _c ---										
6: ATTERBERG LIMITS	7: INCLUSIONS									
<table border="1"> <tr> <td>LL 32</td> <td>PI 11</td> </tr> </table>	LL 32	PI 11	<table border="1"> <tr> <td>% TDS ---</td> <td>% ORGANIC ---</td> </tr> </table>		% TDS ---	% ORGANIC ---				
LL 32	PI 11									
% TDS ---	% ORGANIC ---									
8: UNDISTURBED CONDITION										
WATER CONTENT ---	DRY UNIT WEIGHT ---	VOID RATIO (e) ---								
TEXTURE ---	CONSISTENCY ---	COLOR ---								

9: SPECIFIC GRAVITY 2.66	10: CHARACTERISTICS of COARSE FRACTION			
	ROCK CONTENT (% + No. 4) 1.2	DRY DENSITY ---	MOISTURE CONTENT (SSD) ---	DURABILITY ---

11: REMARKS

U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE <i>H. L. Caddlemann Jr.</i> TITLE Civil Engineer	DATE 6/18/56
---	---	-----------------

SOIL CLASSIFICATION

1: GROUP SYMBOL	2: DESCRIPTION
CL-2	Fine inorganic silty clay.

9: SPECIFIC GRAVITY	10: CHARACTERISTICS of COARSE FRACTION			
2.73	ROCK CONTENT (% + No. 4) 0.3	DRY DENSITY ---	MOISTURE CONTENT (SSD) ---	DURABILITY ---

11: REMARKS

RECEIVED
JUL 27 1956
Department of Reclamation

U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE	
	TITLE Civil Engineer	DATE 6/18/56 R.90

MATERIALS TESTING LABORATORY REPORT

SOIL CLASSIFICATION

PROJECT Thorn Creek Stock Dam		LOCATION Gooding SCD, Twin Falls, Idaho
FIELD SAMPLE No. 2	TYPE of SAMPLE Bag	ORIGIN Boring 1 2 to 4 ft.
PROPOSED USE Shell Material	LABORATORY SAMPLE No. 227-I-56	TESTED BY JS

1: GROUP SYMBOL SC	2: DESCRIPTION Clayey, silty sand.
------------------------------	--

3: GRAIN SIZE DISTRIBUTION	4: PARTICLE SIZES (mm)	5: GRADING								
	<table border="1"> <tr> <td>D₁₀ 0.017</td> <td>D₁₅ 0.049</td> <td>D₃₀ 0.37</td> </tr> <tr> <td>D₅₀ 0.92</td> <td>D₆₀ 1.30</td> <td>D₈₅ 7.10</td> </tr> </table>	D ₁₀ 0.017	D ₁₅ 0.049	D ₃₀ 0.37	D ₅₀ 0.92	D ₆₀ 1.30	D ₈₅ 7.10	<table border="1"> <tr> <td>C_u --</td> </tr> <tr> <td>C_c --</td> </tr> </table>	C _u --	C _c --
	D ₁₀ 0.017	D ₁₅ 0.049	D ₃₀ 0.37							
	D ₅₀ 0.92	D ₆₀ 1.30	D ₈₅ 7.10							
	C _u --									
C _c --										
6: ATTERBERG LIMITS	7: INCLUSIONS									
<table border="1"> <tr> <td>LL 29</td> <td>PI 9</td> </tr> </table>	LL 29	PI 9	<table border="1"> <tr> <td>%TDS --</td> <td>%ORGANIC --</td> </tr> </table>		%TDS --	%ORGANIC --				
LL 29	PI 9									
%TDS --	%ORGANIC --									
8: UNDISTURBED CONDITION										
<table border="1"> <tr> <td>WATER CONTENT --</td> <td>DRY UNIT WEIGHT --</td> <td>VOID RATIO (e) --</td> </tr> <tr> <td>TEXTURE --</td> <td>CONSISTENCY --</td> <td>COLOR --</td> </tr> </table>			WATER CONTENT --	DRY UNIT WEIGHT --	VOID RATIO (e) --	TEXTURE --	CONSISTENCY --	COLOR --		
WATER CONTENT --	DRY UNIT WEIGHT --	VOID RATIO (e) --								
TEXTURE --	CONSISTENCY --	COLOR --								

9: SPECIFIC GRAVITY 2.75	10: CHARACTERISTICS of COARSE FRACTION			
	ROCK CONTENT (% + No. 4) 9.0	DRY DENSITY --	MOISTURE CONTENT (SSD) --	DURABILITY --

11: REMARKS
RECEIVED JUL 27 1956 Department of Reclamation

U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE <i>H. L. Cappelman Jr.</i> TITLE Civil Engineer DATE 6/18/56 P. 993
--	---

MATERIALS TESTING LABORATORY REPORT

SOIL CLASSIFICATION

PROJECT Thorn Creek Stock Dam		LOCATION Gooding SCD, Idaho
FIELD SAMPLE No. 4	TYPE of SAMPLE Bag	ORIGIN Boring No. 3, 0-4'
PROPOSED USE Fill	LABORATORY SAMPLE No. 229-I-56	TESTED BY JS

1: GROUP SYMBOL CL-1	2: DESCRIPTION Very fine silty clay.
-------------------------	---

3: GRAIN SIZE DISTRIBUTION	4: PARTICLE SIZES (mm)	5: GRADING								
	<table border="1"> <tr> <td>D₁₀ 0.0012</td> <td>D₁₅ 0.0024</td> <td>D₃₀ 0.0084</td> </tr> <tr> <td>D₅₀ 0.021</td> <td>D₆₀ 0.031</td> <td>D₈₅ 0.075</td> </tr> </table>	D ₁₀ 0.0012	D ₁₅ 0.0024	D ₃₀ 0.0084	D ₅₀ 0.021	D ₆₀ 0.031	D ₈₅ 0.075	<table border="1"> <tr> <td>C_u ---</td> </tr> <tr> <td>C_c ---</td> </tr> </table>	C _u ---	C _c ---
	D ₁₀ 0.0012	D ₁₅ 0.0024	D ₃₀ 0.0084							
	D ₅₀ 0.021	D ₆₀ 0.031	D ₈₅ 0.075							
	C _u ---									
C _c ---										
6: ATTERBERG LIMITS	7: INCLUSIONS									
<table border="1"> <tr> <td>LL 31</td> <td>PI 11</td> </tr> </table>	LL 31	PI 11	<table border="1"> <tr> <td>% TDS ---</td> <td>% ORGANIC ---</td> </tr> </table>		% TDS ---	% ORGANIC ---				
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WATER CONTENT ---	DRY UNIT WEIGHT ---	VOID RATIO (e) ---								
TEXTURE ---	CONSISTENCY ---	COLOR ---								

9: SPECIFIC GRAVITY 2.70	10: CHARACTERISTICS of COARSE FRACTION			
	ROCK CONTENT (% + No. 4) 0.7%	DRY DENSITY ---	MOISTURE CONTENT (SSD) ---	DURABILITY ---

11: REMARKS

U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE R 993	
	TITLE Civil Engineer	DATE May 29, 1956

COMPUTATION SHEET

State Idaho Project Thorn Creek Dam
 Subject Hydrology
 Job No. _____ Date 4/20/56 By THC RBE Sheet No. 115

① Interval	② Elapsed time hrs	③ Inst. Q cfs	④ Av. Q Cfs	⑤ Vol/Int cfs hrs	⑥ ws Elev end of Interval	⑦ Discharge cfs
	0	0			102.5	0
1	1	60	30	30	102.7	6
2	2	155	108		103.3	42
3	3	280	218		104.2	137
4	4	355	318		105.0	255
5	5	350	353		105.4+	326
6	6	295	323		105.4-	318
7	7	260	278		105.2	286
8	8	245	253		105.0	261
9	9	215	230	230	104.9	238
10	10	180	198		104.7	210
11	11	135	158		104.5	175
12	12	105	120		104.2	141
13	13	95	100		104.0	116
14	14	70	83		103.8	97
15	15	45	58		103.6	75
16	16	30	38		103.4	56
17	17	15	23		103.2	40
18	18	5	10	10	103.1	28

RECEIVED
 JUL 27 1956
 Department of Reclamation

COMPUTATION SHEET

State Idaho Project Thorn Creek Dam
 Subject Hydrology (Spillway Rating)
 Job No. _____ Date 6/2/55 By JHC RSB Sheet No. 215

$$b = 20' \quad z = 1/2:1$$

Res. hts.	D_n	$D_c = 2/3 D_n$	H_v	V	A	Q	Q/A
102.5	0	0	0	0	0	0	0
103	0.5	.33	.17	3.31	6.65	22.0	11.0
102.5	1.0	0.67	.33	4.61	13.60	62.6	31.3
104	1.5	1.0	.50	5.68	20.50	116.5	58.3
104.5	2.0	1.33	.67	6.56	27.50	180.0	90.0
105	2.5	1.67	.83	7.32	34.80	255.0	127.5
105.5	3.0	2.00	1.00	8.03	42.0	337.0	168.5

Surcharge = 0 @ 102.5 and 357 @ 105.0

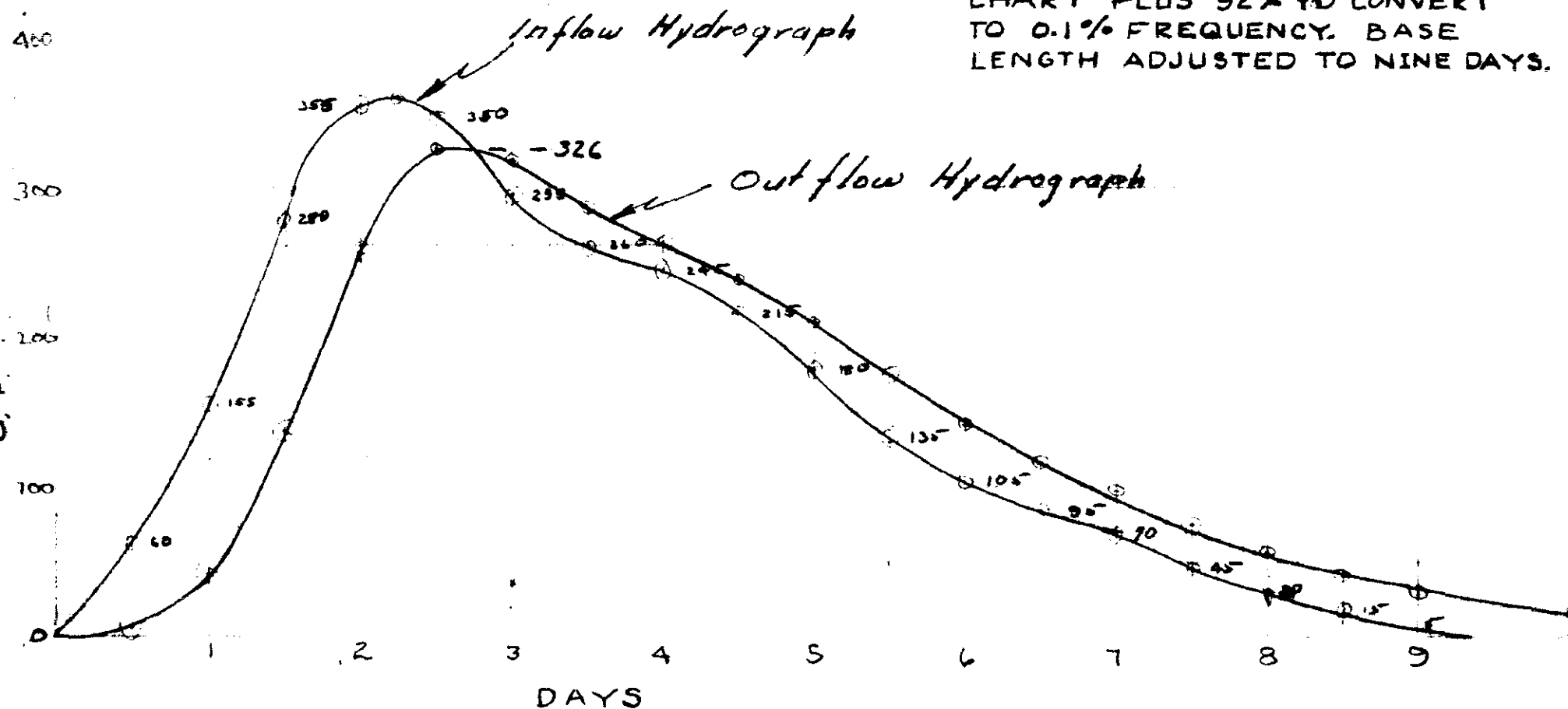
Thorn Ch. hydrograph taken proportional to Spring Valley Fork
 of Dry Creek with peak determined by 2% Runoff chart
 plus 92% to convert to 0.1% frequency. Base length
 arbitrarily set at 9 days (~~Seems~~ ^{NO} that for 10-20 sq. mi.
 watershed use about 1 day / sq. mi. in similar run-off conditions)
 Routed as in 'Typical Spillway Design for earth fill dams'
 by Hol Enderlin & staff 1951

FLOOD FLOW HYDROGRAPH THORN CREEK, IDAHO

0.1 % Flood

6/20/56 TNC RRB

INTAKE HYDROGRAPH TAKEN
PROPORTIONAL TO SPRING
VALLEY FORK OF DRY CREEK
WITH PEAK SET BY 2% RUNOFF
CHART PLUS 92% TO CONVERT
TO 0.1% FREQUENCY. BASE
LENGTH ADJUSTED TO NINE DAYS.



R-993

RECEIVED
JUL 25 1956
DEPARTMENT OF AGRICULTURE

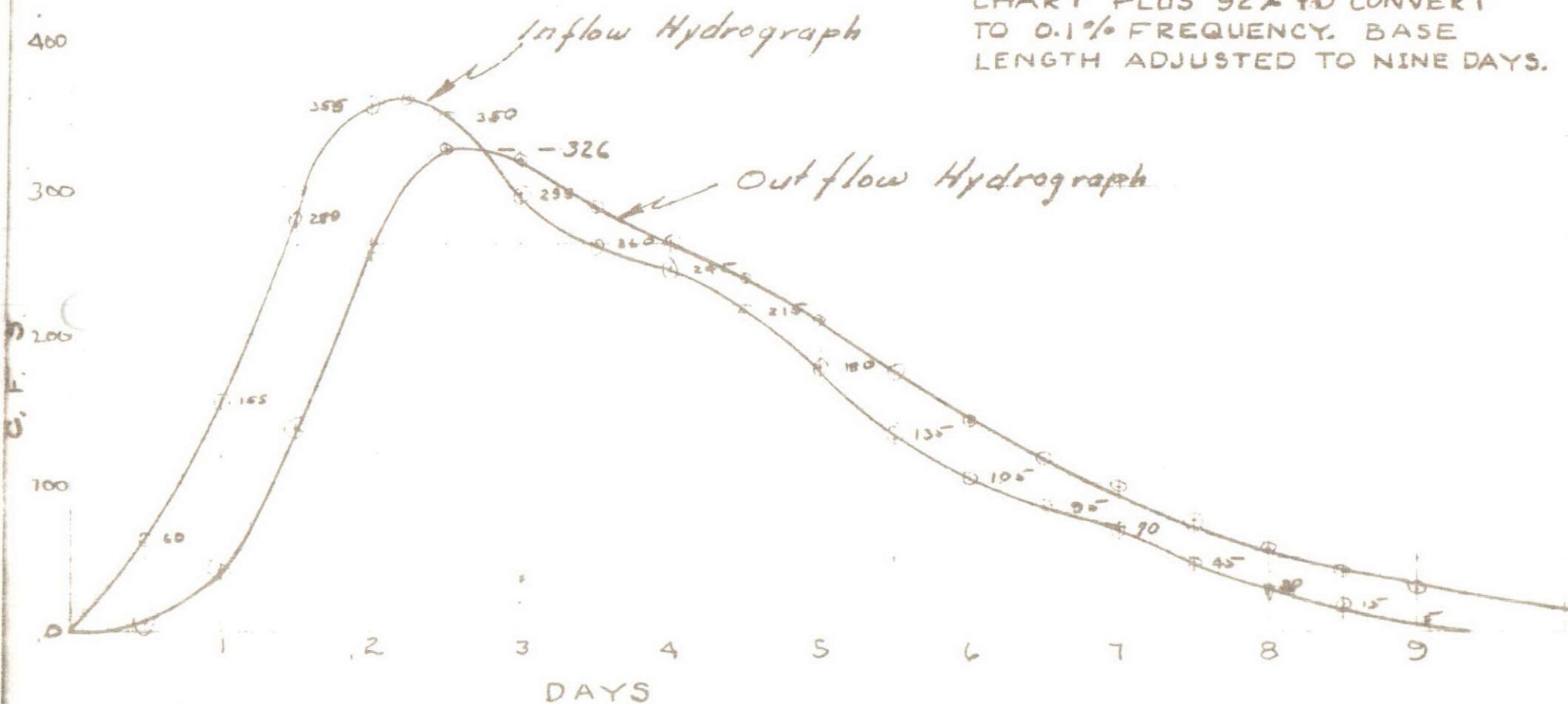
FLOOD FLOW HYDROGRAPH THORN CREEK, IDAHO

0.1 % Flood

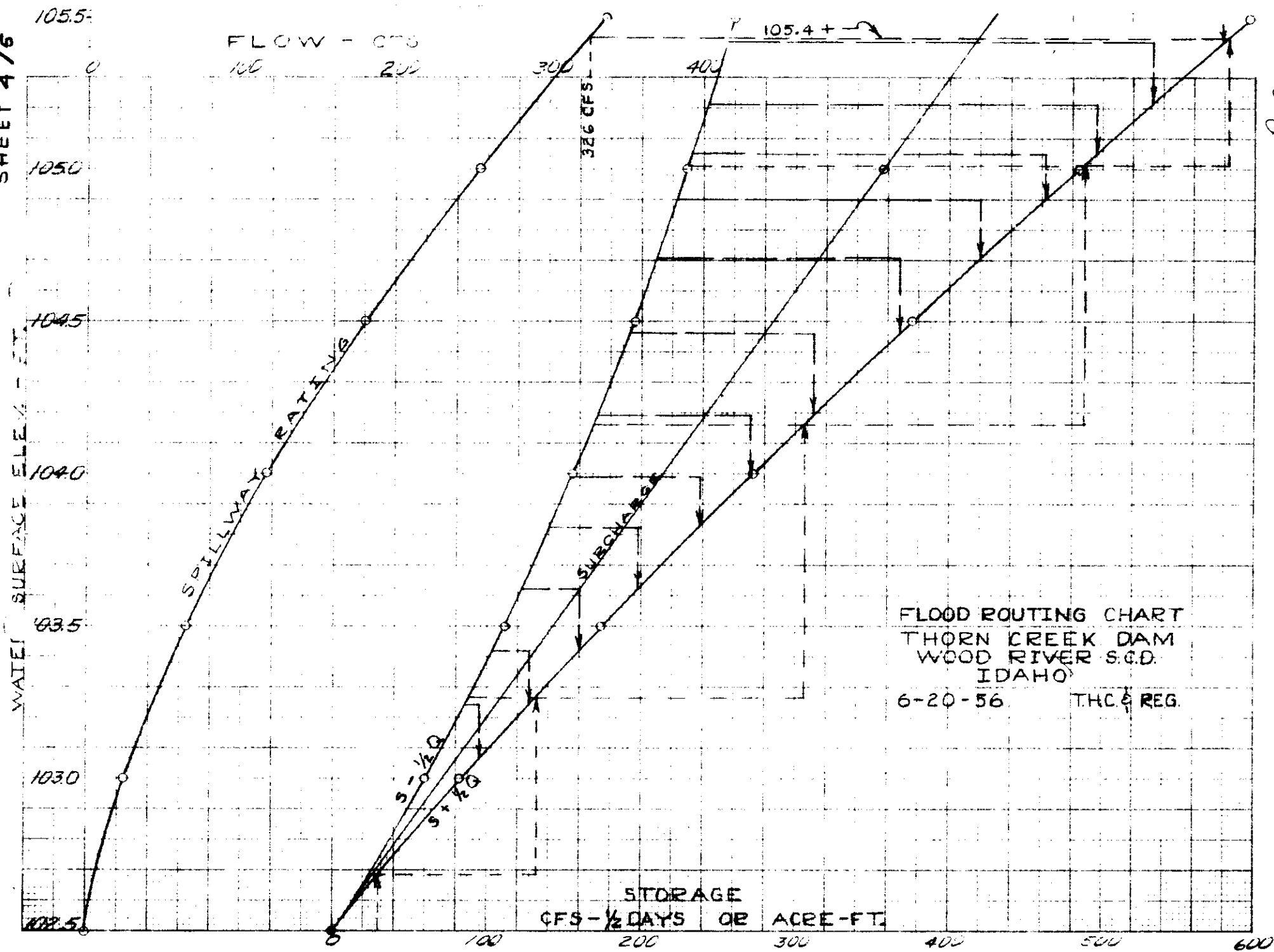
6/20/56 TNC ~~1956~~

INTAKE HYDROGRAPH TAKEN
PROPORTIONAL TO SPRING
VALLEY FORK OF DRY CREEK
WITH PEAK SET BY 2% RUNOFF
CHART PLUS 92% TO CONVERT
TO 0.1% FREQUENCY. BASE
LENGTH ADJUSTED TO NINE DAYS.

R-993



SHEET 4/6



FLOOD ROUTING CHART
THORN CREEK DAM
WOOD RIVER S.C.D.
IDAHO
6-20-56

THC & REG.

R-993

105.5-

FLOW - CFS

105.4 +

WATER SURFACE ELEV. - FT.

105.0

104.5

104.0

103.5

103.0

102.5

SPILLWAY RATING

326 CFS

SURCHARGE

$S - \frac{1}{2}Q$

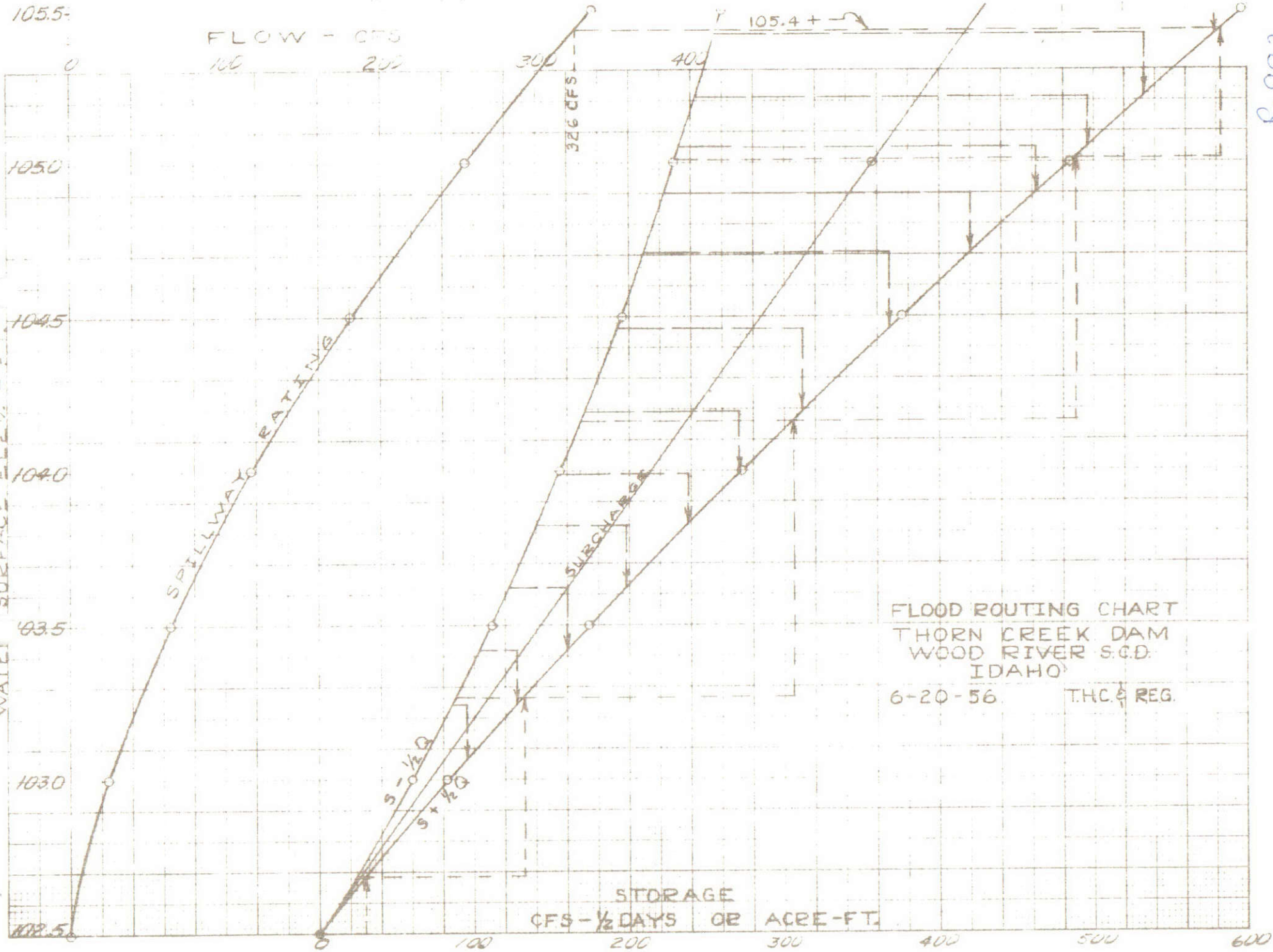
$S + \frac{1}{2}Q$

STORAGE
CFS - 1/2 DAYS OR ACRE-FT.

FLOOD ROUTING CHART
THORN CREEK DAM
WOOD RIVER S.C.D.
IDAHO

6-20-56 T.H.C. & REG.

R-993



COMPUTATION SHEET

State Idaho Project Thorn Creek Dam
 Subject Revised Spillway Hydraulics
 Job No. _____ Date 6/20/56 By [Signature] Sheet No. 5 / 5

$Q_c = 326 \text{ cfs}$ $n = 0.04$ $z = 1\frac{1}{2}:1$ $b = 20'$ $Q/b = 16.3 \text{ } \frac{3}{4} = .025$
 $d_c = 1.98$ $A_c = 41.6 \text{ ft}^2$ $V_c = 7.85$ $J_c < 20\%$

Sta	D	b	A	V	R	S _f	S ₀	h _v	H _e ¹¹	H _e ¹	L	?
0+29	1.98	20.0	41.6	7.85	1.70			.955				
				7.71	1.82	.0173	0.0		2.993	2.755	13.8	ok
0+15.2	2.30	20	48.7	6.69	1.94			.693				
				6.61	1.96	.0129			2.021	2.442	2.17	short
	2.36	20	44.9	6.53	1.98			.641				
				6.52	1.98	.0124			3.045	2.993	4.19	short
0+11.0	2.42	20	51.3	6.35	2.02			.625				
				6.30	2.035	.0112			2.067	3.005	1.01	short
	2.46	20	58.2	6.24	2.05			.603				
				6.25	2.045	.0109			3.078	3.005	2.5	✓
0+08	2.49	20	58.9	6.16	2.07			.588				
							-.075					

W.S. E1. = 102.5
 + D @ 0+08 = 2.49
 + H_v 1 ✓ = .59
 105.58

Set Spillway Crest 102.4
 Max W.S. = 105.5
 Top Dam 107.5
 2' Fb. on 0.1% storm

Project plan
For *R-993*
CONSERVATION OPERATIONS
For the
THORN CREEK CATTLE ASSOC. RESERVOIR



SOIL CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

Assisting the

Wood River

SOIL CONSERVATION DISTRICT
STATE of IDAHO

R-993

LOCATION AND SCOPE OF WORK

Location

The work to be done under these plans and specifications is located on Thorn Creek in Gooding County and Lincoln County, Idaho on Thorn Creek Cattle Association property. The site is approximately twenty miles northwest of Shoshone.

Description

The principal features of this work consist of construction of an earth dam, spillway cut through rock formation, and outlet conduit with cutoff collars and appertenances.

The embankment will be about 271 feet long and have a maximum height of 25 feet. Estimated embankment fill is about 11,500 cu. yds.

The spillway will be cut through rock and will not necessitate concrete lining other than that required to level the crest. Removal of about 60 cu. yds. of rock will be involved.

The outlet will be 12" reinforced concrete pipe with reinforced concrete cutoff collars spaced along the length of the pipe. The estimated quantity of concrete for cutoff collars and appertenances is 7 cu. yds.

Purpose

Proposed storage capacity of about 950 acre feet of water is to provide stock water, possible development for stocking fish, and irrigation storage for possible future development of land.

Downstream Flood Plain Conditions

Immediately below the dam for approximately 4 miles the stream is confined to a gorge of adequate size to carry any flow that might result from failure of the dam. There is no usable land or development in this reach. For the next 2.5 miles the stream flows through a moderately developed dry farm area. About 160 acres of this land adjacent to the river is within the area assumed to be flooded in event of failure of the proposed dam. For the next 7.5 miles the stream is confined to a gorge of adequate size to carry any flow that might result from failure of the proposed dam. For the next 4 miles the creek flows through an irrigated farm area and then empties into Big Wood River. About 1,000 acres of farmland lie adjacent to the creek channel, and three bridges and one canal flume span the channel through this reach of the creek. While the channel has proven adequate to carry the peak watershed run-off through this area during the past years, it is doubtful if it would handle the flood in event of a dam failure.

It could be assumed that substantial loss of property and possibly loss of life might result from a dam failure.

The total length of the creek below the dam is about 18 miles to where it empties into Big Wood River.

Below this confluence such a flow would be absorbed by the larger channel of Big Wood River.

DEFINITIONS AND RELATIONSHIP
OF PARTIES CONCERNED

Owner

In these specifications the "owner" shall be understood to be the Thorn Creek Cattle Association.

The owner is responsible for all expenditures for construction. All items of work to be paid by the owner must have the owner's approval.

It is understood that the owner will execute the plans and specifications to the best of its ability, and that any changes made as construction progresses will be made with the advice and concurrence of the SCS Engineer and approval of the State Engineer.

District

The term "District" shall be understood to be the Wood River Soil Conservation District.

Technical assistance of the Soil Conservation Service is provided through the District. This assistance presumes that the owner and contractor will diligently follow the plans and specifications.

SCS Engineer

The term "SCS Engineer" shall refer to the Work Unit Engineer of the U. S. Soil Conservation Service and engineering representative of the Wood River Soil Conservation District, or his authorized representative.

The SCS Engineer acting as a technical advisor for the owner has compiled these plans and specifications. The SCS Engineer will provide surveys, tests, and technical direction of the work so that the job may be constructed as planned. He cannot authorize changes without the owner's approval.

State Engineer

The term "State Engineer" shall be understood to be the State Engineer of Idaho or his authorized representative.

Under the provisions of Water Laws of Idaho the State Engineer is charged with the examination and approval of sites, plans and specifications and inspection of construction to insure safety of such work with reference to possible damage to life and property.

These plans and specifications must have the written approval of the State Engineer prior to initiation of construction. It is further required that the work performed in the construction of the dam and the materials that are used

in construction that become a part of the completed structure shall at all times be subject to the approval of the State Engineer and that no change in the plans or specifications made necessary by the development during construction of unforeseen conditions or otherwise, shall be made without prior approval of the State Engineer.

Plans

The official plans approved by the Soil Conservation Service and the State Engineer are part of these specifications.

Specifications

The directions, provisions, and requirements contained herein pertain to the method and manner of performing the work and to the quality of material to be used.

SPECIFICATIONS FOR CONSTRUCTION

Thorn Creek Cattle Association Dam

I. EXCAVATION

1. Borrow Pits

All materials required for construction of the embankment that are not available from required excavation, shall be taken from borrow pits. The sites of the borrow pits shall be carefully stripped of all surface soil, vegetation, roots, brush, sod and other objectionable material. This material shall not be used in any part of the fill.

2. Embankment Foundation

The dam foundation shall be stripped or excavated to a sufficient depth to remove all surface soil, vegetation, roots, brush, sod and other material not suitable for foundations. Before fill is placed, the foundation and abutment areas shall have their surfaces in a loose and scored condition by plowing or discing to depths of 3 to 4 inches to provide a good bond between the foundation and the embankment. Loose earth shall not be left on the foundation area to a depth in excess of 6 inches above approved, undisturbed foundation material. This loose bonding surface shall contain adequate moisture for proper compaction when fill material is placed on it. No foundations or abutments shall be covered by material of the dam until the SCS Engineer has inspected and approved the same.

3. Cutoff Trench

An artificial barrier or cutoff to prevent leakage through or under the base of the dam shall be constructed. This barrier will consist of a trench backfilled with selected impervious material, properly compacted. The trench shall extend the full length of the dam and shall be excavated to and into the bedrock as deeply as can be ripped. The cutoff trench shall be located approximately at the upstream edge of the impervious core zone in the dam. The side slopes shall be not steeper than 1 to 1, and the bottom width shall be sufficient to accomodate the width of the carryall. Excess water shall be removed from the trench before placement of any fill material. No fill material shall be placed in the cutoff trench until the SCS engineer has inspected and approved the trench.

4. Spillway

A spillway channel approximately 25 feet long shall be excavated through the north abutment as shown on the plans. Excavation will be in rock and shall conform to the dimensions shown on the plans. Any blasting required shall be done before installation of the conduit. Rock material removed from the spillway may be used as riprap or as drain material in the downstream toe of the dam. Cracks and irregularities in the floor of the spillway shall be filled with concrete.

5. Conduit Trench

The outlet conduit shall be installed in a trench excavated in the location shown on the plans. The trench shall be confined to neat lines and grades so that the bottom and two sides become suitable forms for the concrete encasements and cutoff collars. No concrete shall be poured into this trench until the SCS engineer has inspected and approved it.

II. OUTLET CONDUIT

The outlet conduit shall consist of a 12 inch reinforced concrete pipe, a control gate, inlet and outlet structures and concrete cutoff collars poured monolithically with the conduit. Minimum wall thickness of the pipe shall be 6 inches.

1. Concrete

Concrete shall be mixed and placed as specified below:

a. Cement

To be Portland Cement of a standard commercial brand, free from lumps and partially set masses. In no case shall less than 5-1/2 sacks of cement be used in each cubic yard of concrete.

b. Water

Water shall be free of acid, alkali, oils and organic matter. Simple rule -- water should be suitable for drinking.

c. Aggregate

This may be of non-commercial sources, provided it has adequately graded, clean, hard, strong, durable particles, and is sufficiently free of deleterious substances. The aggregate shall be considered adequately graded and sufficiently free of deleterious substances when it meets the following limitations.

- (1) When separated on the number four standard screen, the weight passing the sieve shall not be less than thirty percent nor more than fifty percent of the total. No rock shall exceed 1-1/2 inch diameter.
- (2) Clay lumps do not exceed 1.5 percent.
- (3) All other deleterious substances do not exceed five percent.

d. Mixing

Mixing shall be continued for at least 1-1/2 minutes after all materials, including water, are in the mixer. Each batch shall be completely discharged before the mixer is recharged. Not more than 6-1/2 gallons of water per sack of cement shall be used. This includes surface water in the aggregates. Excessive overmixing requiring the addition of water to preserve the required concrete consistency shall not be permitted.

Truck mixing will be allowed provided that the use of this method does not violate any applicable provisions of these specifications for concrete.

e. Measurement of Materials

Equipment used for measuring quantities shall be calibrated so the correct quantity of material measured is known.

f. Forms

Forms shall conform to the shape, lines, and dimensions of the members as called for on the plans, and shall be substantial and sufficiently tight to prevent leakage of mortar. They shall be properly braced and tied together so as to maintain position and shape.

g. Placing Concrete

Forms shall be wetted or oiled and thoroughly cleaned of debris and ice. Depositing continuously at one point and letting it flow to distant points shall not be allowed since the water and fines segregate from the rest of the mass. The concrete shall be spaded next to the forms to prevent honeycombing. Laitance and increased water in the upper portions of the concrete shall be prevented. Excess water shall be worked to a low point without causing flow, and be removed.

h. Reinforcing Steel

Reinforcing steel shall be furnished, fabricated and placed as shown on the plans. All reinforcing bars shall be deformed bars of structural grade steel. Reinforcing steel, before being placed in the forms, shall be thoroughly cleaned of loose mill and rust scale, oil, dirt or other coatings of any character that would destroy or reduce the bond.

i. Construction Joints

Joints not indicated on the plans shall be so made and located as to least impair the strength of the structure. Where a joint is to be made, the surface of the concrete shall be thoroughly cleaned, and all laitance removed. In addition to the foregoing, vertical joints shall be thoroughly wetted, but not saturated, and flushed with a coat of neat cement grout immediately before the placing of new concrete.

j. Curing

All concrete shall be kept moist for at least seven (7) days by one of the approved methods of curing. Moisture or a membrane seal shall be applied within thirty (30) minutes after placing. All concrete shall be protected from direct rays of the sun for not less than three (3) days. All concrete shall be protected against freezing for a period of twenty-eight (28) days. This may be reduced to seven (7) days for high-early-strength concrete.

III. EARTH EMBANKMENT

The foundation for the earth fill shall be so prepared by leveling and rolling that the surface materials of the foundation will be as compact and well bonded with the first layer of the fill as herein specified for the subsequent layers of the earth fill.

The earth fill portion of the dam, including the fill about the outlet conduit, and in the cutoff trenches shall consist of soil materials approved by the SCS Engineer from proposed borrow pits and from excavations required for other parts of the work. The first course of fill material shall be spread over the foundation in a thin layer such that the combined thickness of this layer and the scarified surface of the foundation shall not exceed 8 inches. No brush, roots, sod, or other perishable or unsuitable material shall be placed in the embankments. No stones having maximum dimensions of more than five inches shall be placed in the embankment. Any such stones hauled onto the embankment shall be removed before rolling.

The distribution and gradation of materials shall be in such a manner that the embankment will be free from lenses, pockets, streaks, or layers differing appreciably in texture or gradation from the surrounding material. The different materials will be zoned as shown on the plans with the fine-textured clays in the central portion and the coarser sands and gravels in the outer shells. Soils which are the most freely draining will be placed in the lower portions of the downstream toe of the dam. The placement of materials from the different borrow areas must be approved by the SCS Engineer.

If at any time the rolled surface of any layer becomes too smooth for proper bond, it shall be adequately scarified.

The approved mixture of earth materials shall be placed in the earth embankment in continuous, approximately horizontal layers, not more than 4 inches in thickness after rolling. A tamping roller shall be used that is of such size and weight that the embankment will be compacted to the desired density. The following table shows the estimated number of trips and amount of material that can be adequately compacted with rollers weighing 1500 lbs. and 2000 lbs. per foot of width. Rate of placement for other weights of roller may be computed by the formula.

The projected face area of each knob and the numbers and spacing of the knobs shall be such that the total weight of the weighted roller, if distributed over one row of knobs, will be a minimum of 250 pounds per square inch.

A definite working range of moisture for each type of fill material shall be established prior to start of construction, and no material shall be placed in the embankment that does not have a moisture content falling within its working range, except that moisture may be added by sprinkling on the borrow pit or embankment in such a manner that uniform distribution is obtained.

If the foundation and/or abutments have insufficient moisture content, water shall be added by sprinkling. The abutments at the level of the fill surface shall be maintained at the required moisture content during placing operations.

Any material that has dried below the working range shall be uniformly moistened by sprinkling. Material that contains moisture higher than the working range shall be removed or allowed to dry to an acceptable moisture content.

The application of water to the material shall be done in the borrow pits insofar as practicable.

Each layer of fill material shall be compacted by passing the roller over the entire surface the number of times required to obtain the desired density.

To attain a minimum dry density of 103 lbs. per cu. ft. requires compactive effort of 23,700 ft. lbs. of energy per cu. ft. of fill material when placed with a moisture content ranging from 16 to 21 percent.

The number of roller trips to compact a four inch layer, and the rate of placement of fill per foot of roller width that can be so compacted are estimated from the following relations for the above conditions and are for a roller traveling three miles per hour.

$$\text{Number of trips (N)} = \frac{31600}{\text{wt. per ft. of roller (w)}}$$

$$\text{Rate of placement per ft. of roller (p)} = \frac{(\text{Roller speed in ft. per hr.} \times \text{Roller wt./ft.})}{108 \times (\text{Compactive Effort})}$$

Number of trips and associated rate of placement per ft. of roller for two common weights of roller are:

<u>Roller wt. per ft. of width</u> (w)	<u>Number of Trips</u> (N)	<u>Rate of Placement per ft. of roller width (cu. yds./hr.)</u> (p)
1500	20	9.3
2000	16	12.4

If other weights of roller are used the initial estimate of number of trips and rate of placing fill will be established by the SCS Engineer on basis of these formulae.

Adjustment of rolling requirements to secure the minimum dry density of 103 lbs. per cu. ft. will be made on the basis of samples of compacted fill taken from the embankment as the job progresses.

THORN CREEK DAM
Idaho Area III

COST ESTIMATES

COST DISTRIBUTION SHEET

<u>Item</u>	<u>Unit</u>	<u>Amount</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Embankment Vol.	Cu. Yd.	11,500	\$.20	\$2,300.00
Cutoff excavation	Cu. Yd.	109	.20	21.80
Cutoff embankment	Cu. Yd.	125	.20	25.00
Spillway Excavation (rock)	Cu. Yd.	58	7.00	406.00
Concrete (140 ft. 12" pipe with 5 cutoff collars, one each of inlet, outlet, and gate control structure, and six gate stem pedestals)	Cu. Yd.	24.34	50.00	1,217.00
Reinforcing Steel (in above listed structures and trash rack)	Lbs.	1,500	.25	375.00
Gate (Armco #101 or similar)	Ea.	1	33.00	33.00
Gate Stem 1-1/8"	Ft.	80	.45	36.00
Gate Stem Pipe 1-1/4"	Ft.	80	.335	26.80
Gate Stem Splices, threading, etc.	Lump			25.00
Gate Stem Guides	Ea.	6	9.00	54.00
Hand Wheel (Armco H-18 or similar)	Ea.	1	12.00	<u>12.00</u>
				\$4,531.60

R-993

Geology Report
Thorn Creek Damsite

Location and Description

The Thorn Creek site is located in the southeast quarter of Sec. 6, T 3 S, R 16 E, of Gooding County, Idaho. The dam will be 25 feet high and a 20 foot height of water will impound approximately 1000 acre feet. Approximately 11,500 cubic yards will be needed to construct the fill. Water will be backed up for approximately a mile above the dam.

Geology

Bedrocks of the area are mapped rather generally as Snake River basalts but locally on the site the rocks are both granitic and rhyolitic. The abutments are abrupt granitic textured rocks that show flowage and folding. Weathering in the form of thin sheety exfoliation is quite pronounced.

The floodplain is approximately 100 feet wide and it is underlain by thin alluvium overlying a residual soil. A typical boring near the shallow channel shows 4-1/2 feet of clayey and gravelly soil overlying the bedrock. The residual blanket is thin but sufficient to perch a high water table in the gravelly soils.

Construction (borrow) materials are scarce but appear suitable and adequate for both the core and the outer shell. Borrowing will probably be necessary from both the downstream area and for a considerable distance upstream.

A spillway location was selected in the right abutment. The area shows considerable jointing and fracturing that may necessitate both grouting and lining in the spillway. Erosion potential should not be too great after the completion of the spillway.

Recommendations

The core should extend into the bedrock to insure a positive cutoff.

Sufficient materials should be left undisturbed in the floodplain to provide an adequate blanketing of the bedrock.

Spillway treatment may be necessary to prevent excessive leakage and erosion.

Blasting, if necessary in the damsite area, should be done before placement of the fill and the outlet pipe.

The laboratory will make the necessary recommendations governing the use of the borrow materials.

8-9-53

MATERIALS TESTING LABORATORY REPORT

SOIL COMPACTION CURVES

PROJECT
THORN CREEK DAM

LOCATION
WOOD RIVER SCD

FIELD SAMPLE No

2

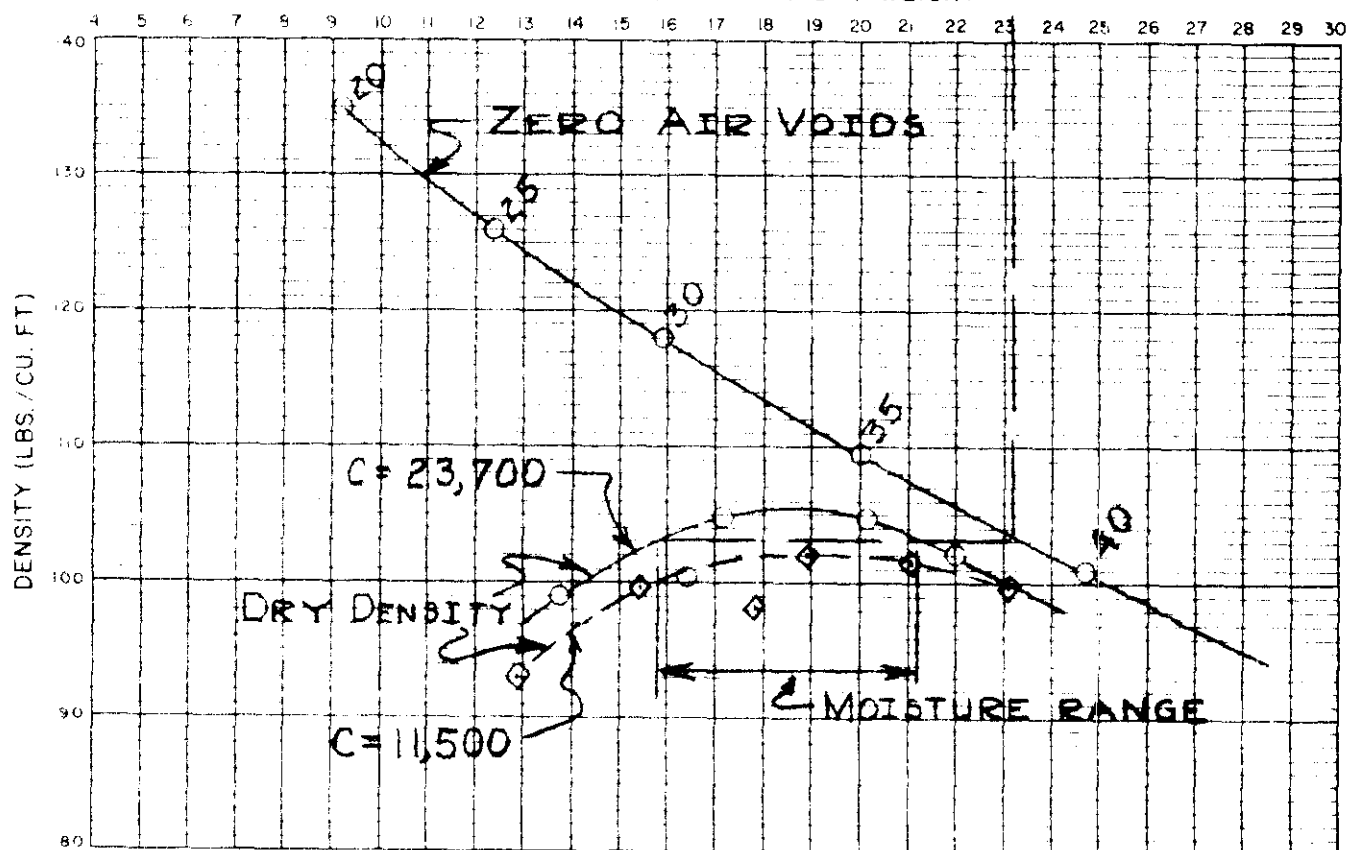
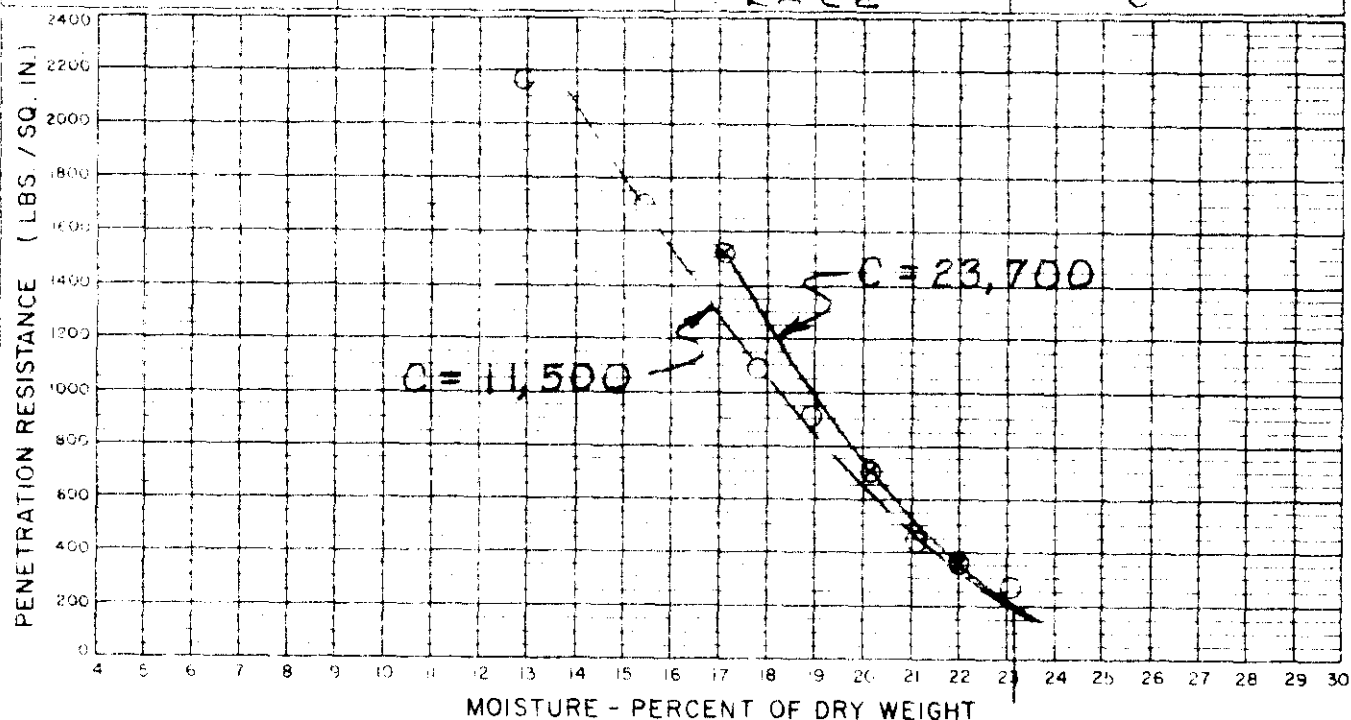
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% LARGER THAN TESTED

TRACE

COMPACTIVE EFFORT

C



U. S. DEPARTMENT of AGRICULTURE
SOIL CONSERVATION SERVICE
ENGINEERING and WATERSHED PLANNING UNIT
PORTLAND, OREGON

SIGNATURE

Thomas H. Carter R-993

TITLE

AREA ENGR.

DATE

7-13-56

MATERIALS TESTING LABORATORY REPORT

SOIL COMPACTION CURVES

PROJECT

THORN CREEK DAM

LOCATION

WOOD RIVER SCD

FIELD SAMPLE No

2

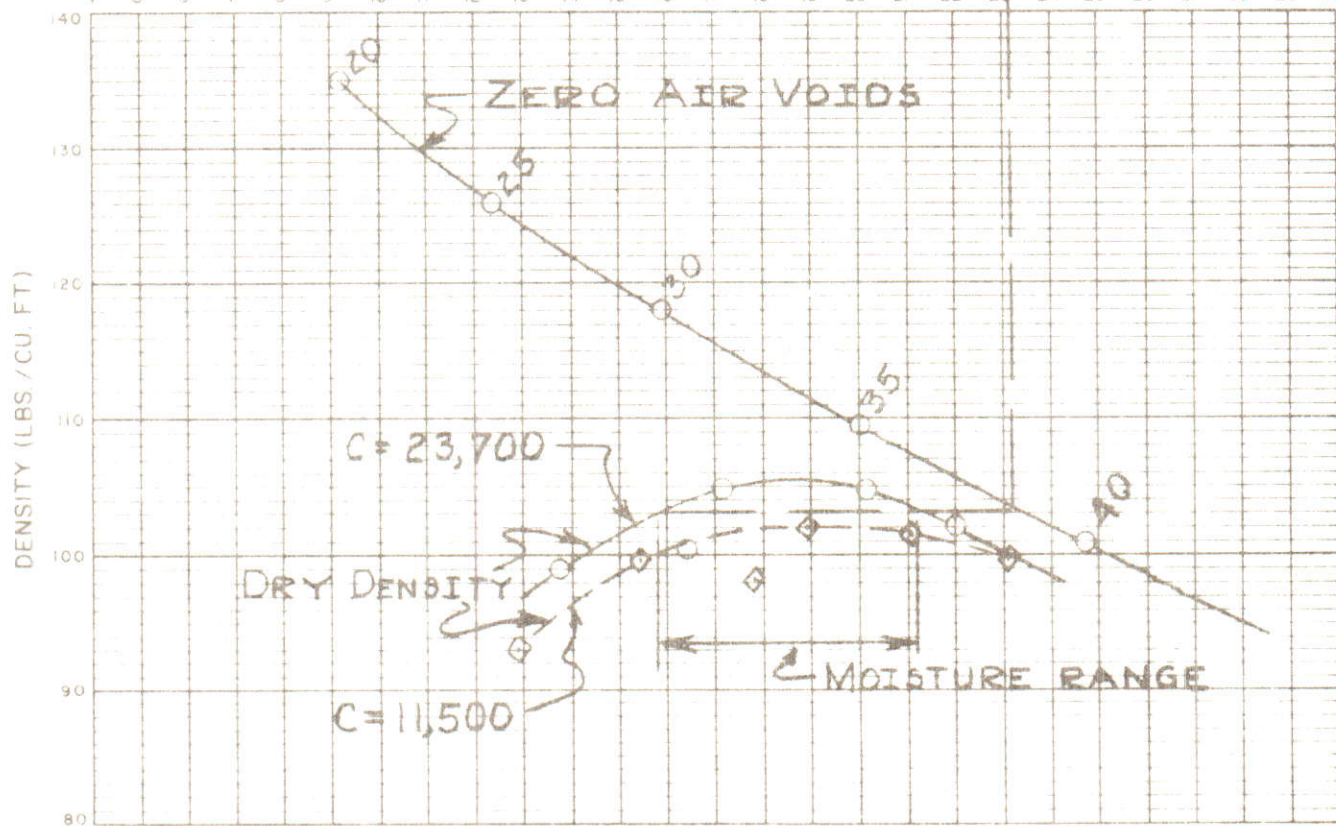
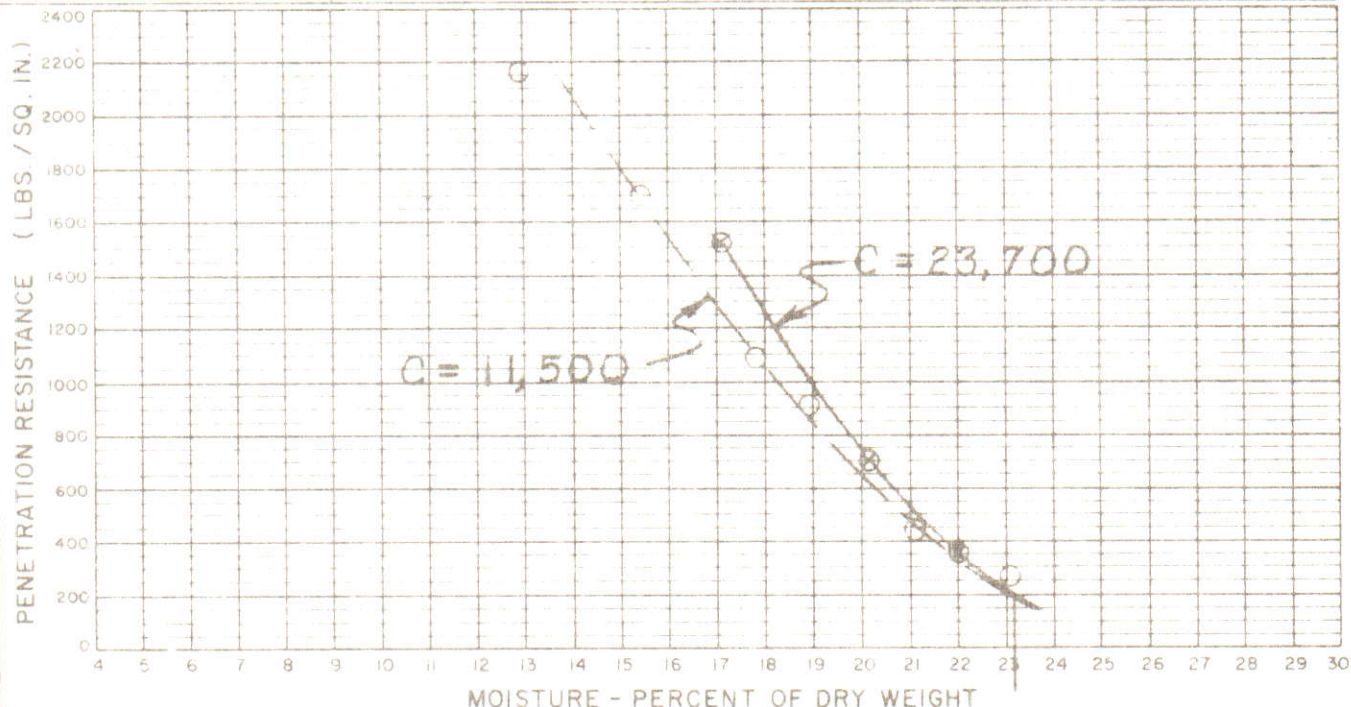
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% LARGER THAN TESTED

TRACE

COMPACTIVE EFFORT

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U. S. DEPARTMENT of AGRICULTURE
SOIL CONSERVATION SERVICE
ENGINEERING and WATERSHED PLANNING UNIT
PORTLAND, OREGON

SIGNATURE

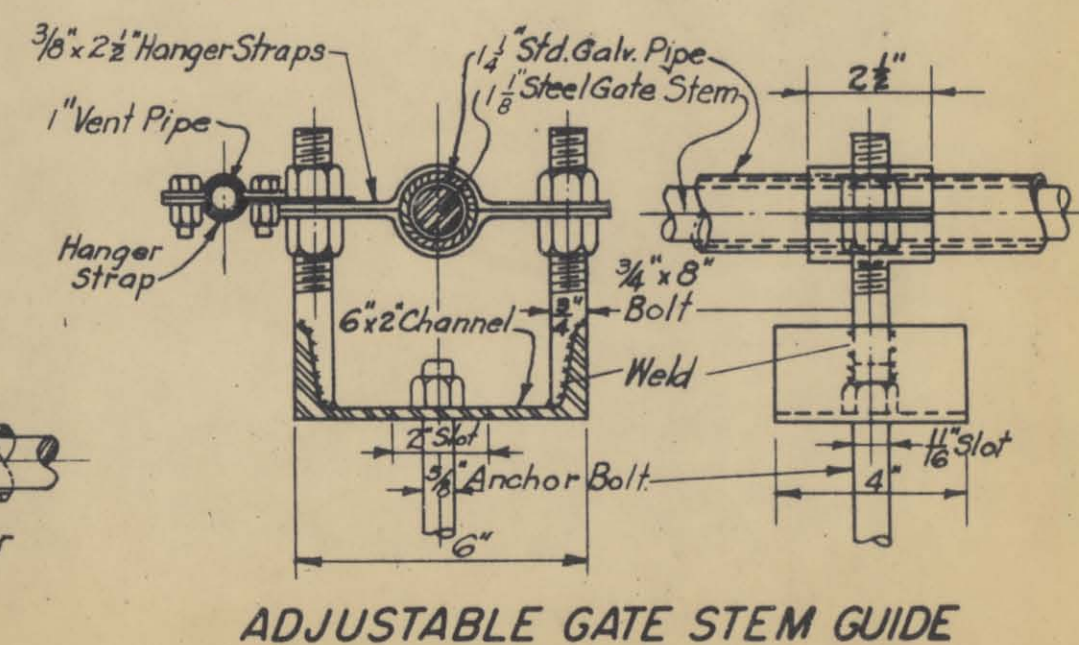
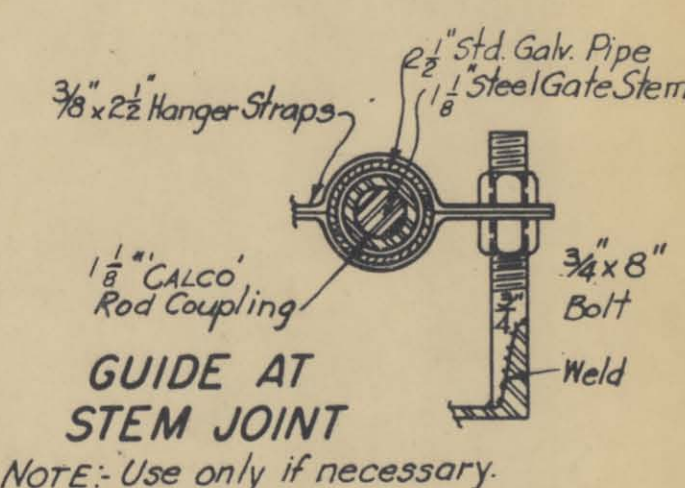
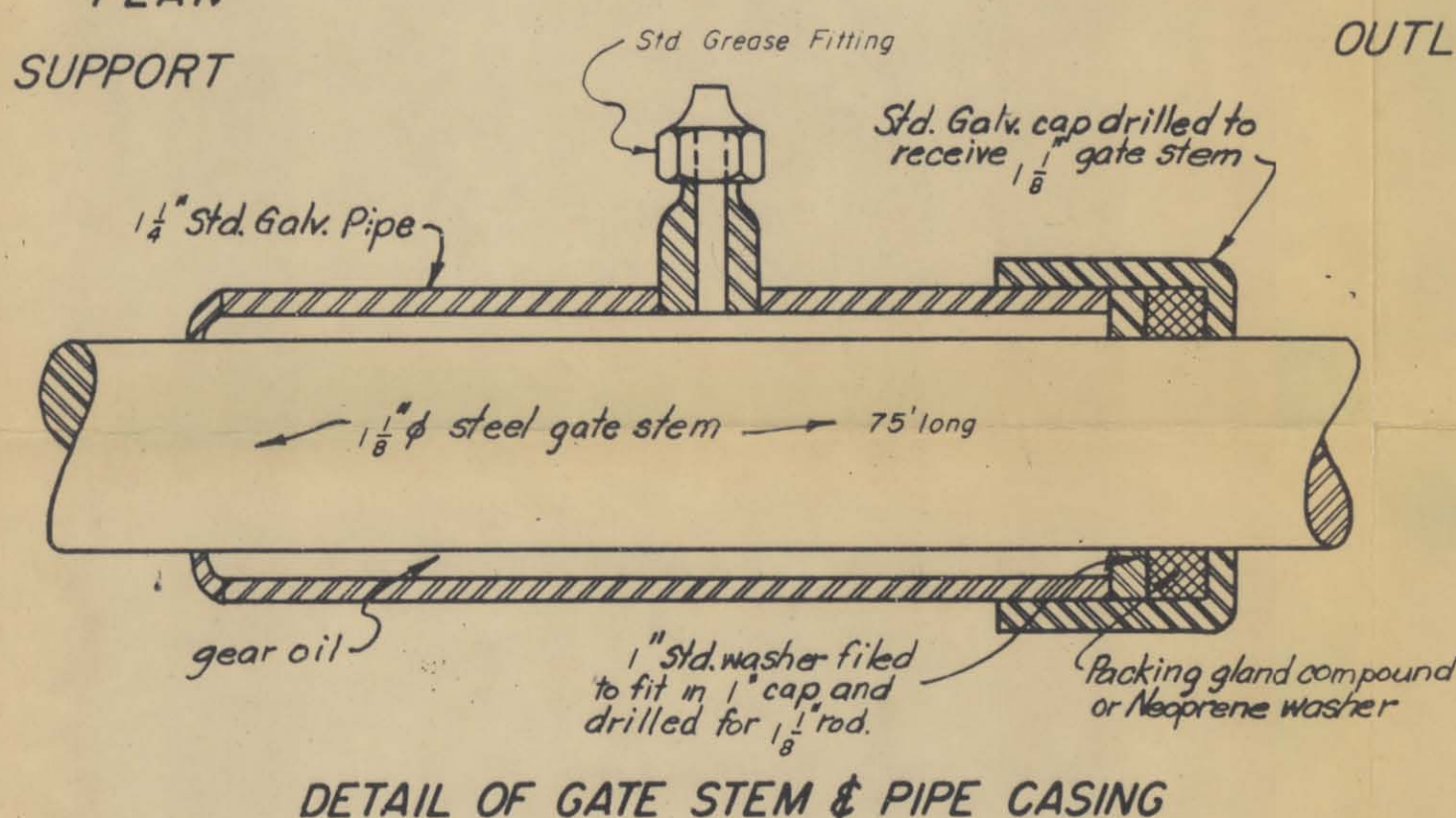
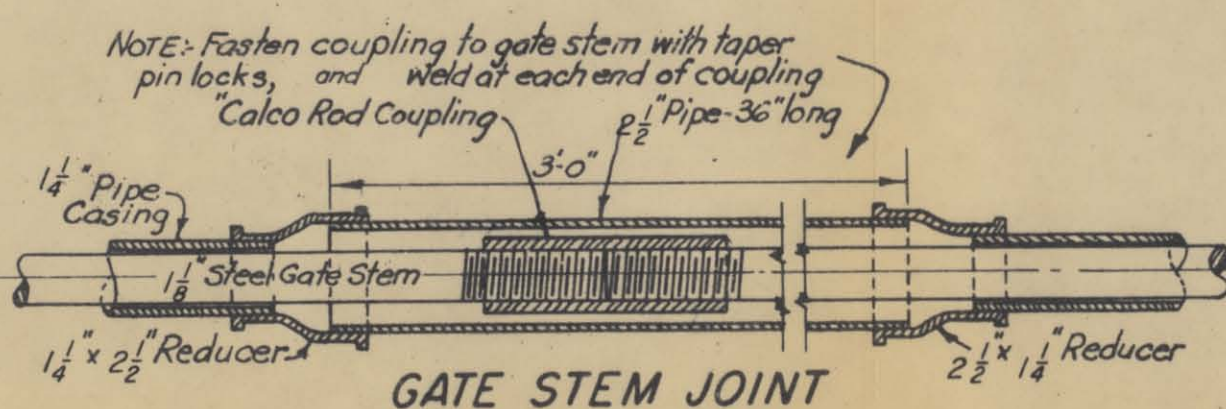
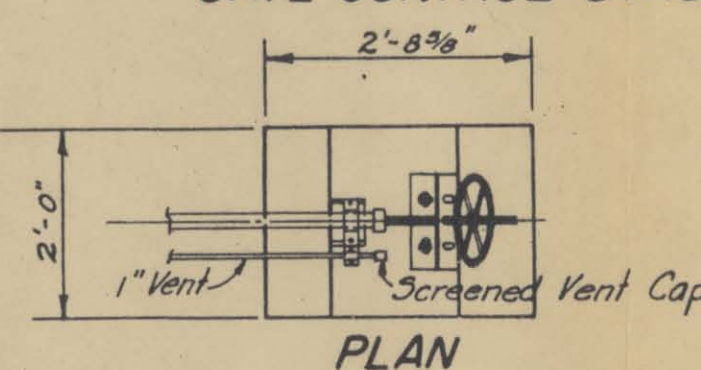
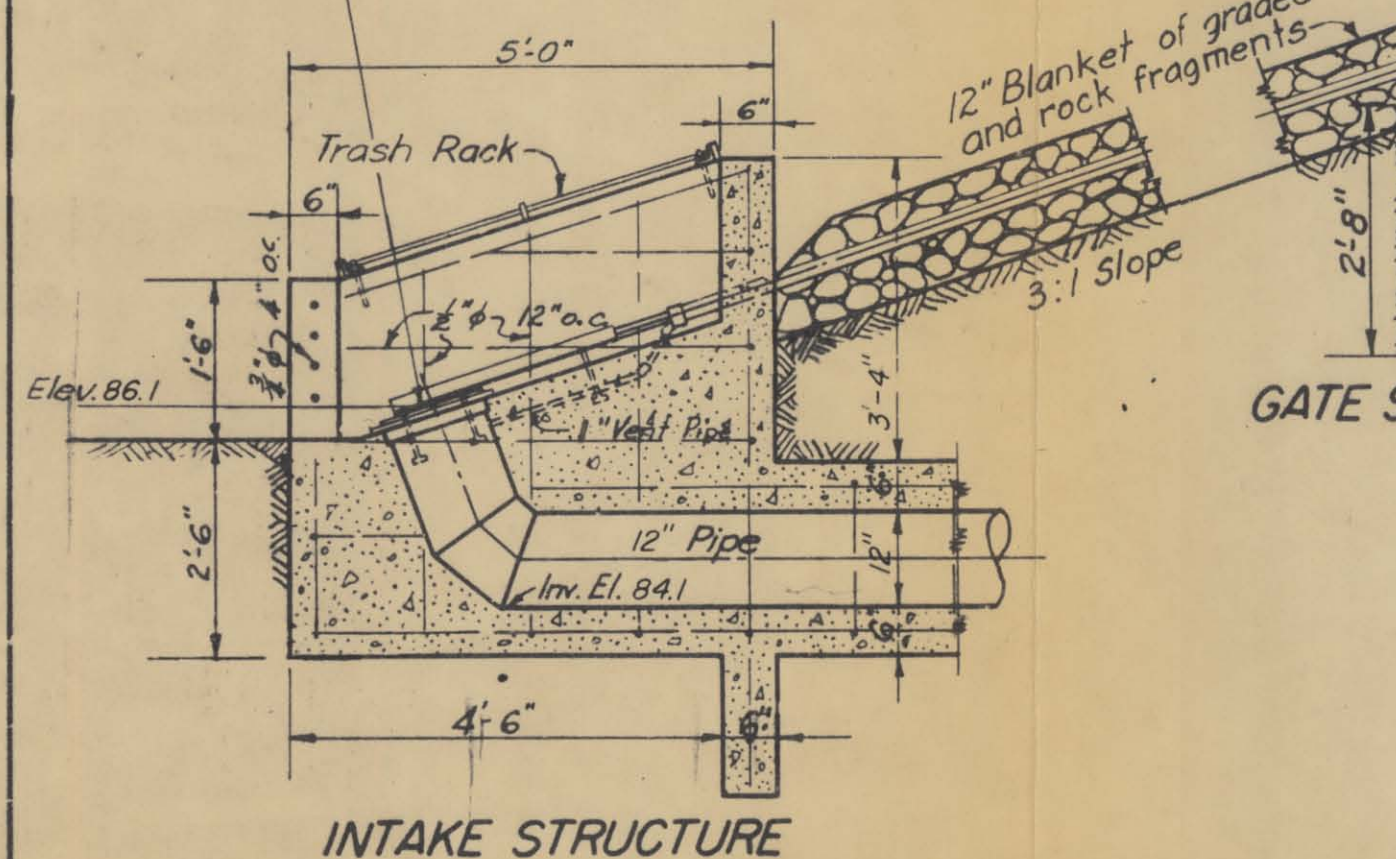
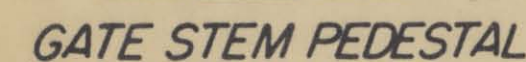
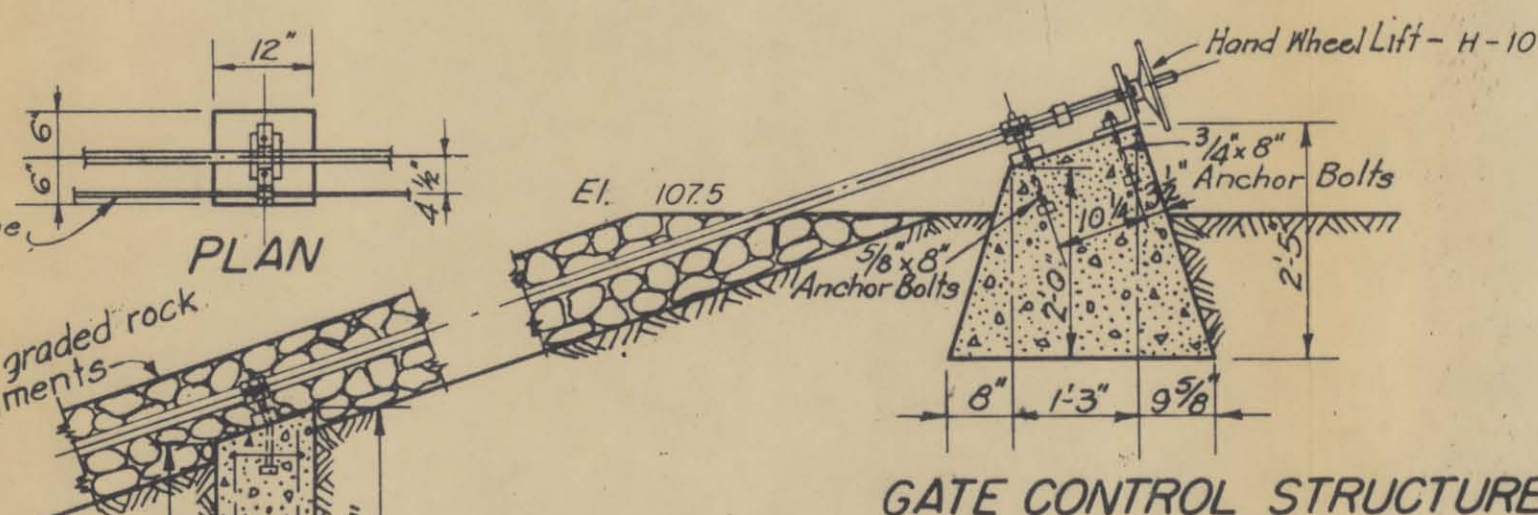
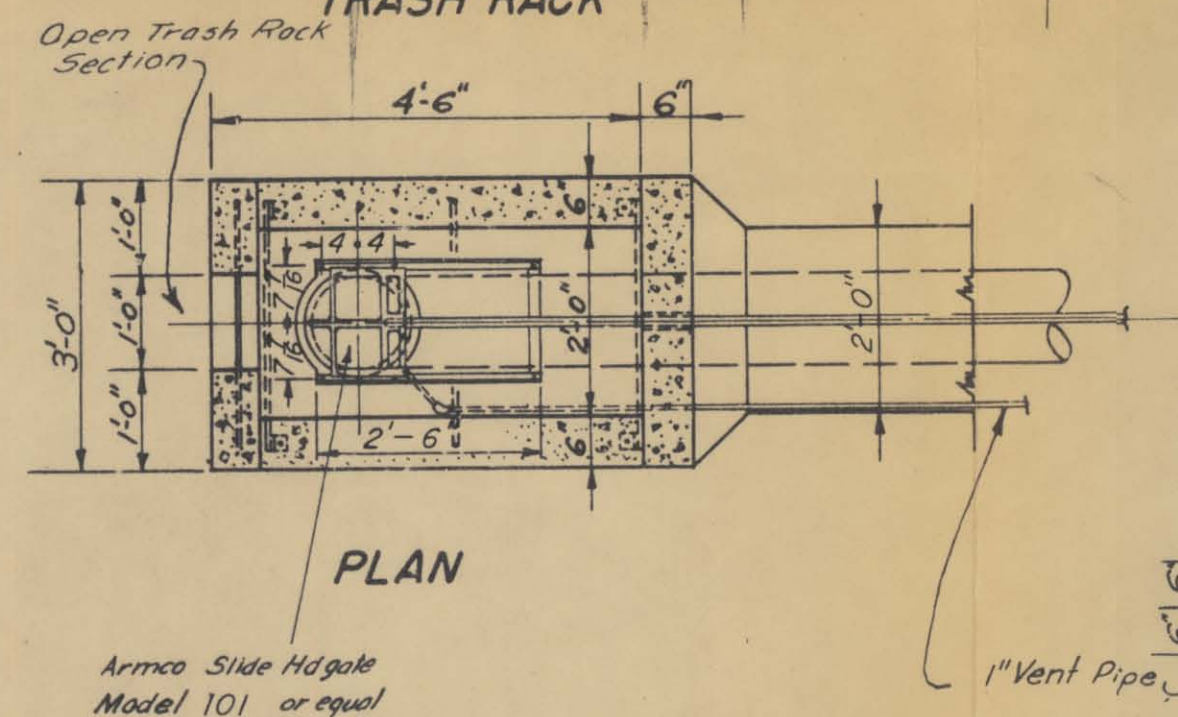
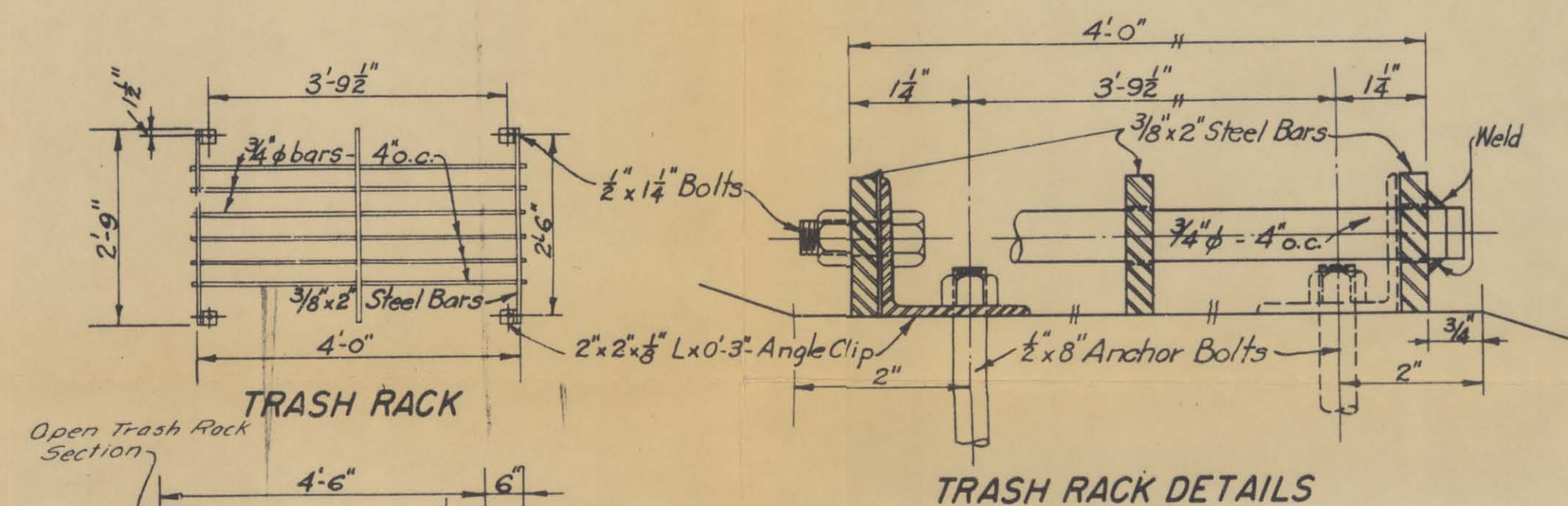
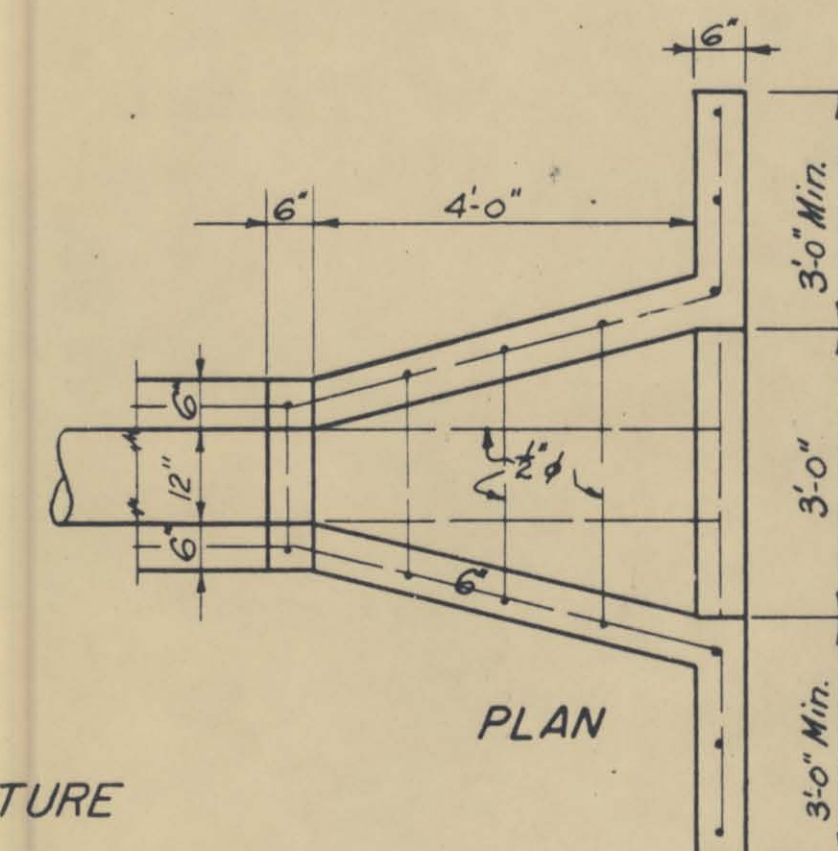
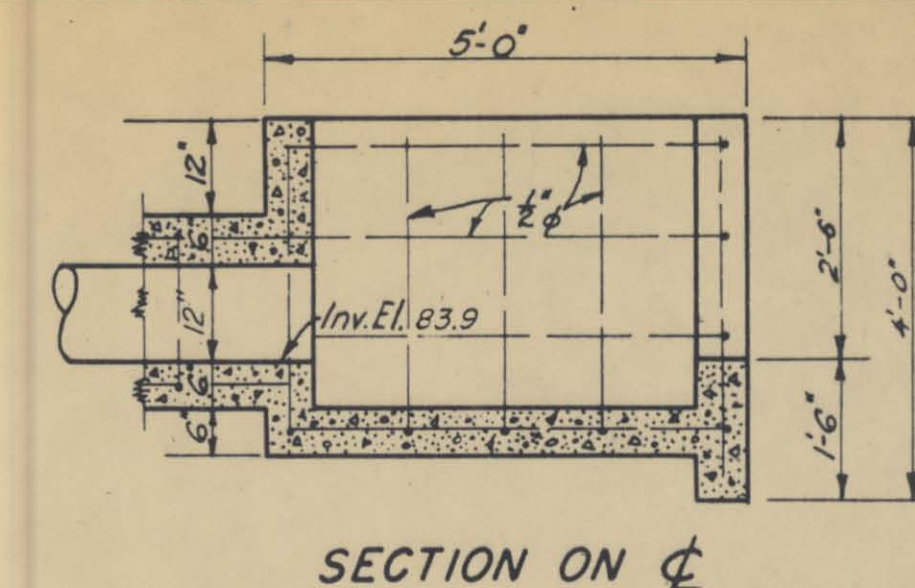
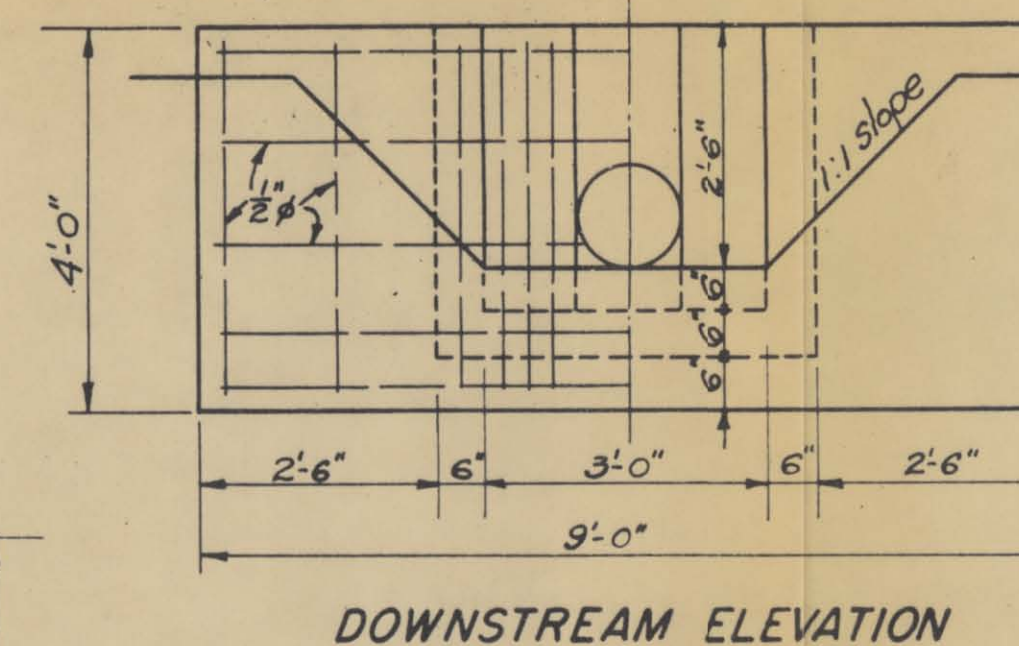
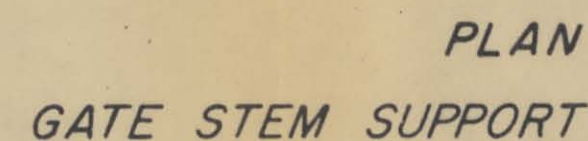
Thomas H. Curtis R-993

TITLE

AREA ENGR.

DATE

7-13-56



Meader H. Wilkins
State Soil Conservation Engineer, Soil Conservation Service

STATE OF IDAHO
Department Of Reclamation
APPROVED

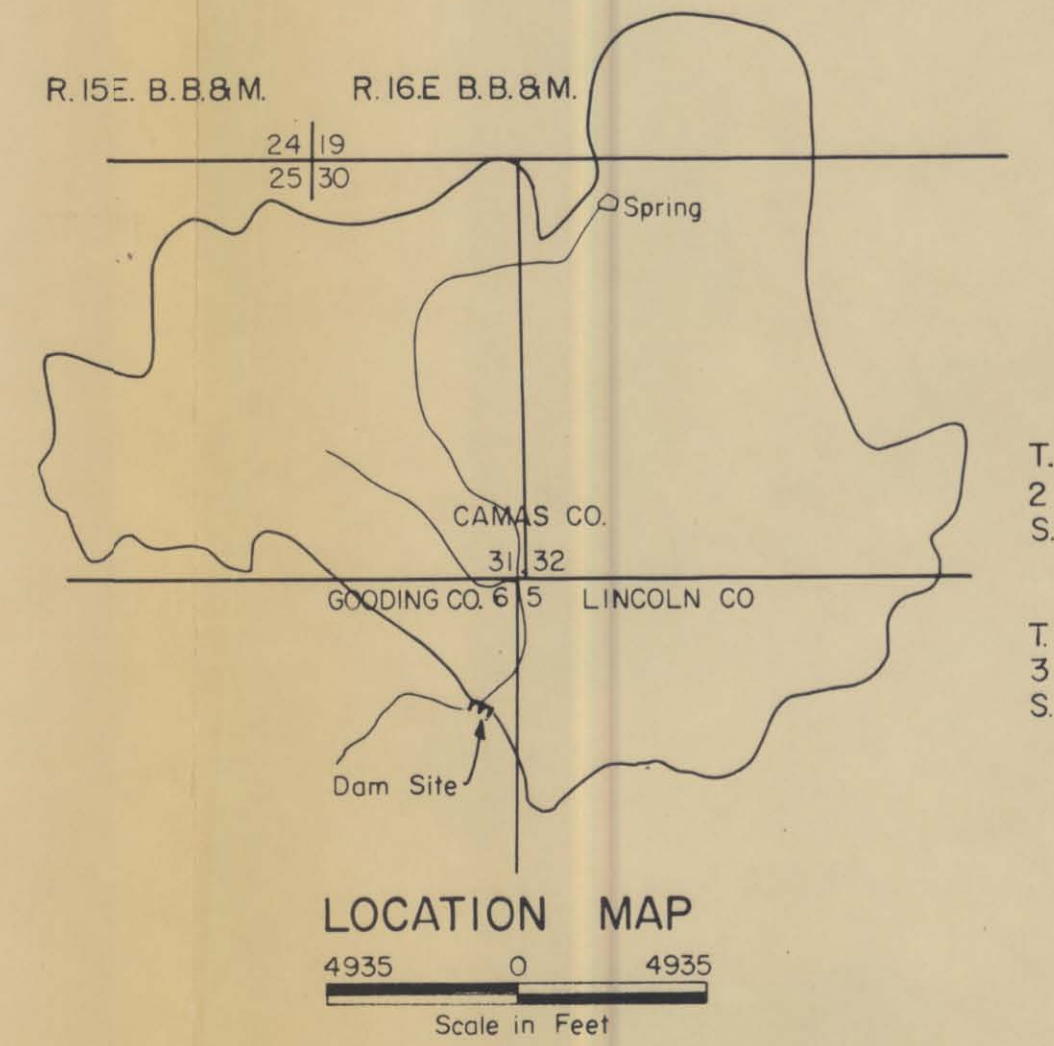
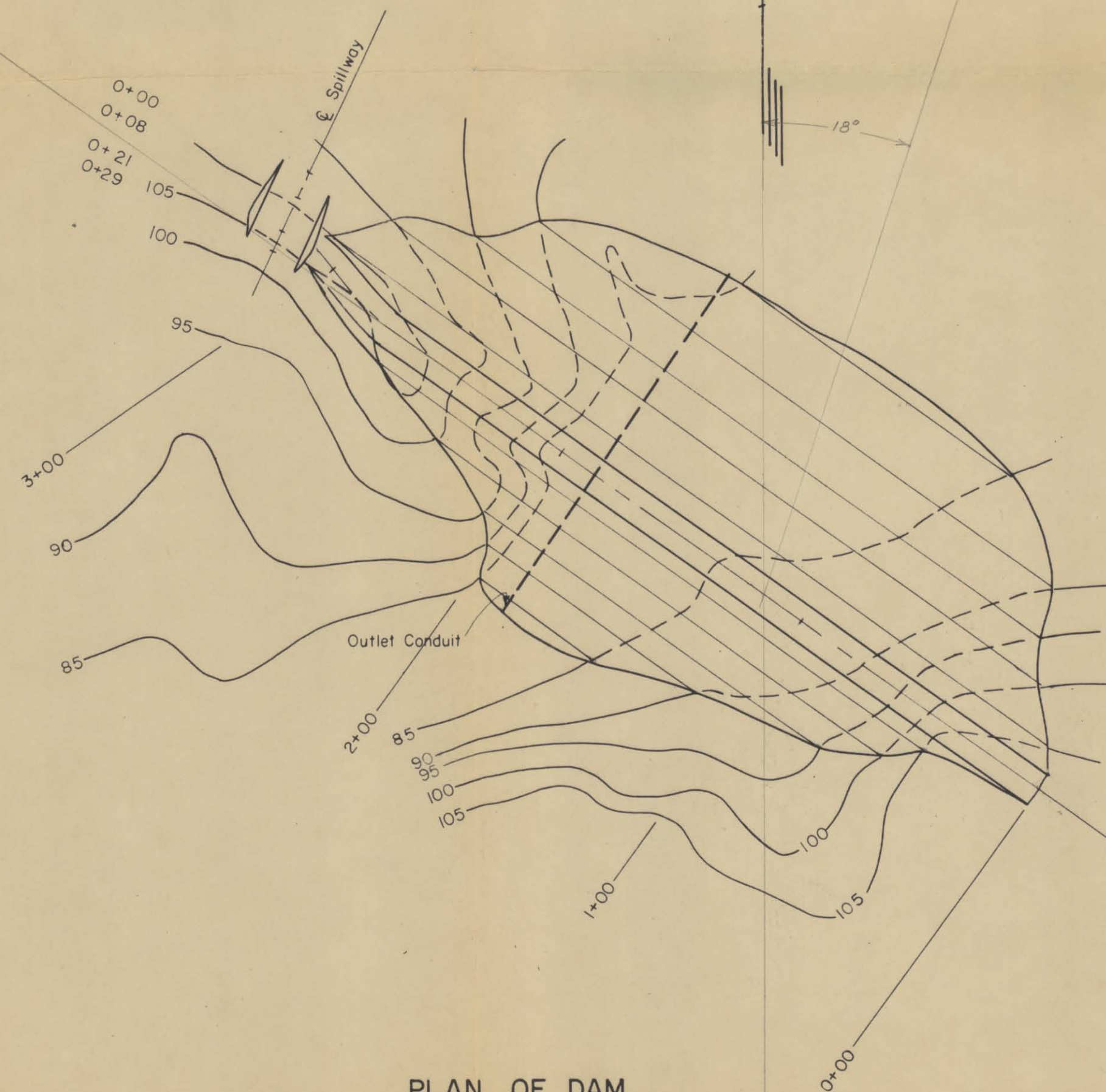
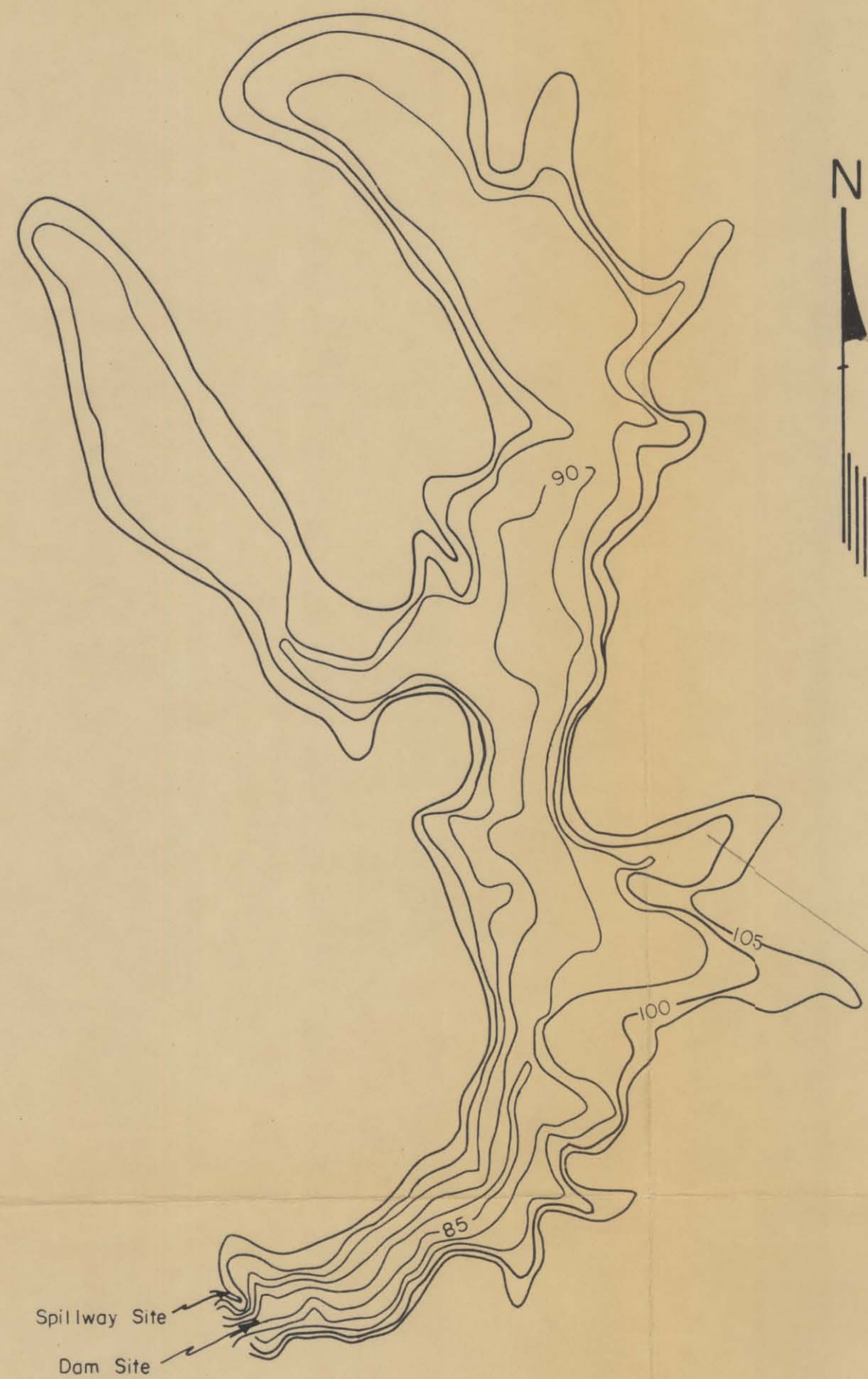
DATE: July 23, 1956

Mark R Kuly
STATE RECLAMATION ENGINEER

THORN CREEK CATTLE ASSOC. RESERVOIR
WOOD RIVER S.C.D., LINCOLN CO. IDAHO

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

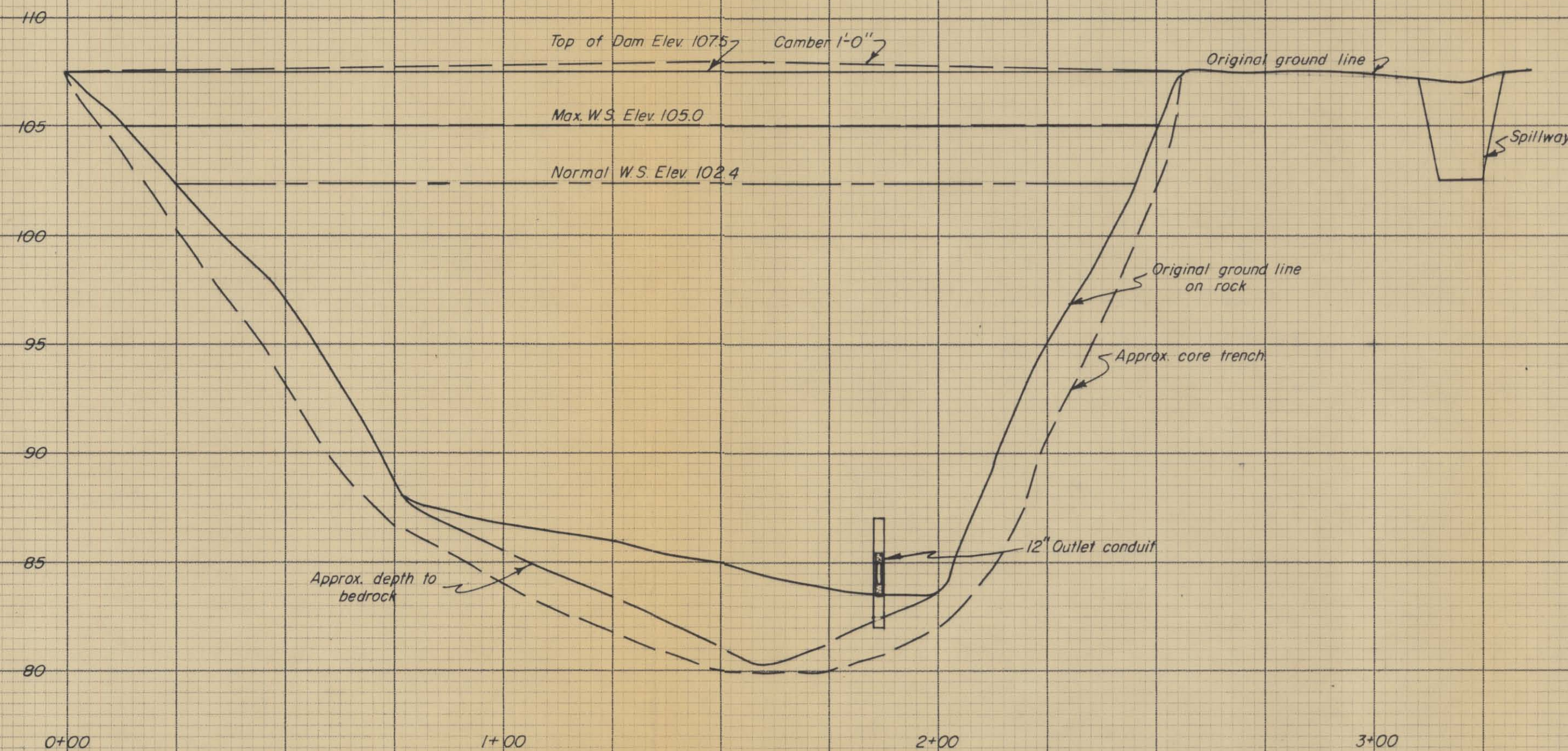
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Checked	<i>[Signature]</i>		6-56	Sheet	Drawing No
				No. 3	
				of 3	7-E-15444



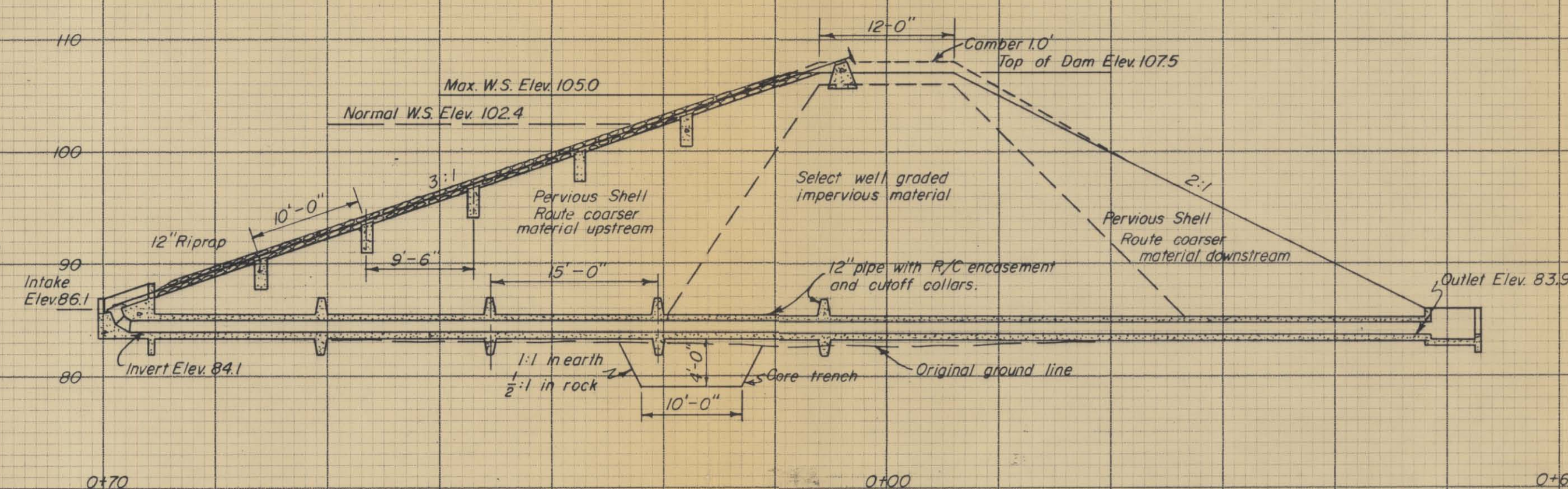
"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

Meador H. Wilkins
State Soil Conservation Engineer, Soil Conservation Service

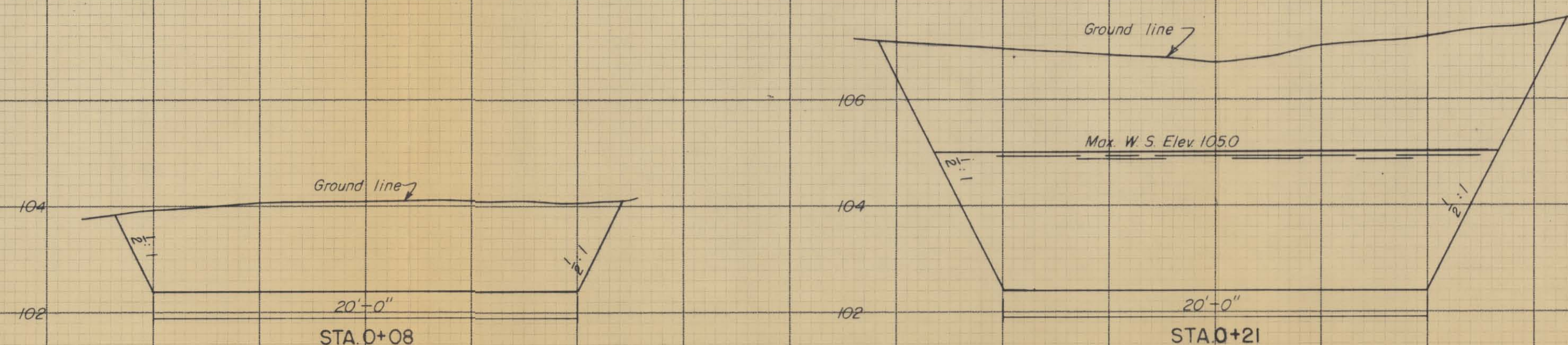
THORN CREEK CATTLE ASSOC. RESERVOIR			
WOOD RIVER S.C.D., LINCOLN CO. IDAHO			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed <i>D.P.S.</i>	Date <i>6-56</i>	Approved by <i>E. W. P. Unit</i> Title <i>Head, E. & W. P. Unit</i>	
Drawn <i>M. H. K.</i>	Date <i>6-56</i>	Title	
Traced <i>M. H. K.</i>	Date <i>6-56</i>	Sheet <i>No 1</i>	Drawing No. <i>7-E-15444</i>
Checked <i>[Signature]</i>	Date <i>6-56</i>	of 3	
STATE OF IDAHO Department Of Reclamation			
APPROVED			
DATE: <i>July 23, 1956</i>		<i>Mark R. Kulp</i> STATE RECLAMATION ENGINEER	



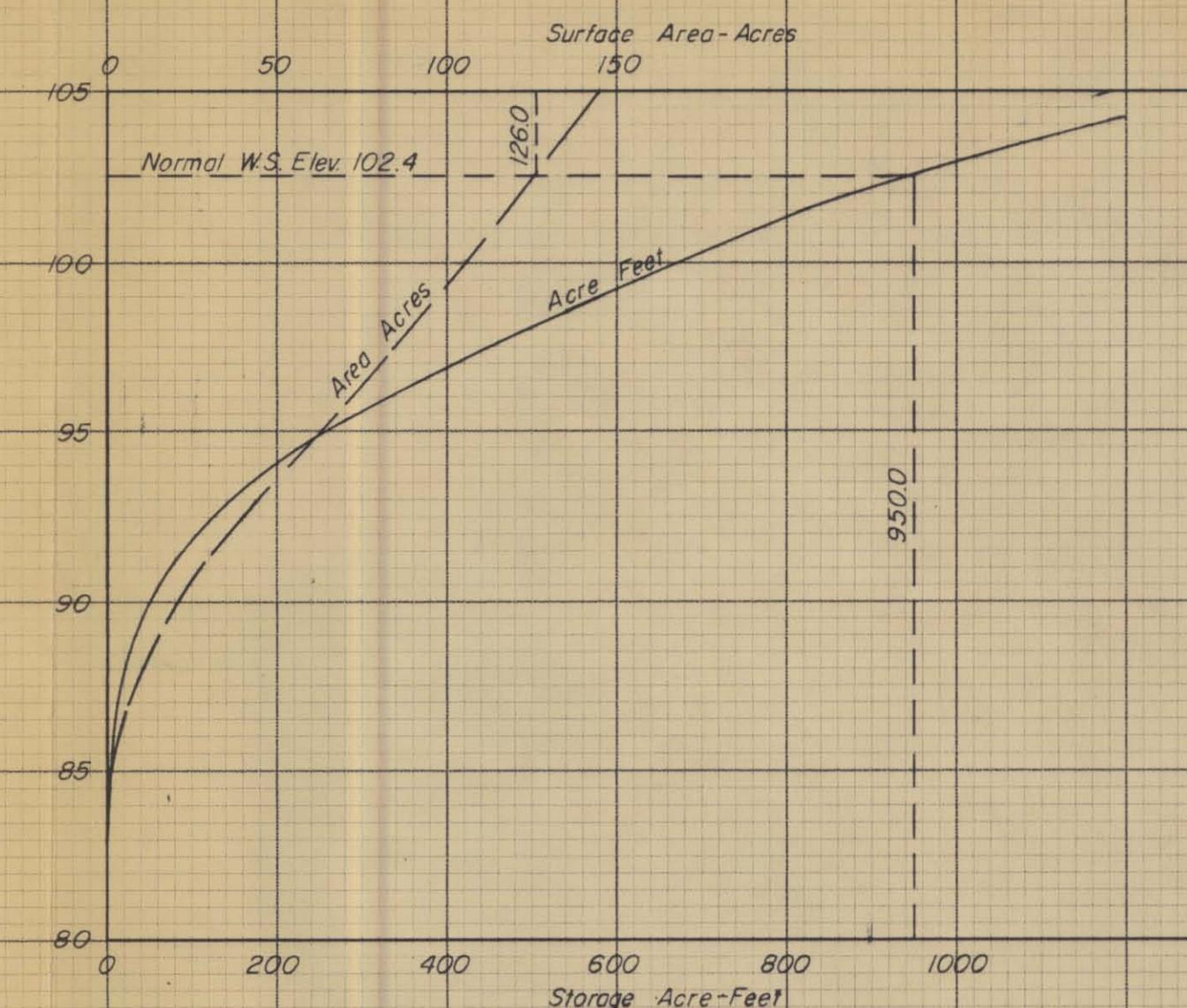
PROFILE ON C OF DAM



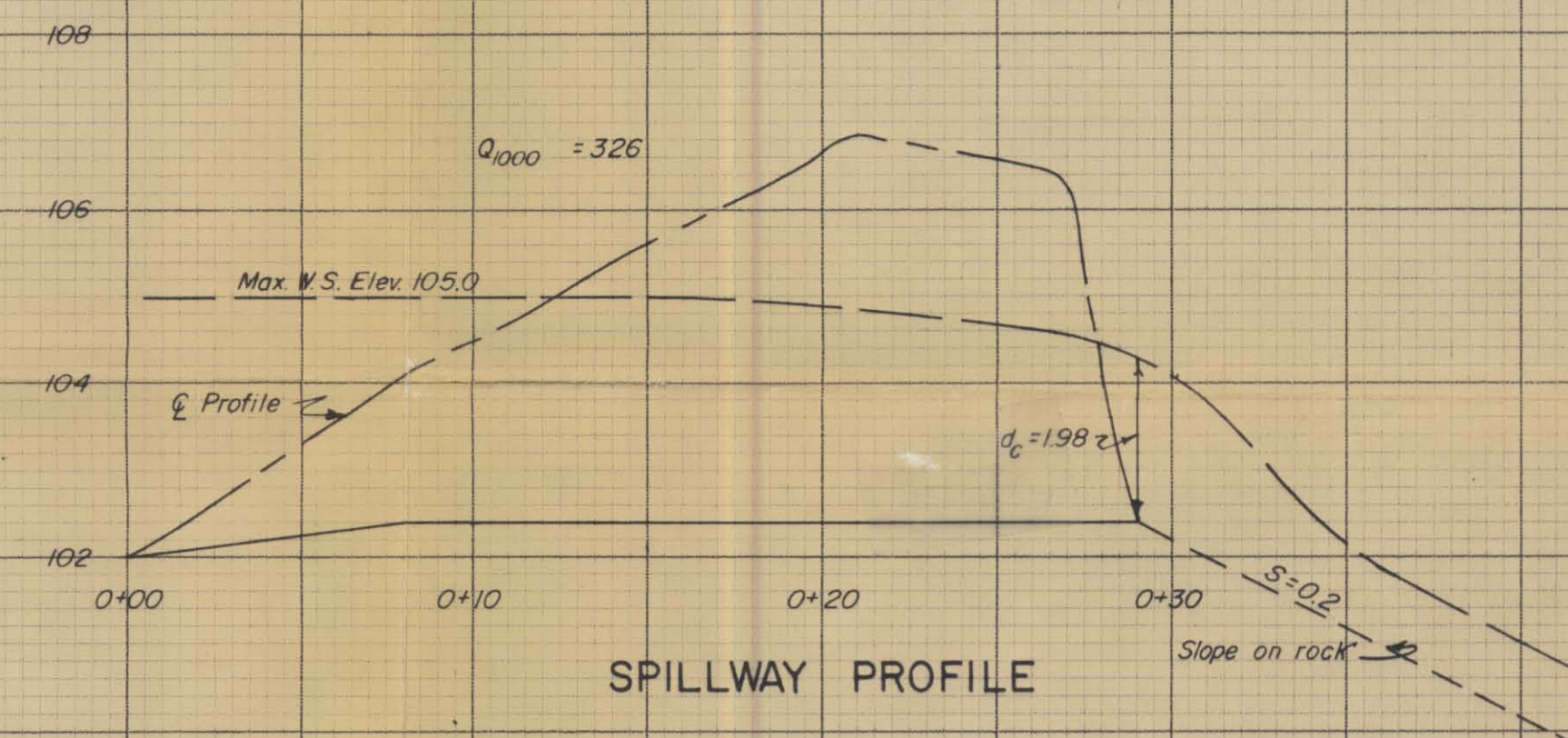
SECTION THRU OUTLET CONDUIT



SPILLWAY SECTIONS



CAPACITY CHART



SPILLWAY PROFILE

"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

Madison Wilkins
State Soil Conservation Engineer, Soil Conservation Service

THORN CREEK CATTLE ASSOC. RESERVOIR
WOOD RIVER S.C.D., LINCOLN CO. IDAHO

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed	D.P.S.	Date	6-56	Approved by	<i>Ellis F. Hatt</i>
Drawn	M.H.K.	Title	Head, E. & W.P. Unit		
Traced	M.H.K.	Sheet	6-56	Drawing No.	7-E-15444
Checked	<i>[Signature]</i>	No. 2 of 3			

STATE OF IDAHO
Department of Reclamation

APPROVED

DATE: July 23, 1956

Mark R. Kulp
STATE RECLAMATION ENGINEER

R-993

RECORD OF PLANS	
Plans ☒	Hydrology ☒
Specs ☒	Hydraulics ☒
Geology ☒	Narrative ☒
Soils ☒	
Approved by State Rec. Engr. <u>7/23/56</u>	
Copy to State Rec. Engineer <u>7/23/56</u>	

x Tube supplied mna R-993

June 15, 1956

RE: Permit No. R-993

Thorn Creek Cattle Ass'n, Inc.
C/o Don Fredericksen
Route 1
Gooding, Idaho

Dear Mr. Fredericksen:

We enclose Permit No. R-993 in the name of Thorn Creek Cattle Ass'n., Inc., and direct attention to the limitations and conditions as given on the fourth page under approval of the State Reclamation Engineer.

Before construction is commenced, plans and specifications must be submitted in duplicate for approval of the State Reclamation Engineer.

Departmental receipt for the \$5.25 filing fee was handed you when in the office.

Very truly yours,

MARK R. KULP
State Reclamation Engineer
By

Chief Clerk

R:hll
Enc.

R-993

June 5, 1956

Re: Application No. R-34270
Thorn Creek Cattle Ass'n. Inc

Mr. Don Fredericksen
Route #1
Gooding, Idaho

Dear Mr. Fredricksen:

Relative to your Application for Permit to construct a Reservoir and appropriate and store the Public Waters of the State of Idaho to be used for stock watering purposes.

This letter will confirm our conversation while you were in the Department of Reclamation Office, that it will be necessary before commencing work on the Reservoir embankment that plans and specifications be furnished and approved by this Department prior to construction on same.

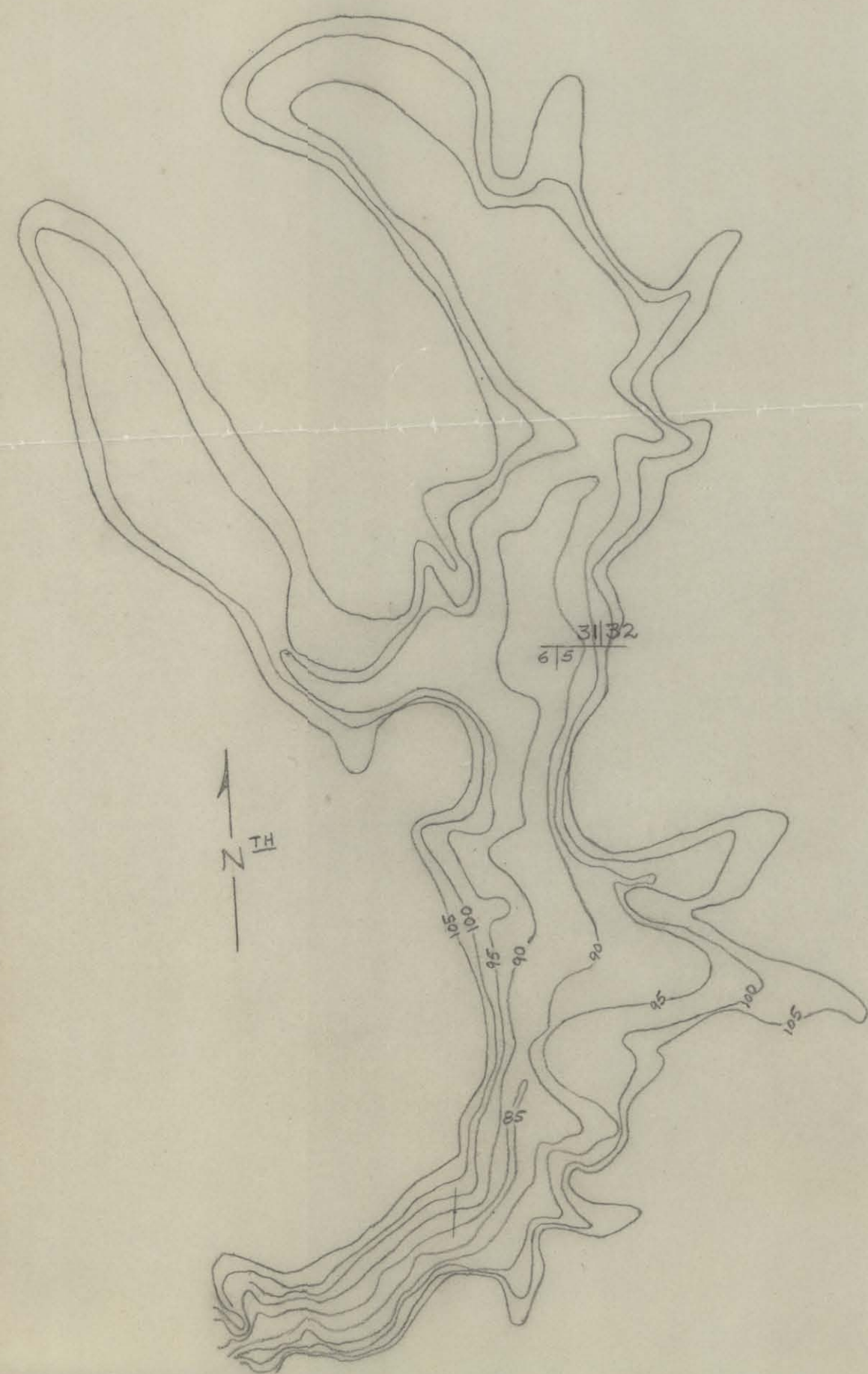
Very truly yours,

MARK R. KULP
State Reclamation Engineer
By

Roy W. Thompson
Office Manager

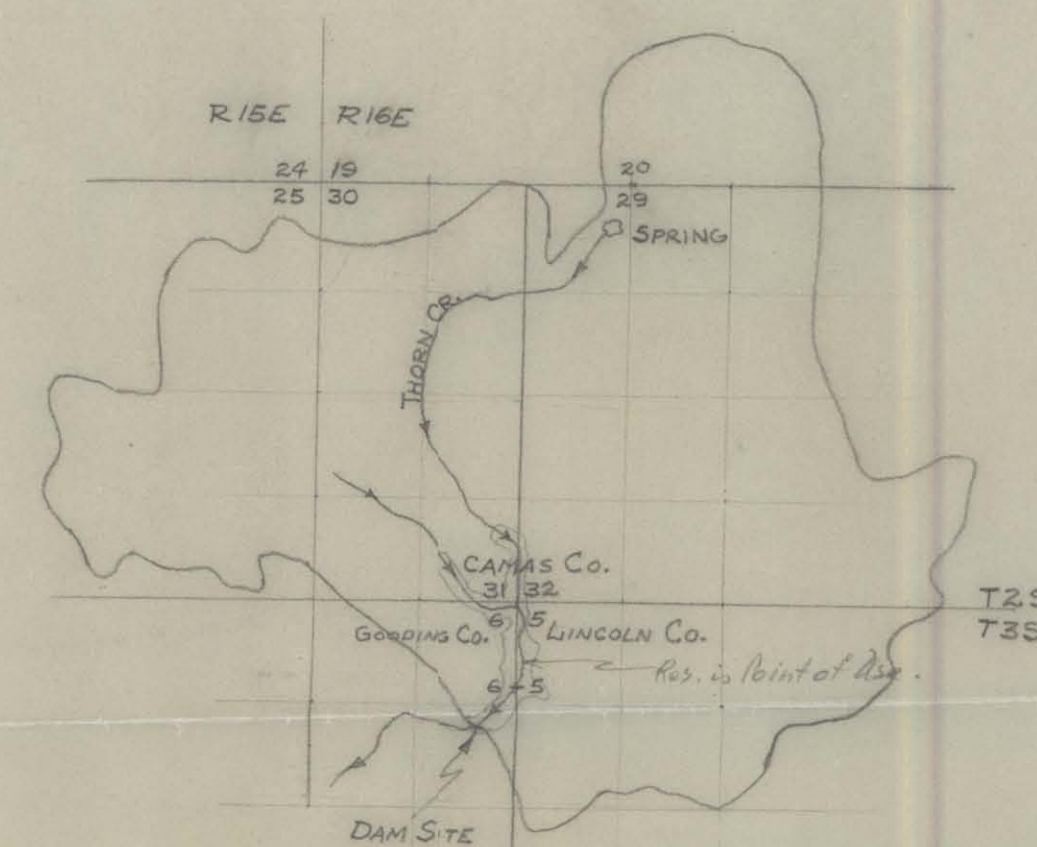
RW:er

R-993



PLAN OF STORAGE AREA & DAM SITE
CONTOUR INTERVAL = 5'
SCALE: 1" = 600'

DAM INFORMATION	
STORAGE	950 AC. FT.
SURFACE AREA	126 ACRE
HIEGHT OF FILL (9,180 yds ³)	24.6 FT.
DEPTH OF WATER AT DAM	19.7 FT.
DEPTH OF SPILLWAY	4.9 FT.
DEPTH OF CUT IN SPILLWAY (45 yds ³)	3.0 FT.
LENGTH OF DAM AT CREST	254 FT.
WIDE OF DAM AT CREST	12.0 FT.
WIDE OF DAM AT BASE	139 FT.
LENGTH OF OUTLET PIPE (3.0")	143 FT.



WATERSHED & LOCATION MAP
SCALE: 1" = 4935'
AREA = 9.2 MI²

THORN CREEK CATTLE ASSOC. RESERVOIR
LINCOLN CO. IDAHO - SHOSHONE, IDAHO
WOOD RIVER SCD

Permit Map No. **R-993**
As Approved **1956**
MARK R. KULP
State Reclamation Engineer

R-993