R-1093

Warren Passey
R.F.D.
Ovid, Idaho

APPLICATION FOR PERMIT

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

Application No. R 38080
Permit No. R 1093

1. Name of Applicant: Hammond Creek Irrigation Co.

Post office address: Ovid County Bear Lake State Idaho

I. If applicant is a corporation, give:

(a) Date and place of incorporation:

(b) Amount of Capital Stock: $

(c) Amount paid in: $

(d) Names and addresses of directors:

II. The financial resources of the corporation are:

(a) Cash on hand: $

(b) Treasury Stock: $

(c) Bonds to be issued: $

(d) Other resources:

2. Quantity of water to be stored: 815 acre feet per annum.

3. Source of water supply is Hammond (Creek) ~~(River) (Spring)~~, a tributary of Bear River.

4 The outlet of the proposed reservoir is located feet, distant from the corner of Section , Township , Range , B.M. and is in the SE ¼ of SE ¼ of Section 30 , Township 13 S , Range 43 E , B.M. County of Bear Lake
(bearing)

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

(a) The reservoir is located in the channel of Hammond (Creek) (River).

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

6. (a) The area of the high water line of the reservoir is 60 acres.

(b) The reservoir capacity is 615 acre feet.

7. Height of reservoir dam 32 feet, length at top 350 feet, length at bottom 25 feet, size of outlet 1.0' dia. feet by feet. The dam is to be constructed of materials as follows: Earth (CH & GC)

(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 Hammond (Creek) (River)? No

(b) Water stored in reservoir will be carried in the channel of Hammond (Creek) (River) a distance of 1/2 miles to point of diversion located , feet, distant from the corner of Section
(bearing)
Township , Range , B.M., and in the SE ¼ of SW ¼ of Section 29 Township 13 S , Range 43 E. , B.M.

9. (a) Area of watershed above dam site 2¼ square miles.

(b) Estimated maximum flow of stream 30 cubic feet per second.

10. Water is to be used for Irrigation purposes.

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

(a) Point of use of water feet, distant from Corner of Section , Township , Range
(bearing)
, 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 feet
(bearing)
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: Canal
(Dam, canal, flume, pipe, etc.)

14. Height of diversion dam: 4.0 feet, length at top 10 feet, length at bottom feet. The dam is to be constructed of materials as follows: Presently in existence - wood

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

15. Size of headgate: Width 4.0 feet, Height 4.0 feet.

16. Diversion Canal: Width at bottom 4.0 feet, width at water line 7.0 feet, depth of water 1.5 feet, Dimensions of Flume None Diameter of Pipe inches; Length of Conduit miles. Average grade per mile 2% feet.

17. Estimated Cost of Works: Storage Works: $15,000.00 Diversion Works: $ Existing

18. Time required for completion of work 5 years.

19. Time required for complete application of water to proposed beneficial use is 5 years.

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

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

Twp.	Range	Sec.	NE¼				NW¼				SW¼				SE¼				Totals
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
13 S	43 E	28	15	40	40	30	40	40	40	40	40	35	30		5	40			435

Total Number of Acres to Be Irrigated 435

21. Existing rights and/or valid permits appurtenant to lands described above are Owned by company members

REMARKS: Dear Sirs: In reference to your letter to me dated August 7, 1961, Questions No. 13, 14, 15, 16, and 17 are concerning the diversion works for our irrigation system. These works are now in existance. We have had a small dam in Hammond Creek for the past 26 years. We have been using the water stored by this dam, and the natural stream flow during this past 26 year period. Our existing system will be used to deliver the storage water we are now applying for.

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

s/ Hammond Creek Irrigation Co., *Applicant.*

By Warren Passey, *Agent.*

Date of first receipt at Department of Reclamation: 8:00 A.M. August 7, 1961
Returned to applicant for correction: August 7, 1961
Corrected application received: August 14, 1961

APPROVAL OF STATE RECLAMATION ENGINEER

The number of this permit is R 1093

Recorded in book R 5, page 1093. Approved August 18, 1961

This is to certify that I have examined the within application for a permit to construct a reservoir and appropriate and store 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 October 18, 1961 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 February 18, 1964

The whole of said work to be completed on or before August 18, 1966

Beneficial use of water stored in accordance herewith, to be made on or before August 18, 1971

Witness my hand this 18th day of August, 19 61

s/ RALPH W. THOMAS
Deputy *State Reclamation Engineer.*

IN TESTIMONY WHEREOF, We, ROBERT E. SMYLIE, Governor of the State of Idaho, and ARNOLD WILLIAMS, 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 18th day of August, 19 61.

COUNTERSIGNED

STATE OF IDAHO

By s/ ARNOLD WILLIAMS
Secretary of State.

By s/ ROBERT E. SMYLIE
Governor.

(SEAL)

A S S I G N M E N T

For value received, I hereby assign all of my right, title and interest in and to Permit to Appropriate the Public Waters of the State of Idaho, No. R-1093 to Little Valley Reservoir and Ditch Co. of Ovid Idaho, Bear Lake County.

Hammond Cr. Irrigation Co
/s/ Warren Passey
Pres. of Permit Holder
/s/ Ida H. Passey
Sec. of Permit Holder

STATE OF IDAHO)
: ss
County of)

On this 18 day of February, 1963, before me, a Notary Public for the State of Idaho, residing at Paris, Idaho personally appeared Warren Passey and Ida H. Passey known to me to be the persons whose names are subscribed to the within instrument and duly acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal, the day and year in this certificate first above written.

/s/ L. Hugh Shepherd
Notary Public Residing at Paris, Idaho

My commission expires: Oct 10-1966

(SEAL)

Permit No. R-1093
CERTIFICATE OF COMPLETION OF WORKS

TO ALL WHOM IT MAY CONCERN:

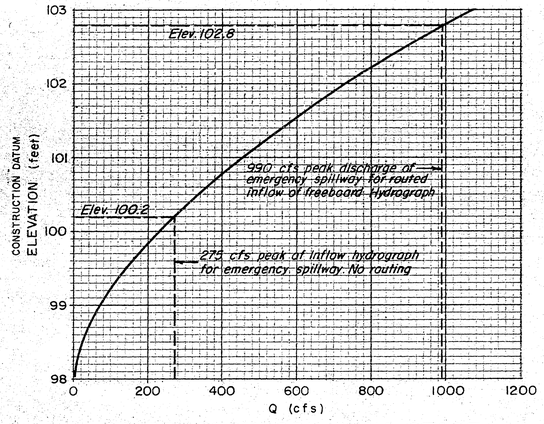
This is to certify that HAMMOND CREEK IRRIGATION CO. - Assignee - LITTLE VALLEY RESERVOIR & DITCH CO. of Ovid, County of Bear Lake, and State of Idaho, the holder of Permit No. R-1093, issued upon Application No. R-38080 bearing date of priority of August 7, 1961, authorizing the diversion of 815 acre feet of waters of Hammond Creek County of Bear Lake, State of Idaho, for irrigation purposes, has fully complied with the provisions of the laws of the State of Idaho relating to the proof of completion of the works of diversion set out and described in said Permit; that said works are adequate for diverting and conveying to the place of intended use 815 acre feet of the waters of Hammond Creek tributary of Bear River; that the point of diversion of said waters SE¼SE¼, Sec. 30, T. 13 S., R. 43 E.,B.M. and that the lands proposed to be irrigated by the use or place of use of said water are described as follows, to-wit:

N½, N½SW¼, SW¼SW¼, N½SE¼, Sec. 28, T. 13 S., R. 43 E.,B.M.

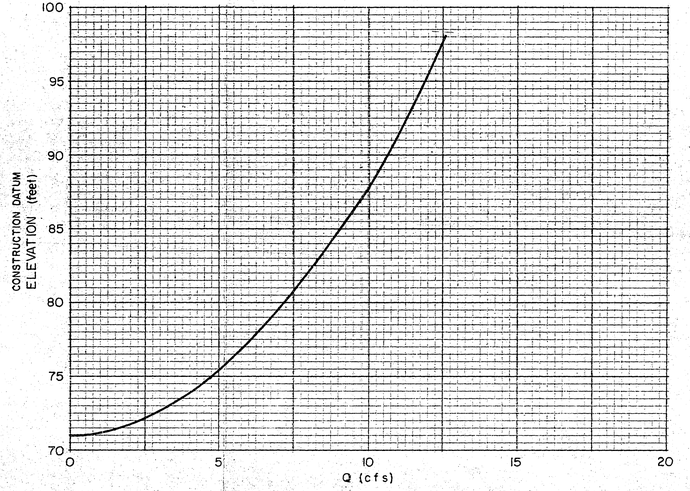
Proof of Completion of Works Made: July 28, 1966

Witness my hand this 1st day of September, A. D. 1966

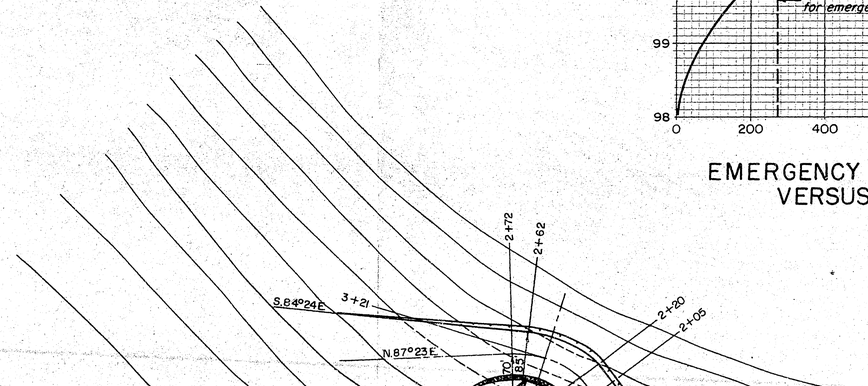
/s/ R. KEITH HIGGINSON
State Reclamation Engineer

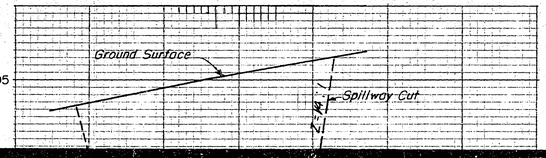


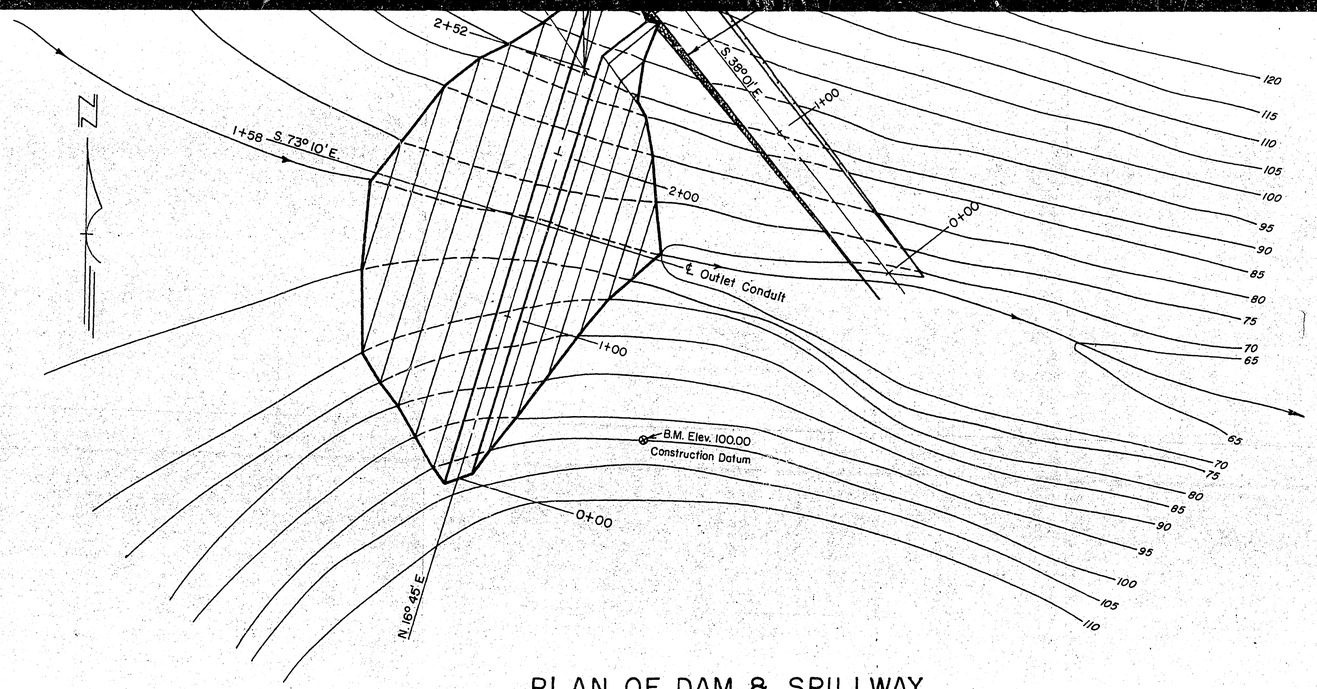
EMERGENCY SPILLWAY STAGE VERSUS DISCHARGE



OUTLET PIPE STAGE VERSUS DISCHARGE

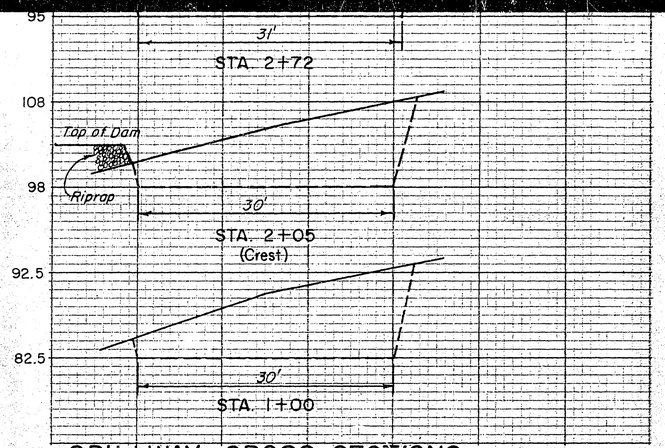






PLAN OF DAM & SPILLWAY

50 0 50 100
SCALE IN FEET



SPILLWAY CROSS SECTIONS

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

Meadorth Wilkins
State Soil Conservation Engineer, Soil Conservation Service

STATE OF IDAHO
Department Of Reclamation

APPROVED

DATE: Aug 10/62 Carl P. Trapshan
Asst. STATE RECLAMATION ENGINEER

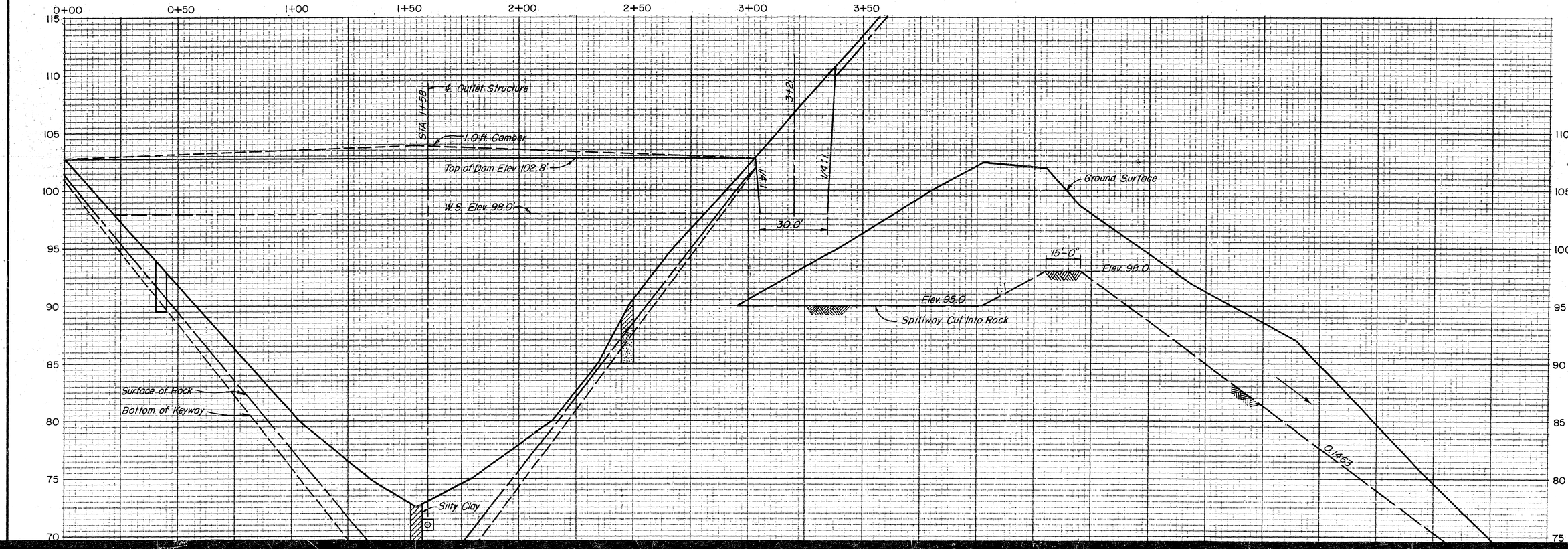
LITTLE VALLEY DAM

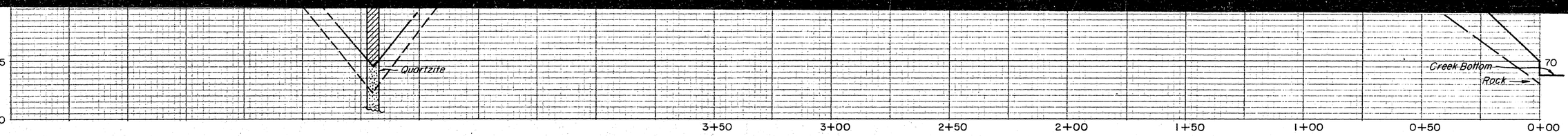
BEAR LAKE S. C. DISTRICT, IDAHO

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed V. G. King	Date 10/61	Approved by Meadorth Wilkins	
Drawn V. G. King	10/61	Title State Conservation Engineer	
Traced E. O.	2/62	Title Head E. & W. P. Unit	
Checked B.B.O. FKM		Sheet No 2 of 4	Drawing No. 7-E-16981

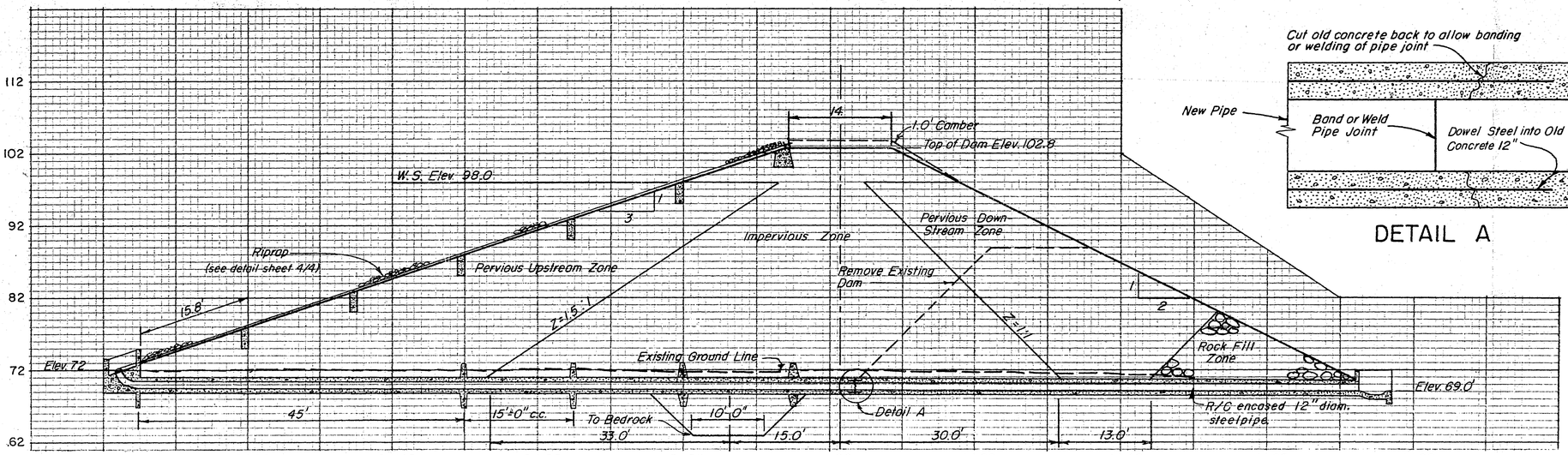
R-109


0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
115
110
105
100
95
90
85
80
75
70
℄ Outlet Structure
STA. 1+58
1.0 ft. Camber
Top of Dam Elev. 102.8'
W.S. Elev. 98.0'
3+92
1.4:1
1.4:1
30.0'
15'-0"
Elev. 98.0
Elev. 95.0
Spillway Cut into Rock
Ground Surface
0.1463
Surface of Rock
Bottom of Keyway
Silty Clay
110'
105
100
95
90
85
80
75



PROFILE OF DAM ON ℄

PROFILE EMERGENCY SPILLWAY



CROSS SECTION OF DAM THRU OUTLET

DETAIL A

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

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

STATE OF IDAHO
Department Of Reclamation
APPROVED
DATE: Aug 11, 1961
Carl P. Taphorn
STATE RECLAMATION ENGINEER

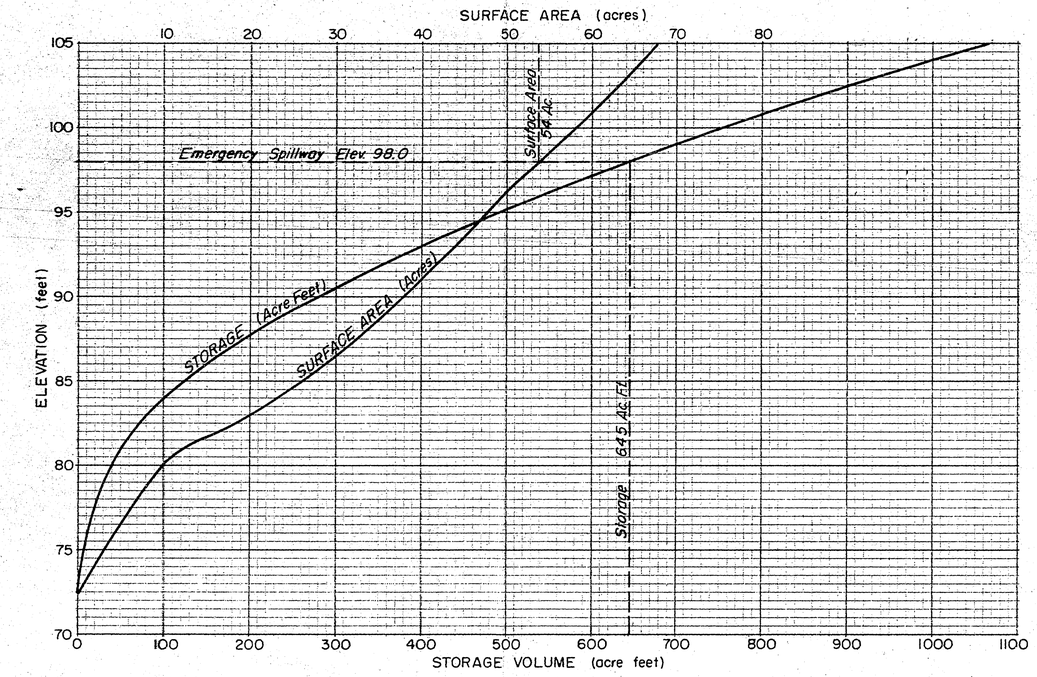
LITTLE VALLEY DAM

BEAR LAKE S. C. DISTRICT, IDAHO

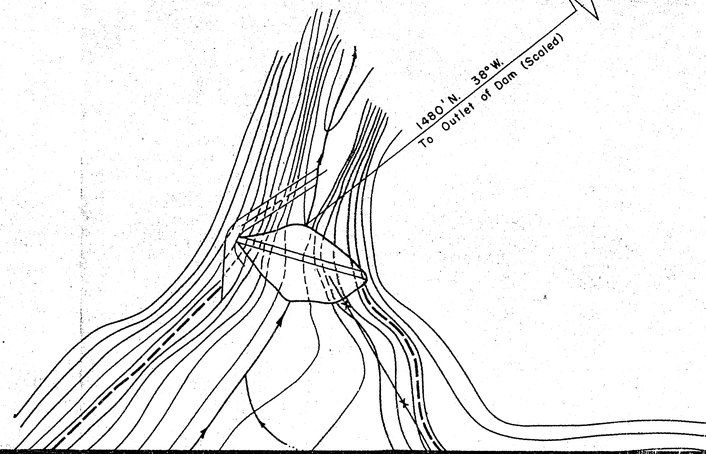
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

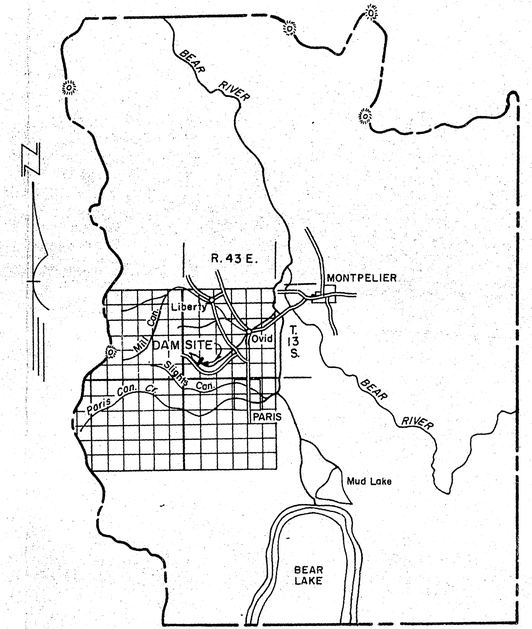
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Drawn V.G. King	10/61	Title State Conservation Engineer	
Traced E.O.	2/62	Title Head E.B.W.P. Unit	
Checked B.B.C. RKH		Sheet No. 3 of 4	Drawing No. 7-E-16981

R-103

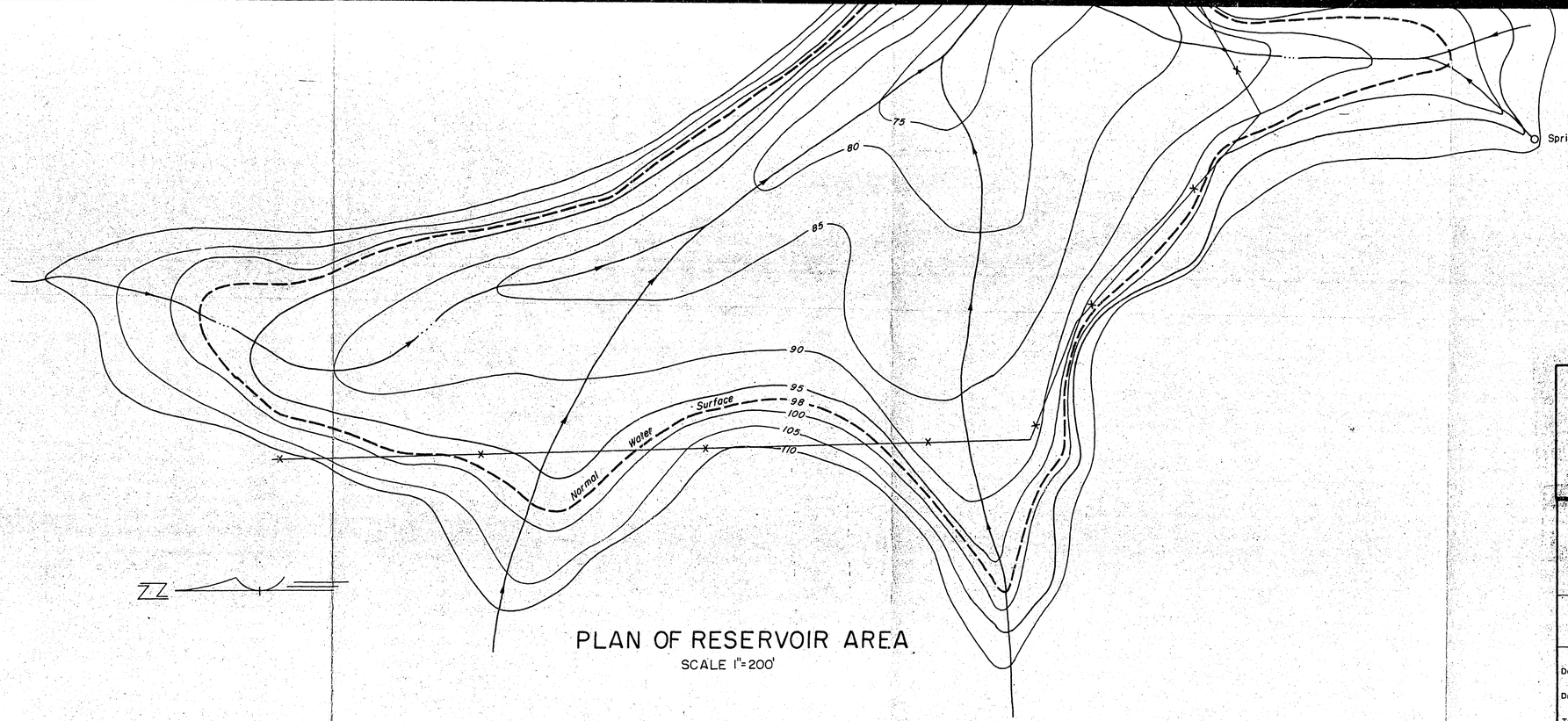


STORAGE AREA CURVES





LOCATION MAP



PLAN OF RESERVOIR AREA

SCALE 1"=200'

"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

STATE OF IDAHO
Department Of Reclamation

APPROVED

DATE: 5/10/62 Earl P. Thaggard
STATE RECLAMATION ENGINEER

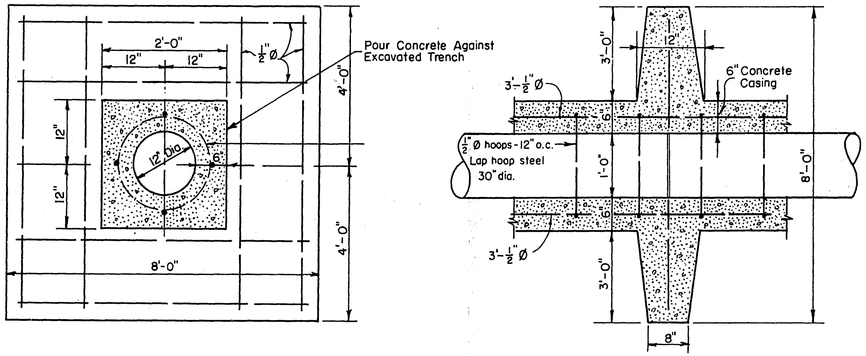
LITTLE VALLEY DAM

BEAR LAKE S. C. DISTRICT, IDAHO

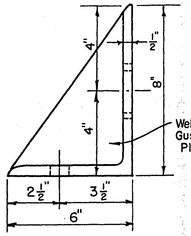
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed V. G. King	Date 10/61	Approved by Meador H. Wilkins	
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Traced E. O.	2/62	Title Head, E. & W.P. Unit	
Checked D.B.O. EKM		Sheet No 1 of 4	Drawing No. 7-E-16981

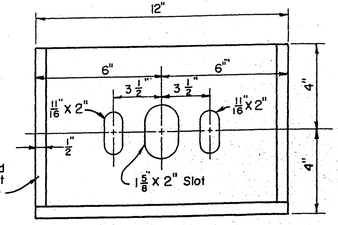
R-1093



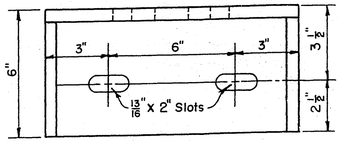
SECTION THROUGH CONCRETE CONDUIT SHOWING COLLARS



SIDE VIEW

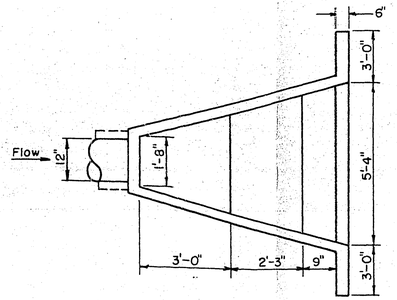


ELEVATION

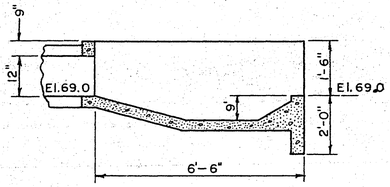


PLAN

GATE STEM SUPPORT

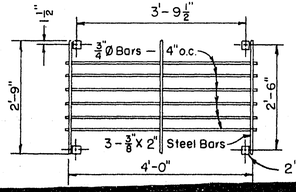


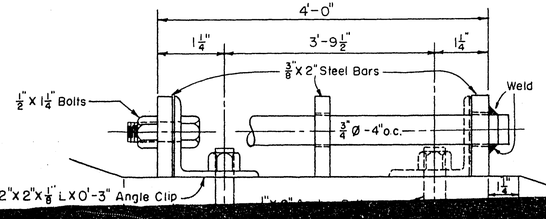
PLAN

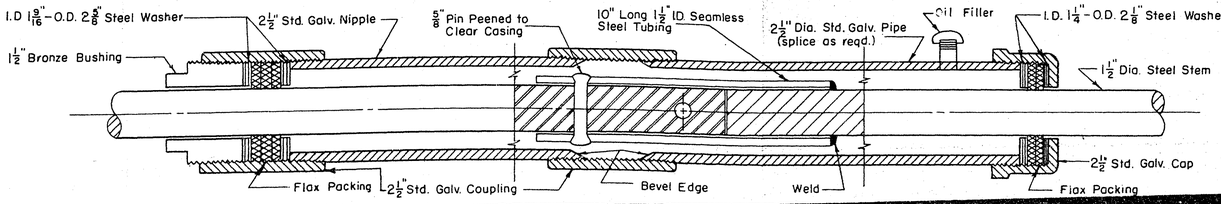


SECTION ON ℄

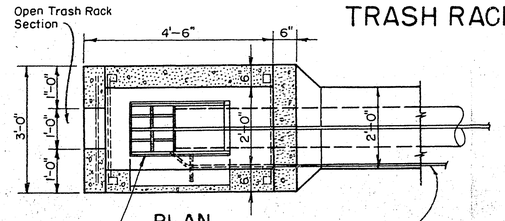
OUTLET STRUCTURE





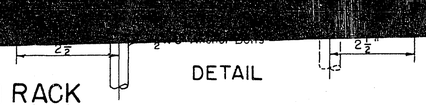


DETAIL OIL SEAL



PLAN

TRASH RACK

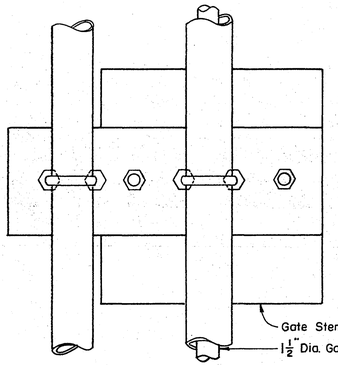


DETAIL

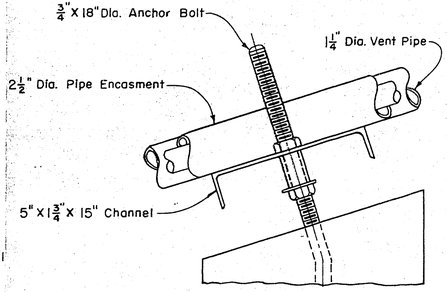
DETAIL STEM SPLICE

DETAIL WEATHER SEAL

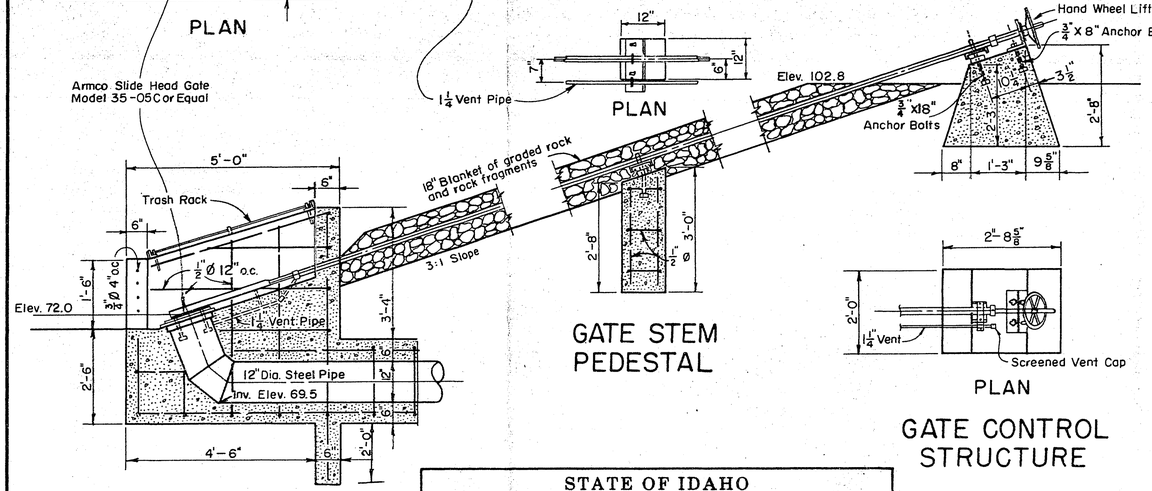
GATE STEM & PIPE CASING



PLAN



SIDE VIEW

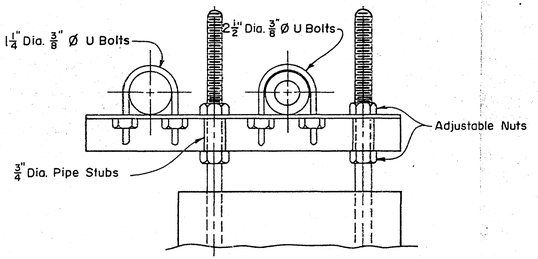


INTAKE STRUCTURE

GATE STEM PEDESTAL

PLAN

GATE CONTROL STRUCTURE



ADJUSTABLE GATE STEM GUIDE

STATE OF IDAHO
Department Of Reclamation
APPROVED
DATE: Aug 14, 1962
Earl P. Parkinson
STATE RECLAMATION ENGINEER

"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."
Meader H. Wilkins
State Soil Conservation Engineer, Soil Conservation Service

LITTLE VALLEY DAM

BEAR LAKE S. C. DISTRICT, IDAHO

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed V. G. King	Date 10/61	Approved by Meader H. Wilkins	
Drawn V. G. King	10/61	Title State Conservation Engineer	
Traced E. O.	2/62	Title Head, E. & W. P. Unit	
Checked B.B.O. FRM		Sheet No. 4 of 4	Drawing No. 7-E-16981

R-1029

State Reclamation Engr.

ID-58

Project plan
For
CONSERVATION OPERATIONS
For the
LITTLE VALLEY DAM



SOIL CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

Assisting the

Bear Lake

SOIL CONSERVATION DISTRICT
STATE of IDAHO

3032 USDA-SCS PORTLAND, OREG. 1960

7-L-15000-359

RECORD OF PLANS

Plans ✓	Hydrology ✓
Specs	Hydraulics ✓
Geology ✓	Narrative ✓
Soils ✓	

Approved by State Rec. Engr. 3/10/82

Copy to State Rec. Engineer 3/10/82

RECEIVED
AUG 25 1964
Department of Reclamation

COMPLETION REPORT
Little Valley Dam
Bear Lake Soil Conservation District
Hammond Creek Irrigation Co.
February 11, 1963

Construction of the Little Valley Dam located in SW¼ Sec. 3, Twp. 13S, Range 43E, began about September 24, 1962 and was completed about November 30, 1962.

Ed Smith, earth moving contractor, was hired by the hour for construction. The farmers supplied the balance of the labor and materials. The contractor was concerned only with the earthwork, part 3 of cost estimate. The farmers supplied labor, materials and equipment for compaction, concrete (pipe encasement and inlet & outlet structure), the outlet pipe, gates & accessories and the placement of rock riprap. Cost outlay to contractor for earth moving was $4,419.30 while the group supplied in labor and materials approximately $4,403.37.

Two major changes in the approved plans which were made consisted of changing the spillway location from the north abutment to south abutment. This amounted to an estimated savings in rock excavation of 2000 C.Y. In changing the spillway to the south abutment, it will afford protection to the proposed irrigation channel from the reservoir outlet. This change was proposed by Verl Ring, Unit Engineer, and approved by Donald Stewart, Engineering Specialist, of Area IV.

The rock excavation proved difficult for the contractor. The side slopes are flatter than was specified and the bottom width is narrower than designed. The capacity is not reduced sufficiently to pose a problem since the gradient of the spillway is steeper than originally designed.

One caution which the group should keep in mind is the spillway banks next to the earthfill. This could become a hazard at peak floods. If it becomes a hazard, the spillway should be widened further and heavy rock riprap should be placed along the banks next to the fill.

The old fill, which was to have been removed, was not done according to the plans. When excavation of the downstream toe was made, to provide for installing outlet structure and rockfill zone, an old concrete cut-off wall was found. It was deemed that this was sound and afforded a good cut-off and that the old fill above this would not need to be removed and recompacted. A new section of pipe, encased in concrete, was installed on the outlet end.

Several other minor changes to facilitate construction were made as shown on the attached plans.

R-1095

The plans as submitted will be the as-built plans for this structure and were approved after inspection by Donald Stewart, Engineering Specialist, Area IV.

PREPARED BY: Donald E Stewart DATE: 2/11/63

P-1093

RECEIVED
AUG 23 1961
Department of Reclamation

COST BREAKDOWN - - - LITTLE VALLEY DAM
BEAR LAKE COUNTY, IDAHO
Constructed in 1962
Bear Lake Soil Conservation District

Earthwork and Rock Excavation (includes removal of old riprap on old dam). Charge per hour for Caterpillar, carry-all and blade) $17.50. Also includes backhoe work done for pipe through cutoff trench at $17.50 per hour.	$6,419.50
Caterpillar rental to pull sheepsfoot roller (includes some truck rental)	2,643.00
Caterpillar rental for replacement (other cat broke down) - different owner.	735.00
Cost of dynamiting spillway (includes dynamite, compressor & labor).	233.00
Cost of gravel, cement reinforcing steel, concrete, steel pipe through dam.	732.62
Cost of small parts, bolts, tools, survey stakes, channel iron, oil for stem.	147.33
Armco stem and gate assembly	605.46
Truck rental for hauling supplies and hauling rocks for riprap	150.00
Labor	973.26
Lumber for building structures	32.90
Rental for two sections of sheepsfoot roller	160.00
TOTAL COST	$12,832.07

Above costs include $5.50 for filing fee.
Does not include $8.00 donated for phone calls.
Does not include interest of any kind.

645 acre feet of storage (maximum) would show a cost of $19.89 per acre foot stored. Cost sharing indicated in ACP-247 received by SCS, indicates $5,400.00. This would leave a balance of $7,432.07 to be born by the Irrigation Company. The cost per acre foot of storage then becomes $11.50 to the Company.

R-1023

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

P. O. Box 1247
Boise, Idaho 83701

RECEIVED
AUG 25 1964
Department of Reclamation

August 24, 1964

Mr. Carl Tappan
State Reclamation Engineer
Statehouse
Boise, Idaho

Dear Carl:

Attached is a copy of the Completion Report for the Little Valley Dam, Hammond Creek Irrigation Co., Bear Lake SCD.

Changes made in the plans are covered in the report. I do not have an extra set to prepare "as built" plans for you but I will be happy to make the changes on your plans if you so desire. I realize that these changes probably should have been submitted to you for approval but I didn't feel that they were important enough to bother you with them.

Sincerely,

Meader H. Wilkins

Meader H. Wilkins
State Conservation Engineer

Attachment

K-1093

RECEIVED
AUG 25 1964
Department of Reclamation

P. O. Box 1247
Boise, Idaho 83701

August 24, 1964

Mr. Carl Tappan
State Reclamation Engineer
Statehouse
Boise, Idaho

Dear Carl:

Attached is a copy of the Completion Report for the Little Valley Dam, Hammond Creek Irrigation Co., Bear Lake SCD.

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Sincerely,

Meader H. Wilkins

Meader H. Wilkins
State Conservation Engineer

Attachment

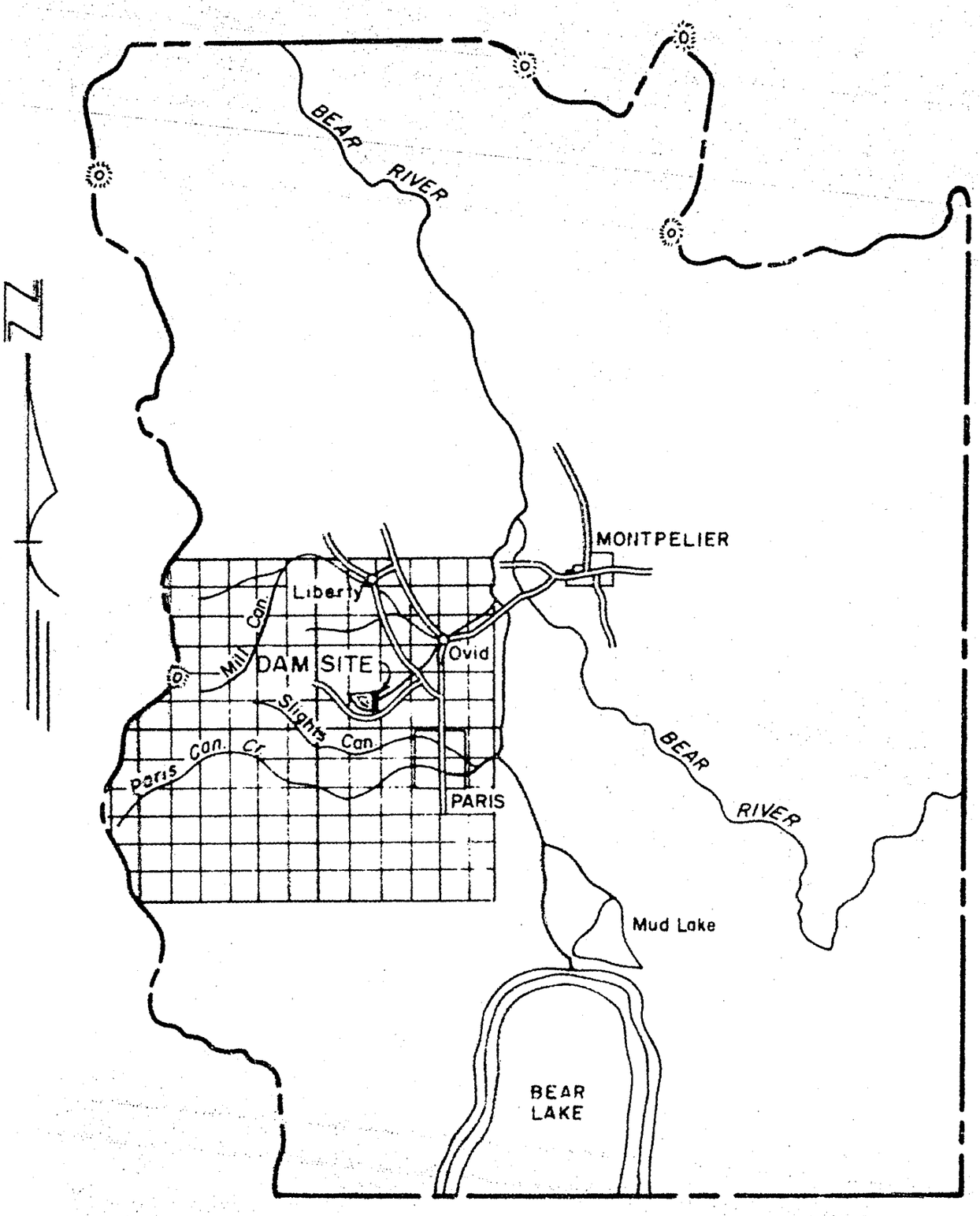
R-1093

DESIGN REPORT
LITTLE VALLEY DAM

BEAR LAKE S.C.D., IDAHO
MONTPELIAR, IDAHO

USDA - Soil Conservation
Service

R-1093



LOCATION MAP

R-1093

Design Report
of
LITTLE VALLEY EARTH FILL DAM

General Information

The Little Valley Dam is located two miles west of Lanark, Idaho, in the Bear Lake Soil Conservation District, Idaho, Sec. 30, T. 13 S., R. 43 E. It will be built across the Hammond Cr. channel as it leaves Little Valley. The dam will be constructed 30 feet high and have a top length of 306 feet. The lake behind the dam will have a surface area of 54 acres and a volume of 645 acre feet.

Geology of Site

The site for this dam was inspected by the State SCS geologist. Three pits were dug along the center line of the dam for sub-surface investigation. A rock ledge was encountered at eight feet of depth at the low point on the dam centerline. The rock was penetrated into 5.5 feet. The fractures in the rock were found to be sealed tight with clay.

A pit was dug in each abutment of the dam site. The rock ledge was encountered at 2.0 feet of depth.

The rock at this site and in the surrounding reservoir area is quartzite sandstone. The attitude of the formation is favorable to a tight reservoir site.

For further information, see the geology report of the SCS State geologist on this site.

Soil Mechanics Testing Evaluation

Soil samples were obtained from the south abutment of the dam site (pit #1) and the reservoir site (pit #2). These soils were sent to the Soil Mechanics Laboratory at Portland, Oregon, for classification and testing. The soil from pit #1 was classified as a GC-SC soil. The soil from pit #2 was classified as a CL-2 soil.

These soils will be used as fill material in the dam. Soil compaction curves were developed by the Portland Laboratory for these soils and are attached. These curves indicate that the CL-2 soil must be compacted to a dry density of 102 lbs. per cubic foot to obtain a shear resistance of 200 lbs/In^2. This will be used for the required compaction of the earth fill in the dam.

Limiting Design Criteria

The limiting design criteria for darth dams as established by Engineering Memorandum 27 is applicable to this dam since the height of the dam times the storage is greater than 300.

Storage x H = 645 x 26 = 16,800

R-1093

Below this dam a distance of two miles two homes lie along the water course of Hammond Creek. These homes are occupied the year round. The channel of the creek is well confined to a point several hundred feet above these homes where the channel opens up into Liberty Valley. The loss of life due to failure of this dam would be remote. However, since the possibility exists, the dam is designed as a class C hazard dam.

The spillway design criteria for a class C hazard dam as established by Engineering Memorandum 27 requires that the spillway pass the runoff from a 6 hour point rainfall with an anticedant moisture condition of II, and that the spillway Freeboard requirement pass the runoff flow from a storm 2.5 times the 6 hour point rainfall with an anticedant-moisture condition of II. This criteria is used in the hydrologic determinations and spillway design.

Hydrology

The watershed area above this dam is 2.5 square miles. A 6 hr. point rainfall for this area as taken from the Hydrology Handbook Fig. 3.21-2 is 4.0 inches. Since the watershed area is small no modification of this rainfall is made for the area rainfall.

This area lies in a rainfall zone of 12" to 15", therefore, curve B of Fig. 3.21-5 is used for determining the storm distribution.

The watershed cover complex is as follows and the curve number as determined:

Cover	Condition	% Area	Soil	Curve	Weighted Curve
Sagebrush	Fair	50%	Higham (D)	79	39.5
Sagebrush	Good	30%	Lanark (B)	35	10.5
Aspen	Good	20%	Aspen (B)	30	6.0
				Curve No. =	56.0

The time of concentration for this watershed is computed from the watershed configuration. The other hydrologic terms are computed as outlined in Section 3.21 for determining the storm runoff hydrograph.

$$Tc = \frac{L}{v} = \frac{1.5(5280)}{3} = 2640 \text{ Sec.}$$
$$= 44 \text{ min. or } 0.73 \text{ hr.}$$

$$Tp = \frac{D}{2} + 0.6\,Tc = \frac{0.5}{2} + 0.6(.733) = 0.69 \text{ hr.}$$

$$Tb = 2.67(0.69) = 1.85 \text{ Hr.}$$

$$qx = \frac{484\,AQ}{Tp} = 1580Q$$

R-1093

Watershed and Storm Data:

A = 2.25 mi.^{2}	ΔD = 0.50 Hr.
Tc = 44 min. = .73 Hr	Tp = 0.69 Hr.
II Curve No. = 56	Tb = 1.85 Hr.
P = 4.0"	qx = 1580 ΔQ

Computation of Subhydrograph Peaks (4.0" Rainfall):

Time Hrs.	Kp	Acc P Inches	Acc Q Inches	ΔQ Inches	1580 ΔQ cfs
0.0	0	0	0		
0.5	.035	0.14	0		
1.0	.080	0.32	0		
1.5	.135	0.54	0		
2.0	.23	0.92	0		
				.08	126.4
2.5	.60	2.40	0.08		
				.08	126.4
3.0	.70	2.80	0.16		
				.10	158.0
3.5	.78	3.12	0.26		
				.06	95.0
4.0	.835	3.340	0.32		
				.08	126.4
4.5	.885	3.540	0.40		
				.05	79.0
5.0	.925	3.700	0.45		
				.06	95.0
5.5	.965	3.860	0.51		
				.06	95.0
6.0	1.0	4.0	0.57		

Computation of Sub-Hydrograph Peaks:
P = 2.5(4.0) = 10.0"

Time	Kp	Acc.P	Acc.Q	ΔQ	1580 ΔQ
0.0	0	0	0		
0.5	.035	0.35	0		
1.0	.080	0.80	0		
1.5	.135	1.35	0		
				.06	94.8
2.0	.23	2.30	0.06		
				1.54	2440.0
2.5	.60	6.0	1.6		
				0.60	948.0

R-1093

Computation of Sub-Hydrograph Peaks: (Continued)
P = 2.5(4.0) = 10.0"

Time	Kp	Acc.P	Acc.Q	Q	1580 Q
3.0	.70	7.0	2.2		
				0.56	885.0
3.5	.78	7.8	2.76		
				0.36	569.0
4.0	.835	8.35	3.15		
				0.34	537.0
4.5	.885	8.85	3.49		
				0.30	474.0
5.0	.925	9.25	3.79		
				0.30	474.0
5.5	.965	9.65	4.09		
				0.27	427.0
6.0	1.0	10.0	4.36		

The composite hydrographs (attached) give peak runoff flows of 275 c.f.s. for the emergency spillway and 2,725 c.f.s. for the freeboard design.

These flows are routed through the reservoir for the spillway design. See the spillway design for this information.

Spillway Design

In order to determine the required spillway dimensions, the storm hydrographs were routed through the reservoir. The spillway dimensions used were:

b = 30 ft.
2 = 1:1
n = .04
L = 20 ft. (Technical Release #2)
Si = 0.0827
So = 0.1463 (Super-critical)

With the crest of the spillway at elevation $98\underline{0}$, the peak outflow of the reservoir was reached at elevation $102\underline{8}$ with a discharge of 990 c.f.s. This gives a required spillway depth of 4.8 ft. The stage elevation at a discharge of 275 c.f.s. is 100.25 ft. This allows a freeboard of 2.55 feet during the designed spillway flow.

The spillway dimensions listed are used for the design of this dam.

Since the spillway will be cut into rock, no primary spillway is needed in this design. The steep slope of the outlet channel is also desirable since no erosion problem exists and a quick decent from the hillside reduces the spillway cut.

Selection of Basic Design Type - Rolled Earth Fill Dam

The CL-2 soil will be used for the core and GC-SC for shell material in this dam. For selection of basic design type refer to Section IEHB. Chart D, Fig. 7-19.

CL-2 is in behavior group VI.

Table 4, Fig. 7-22
Characteristics of compacted fill material:
Shearing -5 (Relative Resistance to)
Piping -2 (failure (1) greatest to)
Cracking -2 ((6) Least)
Permeability - Low
Compressibility - Medium to high
Compaction - Good to fair

Evaluation of Site and Foundation
Table 6, Fig. 7-24
Site classification - Type A
Foundation classification
Compressibility - None to very slight
Permeability - Impervious
Foundation Type - 1a

Table 7, Fig. 7-24a
Selection of basic design type
Site type A
Foundation Type 1a
Use zone section
Materials II - VII usable in core
Materials I, III usable in shell

Structural Design

Top width of dam:

$$W = \frac{H+35}{5} = \frac{30+35}{5} = 13 \text{ ft.}$$

USE 14.0 ft.

Cut-off-Collars:

Design collars to increase the length of creep along the outlet pipe 15%.

L = 140 ft.
Increase L = .15(140) = 21 ft.
Increased L/Collar = 6.0 ft.
No. Collars = 21.0/6 = 3.5 USE 4 collars

Space the collars in the impervious zone along the outlet pipe extending through the new portion of the dam as shown on the plans.

Cut-Off Trench

A cut-off trench will be cut into the foundation of this dam and penetrate into the underground rock formation 18 inches. This trench will then be back filled with the CL-2 materials available. The dimensions of the cut will be: b = 10 ft.
z = 1:1

RipRap

The face of this dam will be riprapped 18" deep. The materials cut from the spillway will be suitable for this use.

Toe Drain

See the accompanying plans for the design of the toe drain. The drain materials will be of a quality suitable to filter out the fines of the fill material.

Plans

The detailed drawings accompany this report to the State Conservation Engineer for checking and forwarding to Cartographic for final drafting.

Cost Estimates

An estimated cost for the construction of this drain is attached.

ID-9
12/13/55

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
IDAHO

Sheet No. _____
of _____

(Estimate)
~~(Final)~~

COST DISTRIBUTION SHEET

Planning Engineer V. G. King Date 8/18/61

Job Name Little Valley Dam

Approved by _____ Date _____

Construction Engineer _____

Job Location Montpelier Work Unit Bear Lake County Date Completed _____

ITEM NO.	ITEM	UNIT	QUANTITY	UNIT COST	Cost Division			TOTAL COST
					Group	Soil Conservation District		
						SCS in source	Other than SCS in source	
1	Concrete (Reinforced): Pipe Encasing, cutoff collars, control & gate stem pedestals	C. Y.	22.0	$60.00	$1320.00			
2.	Concrete (Reinforced): Inlet & Outlet Stru.	C.Y.	3.5	90.00	315.00			
3.	Earthwork							
	A. Cut							
	Core Trench	C.Y.	970	.30	291.00			
	Spillway (Rock)	C.Y.	3257	1.00	3257.00			
	B. Fill							
	Core Trench	C.Y.	970	.50	435.00			
	Dam	C.Y.	12000	.50	6000.00			
	C. Stripping Dam Site	C.Y.	600	.20	120.00			
4.	Outlet Pipe	Ft.	90' - 12"	3.00	270.00			
5.	Gate & Accessories	Unit	1	300.00	300.00			

R-1093

ARS SCS PORTLAND, ORE. AUGUST 1959

M-1168

ID-9e Continuetion Sheet
5/3/56

COST DISTRIBUTION SHEET

ITEM NO.	ITEM	UNIT	NO. UNITS	UNIT COSTS	COST DIVISION		TOTAL COSTS
					Group	SCS	
6.	Rip-rap (used from Spw. cut)	C.Y.	200	-			
7.	Gravel	C.Y.	100	4.00	400.00		
					$12,708.00		$12,708.00
8.	Engineering					$2,000.00	2,000.00
							$14,708.00

R-1093

MATERIALS TESTING SECTION REPORT	EWP-5 (10-20-56) Portland, Oregon	SOIL CLASSIFICATION

PROJECT	LOCATION
Little Valley Dam	Bear Lake SCD, Idaho

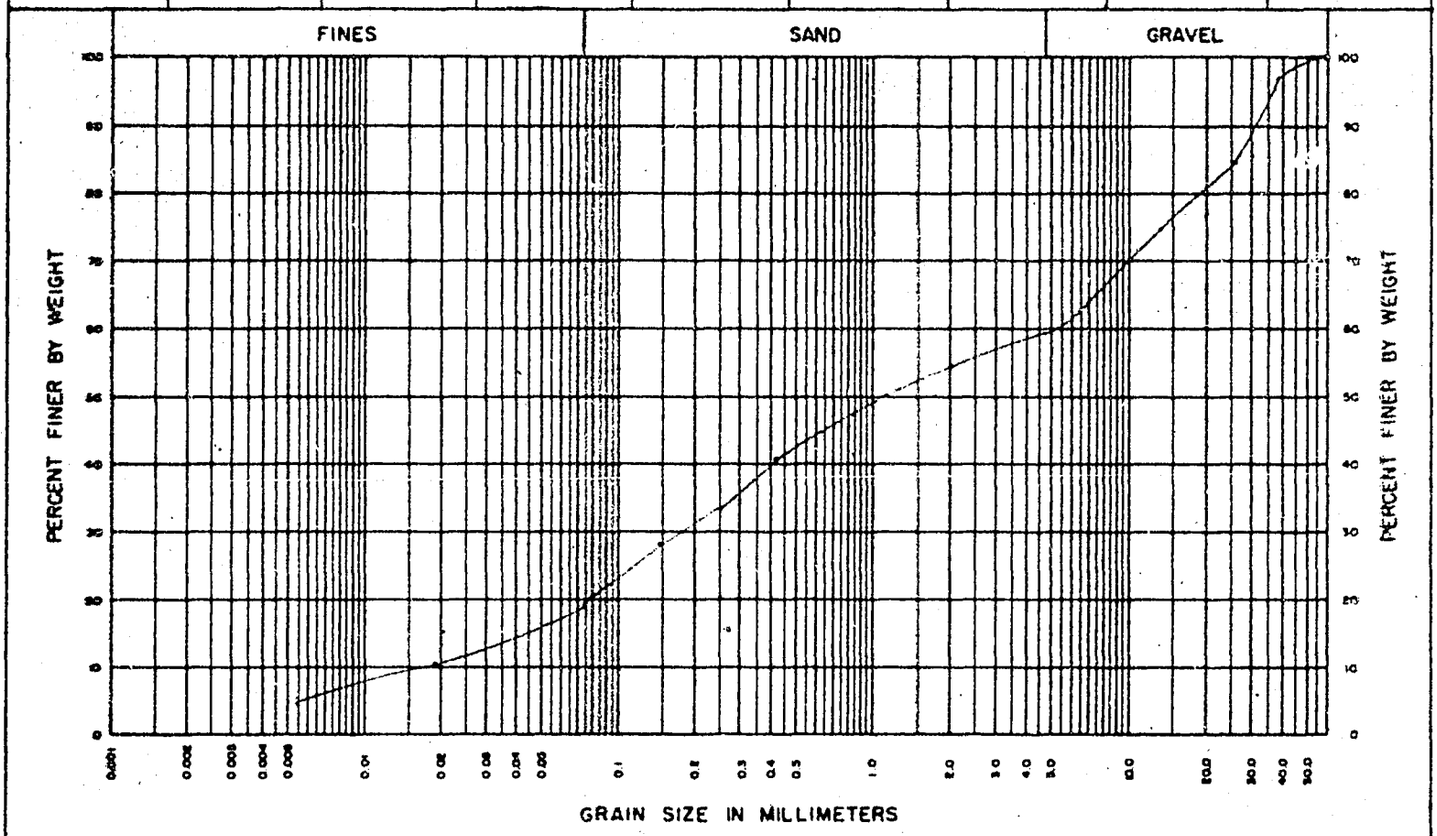
FIELD SAMPLE No.	TYPE of SAMPLE	ORIGIN
1-1	Bag	Depth 1' to 2'

PROPOSED USE	TESTING SECTION SAMPLE No.	SUBMITTED BY
shell	620237	V. G. King

1: SYMBOL	2: DESCRIPTION
GC-SC	Dark brown clayey gravelly sand

3: GRAIN SIZE DISTRIBUTION

D_{10}	D_{15}	D_{30}	D_{50}	D_{60}	D_{85}	D_{MAX}	C_u	C_c
0.017	0.045	0.175	1.10	5.4	20.6	50.8		



4: SPECIFIC GRAVITY	5: ATTERBERG LIMITS						6: TOTAL SALTS	7: UNDISTURBED CONDITION	
	UNDISTURBED		AIR DRY		OVEN DRY			MOISTURE	UNIT WEIGHT
G	LL	PI	LL	PI	LL	PI			
2.64			31	14			%	%	lb/ft³

8: REMARKS

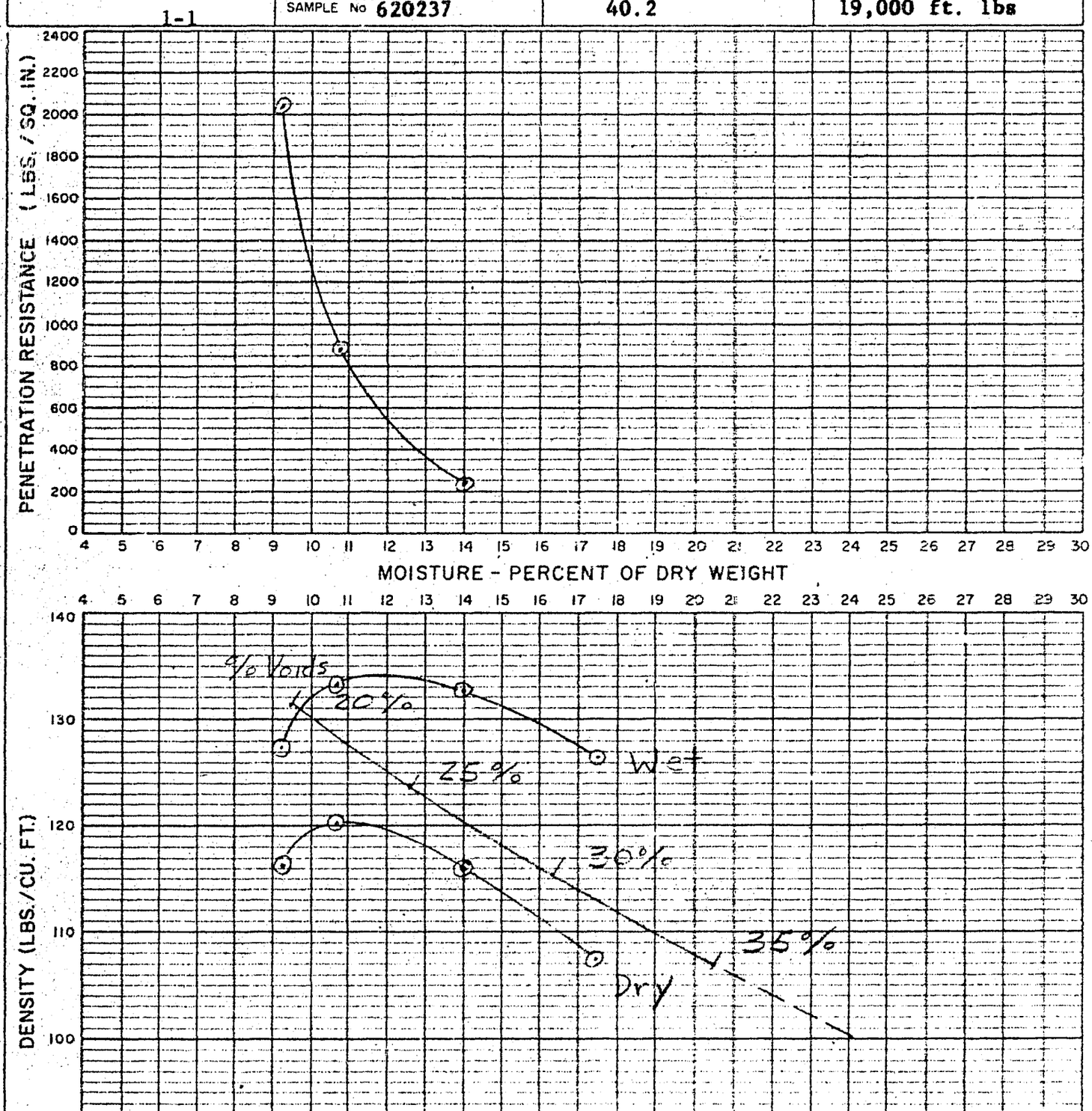
U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE Ralph M. Arrington	
	TITLE Civil Engineer	DATE 9/20/61

R-1093 7-0-14820-L

MATERIALS TESTING SECTION REPORT	EWP-23 1-21-59 PORTLAND, OREGON	SOIL COMPACTION CURVES

PROJECT	LOCATION
Little Valley Dam	Bear Lake SCD, Idaho

FIELD SAMPLE No.	TESTING SECTION SAMPLE No	% LARGER THAN TESTED	COMPACTIVE EFFORT
1-1	620237	40.2	19,000 ft. lbs



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

SIGNATURE: Ralph M. Arrington

TITLE: Civil Engineer

DATE: 9/20/61

M-1954

R-1093

7-0-14821-L

MATERIALS TESTING SECTION REPORT

EWP-5 (10-20-56) Portland, Oregon

SOIL CLASSIFICATION

PROJECT	LOCATION
Little Valley Dam	Bear Lake SCD, Idaho

FIELD SAMPLE No.	TYPE of SAMPLE	ORIGIN
2-2	bag	Depth: 2.0 to 4.0 feet

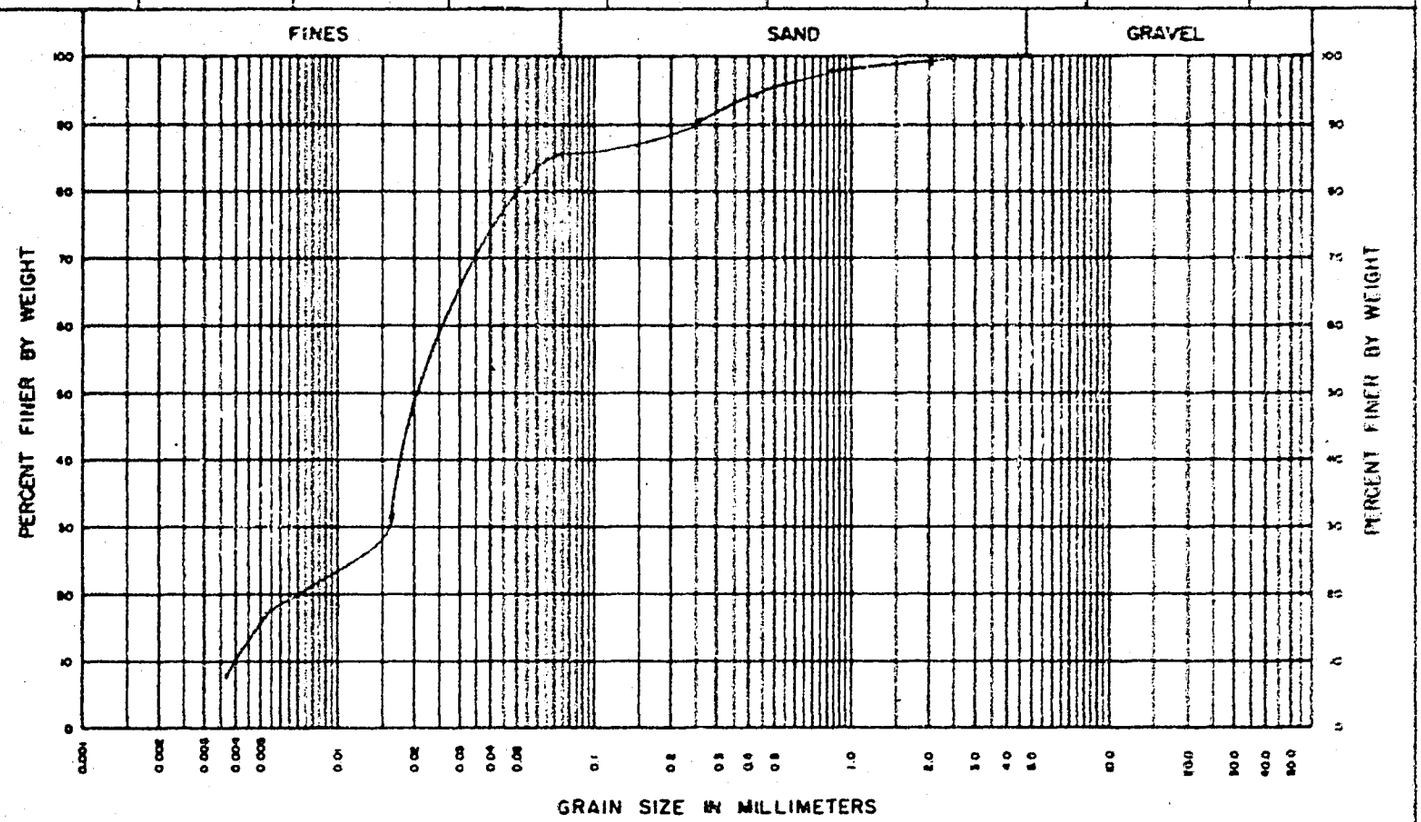
PROPOSED USE	TESTING SECTION SAMPLE No.	SUBMITTED BY
Fill	620239	Verl G. King

1. SYMBOL: CL-2

2. DESCRIPTION: Pale brown sandy silty clay

3. GRAIN SIZE DISTRIBUTION

D_{10}	D_{15}	D_{30}	D_{50}	D_{60}	D_{85}	D_{MAX}	C_u	C_c
0.004	0.0049	0.016	0.021	0.026	0.07	4.76		



4. SPECIFIC GRAVITY	5. ATTERBERG LIMITS						6. TOTAL SALTS	7. UNDISTURBED CONDITION	
	UNDISTURBED		AIR DRY		OVEN DRY			MOISTURE	UNIT WEIGHT
G	LL	PI	LL	PI	LL	PI			
2.55			40	17			%	%	lb/ft³

8. REMARKS

Positive reaction to benzidine.

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

SIGNATURE: Ralph M. Armington

TITLE: Civil Engineer

DATE: 9/20/61

M-2069

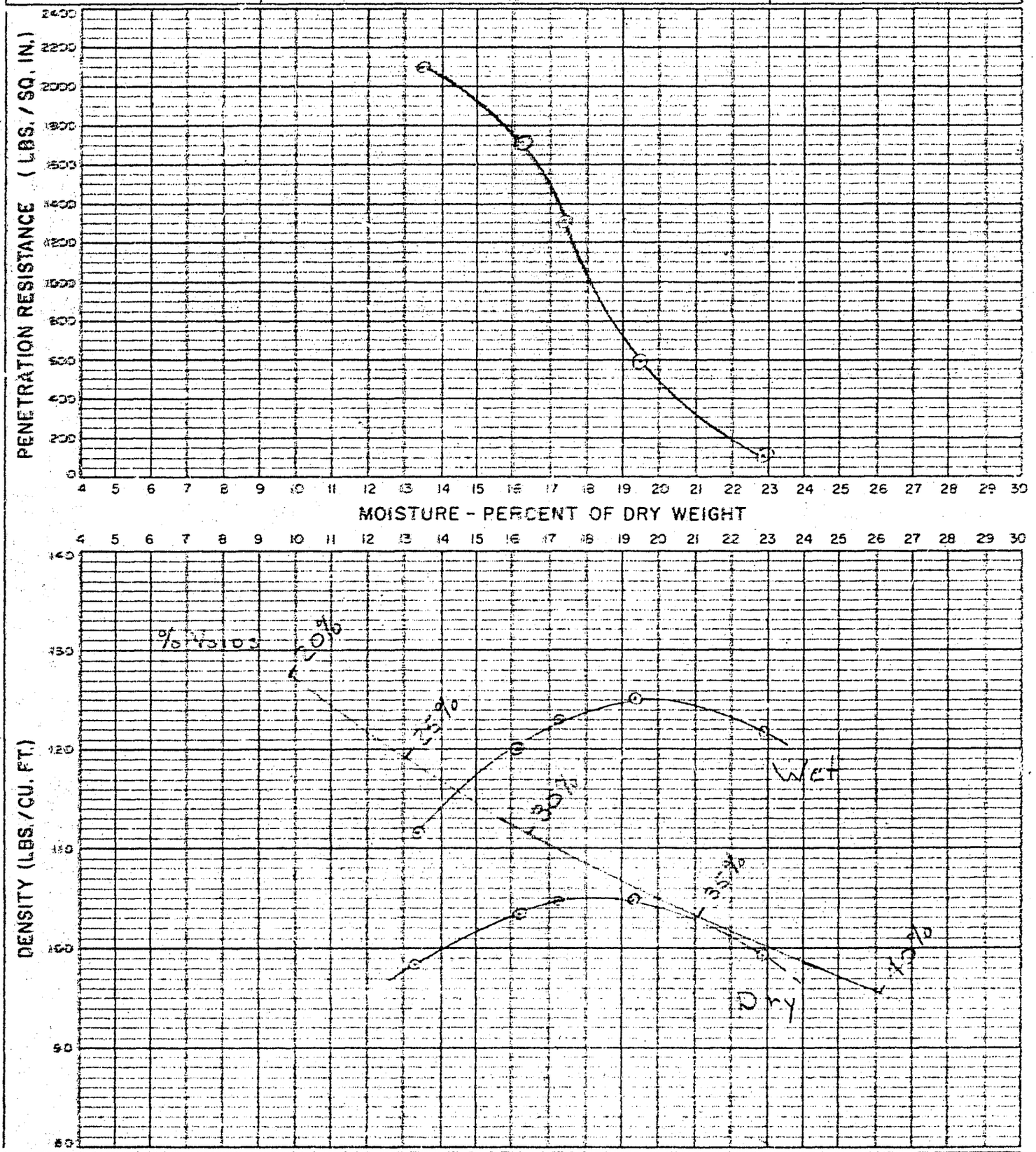
R-1093

7-0-14820-1

MATERIALS TESTING SECTION REPORT	EWP-23 -21-59 PORTLAND, OREGON	SOIL COMPACTION CURVES

PROJECT	LOCATION
Little Valley Dam	Bear Lake SCD, Idaho

FIELD SAMPLE No.	TESTING SECTION SAMPLE No.	% LARGER THAN TESTED	COMPACTIVE EFFORT
2-2	620239	0.0	21,900 ft lbs/ft^3



U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE Ralph M. Arrington TITLE Civil Engineer DATE 9/20/61

M-1956

R-1093

7-0-14821-L

MATERIALS TESTING SECTION REPORT	EWP-5 (10-20-56) Portland, Oregon	SOIL CLASSIFICATION

PROJECT	LOCATION
Little Valley Dam	Bear Lake SCD, Idaho

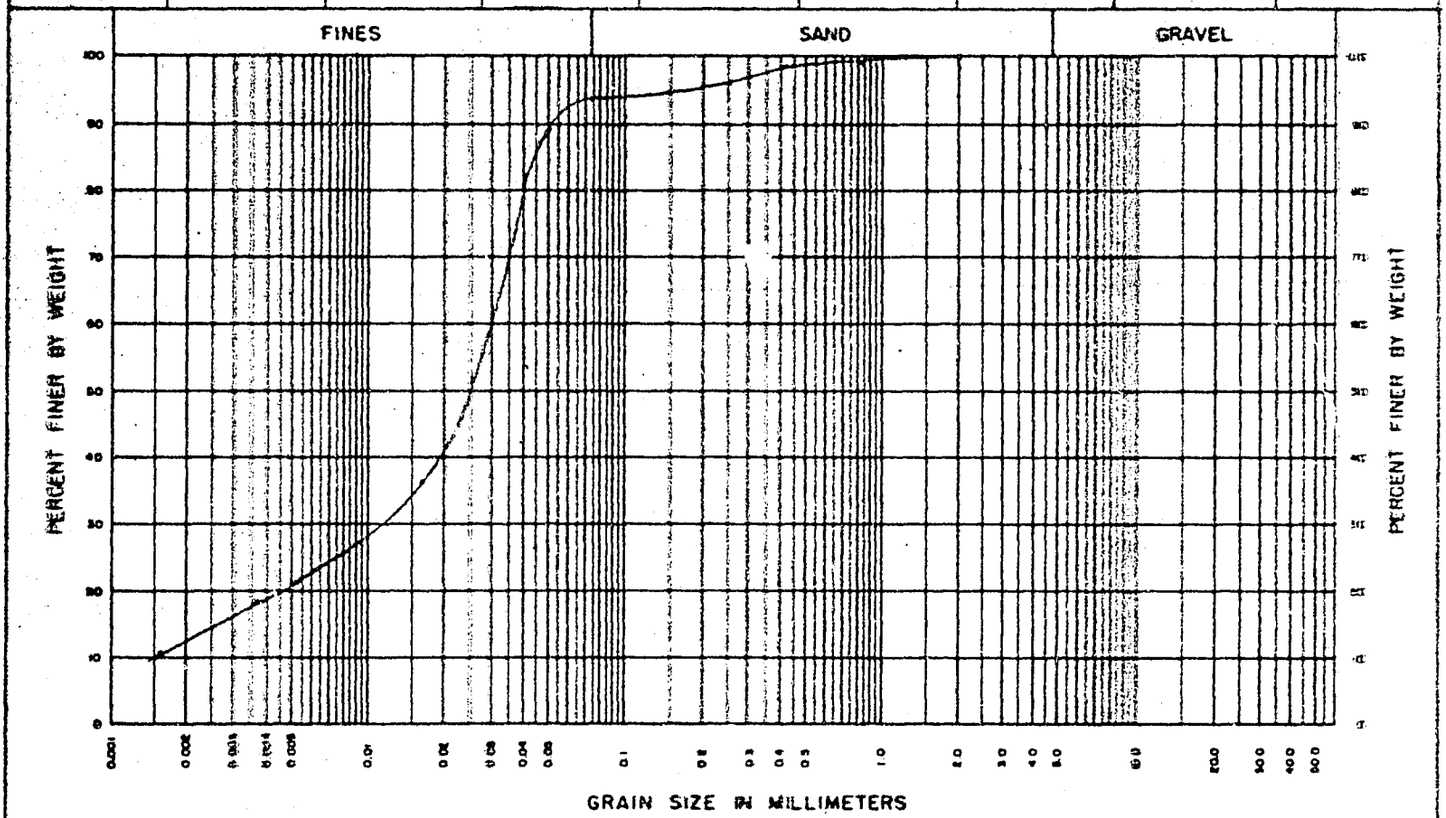
FIELD SAMPLE No.	TYPE of SAMPLE	ORIGIN
2-2	Bag	Depth: 1.0 to 2.0 feet.

PROPOSED USE	TESTING SECTION SAMPLE No.	SUBMITTED BY
Fill	620238	V. G. King

1: SYMBOL	2: DESCRIPTION
CL-2	Grey-brown silty clay

3: GRAIN SIZE DISTRIBUTION

D_{10}	D_{15}	D_{30}	D_{50}	D_{60}	D_{85}	D_{MAX}	C_u	C_c
.0015	0.0025	0.012	0.015	0.03	0.045	2.0		



4: SPECIFIC GRAVITY	5: ATTERBERG LIMITS						6: TOTAL SALTS	7: UNDISTURBED CONDITION	
	UNDISTURBED		AIR DRY		OVEN DRY			MOISTURE	UNIT WEIGHT
G	LL	PI	LL	PI	LL	PI	%	%	lb/ft³
2.54			46	19					

8: REMARKS

Positive reaction to benzidine.

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

SIGNATURE Ralph M. Arrington

TITLE Civil Engineer

DATE 9/20/61

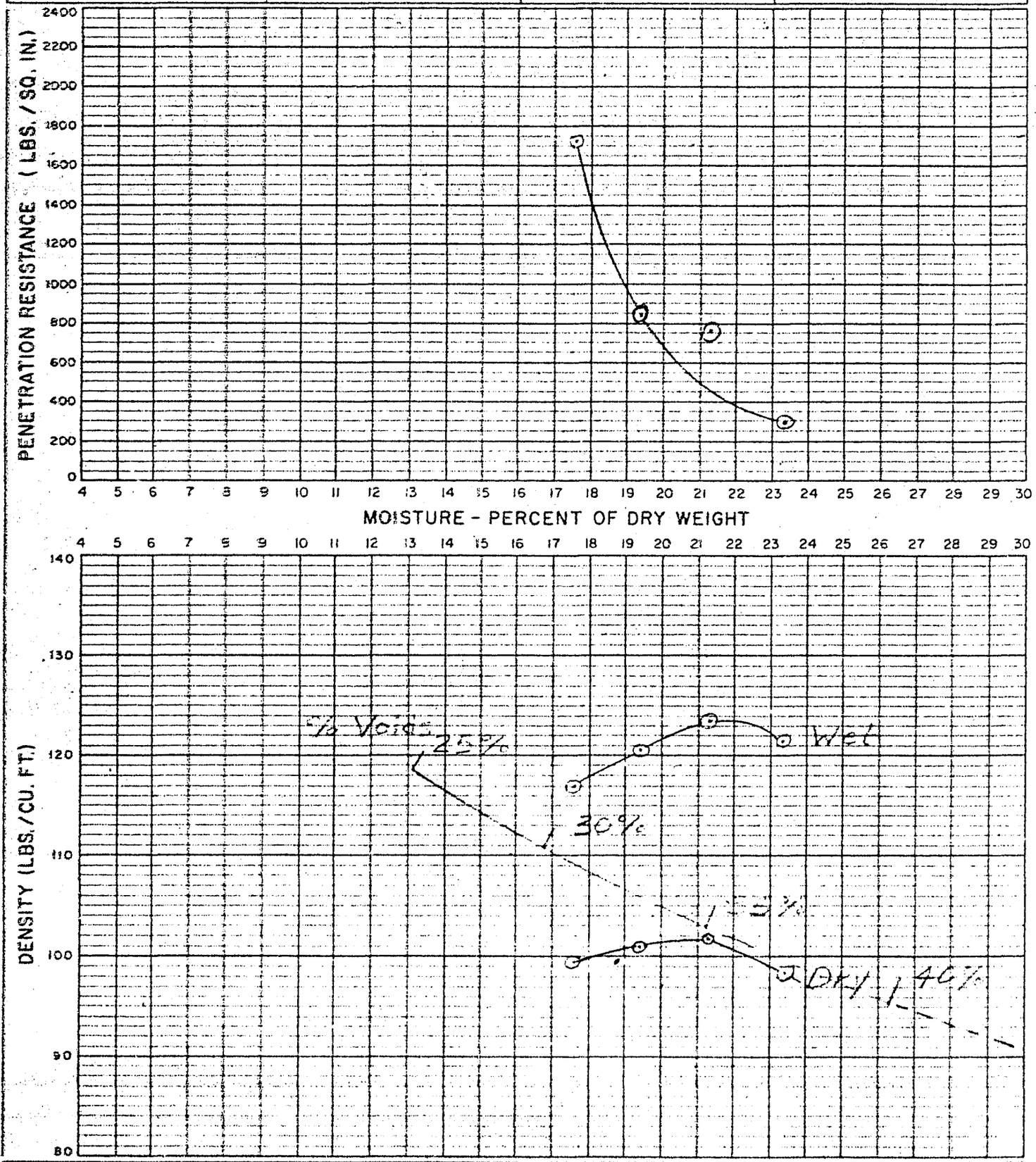
R-1093

M-2069

MATERIALS TESTING SECTION REPORT	EWP-23 1-21-59 PORTLAND, OREGON	SOIL COMPACTION CURVES

PROJECT	LOCATION
Little Valley Dam	Bear Lake SCD, Idaho

FIELD SAMPLE No.	TESTING SECTION SAMPLE No	% LARGER THAN TESTED	COMPACTIVE EFFORT
2-2	620238	0.0	16,100 ft. lbs



U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE Gayle M Cunningham TITLE Civil Engineer DATE 9/20/61

M-1554

R-1093 7-0-14821-1

GEOLOGIC REPORT
LITTLE VALLEY DAM AND RESERVOIR SITE
Bear Lake SCD, Bear Lake County, Idaho

General

Location - The Little Valley dam and reservoir is located approximately 2 miles south and west of Tanark, Idaho on Hammond Creek, a minor tributary of the Bear Lake outlet.

Present Status - The existing dam has a maximum heigth of 18 feet and a crest length of approximately 185 feet providing a storage capacity of 95 acre feet. The dam is of earth fill construction with a concrete core said to rest on compact blue clay. Side slopes approximate a 1 on 1 downstream and 1 on 1 1/2 upstream. The outlet works consists of a gated 12 inch steel pipe. The emergency spillway, excavated across the left abutment and adjoining the dam, is essentially an earth section passing into fractured bedrock at its lower end. Past performance of the structure generally has been satisfactory although some seepage is said to occur along the downstream toe from the outlet pipe to the right end of the fill under full reservoir head.

It has been proposed to increase the heigth of the existing dam another 15.5 feet for a maximum heigth of 32 feet, providing a storage capacity of 600 acre feet.

Investigations - A surficial study of the dam and reservoir geology was made on August 2, 1961 supplemented by test pits put down in the foundation area to verify foundation conditions and determine cutoff requirements. A previous investigation of preliminary nature had been made by the Service to verify the availability of suitable construction materials.

Geology

The dam and reservoir basin lies at approximate elevation 6500 feet in the rolling ridge lands forming the lower east slopes of the Bear River Range. Bedrock in the area is formed of generally thickbedded quartzites tilted westerly (upstream) from 12 to 22 degrees and locally cropping out in prominent ledges along the steeper slopes in the dam and reservoir area. Bedrock along the lower flatter slopes is covered by relatively shallow deposits of stony clayey slopewash and in the valley bottoms by somewhat thicker alluvial deposits of a gravelly clayey nature. The abutments of the existing dam are formed of massive bedrock ridges measured in hundreds of feet and rising on more or less uniform 1 on 4 slopes veneered by stony clayey slopewash. The dam apparently is tied to weathered

R-1093

quartzite bedrock on the abutments and founded on gravelly clayey alluvial deposits in the narrow channel area.

Foundation Conditions - Foundation conditions relative to raising the existing dam were explored by means of three (3) test pits put down with a backhoe, one in the channel bottom at the upstream toe of the existing fill next to the outlet pipe and one each on the abutments roughly in line with the fill (see geologic section). The channel pit, extending to a depth of 13 feet encountered weathered quartzite bedrock at depth 8 feet beneath a compact medium stiff impervious gravelly clayey sand overlain by 2 feet of soft organic clayey silts. The abutment test pits, extending to depths of 4 and 5 feet encountered bedrock at depths of 2.5 feet on the left abutment and 4 feet on the right abutment, beneath stony clayey slope-wash (see attached logs). The moderately to closely fractured bedrock is tightly sealed with clay fillings and impervious. Geologic relationships along the upstream toe of the existing fill are shown on the attached geologic section.

Reservoir Area - In view of the impervious nature of the overburden materials and underlying bedrock flooring the area to come under water, reservoir leakage is not considered to be a problem. There is, however, a small area about 150 yards upstream from the dam on the right (south) side of the basin floor where leakage has been known to occur in the past. This area should be blanketed with about 3 feet of impervious material to prevent possible high losses under the increased reservoir head.

Construction Materials - Borrow in the area is limited to stony gravelly clayey materials (GC and gravelly SC types) which are available in quantity and suitable for homogeneous dam construction. These materials are available from adjacent lower slopes and the reservoir basin.

Borrowing from the reservoir floor should be restricted to areas of substantial cover. Riprap for slope protection can be obtained readily from nearby rock ledges. Drainage materials for toe drain construction will have to be hauled in.

Conclusions

This is a good dam and reservoir site for storage purposes. Foundation conditions are such as to present no special problems in increasing the heighth of the existing dam to a maximum of 32 feet. The relatively unsaturated foundation materials underlying the channel area are sufficiently impermeable as to preclude underseepage and piping as a problem.

From the standpoint of stability, the foundation soils apparently have been partially preconsolidated by alternate wetting and drying and have sufficient inplace density so as to preclude appreciable post construction settlement upon saturation. The abutments, shallow to bedrock, also are impermeable as a result of extensive clay filling of fractures. A cutoff will not be required at this site.

Recommendations

This site will require little foundation preparation other than those items outlined below:

1. Remove black organic top soil from foundation area.

2. Construct "key" trench in foundation, including abutments.

3. Install toe drain.

The key trench will be needed to effect a good bond between embankment and foundation materials. Particular care will be required to insure that the embankment is keyed well into the weathered abutment; all loose rock must be removed.

The toe drain is essential for control of through seepage and prevention of saturation of the foundation at the downstream toe.

H. A. Allen
Geologist,
Soil Conservation Service
October 26, 1961

R-1093

Form SCS-533
Rev. Dec. 58

LOG OF TEST HOLES

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Location Bear Lake SCD, Bear Lake County Owner (Private) State Idaho

Watershed Hammond Creek Sub-watershed Site No.

Logged by H. A. Allen Date 8-2- 19 61 Project: WP1 WP2 FP Pub. 46 ACP

Drilling Equipment Backhoe Location of Holes Upstream toe existing dam

Hole No.	Station and Surface Elev.	Hole Depth From Ft.	Hole Depth To Ft.	Description of Materials	Unif. Soil Class. Symb.	Type Bit Used	Samples No.	Samples Type*	Samples From Ft.	Samples To Ft.	Samples Rec.† %
1	not estab-	0	2.0	Clayey silt ; soft, black, organic; moist; rock fragments to 8" size common; (reservoir deposit)	OL						
	lished	2.0	8.0	Gravelly clayey sand; bluish gray to brown colored with streaks, of iron staining; compact in place, medium stiff in remolded state; moist; impervious; occasional thin sand lense; 45% hard to soft, weathered quartz sand grains; 35% plastic fines; 20% hard, angular quartzite rock fragments 1/2" to 12" size, occasionally to 16"; rock fragments not in contact; (Valley fill deposit).	SC						
		8.0	13.0	Quartzite bedrock; uneven surface; moderately to closely fractured; fractures clay-filled and tight; bedding not discernible.							

* Disturbed-undisturbed-rock core. † Percent sample recovery.
1 copy to E and WP Unit. 1 copy Soil Mechanics Laboratory with samples.
Other copies as directed by State Conservationist.

Sheet 1 of 1 Sheets

R-1093

Form SCS-533
Rev. Dec. 58

LOG OF TEST HOLES

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Location Bear Lake SCD, Bear Lake County Owner (Private) State Idaho

Watershed Hammond Creek Sub-watershed Site No.

Logged by H. A. Allen Date 8-2- 1961 Project: WP1 WP2 FP Pub. 46 ACP

Drilling Equipment Backhoe Location of Holes Left Abutment

Hole No.	Station and Surface Elev.	Hole Depth From Ft.	Hole Depth To Ft.	Description of Materials	Unif. Soil Class. Symb.	Type Bit Used	Samples No.	Samples Type*	Samples From Ft.	Samples To Ft.	Samples Rec. † %
2	not established	0	2.5	Clayey gravel; hard, angular quartzite fragments to 6" size in highly plastic clay matrix; (slopewash passing downward into weathered bedrock).	GC						
		2.5	4.0	Quartzite bedrock; weathered bedrock with uneven surface; closely fractured; fractures clay-filled; distinct bedding, strike N-S, dip 22 degrees W.							

* Disturbed-undisturbed-rock core. † Percent sample recovery.
1 copy to L and WP Unit, 1 copy Soil Mechanics Laboratory with samples.
Other copies as directed by State Conservationist.

Sheet 1 of 1 Sheets

R-1093

Form SCS-533
Rev. Dec. 58

LOG OF TEST HOLES

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Location Bear Lake SCD, Bear Lake County Owner (Private) State Idaho

Watershed Hammond Creek Sub-watershed Site No.

Logged by N. A. Allen Date 8-2- 1961 Project: WP1 WP2 FP Pub. 46 ACP

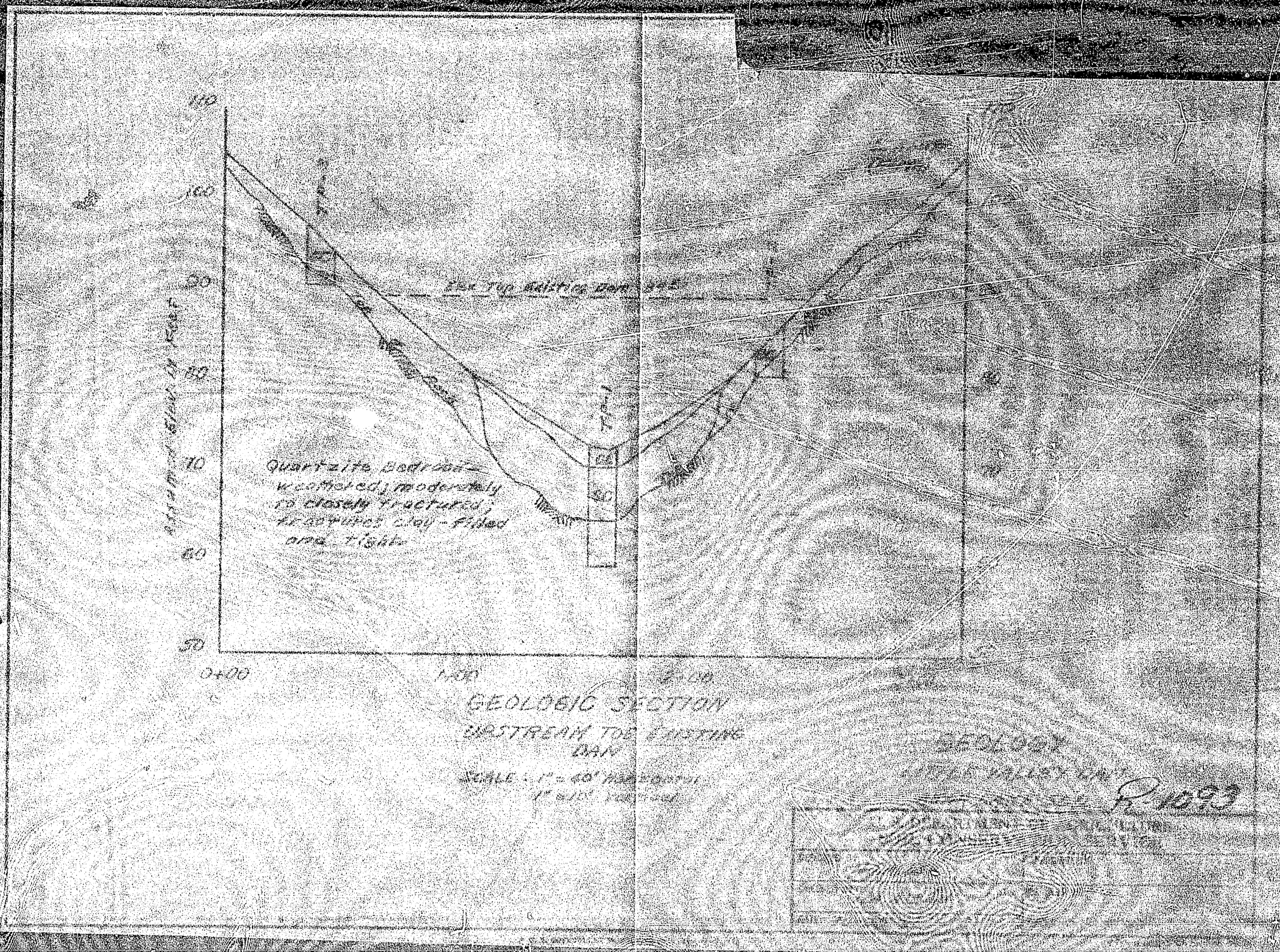
Drilling Equipment Backhoe Location of Holes Right Abutment

Hole No.	Station and Surface Elev.	Hole Depth From Ft.	Hole Depth To Ft.	Description of Materials	Unif. Soil Class. Symb.	Type Bit Used	Samples No.	Samples Type*	Samples From Ft.	Samples To Ft.	Samples Rec.† %
3	dot established	0	4.0	Clayey gravel; hard angular quartzite fragments to 6" size in highly plastic clay matrix; topmost 1 foot slightly organic; (slopewash passing downward into weathered bedrock).	GC						
		4.0	5.0	Quartzite bedrock; weathered bedrock, closely fractured; fractures clay-filled and tight; bedding not discernible.							

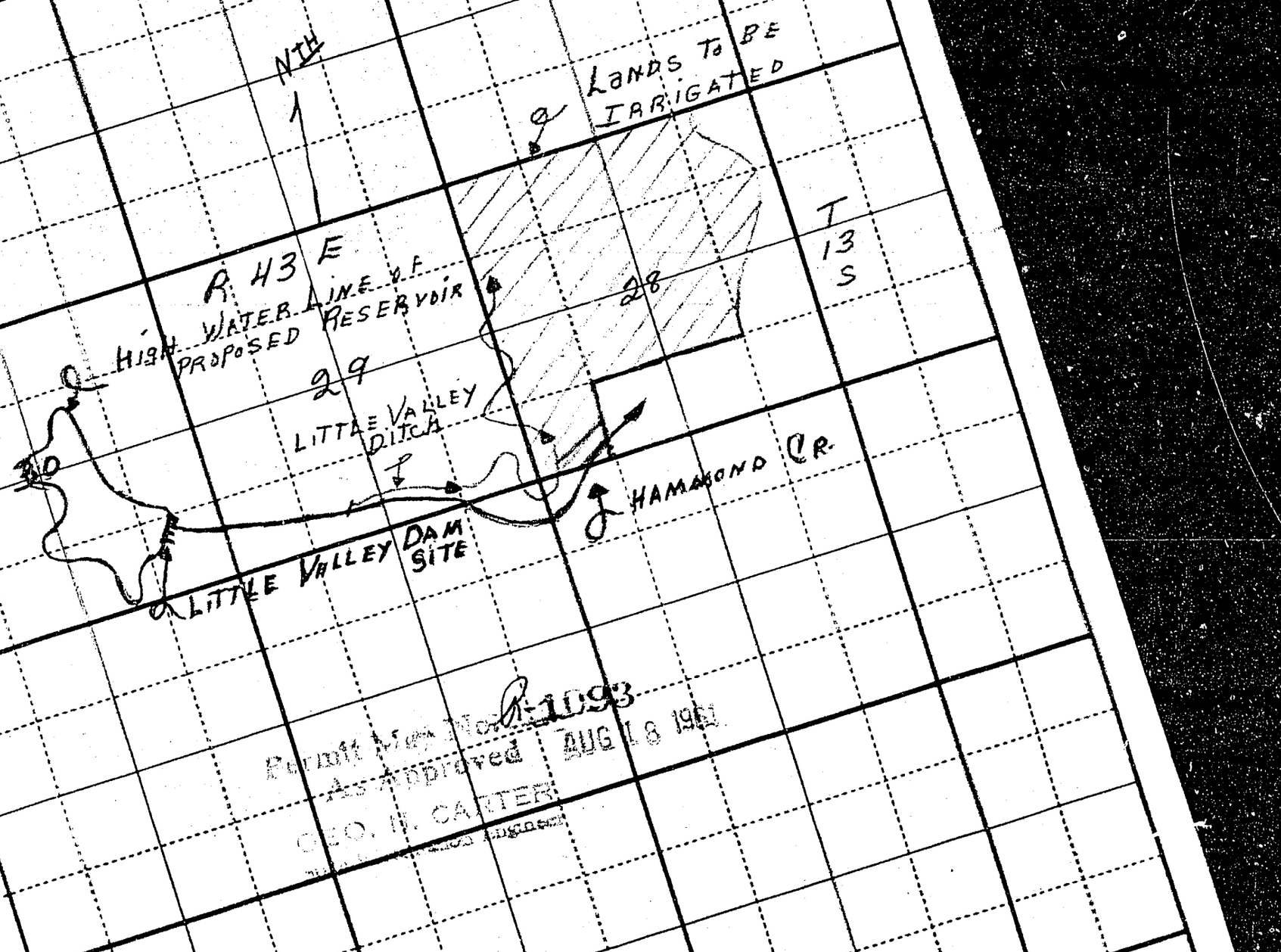
* Disturbed-undisturbed rock core. † Percent sample recovery.
1 copy to E and WP Unit, 1 copy Soil Mechanics Laboratory with samples.
Other copies as directed by State Conservationist.

Sheet 1 of 1 Sheets

R-1093


110
100
90
80
70
60
50
Elev. Top Bedrock Zone 2
Quartzite Bedrock-
weathered moderately
to closely fractured;
Kaolinite clay-filled
and tight.
0+00
1+00
2+00
GEOLOGIC SECTION
EASTERN TOE ENDSTONE
DAM
SCALE: 1" = 40' HORIZONTAL
1" = 40' VERTICAL
GEOLOGY
P-203

NAME OF APPLICANT Hammond Creek Irrigation Co...



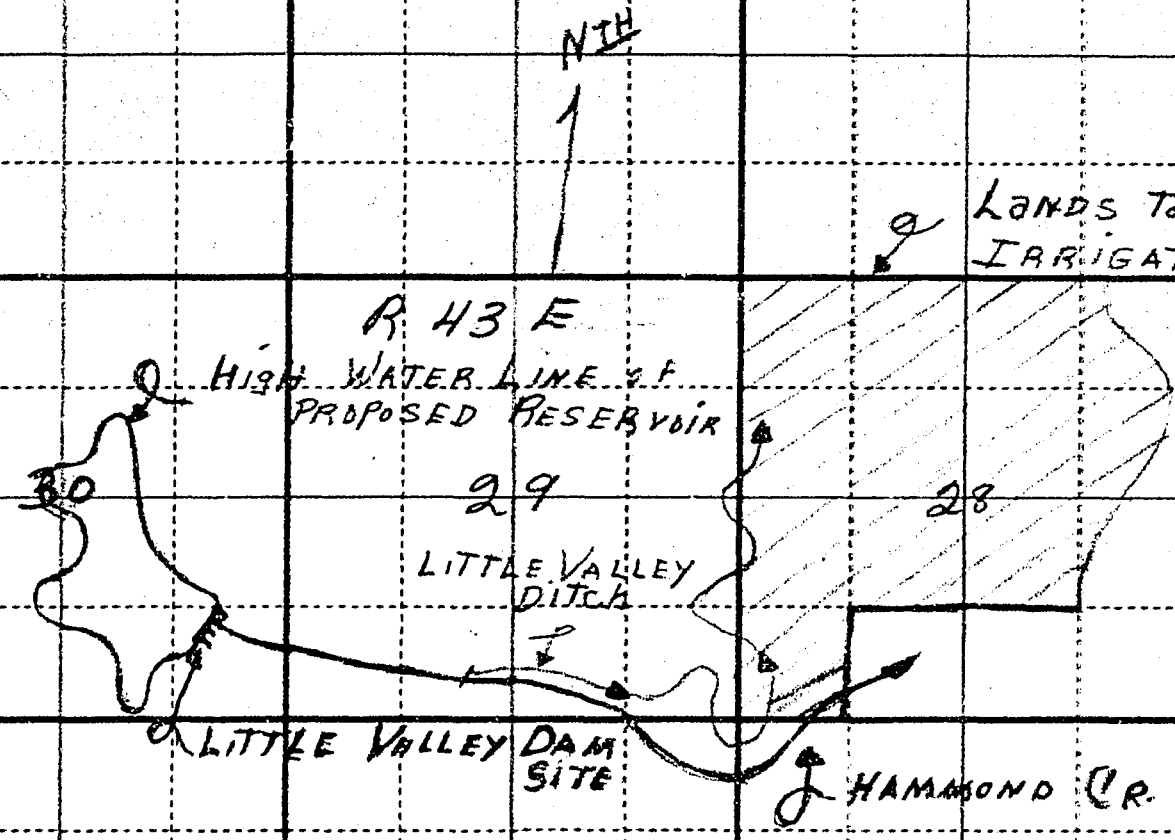
Patent Mgm. No. R-1093
As Approved AUG 16 1962
GEO. H. CARTER
...

R-1093

Equal 1 Mile. Draw Plan In Ink.

NAME OF APPLICANT Hammond Creek Irrigation Co.

Form No. 0



Plan of Map No. R-1093
As Approved AUG 18 1961
CHAS. H. CARTER
STATE ENGINEER

SCALE: 2 Inches Equal 1 Mile. Draw Plan In Ink.

R-1093

April 29, 1961

RECEIVED
MAY 1 1961
Department of Reclamation

Dept of Reclamation
State House
Boise, Idaho

Dear Sirs;

About three weeks ago I wrote your office for blank forms for a water storage permit. I neglected to check if our water co had already a water storage permit. This is for the Little Valley Reservoir and Ditch Co. which was organized in 1911 and have been storing water in a small reservoir since. The company was incorporated in 1911. We are working with the Bear Lake County Soil Conservation District to enlarge and raise the height of the dam.

Do you have any record of a water storage permit for the Little Valley Resevoir & Ditch Co in the past ? We have had the State Engineer ,Mr King, check our proposed project.
If there was a water storage permit in the past do we have to have another or just renew the old one? Please advise if you have any information to help us get the project under way. Thanking you in advance I remain,

Very truly yours
Gene Passey
Gene H. Passey
Montpelier, Idaho
418 N. 2nd St.

Little Valley Resevoir
Lanark, Idaho

Gene

R-1093

May 1, 1961

RE: Application for Storage Permit

Gene H. Passey
418 N 9th Street
Montpelier, Idaho

Dear Mr. Passey:

We find no record of Little Valley Reservoir and Ditch Company in our name files. Your new application should be for the total capacity of the reservoir.

Very truly yours,

GEO. N. CARTER
State Reclamation Engineer
By

Ralph W. Thomas
Deputy State Reclamation Engineer

RWT:mr

R-1093

August 7, 1961

Re: Application No. R-38080
Hammond Creek Irrigation Co.

Warren Passey
R. F. D.
Ovid, Idaho

Dear Mr. Passey:

Returned herewith is the application for permit with attached Receipt No. 30693 for $5.50 filing fee.

Kindly answer questions 13, 14, 15, 16 and last half of 17. Diversion works could be shown "in place". Also complete the second map.

Return the completed application within 60 days for processing.

Very truly yours,

GEO. N. CARTER
State Reclamation Engineer

By:

RALPH W. THOMAS, Deputy
State Reclamation Engineer

RT:ew

Enc. application with receipt

R-1093

August 29, 1961

Re: Permit R-1093
Hammond Creek Irrigation Co.

Mr. Warren Passey,
R. F. D.
Ovid, Idaho.

Dear Mr. Passey:

We enclose Permit No. R-1093 in which we direct your attention to the limitations and conditions as given on the fourth page under approval of the State Reclamation Engineer.

Departmental Receipt No. 30693, which was issued covering payment in the amount of $5.50 for the filing fee of the above mentioned permit, was mailed to you with our letter of August 7, 1961.

Very truly yours,

GEO. N. CARTER
State Reclamation Engineer
By

(Mrs.) Edna P. Rule
Chief Clerk

Encl.
EPR:pmk
cc: Hammond Creek Irrigation Co.
Ovid, Idaho

R-1093

February 19, 1963

RE: Permit No. R-1093
Little Valley Reservoir & Ditch Company

Warren Passey, President
Little Valley Reservoir & Ditch Company
R. F. D.
Ovid, Idaho

Dear Mr. Passey:

Enclosed is the assignment of the above numbered permit to Little Valley Reservoir & Ditch Company.

Departmental receipt No. 21446 covering the $0.50 fee for recording the assignment will be mailed with your new application No. 39057.

Very truly yours,

GEO. N. CARTER
State Reclamation Engineer
By

(Mrs.) Edna P. Rule
Chief Clerk

EPR:mr

Enc. assignment

R-1093

S T A T E OF I D A H O

DEPARTMENT OF RECLAMATION

INSTRUCTIONS

PROOF OF COMPLETION OF WORKS

Boise, Idaho

June 1, 1966

Re: Permit R-1093

Little Valley Reservoir and Ditch Co.
Ovid, Idaho

Dear **Sirs:**

Under the terms of your Permit No. R-1093 you are required to complete your diversion works on or before ~~Aug. 18, 1966~~ _____ I enclose blank affidavit to be filled out, sworn to by you before a Notary Public, or a Justice of the Peace, and returned to this office on or before the above date, or within ten days thereafter, for the purpose of making proof of completion under the permit. Upon receipt of this affidavit in this office, provided the same satisfactorily shows the completion of the works substantially in accordance with the terms of the permit, [redacted] a Certificate of Completion will be issued to you.

The certificate to be issued under this proof will not give a perpetual right to the use of water for which application was made, as it only confirms the completion of works of a capacity to divert and convey to the place of intended use a certain amount of water. The law requires that another proof be submitted when the water has been fully applied to a beneficial use, at which time license is issued for the amount of water actually in use. Information in regard to this last proof will be furnished on request.

Very truly yours,

CARL E. TAPPAN

State Reclamation Engineer

Enc. Form 6

R-1093

June 13-1966

-R-1093

Department of Reclamation

RECEIVED
JUN 14 1966
Department of Reclamation

Mr. Carl E. Loppan

Dear Sir

I am in receipt of your letter dated June-1-66, and am in doubt as to what is wanted. I believe this is in regard to our proposed diversion of Water from Miles Creek to Little Valley Reservoir. If this is correct, We have abandoned this plan, as the route for a diversion ditch is too rocky. We ran several surveys but were unable to find a suitable route. If this was the information You Wanted, We have given up on this diversion at present.

If it was in regard to the Reservoir in "Little Valley" this is R-1093

Completed and in good use.

If additional information is needed please advise.

Sincerely

Warren Passey

Res. Little Valley Reservoir

Weiser, Idaho

R-1093
R-1146 - Rel. 1/11/65

June 14, 1966

RE: Permit R-1093

Warren Passey, President
Little Valley Reservoir and Ditch Company
Ovid, Idaho

Dear Mr. Passey:

In response to your letter of June 13, 1966, our letter of June 1, 1966, is for your "Little Valley Reservoir". You are required by statutes to prove completion of works prior to August 18, 1966. Therefore, the form forwarded to you must be filled out with all the required information and returned to our office prior to August 18, 1966.

Your other permit for water from Miles Creek was relinquished on January 11, 1965.

Hope this helps solve some of your problems.

Very truly yours,

M. RUSSELL BOSCH
Office Manager

MRB:el:w

R-1093

August 3, 1966

Re: Permit No. R-1093

Mr. Warren Passey,
Little Valley Reservoir & Ditch Co.,
Box 73,
Ovid, Idaho.

Dear Mr. Passey:

Returned herewith is your affidavit of holder for proof of completion of works for the above referenced permit. It is found not to be in proper form. The lands you have listed to be irrigated are other than are found on the permit. The permit states the lands to be irrigated are the N½, N½SW¼, SW¼SW¼, N½SE¼, Section 28, Twp. 13 S., Rge. 43 E.B.M. Therefore, if the lands you have listed on the proof of completion of works form are what you are irrigating, you must amend the land list of Permit R-1093 prior to submitting your proof. Form for amendment is enclosed, for which a $1.00 recording fee is required. We are enclosing a new proof of completion of works form in case you do not amend the permit.

Please remember your proof is due August 13, 1966.

Very truly yours,

DONALD W. McELDOWNEY
State Water Rights Clerk

Encl: Application for Amendment
Land List
Affidavit of Holder
Affidavit of Holder (Blank)

DWMc:pmk

COPY

R-1093

FORM 6

Permit No. R-1093

RECEIVED
AUG 8 1966
Department of Reclamation

STATE OF IDAHO
Department of Reclamation

RECEIVED
JUL 29 1966
Department of Reclamation

Proof of Completion of Works

AFFIDAVIT OF HOLDER

STATE OF IDAHO
County of Bear Lake } ss.

I, Warren Passey, being first duly sworn, upon his oath deposes and says:

First: That he is the holder and owner of Permit to Appropriate the Public Waters of the State of Idaho, No. R-1093, and that his postoffice address is Box 73 Ovid State of Idaho.

Second: That the name of the stream from which said water is to be diverted is Hammond Creek

Third: That the point of diversion of said water is 1480 Feet North 38° West of South East Corner Section 30 Twp 13S, R. 43E. B.M.

Fourth: That under the terms and conditions of said permit, construction thereunder was required to be completed by August 16, 1966.

Fifth: That the use for which said water is intended is Irrigation

Sixth: That on the date above mentioned, the works constructed under said permit were (or were not) fully completed and consisted of the following:

I. Kind of Works: Dam
(RESERVOIR, DAM, DITCH, FLUME, PIPE OR OTHERWISE)

II. Dimensions of work:

(a) Height of dam 32.6 feet, length of dam at top 303 feet, length of dam at bottom 43 feet. Material used in construction Earth-stone
(STATE WHETHER WOOD, EARTH STONE OR CONCRETE)

(b) Capacity of reservoir 645 acre feet.

(c) Size of headgate: Width 3.0 feet, height 5.5 feet.

(d) Conduit pipe width at bottom NA feet, width at water line NA feet, depth of water NA feet; diameter of pipe 12 inches, average grade per mile is 26 feet. Length of conduit is 0.004 miles.
(STATE WHETHER DITCH, FLUME OR PIPE)

Seventh: That said works are capable of conducting to the place of intended use 6.0 second feet of water.

Eighth: That water appropriated under said permit is available for 308 acres of land described as follows: NE¼ Section 28, NW¼ NE¼ Section 28, N½ SE¼ NE¼ Section 28 N½ NE¼ NE¼ Section 28, N½ NW¼ Section 27, SW¼ SW¼ Section 22 Twp 13S, R43E, B.M. N½, N½ SW¼, SW¼ SW¼, N½ SE¼, Section 28, Twp. 13 S., Rge. 43 E.B.M. * See note on reverse side.

Ninth: Remarks:—That

Little Valley Reservoir and Ditch Co
Warren Passey Pres.
(SIGN HERE)

Subscribed and sworn to before me this 28th day of June, 1966

L Ellis Shepherd
NOTARY PUBLIC

My commission expires Oct 10th 1966

R-1093

* Description of lands to be irrigated from appropriated waters was complied by a person other than myself without consulting me and covers all the land owned by the members of the Little Valley Reservoir and Ditch Company.

The corrected description of the land to be irrigated is shown.

Warren Passey Pres.
Little Valley Res. and Ditch Co

FORM 22 Permit No. R-1093

Certificate of Completion of Works

TO ALL WHOM IT MAY CONCERN:

This is to certify that HAMMOND CREEK IRRIGATION CO. - Assignee - LITTLE VALLEY RESERVOIR & DITCH CO. of Ovid, County of Bear Lake, and State of Idaho, the holder of Permit No. R-1093, issued upon Application No. R-38080 bearing date of priority of August 7, 1961, authorizing the diversion of 815 acre feet ~~Second feet~~ of waters of Hammond Creek

County of Bear Lake, State of Idaho, for irrigation purposes, has fully complied with the provisions of the laws of the State of Idaho relating to the proof of completion of the works of diversion set out and described in said Permit; that said works are adequate for diverting and conveying to the place of intended use 815 acre feet ~~second feet~~ of the waters of Hammond Creek tributary of Bear River;

that the point of diversion of said waters SE¼SE¼, Sec. 30, T. 13 S., R. 43 E., B.M.

and that the lands proposed to be irrigated by the use or place of use of said water are described as follows, to-wit: N½, N½SW¼, SW¼SW¼, N½SE¼, Sec. 28 T. 13 S., R. 43 E., B.M.

Proof of Completion of Works Made: July 28, 1966

Witness my hand this 1st day of September, A. D. 19 66

R. Keith Higginson
State Reclamation Engineer

R-1093

Permit No. R-1093

Certificate of Completion of Works

Dated ...September 1..., 19..66...

Stream ....Hammond Creek.....

County ....Bear Lake.....

Amount ....815 acre feet.....

Date of Priority August 7, 1961

Recorded in Book .....R-5.....

of ....Permits..... , page ..1093..

T 1093

September 1, 1966

RE: Permit No. R-1093

Warren Passey, President
Little Valley Reservoir & Ditch Company
Ovid, Idaho

Dear Mr. Passey:

Enclosed is the Certificate of Completion of Works on the above numbered permit.

Very truly yours,

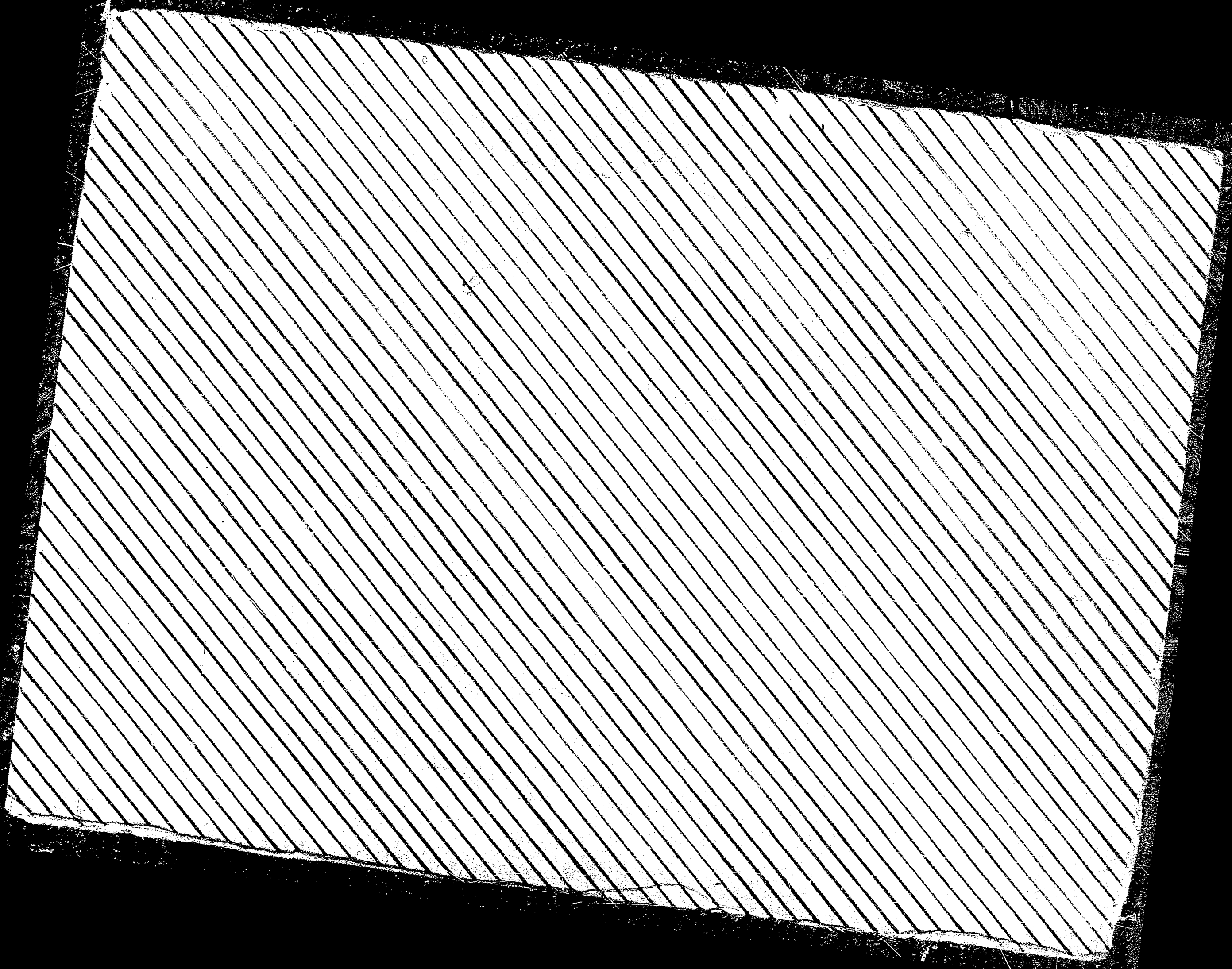
M. Russell Bosch
Office Manager

MRB:mr

Enc. certificate

COPY

R-1093



BEFORE THE DEPARTMENT OF WATER ADMINISTRATION

OF THE

STATE OF IDAHO

IN THE MATTER OF PERMIT NO. R-1093/11-2158 in the name of Little Valley Reservoir and Ditch Company	ORDER MODIFYING REQUIREMENTS FOR COMPLETION OF PERMIT TO APPROPRIATE WATER

WHEREAS, the 39th Idaho Legislature made certain amendments to the Idaho Water Law; and,

WHEREAS, these changes raised questions as to the procedures to be followed by holders of permits issued prior to the effective date of the amendments, May 31, 1967; and,

WHEREAS, on August 1, 1968, the Department of Water Administration adopted Rules of Practice and Procedure for the processing of such permits issued prior to May 31, 1967; and,

WHEREAS, Permit No. R-1093 was issued previous to that date;

NOW THEREFORE, the requirements for completion of the above numbered permit are hereby modified to conform to the adopted Rules of Practice and Procedure as follows:

1. The above numbered permit will be completed under the terms of Title 42, Chapter 2, Idaho Code, as amended by the 39th Idaho Legislature.

2. The conditions of the above numbered permit are modified as follows:

   a. Notice of the issuance of the permit will be published at the permit holders expense for two weekly issues in the official newspaper of the county in which the point of diversion lies.

Dated this 30TH day of SEPTEMBER, 1970.

R. KEITH HIGGINSON
Director

RKH/DG

11-2158
R-1093

October 15, 1970

Re: Permit No. R-1093/11-2158

Mr. Warren Passey
Little Valley Reservoir & Ditch Co.
Ovid, Idaho 83260

Dear Mr. Passey:

The legal notice for the above-referenced permit is being published in the News-Examiner, Montpelier, Idaho on October 29 and November 5, 1970.

You will be required to submit an affidavit of publication to this department. The affidavit may be obtained from the above-mentioned newspaper upon payment of the bill of publication.

Thank you for your cooperation in this matter.

Very truly yours,

Donald W. McEldowney
Appropriation Supervisor

DWM/DG

11-2158
R-1093

October 15, 1970

Re: Permit No. R-1093/11-2158

The News-Examiner
P.O. Box 278
Montpelier, Idaho 83254

Gentlemen:

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

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

The expense of the publication is to be paid by **Warren Passey, Ovid, Idaho**, to whom you should furnish an affidavit of publication.

Very truly yours,

Donald W. McEldowney
Appropriation Supervisor

DWM/DG
Enc: legal notice

11-2158
R-1093

RECEIVED
OCT 14 1970
Department of Water Administration

NOTICE OF EXISTING WATER PERMIT

Notice is hereby given that the Little Valley Reservoir and Ditch Co., Ovid, Idaho has received an approved Permit No. R-1093/11-2158 issued by the Idaho Department of Water Administration authorizing the ~~diversion~~ storage of 815 ~~cubic feet per second~~ acre feet per annum of water from Hammond Creek, trib. of Bear River.

The priority to be established under this permit is August 7, 1961 and the permit was approved August 18, 1961.

Water is to be diverted by dam and canal from a point within the SE¼SE¼, Sec. 30, T. 13 S, R. 43 E, B. M., Bear Lake County to be used for irrigation in the N½, N½SW¼, SW¼SW¼, N½SE¼, Sec. 28, T. 13 S, R. 43 E, B. M.

Proof of the application of the water to beneficial use is to be submitted to the Department on or before August 18, 1971. Any protests against the issuance of the license for the above referenced permit should be filed with the Idaho Department of Water Administration within ten (10) days of the last date of publication of this notice or prior to the licensing of the permit. Licensing may commence prior to the date beneficial use proof is due without further notice.

R. KEITH HIGGINSON, Director
Idaho Dept. of Water Administration

Published in the News-Examiner, Montpelier, Idaho
on October 29 and November 5, 1970.

Permit No. 11-2158

Director:

You are hereby authorized to have the above notice published at my expense in the News-Examiner of Montpelier, Idaho; published in the county in which the works are situated.

Warren Dasey
(Signature)

Ovid Idaho 83260
(Address)

Oct. 12. 1970
(Date)

11-2158
R-1093

October 9, 1970

Re: Permit No. R-1093/11-2158

Mr. Warren Passey
Little Valley Reservoir & Ditch Co.
RFD
Ovid, Idaho

Dear Mr. Passey:

During the 1967 session of the Idaho Legislature, certain amendments were made in the law pertaining to the procedures for making proof of beneficial use of water. In order for the Department to comply with these changes, Rules of Practice and Procedure were adopted on August 1, 1968. Generally, these procedures and the amended law make it simpler for a person to make proof and relieve the permit holder from making separate proofs of completion of works and beneficial use of water.

The enclosed order modifies your permit to comply with these rules and regulations. As a part of the new procedure, you will be required to publish a notice at your expense for two consecutive weeks in a paper as prescribed by the Department; previously, a permit holder had to publish a notice for four weeks when he submitted proof under his permit.

If you will complete the enclosed forms, we will cause the notice to be published. Should you require additional forms or information, we will be glad to supply them upon request at any time.

Very truly yours,

Donald W. McEldowney
Appropriation Supervisor

DWM/DG
Enc: order
advertising package

11-2158
R-1093



November 25, 1970

Re: Permit No. R-1093/11-2158

Mr. Warren Passey
Little Valley Reservoir & Ditch Co.
Ovid, Idaho 83260

Dear Mr. Passey:

We acknowledge receipt of the affidavit of publication submitted in connection with the above referenced permit. Since proof of beneficial use of the water is not required until August 18, 1971, the Department will notify you sixty days in advance of this date as to further requirements. We wish to advise you, however, that if you have fulfilled the requirements under the permit you may submit proof anytime prior to the above date.

Very truly yours,

Donald W. McEldowney
Appropriation Supervisor

DWM/DG

11 2158

June 1, 1971 CERTIFIED MAIL #22792

Re: Permit No. R-1093/11-2158

Little Valley Reservoir & Ditch Co.
Ovid,
Idaho 83260

Gentlemen:

One of the conditions of approval of your water Permit No. R-1093/11-2158 (see last page of your approved permit) was that evidence of the extent of development be submitted as proof of application of water to beneficial use to this office on or before August 18, 1971. Enclosed is an affidavit form which must be used to submit the required proof of beneficial use.

If you have not fully completed your project, and you have not previously received an extension of time, you may request an extension of time provided the delay is for reasonable cause as indicated in Section 42-204, Idaho Code, amended. If you have been prevented from proceeding by a governmental agency or by litigation, more than one extension of time can be granted.

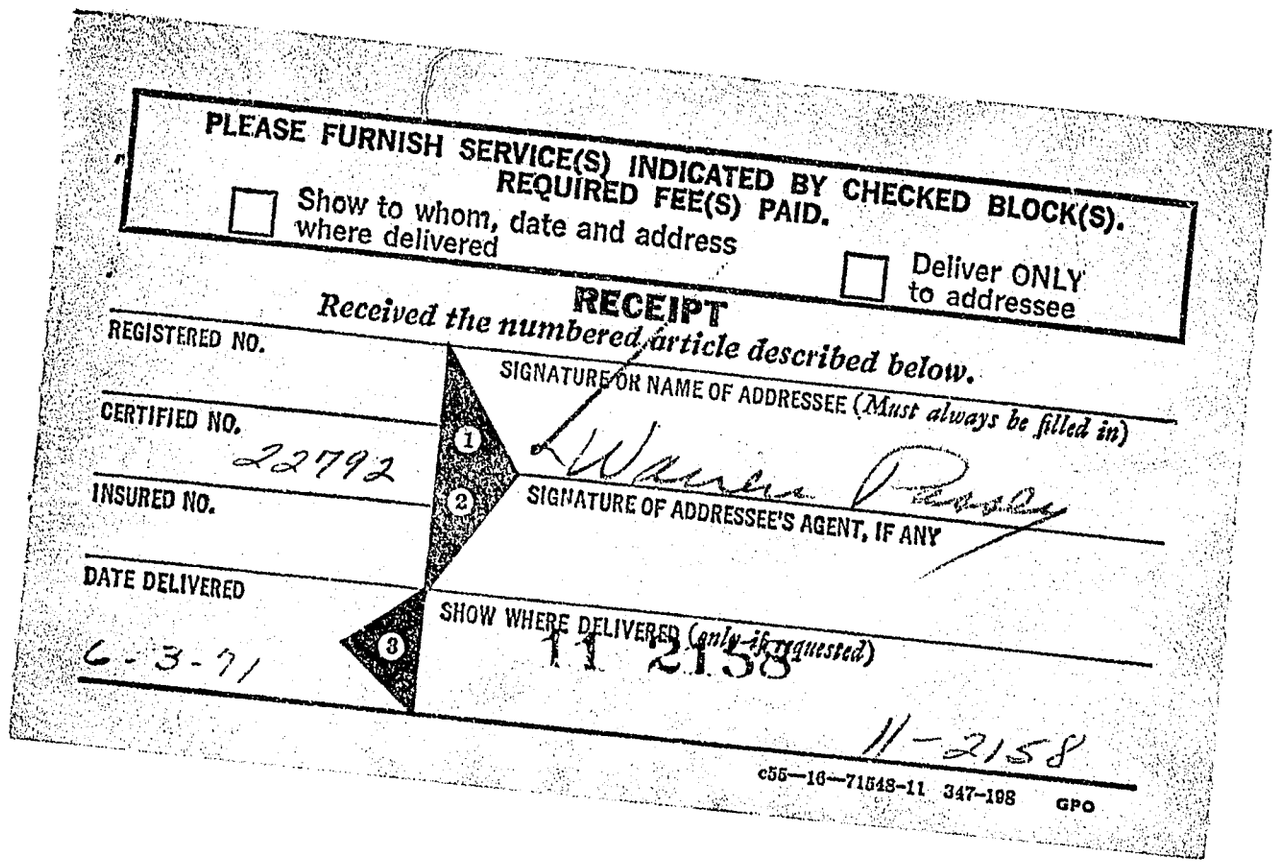
Either the beneficial use affidavit or a request for an extension of time must be received by this Department on or before the above mentioned date, otherwise the permit will lapse and be of no further force or effect.

R. Keith Higginson

R. KEITH HIGGINSON
Director

Enc: Proof affidavit
dr

11 2158



PLEASE FURNISH SERVICE(S) INDICATED BY CHECKED BLOCK(S).
REQUIRED FEE(S) PAID.

☐ Show to whom, date and address where delivered

☐ Deliver ONLY to addressee

RECEIPT

Received the numbered article described below.

REGISTERED NO.

CERTIFIED NO. 22792

INSURED NO.

DATE DELIVERED 6-3-71

1. SIGNATURE OR NAME OF ADDRESSEE (*Must always be filled in*) L Warren Perry

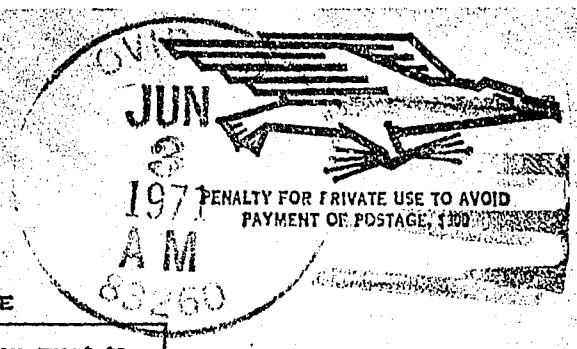
2. SIGNATURE OF ADDRESSEE'S AGENT, IF ANY

3. SHOW WHERE DELIVERED (*only if requested*) 11 2158

11-2158

c55—16—71548-11 347-198 GPO

POST OFFICE DEPARTMENT
OFFICIAL BUSINESS



PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

POSTMARK OF DELIVERING OFFICE

Print your name and address below. If you want to restrict delivery, or to have the address of delivery shown on this receipt, check block(s) on other side. Moisten gummed ends and attach this card to back of article.

RETURN TO

DEPARTMENT OF WATER ADMINISTRATION
STATEHOUSE - ANNEX #2
BOISE, IDAHO 83

11 2158

POD Form 3811 Apr. 1969 655—10—71548-11

June 22, 1971

Re: Permit No. R-1093/11-2158

Little Valley Reservoir & Ditch Co.
Ovid,
Idaho 83260

Gentlemen:

We acknowledge receipt of the affidavit submitted as proof of beneficial use for the above referenced permit.

In reviewing the proof affidavit, we note the following discrepancies between the affidavit and the permit:

	Permit	Affidavit
Point of diversion:	SE¼SE¼, Sec. 30	SW¼SW¼, Sec. 30
Place of use:	N½, N½SW¼, SW¼SW¼, N½SE¼, Sec. 28	N½, W½SW¼, Sec. 28; NE¼SE¼, Sec. 29

If the proof affidavit is indeed correct, it will be necessary to amend the permit. We are enclosing an application for amendment form for your use in this matter. Please be advised that there is a $10.00 fee when submitting amendment applications.

We would appreciate hearing from you by return mail regarding this matter.

Very truly yours,

Donadd W. McEldowney
Appropriation Supervisor

DWM:DR
Enclosure

11 2158

RECEIVED

JUN 28 1971

Department of Water Administration

State of Idaho
Dept of Water administration
Gentlemen.

In answer to your letter of June 22 - the affidavit for proof of Benefited use was in error. The permit was correct. We do not wish to change the permit. The water is used for irrigation only on the lands described in the permit.

If more information is needed please advise.

Sincerely

Warm Springs Res.
Little Valley Res. and Ditch Co.
Ovid Idaho 83260.

11 2158

July 7, 1971

Re: Permit No. R-1093/11-2158

C

Warren Passey, Pres.
Little Valley Reservoir & Ditch Co.
Ovid, Idaho 83260

O

Dear Mr. Passey:

Pursuant to your letter received June 28, 1971, we have changed the proof affidavit to correspond with the above referenced permit.

P

Before a license can be issued, a field examination must be made by a representative from this Department. We cannot tell just when this examination will be made but our examiner will try to contact you at the time he makes the examination so that you may show him the system. If someone other than you should be contacted by the examiner, please advise.

Very truly yours,

Y

Donald W. McEldowney
Appropriation Supervisor

DWM:DR

11 2158

THE NEWS-EXAMINER

MONTPELIER, IDAHO

RECEIVED

NOV 25 1970

Department of Water Administration

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO,)
County of Bear Lake,) ss.

W. Jerome Taylor

being first duly sworn, deposes and says he is Publisher and Foreman of the **News-Examiner**; that the said **News-Examiner** is a weekly newspaper published at Montpelier, County of Bear Lake, State of Idaho, of general circulation in said County and State.

That the notice attached was published in the said **News-Examiner**, and not in a supplement, for two successive weeks, commencing with the issue dated October 29, 1970 and ending with the issue dated November 5, 1970

W. Jerome Taylor
Publisher and Foreman.

Subscribed and sworn to before me this 19th day of November 1970

Notary Public.

NOTICE OF EXISTING WATER PERMIT

Notice is hereby given that the Little Valley Reservoir and Ditch Company, Ovid, Idaho, has received an approved Permit No. R-1693/11-2158 issued by the Idaho Department of Water Administration authorizing the storage of 815 acre feet per annum of water from Hammond Creek, trib. of Bear River. The priority to be established under this permit is August 7, 1961 and the permit was approved August 18, 1961.

Water is to be diverted by dam and canal from a point within the SE¼SE¼ Sec. 30, T. 13 S, R. 43 E, B. M., Bear Lake County to be used for irrigation in the N½, N½SW¼, SW¼SW¼, N½SE¼, Sec. 28, T. 13 S, R. 43 E, B. M.

Proof of the application of the water to beneficial use is to be submitted to the Department on or before August 18, 1971. Any protests against the issuance of the license for the above referenced permit should be filed with the Idaho Department of Water Administration within ten (10) days of the last date of publication of this notice or prior to the licensing of the permit. Licensing may commence prior to the date beneficial use proof is due without further notice.

R. KEITH HIGGINSON
Director
Idaho Department of
Water Administration

Published in The News-Examiner, Montpelier, Idaho on October 29 and November 5, 1970.
(o-29; n-5)

ap of 11-25-70

11 2158

THE NEWS-EXAMINER

MONTPELIER, IDAHO

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO,)
County of Bear Lake,) ss.

W. Jerome Taylor

being first duly sworn, deposes and says he is Publisher and Foreman of the **News-Examiner**; that the said **News-Examiner** is a weekly newspaper published at Montpelier, County of Bear Lake, State of Idaho, of general circulation in said County and State.

That the notice attached was published in the said **News-Examiner**, and not in a supplement, for two successive weeks, commencing with the issue dated October 29, 1970 and ending with the issue

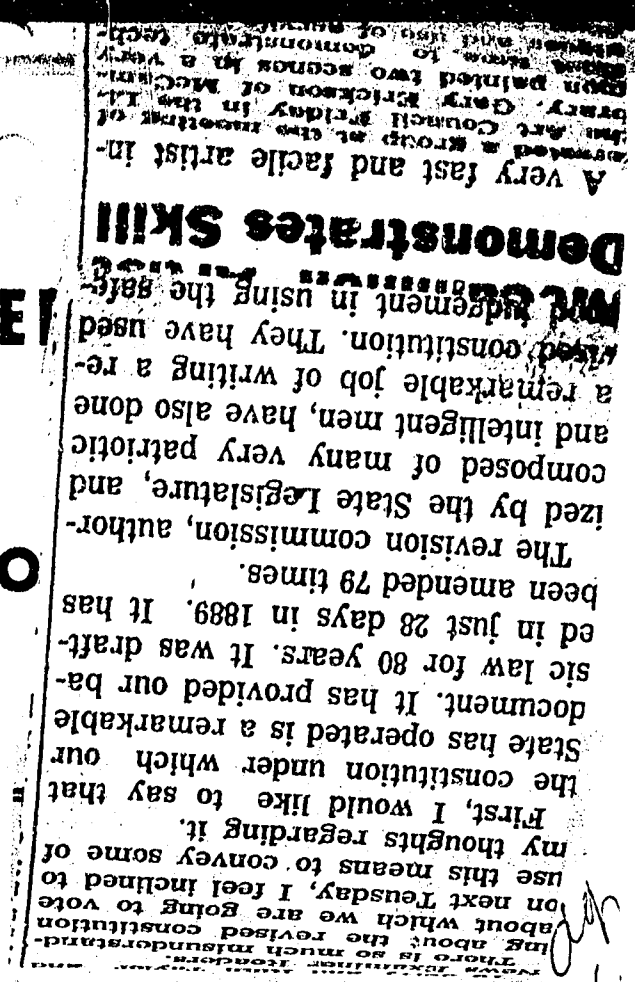
dated November 5, 1970

W. Jerome Taylor
Publisher and Foreman.

Subscribed and sworn to before me this 19th day of November, 1970

Notary Public.

11 2158



Identification No. _____

Permit No. R.1093/11-215-8

STATE OF IDAHO
DEPARTMENT OF WATER ADMINISTRATION

RECEIVED
JUN 30 1971
Department of Water Administration

PROOF OF APPLICATION OF WATER TO BENEFICIAL USE

1. a) Name of Permit Holder LITTLE VALLEY RESERVOIR DITCH CO.
   b) Post Office Address OVID IDAHO 83260
2. Permit Number R-1093/11-215-8
3. Date of Priority that you are prepared to establish June 1968
4. a) Source from which water was appropriated HAMMOND CREEK
   b) Location of the point of diversion: S½SE¼ S½SE¼, Section 30
   Township 13 S, Range 43 E Boise Meridian, Other points of diversion:
   See letter of 6-28-71 in file
   do

5. a) The amount of water and use to which the water has been applied:
   amount 645 Ac. ft. (cfs and/or acre feet per annum) for IRRIGATION purposes from MAY 10 (Month-Day) to SEPT 15 (Month-Day) incl.
   amount _____ (cfs and/or acre feet per annum) for _____ purposes from _____ (Month-Day) to _____ (Month-Day) incl.
   amount _____ (cfs and/or acre feet per annum) for _____ purposes from _____ (Month-Day) to _____ (Month-Day) incl.
   b) Total amount appropriated 645 Ac ft cfs and/or acre feet per annum
   c) Describe how and by whom measurement of rate of flow or amount of storage was made and the qualifications of the person making the measurement: AMOUNT OF STORAGE FROM S.C.S. TOPOGRAPHIC SURVEY & DESIGN

6. If the means of diversion and conveyance are owned by someone other than the Permit Holder:
   a) Give the name or description of the canal, ditch or other works by which the water is conducted to the place of use: _____
   b) Describe the agreement or understanding by which you take water from the works: 1 DAY PER SHARE PER Stockholder

7. a) Breifly describe the works for diverting and conveying the water to the place of use, (If from a subterranean source, give the pump size, motor size, size of well casing, depth of well; if from surface water, give breif description of diversion structure and/or canal or ditch) Screened intake box With Pipe through dam. Headgate with screw type gate. about 1¼ miles open ditch
   b) Describe the type and size of measuring device which you have installed at your point of diversion: Wheel and screw type gate on end of 12" steel pipe encased in concrete. Wheel on top of dam
   c) Give well drillers name and address and date the well was completed _____

LL 2158

11 2158

8. If for other than irrigation, describe the beneficial use to which you have applied the water and the place of use _____

9. Irrigation uses: Describe the lands irrigated by giving the acreages irrigated within each 40 acre subdivision: _____

TWP.	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
13 S	43 E	28	21	40	13	22	40	40	40	40		40	21		✓	✓			317
13 S	43 E	29													12				12

Same as limit is

Total number of acres irrigated 329

10. Remarks: The Water from this Reservior has been applied to the above acres as far as it would go. about 1/2 has been applied by flooding, and the Other 1/2 by gravity sprinkling, for the past four years.

The above information is a true statement of the extent to which the above numbered permit has been developed.

June 14, 1971
(Date)

Warren Peasley Pres.
(Signature)

State of Idaho)
ss.
County of Bonneville)

On this 15 day of June, 1971, 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 Moreland Idaho.

My commission expires 7-11-73

State of Idaho

Department of Water Resources

WATER RIGHT LICENSE

License of Water Right No. R-1093/11-2158 Priority August 7, 1961 Amount 645 acre feet

THIS IS TO CERTIFY, that LITTLE VALLEY RESERVOIR & DITCH COMPANY

of Ovid, Idaho, has complied with the terms and conditions of Permit No. R-1093/11-2158 issued pursuant to Application for Permit dated August 7, 1961, and has submitted proof to the Department of Water Resources on June 16, 1971, that he has applied water to a beneficial use; an examination by the Department indicates that the works have a capacity for the storage of 645 acre feet of water from Hammond Creek, tributary to the Bear River, and that the permit holder has applied to a beneficial use and established a right to use water as follows:

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
Storage for Irrigation	from Jan. 1	to Dec. 31	at n/a cfs and	645 acre feet
	from	to	at cfs and	
Irrigation	from May 10	to Sept. 15 (both dates inclusive)	at 7.72 cfs and	1,158 acre feet or 3.0 af per acre

Subject, however, to the condition that no more than 645 acre feet of water be stored at any one time, and that the amount of water so stored and to which such right is entitled and confirmed is for the purpose aforementioned and is limited to the amount which can actually be beneficially used and shall not exceed 3.0 acre feet per acre per year, said waters to be diverted within the $SE\frac{1}{4}SE\frac{1}{4}$ of Sec. 30, Twp. 13 S, Rge. 43 E, B.M. in the County of Bear Lake

Description and location of place of use:

Twp.	Range	Sec.	NE¼				NW¼				SW¼				SE¼				Totals
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
13 S	43 E	28	21	40	13	22	40	40	40	40	20	39	20		3	37			375
		29													11				11

Total number of acres irrigated 386

NOTE: Modifications to or variance from this license must be made within the limits of Section 42-222, Idaho Code, or the applicable Idaho Law. This right may be forfeited by five years of non-use.

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

Witness the seal and signature of the Director, affixed at Boise, Idaho, this 24 day of February, 19 75.

L Kirk Higgins

Director

Filing Fee: $10.00
Receipt # 793

RECEIVED
FEB 20 1975
Department of Water Resources

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR AMENDMENT

Permit No. R-1093/11-2158

Comes now Little Valley Reservoir & Ditch Company of (address) Ovid, Idaho, and represents to the Director of the Idaho Department of Water Resources:

That he is the owner and holder of Permit to Appropriate the Public Waters of the State of Idaho No. R-1093/11-2158, and requests that the permit and permit map be changed as follows:

1. Point of diversion: NO CHANGE _____ ¼ _____ ¼, Sec. _____ Twp. _____ Rge. _____, B.M., County of _____. Other points of diversion:

_____

_____

2. Period and nature of use: (irrigation, domestic, stockwatering, industrial, etc.)

NO CHANGE

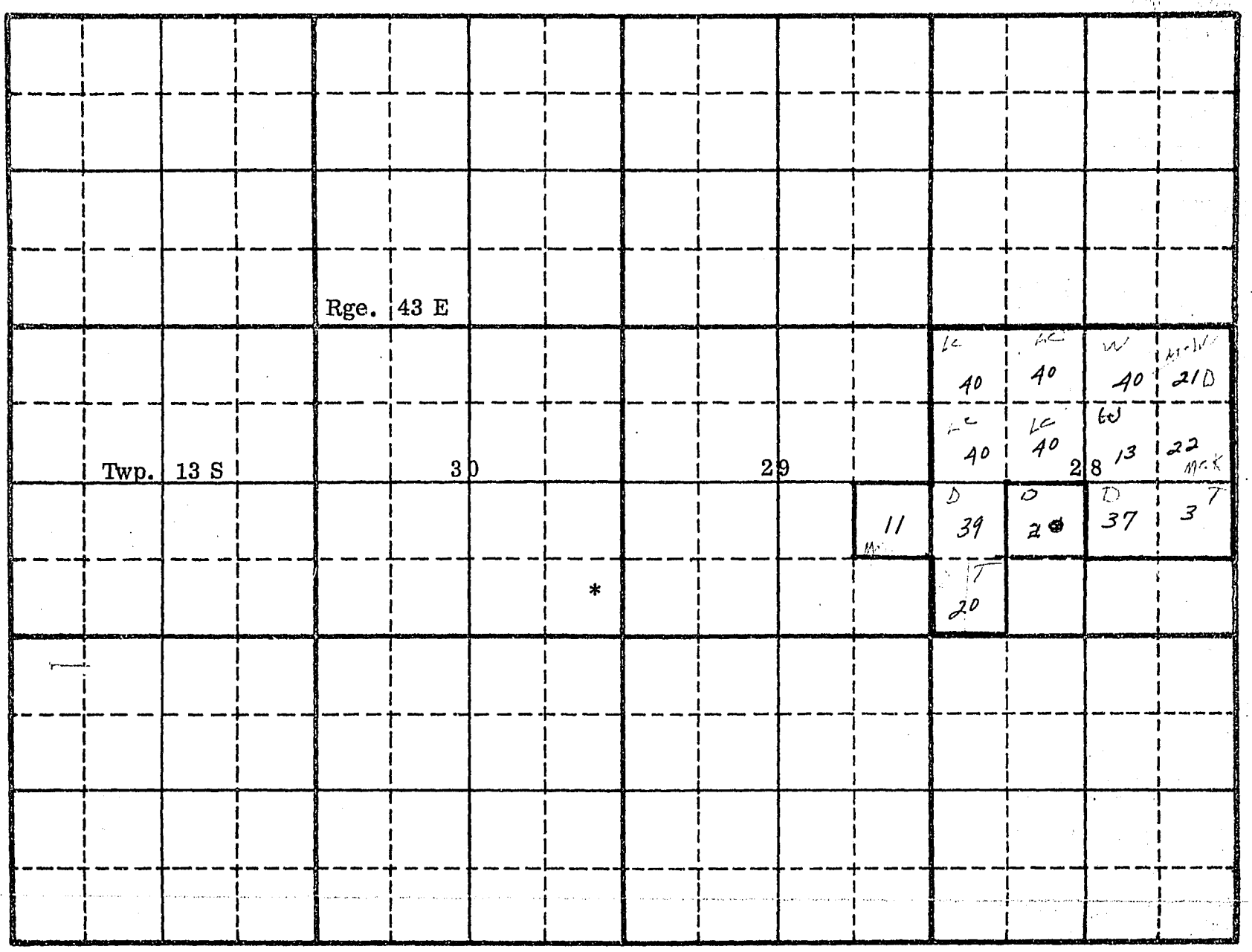
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs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

3. Place of use or land to be irrigated:

TWP	RANGE	SEC	NE ¼				NW ¼				SW ¼				SE ¼				TOTALS
			NE ¼	NW ¼	SW ¼	SE ¼	NE ¼	NW ¼	SW ¼	SE ¼	NE ¼	NW ¼	SW ¼	SE ¼	NE ¼	NW ¼	SW ¼	SE ¼	
13 S	43 E	28	21	40	13	22	40	40	40	40	20	39	20		20 3	37			375 ~~355~~
		29													11				11

Total number of acres to be irrigated 366 386

Complete the following map by showing land and point of diversion as proposed by this amendment. Show 40-acre subdivisions, townships, ranges and ditches.



Scale: 2 inches equal 1 mile

That no one will be injured by such change, and that such change will be made at permit holders own risk.

Signed at OVID IDAHO, this 18 day of Feb., 1975.

Warren Pasley Rep.
(signature)

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

I, R. KEITH HIGGINSON, Director of the Department of Water Resources hereby approve the above application for amendment for Permit No. R-1093/11-2158.

Witness my hand this 24 day of February, 19 75.

R. Keith Higginson
Director

28. acres NE SW 1/4 Sec 28. 13. 43

~~NE SW~~ 28-13-43

RECEIVED

DEPARTMENT OF WATER ADMINISTRATION
FIELD REPORT

Permit No. R-1093/11-2158

Examination for B/U

1. Name of permit holder. Hammond Creek Irrigation Company

Post office address Ovid, Idaho Phone _____

Person to contact _____ Phone _____

2. Source of water supply: Groundwater ☐ Surface water ☒ Hammond Creek
(name spring, stream, etc.)

Tributary to Bear River

3. Water will be used for the following purposes:
(Proof states 645 a.f.)

Amount 815 a.f. ~~c.f.s.~~ for Irrigation
_____ AF/Annum (nature of use)

Period of Use: from May 10 to September 15
(mo.-day) inclusive (mo.-day)

Amount _____ c.f.s. for _____
_____ AF/Annum (nature of use)

Period of Use: from _____ to _____
(mo.-day) inclusive (mo.-day)

Amount _____ c.f.s. for _____
_____ AF/Annum (nature of use)

Period of Use: from _____ to _____
(mo.-day) inclusive (mo.-day)

Other uses: _____

4. Total amount to be appropriated:

Max Rate of Diversion 815af ~~cubic feet per second~~ and annual volume _____ AF/Annum.

5. Location of Point(s) of Diversion:

Township 13 N/S, Range 43 E/W, B.M., Section 30, Subdivision SE ¼ SE ¼, Bear Lake County

Township _____ N/S, Range _____ E/W, B.M., Section _____, Subdivision _____ ¼ _____ ¼, _____ County

Township _____ N/S, Range _____ E/W, B.M., Section _____, Subdivision _____ ¼ _____ ¼, _____ County

Other Points of Diversions: _____

Description of diverting works: Screened intake box with pipe through dam. Headgate with screw type gate about 1-1/4 miles, open ditch

Measuring device required: yes ☐ no ☒

6. Lands to be irrigated or place of use.

TWP.	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
13S	43E	28	x	x	x	x	x	x	x	x	x	x	x		x	x			

TOTAL ACREAGE _____

R 43 E

T

13

30

29

S

Point of Diversion

40 | 40 | 40 ~~44~~ | 21
40 | 40 | 13 | 22
39 | 28 | 37 ~~38~~ | 3 ~~2~~
20

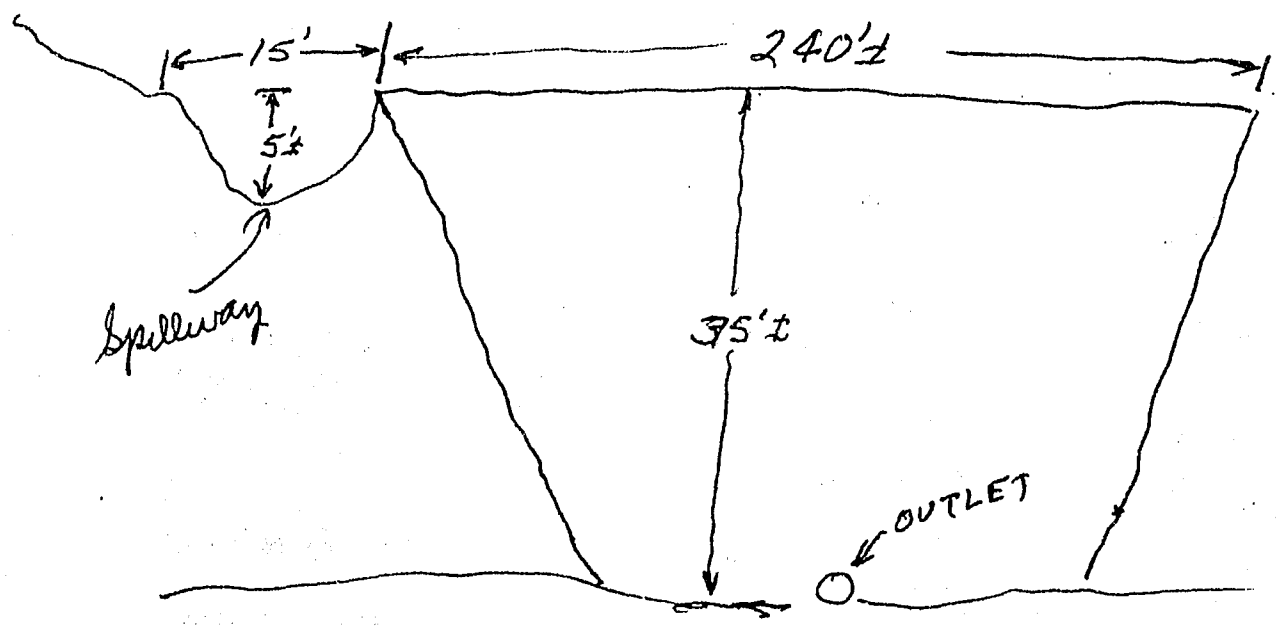
11

Diagram of System

Typical X sec channel
below dam

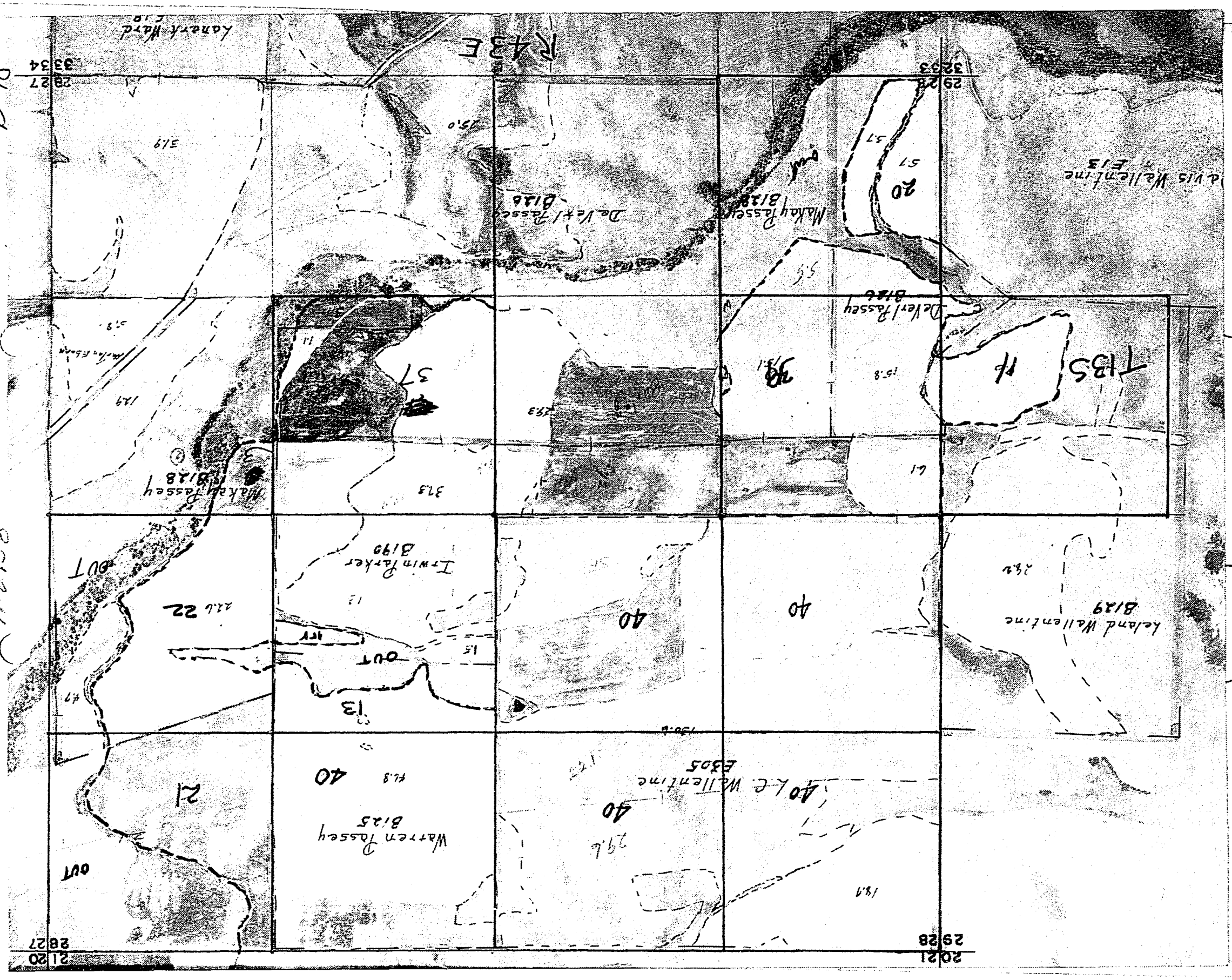
1.5 — 3' — 6" depth

Slope est 0.35%

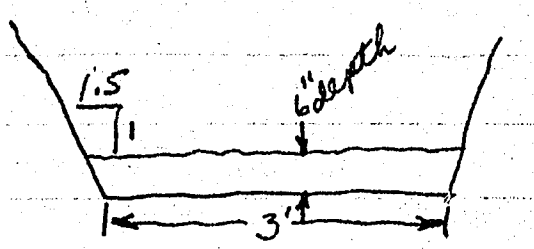


11-2158

D-18


T13S
R43E
Wahkeena Passeq
Delvert Passeq
Maltby Passeq
Twin Parker
Warren Passeq
Leland Wallentine
Delvert Passeq
Maltby Passeq
Leland Wallentine
Hanark Hard
OUT
OUT
OUT
DAM - DOWNSTREAM FACE
OUTLET

11-2158



Typical channel X section downstream from dam.
Slope 0.35%

$A = 1.875\ ft^2$ $\quad P_w = 4.803'$

Earth bottom $n = .018$

$R = \frac{A}{P_w} = .390\ ft.$

$Q = \left(\frac{1.49}{.018}\right)(1.875)(.390^{.67})(\sqrt{.005}) = 4.89\ cfs$

LH 2-10-75

Diversion out of Reservoir

DATE OF EXAM June 13, 1973

ACREAGE
Found 366
Recommended 366 see permit

Irrigation Requirement 3 Ac Ft/Ac

USE
Storage for Irrigation Q= N/A c.f.s. V= 645 AF/Ann. from May 10 to Sept 15
Domestic Q=____ c.f.s. V=____ AF/Ann. from ____ to ____
Livestock Q=____ c.f.s. V=____ AF/Ann. from ____ to ____

Is water co-mingled? yes____ no ✓

Name source: _____
twp.____N/S, Rge____E/W, B.M., Sec.____, Sub.____¼____¼____
County

Exchange? yes____ no ✓

Name source exchanged with: N/A
twp.____N/S, Rge____E/W, B.M., Sec.____, Sub.____¼____¼____
County

Point of injection:
twp.____N/S, Rge____E/W, B.M., Sec.____, Sub.____¼____¼____
County

Point of exchange:
twp.____N/S, Rge____E/W, B.M., Sec.____, Sub.____¼____¼____
County

Total Q measured out of res. 4.89 CFS Method of measurement Manning formula

Total Q recommended N/A Meter No.____ Type____ Condition ____

Total V recommended 645 AF

Recommended Amendments:

P.D. ____
Place of Use ✓ pickup 11 acres in NE¼ SE¼ Sec 29 T13S R43E
Other____
None

MEASUREMENT CALCULATION:
645 AF reservoir capacity according to Bear Lake County Soil Conservation Service at Montpelier
Flow out of Reservoir 4.89 CFS - See attached sheet on Manning Formula Calculation.

SYSTEM DESCRIPTION:
Dam 240± crest - ~~35~~ 35' vertical height. Outlet is 12" ~~10~~ D steel pipe through center of ~~dam~~. Spillway is 5' deep and approx 15' wide

REMARKS:
Unable to locate permit holders on date of exam. No accessability to upper end of reservoir - ~~not~~ Therefore couldn't measure div. S.C.S. preliminary report indicates surface area into res. of reservoir: 54 acres with capacity of 645 A.F. - per Conference with Montpelier Soil Cons Service 6/13/73 JF
On stream reservoir

Examiner's Signature John Ferbrache Date June 13, 1973

Checked by Loren O Haluer Date Feb 11, 1975

Approved by ____ Date ____

February 13, 1975

COPY

Little Valley Reservoir & Ditch Company
Ovid,
Idaho 83260

Gentlemen:

A representative of this Department has made an examination of the works covered by your Permit No. R-1093/11-2158 and has found the following:

Quantity of water stored: 645 acre feet Source: Hammond Creek

Point of diversion: SE¼SE¼, Sec. 30, Twp. 13 S, Rge. 43 E, B. M.

Beneficial use: Storage from Jan. 1 to Dec. 31 and the irrigation of 366 acres from May 10 to Sept. 15 within the N½, W½SW¼, N½SE¼, Sec. 28 and NE¼SE¼, Sec. 29, all in Twp. 13 S, Rge. 43 E, B. M.

Priority date established: August 7, 1961

The maximum quantity diverted shall not exceed 3.0 acre feet per acre per year.

The land being irrigated was found by our examiner to differ from that description listed on your permit, therefore, it will be necessary to amend the permit before a water license can be issued. We have enclosed a partially completed application for amendment for your use in this matter. Please sign the application and return it to this office with a $10.00 filing fee within 20 days in order that we may issue your license as set forth above.

If you do not concur with these findings or have any questions, please contact us within the 20-day period.

Sincerely,

BOBBY D. FLEENOR
Chief, Water Rights

BDF:DR
Enc: App for amend

February 25, 1975

Re: Permit No. R-1093/11-2158

Little Valley Reservoir & Ditch Company
Ovid,
Idaho 83260

Gentlemen:

Enclosed herewith is a copy of the water license issued on the above referenced permit.

We are also enclosing a copy of the approved amendment along with Receipt No. 793 in the amount of $10.00.

Sincerely,

BOBBY D. FLEENOR
Chief, Water Rights

BDF:jfr

Enclosures