

Notice of Proof of Completion of
Works and Application of Water
to Beneficial Use.

Notice is hereby given that at two o'clock P. M., on the twenty-eighth day of January, 1918, at Phoenix, County of Bannock, State of Idaho, before H. K. Thatcher, a Notary Public, proof will be submitted of the completion of works for the diversion of the equivalent of three thousand (3000) cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred (2500) cubic feet per second, continuous flow; (a) from Bear Lake, the equivalent of three hundred (300) cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred (200) cubic feet per second, continuous flow, and of the application to beneficial use of said water in accordance with the terms and conditions of Permit No. 8962 (amended) heretofore issued by the State Engineer of the State of Idaho.

1. The name and postoffice address of the corporation holding said Permit is Utah Power & Light Company, a corporation of Maine, with postoffice address in the State of Idaho, at Grace, Bannock County Idaho.

2. Said works of diversion will be fully completed on the date set for such completion, and the amount of water which said works are capable of conducting to the place of use, in accordance with the plans accompanying the Application for such Permit, is the equivalent of three thousand (3000) cubic feet per second, continuous flow.

3. The use to which said water has been applied is for power purposes.

4. The places where said water is used are (a) at Bear and North or Mud Lakes in Bear Lake County, Idaho; and (b) at a point on Bear River, in Bannock County, Idaho, N. 41 degrees 0 minutes W., one thousand eight hundred forty (1840) feet from the quarter section corner on the south boundary line of Section Twenty-one, Township Ten South, Range Forty East, B. B. & M.; and also at another point on Bear River, in said Bannock County, Idaho, which is S. 74 degrees 01 minutes E., three thousand one hundred seventy-three (3173) feet from the southwest corner of Section Twenty-three, Township Thirteen South, Range Forty East, B. B. & M.

5. The date of priority which said user is prepared to establish is 11:20 A. M., September 11, 1912.

J. H. SMITH,
State Engineer.

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO, }
County of Bannock, } SS.

I, F. B. Porter publisher of The Downey

Idahoan, published weekly at Downey, Bannock County, State of Idaho, do solemnly swear that a copy of the annexed advertisement was published weekly in the regular and entire issue of said newspaper, and not in any supplement thereof, for five consecutive weeks, commencing with the issue dated

Dec. 28, 1917, and ending with the issue dated Jan. 25, 1918.

Subscribed and sworn to before me this 24th day of

Jan., 1918.

F. B. Porter
J. H. Smith

Notary Public.

My commission expires _____, 1918.

8962

STATE OF IDAHO

WATER LICENSE NO. 8962

diverted

WHEREAS, on the eleventh day of September, A. D. 1912, William C. Cates of Salt Lake City, Salt Lake County, Utah, duly made Application No. 13123, to the State Engineer of Idaho for a Permit to divert and use the equivalent of a continuous flow of three thousand (3000) cubic feet of water per second from the following sources, viz: (1) from Bear River, the equivalent of a continuous flow of twenty-five hundred (2500) cubic feet per second; (2) from Bear Lake, the equivalent of a continuous flow of three hundred (300) cubic feet per second; (3) from North or Mud Lake, the equivalent of two hundred (200) cubic feet per second; and to impound such waters to the full quantity of 400,000 acre feet annually in Bear Lake and North or Mud Lake Reservoirs, Reservoir No. 1 and Reservoir No. 2, described in said Permit, all in Water District Nos. 5-A and 5-F, Counties of Bannock, Bear Lake and Oneida, State of Idaho, for power purposes; and

WHEREAS, on the twenty-eighth day of January, A. D. 1913, Permit No. 8962 was issued to said applicant for the diversion and impounding of said waters, and providing for the completion of works of diversion therein described, on or before the twenty-eighth day of January, A. D. 1918, and for the application to beneficial use of said waters on or before the twenty-eighth day of January, A. D. 1922; and

WHEREAS, on the fourteenth day of March, A. D. 1914, the said applicant, William C. Cates, transferred all his right, title and interest in and to said Permit to Utah Power & Light Company; and

WHEREAS, on the twenty-sixth day of January, A. D. 1918, Utah Power & Light Company, the present holder of said Permit, duly made proof of completion of adequate works for the diversion and conveyance of the waters described in said Permit, to-wit: the equivalent of a continuous flow of three thousand (3000) cubic feet of water per second from the several sources mentioned and respectively described in said Permit and for the impounding of such waters to the full quantity of 400,000 acre feet annually in the said Bear Lake and North or Mud Lake Reservoir and Reservoir No. 1 and Reservoir No. 2, described in said Permit, as evidenced by the certificate of the State Engineer of Idaho, No. 8962, dated March 14, 1918, approving and confirming the completion of works of sufficient capacity for diverting and conveying said waters to the reservoirs and places of intended use described in said Permit and for the impounding of said waters in said reservoirs, with date of priority of September 11, 1912; and

WHEREAS, on the twenty-sixth day of January, A. D. 1918, said Utah Power & Light Company, the holder of said Permit, duly made Proof of the Application to Beneficial Use of all the waters hereinbefore mentioned;

NOW, THEREFORE, by virtue of authority vested in me by the laws of the State of Idaho, I hereby grant and confirm to said Utah Power & Light Company, the holder and owner of said Permit No. 8962, a perpetual right, with priority as of September 11, 1912, to the use of the equivalent of a continuous flow of three thousand (3000) cubic feet of water per second from said several sources, viz: (1) from Bear River, the equivalent of a continuous flow of twenty-five hundred (2500) cubic feet per second; (2) from Bear Lake, the equivalent of a continuous flow of three hundred (300) cubic feet per second; (3) from North or Mud Lake, the equivalent of a continuous flow of two hundred (200) cubic feet per second, together with the right to impound said waters to the full quantity annually of 400,000 acre feet in the said Bear Lake and North or Mud Lake Reservoir, Reservoir No. 1 and Reservoir No. 2, described in said Permit, all in Water District Nos. 5-A and 5-F, in the Counties of Bannock, Bear Lake and Oneida, State of Idaho, or so much of said waters as may be necessary for the purposes hereinafter mentioned, said waters to be diverted at the following points: (a) from Bear River, in the southeast quarter of the northeast quarter of Section 34, T. 13 S. R. 44 E. B. B. & M., at a point S. 12° 36' W., approximately 1400 feet from the northeast corner of said Section; (b) from Bear Lake, at a point S. 85° 53' E. approximately 14,000 feet from the northwest corner of Section 18, T. 15 S. R. 44 E. B. B. & M.; (c) from North or Mud Lake, at a point N. 64° 15' E. 8120 feet from the southwest corner of Section 18 T. 14 S. R. 44 E. B. B. & M.; (d) from Bear River into Reservoir No. 1,

at a point S. 2° 45' E. 2030 feet from the quarter corner on the north boundary of Section 31, T. 9 S. R. 41 E. B. B. & M.; (d) from Bear River and Reservoir No. 1, at a point S. 55° 26' W. 2450 feet from the northeast corner of Section 1, T. 10 S. R. 40 E. B. B. & M.; (f) from Bear River into Reservoir No. 2, at a point N. 48° 17' E. 1185 feet from the northwest corner of Section 6, T. 13 S. R. 41 E. B. B. & M.; (g) from Bear River and Reservoir No. 2, at a point whence the northwest corner of Section 26, T. 13 S. R. 40 E. B. B. & M. bears S. 74° 30' W. 3996.31 feet; and to be used for power purposes at the following points: (a) at Bear Lake and North or Mud Lake, in Bear Lake County, Idaho; (b) at Reservoir No. 1 in Bannock County, Idaho; (c) at Reservoir No. 2 in said Bannock County; (d) at a point on Bear River in said Bannock County, N. 41° 0' W. 1840 feet from the quarter section corner on the south boundary line of Section 21, T. 10 S. R. 40 E. B. B. & M.; (e) at a point on Bear River in said Bannock County, S. 74° 1' E. 3173 feet from the southwest corner of Section 23, T. 13 S. R. 40 E. B. B. & M.; subject, however, to the laws of the State of Idaho, applicable to a license for the use of the waters of said State, and subject, also, to the local or community customs, rules and regulations which may have been or may be adopted from time to time by a majority of the users of water from a common source of supply canal or lateral from which such water may be taken, when such rules and regulations have for their object the economical use of such water.

WITNESS my hand and the seal of my office at Boise, Idaho, this 14th day of March, A. D. 1918.

(SEAL)

FRED A. WILKIE
State Engineer

11 2052

No. 13123

APPLICATION FOR PERMIT

To Appropriate the Public Waters of the State of Idaho

1. Name of applicant: William C. Cates

Postoffice address: Salt Lake

County: Salt Lake

State: Utah.

I. If applicant is a corporation, give

(a) Date and place of incorporation:

(b) The amount of capital stock:

(d) Names and addresses of directors:

(c) The amount paid in:

II. The financial resources of the applicant are: (a) Cash on hand:

(b) Treasury stock:

(d) Other resources:

(c) Bonds to be issued:

2. The quantity of water claimed is See "A" under remarks.

cubic feet per second.

3. Source of water supply: See "A" under remarks.

4. Location of point of diversion: See "B" under remarks.

5. To be used for: Power

County of Bear Lake, Bannock and Oneida.

I. Irrigation and domestic use: (a) Amount of land to be irrigated:

acres.

(b) In the following legal subdivisions:

II. Mining, milling, power, manufacturing, transportation or other purposes:

[a] At what point: See "C" under remarks.

[b] Amount of power to be generated: See "C"

H. P. under

ft. head

[c] Is water to be returned to any stream?

Yes

(d) If so, name stream and locate point of

return: To Bear River at points described in "C" under remarks.

6. Estimated cost of works: \$4,000,000.00

7. Description of works for diversion:

I. Kind of works: Reservoirs, diversion dams, canals, pipelines, and appurtenant structures.

II. Dimensions of works: See Exhibit "1" attached.

[a] Height of dam

feet, length of dam at top

feet,

length of dam at bottom

feet. Material used in construction:

[b] Capacity of reservoir 400000/ For the Bear Lake and North or Mud Lake Reservoir. acre feet. [c] Size of headgate, width

feet,

Height

feet. (d) Conduit

width at bottom

feet,

width at water line

feet, depth of water

feet; diameter of pipe

inches; average grade per mile is
and it crosses the following quarter sections:

feet. Length of conduit is

miles,

8. The time required for the completion of the construction of such work is five

years.

9. Time required for the complete application of the water to the proposed use is four additional years.

four

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

William C. Cates. Applicant.

By...Geo. L. Swendsen..... Agent.

Date of first receipt at office of State Engineer 11.20 a.m. September 11, 1912.

Returned to applicant for correction October 11, 1912.

Corrected application received December 9, 1912.

APPROVAL OF STATE ENGINEER.

The number of this permit is 8962
 Recorded in Book 29 Page 8962 Approved January 28, 1913.
 This is to certify that I have examined the within application for a permit to appropriate the public waters of the State of Idaho, and hereby approve the same, subject to the following limitations and conditions.
 Bond in the sum of \$6,000 to be filed on or before March 29, 1913.
 Work to begin on or before and to continue diligently and uninterruptedly to completion, unless temporarily interrupted by circumstances over which permit holder has no control.
 One-fifth of the work above specified to be completed on or before July 28, 1915.
 The whole of said work to be completed on or before January 28, 1918.
 Beneficial use of water appropriated in accordance herewith, to be made on or before January 28, 1922.

Witness my hand this 28th day of January, 1913.

A. E. Robinson,
 State Engineer.

Remarks:

"A": The equivalent of three thousand cubic feet per second continuous flow (1) from Bear River the equivalent of twenty-five hundred cubic feet per second continuous flow;
 (2) From Bear Lake the equivalent of three hundred cubic feet per second continuous flow;
 (3) From North or Mud Lake the equivalent of two hundred cubic feet per second continuous flow.

"B" LOCATION OF POINTS OF DIVERSION.

(1) From Bear River in Bear Lake County, Idaho, at a point South, sixty-nine degrees West, twenty eight hundred feet from the southeast corner of Section six, township fourteen south, range forty-five east, Boise Meridian.

(1a) An alternate point of diversion for (1) is described as follows: South sixty-one degrees thirty minutes east, thirty-four hundred feet from the northwest corner of section seventeen, township fourteen south, range forty-five east, Boise Meridian.

(2) From Bear Lake in Bear Lake County, Idaho at a point south thirty-two degrees east, forty-four hundred twenty feet from the southwest corner of section seven, township fifteen south, range forty-four east, Boise Meridian.

(3) From Bear Lake in Bear Lake County, Idaho at a point south seventy-eight degrees fifteen minutes east, eighty-two hundred eighty-seven feet from the southeast corner of section twelve, township fifteen south, range forty-three east, Boise Meridian.

(4) From North or Mud Lake, in Bear Lake County, Idaho, at points (a) South fifty-nine degrees east, eighty-four hundred feet, from the south quarter corner of section eighteen, township fourteen south, range forty-four east, Boise Meridian. (b) South six degrees five minutes west, thirty-two hundred twenty feet from the northeast corner of section six, township fourteen south, range forty-four east, Boise Meridian, being a point on the high water line of North or Mud Lake, on the natural outlet therefrom.

(5) From Bear river in Bannock County, Idaho, into reservoir number one at a point south seven degrees fifty minutes west, thirty-five hundred feet from the northwest corner of section eighteen, township nine south, range forty-two east, Boise Meridian.

(6) From Bear river in Bannock County, Idaho, and reservoir number one, into pipe lines at a point south eight-eight degrees east, forty-two hundred sixty feet from the southeast corner of section twenty-four, township nine south, range forty east, Boise Meridian.

(7) From Bear river, in Bannock County, Idaho, into reservoir number two, at a point north twenty-five degrees ten minutes west, eighteen hundred feet, from the south quarter corner of section seven, township thirteen south, range forty-one east, Boise Meridian.

(8) From Bear River, in Oneida County, and reservoir number two, into pipe lines, at a point south eighty-five degrees forty-minutes west 1010 feet from the east quarter corner of section three, township fourteen south, range forty-east, Boise Meridian.

At points of diversion numbered two, three, and four above, it is intended to divert not only by gravity flow the natural run-off into Bear Lake and North or Mud Lakes, and also the additional run-off impounded therein, by works herein described, but also at all such points by means of pumps to release, divert, and convey away from said lakes all the run-off into such lakes, as well as the water impounded therein, by the works herein described, to the full equivalent, either by gravity or pumping or both, of three thousand (3000) cubic feet per second continuous flow.

Recorded by C13

Checked by C13

II. DIMENSIONS OF WORKS: Exhibit 1.

- (a) At diversion point #1, diversion dam, height 9 feet, length at top 174 feet, length at bottom 140 feet, materials to be steel sheet piling and rubble concrete.
- (b) Diversion canal from Bear River to North or Mud Lake to be 102 feet wide at bottom; 162 feet wide at the water line; depth of water 10 feet. Grade per mile 0.528 feet. If point of diversion #1 be used, such canal will be 3.75 miles long and cross the following: $W\frac{1}{2}$ Sec. 7, T. 14 S. R. 45 E. B. B. & M.; $SE\frac{1}{4}$ Sec. 12, $N\frac{1}{2}$ Sec. 13, $N\frac{1}{2}$ and $SW\frac{1}{4}$ Sec. 14, and $SE\frac{1}{4}$ Sec. 15, T. 14 S. R. 44 E. B. B. & M.
- (c) At diversion point (1a) if utilized, diversion dam 12 feet high, length at top 260 feet, length at bottom 200 feet, materials to be steel sheet piling and rubble concrete. The diversion canal in (b) above would have the same dimensions as therein given and would cross the following: $N\frac{1}{2}$ Sec. 17, $SW\frac{1}{4}$ Sec. 8, $S\frac{1}{2}$ Sec. 7, T. 14 S. R. 45 E. B. B. & M. $SE\frac{1}{4}$ Sec. 12, $N\frac{1}{2}$ Sec. 13, $N\frac{1}{2}$ and $SW\frac{1}{4}$ Sec. 14, $SE\frac{1}{4}$ 15, T. 14 S. R. 44 E. B. B. & M., with a total length of 5 miles.
- (d) Headgates for canal from diversion point 1 or 1a, battery of 14 gates each 7.50 feet wide by 10 feet high.
- (e) Headgates for controlling flow into supply canal #1 at diversion point #2 at Bear Lake, battery of 16 gates each 7 feet wide by eight feet high.
- (f) Supply canal #1 leading from diversion point #2 at Bear Lake, to Bear River, width at bottom 120 feet; width at top 168 feet; depth of water 8 feet; grade per mile 0.792 feet. Length 15 miles, and crosses the following: $W\frac{1}{2}$ Sec. 8, $W\frac{1}{2}$ Sec. 7, $W\frac{1}{2}$ Sec. 6, T. 15 S. R. 44 E. B. B. & M., West half of Sections 6, 7, 18, 19, 30, and 31 of T. 14 S. R. 44 E. B. B. & M. $SW\frac{1}{4}$ Sec. 6, and west half sections 7, 18, 19, 30, 31, T. 13 S. R. 44 E. B. B. & M.
- (g) Supply canal #2 leading from diversion points 4a and 4b on North or Mud Lakes, width at bottom 120 feet; width at top 168 feet; depth of water 8 feet; grade per mile 0.792 feet; length 4.25 miles, and crosses unsurveyed lands within the meander lines of North or Mud Lake, also the $S\frac{1}{2}$ and $NW\frac{1}{4}$ of Sec. 6, T. 14 S. R. 44 E. and discharges into supply canal #1.
- (h) Headgates for controlling flow of water into supply canal #2, same as described in (e) above.
- (g) Headgates for controlling flow of water from Bear Lake into North or Mud Lake, to be installed at point of diversion #3, at Bear Lake, battery of eight gates each 7 feet wide by eight feet high.
- (h) Diversion and storage dam in Bear River, at point of diversion number six (6), height 80 feet, length at top 280 feet, length at bottom 180 feet, materials of construction rubble masonry and concrete. Storage capacity 16000 Acre Ft.
- (i) Pipe lines leading from diversion and Storage dam described under (h), to consist of three lines of pipes, each ten feet in diameter, of wood stave pattern up to head of two hundred feet, and for heads greater than 200 feet, of riveted steel. Such pipe lines will have a grade of 15.84 feet per mile, and a total length of 8.60 miles, crossing the following: $E\frac{1}{2}$ and $SW\frac{1}{4}$ Sec. 30, and $W\frac{1}{2}$ Sec. 31, T. 9 S. R. 41 E. B. B. & M., and $SE\frac{1}{4}$ Sec. 36, T. 9 S. R. 40 E. B. B. & M. The $SE\frac{1}{4}$ Sec. 2, the $N\frac{1}{2}$ and $SW\frac{1}{4}$ Sec. 1, $N\frac{1}{2}$ and $SW\frac{1}{4}$ Sec. 11, $SE\frac{1}{4}$ Sec. 10, $N\frac{1}{2}$ and $SW\frac{1}{4}$ Sec. 15, $SE\frac{1}{4}$ Sec. 16, $N\frac{1}{2}$ and $SW\frac{1}{4}$ Sec. 21, T. 10 S. R. 40 E. B. B. & M.
- (j) Storage and diversion dam in Bear River, at point of diversion (#8), height 200 feet, length at top 600 feet, length at bottom 100 feet, materials of construction, rubble masonry and concrete. Capacity of reservoir Acre feet, 94950.
- (k) Pipe lines leading from diversion and storage dam described under (j), to consist of (3) lines of pipes each ten feet in diameter, of wood stave pattern, grade per mile 15.84 feet, and a total length of 3.30 miles, crossing: The $S\frac{1}{2}$ Sec. 3, $W\frac{1}{2}$ Sec. 10, $NW\frac{1}{4}$ Sec. 15, and $E\frac{1}{2}$ Sec. 16, T. 14 S. R. 40 E. B. B. & M.

REMARKS CONTINUED.

"C" Location of points of use for power and return of water to stream.

Amount of power developed, and head for such development.

- (a) Point of use for power and point of return to Bear River, of the water diverted at point of diversion number six(6) remarks "B", is a point in Bannock county, Idaho, North sixty-five degrees west, twenty-six hundred fifty feet from the south quarter corner of section twenty-one, township ten south, range forty east, Boise Meridian.

Amount of power to be developed at such point is one hundred thirty thousand (130000) horse power. Head for development is six hundred fifty (650) feet.

- (b) Point of use for power and point of return to Bear River, of the water diverted at point of diversion number eight (8), remarks "B", is a point in Oneida county, Idaho, North fifty-five degrees forty-seven minutes east, fifteen hundred forty-eight feet from the north quarter corner of section twenty-one, township fourteen south, range forty east, Boise Meridian.

Amount of power to be developed at such point is fifty-eight thousand horse power. (58000)

Head for the development is two hundred thirty (230) feet.

The waters stored in Bear Lake and North or Mud Lakes, and released therefrom as herein provided, are to be conveyed down the natural channel of Bear River to the points of diversion numbered six (6) and eight (8), where, together with the flood and unappropriated waters flowing at such points of diversion, they will be diverted into pipe lines and used for power as indicated herein, or is to be stored, together with the flood and unappropriated waters flowing at such points of diversion, in reservoirs numbered one and two herein provided for, and drawn off from such reservoirs at will, for the power development herein specified.

- - - - - D E E D. - - - - -

THIS DEED, Made this 14th day of March, A. D., 1914, between William C. Cates, of Bonneville County, Idaho, of the first part and Utah Power & Light Company, a corporation organized under the laws of Maine of the second part, WITNESSETH:

That in consideration of one dollar (\$1.00), and of other good and valuable consideration to him in hand paid by second party, receipt whereof is hereby acknowledged, first party hereby assigns, transfers, conveys and quit-claims unto second party, its successors and assigns, that certain Application for Permit to appropriate the equivalent of three thousand cubic feet per second continuous flow (1) From Bear River, the equivalent of 2500 cubic feet per second continuous flow; (2) From Bear Lake the equivalent of 300 cubic feet per second continuous flow; (3) From North or Mud Lake, the equivalent of (200) second feet continuous flow, in Bear Lake, Bannock and Oneida Counties, in the State of Idaho, for power purposes, No. 13123, filed in the office of the State Engineer of the State of Idaho, on September 11, 1912, and approved by said State Engineer as permit No. 8962m together with all of the right of grantor to divert or use the waters of said Bear River, Bear Lake and North or Mud Lake under said permit.

TO HAVE AND TO HOLD, the same, with the appurtenances, unto said grantee, its successors and assigns, forever.

IN WITNESS WHEREOF, first party has hereunto subscribed his name, and affixed his seal the day and year first above written.

WITNESSES:
Myrtle Heath.
A. T. Booth.

William C. Cates (SEAL)

STATE OF IDAHO : ss.
COUNTY OF BONNEVILLE :

On this 14th day of March, A.D. 1914, before me Myrtle Heath, a Notary Public in and for the County and State aforesaid, personally appeared William C. Cates, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

My commission expires March 4, 1915.

Myrtle Heath,
Notary Public.

(SEAL)

Received and filed for record in the office of the State Engineer, at Boise, Idaho,
at 9:00 A.M. Jan. 11, 1916,

STATE OF UTAH,)
) (SS:
 County of Salt Lake)

Frederick Steigmeyer, being first duly sworn, upon his oath, deposes and says that he is the attorney and agent for Utah Power & Light Company, a corporation of Maine, holder and owner of Permit No. 8962, approved by the State Engineer of Idaho on the twenty-eighth day of January, A.D., 1913; that said owner and holder intends changing certain points of diversion, use and return, described in said Permit No. 8962, to certain other points as hereinafter set-forth; that as agent and attorney of such holder and owner, he on its behalf, being thereunto first duly authorized by resolution of its Board of Directors, makes this affidavit for recording in the office of the State Engineer of Idaho at Boise, Idaho; that no one will be injured by such changes, as herein set-forth, and that such holder and owner makes such changes at its own risk; that such original Permit No. 8962, was for the equivalent of "three thousand cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred cubic feet per second, continuous flow; (a) from Bear Lake, the equivalent of three hundred cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred cubic feet per second, continuous flow".

That in said original permit No. 8962, there was designated a point of diversion from Bear River, in Bear Lake County, Idaho, as follows: "at a point South sixty-nine degrees West, two thousand eight hundred feet from the southeast corner of Section Six, Township Fourteen South, Range Forty-five East, Boise Meridian"; that said holder and owner hereby changes the description of the above mentioned diverting point, on and from Bear River, to such diverting point as actually established under diversion works constructed on the ground, viz: to a point on said Bear River, in Bear Lake County, Idaho, which is S. 12° 36' W. 1411 feet from the northeast corner of Section 34, T. 13 S., R. 44 E.B.B.&M.

That in said original Permit, No. 8962, there were designated two points of diversion from Bear Lake, in Bear Lake County aforesaid, the first stated as "at a point South thirty-two degrees East, four thousand four hundred twenty feet from the Southwest corner of Section Seven, Township Fifteen South, Range Forty-four East, Boise Meridian", and the second stated as "at a point South Seventy-eight degrees fifteen minutes East, eight thousand two hundred eighty-seven feet from the Southeast corner of Section twelve, Township Fifteen South, Range Forty-three East, Boise Meridian"; and in said original Permit, it was stated that at the last two above mentioned points of diversion, and also at the points of diversion hereinafter mentioned from North or Mud Lake, in said County, the permittee intended "to divert not only by gravity flow the natural run-off into Bear Lake and North or Mud Lake, and also the additional run-off impounded therein", by works described in such permit, "but also at all such points" by means of works described in said Permit, "to release, divert and convey away from said lakes all the run-off into such lakes, as well as the water impounded therein, to the full equivalent, either by gravity or pumping or both, of three thousand cubic feet per second continuous flow"; that the works constructed for the purposes last above mentioned are situate at a point on the Natural Causeway between Bear Lake and North or Mud Lake at a point which is S. 85° 53' E., fourteen thousand six (14006) feet from the Southeast corner of Section 12, Township 15 South, Range 43 East, B.B. & M., in Bear Lake County aforesaid; that said two above mentioned points of diversion from Bear Lake, as recited in said original Permit No. 8962, are hereby changed by the holder and owner aforesaid, to the point, on said Causeway, being on the bank and at the waters' edge of Bear Lake, last above mentioned.

That in said original Permit, the following is the description of the proposed points of diversion from North or Mud Lake, in Bear Lake County aforesaid: "(a) South fifty-nine degrees East, eight thousand four hundred feet, from the South quarter corner of Section Eighteen, Township Fourteen South, Range Forty-four East, Boise Meridian; and (b) South six degrees five minutes West, three thousand two hundred twenty feet from the northeast corner of Section Six, Township Fourteen South, Range Forty-four East, Boise Meridian, being a point on the high water line of North or Mud Lake, on the Natural Outlet therefrom"; that the impounding and releasing works owned and operated by said Utah Power & Light Company, and situate on and controlling North or Mud Lake, are (the center point of Outlet Gates in the Main Dyke) N. 64° 15' E., eight thousand one hundred twenty (8120) feet from the southwest corner of Section 18, Township 14 South, Range 44 East, B.B. & M., in said Bear Lake County; that hereby said holder and owner changes the two points of diversion from North or Mud Lake, as described in said original Permit, No. 8962, to the point last above described, being a point on said North Lake and the Natural Outlet therefrom.

In said original Permit, there is recited a point of diversion from Bear River in Bannock County, Idaho, "into Reservoir No. 1, at a point South seventeen degrees fifty minutes West, three thousand five hundred feet from the northwest corner of Section Eighteen, Township Nine South, Range Forty-two East, Boise Meridian". Said owner and holder hereby changes said point of diversion from Bear River, in said County, to the following: "Into Reservoir No. One at a point on Bear River in Bannock County, Idaho, S. 2° 45' E. two thousand thirty (2030) feet from the quarter section corner on the northern boundary of Section 31, Township 9 South, Range 41 East, B.B. & M.

In said original Permit, there is described a point of diversion from Bear River and said "Reservoir No. One", in Bannock County, Idaho, as follows: "Into Pipe lines at a point South eight degrees East, four thousand two hundred sixty feet from the Southeast corner of Section Twenty-five, Township Nine South, Range Forty East, Boise Meridian". The holder and owner aforesaid hereby changes said last mentioned point of diversion to the following point: S. 59° 02' W., two thousand three hundred four (2354) feet from the Northeast corner of Section 1, T. 10 S., R. 40 E.B.B. & M., in Bannock County, Idaho, which point is on Bear River aforesaid.

In said original Permit, there is described a point of diversion from Bear River Bannock County, Idaho, as follows: "Into Reservoir No. 2, at a point North, twenty-five degrees ten minutes West, eighteen hundred feet, from the South quarter corner of Section seven, Township Thirteen South, Range Forty-one East, Boise Meridian". The holder and owner aforesaid hereby changes such last mentioned point of diversion as follows: Into Reservoir No. 2, at a point in Bannock County, Idaho, N. 48° 17' E. one thousand one hundred eight-five (1185) feet from the Northwest corner of Section 6, T. 13 S., R. 41 E.B.B. & M.

In said original Permit, there is described a point of diversion from Bear River said "Reservoir No. 2", as follows: "Into pipe lines, at a point South eight-five degrees forty minutes West, ten hundred ten feet from the east quarter corner of Section Three, Township Fourteen South, Range Forty-one East, Boise Meridian". The holder and owner aforesaid hereby changes said last mentioned point of diversion to the following: From Bear River and Reservoir No. 2, in Bannock County, Idaho, into pipe lines, N. 74° 15' E., three thousand nine hundred ninety-six and three-tenths (3996.3) feet from the Southwest corner of Section 23, T. 13 S., R. 40 E.B.B. & M., the center of the dam for such reservoir being at a point N. 53° 15' E., one thousand five hundred fifteen and four-tenths (3514.4) feet from the southwest corner of Section 23 last mentioned.

In said original Permit, there is specified a point of use and return as follows: "(a) Point of use for Power and point of return to Bear River, of the Water diverted at Point of Diversion No. Six (6), Remarks 'B'", as a point "in Bannock County, Idaho, North sixty-five degrees West, twenty-five hundred fifty feet, from the south quarter corner of Section twenty-one, Township Ten South, Range Forty-one East, Boise Meridian." Said holder and owner hereby changes such last described point of use and return of said Bear River to the following point: N. 41° 0' W., one thousand eight hundred forty (1840) feet from the quarter section corner on the South boundary line of Section 21, T. 10 S., R. 40 E.B.B. & M., in Bannock County, Idaho. In said original Permit, there is described a "point of use for power and point of return to Bear River of the water diverted at Point of diversion No. Eight (8), Remarks 'B'", as follows: "a point in Oneida County, Idaho, North fifty-five degrees forty-seven minutes East, fifteen hundred forty-eight feet from the Northwest corner of Section Twenty-one, Township Fourteen South, Range Forty East, Boise Meridian". Said holder and owner hereby changes such last described point of use for power and point of return of waters to Bear River to the following point: S. 74° 01' E., three thousand one hundred seventy-three (3173) feet from the Southwest corner of Section 23, T. 13 S., R. 40 E.B.B. & M., in Bannock County, Idaho, - Oneida County boundaries have been changed by Act of Legislature so as to exclude above point, and such point of use and return being in virtue of said Act now situate within Bannock County.

As to the last two mentioned points of use and return, fixed and above described and as a part of this Amendment of said Permit, No. 8962, same are the points of use and return of the water diverted respectively (a) at said Point of Diversion No. Six (6), Remarks "B", of said original Permit, amended by this affidavit, and (b) at Point of Diversion No. Eight (8), Remarks "B", of said original Permit, amended by this affidavit.

That by the making of the foregoing changes in certain points of diversion and points of use and return, under said Permit, No. 8962, said holder and owner gives notice that it does not intend thereby to waive any rights in it vested or vesting under or through other sources of title than said Permit No. 8962 to the right to divert, impound, release and / or utilize waters of Bear Lake, North or Mud Lake or Bear River, in the State of Idaho.

Changes or amendments there are none of points of diversion specified in original Permit No. 8962, and not hereinabove specifically mentioned.

And further deponent saith not.

Frederick Steigmeyer.

Subscribed and sworn to before me this twenty-fourth day of November, A.D. 1917.

My Commission expires November 2, 1921.

A.E. Burdette.
Notary Public in and for the County of
Salt Lake, State of Utah, residing at
Salt Lake City, Utah.

Notarial Seal.

Received and filed for record in the office of the State Engineer at Boise, Idaho, at 9:00 A.M. Nov. 27, 1917.

J.H. Smith,
State Engineer.

Permit No. 8962

CERTIFICATE OF COMPLETION OF WORKS

To All Whom It May Concern:

This is to certify that Utah Power & Light Company, a corporation organized under the laws of the State of Maine, having its principal place of business in the State of Utah in the City of Salt Lake, County of Salt Lake, the holder of Permit No. 8962, issued upon Application No. 13123, bearing date of priority of September 11, 1912, and authorizing the diversion of the equivalent of a continuous flow of three thousand (3000) cubic feet of water per second from the following sources, viz: (1) From Bear River, the equivalent of a continuous flow of twenty-five hundred (2500) cubic feet per second; (2) From Bear Lake, the equivalent of a continuous flow of three hundred (300) cubic feet per second; (3) From North or Mud Lake, the equivalent of a continuous flow of two hundred (200) cubic feet per second, and the impounding of such waters up to the quantity of 400,000 acre feet annually in the reservoirs described in such Permit, viz: Bear Lake and North or Mud Lake Reservoir, Reservoir No. 1 and Reservoir No. 2, all in Water District No. 5-A and 5-F, in the Counties of Bannock, Bear Lake and Oneida, State of Idaho, for power purposes, has fully complied with the provisions of the laws of the State of Idaho relating to Proof of Completion of Works of diversion and impounding set-out and described in said Permit; that said works are adequate for diverting and conveying to the reservoirs and places of use described in said Permit the equivalent of a continuous flow of three thousand (3000) cubic feet of water per second, as follows: from Bear River, the equivalent of a continuous flow of twenty-five hundred (2500) cubic feet per second; from Bear Lake, the equivalent of a continuous flow of three hundred (300) cubic feet per second, and from North or Mud Lake, the equivalent of a continuous flow of two hundred (200) cubic feet per second, and also for the impounding of such waters up to the quantity of 400,000 acre feet annually in said Bear Lake and North or Mud Lake Reservoir, Reservoir No. 1 and Reservoir No. 2, described in said Permit; that the points of diversion of said waters are as follows: (a) From Bear River, in the southeast quarter of the northeast quarter of Section 34, T. 13 S. R. 44 East, B. B. & M., at a point S. 12° 36' W., approximately 1400 feet from the northeast corner of said Section; (b) from Bear Lake, at a point S. 85° 53' E. approximately 14,000 feet from the northwest corner of Section 18, T. 15 S. R. 44 East, B. B. & M.; (c) from North or Mud Lake, at a point N. 64° 15' E. 8120 feet from the southwest corner of Section 18, T. 14 S. R. 44 East, B. B. & M.; (d) from Bear River into Reservoir No. 1, at a point S. 2° 45' E. 2030 feet from the quarter corner on the north boundary of Section 31, T. 9 S. R. 41 East, B. B. & M.; (e) from Bear River and Reservoir No. 1, at a point S. 55° 26' W. 2450 feet from the northeast corner of Section 1, T. 10 S. R. 40 East, B. B. & M.; (f) from Bear River into Reservoir No. 2, at a point N. 48° 17' E. 1185 feet from the northwest corner of Section 6, T. 13 S. R. 41 East, B. B. & M.; (g) from Bear River and Reservoir No. 2, at a point whence the northwest corner of Section 26, T. 13 S. R. 40 East, B. B. & M., bears S. 74° 30' W., 3996-31 feet; and that the places of use of said waters are as follows: (a) At Bear Lake and North or Mud Lake, in Bear Lake County, Idaho; (b) At Reservoir No. 1 in Bannock County, Idaho; (c) At Reservoir No. 2 in said Bannock County; (d) At a point on Bear River in said Bannock County, N. 41° 0' W. 1840 feet from the quarter section corner on the south boundary line of Section 21, T. 10 S. R. 40 E. B. B. & M.; (e) At a point on Bear River in said Bannock County, S. 74° 1' E. 3173 feet from the southwest corner of Section 23, T. 13 S. R. 40 E., B. B. & M.

WITNESS my hand this Fourteenth day of March, 1918.

FRED A. WILKIE
State Engineer

License issued for 3000 second feet

Page 2267

WATER RIGHT NUMBER 13-2311 ✓

OWNER LAST NAME - CATES ✓

FIRST NAME - WILLIAM C. ✓

ORIG OWNER - 0 ✓

OWNER LAST NAME - UTAH POWER & LIGHT CO. ✓

FIRST NAME -

ORIG OWNER -

ADDRESS LINE 1 -

ADDRESS LINE 2 -

ADDRESS LINE 3 -

CITY -

STATE -

ZIP CODE -

SOURCE -

TRIBUTARY OF -

STAGE - DECREE ✓

STATUS - ✓

PRIORITY -

COUNTY -

TOTAL DIV. RATE -

.0000 -CFS

TOTAL DIV. VOLUME -

.00 AFA TRFR/AMEND -

WATER DIST. -

DLE/CAREY ACT -

RIGHT BASIS -

DIVERSION POINT -

FROM - TO -

USE -

USE DIV. RATE -

.0000 CFS

USE DIV. VOLUME -

.00 AFA

USE -

PLACE OF USE - TWN

RNG

SEC

DATE -

TOTAL ACRES

0

DECREE NAME -

REMARKS - SUPERCEDED BY DECREE. SEE RIGHT NO. 11-2052. ✓

NON IRRIG USE -

OTHER RIGHTS FOR SAME USE -

PROOF DUE -

PERMIT/DENIED -

PROTESTED -

HEARING -

OLD NO. -

PROOF MADE -

FLD EXAM -

COND. OF APPROVAL -

DIVERSION MEANS -

WRR100
11-2052

VERIFIED KAW

12-23-85

IDAHO DEPARTMENT OF WATER RESOURCES
WATER RIGHTS PROOF READING REPORT

PAGE 1
18-DEC-1985 19:47:37

01 WATER RIGHT NUMBER - 11-2052 ✓ 02 OLD (D) NUMBER - 8962

LAST NAME
03001 - CATES
03002 - UTAH POWER & LIGHT CO.

FIRST NAME
04001 - WILLIAM C.
04002 -

ORIG. OWNER
05001 - O
05002 - C

06 ADD LINE 1 -

07 ADD LINE 2 -

08 ADD LINE 3 -

09 CITY -

10 STATE -

11 ZIP -

12 STAGE - ✓

13 STATUS -

SOURCE
14001 -

TRIBUTARY OF
15001 -

16 DIVERSION MEANS -

17 COUNTY -

18 DIVERSION CAPACITY - .000

19 TOTAL DIVERSION RATE - .000

20 TOTAL DIVERSION VOLUME - .00

21 WATER DISTRICT -

----- DIVERSION POINTS -----					----- S T R E A M I N D E X F I E L D S -----		
TRACT	SEC	TWN	RNG	LOT	RFLG		
22001 -	23001 -	24001 -	25001 -	26001 -	27001 -		
			28001 -				

29 NON-IRRIGATION USE -

----- PLACE OF USE -----					-----		
USE CODE / USE	TWN	RNG	SEC	TRACT	ACRES	LOT	
30001 -	31001 -	32001 -	33001 -	34001 -	35001 -	36001 -	
							TOTAL ACRES: 0

----- WATER USE -----			-----	
PERIOD FROM	PERIOD TO	USE CODE / USE	DIVERSION RATE	DIVERSION VOLUME
37001 -	38001 -	39001 -	40001 -	41001 -

42 DECREE PLAINTIFF NAME -

43 DECREE DEFENDANT NAME -

REMARKS
44001 - SUPERCEDED BY DECREE. SEE RT. NOS. 11-0248, 11-0249, 11-0264.
44002 - 11-0268, 11-0269, 11-0273, 11-0274, 11-0282 THRU 11-0285. ✓

APPROVAL CONDITIONS: 45001 -

46 OTHER RIGHTS FOR SAME USE -

----- D A T E S -----		----- D A T E S -----		----- F L A G S -----	
47 PRIORITY	-	55 LICENSE	-	63 TRANSFER/AMENDED	-
48 PROOF DUE	-	56 APPL RECEIVED	-	64 DLE/CAREY ACT	-
49 PROOF MADE	-	57 FIELD EXAM MADE	-	65 FLAG_1	-
50 APPROVE/DENIED	-	58 DECREE	-	66 FLAG_2	-
51 PROTESTED	-	59 START WORK	-	67 FLAG_3	-
52 HEARING	-	60 ORDER SHOW CAUSE	-		

WRR100
11-2052

IDAHO DEPARTMENT OF WATER RESOURCES
WATER RIGHTS PROOF READING REPORT

PAGE 2
18-DEC-1985 19:47:37

----- D A T E S ----- D A T E S ----- F L A G S -----

53 VERIFIED -
54 LAST UPDATE - 18-DEC-1985

61 DATE_1 -
62 DATE_2 -

IDENT.

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

WATER RIGHT
DATA ENTRY LOG[illegible]

September 3, 1927.

Re: Permit No. 8962.

Mr. Charles E. Harris,
Montpelier, Idaho.

Dear Sir:

We are mailing you herewith two copies
of the above numbered permit, as you requested.
These have been checked, but not certified.

Very truly yours,

Assistant Commissioner.

P.
Enc.

8962

August 8, 1918.

Re Permit 8962.

Messrs. Story & Steigmeyer,
Attorneys at law,
500-508 Boston Building,
Salt Lake City, Utah.

Gentlemen:—

Am enclosing herewith certificate
of completion of works and water license issued
under the above permit, the changes requested
having been made.

Very truly yours,

FRED A. WILKIE,

State Engineer.

By _____

CCW&L

8962

June 27, 1918.

Re: Permit No. 8962.

Utah Power & Light Company,
Kearns Building,
Salt Lake City, Utah.

Gentlemen:

This is to acknowledge receipt of yours of the
25th enclosing map showing the data as requested.

I think there is upon this map all the data re-
quired. I will make a tracing of this map, leaving
off all unnecessary marking and submit the same to
you for your approval.

Very truly yours,

State Engineer.

FAH/LB

File: P-8962

8962

UTAH POWER & LIGHT COMPANY

KEARNS BUILDING
SALT LAKE CITY, UTAH

June 25, 1918.

Mr. Fred A. Wilkie,
State Engineer of Idaho,
Boise, Idaho.

Dear Sir:-

Permit No. 8962.

Referring to your letter of June 19th, 1918,
I am handing you herewith, a map showing ties to
the different points of diversion, use and return,
etc., which are identical with those ties given
in our proof of completion of works under Permit
No. 8962.

Trusting that this map will cover the different
points to your satisfaction, I remain,

Yours truly,

GRC:CB.

Geo. R. Conry

*Legal Dept.
U. P. & L. Co.
Salt Lake.*

RECEIVED

JUN 27 1918

OFFICE OF STATE ENGINEER

8962

June 19, 1918.

Re: Amendment of Certificate of Completion & Water License.

Utah Power & Light Company,
Kearns Building,
Salt Lake City, Utah.

Gentlemen:

Referring to your letter of May 18th, regarding the certificate of completion of works and the license issued to you under your filings on Bear River, permit No. 8962, I beg to state I have no objection to amending these documents although I do not see that the language you propose to use alters the meaning of them. I take it that the words "continuous flow" in connection with "second feet" is superfluous because second feet cannot be anything but continuous flow and these would only add to the amount of record which we are required to make from the office.

However, upon examination and comparison of these documents, I find that the maps on file in this office do not correspond with the readings of the instruments and will therefore ask you to file maps showing particularly the following:- your point of diversion as described as follows: (1) from Bear River; (2) from Bear Lake; (3) from North or Mud Lake, also platting on the map Reservoir No. 1 and Reservoir No. 2, also point of diversion (a) from Bear River in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sec. 34, T. 13 S., R. 44 East of Boise Meridian; (b) from Bear River at a point S. 85° 53' E. 1400' from the NW corner of Section 18, T. 15 S., R. 44 East of Boise Meridian; (c) from North or Mud Lake; (d) from Bear River into Reservoir No. 1; (e) from Bear River and Reservoir No. 1; (f) from Bear River into Reservoir No. 2; (g) from Bear river and Reservoir No. 2 and to be used at the following points which must be platted upon the maps; (a) at Bear Lake and North or Mud Lake; (b) at Reservoir No. 1; (c) at Reservoir No. 2; (d) at a point on Bear River in Bannock County, described in your License as N. 41° 08' W. 1840' from the quarter section corner of the South boundary line of Section 21, T. 10 S., R. 40 East Boise Meridian; (e) at a point described in your license as S. 74° 11' E. 3173' from the SW corner of Section 23, T. 13 S., R. 43 East of Boise Meridian.

There are three maps in this office, none of which correctly show the location of the various points of diversion and places of use and the reservoirs described in these instruments. I will make the amendments you request upon ~~very certainty of the~~ map which will properly correspond to the reading of the certificate and license.

UTAH POWER & LIGHT COMPANY

KEARNS BUILDING
SALT LAKE CITY, UTAH

RECEIVED

May 18, 1918.

MAY 20 1918

SEAL OF STATE ENGINEER

Mr. Fred A. Wilkie,
State Engineer of Idaho,
Boise, Idaho.

Dear Sir:-

Owing to my continued absence from the City and the press of other business, I have been unable sooner to give attention to the Certificate of Completion of Works and the License under Permit No. 8962, issued by your office about March 15th. I might also add that Mr. Steigmeyer of Story & Steigmeyer, who as you may know, has had much to do with these Permits from their inception, has been constantly away from the City since April 1st. and I have been obliged therefore, to obtain his views and suggestions by correspondence since my return to the City.

In studying this Application, it impresses me, (and Mr. Steigmeyer assures me that this is correct) that the intent of the appropriator was to appropriate not only 3000 Sec. Ft. of the flow of Bear River, Bear Lake and North or Mud Lake, but to appropriate a quantity from these several sources equivalent to a continued flow of 3000 Sec. Ft. up to a maximum quantity of 400,000 acre feet annually, and that it is particularly stated that this water is to be stored in Bear Lake Reservoir, Reservoir No. 1 and Reservoir No. 2, to the extent of 400,000 acre feet annually and to be released therefrom and used at the different power stations below the Reservoir and along Bear River as recited in the Application.

A careful study of the Certificate and License as issued, convinces me that neither of these points which seem essential to us, have been included. I am therefore enclosing herewith, a rough draft of Certificate and License which we have prepared, to embody our views and which we believe more clearly expresses what we consider to be the intent of the Application as passed to Permit.

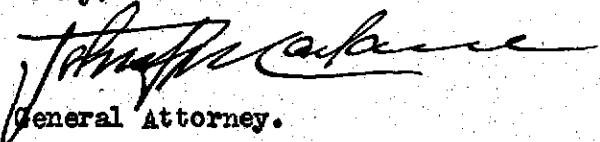
8962

-2-

I would ask therefore, that, after you have considered our views as comprehended in the draft above mentioned, if you can consistently do so, you amend the Certificate and License as now recorded in your office, to cover these two points, i.e. that Utah Power & Light Company is entitled to divert and store water as outlined in such draft, or if you prefer, to substitute for the Certificate and License a new Certificate and License substantially the same as that outlined above.

If there is any data that we can furnish you as to the capacity of Bear Lake Reservoir, or that will in anyway supplement the data heretofore furnished, to support our request, we shall be very glad to supply the same immediately.

Yours truly,


General Attorney.

GRC:CB.

8962

March 23, 1918.

Re Permit 8962- Utah Power & Light Co.

Story & Steigmeier, Attorneys,
500-508 Boston Building,
Salt Lake City, Utah.

Gentlemen:--

Enclosing herewith certificate of completion of works
and a license issued under the above numbered permit.

Very truly yours,

FRED A. WILKIE,

State Engineer.

C&L

By _____

8962

8962 ✓
March 12, 1918.

Utah Power & Light Company,
Salt Lake City, Utah.

Gentlemen:

I enclose you herewith statement of salary and expenses for S. H. Chapman while making the investigations on your water filings on Bear River. Mr. Chapman's findings entitle you to your licenses in accordance with the terms of these permits, which licenses will be issued immediately.

This amount is \$30.00 for salary and \$28.50 expenses.

Very truly yours,

State Engineer.

FAW/MB

File: P.8962
R-18
12236.

8962

Mar. 5, 1918.

THE UTAH LIGHT AND POWER CO.

SALT LAKE CITY, UTAH.

TO S.H. CHAPMAN,.....Dr.,
Engineering Department,
BOISE, IDAHO.

To cost of Examination for Beneficial Use on permits
Nos. 8962, R-18, 12236.

Expenses -28.15

6 days Services at \$5.00 per da. - - - - - 30.00

TOTAL \$ 58.15

825

OFFICE OF STATE ENGINEER,

Boise, Idaho, Mar. 1, 1918.

Mr. Fred A. Wilkie,
State Engineer,
Boise, Idaho.

Dear Sir:

Following your instructions, I left Boise on Feb. 24th and went to Grace, Idaho, and thence to the following points: Pumping plant, located on Bear Lake; Intake Canal from Bear River into Mud Lake; Equalizing canal between Mud Lake and Bear Lake; and Controlling works to outlet canal from Mud Lake and Reservoir.

After examining the above named points - I went to Alexander; from Alexander I went down Bear River making examination on the following: Dam and pipe line, headings for Grace plant; Grace plant, Dam and flume for Cove plant; Cove plant; Dam and Heading for Oneida plant, and Oneida plant.

The power operating the system owned by the Utah Power and Light Co. on Bear River is supplied as follows:

A Canal called "The Rainbow Canal" diverts out of Bear River and is discharged into Mud Lake. There is a natural cause-way between Mud Lake and Bear lake - between these two lakes is an equalizing canal.

From Bear Lake into Mud Lake is a Gravity outlet which draws water from Bear Lake. At this point is also a pumping plant with a capacity of 1500 sec. ft. against a 4 ft. head.

During flood water season, water is diverted from Bear River and stored in Mud and Bear Lakes; and during the low water period is drawn from Mud Lake through an outlet canal connecting Mud Lake with Bear River at a point considerable lower than the diversion point of the Rainbow Canal.

The Gravity outlet between Mud Lake and Bear Lake will lower Bear Lake from an elevation of 5923.65 ft. to 5912 or 11.65'.

To give a sufficient amount of water at all times, the pumping plant is used when water in Bear Lake gets low.

After water is released from Mud Lake into outlet Canal and thence into Bear River it flows down to a point in the NE $\frac{1}{4}$ of Sec. 1, T. 10 S., R. 40 E. where it is diverted into two wood stave pipes and carried a distance of approximately 5 miles and then carried down a hill to the turbines of the Grace generating Plant.

The tail race of the Grace plant discharging into Bear River and about 2500 ft. below, is again diverted into a concrete, timber lined flume and is carried a distance of approximately 1 $\frac{1}{4}$ miles, and delivered to the turbine of the Cove plant through a steel pipe.

The water after passing through the Cove plant is discharged into Bear River and again diverted at a point in the SE $\frac{1}{4}$ of Sec. 23, T. 13 S., R. 40 E.B.M. and carried through a 16' steel pipe to the turbines of the Oneida plant.

Bear River is tapped by the Rain Bow Canal - point of diversion being located in the $SE\frac{1}{4} NE\frac{1}{4}$ of Sec. 34, T. 13 S. R. 44 E.B.M. The heading to this canal consists of a concrete structure with 7 - 8 ft. openings, 16' high, with stop log control. The logs are moved with a derrick.

The dam in Bear River at head of Rain Bow Canal is a concrete dam with a height of 21' and a top length of 209.5'. There are five steel radial gates 16' high and 25' wide and one steel radial gate 10' high and 31' wide. The water can flow over or under these gates at will of operator.

The cross section of the Rain Bow Canal is as follows: 100' bottom, 12' depth of water; 125' width of water on top and a grade of 1.4' per mile with a 4' free board. The maximum meter measurement for this canal is 3922 sec. ft. - April 20th, 1917. With above cross section and grade - this canal should carry (using .025 for N) - 6525 sec. ft.

The equalizing canal between Bear Lake and Mud Lake is 200' wide and 16' deep.

The Pumping plant is located on Bear Lake at a point South $85^{\circ} 53'$ E. 1406' from NW corner of Section 18, T. 15 S., R. 44 E.B.M.

The building is of concrete 180' long and 51' wide. The machinery in this plant is as follows: Five Induction motors, Type I, Class 96, Form M - Cycle 60, H.P. 750, V-2300, A-230, R.P.M. 75 - (Full load $73\frac{1}{2}$ R.P.M.); Five turbine vertical shaft centrifugal pumps. Capacity - 300 sec. ft. against a head of 4' when running at a speed of $72\frac{1}{2}$ R.P.M. and using 430 H.P. Turbines made by I.P. Mores Co.

The Gravity outlet will supply 1500 sec. ft. of water from Bear Lake down to an elevation of approximately 5918.50. From the elevation of 5918.50 to 5912 it would be necessary that the pumping plant supplied part of the water, below the 5912 point the pumping plant would be required to pump all the water.

The gravity outlet consists of two 11 ft. x 17'3" openings - equipped with gates with electrical and hand control.

The size of suction pipes leading to turbines is 8'x12 with gates 14' x 9' electrically controlled. The delivery pipe at turbines is 6' x 4'3½", and increases to 8' 5¼" x 12' 1½" at end.

The pumping plant is equipped with electrical control for all gates, over head Crane for moving machinery, and all other parts necessary for a complete plant.

The controlling works for outlet Canal from North Lake and reservoir is located as follows: N. 64° 15' E. 8120' from SW corner of Sec. 18, T. 14 S., R. 44 E.B.M.

The controlling works consist of a concrete structure with 8 - 8' x 15' openings with stop-log control and derrick to move logs.

There is a dike 19000 ft. long with top width of 20 ft. leading to controlling works.

This canal has a bottom width of 91 ft., water depth of 13', width of top of water of 112'. Grade .7 ft. per mile, This canal should give a maximum discharge of 4288 sec. ft. with a free board of from 3 to 5'. The maximum meter measurement June 30-1916 was 1267 sec. ft., with a gage of 18.35.

Maximum Gages - April 22-17 - 19.98.

The meter measurement given indicates that the Canal will not carry the 4288 sec. ft. obtained from computation. This is undoubtedly due to the back water effect of Bear River which decreases the .7 ft. grade to a somewhat less effective grade.

- - - -

GRACE PLANT.

The water for this plant is diverted from Bear River at a point in the NE $\frac{1}{4}$ of Sec. 1, T. 10 S., R. 40 E.B.M. The diversion dam is a Rock fill, wood Crib dam, approximately 38 ft. high with crest length of 300 ft.

The dam is equipped with fixtures for flash boarding 8 ft. Vertical.

There is a small reservoir above dam.

The water is diverted into two wood stave pipes 8 ft. 4 in. and 11 ft. in diameter. The large pipe has a concrete house at head and concrete supports throughout its entire length. The smaller pipe has a wooden house at head, these pipes are approximately five miles long.

The Grace plant is equipped with two alternating current generators - Type ATB, Form V; 11,000 K.W.- 6600 V; 1070 A ; Speed 514 R.P.M.

Two 16500 H.P. Turbines, Speed 514 R.P.M. Head 482 feet, Manufactured by I.P. Morris Co.

8962

Two Westinghouse alternating current generators 5500 K.W.; 2300 volts; 3 phase; 60 cycles R.P.M. 300.

Two Allis Chalmers Hydraulic turbines, H.P. 8500; Head 440 ft. R.P.M. 300.

Nine transformers, which step the voltage up to 130,000.

On Feb. 27 at 10.30 A.M. No. 3 Generator had a load of 10,800 K.W.; No. 4 10,400 K.W.; No.2-4700 K.W.; No.1 - Generator was shut down.

On July 6-1917 this plant carried a load of 35,650 K.W. using more than 1200 sec. ft. of water.

The two 16,500 H.P. turbines are operated from the water delivered by the 11 ft. pipe. This pipe should deliver approximately 1165 sec. ft. of water to penstock above plant.

The amount of water under a 482' head necessary to develop (allowing 70% efficiency) the 16,500 H.P. should be 430 sec. ft.

For both units it will require 860 sec. ft. of water.

The 8'4" pipe will deliver approximately 585 sec. ft. to Grace plant.

The 8500 H.P. turbines should require 243 sec. ft. of water to develop the 8500 H.P. (assuming the turbine has 70% efficiency) under a head of 440 ft. this would make a flow of 486 sec. ft. necessary per both units.

The above figures would indicate that the ~~two~~ pipe has required capacity.

COVE PLANT.

The dam across Bear River for the purpose of diverting water for the Cove Plant is located at a point in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Sec. 28, T. 10 S., R. 40 E.B.M.

This dam is a concrete dam of overflow type 38' high with a crest length of 151.8 ft. It has one steel release gate 20' wide and 13' high.

The water is diverted into a concrete flume, 12 ft. deep and 20 ft. wide. The first 350 ft. is solid concrete, the rest consisting, of about 1 $\frac{1}{4}$ miles, is concrete timber lined.

The flume has a grade of 1.90' per mile which should give a discharge of 1560 sec. ft. with 1 ft. free board,-at end of flume is a spillway.

Penstock leading from flume to plant is 12 $\frac{1}{2}$ ft. in diameter and 598 ft. long.

This plant is electrically operated from the Grace plant. It is well equipped with oil tank, pumps, etc.

The building is of concrete 25 ft. wide and 50 ft. long.

There is one alternating current Generator Type A T B, Form V; Amp. 690, Speed 171.3; K.W. 7500 Volts (full load) 7000.

The turbine is rated at 10500 H.P.; speed 171.4 R.P.M. Head 90 ft. made by I.P. Morris Co.

This plant has not yet reached maximum capacity. On Wed. Feb. 27, at 10 A.M. there was 4000 K.W. output. Assuming the turbine to have an efficiency of 70% , 1466 sec. ft. under a head of 90 ft. should develop the 10500 H.P. Assuming the generator had 90% efficiency the 10,500 H.P. turbine should be able to develop 7011.9 K.W. From these figures it is safe to assume that this plant has the required capacity.✓

ONEIDA PLANT.

The water for the Oneida plant is diverted from Bear River at a point in the SE $\frac{1}{4}$ Sec. 23, T. 13 S., R. 40 E.B.M.

The dam is of concrete 122 ft. high with a crest length of 389'; of the overflow type. The dam is not quite complete. There is an earth dyke 60 ft. high and approximately 1175' long.

There is a small reservoir above dam. Connecting reservoir with plant is a steel pipe 16' in diameter and 2344' long with a grade of 2.38' per 100' terminating in a steel surge tank 40 ft. in diameter and 129 ft. high.

The effective head stamped on the turbine is 140'. The amount of water under a 140' necessary to develop 15,000 H.P. (assuming the turbines have 70% efficiency) will be 1347 sec. ft. The two turbines will require 2694 sec. ft. of water. It is safe to say that the 16' pipe with a grade of 2.38 ft. per 100 ft. will carry far in excess of the above required amount.

The Oneida plant consists of a concrete building 60' wide by 180' long.

Two alternating current generators, 10,000 K.W. Type A.T.B., Form V, Volts 6600, Amphers 975, Speed 180 R.P.M. At the time I was there generator No. 2 was generating 5,000 K.W. and No. 1 4800 K.W. at 4:15 P.M. Wednesday Feb. 27th. Two I.P. Morris Turbines, 15,000 H.P., 160 R.P.M. 140 ft. head.

Two banks of three 4,000 K.V. transformers, step up to 130,000 V.

Arrangements have been made at this plant to put in two more units.

On July 6, 1917, this plant carried a load of 16,800 K.W. using over 2200 Sec. Ft. of water.

The map, accompanying this report gives the points of diversion.

A is the point of diversion of the Rain Bow Canal from Bear River.

B is pumping plant.

C - Controlling works where water is released from Mud Lake and reservoir.

D - Head of pipe lines.

E - Grace Plant.

F - Diversion point for Cove plant.

G - Cove plant.

H - Oneida Dam.

I - Oneida Plant.

Yours Respectfully,

Lowell W. Chapman

Eng. Report

Affidavit of Publication

STATE OF IDAHO,

County of Bear Lake } ss

E. E. Wright
being first duly sworn, deposes and says that he is *Editor* of the MONTPELIER EXAMINER; that said MONTPELIER EXAMINER is a weekly newspaper published at Montpelier, Bear Lake County, Idaho, of general circulation in said county and state.

That the attached notice was published in said MONTPELIER EXAMINER, and not in a supplement, for *5* successive weeks, commencing with the issue dated

Dec 28 1917

and ending with the issue dated

Jan 25 1918

Subscribed and sworn to before

Jan 1918

8962

Notice of Proof of Completion of Works and Application of Water to Beneficial Use.

Notice is hereby given that at ten o'clock A. M., on the twenty-sixth day of January, 1918, at the City of Montpelier, County of Bear Lake, State of Idaho, before E. L. McClave, a Notary Public, proof will be submitted of the completion of works for the diversion of the equivalent of three thousand (3000) cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred (2500) cubic feet per second, continuous flow; (2) from Bear Lake, the equivalent of three hundred (300) cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred (200) cubic feet per second, continuous flow, and of the application to beneficial use of said water in accordance with the terms and conditions of Permit No. 8962 (amended), heretofore issued by the State Engineer of the State of Idaho.

1. The name and postoffice address of the corporation holding said Permit is Utah Power & Light Company, a corporation of Maine, with postoffice address in the State of Idaho at Grace, Bannock County, Idaho.

2. Said works of diversion will be fully completed on the date set for for such completion, and the amount of water which said works are capable of conducting to the place of use, in accordance with the plans accompanying the application for such Permit, is the equivalent of three thousand (3000) cubic feet per second, continuous flow.

3. The use to which said water has been applied is for power purposes.

4. The places where said water is used are (a) at Bear and North or Mud Lakes in Bear Lake County, Idaho; and (b) at a point on Bear River, in Bannock County, Idaho, N. 41 degrees 0 min. W. one thousand eight hundred forty (1840) feet from the quarter section corner on the south boundary line of Section Twenty-one, Township Ten South, Range Forty East, B. B. & M.; and also at another point on Bear River, in said Bannock County, Idaho, which is S. 74 degrees 01 min. E. three thousand one hundred seventy three (3173) feet from the southwest corner of Section Twenty-three, Township Thirteen South, Range Forty East, B. B. & M.

5. The date of priority which said user is prepared to establish is 11:20 A. M., September 11, 1912.

J. H. SMITH,
12-28-4t. State Engineer.

Notice of Proof of Completion of
Works and Application of Water
to Beneficial Use.

Notice is hereby given that at two o'clock P. M., on the twenty-eighth day of January, 1918, at Phoenix, County of Bannock, State of Idaho, before H. K. Thatcher, a Notary Public, proof will be submitted of the completion of works for the diversion of the equivalent of three thousand (3000) cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred (2500) cubic feet per second, continuous flow; (a) from Bear Lake, the equivalent of three hundred (300) cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred (200) cubic feet per second, continuous flow, and of the application to beneficial use of said water in accordance with the terms and conditions of Permit No. 8962 (amended) heretofore issued by the State Engineer of the State of Idaho.

1. The name and postoffice address of the corporation holding said Permit is Utah Power & Light Company, a corporation of Maine, with postoffice address in the State of Idaho, at Grace, Bannock County Idaho.

2. Said works of diversion will be fully completed on the date set for such completion; and the amount of water which said works are capable of conducting to the place of use, in accordance with the plans accompanying the Application for such Permit, is the equivalent of three thousand (3000) cubic feet per second, continuous flow.

3. The use to which said water has been applied is for power purposes.

4. The places where said water is used are (a) at Bear and North or Mud Lakes in Bear Lake County, Idaho; and (b) at a point on Bear River, in Bannock County, Idaho, N. 41 degrees 0 minutes W., one thousand, eight hundred forty (1840) feet from the quarter section corner in the south boundary line of Section Twenty-one, Township Ten South, Range Forty East, B. B. & M.; and also at another point on Bear River, in said Bannock County, Idaho, which is S. 74 degrees 01 minutes E., three thousand one hundred seventy-three (3173) feet from the southwest corner of Section Twenty-three, Township Thirteen South, Range Forty East, B. B. & M.

5. The date of priority which said user is prepared to establish is 11:20 A. M., September 11, 1912.

J. H. SMITH,
State Engineer.

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO, } SS.

County of Bannock,

I, F. B. Porter publisher of The Downey

Idahoan, published weekly at Downey, Bannock County, State of Idaho, do solemnly swear that a copy of the annexed advertisement was published weekly in the regular and entire issue of said newspaper, and not in any supplement thereof, for five consecutive weeks, commencing with the issue dated

Dec. 28, 1917, and ending with the issue dated Jan. 25, 1918.

Subscribed and sworn to before me this 24th day of

Jan., 1918.

F. B. Porter

Notary Public.

My commission expires _____, 1918.

8892

February 4th, 1918.

Re Permits 8962-12236-R-18.

Mr. H. K. Thatcher,
Thatcher, Idaho.

Dear Sir:—

Yours of the 28th ult. to hand, with depositions for
proof under above permits. These have been checked and are in
regular order.

Very truly yours,

J. H. SMITH,

State Engineer.

By _____

8962

Ans. to Ques. 4: Bear River and Bear Lake and North or Mud Lake. Division from Bear River to reservoir (comprising Bear Lake and North or Mud Lake) is by Stewart Dam, across Bear River, which is situate in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sec. 34, T. 13 S., R. 44 E., B. B. & M. in Bear Lake County, Idaho, and by Rainbow Canal, the intake to which is on the forebay created by such Stewart Dam, such Rainbow Canal extends southerly into said reservoir a distance of approximately four miles through Sec. 34, T. 13 S., R. 44 E., B. B. & M. and Secs. 3, 10 and 15, T. 14 S., R. 44 E., B. B. & M. in said Bear Lake County. First use of Bear River waters thus diverted, plus the natural run-off to said reservoir from the basin thereof, is made by impounding the greater part of said waters to the total extent of over 400,000 acre feet per annum, and said reservoir has thus, and to such extent, heretofore been occupied and used. Stewart Dam above mentioned, is a concrete diversion dam, of gravity overflow type, 21 feet high, with crest length of 209.5 feet and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern type fish-way. On the forebay of such Stewart Dam the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven gates, each 8 feet wide by 16 feet high. The Rainbow Canal above mentioned, is 100 feet wide at bottom; has water carrying depth of 11.5 feet at maximum, and width of 120 feet at such level. Grade: 1.4 feet per mile. Flexibility of operation and use of said reservoir as a whole is accomplished by further works known as "Lifton," situated at a point on the natural Causeway between said two lakes, S. 85° 53' E. approximately 14000 feet, from the Northwest Corner of Sec. 18, T. 15 S., R. 44 E., B. B. & M. in Bear Lake County aforesaid. At "Lifton" is situate (a) intake canalway extending through said Causeway from North Lake into Bear Lake, being a Canalway 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of 4000 second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 3500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15/8 wide by 8 feet high, and discharge controls by gate 14 feet 3 in. wide by 8 feet 10 $\frac{1}{2}$ inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 feet 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G. E. 750 H. P. Motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

Impounding of waters diverted by Helder from Bear River, plus natural run-off to such reservoir from the basin thereof, is accomplished by means of an earthen dam-dike 12,000 feet long and with average height of 20 ft. The opening through this dike for the release of impounded waters is very approximately at the center thereof, viz., a point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S., R. 44 E., B. B. & M., in Bear Lake County aforesaid, and such release is through a concrete structure 115 feet long and 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters thus permitted to flow from said reservoir are conducted by means of the so-called "Outlet Canal" northerly to Bear River. Such "Outlet Canal" extends from the release point last above mentioned through Sec. 6, T. 14 S., R. 44 E., B. B. & M. and Secs. 31, 30, 19, 18, 7, and 6, T. 13 S., R. 44 E., B. B. & M. for a distance of approximately 8 miles to Bear River the confluence being at a point N. 44° 54' E. 3740 feet from the Southwest Corner of Sec. 6, T. 13 S., R. 44 E., B. B. & M. in said Bear Lake County, which "Outlet Canal" is 91 feet wide at the bottom; has carrying depth of 13 feet at maximum, and width of 112 feet at such level. Grade: seven tenths of one foot per mile.

The so-called "Grace Diversion Dam," on Bear River, is situated in the NE $\frac{1}{4}$ of Sec. 1, T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho,

the center being at a point S. 55° 26' W. 2450 feet from the NE Corner of said Sec. 1. This dam is a rock-filled, crib structure, approximately 38 feet high with permanent fixtures for flash-boarding 8 feet above crest with crest length of 300 feet and bottom length of 145 feet. This dam is provided with proper and sufficient spillways, fish-way and many appurtenances. It creates a forebay within the lava gorge which is the river channel over a part of the following quarter sections; NE $\frac{1}{4}$ Sec. 1, T. 10 S., R. 40 E., B. B. & M., SE $\frac{1}{4}$ of Sec. 36, T. 9 S., R. 40 E., B. B. & M. and SW $\frac{1}{4}$ NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. The intersection of backwater of this reservoir with channel of Bear River is at a point S. 2° 45' E. 2030 feet from Northwest Corner of the NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. There is thus impounded by this dam approximately 1800 acre feet. At this point, from the forebay thus created, natural river flow is diverted and at times of low water, natural river flow plus released stored waters are diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding 1200 second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace Generating Station of the Helder, such station being situated in the southwest $\frac{1}{4}$ quarter of Sec. 21, T. 10 S., R. 40 E., B. B. & M. These penstocks extend across the following quarter sections; NE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of section 10; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$ SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, and waters under pressure from their entry into pressure boxes connected with such pressure pipes to the point of discharge at the water wheels in the Grace Electric generating station aforesaid.

The so-called "Oneida Dam" on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S., R. 40 E., B. B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Helder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the

and pumping station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 3500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15/5 wide by 8 feet high, and discharge controls by gate 14. feet 3 in. wide by 8 feet 10 1/2 inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 feet 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G. E. 750 H. P. Motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

Impounding of waters diverted by Holder from Bear River, plus natural run-off to such reservoir from the basin thereof, is accomplished by means of an earthen dam-dike 12,000 feet long and with average height of 20 ft. The opening through this dike for the release of impounded waters is very approximately at the center thereof, viz., a point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S., R. 44 E., B. B. & M., in Bear Lake County aforesaid, and such release is through a concrete structure 115 feet long and 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters thus permitted to flow from said reservoir are conducted by means of the so-called "Outlet Canal" northerly to Bear River. Such "Outlet Canal" extends from the release point last above mentioned through Sec. 6, T. 14 S., R. 44 E., B. B. & M. and Secs. 31, 30, 19, 18, 7, and 6, T. 13 S., R. 44 E., B. B. & M. for a distance of approximately 8 miles to Bear River the confluence being at a point N. 44° 54' E. 3740 feet from the Southwest Corner of Sec. 6, T. 13 S., R. 44 E. B. B. & M. in said Bear Lake County, which "Outlet Canal" is 91 feet wide at the bottom; has carrying depth of 13 feet at maximum, and width of 112 feet at such level. Grade: seven tenths of one foot per mile.

The so-called "Grace Diversion Dam," on Bear River, is situated in the NE 1/4 of Sec. 1, T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho,

the center being at a point S. 55° 26' W. 2450 feet from the NW Corner of said Sec. 1. This dam is a rock-filled, crib structure, approximately 38 feet high with permanent fixtures for flash-boarding 8 feet above crest with crest length of 300 feet and bottom length of 145 feet. This dam is provided with proper and sufficient spillways, fish-way and many appurtenances. It creates a forebay within the lava gorge which is the river channel over a part of the following quarter sections; NE 1/4 Sec. 1, T. 10, S., R. 40 E., B. B. & M., SE 1/4 of Sec. 36, T. 9 S., R. 40 E., B. B. & M. and SW 1/4 NW 1/4 and NE 1/4 of Sec. 31, T. 9 S., R. 41 E., B. B. & M. The intersection of backwater of this reservoir with channel of Bear River is at a point S. 2° 45' E 2030 feet from Northwest Corner of the NE 1/4 of Sec. 31, T. 9 S., R. 41 E., B. B. & M. There is thus impounded by this dam approximately 1800 acre feet. At this point, from the forebay thus created, natural river flow is diverted and at times of low water, natural river flow plus released stored waters are diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding 1200 second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace Generating Station of the Holder, such station being situated in the southwest 1/4 quarter of Sec. 21, T. 10 S., R. 40 E., B. B. & M. These penstocks extend across the following quarter sections; NE 1/4 NW 1/4 and SW 1/4 of section 10; SE 1/4 of Sec. 2; all quarters of Sec. 11; NW 1/4 of Sec. 12; SE 1/4 of Sec. 10; NW 1/4 of Sec. 14; all quarters of Sec. 15; SE 1/4 of Sec. 16; NW 1/4 of Sec. 22, and NE 1/4 SE 1/4 and SW 1/4 of Sec. 21, all in T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, and waters under pressure from their entry into pressure boxes connected with such pressure pipes to the point of discharge at the water wheels in the Grace Electric generating station aforesaid.

The so-called "Oneida Dam" on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S., R. 40 E., B. B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S., R. 41 E., B. B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE 1/4 and NE 1/4 of Sec. 23; NW 1/4 of Sec. 24; SW 1/4 and SE 1/4 and NE 1/4 and Sec. 13, T. 13 S., R. 40 E., B. B. & M., and NW 1/4 of Sec. 18, and SW 1/4 and SE 1/4 and NE 1/4 of Sec. 7, and SE 1/4 and SW 1/4 and NW 1/4 of Sec. 6, T. 13, S., R. 41 E., B. B. & M., and SW 1/4 of Sec. 31, T. 12 S., R. 41 E., B. B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,286 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the

northwest corner of Sec. 26, T. 13 S., R. 40 E., B. B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

Permit No. 8962

Proof of Application of Water to Beneficial Use

DEPOSITION OF WITNESS

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

Ans. Harry L. Stoner. 30 years. Salt Lake City, Utah. Hydraulic Engineer. 133 South West Temple Street, Salt Lake City, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the holder of Permit No. 8962? How long have you known such corporation and where is its place of business?

Ans. Yes. Several years last past. It is a corporation of Maine with principal place of business in Idaho at Grace, Blaine County.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its provisions and conditions?

Ans. Yes. Both the original Permit No. 8962 and the Amendment thereof, and am familiar with its terms and conditions.

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

Ans. _____

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

Ans. More than the quantity specified in said Permit. More than the quantity specified in said Permit.

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

Ans. So far as this proof is concerned, for power purposes. At Bear and Horley Lake Reservoir aforesaid and thereafter in and through the penstocks in this Deposition hereinbefore described, and under head on water-wheels, propelling electric generators, at respectively Grace and Oneida Generating Stations above-mentioned, and two locations of which are hereinbefore described. At each Grace Station, 50,000 H.P. and at each Oneida Station, 27,500 H.P. of electrical energy are generated. Operating head at Grace, 524 feet; at Oneida, 145 feet. For further answer to this question, I hereby refer to my answers to each of the other questions of this Deposition.

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

Ans. To the full extent of the Permit and as described in my answers to previous questions.

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

Ans. _____

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

Ans. None whatever.

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

Ans. Prior to my signing this Deposition. By personal observation and examination. To the amounts of limits hereinabove stated. To the extent that I fully assured myself of the correctness of the foregoing answers.

(Sign)

Harry L. Stoner

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me in Phoenix, County of Bannock, State of Idaho, on this 28th day of January A. D. 19 18.

H. L. Thatcher
Notary Public. in

My commission expires Jan. 27, 1919 and for the County of Bannock, State of Idaho; residing at Thatcher, Idaho.

8962

Ans. to Ques. 4: Bear River and Bear Lake and North or Mud Lake. Division from Bear River to reservoir (comprising Bear Lake and North or Mud Lake) is by Stewart Dam, across Bear River, which is situate in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sec. 34, T. 13 S., R. 44 E. B. B. & M. in Bear Lake County, Idaho, and by Rainbow Canal, the intake to which is on the forebay created by such Stewart Dam, such Rainbow Canal extends southerly into said reservoir a distance of approximately four miles through Sec. 34, T. 13 S. R. 44 E. B. B. & M. and Secs. 3, 10 and 15, T. 14 S. R. 44 E., B.B. & M. in said Bear Lake County. First use of Bear River waters thus diverted, plus the natural run-off to said reservoir from the basin thereof, is made by impounding the greater part of said waters to the total extent of over 400,000 acre feet per annum, and said reservoir has thus, and to such extent, heretofore been occupied and used. Stewart Dam above mentioned, is a concrete diversion dam, of gravity overflow type, 21 feet high, with crest length of 209.5 feet and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern type fish-way. On the forebay of such Stewart Dam the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven gates, each 8 feet wide by 16 feet high. The Rainbow Canal above mentioned, is 100 feet wide at bottom; has water carrying depth of 11.5 feet at maximum, and width of 120 feet at such level. Grade: 1.4 feet per mile. Flexibility of operation and use of said reservoir as a whole is accomplished by further works known as "Lifton," situated at a point on the natural Causeway between said two lakes, S. 85° 53' E. approximately 14000 feet, from the Northwest Corner of Sec. 18, T. 15 S., R. 44 E. B. B. & M. in Bear Lake County aforesaid. At "Lifton" is situate (a) intake canalway extending through said Causeway from North Lake into Bear Lake, being a Canalway 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of 4000 second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 3500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15, 5 wide by 8 feet high, and discharge controls by gate 14, feet 3 in. wide by 8 feet 10 $\frac{1}{2}$ inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 feet 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G. E. 750 H. P. Motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

Impounding of waters diverted by Holder from Bear River, plus natural run-off to such reservoir from the basin thereof, is accomplished by means of an earthen dam-dike 12,000 feet long and with average height of 20 ft. The opening through this dike for the release of Impounded waters is very approximately at the center thereof, Viz., a point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S., R. 44 E., B. B. & M., in Bear Lake County aforesaid, and such release is through a concrete structure 115 feet long and 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters thus permitted to flow from said reservoir are conducted by means of the so-called "Outlet Canal" northerly to Bear River. Such "Outlet Canal" extends from the release point last above mentioned through Sec. 6, T. 14 S., R. 44 E., B. B. & M. and Secs. 31, 30, 19, 18, 7, and 6, T. 13 S., R. 44 E., B. B. & M. for a distance of approximately 8 miles to Bear River the confluence being at a point N. 44° 54' E. 3740 feet from the Southwest Corner of Sec. 6, T. 13 S., R. 44 E. B. B. & M. in said Bear Lake County, which "Outlet Canal" is 91 feet wide at the bottom; has carrying depth of 13 feet at maximum, and width of 112 feet at such level. Grade: seven tenths of one foot per mile.

The so-called "Grace Diversion Dam," on Bear River, is situated in the NE $\frac{1}{4}$ of Sec. 1, T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho,

the center being at a point S. 55° 26' W. 2450 feet from the NE Corner of said Sec. 1. This dam is a rock-filled, crib structure, approximately 38 feet high with permanent fixtures for flash-boarding 8 feet above crest with crest length of 300 feet and bottom length of 145 feet. This dam is provided with proper and sufficient spillways, fish-way and many appurtenances. It creates a forebay within the lava gorge which is the river channel over a part of the following quarter sections; NE $\frac{1}{4}$ Sec. 1, T. 10, S., R. 40 E., B. B. & M., SE $\frac{1}{4}$ of Sec. 36, T. 9 S., R. 40 E., B. B. & M. and SW $\frac{1}{4}$ NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. The intersection of backwater of this reservoir with channel of Bear River is at a point S. 2° 45' E. 2030 feet from Northwest Corner of the NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. There is thus impounded by this dam approximately 1800 acre feet. At this point, from the forebay thus created, natural river flow is diverted and at times of low water, natural river flow plus released stored waters are diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding 1200 second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace Generating Station of the Holder, such station being situated in the southwest~~erly~~ quarter of Sec. 21, T. 10 S., R. 40 E., B. B. & M. These penstocks extend across the following quarter sections; NE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of section 10; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 13; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$ SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, and waters under pressure from their entry into pressure boxes connected with such pressure pipes to the point of discharge at the water wheels in the Grace Electric generating station aforesaid.

The so-called "Oneida Dam" on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E. B. B. & M., in Bannock County, Idaho, -the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high with crest length of 589 feet and bottom length of 110 feet. To the east

ing capacity in excess of 1000 second feet, and (10) a generating station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 3500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15/6 wide by 8 feet high, and discharge controls by gate 14 feet 3 in. wide by 8 feet 10 3/4 inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 feet 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G. E. 750 H. P. Motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

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From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the

northwest corner of Sec. 26, T. 13 S. R. 40 E. B. B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

Permit No. 8962.

Proof of Application of Water to Beneficial Use

DEPOSITION OF WITNESS

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

Ans. H. Lewis Rasmason. 39 years. Salt Lake City, Utah. Civil, Hydraulic and Electrical Engineer. 508 Boston Building, Salt Lake City, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the holder of Permit No. 8962? How long have you known ~~current water distribution~~ such corporation and where is its place of business?

Ans. Yes. Several years last past. It is a corporation of Maine with principal place of business in Idaho at Grace, Blaine County.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its provisions and conditions?

Ans. Yes. Both the original Permit No. 8962 and the Amendment thereof, and am familiar with its terms and conditions.

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

Ans. _____

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

Ans. More than the quantity specified in said Permit. More than the quantity specified in said Permit.

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

Ans. So far as this proof is concerned, for power purposes. At Bear and North Lake Reservoir aforesaid and thereafter in and through the penstocks in this Deposition hereinbefore described, and under head on water-wheels, propelling electric generators, at respectively Grace and Onida Generating Stations above-mentioned, and two locations of which are hereinbefore described. At such Grace Station, 50,000 H.P. and at such Onida Station, 27,500 H.P. of electrical energy are generated. Operating head at Grace, 524 feet; at Onida, 145 feet. For further answer to this question, I hereby refer to my Answers to each of the other Questions of this Deposition.

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

Ans. To the full extent of the Permit and as described in my Answers to previous questions.

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

Ans. _____

8962

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

Ans. None whatever.

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

Ans. Prior to my signing this Deposition. By personal observation and examination.
To the amounts of limits hereinabove stated. To the extent that I fully assured myself
of the correctness of the foregoing answers.

(Sign) Harvie G. Mason

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me in Phoenix, County of Bannock, State of Idaho, on this 28th day of January A. D. 19 18.

J. H. Thatcher

Notary Public. in

My commission expires

Jan. 5-1919

and for the County of Bannock, State of Idaho; residing at Thatcher, Idaho.

8962

CLAS 110

RECEIVED

Ans. to Ques. 4: Bear River and Bear Lake and North or Mud Lake. Division from Bear River to reservoir (comprising Bear Lake and North or Mud Lake) is by Stewart Dam, across Bear River, which is situate in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sec. 34, T. 13 S., R. 44 E. B. B. & M. in Bear Lake County, Idaho, and by Rainbow Canal, the intake to which is on the forebay created by such Stewart Dam, such Rainbow Canal extends southerly into said reservoir a distance of approximately four miles through Sec. 34, T. 13 S. R. 44 E. B. B. & M. and Secs. 3, 10 and 15, T. 14 S. R. 44 E., B. B. & M. in said Bear Lake County. First use of Bear River waters thus diverted, plus the natural run-off to said reservoir from the basin thereof, is made by impounding the greater part of said waters to the total extent of over 400,000 acre feet per annum, and said reservoir has thus, and to such extent, heretofore been occupied and used. Stewart Dam above mentioned, is a concrete diversion dam, of gravity overflow type, 21 feet high, with crest length of 209.5 feet and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern type fish-way. On the forebay of such Stewart Dam the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven gates, each 8 feet wide by 16 feet high. The Rainbow Canal above mentioned, is 100 feet wide at bottom; has water carrying depth of 11.5 feet at maximum, and width of 120 feet at such level. Grade: 1.4 feet per mile. Flexibility of operation and use of said reservoir as a whole is accomplished by further works known as "Lifton," situated at a point on the natural Causeway between said two lakes, S. 85° 53' E. approximately 14000 feet, from the Northwest Corner of Sec. 18, T. 15 S., R. 44 E. B. B. & M. in Bear Lake County aforesaid. At "Lifton" is situate (a) intake canalway extending through said Causeway from North Lake into Bear Lake, being a Canalway 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of 4000 second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 3500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15.5 wide by 8 feet high, and discharge controls by gate 14. feet 3 in. wide by 8 feet 10 $\frac{1}{2}$ inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 feet 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G. E. 750 H. P. Motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

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The so-called "Grace Diversion Dam," on Bear River, is situated in the NE $\frac{1}{4}$ of Sec. 1, T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho,

the center being at a point S. 55° 26' W. 2450 feet from the NE Corner of said Sec. 1. This dam is a rock-filled, crib structure, approximately 38 feet high with permanent fixtures for flash-boarding 8 feet above crest with crest length of 300 feet and bottom length of 145 feet. This dam is provided with proper and sufficient spillways, fish-way and many appurtenances. It creates a forebay within the lava gorge which is the river channel over a part of the following quarter sections; NE $\frac{1}{4}$ Sec. 1, T. 10, S., R. 40 E., B. B. & M., SE $\frac{1}{4}$ of Sec. 36, T. 9 S., R. 40 E., B. B. & M. and SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. The intersection of backwater of this reservoir with channel of Bear River is at a point S. 2° 45' E 2030 feet from Northwest Corner of the NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. There is thus impounded by this dam approximately 1800 acre feet. At this point, from the forebay thus created, natural river flow is diverted and at times of low water, natural river flow plus released stored waters are diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding 1200 second feet. These penstocks extendsouthwesterly from said last mentioned forebay to the Grace Generating Station of the Holder, such station being situated in the southwesterly quarter of Sec. 21, T. 10 S., R. 40 E., B. B. & M. These penstocks extend across the following quarter sections; NE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of section 10; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$ SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, and waters under pressure from their entry into pressure boxes connected with such pressure pipes to the point of discharge at the water wheels in the Grace Electric generating station aforesaid.

The so-called "Oneida Dam" on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E. B. B. & M., in Bannock County, Idaho, -the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E. B. B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S. R. 40 E. B. B. & M., and NW $\frac{1}{4}$ of Sec. 18, and SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 7, and SE $\frac{1}{4}$ and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13, S. R. 41 E. B. B. & M., and SW $\frac{1}{4}$ of Sec. 31, T. 12 S. R. 41 E. B. B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,286 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the

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northwest corner of Sec. 26, T. 13 S. R. 40 E. B. B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

Permit No. 8962.

Proof of Application of Water to Beneficial Use

DEPOSITION OF WITNESS

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

Ans. ^{35 years} Alma H. Chambers, Logan, Utah. Civil and Hydraulic Engineer. Logan, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the holder of Permit No. 8962? How long have you known ~~the corporation and where is its place of business?~~ such corporation and where is its place of business?

Ans. Yes. Several years last past. It is a corporation of Maine with principal place of business in Idaho at Grace, Bannock County.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its provisions and conditions?

Ans. Yes. Both the original Permit No. 8962 and the Amendment thereof, and am familiar with its terms and conditions.

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

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

Ans. More than the quantity specified in said Permit. More than the quantity specified in said Permit.

Ques. 6. State for what purpose water is used and at what place. (If for irrigation, give each subdivision in which water has been used and number of acres irrigated in each subdivision.) State whether cultivated or natural meadow land and the nature of all improvements which have been made as a direct result of said use. So far as this proof is concerned, for power purposes. At Bear and North Lake Reservoir aforesaid and thereafter in and through the penstocks in this Deposition h

Ans. hereinbefore described, and under head on water-wheels, propelling electric generators, at respectively Grace and Oneida Generating Stations above-mentioned, and in locations of which are hereinbefore described. At such Grace Station, 50,000 H.P. and at such Oneida Station, 27,500 H.P. of electrical energy are generated. Operating head at Grace, 524 feet; at Oneida, 145 feet. For further Answer to this Question, I hereby refer to my Answers to each of the other Questions of this Deposition.

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

Ans. To the full extent of the Permit and as described in my Answers to previous questions.

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

Ans. _____

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

Ans. None whatever.

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

Ans. Prior to my signing this Deposition. By personal observation and examination.
To the amounts of limits hereinabove stated. To the extent that I fully assured myself
of the correctness of the foregoing answers.

(Sign) Alma H. C. Lawrence

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me in Phoenix, County of Bannock, State of Idaho, on this 28th day of January A. D. 19 18.

H. C. Thatcher

Notary Public. in

My commission expires

Jan. 5-1919

and for the County of Bannock, State of Idaho;
residing at Thatcher, Idaho.

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Ans. to Quest. 3. No. 8962, amended. Application first received in office of State Engineer of Idaho at 11:20 A.M., on September 11, 1912; approved as a Permit on January 28, 1913. The equivalent of three thousand cubic feet per second, continuous flow (1) from Bear River, the equivalent of twenty-five hundred cubic feet per second continuous flow; (2) from Bear Lake the equivalent of three hundred cubic feet per second continuous flow; (3) from North or Mud Lake the equivalent of two hundred cubic feet per second continuous flow. Under this Proof, the points of diversion are as follows: (a) from Bear River, in Bear Lake County, Idaho, at a point on said river in the southeast quarter of the northeast quarter of Sec. 34, T. 13 S. R. 44 E.B.B. & M., which is S. $12^{\circ} 36'$ W., approximately fourteen hundred feet from the northeast corner of Sec. 34, T. 13 S. R. 44 E.B.B. & M.; (b) from Bear Lake, at a point in Bear Lake County, Idaho, which is S. $85^{\circ} 53'$ E., fourteen thousand six feet from the northwest corner of Sec. 18, T. 15 S. R. 44 E.B.B. & M.; (c) from North or Mud Lake at a point in Bear Lake County, Idaho, which is N. $64^{\circ} 15'$ E., eight thousand one hundred twenty feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., which last mentioned point is the releasing point from the reservoir comprising both Bear and North or Mud Lakes; (d) from Bear River, in Bannock County, Idaho, at a point in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., which is S. $55^{\circ} 26'$ W. two thousand four hundred fifty feet from the northeast corner of said Sec. 1; (e) from Bear River, in Bannock County, Idaho, in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., at a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E.B.B. & M. bears S. $74^{\circ} 30'$ W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

capacity, diverting waters of Bear River, in Bear Lake County, Idaho, to its reservoir, comprising Bear and North lakes, but on account their large carrying capacities, it is deemed necessary by Holder under this proof to offer description of one of these canals and accompanying diverting works only, as the diverting and carrying capacity of such works far exceeds the maximum limit as fixed by this permit, No. 8963. The Holder, therefore, elects to offer under this proof its so-called "Stewart and Rainbow Intake works", comprising the so-called "Stewart Dam" across Bear River, and its Intake canal known as "the Rainbow Canal", together with all appurtenances. This Stewart Dam is situated in the southeast quarter of the northeast quarter of Sec. 34, T. 15 S. R. 44 E.B.B.&M., in Bear Lake County aforesaid. It is a concrete diversion dam, of gravity overflow type, 21 feet high, with crest length of 209.5 feet and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the forebay of such Stewart Dam, the intake to Rainbow Canal is situated,-- being a concrete structure, 110 feet long and 20 feet high, provided with seven openings, each 8 feet wide by 16 feet high. From this intake the Rainbow Canal extends southerly, into the reservoir (North and Bear Lake Reservoir) a distance of approximately four miles, through Sec. 34, T. 15 S. R. 44 E.B.B.&M., and Secs. 3, 10 and 15, T. 14 S. R. 44 E.B.B.&M., in Bear Lake County aforesaid. This Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. The Holder has constructed, occupies and uses an intake canal-way, connecting North and Bear lakes, and situated through the Causeway between such two lakes. This inlet canal-way, and the outlet conduits next described and the pumping units next mentioned all comprise works known as "Lifton". The intake canal-way through the Causeway is 800 feet wide and 15 feet deep and has a maximum carrying capacity in excess of four thousand second feet. The outlet conduits above mentioned are two concrete, gravity release-ways, one 10 feet wide by 15 feet high and the other 10 feet wide by 15 feet high, and with capacity exceeding thirty-five hundred second feet. At this same point Holder has constructed a 47 1/2 foot concrete-covered building, housing five 300 second foot pumping units, each independent of the other in its operation, and each having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 5 inches wide by 8 feet 10 1/2 inches high. Each such unit comprises an I. P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a C. E. 750 H.P. motor. There are many suitable controlling and regulating valves and appurtenances. There are five such pump and motor units. The total capacity of these five pumping units is fifteen hundred second feet. All are completed, each has been operated to capacity for test purposes, and all are operative at the will of the Holder. These lifton works are situated at a point S. 85° E. approximately fourteen thousand feet from the northwest corner of Sec. 18, T. 15 S. R. 44 E.B.B.&M., in Bear Lake County, Idaho. The impounding of the natural run-off of the basin of said reservoir, plus waters diverted thereto from Bear River by the works of Holder, is accomplished by a dam-dyke, the center of which is at a point E. 64° 15' E. 8130 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B.&M., in Bear Lake County aforesaid. This is an earthen dyke, twelve thousand feet long, with an average height of 20 feet. The opening through this dyke, for releasing of waters, is by a concrete structure, 115 feet long by 18 feet high, provided with 9 openings, each very approximately 8 feet wide by 15 feet high. Waters permitted to flow through such last mentioned release-works are conducted by the so-called "Outlet Canal" northerly to Bear River. This Outlet Canal is 91 feet wide on bottom; water carrying depth, 15 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile. Water carrying capacity in excess of fifteen hundred second feet. Such Outlet Canal extends from the point of release last above mentioned northerly through Sec. 6, T. 14

S. R. 44 E.B.B.&M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B.&M., for a distance of approximately eight miles to Bear River, the confluence being at a point E. 44° 54' E., 3740 feet from the southwest corner of Sec. 6, T. 15 S. R. 44 E.B.B.&M., in Bear Lake County aforesaid.

The "Grace Diversion Dam", on Bear River, is situated in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B.&M., in Bannock County, Idaho,-- the center being at a point S. 65° 26' W., 2450 feet from the northeast corner of said Sec. 1. This is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-boarding 8 feet above crest. The crest length is very approximately 500 feet and the bottom length is 145 feet. There is a proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE 1/4 of Sec. 1, T. 10 S. R. 40 E.B.B.&M.; SE 1/4 of Sec. 36, T. 9 S. R. 40 E.B.B.&M.; SW 1/4, NW 1/4 and NE 1/4 of Sec. 31, T. 9 S. R. 41 E.B.B.&M., all in Bannock County aforesaid.

There is thus impounded by this dam approximately eighteen hundred twenty-six acre feet. From the forebay created by suchlast mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly across the following quarter sections: NE 1/4 and SW 1/4 of Sec. 1; SE 1/4 of Sec. 2; all quarters of Sec. 11; NW 1/4 of Sec. 18; SE 1/4 of Sec. 10; NW 1/4 of Sec. 14; all quarters of Sec. 16; SE 1/4 of Sec. 16; NW 1/4 of Sec. 32, and NE 1/4, SE 1/4 and SW 1/4 of Sec. 31, all in T. 10 S. R. 40 E.B.B.&M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Onelda Dam", on Bear River, is situated in the southeast quarter of Sec. 25, T. 15 S. R. 40 E.B.B.&M., in Bannock County, Idaho,-- the center of such dam being N. 53° 15' E., three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 25. This dam is concrete, gravity over-flow type, 132 feet high, with crest length of 389 feet and bottom length of 110 feet, 30 the east

this inlet canal-way, and the outlet conduits here mentioned and the pumping units next mentioned all comprise works known as "Lifton". The intake canal-way through the Causeway is 800 feet wide and 15 feet deep and has a maximum carrying capacity in excess of four thousand second feet. The outlet conduits above mentioned are two concrete, gravity release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet. At this same point Holder has constructed a five, concrete-covered building, housing five 300 second foot pumping units, each independent of the other in its operation, and each having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10 1/2 inches high. Each such unit comprises an I. P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a C. E. 750 H.P. motor.

There are many suitable controlling and regulating devices and appurtenances. There are five such pump and motor units. The total capacity of these five pumping units is fifteen hundred second feet. All are completed, each has been operated to capacity for test purposes, and all are operative at the will of the Holder. These Lifton works are situate at a point S. 85° 53' E. approximately fourteen thousand feet from the northwest corner of Sec. 18, T. 15 S. R. 44 E.B.B.& M., in Bear Lake County, Idaho. The impounding of the natural run-off of the basin of said reservoir, plus waters diverted thereto from Bear River by the works of Holder, is accomplished by a dam-dyke, the center of which is at a point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B.& M., in Bear Lake County aforesaid. This is an earthen dyke, twelve thousand feet long, with an average height of 20 feet. The opening through this dyke, for releasing of waters, is by a concrete structure, 115 feet long by 18 feet high, provided with 9 openings, each very approximately 8 feet wide by 15 feet high. Waters permitted to flow through such last mentioned release-works are conducted by the so-called "Outlet Canal" north-erly to Bear River. This Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile. Water carrying capacity in excess of fifteen hundred second feet. Such Outlet Canal extends from the point of release last above mentioned northerly through Sec. 6, T. 14

S. R. 44 E.B.B.& M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B.& M., for a distance of approximately eight miles to Bear River, the confluence being at a point N. 44° 54' E., 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E.B.B.& M., in Bear Lake County aforesaid.

The "Grace Diversion Dam", on Bear River, is situate in the north-east quarter of Sec. 1, T. 10 S. R. 40 E.B.B.& M., in Bannock County, Idaho, the center being at a point S. 65° 26' W., 3450 feet from the north-east corner of said Sec. 1. This is a rock-filled crib structure, approximately 38 feet high, with permanent fixtures for flash-boarding 8 feet above crest. The crest length is very approximately 300 feet and the bottom length is 145 feet. There is a proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NW 1/4 of Sec. 1, T. 10 S. R. 40 E.B.B.& M.; SE 1/4 of Sec. 36, T. 9 S. R. 40 E.B.B.& M.; SW 1/4, NW 1/4 and NE 1/4 of Sec. 31, T. 9 S. R. 41 E.B.B.& M., all in Bannock County aforesaid.

There is thus impounded by this dam approximately eighteen hundred twenty-six acre feet. From the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly across the following quarter sections: NE 1/4, NW 1/4 and SW 1/4 of Sec. 1; SE 1/4 of Sec. 2; all quarters of Sec. 11; NW 1/4 of Sec. 12; SE 1/4 of Sec. 10; NW 1/4 of Sec. 14; all quarters of Sec. 15; SE 1/4 of Sec. 16; NW 1/4 of Sec. 22, and NW 1/4, SE 1/4 and SW 1/4 of Sec. 21, all in T. 10 S. R. 40 E.B.B.& M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Oneida Dam", on Bear River, is situate in the south-east quarter of Sec. 23, T. 13 S. R. 40 E.B.B.& M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B.& M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE 1/4 and NE 1/4 of Sec. 23; NW 1/4 of Sec. 24; SW 1/4 and SE 1/4 and NE 1/4 of Sec. 13, T. 13 S. R. 40 E.B.B.& M.; and NW 1/4 of Sec. 18, and SW 1/4 and SE 1/4 of Sec. 7, and SE 1/4 and SW 1/4 and NW 1/4 of Sec. 6, T. 13 S. R. 41 E.B.B.& M., and SW 1/4 of Sec. 31, T. 12 S. R. 41 E.B.B.& M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,280 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.58 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 15 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred

second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E.B.B.& M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet. The total cost of these works exceeds the sum of one million dollars.

PERMIT NO 8962.

Proof of Completion of Works

DEPOSITION OF HOLDER

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

Ans. George R. Carey. 31 years. Salt Lake City, Utah. Hydraulic Engineer. P.O. Box 1032, Salt Lake City, Utah.

Ques. 2. If acting in behalf of a corporation, state its name, principal place of business, your position with reference to same, and your authority for appearing in its behalf.

Ans. Utah Power & Light Company. In Idaho, at Grace, Bannock County. A hydraulic engineer in its employ. Duly adopted resolution of its Board of Directors.

Ques. 3. State number and date of permit, amount of water you are authorized to divert, source, and point of diversion.

Ques. 4. State purpose for which water is to be used, and, if for irrigation, state the number of acres and give description of the land you intend to reclaim.

Ans. Under this Proof, for power purposes.

Ques. 5. State whether or not the water has been turned into your works of diversion, and, if so, when and to what extent.

Ans. Yes. These works have been in actual operation for many months past. To an extent or in quantities greater than those specified in said Permit.

Ques. 6. State whether or not the works of diversion are fully completed, and whether or not they comply in all respects with the terms of the permit.

Ans. These works are fully completed. They comply in all respects with the terms of the Permit and amendment thereof, of record in the office of the State Engineer of Idaho in Book 29 of Permits at Page 8962

Ques. 7. If the works of diversion do not comply with all the terms of your permit, state fully those particulars in which there is any variance.

Ans.

Ques. 8. Give description of works, state dimensions and capacity of each part, and give cost of same.

Ans.

(Sign here.) George R. Carey.

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, in Phoenix, County of

Bannock, State of Idaho, on this twenty-eighth day of

January

A. D. 19 18.

My commission expires Jan. 5 - 1919.

J. H. Thatcher

My Commission expires

Notary Public.
in and for the County of Bannock,
State of Idaho; residing at Thatcher,
Idaho.

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Ans. to Ques. 6: The works for diversion of Bear River waters to North and Bear Lakes have a greater carrying capacity than twenty-five hundred second feet, the capacity of the Rainbow Canal only being in excess of four thousand second feet. The Outlet Canal from the reservoir (North and Bear Lakes), for release of impounded waters, has carrying capacity in excess of fifteen hundred second feet. The so-called Stewart Dam, across Bear River, at intake to said Rainbow Canal, is situate in the southeast quarter of the northeast quarter of Sec. 34, T. 13, S. R. 44 E., B. B. & M., in Bear Lake County, Idaho. The Rainbow Canal extends southerly into the reservoir (North and Bear Lake Reservoir) a distance of approximately four miles, through Sec. 34, T. 13 S. R. 44 E.B.B. & M. and Secs. 3, 10 and 15, T. 14 S. R. 44 E.B.B. & M., in said Bear Lake County. The Outlet Canal aforesaid extends from a point at the northerly end of said reservoir, N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M in said Bear Lake County, northerly through Sec. 6, T. 14 S. R. 44 E.B.B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B. & M., for a distance of approximately 8 miles to Bear River, the confluence being at a point N. 44° 54' E. 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E.B.B. & M., in said Bear Lake County.

Stewart Dam above mentioned is a concrete diversion dam, of over-flow type, 21 feet high, and with crest length of 209.5 feet, and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the fore-bay of such Stewart Dam, the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven openings, each 8 feet wide by 16 feet high. The Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Waters flowing into said reservoir from the basin thereof, plus waters diverted thereto by works of the Holder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile.

Inside said reservoir-site, on the Natural Causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situate additional impounding and releasing works, known as a whole as "Lifton." These works consist of (a) intake canal-way extending from North Lake through such Causeway into Bear Lake, which canal-way is 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of four thousand second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete-covered building), consisting of two concrete gravity conduits or release-ways, one ten feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet, and five 300 second foot pumping units, each unit being independent, and having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10½ inches high. Each unit further comprises an I. P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G. E. 750 H. P. motor. There are five such pump and motor units. Total capacity of the five pumping units is fifteen hundred second feet.

The so-called "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center being at a point S. 55° 26' W. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-board 38 feet above crest, with crest length of 300 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE¼ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE¼ of Sec. 36, T. 9 S. R. 40 E.B.B. & M., SW¼, NW¼ and NE¼ of Section 31, T. 9 S. R. 41 E.B.B. & M.

There is thus impounded by this dam approximately eighteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace generating station of the Holder, such station being situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E.B.B. & M. These penstocks extend across the following quarter sections: NE¼ and NW¼ of Sec. 1; SE¼ of Sec. 2; all quarters of Sec. 11; NW¼ of Sec. 12; SE¼ of Sec. 10; NW¼ of Sec. 14; all quarters of Sec. 15; SE¼ of Sec. 16; NW¼ of Sec. 22, and NE¼, SE¼ and SW¼ of Sec. 21, all in T. 10 S. R. 40 E. B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Oneida Dam," on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13

feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the fore-bay of such Stewart Dam, the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven openings, each 8 feet wide by 16 feet high. The Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Waters flowing into said reservoir from the basin thereof, plus waters diverted thereto by works of the Holder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile.

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The so-called "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center being at a point S. 55° 26' W. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-board 38 feet above crest, with crest length of 300 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Section 31, T. 9 S. R. 41 E.B.B. & M.

There is thus impounded by this dam approximately eighteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace generating station of the Holder, such station being situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E.B.B. & M. These penstocks extend across the following quarter sections: NE $\frac{1}{4}$ ~~and~~ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E. B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Oneida Dam," on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S. R. 40 E. B. & M., and NW $\frac{1}{4}$ of Sec. 18, and SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 7, and SE $\frac{1}{4}$ and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13 S. R. 41 E.B.B. & M., and SW $\frac{1}{4}$ of Sec. 31, T. 12 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,280 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station, of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E. B.B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

The Depositions of two Witnesses, in this form, taken separately, required in each case.

PERMIT NO. 8962.

Proof of Completion of Works

DEPOSITION OF WITNESS

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

Ans. H. Lewis Rasmason. 39 years. Salt Lake City, Civil, Hydraulic and Electrical Engineer. 508 Boston Bldg. Salt Lake City, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the original and amended the equivalent of holder of Permit No. 8962, authorizing the diversion of 2500 second-feet of the waters of Bear River, and 300 sec. ft. from Bear Lake, and 200 sec. ft. from North Lake at points as specified in such Permit, in Bear Lake County, Idaho.

for power purposes? How long have you known such corporation?

Ans. Approximately five years. It is a corporation of Maine; has an office at Grace, Idaho.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its terms and conditions?

Ans. Yes; both the original and Amendment.

Ques. 4. (If for irrigation purposes). Are you acquainted with the land proposed to be irrigated under said permit? If so, describe same, state its character, and give your estimate of the amount of water required for its profitable cultivation.

Ans. _____

Ques. 5. Are the works of diversion fully completed and of sufficient capacity to convey the entire amount of water set out in the permit from point of diversion to place of use?

Ans. Yes, Yes.

Ques. 6. Describe the works of diversion as they now exist, and give your estimate of their capacity.

Ans. _____

(Sign here.)

H. Lewis Rasmason

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in Phoenix, County

of Bannock, State of Idaho, on this twenty-eighth day of

January, A. D. 1918.

My commission expires

Jan. 5-1919.

H. H. Thatcher
Notary Public in and for the County of Bannock, State of Idaho; residing at Thatcher, Idaho.

8962

Ans. to Ques. 6: The works for diversion of Bear River waters to North and Bear Lakes have a greater carrying capacity than twenty-five hundred second feet, the capacity of the Rainbow Canal only being in excess of four thousand second feet. The Outlet Canal from the reservoir (North and Bear Lakes), for release of impounded waters, has carrying capacity in excess of fifteen hundred second feet. The so-called Stewart Dam, across Bear River, at intake to said Rainbow Canal, is situate in the southeast quarter of the northeast quarter of Sec. 34, T. 13, S. R. 44 E., B. B. & M., in Bear Lake County, Idaho. The Rainbow Canal extends southerly into the reservoir (North and Bear Lake Reservoir) a distance of approximately four miles, through Sec. 34, T. 13 S. R. 44 E.B.B. & M. and Secs. 3, 10 and 15, T. 14 S. R. 44 E.B.B. & M., in said Bear Lake County. The Outlet Canal aforesaid extends from a point at the northerly end of said reservoir, N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M. in said Bear Lake County, northerly through Sec. 6, T. 14 S. R. 44 E.B.B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B. & M., for a distance of approximately 8 miles to Bear River, the confluence being at a point N. 44° 54' E. 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E.B.B. & M., in said Bear Lake County.

Stewart Dam above mentioned is a concrete diversion dam, of over-flow type, 21 feet high, and with crest length of 209.5 feet, and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the fore-bay of such Stewart Dam, the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven openings, each 8 feet wide by 16 feet high. The Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Waters flowing into said reservoir from the basin thereof, plus waters diverted thereto by works of the Helder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile.

Inside said reservoir-site, on the Natural Causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situate additional impounding and releasing works, known as a whole as "Lifton." These works consist of (a) intake canal-way extending from North Lake through such Causeway into Bear Lake, which canal-way is 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of four thousand second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete-covered building), consisting of two concrete gravity conduits or release-ways, one ten feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet, and five 300 second foot pumping units, each unit being independent, and having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{1}{2}$ inches high. Each unit further comprises an I. P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G. E. 750 H. P. motor. There are five such pump and motor units. Total capacity of the five pumping units is fifteen hundred second feet.

The so-called "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center being at a point S. 55° 26' W. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-board 8 feet above crest, with crest length of 300 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE $\frac{1}{4}$ of Sec. 26, T. 9 S. R. 40 E.B.B. & M., SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Section 31, T. 9 S. R. 41 E.B.B. & M.

There is thus impounded by this dam approximately eighteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace generating station of the Helder, such station being situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E.B.B. & M. These penstocks extend across the following quarter sections: NE $\frac{1}{4}$ and NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E. B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Helder.

The so-called "Oneida Dam," on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Helder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 40 E.B.B. & M.

feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the fore-bay of such Stewart Dam, the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven openings, each 8 feet wide by 16 feet high. The Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Waters flowing into said reservoir from the basin thereof, plus waters diverted thereto by works of the Holder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile.

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The so-called "Oneida Dam," on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S. R. 40 E. B. & M., and NW $\frac{1}{4}$ of Sec. 18, and SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 7, and SE $\frac{1}{4}$ and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13 S. R. 41 E.B.B. & M., and SW $\frac{1}{4}$ of Sec. 31, T. 12 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,280 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station, of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E. B.B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

The Depositions of two Witnesses, in this form, taken separately, required in each case.

PERMIT NO. 8962.

Proof of Completion of Works

DEPOSITION OF WITNESS

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

Ans. Harry L. Stoner. 30 years. Salt Lake City, Utah.

Hydraulic Engineer. 133 South West Temple St. Salt Lake City, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the original and amended the equivalent of holder of Permit No. 8962, authorizing the diversion of 2500 second-feet of the waters of Bear River and 300 sec. ft. from Bear Lake, and 200 sec. ft. from North Lake at points specified in such Permit, in Bear Lake County, Idaho.

for power purposes? How long have you known such corporation?
Ans. Approximately five years. It is a corporation of Maine; has an office at Grace, Idaho.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its terms and conditions?

Ans. Yes; both the original and Amendment.

Ques. 4. (If for irrigation purposes). Are you acquainted with the land proposed to be irrigated under said permit? If so, describe same, state its character, and give your estimate of the amount of water required for its profitable cultivation.

Ans. _____

Ques. 5. Are the works of diversion fully completed and of sufficient capacity to convey the entire amount of water set out in the permit from point of diversion to place of use?

Ans. Yes. Yes.

Ques. 6. Describe the works of diversion as they now exist, and give your estimate of their capacity.

(Sign here.) Harry L. Stoner

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in Phoenix, County of Maricopa, State of Idaho, on this twenty-eighth day of January, A. D. 1918.

My commission expires Jan. 5-1919.

H. H. Thatcher
Notary Public in and for the County of Maricopa, State of Idaho; residing at Thatcher.

8962

Ans. to Ques. 6: The works for diversion of Bear River waters to North and Bear lakes have a greater carrying capacity than twenty-five hundred second feet, the capacity of the Rainbow Canal only being in excess of four thousand second feet. The Outlet Canal from the reservoir (North and Bear lakes), for release of impounded waters, has carrying capacity in excess of fifteen hundred second feet. The so-called Stewart Dam, across Bear River, at intake to said Rainbow Canal, is situate in the southeast quarter of the northeast quarter of Sec. 34, T. 13, S. R. 44 E., B. B. & M., in Bear Lake County, Idaho. The Rainbow Canal extends southerly into the reservoir (North and Bear Lake Reservoir) a distance of approximately four miles, through Sec. 34, T. 13 S. R. 44 E. B. B. & M. and Secs. 3, 10 and 15, T. 14 S. R. 44 E. B. B. & M., in said Bear Lake County. The Outlet Canal aforesaid extends from a point at the northerly end of said reservoir, N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E. B. B. & M. in said Bear Lake County, northerly through Sec. 6, T. 14 S. R. 44 E. B. B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E. B. B. & M., for a distance of approximately 8 miles to Bear River, the confluence being at a point N. 44° 54' E. 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E. B. B. & M., in said Bear Lake County.

Stewart Dam above mentioned is a concrete diversion dam, of over-flow type, 21 feet high, and with crest length of 209.5 feet, and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 25 feet wide, and a modern-type fish-way. On the fore-bay of such Stewart Dam, the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven openings, each 8 feet wide by 16 feet high. The Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Waters flowing into said reservoir from the basin thereof, plus waters diverted thereto by works of the Holder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E. B. B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile.

Inside said reservoir-site, on the Natural Causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situate additional impounding and releasing works, known as a whole as "Lifton." These works consist of (a) intake canal-way extending from North Lake through such Causeway into Bear Lake, which canal-way is 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of four thousand second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete-covered building), consisting of two concrete gravity conduits or release-ways, one ten feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet, and five 500 second foot pumping units, each unit being independent, and having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{3}{4}$ inches high. Each unit further comprises an I. P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G. E. 750 H. P. motor. There are five such pump and motor units. Total capacity of the five pumping units is fifteen hundred second feet.

The so-called "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E. B. B. & M., in Bannock County, Idaho. The center being at a point S. 55° 26' W. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-board, 8 feet above crest, with crest length of 500 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E. B. B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E. B. B. & M.; SW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Section 31, T. 9 S. R. 41 E. B. B. & M.

There is thus impounded by this dam approximately eighteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace generating station of the Holder, such station being situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E. B. B. & M. These penstocks extend across the following quarter sections: NE $\frac{1}{4}$ and NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E. B. B. & M., in Bannock County, Idaho, and is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Onaida Dam", on Bear River, is situate in the southeast quarter of Sec. 25, T. 13 S. R. 40 E. B. B. & M., in Bannock County, Idaho. The center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 25. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east and approximately 1175 feet long. This dam and dyke create a reservoir, the back waterline of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13

type fish-way. On the fore-bay of such Stewart Dam, the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven openings, each 8 feet wide by 16 feet high. The Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Waters flowing into said reservoir from the basin thereof, plus waters diverted thereto by works of the Holder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile.

Inside said reservoir-site, on the Natural Causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situate additional impounding and releasing works, known as a whole as "Lifton." These works consist of (a) intake canal-way extending from North Lake through such Causeway into Bear Lake, which canal-way is 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of four thousand second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete-covered building), consisting of two concrete gravity conduits or release-ways, one ten feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet, and five 300 second foot pumping units, each unit being independent, and having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10½ inches high. Each unit further comprises an I. P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G. E. 750 H. P. motor. There are five such pump and motor units. Total capacity of the five pumping units is fifteen hundred second feet.

The so-called "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center being at a point S. 55° 26' W. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-board 8 feet above crest, with crest length of 300 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE¼ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE¼ of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW¼, NW¼ and NE¼ of Section 31, T. 9 S. R. 41 E.B.B. & M.

There is thus impounded by this dam approximately eighteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace generating station of the Holder, such station being situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E.B.B. & M. These penstocks extend across the following quarter sections: NE¼ and NW¼ of Sec. 1; SE¼ of Sec. 2; all quarters of Sec. 11; NW¼ of Sec. 12; SE¼ of Sec. 10; NW¼ of Sec. 14; all quarters of Sec. 15; SE¼ of Sec. 16; NW¼ of Sec. 22, and NE¼, SE¼ and SW¼ of Sec. 21, all in T. 10 S. R. 40 E. B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Oneida Dam," on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE¼ and NE¼ of Sec. 23; NW¼ of Sec. 24; SW¼ and SE¼ and NE¼ of Sec. 13, T. 13 S. R. 40 E. B. & M., and NW¼ of Sec. 18, and SW¼ and SE¼ and NE¼ of Sec. 7, and SE¼ and SW¼ and NW¼ of Sec. 6, T. 13 S. R. 41 E.B.B. & M., and SW¼ of Sec. 31, T. 12 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,280 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station, of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E. B.B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

The Depositions of two Witnesses, in this form, taken separately, required in each case.

PERMIT NO. 8962

Proof of Completion of Works

DEPOSITION OF WITNESS

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

Ans. Alma H. Chambers. 35 years. Logan, Utah. Civil and Hydraulic Engineer. Logan, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the original and amended holder of Permit No. 8962, authorizing the diversion of the equivalent of 2800 second-feet of the waters of Bear River and 300 sec. ft. from Bear Lake, and 200 sec. ft. from North Lake at points as specified in such Permit, in Bear Lake County, Idaho.

for power purposes? How long have you known said corporation? and where does he reside?

Ans. Approximately five years. It is a corporation of Maine; has an office at Grace, Idaho.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its terms and conditions?

Ans. Yes; both the original and amendment.

Ques. 4. (If for irrigation purposes). Are you acquainted with the land proposed to be irrigated under said permit? If so, describe same, state its character, and give your estimate of the amount of water required for its profitable cultivation.

Ans. _____

Ques. 5. Are the works of diversion fully completed and of sufficient capacity to convey the entire amount of water set out in the permit from point of diversion to place of use?

Ans. Yes. Yes.

Ques. 6. Describe the works of diversion as they now exist, and give your estimate of their capacity.

Ans. _____

(Sign here.) Alma H. Chambers

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in Phoenix, County of Bannock, State of Idaho, on this twenty-eighth day of January, A. D. 1918.

My commission expires Jan. 5-1919.

8962

Notary Public in and for the County of Bannock, State of Idaho; residing at Thatcher.

Ans. to Quas. 5. Works upon which Proof under this Permit is being made are known as (a) "Stewart Dam and Rainbow Inlet Canal", "Lifton", "Dyke", "Outlet Canal", "Grace Works" and "Oneida works" of Utah Power & Light Company. The diverting, impounding and releasing works in Bear Lake County are also often referred to as "Bear Lake County works of Utah Power & Light Company". "Stewart Dam and Rainbow Inlet Canal" are described as follows: Stewart Dam is situate, across Bear River, in the southeast quarter of the northeast quarter of Sec. 34, T. 13 S. R. 44 E.B.B. & M., in Bear Lake County, Idaho, at a point S. 12° 36' W. approximately fourteen hundred feet from the northeast corner of Sec. 34, T. 13 S. R. 44 E.B.B. & M. It is a concrete diversion dam, of gravity over-flow type, 21 feet high, with crest length of 209.5 feet, and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the forebay of such Stewart Dam, the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven gates, each 8 feet wide by 16 feet high. From this intake, the Rainbow Canal extends southerly, into the reservoir (North and Bear Lake Reservoir) a distance of approximately four miles, through Sec. 34, T. 13 S. R. 44 E.B.B. & M., and Secs. 3, 10 and 15, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid. This Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Maximum carrying capacity very approximately 4500 second feet from point of diversion to reservoir. "Lifton" comprises an inlet canal, connecting North and Bear Lakes, and situate through the Causeway between such two lakes. This inlet canal-way, and the outlet conduits next described and the pumping units next mentioned comprise the works known as "Lifton". The intake canal-way through such Causeway is 200 feet wide and 15 feet deep and has a maximum carrying capacity in excess of four thousand second feet. The outlet conduits above mentioned, at "Lifton", are two concrete gravity release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet. At this same point, Holder has constructed a tile concrete-covered building, housing five 300 second foot pumping units, each independent of the other in its operation, and each having intake control by gate 15.5 feet wide by 8 feet high, and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{1}{2}$ inches high. Each such unit further comprises an I.P. Morris centrifugal pump, with runner 2 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G.E. 750 H.P. motor. There are also here, as at all the works herein described, many suitable controlling and regulating devices and appurtenances. There are five such pump and motor units. The total capacity of these five pumping units is fifteen hundred second feet. All are completed, each has been operated to capacity, and all are operative at the will of the Holder. "Lifton" is situate at a point S. 85° 53' E. approximately fourteen thousand feet from the northwest corner of Sec. 18, T. 15 S. R. 44 E.B.B. & M., in Bear Lake County, Idaho. The impounding of the natural run-off of the basin of said reservoir (Bear and North Lakes), plus waters diverted thereto from Bear River by the works of Holder, has resulted in occupation and use of said reservoir to the full extent exceeding four hundred thousand acre feet. Such impounding is accomplished by an earthen dam-dyke, the center of which is at a point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid. This dam-dyke is 12,000 feet long, with an average height of 20 feet. The opening through this dyke, for releasing of waters, is by concrete structure, 115 feet long by 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters permitted to flow through such last mentioned release works are conducted by the so-called "Outlet Canal" northerly to Bear River. This Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile. Water carrying capacity eighteen hundred second feet.

Such Outlet Canal extends from the point of release last above mentioned northerly through Sec. 6, T. 14 S. R. 44 E.B.B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B. & M., for a distance of approximately eight miles to Bear River, the confluence being at a point N. 44° 54' E., 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid.

The Grace works consist of diversion dam, across Bear River, in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center being at a point S. 55° 26' W., 2450 feet from the northeast corner of said Sec. 1. This is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-boarding 8 feet above crest. The crest length is very approximately 300 feet and the bottom length is 145 feet. There is a proper and sufficient spill-way, fish-way and other appurtenances. This dam creates a forebay covering in part the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The back water of this reservoir intersects Bear River channel at a point S. 22° 45' E. 2030 feet from the northwest corner of the northeast quarter of Sec. 31, T. 9 S. R. 41 E.B.B. & M., in said Bannock County. There is impounded by this dam 1826 acre feet. From such "Grace Reservoir", natural river flow is diverted, and at times of low waters natural river flow plus released stored waters are diverted, into two penstocks, steel and wood, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly across the following quarter sections: NE $\frac{1}{4}$, NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder. All these works at Grace, Idaho, are known as the "Grace works of Utah Power & Light Company".

discharge control by gate 14 feet 6 inches wide by 8 feet 10 1/2 inches high. Each such unit further comprises an I.P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G.E. 750 H.P. motor. There are also here, as at all the works herein described, many suitable controlling and regulating devices and appurtenances. There are five such pump and motor units. The total capacity of these five pumping units is fifteen hundred second feet. All are completed, each has been operated to capacity, and all are operative at the will of the Holder. "Lifton" is situate at a point S. 85° 53' E. approximately fourteen thousand feet from the northwest corner of Sec. 18, T. 15 S. R. 44 E.B.B. & M., in Bear Lake County, Idaho. The impounding of the natural run-off of the basin of said reservoir (Bear and North Lakes), plus waters diverted thereto from Bear River by the works of Holder, has resulted in occupation and use of said reservoir to the full extent exceeding four hundred thousand acre feet. Such impounding is accomplished by an earthen dam-dyke, the center of which is at a point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid. This dam-dyke is 12,000 feet long, with an average height of 20 feet. The opening through this dyke, for releasing of waters, is by concrete structure, 115 feet long by 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters permitted to flow through such last mentioned release works are conducted by the so-called "Outlet Canal" northerly to Bear River. This Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile. Water carrying capacity eighteen hundred second feet.

Such Outlet Canal extends from the point of release last above mentioned northerly through Sec. 6, T. 14 S. R. 44 E.B.B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B. & M., for a distance of approximately eight miles to Bear River, the confluence being at a point N. 44° 54' E., 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid.

The Grace works consist of diversion dam, across Bear River, in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center being at a point S. 55° 26' W., 2450 feet from the northeast corner of said Sec. 1. This is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-boarding 8 feet above crest. The crest length is very approximately 300 feet and the bottom length is 145 feet. There is a proper and sufficient spill-way, fish-way and other appurtenances. This dam creates a forebay covering in part the following quarter sections: NE 1/4 of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE 1/4 of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW 1/4, NW 1/4 and NE 1/4 of Sec. 31, T. 9 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The back water of this reservoir intersects Bear River channel at a point S. 22° 45' E. 2030 feet from the northwest corner of the northeast quarter of Sec. 31, T. 9 S. R. 41 E.B.B. & M., in said Bannock County. There is impounded by this dam 1826 acre feet. From such "Grace Reservoir", natural river flow is diverted, and at times of low waters natural river flow plus released stored waters are diverted, into two penstocks, steel and wood, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly across the following quarter sections: NE 1/4, NW 1/4 and SW 1/4 of Sec. 1; SE 1/4 of Sec. 2; all quarters of Sec. 11; NW 1/4 of Sec. 12; SE 1/4 of Sec. 10; NW 1/4 of Sec. 14; all quarters of Sec. 15; SE 1/4 of Sec. 16; NW 1/4 of Sec. 22, and NE 1/4, SE 1/4 and SW 1/4 of Sec. 21, all in T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder. All these works at Grace, Idaho, are known as the "Grace works of Utah Power & Light Company".

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E., 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE 1/4 and NE 1/4 of Sec. 23; NW 1/4 of Sec. 24; SW 1/4 and SE 1/4 and NE 1/4 of Sec. 13, T. 13 S. R. 40 E.B. & M., and NW 1/4 of Sec. 18, and SW 1/4 and SE 1/4 and NE 1/4 of Sec. 7, and SE 1/4 and SW 1/4 and NW 1/4 of Sec. 6, T. 13 S. R. 41 E.B.B. & M., and SW 1/4 of Sec. 31, T. 12 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,280 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey

thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E.B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred twenty-six and thirty-one one-hundredths feet. All these works at Phoenix, Bannock County, Idaho, are known as the "Oneida works of Utah Power & Light Company".

PERMIT NC8962.

Proof of Application of Water to Beneficial Use**DEPOSITION OF HOLDER**

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

Ans. George R. Corey. 31 years. Salt Lake City, Utah. Hydraulic Engineer.

P.O. Box 1393, Salt Lake City, Utah.

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

Ans. Utah Power & Light Company, a corporation of Maine. Principal place of business in Idaho is at Grace, Bannock County. C.E. Bennett, Grace, Idaho. An hydraulic engineer in its employ. Duly adopted resolution of its Board of Directors.

Ques. 3. State number and date of permit, and date of priority you propose to establish under the permit. Permit No. 8962 and Amendment thereof. Application first received by State Engineer of Idaho at 11:30 A.M. on September 11th, 1912, and approved as a Permit

Ans. January 28th, 1913. Propose hereby establishing priority as of 11:20 A.M. September 11th, 1912.

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

Ans. to Ques. 4: Bear River and Bear Lake, and North or Mud Lake. Under this proof, points of diversions are (a) from Bear River, in SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 34, T. 13 S. R. 44 E. B. B. & M. in Bear Lake County, Idaho, at a point S. 12° 36' W. approximately 1400 feet from the Northeast Corner of Sec. 34 T. 13 S. R. 44 E. B. B. & M.; (b) from Bear Lake at point S. 85° 53' E. 14,106 feet from Northwest Corner of Sec. 18 T. 15 S. R. 44 E. B. B. & M. in Bear Lake County aforesaid; (c) From North Lake, and the reservoir of Holder comprising both Bear and North Lakes at point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S. R. 44 E. B. B. & M. in Bear Lake County, aforesaid; (d) From Bear River and "Grace Reservoir", in Bannock County, Idaho at a point S. 55° 26' W. 2450 feet from the Northeast Corner of Sec. 1, T. 10 S. R. 40 E. B. B. & M.; (e) From Bear River in Bannock County and "Oneida Reservoir" at a point whence the Northwest Corner of Sec. 26, T. 13 S. R. 40 E. B. B. & M. bears S. 74° 30' W. three thousand nine hundred ninety-six and 31/100 feet.

8962

name each subdivision in which used, and number of acres in each subdivision that have actually been irrigated with said water.) State whether cultivated or natural meadow land and the nature of all improvements which have been made as a direct result of said use.

Ans. to Ques. 6. So far as this Proof is concerned, for power purposes. The places of use are Bear and North Lakes, known as the "Bear Lake Reservoir of Utah Power & Light Company", and occupying what is known to the Government as "Utah-Idaho Reservoir-Site, No. 1"; and at the Grace works, where water is used through and by means of either and sometimes both of the two penstocks hereinabove described, extending across quarter sections hereinabove specified, and to and through the water wheels of said Grace generating station, situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E. B. B. & M., in Bannock County, Idaho, said water being under pressure from its entry into pressure boxes, connecting with said pressure pipe to the point of discharge at the water wheels in said electric generating station. Also at the Oneida generating station above mentioned, where the water is under pressure from its entry into the pipe line of such waters to its discharge from wheel pit, at point S. 74° 01' E. 3173 feet from the northwest corner of Sec. 26, T. 13 S. R. 40 E. B. B. & M.

Ans.

8962

PERMIT NO 8962.

Proof of Application of Water to Beneficial Use**DEPOSITION OF HOLDER**

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

Ans. George R. Corey. 31 years. Salt Lake City, Utah. Hydraulic Engineer.
P.O. Box 1393, Salt Lake City, Utah.

Ques. 2. If acting as holder of

Ques. 5. Describe your works of diversion, and state amount of water they are capable of con-

Ques. 7. If for other than irrigation purposes, state how applied, amount of horse power generated, etc. The waters are applied as stated in Answer to Ques. No. 6; at Grace, under a head of approximately 524 feet, from pressure box above mentioned to water-wheels, producing 50,000 H.P. of electric energy; and at Oneida, under pressure through conduit and stand-pipe above mentioned, generating 27, 500 H.P.

Ques. 8. What is the minimum amount of water required for the use specified above?
From Bear River, the equivalent of 2500 second feet, continuous flow; from Bear Lake, the equivalent of 300 second feet, continuous flow; from North or Mud Lake, the equivalent of 200 second feet, continuous flow.

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

Ans. _____

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

Ans. _____

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

Ans. _____

(Sign) George R. Corey

I hereby certify that the foregoing testimony was read to the above subscribed before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in Phoenix, County of Bannock State of Idaho, on this 28th day of January A. D. 1918. My commission expires Jan. 5-1919.

H. H. Thatcher
Notary Public in and for the County
of Bannock, State of Idaho; residing at
Thatcher, Idaho.

Thatcher, Idaho, January 28th, 1918.

Hon. J.H.Smith,

State Engineer, B o i s e.

Dear Sir:

On this day, beginning at the hours respectively set therefor by the publications of Notices, the Proofs of the Completion of Works and the Proofs of the Beneficial Use of Water were made before me, the undersigned Notary Public, at Phoenix, Bannock County, Idaho, by Utah Power & Light Company, the Holder, under its Permits Nos. 8962 (and Amendment thereof), R-18 and 12236. The three independent witnesses in each such Proof were Alma H. Chambers, H. Lewis Rasmason and Harry L. Stoner, and the Holder's witness was, in each case, George R. Corey.

Herewith find such Proofs.

There were no contests or protests of any kind.

Yours respectfully,

J.H. Thatcher

Notary Public.

FEB 2 1918

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February 4th, 1918.

Re Permit 8962.

Mr. E. L. McCleave,
Montpelier, Idaho.

Dear Sir:--

Yours of the 26th inst. to hand, with depositions
for proof under above permit. These have been checked and
are in proper form.

Very truly yours,

J. H. SMITH,

State Engineer.

By_____

8962

Ans. to Ques. 5. Works upon which Proof under this permit is being made are known as ~~the~~ "Stewart Dam and Rainbow Inlet Canal", "Lifton", "Dyke", "Outlet Canal", "Grace Works" and "Oneida works" of Utah Power & Light Company. The diverting, impounding and releasing works in Bear Lake County are also often referred to as "Bear Lake County works of Utah Power & Light Company". "Stewart Dam and Rainbow Inlet Canal" are described as follows: Stewart Dam is situate, across Bear River, in the southeast quarter of the northeast quarter of Sec. 34, T. 13 S. R. 44 E. B. B. & M., in Bear Lake County, Idaho, at a point S. 12° 36' W. approximately fourteen hundred feet from the northeast corner of Sec. 34, T. 13 S. R. 44 E. B. B. & M. It is a concrete diversion dam, of gravity over-flow type, 21 feet high, with crest length of 209.5 feet, and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the forebay of such Stewart Dam, the intake to Rainbow Canal is situate, - being a concrete structure, 110 feet long and 20 feet high, provided with seven gates, each 8 feet wide by 16 feet high. From this intake, the Rainbow Canal extends southerly, into the reservoir (North and Bear Lake Reservoir) a distance of approximately four miles, through Sec. 34, T. 13 S. R. 44 E. B. B. & M., and Secs. 3, 10 and 15, T. 14 S. R. 44 E. B. B. & M., in Bear Lake County aforesaid. This Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Maximum carrying capacity very approximately 4500 second feet from point of diversion to reservoir. "Lifton" comprises an inlet canal, connecting North and Bear Lakes, and situate through the Causeway between such two lakes. This inlet canal-way, and the outlet conduits next described and the pumping units next mentioned comprise the works known as "Lifton". The intake canal-way through such Causeway is 200 feet wide and 15 feet deep and has a maximum carrying capacity in excess of four thousand second feet. The outlet conduits above mentioned, at "Lifton", are two concrete gravity release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet. At this same point, Holder has constructed a tile concrete-covered building, housing five 300 second foot pumping units, each independent of the other in its operation, and each having intake control by gate 15.5 feet wide by 8 feet high, and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{3}{4}$ inches high. Each such unit further comprises an I.P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G.E. 750 H.P. motor. There are also here, as at all the works herein described, many suitable controlling and regulating devices and appurtenances. There are five such pump and motor units. The total capacity of these five pumping units is fifteen hundred second feet. All are completed, each has been operated to capacity, and all are operative at the will of the Holder. "Lifton" is situate at a point S. 85° 53' E. approximately fourteen thousand feet from the northwest corner of Sec. 18, T. 15 S. R. 44 E. B. B. & M., in Bear Lake County, Idaho. The impounding of the natural run-off of the basin of said reservoir (Bear and North Lakes), plus waters diverted thereto from Bear River by the works of Holder, has resulted in occupation and use of said reservoir to the full extent exceeding four hundred thousand acre feet. Such impounding is accomplished by an earthen dam-dyke, the center of which is at a point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E. B. B. & M., in Bear Lake County aforesaid. This dam-dyke is 12,000 feet long, with an average height of 20 feet. The opening through this dyke, for releasing of waters, is by concrete structure, 115 feet long by 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters permitted to flow through such last mentioned release works are conducted by the so-called "Outlet Canal" northerly to Bear River. This Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile. Water carrying capacity eighteen hundred second feet.

Such Outlet Canal extends from the point of release last above mentioned northerly through Sec. 6, T. 14 S. R. 44 E. B. B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E. B. B. & M., for a distance of approximately eight miles to Bear River, the confluence being at a point N. 44° 54' E., 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E. B. B. & M., in Bear Lake County aforesaid.

The Grace works consist of diversion dam, across Bear River, in the northeast quarter of Sec. 1, T. 10 S. R. 40 E. B. B. & M., in Bannock County, Idaho, the center being at a point S. 55° 26' W., 2450 feet from the northeast corner of said Sec. 1. This is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-boarding 8 feet above crest. The crest length is very approximately 300 feet and the bottom length is 145 feet. There is a proper and sufficient spill-way, fish-way and other appurtenances. This dam creates a forebay covering in part the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E. B. B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E. B. B. & M.; SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S. R. 41 E. B. B. & M., all in Bannock County aforesaid. The back water of this reservoir intersects Bear River channel at a point S. 2° 45' E. 2030 feet from the northwest corner of the northeast quarter of Sec. 31, T. 9 S. R. 41 E. B. B. & M., in said Bannock County. There is impounded by this dam 1826 acre feet. From such "Grace Reservoir", natural river flow is diverted, and at times of low waters natural river flow plus released stored waters are diverted, into two penstocks, steel and wood, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwest-erly across the following quarter sections: NE $\frac{1}{4}$, NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E. B. B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder. All these works at Grace, Idaho, are known as the "Grace works of Utah Power & Light Company".

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E. B. B. & M., in Bannock County,

each having intake control by gate 13.5 feet wide by 8 feet high, and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{3}{4}$ inches high. Each such unit further comprises an I.P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G.E. 750 H.P. motor. There are also here, as at all the works herein described, many suitable controlling and regulating devices and appurtenances. There are five such pump and motor units. The total capacity of these five pumping units is fifteen hundred second feet. All are completed, each has been operated to capacity, and all are operative at the will of the Holder. "Lifton" is situate at a point S. 85° 53' E. approximately fourteen thousand feet from the northwest corner of Sec. 18, T. 15 S. R. 44 E.B.B. & M., in Bear Lake County, Idaho. The impounding of the natural run-off of the basin of said reservoir (Bear and North Lakes), plus waters diverted thereto from Bear River by the works of Holder, has resulted in occupation and use of said reservoir to the full extent exceeding four hundred thousand acre feet. Such impounding is accomplished by an earthen dam-dyke, the center of which is at a point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid. This dam-dyke is 12,000 feet long, with an average height of 20 feet. The opening through this dyke, for releasing of waters, is by concrete structure, 115 feet long by 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters permitted to flow through such last mentioned release works are conducted by the so-called "Outlet Canal" northerly to Bear River. This Outlet Canal is 91 feet wide on bottom; water carrying depth, 13. feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile. Water carrying capacity eighteen hundred second feet.

Such Outlet Canal extends from the point of release last above mentioned northerly through Sec. 6, T. 14 S. R. 44 E.B.B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B. & M., for a distance of approximately eight miles to Bear River, the confluence being at a point N. 44° 54' E., 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid.

The Grace works consist of diversion dam, across Bear River, in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center being at a point S. 55° 26' W., 2450 feet from the northeast corner of said Sec. 1. This is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-boarding 8 feet above crest. The crest length is very approximately 300 feet and the bottom length is 145 feet. There is a proper and sufficient spill-way, fish-way and other appurtenances. This dam creates a forebay covering in part the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The back water of this reservoir intersects Bear River channel at a point S. 2° 45' E. 2030 feet from the northwest corner of the northeast quarter of Sec. 31, T. 9 S. R. 41 E.B.B. & M., in said Bannock County. There is impounded by this dam 1826 acre feet. From such "Grace Reservoir", natural river flow is diverted, and at times of low waters natural river flow plus released stored waters are diverted, into two penstocks, steel and wood, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwest-erly across the following quarter sections: NE $\frac{1}{4}$, NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder. All these works at Grace, Idaho, are known as the "Grace works of Utah Power & Light Company".

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E., 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S. R. 40 E.B. & M., and NW $\frac{1}{4}$ of Sec. 18, and SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 7, and SE $\frac{1}{4}$ and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13 S. R. 41 E.B.B. & M., and SW $\frac{1}{4}$ of Sec. 31, T. 12 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,280 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey

thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E.B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred twenty-six and thirty-one one-hundredths feet. All these works at Phoenix, Bannock County, Idaho, are known as the "Oneida works of Utah Power & Light Company".

PERMIT No. 8962

Proof of Application of Water to Beneficial Use**DEPOSITION OF HOLDER**

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

Ans. ~~George R. Corey, 31 years, Salt Lake City, Utah, Hydraulic Engineer, P.O. Box 1393, Salt Lake City, Utah.~~

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

Ans. ~~Utah Power & Light Company, a corporation of Maine, Principal place of business in Idaho is at Grace, Bannock County. C. E. Bennett, Grace, Idaho. An hydraulic engineer in its employ. Duly adopted resolution of its Board of Directors.~~

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

Ans. to Ques. 3: Permit No. 8962 and amendment thereof. Application first received by State Engineer of Idaho at 11:30, on September 11, 1912, and approved as a Permit January 28, 1913. Propose hereby establishing priority as of 11:20 A. M. September 11, 1912.

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Under this proof, points of diversions are (a) from Bear River, in SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 34, T. 13 S. R. 44 E. B. B. & M. in Bear Lake County, Idaho, at a point S. 12° 36' W. approximately 1400 feet from the Northeast Corner of Sec. 34 T. 13 S. R. 44 E. B. B. & M.; (b) from Bear Lake at point S. 85° 53' E. 14,006 feet from Northwest Corner of Sec. 18 T. 15 S. R. 44 E. B. B. & M. in Bear Lake County aforesaid; (c) From North Lake, and the reservoir of Holder comprising both Bear and North Lakes, at point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S. R. 44 E. B. B. & M. in Bear Lake County, aforesaid; (d) From Bear River and "Grace Reservoir", in Bannock County, Idaho at a point S. 55° 26' W. 2450 feet from the Northeast Corner of Sec. 1, T. 10 S. R. 40 E. B. B. & M.; (e) From Bear River in Bannock County and "Oneida Reservoir" at a point whence the Northwest Corner of Sec. 26, T. 13 S. R. 40 E. B. B. & M. bears S. 74° 30' W. three thousand nine hundred ninety-six and 31/100 feet.

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irrigated with said water.) State whether cultivated or natural meadow land and the nature of all improvements which have been made as a direct result of said use.

Ans. to Ques. 6. So far as this Proof is concerned, for power purposes. The places of use are Bear and North Lakes, known as the "Bear Lake Reservoir of Utah Power & Light Company", and occupying what is known to the Government as "Utah-Idaho Reservoir-Site, No. 1"; and at the Grace works, where water is used through and by means of either and sometimes both of the two penstocks hereinabove described, extending across quarter sections hereinabove specified, and to and through the water wheels of said Grace generating station, situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E. B. B. & M., in Bannock County, Idaho, said water being under pressure from its entry into pressure boxes, connecting with said pressure pipes to the point of discharge at the water wheels in said electric generating station. Also at the Oneida generating station above mentioned, where the water is under pressure from its entry into the pipe line ~~of such water~~ to its discharge from wheel pit, at point S. 74° 01' E. 3173 feet from the northwest corner of Sec. 26, T. 13 S. R. 40 E. B. B. & M.

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cubic feet per second, continuous flow; from North or Mud Lake, the equivalent of 200 cubic feet per second, continuous flow.

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PERMIT No. 8962

Proof of Application of Water to Beneficial Use

DEPOSITION OF HOLDER

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

Ans. --George R. Corey, 31 years, Salt Lake City, Utah. Hydraulic Engineer. P.O. Box 1393, Salt Lake City, Utah.

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

Ans. Utah Power & Light Company, a corporation of Maine. Principal

Ans.

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

Ans. to Ques. 4: Bear River and Bear Lake, and North or Mud Lake. Under this proof, points of diversions are (a) from Bear River, in SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 34, T. 13 S. R. 44 E. B. B. & M. in Bear Lake County, Idaho, at a point S. 12° 36' W. approximately 1400 feet from the Northeast Corner of Sec. 34 T. 13 S. R. 44 E. B. B. & M.; (b) from Bear Lake at point S. 85° 53' E. 14,006 feet from Northwest Corner of Sec. 18 T. 15 S. R. 44 E. B. B. & M. in Bear Lake County aforesaid; (c) From North Lake, and the reservoir of Holder comprising both Bear and North Lakes, at point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S. R. 44 E. B. B. & M. in Bear Lake County, aforesaid; (d) From Bear River and "Grace Reservoir", in Bannock County, Idaho at a point S. 55° 26' W. 2450 feet from the Northeast Corner of Sec. 1, T. 10 S. R. 40 E. B. B. & M.; (e) From Bear River in Bannock County and "Oneida Reservoir" at a point whence the Northwest Corner of Sec. 26, T. 13 S. R. 40 E. B. B. & M. bears S. 74° 30' W. three thousand nine hundred ninety-six and 31/100 feet.

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irrigated with said water.) State whether cultivated or natural meadow land and the nature of all improvements which have been made as a direct result of said use.

Ans. to Ques. 6. So far as this Proof is concerned, for power purposes. The places of use are Bear and North Lakes, known as the "Bear Lake Reservoir of Utah Power & Light Company", and occupying what is known to the Government as "Utah-Idaho Reservoir-Site, No. 1"; and at the Grace works, where water is used through and by means of either and sometimes both of the two penstocks hereinabove described, extending across quarter sections hereinabove specified, and to and through the water wheels of said Grace generating station, situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E. B. B. & M., in Bannock County, Idaho, said water being under pressure from its entry into pressure boxes, connecting with said pressure pipes to the point of discharge at the water wheels in said electric generating station. Also at the Oneida generating station above mentioned, where the water is under pressure from its entry into the pipe line ~~of such waters~~ to its discharge from wheel pit, at point S. 74° 01' E. 3173 feet from the northwest corner of Sec. 26, T. 13 S. R. 40 E. B. B. & M.

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cubic feet per second, continuous flow; from North or Mud Lake, the equivalent of 200 cubic feet per second, continuous flow.

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PERMIT No. 8962

Proof of Application of Water to Beneficial Use**DEPOSITION OF HOLDER**

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

Ans. -- George R. Corey, 51 years, Salt Lake City, Utah. Hydraulic
 200 Box 1203 Salt Lake City, Utah.

Ques. 5. Describe your works of diversion, and state amount of water they are capable of conveying from point of diversion to place of use, and give name of canal or ditch or other works by

The works of diversion are the Grace and Oneida water wheels, which are located on the North and Mud Lake canals. The Grace water wheel is located on the North Lake canal and is capable of generating 50,000 H.P. of electric energy. The Oneida water wheel is located on the Mud Lake canal and is capable of generating 27,500 H.P. of electric energy. The Grace and Oneida water wheels are both operated by the Utah Power and Light Company. The Grace water wheel is located on the North Lake canal and is capable of generating 50,000 H.P. of electric energy. The Oneida water wheel is located on the Mud Lake canal and is capable of generating 27,500 H.P. of electric energy. The Grace and Oneida water wheels are both operated by the Utah Power and Light Company.

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

Ans. to Ques. 7. The waters are applied as stated in ^{Ans. to} Ques. No. 6; at Grace, under a head of approximately 524 feet, from pressure box above mentioned to water wheels, producing 50,000 H.P. of electric energy; and at Oneida, under pressure through conduit and stand pipe above mentioned generating 27,500 H.P.

cubic feet per second, continuous flow; from North or Mud Lake, the equivalent of 200 cubic feet per second, continuous flow.

PERMIT No. 8962

Proof of Application of Water to Beneficial Use**DEPOSITION OF HOLDER**

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

Ans. --George R. Corey, 51 years, Salt Lake City, Utah. Hydraulic
D. C. Box 1303 Salt Lake City, Utah.

Ques. 5. Describe your works of diversion, and state amount of water they are capable of conveying from point of diversion to place of use, and give name of canal or ditch or other works by

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

Ans. to Ques. 8. From Bear River, the equivalent of 2500 cubic feet per second, continuous flow; from Bear Lake, the equivalent of 300 cubic feet per second, continuous flow; from North or Mud Lake, the equivalent of 200 cubic feet per second, continuous flow.

8962

8962

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

Ans. For sometime past; by means of the works above described; up to the full amounts specified in said Permit. and to an extent greater than the amounts specified in such Permit.

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

Ans. I take it this question applies only where Proof of Beneficial Use is being offered under an irrigation Permit. Certain storage waters, belonging to and released by the Holder, have in times past supplemented the natural flow of Bear River during low flow periods, and have thus been used through these works.

(Sign)

George R. Leary

I hereby certify that the foregoing testimony was read to the above subscribed before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in the City of Montpelier, County of Bear Lake State of Idaho, on this twenty-sixth day of January A. D. 1918.

Erwin M. W. W. W.
Notary Public.

Ans. to ques. 4: Bear River and Bear Lake and North or Mud Lake. Diversion from Bear River to reservoir (comprising Bear Lake and North or Mud Lake) is by Stewart Dam, across Bear River, which is situate in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sec. 34, T. 13 S., R. 44 E., B. B. & M. in Bear Lake County, Idaho, and by Rainbow Canal, the intake to which is on the forebay created by such Stewart Dam, such Rainbow Canal extends southerly into said reservoir a distance of approximately four miles through Sec. 34, T. 13 S., R. 44 E., B. B. & M. and Secs. 3, 10 and 15, T. 14 S., R. 44 E., B. B. & M. in said Bear Lake County. First use of Bear River waters thus diverted, plus the natural run-off to said reservoir from the basin thereof, is made by impounding the greater part of said waters to the total extent of over 400,000 acre feet per annum, and said reservoir has thus, and to such extent, heretofore been occupied and used. Stewart Dam above mentioned, is a concrete diversion dam, of gravity overflow type, 81 feet high, with crest length of 209.5 feet and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern type fish-way. On the forebay of such Stewart Dam the intake to Rainbow Canal is situate being a concrete structure, 110 feet long and 20 feet high, provided with seven gates, each 8 feet wide by 16 feet high. The Rainbow Canal above mentioned, is 100 feet wide at bottom; has water carrying depth of 11.5 feet at maximum, and width of 120 feet at such level. Grade: 1.4 feet per mile. Flexibility of operation and use of said reservoir as a whole is accomplished by further works known as "Lifton", situated at a point on the natural Causeway between said two lakes, S. 85° 53' E. approximately 1400 feet, from the Northwest Corner of Sec. 18, T. 15 S., R. 44 E., B. B. & M. in Bear Lake County aforesaid. At "Lifton" is situate (a) intake canalway extending through said Causeway from North Lake into Bear Lake, being a canalway 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of 4000 second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 5500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15.5 wide by 8 feet high, and discharge controls by gate 14 ft. 3 inches wide by 8 feet 10 $\frac{1}{2}$ inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 ft. 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G.E. 750 H.P. motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

Impounding of waters diverted by Holder from Bear River, plus natural run-off to such reservoir from the basin thereof, is accomplished by means of an earthen dam-dike 12,000 feet long and with average height of 20 ft. The opening through this dike for the release of impounded waters is very approximately at the center thereof, viz., a point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S., R. 44 E., B. B. & M., in Bear Lake County aforesaid, and such release is through a concrete structure 115 feet long and 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters thus permitted to flow from said reservoir are conducted by means of the so-called "Outlet Canal" northerly to Bear River. Such "Outlet Canal" extends from the release point last above mentioned through Sec. 6, T. 14 S., R. 44 E., B. B. & M. and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S., R. 44 E., B. B. & M. for a distance of approximately 8 miles to Bear River the confluence being at a point N. 44° 54' E. 3740 feet from the Southwest Corner of Sec. 6, T. 13 S., R. 44 E., B. B. & M. in said Bear Lake County, which "Outlet Canal" is 91 feet wide at the bottom; has carrying depth of 13 feet at maximum, and width of 112 feet at such level. Grade: seven tenths of one foot per mile.

The so-called "Grace Diversion Dam", on Bear River, is situated in the NE $\frac{1}{4}$ of Sec. 1, T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, the center being at a point S. 55° 26' W. 8450 feet from the NE Corner of said Sec. 1. This dam is a rock-filled, crib structure, approximately 38 feet high with permanent fixtures for flash-boarding 8 feet above crest with crest length of 300 feet and bottom length of 145 feet. This dam is provided with proper and sufficient spillways, fish-way and many appurtenances.

It creates a forebay within the lava gorge which is the river channel over a part of the following quarter sections; NE $\frac{1}{4}$ Sec. 1, T. 10 S., R. 40 E., B. B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S., R. 40 E., B. B. & M. and SW $\frac{1}{4}$ NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. The intersection of backwater of this reservoir with channel of Bear River is at a point S. 22° 45' E. 2030 feet from Northwest Corner of the NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. There is thus impounded by this dam approximately 1800 acre feet. At this point, from the forebay thus created, natural river flow is diverted and at times of low water, natural river flow plus released stored waters are diverted into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding 1200 second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace Generating Station of the Holder, such station being situated in the southwesterly quarter of Sec. 21, T. 10 S., R. 40 E., B. B. & M. These penstocks extend across the following quarter sections; NE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$ SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, and waters under pressure from their entry into pressure boxes connected with such pressure pipes to the point of discharge at the water wheels in the Grace electric generating station aforesaid.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S., R. 40 E., B. B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S., R. 41 E., B. B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections; SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S., R. 40 E., B. B. & M., and NW $\frac{1}{4}$ of Sec. 18, and SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 7, and SE $\frac{1}{4}$ and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13 S., R. 41 E., B. B. & M., and SW $\frac{1}{4}$ of Sec. 21, T. 12 S., R. 41 E., B. B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,286 acre feet.

being a canalway 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of 4000 second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 3500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15.5 wide by 8 feet high, and discharge controls by gate 14 ft. 3 inches wide by 8 feet 10 1/2 inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 ft. 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G.M. 750 H.P. motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

Impounding of waters diverted by Holder from Bear River, plus natural run-off to such reservoir from the basin thereof, is accomplished by means of an earthen dam-dike 12,000 feet long and with average height of 20 ft. The opening through this dike for the release of impounded waters is very approximately at the center thereof, viz., a point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S., R. 44 E., B. B. & M., in Bear Lake County aforesaid, and such release is through a concrete structure 115 feet long and 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters thus permitted to flow from said reservoir are conducted by means of the so-called "Outlet Canal" northerly to Bear River. Such "Outlet Canal" extends from the release point last above mentioned through Sec. 6, T. 14 S., R. 44 E., B. B. & M. and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S., R. 44 E., B. B. & M. for a distance of approximately 8 miles to Bear River the confluence being at a point N. 44° 54' E. 3740 feet from the Southwest Corner of Sec. 6, T. 13 S., R. 44 E., B. B. & M. in said Bear Lake County, which "Outlet Canal" is 91 feet wide at the bottom; has carrying depth of 13 feet at maximum, and width of 112 feet at such level. Grade: seven tenths of one foot per mile.

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It creates a forebay within the lava gorge which is the river channel over a part of the following quarter sections; NE 1/4 Sec. 1, T. 10 S., R. 40 E., B. B. & M.; SW 1/4 of Sec. 36, T. 9 S., R. 40 E., B. B. & M. and SW 1/4 NW 1/4 and NE 1/4 of Sec. 31, T. 9 S., R. 41 E., B. B. & M. The intersection of backwater of this reservoir with channel of Bear River is at a point S. 22° 45' E. 2030 feet from Northwest Corner of the NE 1/4 of Sec. 31, T. 9 S., R. 41 E., B. B. & M. There is thus impounded by this dam approximately 1800 acre feet. At this point, from the forebay thus created, natural river flow is diverted and at times of low water, natural river flow plus released stored waters are diverted into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding 1200 second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace Generating Station of the Holder, such station being situated in the southwesterly quarter of Sec. 21, T. 10 S., R. 40 E., B. B. & M. These penstocks extend across the following quarter sections; NE 1/4 NW 1/4 and SW 1/4 of Sec. 1; SE 1/4 of Sec. 2; all quarters of Sec. 11; NW 1/4 of Sec. 12; SE 1/4 of Sec. 10; NW 1/4 of Sec. 14; all quarters of Sec. 15; SE 1/4 of Sec. 16; NW 1/4 of Sec. 22, and NE 1/4 SE 1/4 and SW 1/4 of Sec. 21, all in T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, and waters under pressure from their entry into pressure boxes connected with such pressure pipes to the point of discharge at the water wheels in the Grace electric generating station aforesaid.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S., R. 40 E., B. B. & M., in Bannock County, Idaho, - the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S., R. 41 E., B. B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE 1/4 and NE 1/4 of Sec. 23; NW 1/4 of Sec. 24; SW 1/4 and SE 1/4 and NE 1/4 of Sec. 13, T. 13 S., R. 40 E., B. B. & M., and NW 1/4 of Sec. 18, and SW 1/4 and SE 1/4 and NE 1/4 of Sec. 7, and SE 1/4 and SW 1/4 and NW 1/4 of Sec. 6, T. 13 S., R. 41 E., B. B. & M., and SW 1/4 of Sec. 31, T. 12 S., R. 41 E., B. B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,286 acre feet.

From said last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 26, T. 13 S., R. 40 E., B. B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

Permit No. 8962

Proof of Application of Water to Beneficial Use**DEPOSITION OF WITNESS**

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

Ans. H. Lewis Rasmason. 39 years. Salt Lake City, Utah. Civil, Hydraulic & Electrical Engineer. 508 Boston Building, Salt Lake City, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the holder of Permit No. 8962? How long have you known such corporation and where is its place of business?

Ans. Yes. Several years last past. It is a corporation of Maine with principal place of business in Idaho at Grace, Bannock County.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its provisions and conditions?

Ans. Yes. Both the original Permit No. 8962 and the amendment thereof and am familiar with its terms and conditions.

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

Ans.

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

Ans. More than the quantity specified in said permit. More than the quantity specified in said permit.

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

Ans. to Ques. 6: So far as this Proof is concerned, for power purposes. At Bear and North Lake Reservoir aforesaid and thereafter in and through the penstocks in this Deposition hereinbefore described, and under head on water wheels, propelling electric generators, at respectively Grace and Oneida Generating Stations above-mentioned, and locations of which are hereinbefore described. At such Grace station, 50,000 H.P. and at such Oneida Station, 27,500 H.P. of electrical energy are generated. Operating head at Grace, 524 feet; at Oneida, 145 feet. For further answer to this question, I hereby refer to my answers to each of the other questions of this Deposition.

extent.

Ans. To the full extent of the Permit and as described in my answer to the previous question.

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

Ans.

8962

Permit No. 8962

Proof of Application of Water to Beneficial Use

DEPOSITION OF WITNESS

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

Ans. H. Lewis Rasmason. 39 years. Salt Lake City, Utah. Civil, Hydraulic & Electrical Engineer. 508 Boston Building, Salt Lake City, Utah.

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Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its provisions and conditions?

Ans. Yes. Both the original Permit No. 8962 and the amendment thereof and am familiar with its terms and conditions.

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

Ans.

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

Ans. I have seen the works being constructed and I have seen the water being conveyed to the place of use. I estimate that the works will safely conduct to the place of use the amount of water which is being conveyed to the place of use. I have seen the water being conveyed to the place of use and I estimate that the works will safely conduct to the place of use the amount of water which is being conveyed to the place of use.

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

Ans. To the full extent of the Permit and as described in my answer to the previous question.

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

Ans.

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

Ans. None whatever.

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

Ans. Prior to my signing this deposition. By personal observation and examination. To the amounts or limits hereinabove stated. To the extent that I fully assured myself of the correctness of the foregoing.

(Sign)

H. Lewis Rasmason

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, in ^{my office at the} *City of Monpelier*, County of *Bear Lake*

State of Idaho, on this *twenty-sixth* day of *January* A. D. 19*18*.

Edwin F. McBlane

Notary Public.

My Commission Expires

8962

Ans. to Ques. 4: Bear River and Bear Lake and North or Mud Lake. Diversion from Bear River to reservoir (comprising Bear Lake and North or Mud Lake) is by Stewart Dam, across Bear River, which is situate in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sec. 34, T. 13 S., R. 44 E., B. B. & M. in Bear Lake County, Idaho, and by Rainbow Canal, the intake to which is on the forebay created by such Stewart Dam, such Rainbow Canal extends southerly into said reservoir a distance of approximately four miles through Sec. 34, T. 13 S., R. 44 E., B. B. & M. and Secs. 3, 10 and 15, T. 14 S., R. 44 E., B. B. & M. in said Bear Lake County. First use of Bear River waters thus diverted, plus the natural run-off to said reservoir from the basin thereof, is made by impounding the greater part of said waters to the total extent of over 400,000 acre feet per annum, and said reservoir has thus, and to such extent, heretofore been occupied and used. Stewart Dam above mentioned, is a concrete diversion dam, of gravity overflow type, 21 feet high, with crest length of 209.5 feet and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern type fish-way. On the forebay of such Stewart Dam the intake to Rainbow Canal is situate being a concrete structure, 110 feet long and 20 feet high, provided with seven gates, each 8 feet wide by 16 feet high. The Rainbow Canal above mentioned, is 100 feet wide at bottom; has water carrying depth of 11.5 feet at maximum, and width of 120 feet at such level. Grade: 1.4 feet per mile. Flexibility of operation and use of said reservoir as a whole is accomplished by further works known as "Lifton", situated at a point on the natural causeway between said two lakes, S. 85° 53' E. approximately 1400 feet, from the Northwest Corner of Sec. 18, T. 15 S., R. 44 E., B. B. & M. in Bear Lake County aforesaid. At "Lifton" is situate (a) intake canalway extending through said causeway from North Lake into Bear Lake, being a canalway 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of 4000 second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 3500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15.5 wide by 8 feet high, and discharge controls by gate 14 ft. 3 in. wide by 8 feet 10 $\frac{1}{2}$ inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 ft. 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G.E. 750 H.P. motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

Impounding of waters diverted by Holder from Bear River, plus natural run-off to such reservoir from the basin thereof, is accomplished by means of an earthen dam-dike 12,000 feet long and with average height of 20 ft. The opening through this dike for the release of impounded waters is very approximately at the center thereof, viz., a point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S., R. 44 E., B. B. & M., in Bear Lake County aforesaid, and such release is through a concrete structure 115 feet long and 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters thus permitted to flow from said reservoir are conducted by means of the so-called "Outlet Canal" northerly to Bear River. Such "Outlet Canal" extends from the release point last above mentioned through Sec. 6, T. 14 S., R. 44 E., B. B. & M. and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S., R. 44 E., B. B. & M. for a distance of approximately 8 miles to Bear River the confluence being at a point N. 44° 54' E. 3740 feet from the Southwest Corner of Sec. 6, T. 13 S., R. 44 E., B. B. & M. in said Bear Lake County, which "Outlet Canal" is 91 feet wide at the bottom; has carrying depth of 13 feet at maximum, and width of 112 feet at such level. Grade: seven tenths of one foot per mile.

The so-called "Grace Diversion Dam", on Bear River, is situated in the NE $\frac{1}{4}$ of Sec. 1, T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, the center being at a point S. 55° 26' W. 2450 feet from the NE Corner of said Sec. 1. This dam is a rock-filled, crib structure, approximately 38 feet high with permanent fixtures for flash-boarding 8 feet above crest with crest length of 300 feet and bottom length of 145 feet. This dam is provided with proper and sufficient spillways, fish-way and many appurten-

ances. It creates a forebay within the lava gorge which is the river channel over a part of the following quarter sections; NE $\frac{1}{4}$ Sec. 1, T. 10 S., R. 40 E., B. B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S., R. 40 E., B. B. & M. and SW $\frac{1}{4}$ NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. The intersection of backwater of this reservoir with channel of Bear River is at a point S. 29° 45' E. 2080 feet from Northwest Corner of the NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. There is thus impounded by this dam approximately 1800 acre feet. At this point, from the forebay thus created, natural river flow is diverted and at times of low water, natural river flow plus released stored waters are diverted into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding 1200 second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace Generating Station of the Holder, such station being situated in the southwesterly quarter of Sec. 21, T. 10 S., R. 40 E., B. B. & M. These penstocks extend across the following quarter sections; NE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$ SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, and waters under pressure from their entry into pressure boxes connected with such pressure pipes to the point of discharge at the water wheels in the Grace electric generating station aforesaid.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S., R. 40 E., B. B. & M., in Bannock County, Idaho, - the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S., R. 41 E., B. B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections; SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S., R. 40 E., B. B. & M., and NW $\frac{1}{4}$ of Sec. 18, and SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 7, and SE $\frac{1}{4}$ and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13 S., R. 41 E., B. B. & M., and SW $\frac{1}{4}$ of Sec. 31, T. 12 S., R. 41 E., B. B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,286 acre feet.

From such last mentioned reservoir, there extends to the so-called

ing capacity in excess of 4000 second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 3500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15.5 wide by 8 feet high, and discharge controls by gate 14 ft. 3 in. wide by 8 feet 10 1/2 inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 ft. 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G.E. 750 H.P. motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

Impounding of waters diverted by Holder from Bear River, plus natural run-off to such reservoir from the basin thereof, is accomplished by means of an earthen dam-dike 12,000 feet long and with average height of 20 ft. The opening through this dike for the release of impounded waters is very approximately at the center thereof, viz., a point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S., R. 44 E., B. B. & M., in Bear Lake County aforesaid, and such release is through a concrete structure 115 feet long and 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters thus permitted to flow from said reservoir are conducted by means of the so-called "Outlet Canal" northerly to Bear River. Such "Outlet Canal" extends from the release point last above mentioned through Sec. 6, T. 14 S., R. 44 E., B. B. & M. and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S., R. 44 E., B. B. & M. for a distance of approximately 8 miles to Bear River the confluence being at a point N. 44° 54' E. 3740 feet from the Southwest Corner of Sec. 6, T. 13 S., R. 44 E., B. B. & M. in said Bear Lake County, which "Outlet Canal" is 91 feet wide at the bottom; has carrying depth of 13 feet at maximum, and width of 112 feet at such level. Grade: seven tenths of one foot per mile.

The so-called "Grace Diversion Dam", on Bear River, is situated in the NE 1/4 of Sec. 1, T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, the center being at a point S. 55° 26' W. 2450 feet from the NE Corner of said Sec. 1. This dam is a rock-filled, crib structure, approximately 38 feet high with permanent fixtures for flash-boarding 8 feet above crest with crest length of 300 feet and bottom length of 145 feet. This dam is provided with proper and sufficient spillways, fish-way and many appurtenances.

It creates a forebay within the lava gorge which is the river channel over a part of the following quarter sections; NE 1/4 Sec. 1, T. 10 S., R. 40 E., B. B. & M.; SE 1/4 of Sec. 36, T. 9 S., R. 40 E., B. B. & M. and SW 1/4 NW 1/4 and NE 1/4 of Sec. 31, T. 9 S., R. 41 E., B. B. & M. The intersection of backwater of this reservoir with channel of Bear River is at a point S. 29° 45' E. 2080 feet from Northwest Corner of the NE 1/4 of Sec. 31, T. 9 S., R. 41 E., B. B. & M. There is thus impounded by this dam approximately 1800 acre feet. At this point, from the forebay thus created, natural river flow is diverted and at times of low water, natural river flow plus released stored waters are diverted into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding 1200 second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace Generating Station of the Holder, such station being situated in the southwesterly quarter of Sec. 21, T. 10 S., R. 40 E., B. B. & M. These penstocks extend across the following quarter sections; NE 1/4 NW 1/4 and SW 1/4 of Sec. 1; SE 1/4 of Sec. 2; all quarters of Sec. 11; NW 1/4 of Sec. 12; SE 1/4 of Sec. 10; NW 1/4 of Sec. 14; all quarters of Sec. 15; SE 1/4 of Sec. 16; NW 1/4 of Sec. 22, and NE 1/4 SE 1/4 and SW 1/4 of Sec. 21, all in T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, and waters under pressure from their entry into pressure boxes connected with such pressure pipes to the point of discharge at the water wheels in the Grace electric generating station aforesaid.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S., R. 40 E., B. B. & M., in Bannock County, Idaho, - the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S., R. 41 E., B. B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE 1/4 and NE 1/4 of Sec. 23; NW 1/4 of Sec. 24; SW 1/4 and SE 1/4 and NE 1/4 of Sec. 13, T. 13 S., R. 40 E., B. B. & M., and NW 1/4 of Sec. 18, and SW 1/4 and SE 1/4 and NE 1/4 of Sec. 7, and SE 1/4 and SW 1/4 and NW 1/4 of Sec. 6, T. 13 S., R. 41 E., B. B. & M., and SW 1/4 of Sec. 31, T. 12 S., R. 41 E., B. B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,286 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 26, T. 13 S., R. 40 E., B. B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

Permit No. **8962**-----

Proof of Application of Water to Beneficial Use

DEPOSITION OF WITNESS

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

Ans. **Harry L. Stoner. 30 years. Salt Lake City, Utah. Hydraulic Engineer. 133 South West Temple Street, Salt Lake City, Utah.**

Ques. 2. Are you acquainted with **Utah Power & Light Company**-----, the holder of Permit No. **8962**-----? How long have you known ~~such corporation and where~~

is its place of business?

Ans. **Yes. Several years last past. It is a corporation of Maine with principal place of business in Idaho at Grace, Bannock County.**

Ques. 3. Have you read or heard read said Permit No. **8962**-----, and are you familiar with its provisions and conditions?

Ans. **Yes. Both the original Permit No. 8962 and the amendment thereof and am familiar with its terms and conditions.**

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

Ans. -----

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

Ans. ~~More than the quantity specified in said permit. More than the quantity specified in said permit.~~

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

Ans. to Ques. 6: So far as this Proof is concerned, for power purposes. At Bear and North Lake Reservoir aforesaid and thereafter in and through the penstocks in this Deposition hereinbefore described, and under head on water-wheels, propelling electric generators, at respectively Grace and Oneida Generating Stations above-mentioned, and locations of which are hereinbefore described. At such Grace station, 50,000 H.P. and at such Oneida Station, ~~22~~ 27,500 H.P. of electrical energy are generated. Operating head at Grace, 524 feet; at Oneida, 145 feet. For further answer to this question, I hereby refer to my answers to each of the other questions of this Deposition.

Ans. ~~To the full extent of the Permit and as described in my answer to the previous question.~~

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

Ans. -----

8962

Permit No. **8962**

Proof of Application of Water to Beneficial Use

DEPOSITION OF WITNESS

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

Ans. Harry L. Stoner. 30 years. Salt Lake City, Utah. Hydraulic Engineer. 133 South West Temple Street, Salt Lake City, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the holder of Permit No. 8962? How long have you known such corporation and where

is its place of business?

Ans. Yes. Several years last past. It is a corporation of Maine with principal place of business in Idaho at Grace, Bannock County.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its provisions and conditions?

Ans. Yes. Both the original Permit No. 8962 and the amendment thereof and am familiar with its terms and conditions.

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

Ans. _____

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

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

Ans. To the full extent of the Permit and as described in my answer to the previous question.

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

Ans. _____

8962

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

Ans. ~~None whatever.~~

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

Ans. ~~Prior to my signing this deposition. By personal observation and examination. To the amounts of limits hereinabove stated. To the extent that I fully ascertained myself of the correctness of the foregoing.~~

(Sign) Harry L. Stoner

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me in ^{my office at the} ~~City of~~ Montpelier, County of Bear Lake, State of Idaho, on this Twenty-sixth day of January, A. D. 1918.

Edwin H. McBlane
Notary Public.

My commission expires

My Commission Expires March 26, 1922
Residence, Montpelier, Idaho.

8962

1730

Ans. to Ques. 4: Bear River and Bear Lake and North or Mud Lake. Diversion from Bear River to reservoir (comprising Bear Lake and North or Mud Lake) is by Stewart Dam, across Bear River, which is situate in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sec. 34, T. 13 S. R. 44 E. B. B. & M. in Bear Lake County, Idaho, and by Rainbow Canal, the intake to which is on the forebay created by such Stewart Dam, such Rainbow Canal extends southerly into said reservoir a distance of approximately four miles through Sec. 34, T. 13 S. R. 44 E. B. B. & M. and Secs. 3, 10 and 15, T. 14 S. R. 44 E., B. B. & M. in said Bear Lake County. First use of Bear River waters thus diverted, plus the natural run-off to said reservoir from the basin thereof, is made by impounding the greater part of said waters to the total extent of over 400,000 acre feet per annum, and said reservoir has thus, and to such extent, heretofore been occupied and used. Stewart Dam above mentioned, is a concrete diversion dam, of gravity overflow type, 21 feet high, with crest length of 209.5 feet and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern type fish-way. On the forebay of such Stewart Dam the intake to Rainbow Canal is situate being a concrete structure, 110 feet long and 20 feet high, provided with seven gates, each 8 feet wide by 16 feet high. The Rainbow Canal above mentioned, is 100 feet wide at bottom; has water carrying depth of 11.5 feet at maximum, and width of 120 feet at such level. Grade: 1.4 feet per mile. Flexibility of operation and use of said reservoir as a whole is accomplished by further works known as "Lifton", situated at a point on the natural Causeway between said two lakes, S. 85° 53' E. approximately 14000 feet, from the Northwest Corner of Sec. 18, T. 15 S., R. 44 E., B. B. & M. in Bear Lake County aforesaid. At "Lifton" is situate (a) intake canalway extending through said Causeway from North Lake into Bear Lake, being a canalway 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of 4000 second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 3500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15.5 wide by 8 feet high, and discharge controls by gate 14 feet 3 inches wide by 8 feet 10 $\frac{3}{4}$ inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 ft. 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G.E. 750 H.P. motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

Impounding of waters diverted by Holder from Bear River, plus natural run-off to such reservoir from the basin thereof, is accomplished by means of an earthen dam-dike 12,000 feet long and with average height of 20 ft. The opening through this dike for the release of impounded waters is very approximately at the center thereof, viz., a point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S., R. 44 E., B. B. & M., in Bear Lake County aforesaid, and such release is through a concrete structure 115 feet long and 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters thus permitted to flow from said reservoir are conducted by means of the so-called "Outlet Canal" northerly to Bear River. Such "Outlet Canal" extends from the release point last above mentioned through Sec. 6, T. 14 S., R. 44 E., B. B. & M. and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S., R. 44 E., B. B. & M. for a distance of approximately 8 miles to Bear River the confluence being at a point N. 44° 54' E. 3740 feet from the Southwest Corner of Sec. 6, T. 13 S., R. 44 E. B. B. & M. in said Bear Lake County, which "Outlet Canal" is 91 feet wide at the bottom; has carrying depth of 13 feet at maximum, and width of 112 feet at such level. Grade: seven tenths of one foot per mile.

The so-called "Grace Diversion Dam", on Bear River, is situated in the NE $\frac{1}{4}$ of Sec. 1, T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, the center being at a point S. 55° 26' W. 8450 feet from the NE Corner of said Sec. 1. This dam is a rock-filled, crib structure, approximately 38 feet high with permanent fixtures for flash-boarding 8 feet above crest with crest length of 300 feet and bottom length of 145 feet. This dam is provided with proper and sufficient spillways, fish-way and many appurten-

ances. It creates a forebay within the lava gorge which is the river channel over a part of the following quarter sections; NE $\frac{1}{4}$ Sec. 1, T. 10, S., R. 40 E., B. B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S., R. 40 E., B. B. & M. and SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. The intersection of backwater of this reservoir with channel of Bear River is at a point S. 2° 45' E. 2030 feet from Northwest Corner of the NE $\frac{1}{4}$ of Sec. 31, T. 9 S., R. 41 E., B. B. & M. There is thus impounded by this dam approximately 1800 acre feet. At this point, from the forebay thus created, natural river flow is diverted and at times of low water, natural river flow plus released stored waters are diverted into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding 1200 second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace Generating Station of the Holder, such station being situated in the southwesterly quarter of Sec. 21, T. 10 S., R. 40 E., B. B. & M. These penstocks extend across the following quarter sections; NE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22; and NE $\frac{1}{4}$ SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, and waters under pressure from their entry into pressure boxes connected with such pressure pipes to the point of discharge at the water wheels in the Grace electric generating station aforesaid.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E. B. B. & M., in Bannock County, Idaho, - the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E. B. B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S. R. 40 E. B. B. & M., and NW $\frac{1}{4}$ of Sec. 18, and SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 7, and SE $\frac{1}{4}$ and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13, S. R. 41 E. H. B. & M., and SW $\frac{1}{4}$ of Sec. 31, T. 12 S. R. 41 E. B. B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,286 acre feet.

From such last mentioned reservoir, there extends to the so-called

mentioned, is 100 feet wide at bottom; has water carrying depth of 11.5 feet at maximum, and width of 120 feet at such level. Grade: 1.4 feet per mile. Flexibility of operation and use of said reservoir as a whole is accomplished by further works known as "Lifton", situated at a point on the natural Causeway between said two lakes, S. 85° 53' E. approximately 14000 feet, from the Northwest Corner of Sec. 18, T. 15 S., R. 44 E., B. B. & M. in Bear Lake County aforesaid. At "Lifton" is situate (a) intake canalway extending through said Causeway from North Lake into Bear Lake, being a canalway 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of 4000 second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete covered building) consisting of two concrete, gravity conduits or release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high and with capacity exceeding 3500 second feet, and five 300 second foot pumping units, each operating independent of the other, and each having intake control by gate 15.5 wide by 8 feet high, and discharge controls by gate 14 feet 3 inch wide by 8 feet 10 3/4 inches high. Each unit further comprises an I. P. Morris centrifugal pump with runner 9 ft. 2 in. in diameter operating at 72.5 R.P.M. direct connected to a G.E. 750 H.P. motor. There are five such pump and motor units. Total capacity of these five units is 1500 second feet.

Impounding of waters diverted by Holder from Bear River, plus natural run-off to such reservoir from the basin thereof, is accomplished by means of an earthen dam-dike 12,000 feet long and with average height of 20 ft. The opening through this dike for the release of impounded waters is very approximately at the center thereof, viz., a point N. 64° 15' E. 8120 feet from the Southwest Corner of Sec. 18, T. 14 S., R. 44 E., B. B. & M., in Bear Lake County aforesaid, and such release is through a concrete structure 115 feet long and 18 feet high, provided with nine gates, each very approximately 8 feet wide by 15 feet high. Waters thus permitted to flow from said reservoir are conducted by means of the so-called "Outlet Canal" northerly to Bear River. Such "Outlet Canal" extends from the release point last above mentioned through Sec. 6, T. 14 S., R. 44 E., B. B. & M. and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S., R. 44 E., B. B. & M. for a distance of approximately 8 miles to Bear River the confluence being at a point N. 44° 54' E. 3740 feet from the Southwest Corner of Sec. 6, T. 13 S., R. 44 E. B. B. & M. in said Bear Lake County, which "Outlet Canal" is 91 feet wide at the bottom; has carrying depth of 13 feet at maximum, and width of 112 feet at such level. Grade: seven tenths of one foot per mile.

The so-called "Grace Diversion Dam", on Bear River, is situated in the NE 1/4 of Sec. 1, T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, the center being at a point S. 55° 26' W. 2450 feet from the NE Corner of said Sec. 1. This dam is a rock-filled, crib structure, approximately 38 feet high with permanent fixtures for flash-boarding 8 feet above crest with crest length of 300 feet and bottom length of 145 feet. This dam is provided with proper and sufficient spillways, fish-way and many appurten-

ances. It creates a forebay within the lava gorge which is the river channel over a part of the following quarter sections; NE 1/4 Sec. 1, T. 10, S., R. 40 E., B. B. & M.; SE 1/4 of Sec. 36, T. 9 S., R. 40 E., B. B. & M. and SW 1/4, NW 1/4 and NE 1/4 of Sec. 31, T. 9 S., R. 41 E., B. B. & M. The intersection of backwater of this reservoir with channel of Bear River is at a point S. 2° 45' E. 2030 feet from Northwest Corner of the NE 1/4 of Sec. 31, T. 9 S., R. 41 E., B. B. & M. There is thus impounded by this dam approximately 1800 acre feet. At this point, from the forebay thus created, natural river flow is diverted and at times of low water, natural river flow plus released stored waters are diverted into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding 1200 second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace Generating Station of the Holder, such station being situated in the southwesterly quarter of Sec. 21, T. 10 S., R. 40 E., B. B. & M. These penstocks extend across the following quarter sections; NE 1/4 NW 1/4 and SW 1/4 of Sec. 1; SE 1/4 of Sec. 2; all quarters of Sec. 11; NW 1/4 of Sec. 12; SE 1/4 of Sec. 10; NW 1/4 of Sec. 14; all quarters of Sec. 15; SE 1/4 of Sec. 16; NW 1/4 of Sec. 22, and NE 1/4 SE 1/4 and SW 1/4 of Sec. 21, all in T. 10 S., R. 40 E., B. B. & M. in Bannock County, Idaho, and waters under pressure from their entry into pressure boxes connected with such pressure pipes to the point of discharge at the water wheels in the Grace electric generating station aforesaid.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E. B. B. & M., in Bannock County, Idaho, - the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E. B. B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE 1/4 and NE 1/4 of Sec. 23; NW 1/4 of Sec. 24; SW 1/4 and SE 1/4 and NE 1/4 of Sec. 13, T. 13 S. R. 40 E. B. B. & M., and NW 1/4 of Sec. 18, and SW 1/4 and SE 1/4 and NE 1/4 of Sec. 7, and SE 1/4 and SW 1/4 and NW 1/4 of Sec. 6, T. 13, S. R. 41 E. B. B. & M., and SW 1/4 of Sec. 31, T. 12 S. R. 41 E. B. B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,286 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the

Permit No. 8962

Proof of Application of Water to Beneficial Use

DEPOSITION OF WITNESS

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

Ans. Alma H. Chambers. 35 years. Logan, Utah. Civil & Hydraulic Engineer. Logan, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the

holder of Permit No. 8962? How long have you known such corporation and where
is its place of business?

Ans. Yes. Several years last past. It is a corporation of Maine with
principal place of business in Idaho at Grace, Bannock County.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its provisions and conditions?

Ans. Yes. Both the original Permit No. 8962 and the amendment there-
of and am familiar with its terms and conditions.

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

Ans.

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

Ans. More than the quantity specified in said permit. More than the
quantity specified in said permit.

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

Ans. to Ques. 6: So far as this Proof is concerned, for power purposes. At Bear and North Lake Reservoir aforesaid and thereafter in and through the penstocks in this Deposition hereinbefore described, and under head on water-wheels, propelling electric generators, at respectively Grace and Oneida Generating Stations above-mentioned, and locations of which are hereinbefore described. At such Grace station, 50,000 H.P. and at such Oneida Station, ~~27~~ 27,500 H.P. of electrical energy are generated. Operating head at Grace, 524 feet; at Oneida, 145 feet. For further answer to this question, I hereby refer to my answers to each of the other questions of this Deposition.

Ans. To the full extent of the Permit and as described in my answer
to the previous question.

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

Ans.

8962

Permit No. 8962

Proof of Application of Water to Beneficial Use

DEPOSITION OF WITNESS

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

Ans. Alma H. Chambers. 35 years. Logan, Utah. Civil & Hydraulic Engineer. Logan, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the

holder of Permit No. 8962? How long have you known such corporation and where
is its place of business?

Ans. Yes. Several years last past. It is a corporation of Maine with
principal place of business in Idaho at Grace, Bannock County.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its provisions and conditions?

Ans. Yes. Both the original Permit No. 8962 and the amendment there-
of and am familiar with its terms and conditions.

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

Ans.

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

Ans.

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

Ans. To the full extent of the Permit and as described in my answer
to the previous question.

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

Ans.

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

Ans. None whatever.

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

Ans. Prior to my signing this deposition. By personal observation and examination. To the amounts of limits hereinabove stated. To the extent that I fully assured myself of the correctness of the foregoing.

(Sign)

Alma H. Chamberlain

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me in my office at Montpelier, County of Bear Lake, State of Idaho, on this Twenty-sixth day of January, A. D. 1918.

Edwin L. McNamee

Notary Public.

My commission expires

My Commission Expires March 8th 1920.
Residence, Montpelier, Idaho.

8362

Ans. to Ques. 8. The Holder has two important canals, of large capacity, diverting waters of Bear River, in Bear Lake County, Idaho, to its reservoir, comprising Bear and North Lakes, but on account their large carrying capacities, it is deemed necessary by Holder under this Proof to offer description of one of these canals and accompanying diverting works only, as the diverting and carrying capacity of such works far exceeds the maximum limit as fixed by this Permit, No. 8962. The Holder, therefore, elects to offer under this Proof its so-called "Stewart and Rainbow intake works", comprising the so-called "Stewart Dam" across Bear River, and its intake canal known as "the Rainbow Canal", together with all appurtenances. This Stewart Dam is situate in the southeast quarter of the northeast quarter of Sec. 34, T. 13 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid. It is a concrete diversion dam, of gravity overflow type, 21 feet high, with crest length of 209.5 feet and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the forebay of such Stewart Dam, the intake to Rainbow Canal is situate, being a concrete structure, 110 feet long and 20 feet high, provided with seven openings, each 8 feet wide by 16 feet high. From this intake the Rainbow Canal extends southerly, into the reservoir (North and Bear Lake Reservoir) a distance of approximately four miles, through Sec. 34, T. 13 S. R. 44 E.B.B. & M., and Secs. 3, 10 and 15, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid. This Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. The Holder has constructed, occupies and uses an intake canal-way, connecting North and Bear Lakes, and situate through the Causeway between such two lakes. This inlet canal-way, and the Outlet conduits next described and the pumping units next mentioned all comprise works known as "Lifton". The intake canal-way through the Causeway is 200 feet wide and 15 feet deep and has a maximum carrying capacity in excess of four thousand second feet. The outlet conduits above mentioned are two concrete, gravity release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet. At this same point Holder has constructed a tile, concrete-covered building, housing five 300 second foot pumping units, each independent of the other in its operation, and each having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{3}{4}$ inches high. Each such unit comprises an I. P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G. E. 750 H.P. motor. There are many suitable controlling and regulating devices and appurtenances. There are five such pump and motor units. The total capacity of these five pumping units is fifteen hundred second feet. All are completed, each has been operated to capacity for test purposes, and all are operative at the will of the Holder. These Lifton works are situate at a point S. 85° 53' E. approximately fourteen thousand feet from the northwest corner of Sec. 18, T. 15 S. R. 44 E.B.B. & M., in Bear Lake County, Idaho. The impounding of the natural run-off of the basin of said reservoir, plus waters diverted thereto from Bear River by the works of Holder, is accomplished by a dam-dyke, the center of which is at a point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid. This is an earthen dyke, twelve thousand feet long, with an average height of 20 feet. The opening through this dyke, for releasing of waters, is by a concrete structure, 115 feet long by 18 feet high, provided with 9 openings, each very approximately 8 feet wide by 15 feet high. Waters permitted to flow through such last mentioned release-works are conducted by the so-called "Outlet Canal" northerly to Bear River. This Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile. Water carrying capacity in excess of fifteen hundred second feet. Such Outlet Canal extends from the point of release last above mentioned northerly through Sec. 6, T. 14 S. R. 44 E.B.B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B. & M., for a distance of approximately eight miles to Bear River, the confluence being at a point N. 44° 54' E., 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid.

The "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center being at a point S. 55° 26' W., 2450 feet from the northeast corner of said Sec. 1. This is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-boarding 8 feet above crest. The crest length is very approximately 300 feet and the bottom length is 145 feet. There is a proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S. R. 41 E.B.B. & M., all in Bannock County aforesaid.

There is thus impounded by this dam approximately eighteen hundred twenty-six acre feet. From the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly across the following quarter sections: NE $\frac{1}{4}$, NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity overflow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east

This inlet canal-way, and the Outlet conduits next described and the pumping units next mentioned all comprise works known as "Lifton". The intake canal-way through the Causeway is 200 feet wide and 15 feet deep and has a maximum carrying capacity in excess of four thousand second feet. The outlet conduits above mentioned are two concrete, gravity release-ways, one 10 feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet. At this same point Holder has constructed a tile, concrete-covered building, housing five 300 second foot pumping units, each independent of the other in its operation, and each having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{3}{4}$ inches high. Each such unit comprises an I. P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G. E. 750 H.P. motor. There are many suitable controlling and regulating devices and appurtenances. There are five such pump and motor units. The total capacity of these five pumping units is fifteen hundred second feet. All are completed, each has been operated to capacity for test purposes, and all are operative at the will of the Holder. These Lifton works are situate at a point S. 85° 53' E. approximately fourteen thousand feet from the northwest corner of Sec. 18, T. 15 S. R. 44 E.B.B. & M., in Bear Lake County, Idaho. The impounding of the natural run-off of the basin of said reservoir, plus waters diverted thereto from Bear River by the works of Holder, is accomplished by a dam-dyke, the center of which is at a point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid. This is an earthen dyke, twelve thousand feet long, with an average height of 20 feet. The opening through this dyke, for releasing of waters, is by a concrete structure, 115 feet long by 18 feet high, provided with 9 openings, each very approximately 8 feet wide by 15 feet high. Waters permitted to flow through such last mentioned release-works are conducted by the so-called "Outlet Canal" northerly to Bear River. This Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile. Water carrying capacity in excess of fifteen hundred second feet. Such Outlet Canal extends from the point of release last above mentioned northerly through Sec. 6, T. 14

S. R. 44 E.B.B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B. & M., for a distance of approximately eight miles to Bear River, the confluence being at a point N. 44° 54' E., 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid.

The "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, - the center being at a point S. 55° 26' W., 2450 feet from the northeast corner of said Sec. 1. This is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for flash-boarding 8 feet above crest. The crest length is very approximately 300 feet and the bottom length is 145 feet. There is a proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE $\frac{1}{4}$ of Sec. 1; T. 10 S. E. 40 E.B.B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S. R. 41 E.B.B. & M., all in Bannock County aforesaid.

There is thus impounded by this dam approximately eighteen hundred twenty-six acre feet. From the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately five miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly across the following quarter sections: NE $\frac{1}{4}$, NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, - the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S. R. 40 E.B. & M.; and NW $\frac{1}{4}$ of Sec. 18, and SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 7, and SE $\frac{1}{4}$ and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13 S. R. 41 E.B.B. & M., and SW $\frac{1}{4}$ of Sec. 31, T. 12 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,280 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E.B.H. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet. The total cost of these works exceeds the sum of one million dollars.

Proof of Completion of Works

DEPOSITION OF HOLDER

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

Ans. George R. Corey. 31 years. Salt Lake City, Utah. Hydraulic Engineer. P.O. Box 1393, Salt Lake City, Utah.

Ques. 2. If acting in behalf of a corporation, state its name, principal place of business, your position with reference to same, and your authority for appearing in its behalf.

Ans. Utah Power & Light Company. In Idaho, at Grace, Bannock County. A hydraulic engineer in its employ. Duly adopted resolution of its Board of Directors.

Ques. 3. State number and date of permit, amount of water you are authorized to divert, source, and point of diversion.

Ans. to Quest. 3. No. 8962, amended. Application first received in office of State Engineer of Idaho at 11:20 A.M., on September 11, 1912; approved as a Permit on January 28, 1913. The equivalent of three thousand cubic feet per second, continuous flow (1) from Bear River, the equivalent of twenty-five hundred cubic feet per second continuous flow; (2) from Bear Lake the equivalent of three hundred cubic feet per second continuous flow; (3) from North or Mud Lake the equivalent of two hundred cubic feet per second continuous flow. Under this Proof, the points of diversion are as follows: (a) from Bear River, in Bear Lake County, Idaho, at a point on said river in the southeast quarter of the northeast quarter of Sec. 34, T. 13 S. R. 44 E.B.B. & M., which is S. 12° 36' W., approximately fourteen hundred feet from the northeast corner of Sec. 34, T. 13 S. R. 44 E.B.B. & M.; (b) from Bear Lake, at a point in Bear Lake County, Idaho, which is S. 85° 53' E., fourteen thousand six feet from the northwest corner of Sec. 18, T. 15 S. R. 44 E.B.B. & M.; (c) from North or Mud Lake at a point in Bear Lake County, Idaho, which is N. 64° 15' E., eight thousand one hundred twenty feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., which last mentioned point is the releasing point from the reservoir comprising both Bear and North or Mud Lakes; (d) from Bear River, in Bannock County, Idaho, at a point in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., which is S. 55° 26' W. two thousand four hundred fifty feet from the northeast corner of said Sec. 1; (e) from Bear River, in Bannock County, Idaho, in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., at a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E.B.B. & M. bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

8962

Ans. _____

(Sign here.)

George R. Corey

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, in my office at The City of Montpelier, County of Bear Lake, State of Idaho, on this Twenty sixth day of January A. D. 1918.

Edwin M. Blaine
Notary Public.

My Commission expires _____

My Commission Expires March 28 1920.
Montpelier, Idaho.

8962

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~~Ans. Under this Proof, for Power purposes.~~

Ans.

Ans.

Geo. R. Corby.

Edwin M. Lane
Notary Public.

Notary Public.

My Commission expires _____

My Certificate Expires March 10, 1923.
Saskatoon, Manitoba, Canada.

8942

Ans. to Ques. 6. The works for diversion of Bear River waters to North and Bear Lakes have a greater carrying capacity than twenty-five hundred second feet, the capacity of the Rainbow Canal only being in excess of four thousand second feet. The Outlet Canal from the reservoir (North and Bear Lakes), for release of impounded waters, has carrying capacity in excess of fifteen hundred second feet. The so-called Stewart Dam, across Bear River, at intake to said Rainbow Canal, is situate in the southeast quarter of the northeast quarter of Sec. 34, T. 13 S. R. 44 E., B.B. & M., in Bear Lake County, Idaho. The Rainbow Canal extends southerly into the reservoir (North and Bear Lake Reservoir) a distance of approximately four miles, through Sec. 34, T. 13 S. R. 44 E.B.B. & M. and Secs. 3, 10 and 15, T. 14 S. R. 44 E.B.B. & M., in said Bear Lake County. The Outlet Canal aforesaid extends from a point at the northerly end of said reservoir, N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M. in said Bear Lake County, northerly through Sec. 6, T. 14 S. R. 44 E.B.B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B. & M., for a distance of approximately eight miles to Bear River, the confluence being at a point N. 44° 54' E. 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E.B.B. & M., in said Bear Lake County.

Stewart Dam above mentioned is a concrete diversion dam, of over-flow type, 21 feet high, and with crest length of 209.5 feet, and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the fore-bay of such Stewart Dam, the intake to Rainbow Canal is situate, - being a concrete structure, 110 feet long and 20 feet high, provided with seven openings, each 8 feet wide by 16 feet high. The Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Waters flowing into said reservoir from the basin thereof, plus waters diverted thereto by works of the Holder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile.

Inside said reservoir-site, on the Natural Causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situate additional impounding and releasing works, known as a whole as "Lifton". These works consist of (a) intake canal-way extending from North Lake through such Causeway into Bear Lake, which canal-way is 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of four thousand second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete-covered building), consisting of two concrete gravity conduits or release-ways, one ten feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet, and five 300 second foot pumping units, each unit being independent, and having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{1}{2}$ inches high. Each unit further comprises an I.P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G.E. 750 H.P. motor. There are five such pump and motor units. Total capacity of the five pumping units is fifteen hundred second feet.

The so-called "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, - the center being at a point S. 55° 26' W. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for

flash-boarding 8 feet above crest, with crest length of 300 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S. R. 41 E.B.B. & M. There is thus impounded by this dam approximately eighteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace generating station of the Holder, such station being situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E.B.B. & M. These penstocks extend across the following quarter sections: NE $\frac{1}{4}$, NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, - the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 182 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec.

depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Waters flowing into said reservoir from the basin thereof, plus waters diverted thereto by works of the Holder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile.

Inside said reservoir-site, on the Natural Causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situate additional impounding and releasing works, known as a whole as "Lifton". These works consist of (a) intake canal-way extending from North Lake through such Causeway into Bear Lake, which canal-way is 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of four thousand second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete-covered building), consisting of two concrete gravity conduits or release-ways, one ten feet wide by 13 feet high and the other 20 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet, and five 300 second foot pumping units, each unit being independent, and having intake control by gate 18.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{1}{2}$ inches high. Each unit further comprises an I.P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G.E. 750 H.P. motor. There are five such pump and motor units. Total capacity of the five pumping units is fifteen hundred second feet.

The so-called "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, - the center being at a point S. 55° 26' W. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for

flash-boarding 8 feet above crest, with crest length of 300 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S. R. 41 E.B.B. & M.

There is thus impounded by this dam approximately eighteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace generating station of the Holder, such station being situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E.B.B. & M. These penstocks extend across the following quarter sections: NE $\frac{1}{4}$, NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, - the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S. R. 40 E.B. & M., and NW $\frac{1}{4}$ of Sec. 18, and SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 7, and SE $\frac{1}{4}$ and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13 S. R. 41 E.B.B. & M., and SW $\frac{1}{4}$ of Sec. 31, T. 12 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,280 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E.B.B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

The Depositions of two Witnesses, in this form, taken separately, required in each case.

PERMIT NO. 8962

Proof of Completion of Works

DEPOSITION OF WITNESS

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

Ans. H. Lewis Rasmason. 39 years. Salt Lake City. Civil, Hydraulic and Electrical Engineer. 508 Boston Building, Salt Lake City, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the original and amended holder of Permit No. 8962, authorizing the diversion of the equivalent of 2500 second-feet of the waters of Bear River, and 300 s.f. from Bear Lake, and 300 s.f. from North Lake, at points specified in such Permit, in Bear Lake County, Idaho. for power purposes? How long have you known him and where does he reside? such corporation?

Ans. approximately five years. It is a corporation of Maine; has an office at Grace, Idaho.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its terms and conditions?

Ans. Yes; both the original and amended Permit No. 8962.

Ques. 4. (If for irrigation purposes). Are you acquainted with the land proposed to be irrigated under said permit? If so, describe same, state its character, and give your estimate of the amount of water required for its profitable cultivation.

Ans. _____

Ques. 5. Are the works of diversion fully completed and of sufficient capacity to convey the entire amount of water set out in the permit from point of diversion to place of use?

Ans. Yes. Yes.

Ques. 6. Describe the works of diversion as they now exist, and give your estimate of their capacity.

Ans. _____

(Sign here.) H. Lewis Rasmason

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in the City of Montpelier, County of Bear Lake, State of Idaho, on this Twenty - sixth day of

January, A. D. 1918.

Edwin L. McClave
Notary Public

8962

The Depositions of two Witnesses, in this form, taken separately, required in each case.

PERMIT NO. 8962

Proof of Completion of Works

DEPOSITION OF WITNESS

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

Ans. Harry L. Stoner. 30 years. Salt Lake City, Utah. Hydraulic Engineer. 133 South West Temple Street, Salt Lake City, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the original and amended holder of Permit No. 8962, authorizing the diversion of the equivalent of 2500 second-feet of the waters of

Bear River, and 300 s.f. from Bear Lake, and 200 s.f. from North Lake, at points specified in such Permit, in Bear Lake County, Idaho, for power purposes? How long have you known him, and where does he reside? such corporation?

Ans. approximately five years. It is a corporation of Maine; has an office at Grace, Idaho.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its terms and conditions?

Ans. Yes; both the original and amended Permit No. 8962.

Ques. 4. (If for irrigation purposes). Are you acquainted with the land proposed to be irrigated under said permit? If so, describe same, state its character, and give your estimate of the amount of water required for its profitable cultivation.

Ans. _____

Ques. 5. Are the works of diversion fully completed and of sufficient capacity to convey the entire amount of water set out in the permit from point of diversion to place of use?

Ans. Yes. Yes.

Ques. 6. Describe the works of diversion as they now exist, and give your estimate of their capacity.

Ans. _____

(Sign here.)

Harry L. Stoner

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in the City of Montpelier, County of Bear Lake, State of Idaho, on this Twenty - sixth day of

January

A. D. 1918

Esquivel M. Clave
Notary Public.

My Commission Expires _____

8962

Witnesses, _____

Ans. to ques. 6. The works for diversion of Bear River waters to North and Bear lakes have a greater carrying capacity than twenty-five hundred second feet, the capacity of the Rainbow Canal only being in excess of four thousand second feet. The Outlet Canal from the reservoir (North and Bear lakes), for release of impounded waters, has carrying capacity in excess of fifteen hundred second feet. The so-called Stewart Dam, across Bear River, at intake to said Rainbow Canal, is situated in the southeast quarter of the northeast quarter of Sec. 34, T. 13 S. R. 44 E. B. B. & M., in Bear Lake County, Idaho. The Rainbow Canal extends southerly into the reservoir (North and Bear Lake Reservoir) a distance of approximately four miles, through Sec. 34, T. 13 S. R. 44 E. B. B. & M. and Secs. 3, 10 and 15, T. 14 S. R. 44 E. B. B. & M., in said Bear Lake County. The Outlet Canal aforesaid extends from a point at the northerly end of said reservoir, N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E. B. B. & M., in said Bear Lake County, northerly through Sec. 6, T. 14 S. R. 44 E. B. B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E. B. B. & M., for a distance of approximately eight miles to Bear River, the confluence being at a point N. 44° 54' E. 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E. B. B. & M., in said Bear Lake County.

Stewart Dam above mentioned is a concrete diversion dam, of over-flow type, 21 feet high, and with crest length of 209.5 feet, and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the fore-bay of such Stewart Dam, the intake to Rainbow Canal is situated, being a concrete structure, 110 feet long and 30 feet high, provided with seven openings, each 8 feet wide by 16 feet high. The Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Waters flowing into said reservoir from the basin thereof, plus waters diverted thereto by works of the Holder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E. B. B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seventenths of one foot per mile.

Inside said reservoir-site, on the Natural Causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situated additional impounding and releasing works, known as a whole as "Lifton". These works consist of (a) intake canal-way extending from North Lake through such Causeway into Bear Lake, which canal-way is 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of four thousand second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete-covered building), consisting of two concrete gravity conduits or release-ways, one ten feet wide by 13 feet high and the other 10 feet wide by 15 feet high, and with capacity exceeding thirty-five hundred second feet, and five 300 second foot pumping units, each unit being independent, and having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10½ inches high. Each unit further comprises an I.P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G.E. 750 H.P. motor. There are five such pump and motor units. Total capacity of the five pumping units is fifteen hundred second feet.

The so-called "Grace Diversion Dam", on Bear River, is situated in the northeast quarter of Sec. 1, T. 10 S. R. 40 E. B. B. & M., in Bannock County, Idaho, the center being at a point 3. 55° 26' N. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled crib structure, approximately 38 feet high, with permanent fixtures for

flash-boarding 8 feet above crest, with crest length of 300 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NW¼ of Sec. 1, T. 10 S. R. 40 E. B. B. & M.; SE¼ of Sec. 36, T. 9 S. R. 40 E. B. B. & M.; NW¼ and NE¼ of Sec. 31, T. 9 S. R. 41 E. B. B. & M. There is thus impounded by this dam approximately fifteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace generating station of the Holder, such station being situated in the southwest quarter of Sec. 21, T. 10 S. R. 40 E. B. B. & M. These penstocks extend across the following quarter sections: NW¼, NW¼ and SW¼ of Sec. 1; SE¼ of Sec. 2; all quarters of Sec. 11; NW¼ of Sec. 13; SE¼ of Sec. 10; NW¼ of Sec. 14; all quarters of Sec. 15; SE¼ of Sec. 16; NW¼ of Sec. 22, and NW¼, SE¼ and SW¼ of Sec. 21, all in T. 10 S. R. 40 E. B. B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Onida Dam", on Bear River, is situated in the southeast quarter of Sec. 23, T. 13 S. R. 40 E. B. B. & M., in Bannock County, Idaho, the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 128 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situated at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E. B. B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE¼ and NW¼ of Sec. 1, T. 13 S. R. 41 E. B. B. & M., in said Bannock County.

Flash-docking 8 feet above crest, with crest length of 300 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NW $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E. B. 4 M.; SE $\frac{1}{4}$ of Sec. 26, T. 9 S. R. 41 E. B. 4 M.; NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S. R. 41 E. B. 4 M. There is thus impounded by this dam approximately eighteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored water is diverted, into two penstocks, one 6 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace Generating station of the Holder, such station being situated in the southwest quarter of Sec. 21, T. 10 S. R. 40 E. B. 4 M. These penstocks extend across the following quarter sections: NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; NW $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 18; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E. B. 4 M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder. The so-called "Grace Dam", on Bear River, is situated in the south-east quarter of Sec. 23, T. 13 S. R. 40 E. B. 4 M., in Bannock County, Idaho, - the center of such dam being N. 55. 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 25. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 269 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situated at a point N. 48. 17' E. 1165 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E. B. 4 M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 13, T. 13 S. R. 40 E. B. 4 M.; NW $\frac{1}{4}$ of Sec. 18, and NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 7, and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13 S. R. 41 E. B. 4 M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,280 acre feet. From such last mentioned reservoir, there extends to the so-called "Onida Generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2544 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Onida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 20, T. 13 S. R. 40 E. B. 4 M., in said Bannock County, bears S. 74. 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

The so-called "Grace Diversion Dam", on Bear River, is situated in the northeast quarter of Sec. 1, T. 10 S. R. 40 E. B. 4 M., in Bannock County, Idaho, - the center being at a point 3. 55. 86' W. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled crib structure, approximately 26 feet high, with permanent fixtures for such pump and motor units. Total capacity of the five pumping units is 72.5 r.p.m., direct connected to a 600 H.P. motor. There are five centrifugal pumps, with runner 2 feet 2 inches in diameter, operating at 8 feet 10 inches high. Each unit further comprises an I.P. motor, wide by 8 feet high and discharge control by gate 14 feet 3 inches wide each unit being independent, and having intake control by gate 15.5 feet thirty-five hundred second feet, and five 300 second foot pumping units, the other 10 feet wide by 15 feet high, and with capacity exceeding gravity conduits or release-ways, one ten feet wide by 15 feet high and housed in a tile, concrete-covered building, consisting of two concrete thousand second feet; and (b) a concrete releasing and pumping station by 15 feet deep, and having maximum carrying capacity in excess of four thousand such capacity into Bear Lake, which canal-way is 200 feet wide through works consist of (a) intake canal-way extending from North Lake to the natural reservoir-site, on the natural causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situated approximately 13 feet at maximum, and with 112 feet at such level. Grade: seven-tenths of one foot per mile. Inside said reservoir-site, the natural causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situated approximately 13 feet at maximum, and with 112 feet at such level. Grade: seven-tenths of one foot per mile. The outlet canal is 91 feet wide on bottom; water carrying depth, by 15 feet high. Impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide approximately 20 feet. The opening through this dyke for release of water, in Bear Lake County aforesaid, is 12,000 feet long; average height, 5. 5120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E. B. 4 M., founded therein by a dyke (center of this dyke is at point N. 64. 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E. B. 4 M., therefor, plus waters diverted thereto by works of the Holder, are impounded flowing into said reservoir from the basin 1.4 feet per mile. Waters flowing into said reservoir from the basin depth, 11.5 feet at maximum, and with 120 feet at such level. Grade: approximately 20 feet at maximum, and with 115 feet at such level. Grade: seven-tenths of one foot per mile. The outlet canal is 91 feet wide on bottom; water carrying depth, by 15 feet high. Impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide approximately 20 feet. The opening through this dyke for release of water, in Bear Lake County aforesaid, is 12,000 feet long; average height, 5. 5120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E. B. 4 M., founded therein by a dyke (center of this dyke is at point N. 64. 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E. B. 4 M., therefor, plus waters diverted thereto by works of the Holder, are impounded flowing into said reservoir from the basin 1.4 feet per mile. Waters flowing into said reservoir from the basin depth, 11.5 feet at maximum, and with 120 feet at such level. Grade: approximately 20 feet at maximum, and with 115 feet at such level. Grade: seven-tenths of one foot per mile.

The Depositions of two Witnesses, in this form, taken separately, required in each case.

PERMIT NO. 8962

Proof of Completion of Works

DEPOSITION OF WITNESS

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

Ans. Alma H. Chanters. 35 years. Logan, Utah. Civil and Hydraulic Engineer. Logan, Utah.

Ques. 2. Are you acquainted with Utah Power & Light Company, the original and amended holder of Permit No. 8962, authorizing the diversion of the equivalent of 2500 second-feet of the waters of Bear River, and 300 s.f. from Bear Lake, and 200 s.f. from North Lake, at points specified in such Permit, in Bear Lake County, Idaho, for power purposes? How long have you known ~~him and where does he reside~~ such corporation?

Ans. Approximately five years. It is a corporation of Maine; has an office at Grace, Idaho.

Ques. 3. Have you read or heard read said Permit No. 8962, and are you familiar with its terms and conditions?

Ans. Yes; both the original and amended Permit No. 8962.

Ques. 4. (If for irrigation purposes). Are you acquainted with the land proposed to be irrigated under said permit? If so, describe same, state its character, and give your estimate of the amount of water required for its profitable cultivation.

Ans. _____

Ques. 5. Are the works of diversion fully completed and of sufficient capacity to convey the entire amount of water set out in the permit from point of diversion to place of use?

Ans. Yes. Yes.

Ques. 6. Describe the works of diversion as they now exist, and give your estimate of their capacity.

Ans. _____

(Sign here.) Alma H. Chanters

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in The City of Montpelier, County of Bear Lake, State of Idaho, on this Twenty-sixth day of January, A. D. 1918.

Edwin J. McBlane
Notary Public.

My Commission Expires March 6th 1920.

8962

Residence, Montpelier, Idaho.

Secs. 6. The works for diversion of Bear River waters to North and Bear Lakes have a greater carrying capacity than twenty-five hundred second feet, the capacity of the Rainbow Canal only being in excess of four thousand second feet. The Outlet Canal from the reservoir (North and Bear Lakes), for release of impounded waters, has carrying capacity in excess of fifteen hundred second feet. The so-called Stewart Dam, across Bear River, at intake to said Rainbow Canal, is situate in the southeast quarter of the northeast quarter of Sec. 34, T. 13 S. R. 44 E., B.B. & M., in Bear Lake County, Idaho. The Rainbow Canal extends southerly into the reservoir (North and Bear Lake Reservoir) a distance of approximately four miles, through Sec. 34, T. 13 S. R. 44 E.B.B. & M. and Secs. 3, 10 and 15, T. 14 S. R. 44 E.B.B. & M., in said Bear Lake County. The Outlet Canal aforesaid extends from a point at the northerly end of said reservoir, N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M. in said Bear Lake County, northerly through Sec. 6, T. 14 S. R. 44 E.B.B. & M., and Secs. 31, 30, 19, 18, 7 and 6, T. 13 S. R. 44 E.B.B. & M., for a distance of approximately eight miles to Bear River, the confluence being at a point N. 44° 54' E. 3740 feet from the southwest corner of Sec. 6, T. 13 S. R. 44 E.B.B. & M., in said Bear Lake County.

Stewart Dam above mentioned is a concrete diversion dam, of over-flow type, 21 feet high, and with crest length of 209.5 feet, and with like bottom length. It is fitted with five steel gates, 16 feet high by 25 feet wide, and one steel gate 10 feet high by 35 feet wide, and a modern-type fish-way. On the fore-bay of such Stewart Dam, the intake to Rainbow Canal is situate, - being a concrete structure, 110 feet long and 20 feet high, provided with seven openings, each 8 feet wide by 16 feet high. The Rainbow Canal is 100 feet wide at bottom; water carrying depth, 11.5 feet at maximum, and width 120 feet at such level. Grade: 1.4 feet per mile. Waters flowing into said reservoir from the basin thereof, plus waters diverted thereto by works of the Holder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile.

Inside said reservoir-site, on the Natural Causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situate additional impounding and releasing works, known as a whole as "Lifton". These works consist of (a) intake canal-way extending from North Lake through such Causeway into Bear Lake, which canal-way is 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of four thousand second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete-covered building), consisting of two concrete gravity conduits or release-ways, one ten feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet, and five 300 second foot pumping units, each unit being independent, and having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{3}{4}$ inches high. Each unit further comprises an I.P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G.E. 750 H.P. motor. There are five such pump and motor units. Total capacity of the five pumping units is fifteen hundred second feet.

The so-called "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, - the center being at a point S. 55° 26' W. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for

flash-boarding 8 feet above crest, with crest length of 300 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S. R. 41 E.B.B. & M.

There is thus impounded by this dam approximately eighteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace generating station of the Holder, such station being situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E.B.B. & M. These penstocks extend across the following quarter sections: NE $\frac{1}{4}$, NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, - the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S. R. 40 E.B.

thereof, plus waters diverted thereto by works of the Holder, are impounded therein by a dyke (center of this dyke is at point N. 64° 15' E. 8120 feet from the southwest corner of Sec. 18, T. 14 S. R. 44 E.B.B. & M., in Bear Lake County aforesaid), 12,000 feet long; average height, approximately 20 feet. The opening through this dyke for release of impounded waters is by concrete structure, 115 feet long and 18 feet high, provided with nine openings, each very approximately 8 feet wide by 15 feet high.

The Outlet Canal is 91 feet wide on bottom; water carrying depth, 13 feet at maximum, and width 112 feet at such level. Grade: seven-tenths of one foot per mile.

Inside said reservoir-site, on the Natural Causeway extending from St. Charles to Hot Springs, in said Bear Lake County, is situate additional impounding and releasing works, known as a whole as "Lifton". These works consist of (a) intake canal-way extending from North Lake through such Causeway into Bear Lake, which canal-way is 200 feet wide by 15 feet deep, and having maximum carrying capacity in excess of four thousand second feet; and (b) a concrete releasing and pumping station (housed in a tile, concrete-covered building), consisting of two concrete gravity conduits or release-ways, one ten feet wide by 13 feet high and the other 10 feet wide by 13 feet high, and with capacity exceeding thirty-five hundred second feet, and five 300 second foot pumping units, each unit being independent, and having intake control by gate 15.5 feet wide by 8 feet high and discharge control by gate 14 feet 3 inches wide by 8 feet 10 $\frac{3}{4}$ inches high. Each unit further comprises an I.P. Morris centrifugal pump, with runner 9 feet 2 inches in diameter, operating at 72.5 r.p.m., direct connected to a G.E. 750 H.P. motor. There are five such pump and motor units. Total capacity of the five pumping units is fifteen hundred second feet.

The so-called "Grace Diversion Dam", on Bear River, is situate in the northeast quarter of Sec. 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, - the center being at a point S. 55° 26' W. 2450 feet from the northeast corner of said Sec. 1. This dam is a rock-filled-crib structure, approximately 38 feet high, with permanent fixtures for

flash-boarding 8 feet above crest, with crest length of 300 feet and bottom length of 145 feet. There is also proper spillway, fish-way, etc. This dam creates a forebay within the lava gorge, which is the river channel, over a part of the following quarter sections: NE $\frac{1}{4}$ of Sec. 1, T. 10 S. R. 40 E.B.B. & M.; SE $\frac{1}{4}$ of Sec. 36, T. 9 S. R. 40 E.B.B. & M.; SW $\frac{1}{4}$, NW $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 31, T. 9 S. R. 41 E.B.B. & M.

There is thus impounded by this dam approximately eighteen hundred acre feet. At this point, from the forebay created by such last mentioned dam, natural river flow is diverted, and at times of low waters natural river flow plus released stored waters is diverted, into two penstocks, one 8 feet 4 inches in diameter and the other 11 feet in diameter, each approximately 5 miles long, and with a combined capacity exceeding twelve hundred second feet. These penstocks extend southwesterly from said last mentioned forebay to the Grace generating station of the Holder, such station being situate in the southwest quarter of Sec. 21, T. 10 S. R. 40 E.B.B. & M. These penstocks extend across the following quarter sections: NE $\frac{1}{4}$, NW $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 1; SE $\frac{1}{4}$ of Sec. 2; all quarters of Sec. 11; NW $\frac{1}{4}$ of Sec. 12; SE $\frac{1}{4}$ of Sec. 10; NW $\frac{1}{4}$ of Sec. 14; all quarters of Sec. 15; SE $\frac{1}{4}$ of Sec. 16; NW $\frac{1}{4}$ of Sec. 22, and NE $\frac{1}{4}$, SE $\frac{1}{4}$ and SW $\frac{1}{4}$ of Sec. 21, all in T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, and water is under pressure from its entry into pressure boxes, connecting with said pressure pipes, to the point of discharge at the water wheels in the Grace electric generating station aforesaid of Holder.

The so-called "Oneida Dam", on Bear River, is situate in the southeast quarter of Sec. 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, - the center of such dam being N. 53° 15' E. three thousand five hundred fifteen and four-tenths feet from the southwest corner of said Sec. 23. This dam is concrete, gravity over-flow type, 122 feet high, with crest length of 389 feet and bottom length of 110 feet. To the east of this dam, the Holder has constructed an earthen dyke, 60 feet high and approximately 1175 feet long. This dam and dyke create a reservoir, the back water line of which (at Bear River channel) is situate at a point N. 48° 17' E. 1185 feet from the northwest corner of Sec. 6, T. 13 S. R. 41 E.B.B. & M., in said Bannock County. This reservoir covers wholly or in part the following quarter sections: SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 23; NW $\frac{1}{4}$ of Sec. 24; SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 13, T. 13 S. R. 40 E.B. & M., and NW $\frac{1}{4}$ of Sec. 18, and SW $\frac{1}{4}$ and SE $\frac{1}{4}$ and NE $\frac{1}{4}$ of Sec. 7, and SE $\frac{1}{4}$ and SW $\frac{1}{4}$ and NW $\frac{1}{4}$ of Sec. 6, T. 13 S. R. 41 E.B.B. & M., and SW $\frac{1}{4}$ of Sec. 31, T. 12 S. R. 41 E.B.B. & M., all in Bannock County aforesaid. The impounding capacity of said reservoir is 19,280 acre feet.

From such last mentioned reservoir, there extends to the so-called "Oneida generating station" of the Holder, a riveted steel penstock, 16 feet inside diameter, 2344 feet long, on grade of 2.38 feet per 100 feet, terminating in a perpendicular steel surge tank, 40 feet in diameter and 129 feet high, from which surge tank the water wheels and generating units are served. The flow to the pipe line is controlled by a steel gate, 16 feet by 16 feet, with steel guides, set in concrete supports. Such gate is fitted with suitable controlling devices. There are many fixtures and appurtenances to the main structure above described, all completed, in use and with capacities sufficient to divert and convey thirty-three hundred second feet of water from the river and reservoir above mentioned down to the final point of use at "Oneida power generating station" of the Holder. The intake to the penstock above mentioned is at a point whence the northwest corner of Sec. 26, T. 13 S. R. 40 E.B.B. & M., in said Bannock County, bears S. 74° 30' W., three thousand nine hundred ninety-six and thirty-one one-hundredths feet.

Montpelier, Idaho, January 26, 1918.

Hon. J.H. Smith,

State Engineer,

Boise, Idaho.

Dear Sir:

On this day, beginning at the hour of ten o'clock, A.M.,
Proof of Completion of Works and Proof of Beneficial Use of Water was
made before me, the undersigned Notary Public, by Utah Power & Light
Company, the Holder, under its Permit No. 8962, and Amendment thereof, -
the witness of Holder, i.e. the person making Deposition of Holder, in
each of said Proofs, being George R. Corey, and the three independent
witnesses in each such Proof being H. Lewis Rasmason, Alma H. Chambers
and Harry L. Stoner.

Herewith find such Proofs.

There were no contests; no contestants appearing.

Yours respectfully,

Edwin L. McLean

Notary Public.

8962

Re Permit 8962.

January 2, 1918.

Messrs. Story & Steigmeyer,
Attorneys at law,
500-508 Boston Building,
Salt Lake City, Utah.

Gentlemen:--

Am herewith returning you duplicate map sent with the affidavit for change of points of diversion and return under above permit. One copy of the map has been placed on file in this office with the original affidavit.

Very truly yours,

J. H. SMITH,

State Engineer.

M

BY _____

State of Idaho

A. E. ROBINSON
ENGINEER

ENGINEERING DEPARTMENT BOISE

INSTRUCTIONS

Proof of Completion of Works

Utah Power & Light Co.

and

c/o H. K. Thatcher,

Proof of Beneficial Use of water.

Phoenix, Idaho.

Boise, Idaho, January 2nd, 1918.

Dear Sir:

I enclose herewith the following forms to be used in connection with proof of completion of works and beneficial use of water under Permit No. 8962.

Deposition of Permit Holder,

Depositions of Two Witnesses.

In submitting this proof the following instructions should be CAREFULLY followed out, since failure to do so may result in the loss of your rights:

1. On January 28th, 1918, the date set for proof, the enclosed forms (two for permit holder and two each for two disinterested witnesses) should be filled out and sworn to, at Phoenix before H. K. Thatcher, notary public.

2. When the depositions have been taken they should be mailed to this office, together with affidavit of publication of notice and fees as follows: Fee for proof of completion of works is \$5.00 for ten second feet or less. Over ten second feet a charge of 30 cents a second foot is made. The fee for beneficial use of water, for power purposes is \$5.00; if for irrigation, \$2.00 for each 40-acre tract, or fraction, to which water has been beneficially applied.

When these have been received, together with report of the Water Commissioner, if everything is properly executed, Certificate of Completion of Works and License will issue.

Yours truly,

J. H. SMITH, ~~A. E. ROBINSON~~

State Engineer.

8962

(Place).....

(Date).....

Downey Lake
Dec. 26, 1917

State Engineer, Boise, Idaho.

Dear Sir:

I have your letter of Dec. 24..... enclosing Notice of Proof of Completion of Works and Beneficial Use of Water under Permit No. 8962 which will be published as you request, beginning with our issue of Dec. 28,....

F. B. Porter

8962

State of Idaho

ENGINEERING DEPARTMENT

BOISE

JAMES STEPHENSON, JR.,
ENGINEER

Boise, Idaho, DEC. 24, 1917.

The Idahoan,
Downey, Idaho.

Dear Sirs:

Enclosed find Notice for Publication of Proof of Completion of Works and Beneficial Use of Water under Permit No. 8962 which please publish once a week for four consecutive weeks in your paper in accordance with provisions of Sec. 4, House Bill No. 146, laws of the Seventh Session of the Legislature. The expense of this publication will be paid by Utah Power & Light Co., Boston Bldg., Salt Lake City to whom you will please furnish proof of publication of this notice on or before January 28th, 1918

Please promptly acknowledge receipt of this notice, and kindly mail me your first issue containing its publication that I may compare it with my records.

Yours truly,

J. H. SMITH, ~~James H. Stephenson, Jr.~~

State Engineer.

NOTICE TO ACCOMPANY THIS LETTER MUST BE MADE IN DUPLICATE

(Date) November 26, 1917.

(P. O.) Box 1032, Salt Lake City, Utah.

To the State Engineer,
Boise, Idaho.

Dear Sir:

You are hereby authorized to have the attached notice published at my expense in the Montpelier Examiner at Montpelier, Idaho, and in the Downey Idahoan, of Downey, Idaho, published in the ^{ies} county in which the works are situated.

UTAH POWER & LIGHT COMPANY

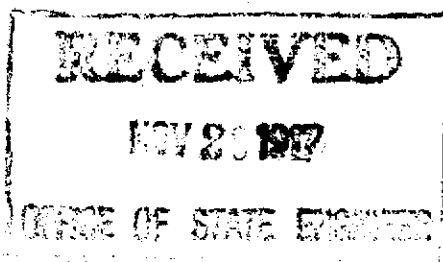
by

Fran M. Higgins
Agent.

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

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

Markham Chivers
Engineer.



8962

NOTICE OF PROOF OF COMPLETION OF WORKS
AND
APPLICATION OF WATER TO BENEFICIAL USE.

Notice is hereby given that at two o'clock P.M., on the twenty-eighth day of January, 1918, at Phoenix, County of Bannock, State of Idaho, before H. K. Thatcher, a Notary Public, proof will be submitted of the completion of works for the diversion of the equivalent of three thousand (3000) cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred (2500) cubic feet per second, continuous flow; (2) from Bear Lake, the equivalent of three hundred (300) cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred (200) cubic feet per second, continuous flow, and of the application to beneficial use of said water in accordance with the terms and conditions of Permit No. 8962 (amended) heretofore issued by the State Engineer of the State of Idaho.

1. The name and postoffice address of the corporation holding said Permit is Utah Power & Light Company, a corporation of Maine, with postoffice address in the State of Idaho, at Grace, Bannock County, Idaho.

2. Said works of diversion will be fully completed on the date set for such completion, and the amount of water which said works are capable of conducting to the place of use, in accordance with the plans accompanying the Application for such Permit, is the equivalent of three thousand (3000) cubic feet per second, continuous flow.

3. The use to which said water has been applied is for power purposes.

4. The places where said water is used are (a) at Bear and North or Mud Lakes in Bear Lake County, Idaho; and (b) at a point on Bear River, in Bannock County, Idaho, N. 41° 0' W., one thousand eight hundred forty (1840) feet from the quarter section corner on the south boundary line of Section Twenty-one, Township Ten South, Range Forty East, B.B. & M.; and also at another point on Bear River, in said Bannock County, Idaho, which is S. 74° 01' E., three thousand one hundred seventy-three (3173) feet from the southwest corner of Section Twenty-three, Township Thirteen South, Range Forty East, B.B. & M.

5. The date of priority which said user is prepared to establish is 11:20 A.M., September 11, 1912.

J. H. Smith

State Engineer.

State of Idaho

A. E. ROBINSON
ENGINEER

ENGINEERING DEPARTMENT
BOISE

INSTRUCTIONS

Proof of Completion of Works

Utah Power & Light Co.

and

c/o E.L. McClave, notary public,
Montpelier, Idaho.

Proof of Beneficial Use of water.

Boise, Idaho, January 2nd, 1918.

Dear Sir:

I enclose herewith the following forms to be used in connection with proof of completion of works and beneficial use of water under Permit No. 8962.

Deposition of Permit Holder,

Depositions of Two Witnesses.

In submitting this proof the following instructions should be CAREFULLY followed out, since failure to do so may result in the loss of your rights:

1. On January 26th, 1918, the date set for proof, the enclosed forms (two for permit holder and two each for two disinterested witnesses) should be filled out and sworn to, at Montpelier, before E.L. McClave, notary public.

2. When the depositions have been taken they should be mailed to this office, together with affidavit of publication of notice and fees as follows: Fee for proof of completion of works is \$5.00 for ten second feet or less. Over ten second feet a charge of 30 cents a second foot is made. The fee for beneficial use of water, for power purposes is \$5.00; if for irrigation, \$2.00 for each 40-acre tract, or fraction, to which water has been beneficially applied.

When these have been received, together with report of the Water Commissioner, if everything is properly executed, Certificate of Completion of Works and License will issue.

Yours truly,

J. H. SMITH, ~~State Engineer~~ **A. E. ROBINSON**

State Engineer.

8962

(Place) *Mouthier, Idaho*

(Date) *Dec 26, 1917*

State Engineer, Boise, Idaho.

Dear Sir:

I have your letter of *Dec 24*.....enclosing Notice of Proof of Completion of Works and Beneficial Use of Water under Permit No. *8962* which will be published as you request, beginning with our issue of *Dec 28/17*

C. E. Wright
8962
Editor

NOTICE OF PROOF OF COMPLETION OF WORKS
AND
APPLICATION OF WATER TO BENEFICIAL USE.

Notice is hereby given that at ten o'clock A.M., on the twenty-sixth day of January, 1918, at the City of Montpelier, County of Bear Lake, State of Idaho, before E. L. McClave, a Notary Public, proof will be submitted of the completion of works for the diversion of the equivalent of three thousand (3000) cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred (2500) cubic feet per second, continuous flow; (2) from Bear Lake, the equivalent of three Hundred (300) cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred (200) cubic feet per second, continuous flow, and of the application to beneficial use of said water in accordance with the terms and conditions of Permit No. 8962 (amended), heretofore issued by the State Engineer of the State of Idaho.

1. The name and postoffice address of the corporation holding said Permit is Utah Power & Light Company, a corporation of Maine, with postoffice address in the State of Idaho, at Grace, Bannock County, Idaho.

2. Said works of diversion will be fully completed on the date set for such completion, and the amount of water which said works are capable of conducting to the place of use, in accordance with the plans accompanying the application for such Permit, is the equivalent of three thousand (3000) cubic feet per second, continuous flow.

3. The use to which said water has been applied is for power purposes.

4. The places where said water is used are (a) at Bear and North or Mud Lakes in Bear Lake County, Idaho; and (b) at a point on Bear River, in Bannock County, Idaho, N. 41° 0' W. one thousand eight hundred forty (1840) feet from the quarter section corner on the south boundary line of Section Twenty-one, Township Ten South, Range Forty East, B.B. & M.; and also at another point on Bear River, in said Bannock County, Idaho, which is S. 74° 01' E., three thousand one hundred seventy-three (3173) feet from the southwest corner of Section Twenty-three, Township Thirteen South, Range Forty East, B.B. & M.

5. The date of priority which said user is prepared to establish is 11:20 A.M., September 11, 1912.

J. H. Smith

State Engineer.

5 A

8962

State of Idaho

ENGINEERING DEPARTMENT

BOISE

JAMES STEPHENSON, JR.,
ENGINEER

Boise, Idaho, DEC. 24, 1917.

The Examiner,
Montpelier, Idaho.

Dear Sirs:

Enclosed find Notice for Publication of Proof of Completion of Works and Beneficial Use of Water under Permit No. 8962 which please publish once a week for four consecutive weeks in your paper in accordance with provisions of Sec. 4, House Bill No. 146, laws of the Seventh Session of the Legislature. The expense of this publication will be paid by

Utah Power & Light Co., Salt Lake City, Boston Bldg. to whom you will please furnish proof of publication of this notice on or before January 26, 1918.

Please promptly acknowledge receipt of this notice, and kindly mail me your first issue containing its publication that I may compare it with my records.

Yours truly,

J. H. SMITH, ~~James H. Stephenson, Jr.~~

8962

State Engineer.

copy sent to
Montpelier OK

NOTICE FOR PUBLICATION

NOTICE OF PROOF OF APPLICATION OF WATER TO BENEFICIAL USE.

26th

Notice is hereby given that at ten o'clock, A.M., on the twenty-fifth day of January, 1918, at the City of Montpelier, County of Bear Lake, State of Idaho, before E. L. McClave, a Notary Public in and for said County, proof will be submitted of the Application to Beneficial Use of the equivalent of three thousand cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred cubic feet per second, continuous flow; (2) from Bear Lake, the equivalent of three hundred cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred cubic feet per second, continuous flow, of the waters respectively of Bear River, Bear Lake and North or Mud Lake, in accordance with the terms and conditions of Permit No. 8962 (as amended) heretofore issued by the State Engineer of the State of Idaho.

1. The name and post office address of the corporation holding said Permit is Utah Power & Light Company, a corporation of Maine; Grace, Bannock County, Idaho.

2. The use to which said water has been applied is the generating of electrical energy, i.e. power purposes.

3. The amount applied to beneficial use is the equivalent of three thousand cubic feet per second, continuous flow.

4. The places where said waters have been used are (a) Bear and North or Mud Lakes, in Bear Lake County, Idaho; (b) on Bear River at point in Bannock County, Idaho, N. 41° 00' W., eighteen hundred forty (1840) feet from the quarter section corner on the south boundary line of Section 21, T. 10 S. R. 40 E.B.B. & M.; (c) at a point on Bear River, in Bannock County, Idaho. S. 74° 01' E., three thousand one hundred seventy-three (3173) feet from the southwest corner of Section 23, T. 13 S. R. 40 E.B.B. & M.

5. The name of the works by which said waters are conducted to such places of use is "the works of Utah Power & Light Company".

6. The right to take the water from such works is, so far as this proposed proof is concerned, based upon Permit No. 8962.

7. The sources of supply from which such waters are diverted are Bear River for the equivalent of twenty-five hundred cubic feet per second, continuous flow, and Bear Lake for the equivalent of three hundred cubic feet per second, continuous flow, and North or Mud Lake for the equivalent of two hundred

-2-

cubic feet per second, continuous flow.

8. The date of priority which said user is prepared to establish under this particular proof is 11:20, A.M., September 11, 1912.

J. H. SMITH, State Engineer.

8962

NOTICE FOR PUBLICATION

NOTICE OF PROOF OF APPLICATION OF WATER TO BENEFICIAL USE.

24-25
James F. [unclear]
Sept 20
9th Notice is hereby given that at two o'clock, P.M., on the twenty-sixth day of January, 1918, at Phoenix, County of Bannock, State of Idaho, before H. K. Thatcher, a Notary Public in and for said County, proof will be submitted of the Application to Beneficial Use of the equivalent of three thousand cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred cubic feet per second, continuous flow; (2) from Bear Lake, the equivalent of three hundred cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred cubic feet per second, continuous flow, of the waters respectively of Bear River, Bear Lake and North or Mud Lake, in accordance with the terms and conditions of Permit No. 8962 (as amended) heretofore issued by the State Engineer of the State of Idaho.

1. The name and post office address of the corporation holding said Permit is Utah Power & Light Company, a corporation of Maine; Grace, Bannock County, Idaho.

2. The use to which said water has been applied is the generating of electrical energy, i.e. power purposes.

3. The amount applied to beneficial use is the equivalent of three thousand cubic feet per second, continuous flow.

4. The places where said waters have been used are (a) Bear and North or Mud Lakes, in Bear Lake County, Idaho; (b) on Bear River at point in Bannock County, Idaho, N. 41. 00' W., eighteen hundred forty (1840) feet from the quarter section corner on the south boundary line of Section 21, T. 10 S. R. 40 N.B.B. & M.; (c) at a point on Bear River, in Bannock County, Idaho, S. 74. 01' E., three thousand one hundred seventy-three (3173) feet from the southwest corner of Section 23, T. 13 S. R. 40 N.B.B. & M.

5. The name of the works by which said waters are conducted to such places of use is "the works of Utah Power & Light Company".

6. The right to take the water from such works is, so far as this proposed proof is concerned, based upon Permit No. 8962.

7. The sources of supply from which such waters are diverted are Bear River for the equivalent of twenty-five hundred cubic feet per second, continuous flow, and Bear Lake for the equivalent of three hundred cubic feet per second, continuous flow, and North or Mud Lake for the equivalent of two hundred

-2-

cubic feet per second, continuous flow.

8. The date of priority which said user is prepared to establish under this particular proof is 11:20, A.M., September 11, 1912.

J. H. SMITH, State Engineer.

WILLIAM STORY WILLIAM STORY, JR FREDERICK STEIGMEYER.

STORY & STEIGMEYER
ATTORNEYS AND COUNSELLORS

500-508 BOSTON BUILDING

SALT LAKE CITY

November 26th, 1917.

State Engineer of Idaho,
B o i s e, Idaho.

Dear Sir:

Enclosed please find Notice for Publication for
Proof of Completion of Works under Permit No. 8962.

Yours very truly,

William Steigmeier

8962

NOTICE OF PUBLICATION

Notice is hereby given that at 10 A. M., on the 28th day of January, 1918, at city of Montpelier County of Bear Lake, State of Idaho, before E. L. McClave, Notary Public proof will be submitted of the completion of works for the diversion of 3000 cubic feet per second of the waters of (a) Bear River, 2500 sec.ft.; (b) Bear Lake, 300 sec.ft.; North or Mud Lake, 200 sec.ft., in accordance with the terms and conditions of a certain permit heretofore issued by the State Engineer of the State of Idaho.

1. The name of the person or corporation holding said permit is _____

Utah Power & Light Company, a corporation of Maine.

2. The postoffice address of such person or principal place of business of such corporation ^{in the State of Idaho} is _____

Grace, County of Bannock, State of Idaho.

3. The number of such Permit is 8962, and the date set for the completion of such work is January 28, 1918.

4. Said water to be used for power purposes.

5. Said works of diversion will be fully completed on the date set for such completion, and the amount of water which said works are capable of conducting to the place intended for use, in accordance with the plans accompanying the application for such permit is 3000 cubic feet per second.

6. ~~The amount of lands for which said water is available is _____ acres, particularly described as follows:~~

8962

J. H. SMITH, State Engineer.

NOTICE OF PUBLICATION

Notice is hereby given that at 10 A. M., on the 28th day of January, 1918, at city of Montpelier County of Bear Lake, State of Idaho, before E. L. McClave, Notary Public proof will be submitted of the completion of works for the diversion of 3000 cubic feet per second of the waters of (a) Bear River, 2500 sec.ft.; (b) Bear Lake, 300 sec.ft.; North or Mud Lake 200 sec.ft. in accordance with the terms and conditions of a certain permit heretofore issued by the State Engineer of the State of Idaho.

1. The name of the person or corporation holding said permit is _____

Utah Power & Light Company, a corporation of Maine.

2. The postoffice address of such person or principal place of business of such corporation is _____

Grace, County of Bannock, State of Idaho.

3. The number of such Permit is 8962, and the date set for the completion of such work is _____

January 28, 1918.

4. Said water to be used for _____ power _____ purposes.

5. Said works of diversion will be fully completed on the date set for such completion, and the amount of water which said works are capable of conducting to the place intended for use, in accordance with the plans accompanying the application for such permit is 3000 cubic feet per second.

6. ~~The amount of lands for which said water is available is xxxxxx acres, particularly described as follows:~~

8962

J. H. SMITH, State Engineer.

NOTICE OF PUBLICATION

Notice is hereby given that at two o'clock, P.M., on the twenty-sixth day of January, 1918, at Phoenix County of Bannock, State of Idaho, before H. K. Thatcher, a Notary Public in and for said County, proof will be submitted of the completion of works for the diversion of the equivalent of three thousand cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred cubic feet per second, continuous flow; (2) from Bear Lake, the equivalent of three hundred cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred cubic feet per second, continuous flow, in accordance with the terms and conditions of a certain Permit (as amended) heretofore issued by the State Engineer of the State of Idaho.

1. The name of the corporation holding said Permit is Utah Power & Light Company, a corporation of Maine.
2. The post office address of such corporation or principal place of business of such corporation in Idaho is Grace, County of Bannock, State of Idaho.
3. The number of such Permit is 8962, and the date set for the completion of such work is January 28, 1918.
4. Said water to be used for power purposes.
5. Said works of diversion will be fully completed on the date set for such completion, and the quantity of water which said works are capable of conducting to the places intended for use, in accordance with the plans accompanying the application for such Permit is the equivalent of three thousand cubic feet per second, continuous flow.

J. H. SMITH, State Engineer.

NOTICE OF PUBLICATION

Notice is hereby given that at ten o'clock, A.M., on the twenty-fifth day of January, 1918, at the City of Montpelier, County of Bear Lake, State of Idaho, before E. L. McClave, a Notary Public in and for said County, proof will be submitted of the completion of works for the diversion of the equivalent of three thousand cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred cubic feet per second, continuous flow; (2) from Bear Lake, the equivalent of three hundred cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred cubic feet per second, continuous flow, in accordance with the terms and conditions of a certain Permit (as amended) heretofore issued by the State Engineer of the State of Idaho.

1. The name of the corporation holding said Permit is Utah Power & Light Company, a corporation of Maine.

2. The post office address of such corporation or principal place of business of such corporation in Idaho is Grace, County of Bannock, State of Idaho.

3. The number of such Permit is 8962, and the date set for the completion of such work is January 28, 1918.

4. Said water to be used for power purposes.

5. Said works of diversion will be fully completed on the date set for such completion, and the quantity of water which said works are capable of conducting to the places intended for use, in accordance with the plans accompanying the Application for such Permit is the equivalent of three thousand cubic feet per second, continuous flow.

J. H. SMITH, State Engineer.

8962

STORY & STEIGMEYER
ATTORNEYS AND COUNSELLORS

500-508 BOSTON BUILDING

SALT LAKE CITY

November 27, 1917.

Honorable J. H. Smith,
State Engineer,
Boise, Idaho.

Dear Sir:

Referring to the Notice of Publication, recently filed with you for Proof of Completion of Works under Permit No. 8962, owned by Utah Power & Light Company, it has occurred to us that you might rule it would be well for this permittee to make Proof of such Completion at two places, one within Bear Lake County and the other within Bannock County, because such works of diversion are situate within both such Counties. We have no objection whatever to such an office ruling on your part, and hereby in advance thereof we acquiesce, authorizing you on behalf of such permittee to publish Notices of Proof of Completion of Works, under such Permit No. 8962, both in the Montpelier Examiner, Montpelier, Idaho, and the Downey Idahoan, Downey, Idaho. However, if two such Proofs are to be made, two different days must be set. Therefore, if you are to rule as above mentioned, would it not be well if ten o'clock A.M., January 25, 1918, were fixed as the date for taking this Proof at Montpelier, before Notary Public E. L. McClave, and two o'clock, P.M., January 26, 1918, as the day and hour for the taking of this Proof in Bannock County, at Phoenix, before Notary Public H. K. Thatcher? This would permit enough time to elapse so that the witnesses might travel from Montpelier to Phoenix. As January 28, 1918, is the final date whereupon this Proof may be made, under the terms of the Permit in question, and as January twenty-seventh falls on Sunday, it would seem that the two dates above mentioned would be the final feasible ones.

The permittee is also prepared and ready to make Proof of Beneficial Use under this Permit No. 8962, and, if this Proof is to be made in both the above mentioned Counties, inasmuch as the works involved are situate in both Counties, we take it the same method would be followed in the giving of notice of the taking such Proof of Beneficial Use. If there is no objection to the making of this Proof of Beneficial Use at the same hours and days respectively, which you may fix for the making of Proof of Completion, we would be much favored in the matter of the expense of transporting witnesses, etc. Having in mind that your office would not object to the making of Proof of Beneficial Use at the same time you may rule Proof of Completion should be made, and at the same places, we enclose herewith two typewritten Notices for

8962

-2- J.H.Smith. Nov.27-17.

Publication of Proof of Application of Water to Beneficial Use,
under such Permit No. 8962, as amended.

If you are to rule that the Proofs of Completion are to be taken at both the points as above stated, and the dates are to be fixed as January twenty-fifth and twenty-sixth respectively, then the two enclosed Notices of Publication for Proof of Completion of Works should be found sufficient and likewise be published. We would have, in any event, each of such Notices run for a full five issues, before the dates determined upon by you for the making of these Proofs. As this is an important Permit, it has occurred to us that you might wish to have a representative present at the taking of each of these Proofs. If so, you may fix in such Notices such other dates for the taking of these Proofs as will accommodate your situation and not affect the proper publication of the Notices for the requisite length of time prescribed by statute.

We also enclose herewith for your files carbon copies of the Notices above mentioned.

It is contemplated that all these Proofs will be made under original Permit No. 8962 as amended.

You are always authorized to make sight drafts on us for any fees due your office in connection with any titles we handle for this client, Utah Power & Light Company. We take it, as heretofore, we will pay the publishers directly for the publication of these Notices.

Yours very truly,

Enc.

S3B

A handwritten signature in dark ink, appearing to read "Henry Higney". The signature is written in a cursive style with a large, sweeping initial "H".

8962

State of Utah, |
 | ss.
County of Salt Lake, |

Frederick Steigmeyer, being first duly sworn, upon his oath, deposes and says that he is the attorney and agent for Utah Power & Light Company, a corporation of Maine, holder and owner of Permit No. 8962, approved by the State Engineer of Idaho on the twenty-eighth day of January, A.D., 1913; that said owner and holder intends changing certain points of diversion, use and return, described in said Permit No. 8962, to certain other points as hereinafter set-forth; that as agent and attorney of such holder and owner, he on its behalf, being thereunto first duly authorized by resolution of its Board of Directors, makes this affidavit for recording in the office of the State Engineer of Idaho at Boise, Idaho; that no one will be injured by such changes, as herein set-forth, and that such holder and owner makes such changes at its own risk; that such original Permit, No. 8962, was for the equivalent of "three thousand cubic feet per second, continuous flow, (1) from Bear River, the equivalent of twenty-five hundred cubic feet per second, continuous flow; (a) from Bear Lake, the equivalent of three hundred cubic feet per second, continuous flow; (3) from North or Mud Lake, the equivalent of two hundred cubic feet per second, continuous flow".

That in said original Permit, No. 8962, there was designated a point of diversion from Bear River, in Bear Lake County, Idaho, as follows: "at a point South sixty-nine degrees West, two thousand eight hundred feet from the southeast corner of Section Six, Township Fourteen South, Range Forty-five East, Boise Meridian"; that said holder and owner hereby changes the description of the above mentioned diverting point, on and from Bear River, to such diverting point as actually established under diversion works constructed on the ground, viz: to a point on said Bear River, in Bear Lake County, Idaho, which is S. 12° 36' W. 1411 feet from the northeast corner of Section 34, T. 13 S. R. 44 E.B. B. & M.

That in said original Permit, No. 8962, there were designated two points of diversion from Bear Lake, in Bear Lake County aforesaid, the first stated as "at a point South thirty-two degrees East, four thousand four hundred twenty feet from the southwest corner of Section Seven, Township Fifteen South, Range Forty-four East, Boise Meridian", and the second stated as "at a point South Seventy-eight degrees fifteen minutes East, eight thousand two hundred eighty-seven feet from the southeast corner of Section Twelve, Township Fifteen South, Range Forty-three East, Boise Meridian"; and in said original Permit, it was stated that at the last two above mentioned points of diversion, and also at the points of diversion hereinafter mentioned from North or Mud Lake, in said County, the permittee intended "to divert not

southeast corner of Section Twenty-four, Township Nine South, Range Forty East, Boise Meridian". The holder and owner aforesaid hereby changes said last mentioned point of diversion to the following point: S. $59^{\circ} 02'$ W., two thousand three hundred fifty-four (2354) feet from the northeast corner of Section 1, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho, which point is on Bear River aforesaid.

In said original Permit, there is described a point of diversion from Bear River, in Bannock County, Idaho, as follows: "Into Reservoir No. 2, at a point North, twenty-five degrees ten minutes West, eighteen hundred feet, from the south quarter corner of Section Seven, Township Thirteen South, Range Forty-one East, Boise Meridian". The holder and owner aforesaid hereby changes such last mentioned point of diversion as follows: Into Reservoir No. 2, at a point in Bannock County, Idaho, N. $48^{\circ} 17'$ E., one thousand one hundred eighty-five (1185) feet from the northwest corner of Section 6, T. 13 S. R. 41 E.B.B. & M.

In said original Permit, there is described a point of diversion from Bear River and said "Reservoir No. 2", as follows: "Into pipe lines, at a point South eighty-five degrees forty minutes West, ten hundred ten feet from the east quarter corner of Section Three, Township Fourteen South, Range Forty East, Boise Meridian". The holder and owner aforesaid hereby changes said last mentioned point of diversion to the following: From Bear River and Reservoir No. 2, in Bannock County, Idaho, into pipe lines, N. $74^{\circ} 30'$ E., three thousand nine hundred ninety-six and three-tenths (3996.3) feet from the southwest corner of Section 23, T. 13 S. R. 40 E.B.B. & M., the center of the dam for such reservoir being at a point, N. $53^{\circ} 15'$ E., three thousand five hundred fifteen and four-tenths (3515.4) feet from the southwest corner of Section 23 last above mentioned.

In said original Permit, there is specified a point of use and return as follows: "(a) Point of use for power and point of return to Bear River, of the water diverted at Point of Diversion No. Six (6), Remarks 'B'", as a point "in Bannock County, Idaho, North sixty-five degrees West, twenty-six hundred fifty feet, from the south quarter corner of Section Twenty-one, Township Ten South, Range Forty East, Boise Meridian". Said holder and owner hereby changes such last described point of use and return of waters to said Bear River to the following point: N. $41^{\circ} 0'$ W., one thousand eight hundred forty (1840) feet from the quarter section corner on the south boundary line of Section 21, T. 10 S. R. 40 E.B.B. & M., in Bannock County, Idaho. In said original Permit, there is described a "point of use for power and point of return to Bear River, of the water diverted at Point of Diversion No. Eight (8), Remarks 'B'", as follows: "a point in Oneida County, Idaho, North fifty-five degrees forty-seven minutes East, fifteen hundred forty-eight feet from the north quarter corner of Section Twenty-one, Township Fourteen South, Range Forty East, Boise Meridian". Said holder and owner hereby changes such last described point of use for power and point of return of waters to

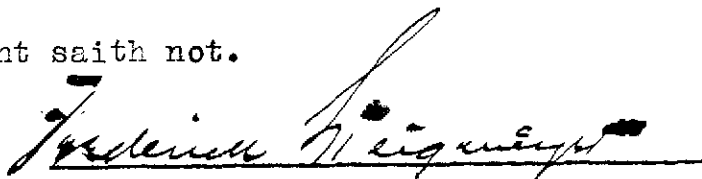
Bear River, to the following point: S. 74° 01' E., three thousand one hundred seventy-three (3173) feet from the southwest corner of Section 23, T. 13 S. R. 40 E.B.B. & M., in Bannock County, Idaho, -Oneida County boundaries having been changed by Act of Legislature so as to exclude above point, and such point of use and return being by virtue of said Act now situate within Bannock County.

As to the last two mentioned points of use and return, fixed and above described under and as a part of this Amendment of said Permit, No. 8962, same are the points of use and return of the waters diverted respectively (a) at said Point of Diversion No. Six (6), Remarks "B", of said original Permit, as amended by this affidavit, and (b) at Point of Diversion No. Eight (8), Remarks "B", of said original Permit, as amended by this affidavit.

That by the making of the foregoing changes in certain points of diversion and points of use and return, under said Permit, No. 8962, said holder and owner gives notice that it does not intend thereby to waive any rights in it vested or vesting under or through other sources of title than said Permit No. 8962 to the right to divert, impound, release and/or utilize waters of Bear Lake, North or Mud Lake and/or Bear River, in the State of Idaho.

Changes or amendments there are none of points of diversion specified in original Permit, No. 8962, and not hereinabove specifically mentioned.

And further deponent saith not.



Subscribed and sworn to before me this twenty-fourth day of November, A.D., 1917.

My commission expires November 2, 1921.


Notary Public in and for the County
of Salt Lake, State of Utah, resid-
ing at Salt Lake City, Utah.

Handwritten signature
JUN 23 1964
U.S. AIR FORCE
HONOLULU, HAWAII

A. E. ROBINSON
STATE ENGINEER

State of Idaho

ENGINEERING DEPARTMENT

Utah Power & Light Co.

BOISE

October 19, 1917.

Story & Steigmeyer, Attys.,

Boston Building,

Salt Lake, City, Utah.

Dear Sir:

I enclose herewith blank notice of proof of completion of Works under your permit No. 8962 and blank Notice of Proof of Beneficial Application of Water under same permit, which notice should be filled out and returned to me at least 60 days before the date upon which it is desired to submit proof, which proof should be on or before Jan. 28, 1918.

Yours truly,

J. H. Smith AxxE. ROBINSON
State Engineer.

8962

Boise, Idaho, August 24, 1914.

Permit No. 8962.

Messrs. Storey & Steigmeyer,
Boston Bldg.,
Salt Lake City.

Gentlemen:--

Replying to yours of the 20th I find that on the 18th inst. we forwarded the old bond in question to Mr. Cates at Idaho Falls, having overlooked the fact that in this letter ~~you~~he requested that the bond be forwarded to you.

I presume he has forwarded the bond to you by this time.

Very truly yours,

F. P. King,

State Engineer.

By _____

W/L

8962

P 8962

WILLIAM STORY WILLIAM STORY, JR. FREDERICK STEIGMEYER.

STORY & STEIGMEYER
ATTORNEYS AND COUNSELLORS
500-508 HOSTON BUILDING
SALT LAKE CITY

August 20, 1914.

Hon. F. P. King,
State Engineer,
Boise, Idaho.

Dear Sir:

We acknowledge with thanks receipt of your letter of August 15th, with enclosures as stated. We assume that like action will be taken by you in reference to the bond executed by the Aetna Accident & Liability Company in connection with Permit No. 8962, but as yet we have not received the same.

Very truly yours,

S2S

Frederick Steigmeier

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RECEIVED
AUG 22 1914
SALT LAKE CITY

8962

Boise, Idaho, August 18, 1914.

Permit 8962.

Mr. Wm. C. Cates,
Idaho Falls, Idaho.

Sir:--

I return you herewith your bond of date
8th February, 1913, filed under the above permit,
this bond having been replaced by bond of date
22nd July, 1914.

Very truly yours,

F. P. KING,

State Engineer.

By _____

Enc. Bond.

W/G.

8962

Boise, Idaho, August 11, 1914.

Permit No. 8962.

Mr. W. C. Cates,
Idaho Falls, Idaho.

Sir:--

We are in receipt of yours of the 6th inst. enclosing bond to be filed in lieu of bond now on file with reference to the above numbered Permit.

Will take up with Mr. King upon his return to Boise the question of surrendering original bond.

Very truly yours,

F. P.

Deputy State Engineer.

W/L

8962

UTAH POWER & LIGHT COMPANY
IDAHO FALLS DIVISION

IDAHO FALLS, IDAHO, Aug. 6, 1914

Hon. F. P. King, State Engineer,

Boise, Idaho.

Dear Sir:-

Enclosed please find my bond, duly executed with surety, in connection with Permit No. 8962. This bond we would ask you to substitute for the bond heretofore executed by myself as principal, and the Aetna Accident & Liability Co., surety.

I understand that Story & Steigmeyer, of Salt Lake City, are writing you in reference to the substitution of the bond, and I would request you to kindly return the original bond direct to them, Boston Building, Salt Lake City, Utah.

Very truly yours,

HCG/c
Enc

M. L. Leates

8962

8962

January 20, 1916.

Re Permits 8962-9567.

Markham Cheever, Chief Engineer,
Utha Power & Light Company,
Kearns Building,
Salt Lake City, Utah.

Sir:--

Am herewith returning assignments of above
water rights, the same having been placed on record
in this office. Please to remit \$1.00 recording fees.

Very truly yours,

J. H. SMITH,

State Engineer.

By _____

UTAH POWER & LIGHT COMPANY

KEARNS BUILDING
SALT LAKE CITY, UTAH

January 11, 1916.

State Engineer,
Boise, Idaho.

Dear Sir:

Enclosed please find assignment of application for permit to appropriate 1500 cu. ft. per sec. of time of the waters of Bear River, No. 14081 filed in your office May 21, 1913, Permit No. 9567, Wm. Story to Utah Power & Light Company.

Also assignment of application for permit to appropriate 5000 cu. ft. per second continuous flow from Bear River, etc. by Wm. C. Cates to Utah Power & Light Company dated March 14, 1914.

Will you please make a note of these assignments on your records and return them to this office.

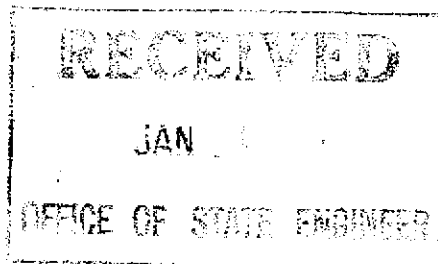
Very truly yours,

MARKHAM CHEEVER, CHIEF ENGINEER,

By A. E. Buckner

2 Enclosures

AEB-MA



89952

STATE OF UTAH,)

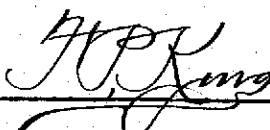
COUNTY OF SALT LAKE,)

P. B. Sawyer, being duly sworn, says that he is the Vice President and General Manager of the Utah Power & Light Company, the surety named in the bond hereto attached; that the said Utah Power & Light Company is a corporation, organized under the laws of the State of Maine and is duly authorized to transact business in the State of Idaho under and by virtue of full compliance of the laws of said last mentioned State; that the said corporation is a freeholder of the State of Idaho and is worth the sum named in said obligation, to-wit: six thousand dollars, over and above all its debts and liabilities, exclusive of property exempt from execution.

Subscribed and sworn to before me this 3rd day
^{August}
of ~~July~~, 1914.

A. E. Brundette
Notary Public.

This bond has been substituted by the principal and is hereby accepted and approved in lieu of that certain bond of date, February 8, 1913, filed in this office February 25, 1913, by William C. Cates, in which said Cates appeared as principal and the Aetna Accident and Liability Company appeared as surety, in the sum of \$6,000.00, said bond having been duly approved by the State Engineer on February 27, 1913.



State Engineer.

Bond.

KNOW ALL MEN BY THESE PRESENTS, That William C. Cates
of Idaho Falls, Idaho, as principal, and Utah Power & Light Company,
of a corporation and
of _____ as sureties, are held and firmly bound unto the State of Idaho in
the full and just sum of Six Thousand (\$6000.00) Dollars,
lawful money of the United States, to the payment of which sum, well and truly to be made, said
principal and sureties bind themselves, their heirs, administrators, executors and assigns, jointly and
severally, under the terms and conditions hereinafter set forth.

The terms of this obligation are such that, whereas the above named principal on the
11th day of September, 1912, filed in the office of the State Engi-
neer in Boise, Idaho, a certain application for permit to appropriate the public waters of the State
of Idaho, the said application being thereupon numbered No. 13123, in accordance with which
said application the State Engineer granted and issued to the said principal herein a certain permit
numbered No. 8962, a full, true and complete copy of which application No. 13123 and permit
No. 8962, is of record in the office of the State Engineer, in Book 29 of Permits, at page 8962

Now, if the above bounden principal shall faithfully carry to completion the said works of diver-
sion as specified in said application No. 13123 and permit No. 8962, in the manner and form
prescribed therein and within the time therein allowed, then the above obligation to be void, other-
wise to remain in full force and effect.

IN WITNESS WHEREOF, The said principal and sureties have hereunto set their hands and
seals, this 22nd day of July, 1914.

WITNESSES:

William C. Cates (SEAL)

Utah Power & Light Company, (SEAL)

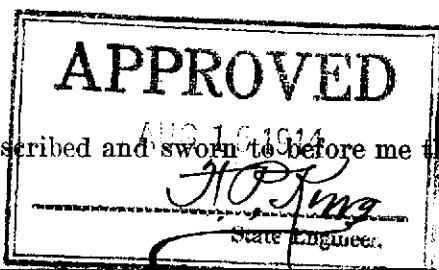
By P. H. Hargis (SEAL)
Vice-President & General Manager.

STATE OF IDAHO,

County of _____ ss:

_____ of _____ and
_____ of _____ whose names
are subscribed to the within and foregoing obligation as sureties thereto, each being duly sworn, upon
oath for himself deposes and says:

That he is a resident and freeholder of the State of Idaho and that he is worth the sum named
in said obligation, to wit, \$_____, over and above all his debts and liabilities, exclusive of prop-
erty exempt from execution.



Subscribed and sworn to before me this

day of _____ 19____

8962

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STATE OF IDAHO
ENGINEERING DEPARTMENT
BOISE

A. E. ROBINSON
STATE ENGINEER

Permit #8962-Cates

Boise, Idaho, Jan. 28, 1913.

Geo. L. Swendsen,

Boise, Idaho.

Dear Sir:

I enclose herewith above numbered permit. BE SURE TO NOTE LIMITATIONS AND CONDITIONS OF SAME as given under approval of State Engineer on the third page.

A. E. ROBINSON,
State Engineer.

SCHEDULE OF REQUIREMENTS AS TO
PLANS AND SPECIFICATIONS FOR DAM
NOS. 1-2-3-4-5-6-7-8-9.

8962

State of Idaho
ENGINEERING DEPARTMENT
BOISE

A. E. ROBINSON
STATE ENGINEER

NOTE

Permit #8962

That in order to keep this permit in force a bond in the sum of \$ 6,000.00 must be filed in the office of the State Engineer on or before March 29, 1913, conditioned upon faithfully carrying to completion the works of diversion as specified in said permit and in the application therefor.

A. E. ROBINSON,
State Engineer.

8962