

No. 23

Water Division No. 1 Grand River Water District

(Blanks to be filled by the State Engineer.)

APPLICATION FOR A PERMIT To appropriate Water Within the State of South Dakota

(Note—Draw a line through items not applicable.)

1. Name of applicant Sarah F. Cox
Postoffice address Ludlow County Butte State South Dakota

-I- If a corporation:

(a) Name of same

(b) Date and place of incorporation

(c) Amount of capital stock

(d) Amount paid in

(e) Names and addresses of directors

(Note—A certified copy of articles of incorporation must accompany the application.)

II. Method of accomplishing the work and financial resources of the applicant:

(a) Method of accomplishing the work (whether by contract, employment of others, or by direct labor) Direct labor and employment of others.

(b) Cash on hand, \$

(c) Treasury stock, \$

(d) Bonds to be issued, \$

(e) Other resources, \$

2. Name of diversion works Eagle's Nest Reservoir and Cox Canal.3. Quantity of water claimed 2.5 cubic feet per second.4. Source of water supply Crooked Creek, a stream having a defined flow of 1.5 sec. ft. during summer, tributary of Grand River.5. Location of point of diversion from the 1/4 Sec. Cor. bet. Secs. 3 & 34, T. 22 & 23 N.R. 5 E. B. H. M., N. 6 43' W. 7107.5 ft. to Dam on Outlet on left bank
(Right or left bank looking down stream.)6. Annual periods during which water is to be used From April 15 to Sept. 15.

7. To be used for:

I. Irrigation or domestic use: Irrigation of Desert Lands,(a) Number of acres to be irrigated 172.32 acres.(b) Legal subdivisions to be irrigated SE 1/4 SW 1/4, S. 1/2 SE 1/4 Sec. 26; N 1/2 N 1/2 Sec. 35 & NE 1/4 NE 1/4 Sec. 34, T. 23 N, R. 5 E., B. H. M.

(Note—All of lands to be irrigated, giving each subdivision and fraction with acreage thereof, should be written here, or may be appended as a part of this application. Same must also be shown on accompanying map.)

(c) Statement as to domestic use (giving location, etc.)

-II- Mining, power, manufacturing, transportation, or other purposes:

(a) Nature of use

(b) Amount of power to be generated horse-power

(c) Location of plant

(d) Method of developing power

(e) Point where water will be returned to stream

8. Estimated cost of works:

(a) Head gates, \$50.00

(b) Pumping plant, \$

(c) Flanking, \$

(d) Canal-earth, \$100.00

---, \$

(e) Other structures, Earth dam with stone wall facing \$675.00

Total, \$825.00

9. Description of diversion works:

I. Nature of works: (Reservoir, dam, ditch, flume, pumping plant, etc.) Storage

reservoir in Crooked Creek and supply canal leading to irrigated land

II. Dimensions of works:

(a) Dam: Height Max. 17.5 feet; length at bottom feet; length at top 565.1 feet; thickness at bottom Max. 71.5 feet; thickness at top 10.0 feet; slope of front (water) face 2:1; slope of back face 1 1/2:1; material used in construction Sandy soil and hard pan, faced with ashler wall 18" thick.

(b) Reservoir: Capacity when filled 137.56 acre feet. Surface area at highwater mark 31.45 acres.

DEPTH AT OUTLET- FEET	SURFACE AREA AT EACH DEPTH AT OUTLET- ACRES	DEPTH OF FEET	CAPACITY- ACRE- FEET
8.0	00.0		00.0
0.0	10.2		20.4
5.0	31.45	H.W.L.	117.16
	Capacity available		117.16
	Total capacity		137.56

(c) Head gate: Width 1.0 feet; height 1.0 feet

Material Stone and cement concrete

(d) Canal: Total length 1.43 miles.

LOCATION BELOW HEADGATE	DEPTH	BOTTOM WIDTH	WIDTH AT WATER LINE	GRADE PER MILE
At mile	1.0 feet	5.0 feet	7.0 feet	5.28 feet
At mile	feet	feet	feet	feet
At mile	feet	feet	feet	feet
At mile	feet	feet	feet	feet
At mile	feet	feet	feet	feet

[Give dimensions where reductions in size are made.]

10. Time required for completion of work 2 years.

11. Time required for complete application of water to the proposed beneficial use 3 years.

12. Choice of newspaper for publication of notice of intention to appropriate

NORTHWEST POST

STATE OF SOUTH DAKOTA

County of Butte

I, Sarah F. Cox, being first duly sworn on my oath depose and say: That my relation to the above described undertaking is that of owner, that I have read the above and foregoing statement, and examined the map accompanying the same, and that I know of my own personal knowledge that the matter therein stated and shown are true.

Signed: Sarah F. Cox

Subscribed and sworn to before me this 11th day of August, 1907.

(SEAL.)

Roy S. Scott
Notary Public (or other qualified officer).
S. Commissioner.

Remarks by State Engineer:

This application is for the right to divert and use the normal flow of Crooked Creek, and in addition to store and appropriate the storm water of this stream, for the irrigation of desert lands.

STATE OF SOUTH DAKOTA

County of Hughes

Pierre, South Dakota, October 23, 1907

This is to certify that the foregoing application was received at this office at 5 o'clock, P. M. upon the 19 day of August, 1907, and that after examination it was found to comply with the provisions of the State Water Laws. Notice of intention was duly published and a hearing was held in this office upon October 21, 1907.

Samuel H. Lea
State Engineer.

By Deputy

Number of permits 23
Date of first receipt of application August 19, 1907
Date of return to applicant for correction 10/2
Date of receipt of corrected application 10/9
Date from which application may claim right August 19, 1907
Approved October 23, 1907, Recorded in Book 1 Page 52

This is to certify that I have examined the foregoing application for a permit to appropriate water of the State of South Dakota and I hereby grant the same as stated herein, subject, however, to the following limitations and conditions.

1st. The equivalent of at least one-fifth of the work above specified is to be completed on or before October 23, 1908.

2d. The whole of said work is to be completed on or before October 23, 1909.

3d. The limit of time for proof of beneficial use of water appropriated in accordance herewith is October 23, 1910.

4th. The water appropriated shall be used for the purpose of Irrigation of desert lands.

5th. The prior right of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be injuriously affected by this appropriation.

6th. The amount of the appropriation herein granted shall not exceed $2\frac{1}{2}$ cubic feet of water per second of time; neither shall it exceed the capacity of the above described system of diversion works, nor the least amount of water that experience may hereafter indicate as necessary for the production of crops in the exercise of the best husbandry; and further, said appropriation must be limited to not more than one-seventieth ($\frac{1}{70}$) of one cubic foot of water per second of time for each acre of land to which water is actually and beneficially applied on or before October 23, 1910; said water to be used during the following described annual periods.

From April 15 to September 15.

Witness my hand this 23 day of October 1907

Samuel H. Lea
State Engineer.

By Deputy

STATE OF SOUTH DAKOTA } ss
COUNTY OF HUGHES }

I hereby certify that the within and foregoing instrument is a true, correct and complete transcript of the instrument which it purports to be, as the same was filed for record in the office of the State Engineer.

Witness my hand and official seal, done at my office in Pierre, State of South Dakota this 12 day of April, 1908.

Samuel H. Lea
State Engineer.

By Orin A. H. Lea
Deputy.

COPY.

No. 23

Division No. 1 Grand R. & W. District

PERMIT

to appropriate water from

Crooked Creek

Butte County, South Dakota

Name of applicant

Sarah E. Cox

Name of diversion works Eagle's

Nest Reservoir & Cox Canal

Date of first receipt at office of State

Engineer August 12, 1907

Returned to applicant for correction

1908

Corrected application received

1908

Date of water right

August 19, 1907

Recorded in Book - 7 - Page 52

One-fifth of work to be completed

October 27, 1908

Whole work to be completed

October 5, 1909

Final proof of use of water

October 27, 1910

Approved October 27, 1907

Samuel H. Lea

State Engineer.

By

Deputy.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA
County of Butte } ss

R. O. Fellows being duly sworn, deposes and says the annexed printed copy of Notice Intention to Appropriate Water was taken from the The Northwest Post a newspaper which during the whole time of publication of said notice herein-after stated, has been and is printed and published in the City of Billings County of Butte and State of South Dakota.

That the said notice was published in said newspaper on the following dates:

Sept 5, Sept 12, Sept 19, Sept 26, 1907

in each and every issue of the full number thereof, the first publication being made on the 5th day of September 1907 and the last publication on the 26th day of September 1907, upon which days or times of publication aforesaid the newspaper was regularly published, and that during the whole time of said publication he was one of the printer and publishers of the said newspaper.

R. O. Fellows

Subscribed and sworn to before me this 16 day of Oct A. D. 1907

J. W. Van Horn
Notary Public, Auditor Butte County, S. D.

OCT 18 1907

OCT 19 1907

NOTICE OF INTENTION TO APPROPRIATE WATER
I, R. O. Fellows, being duly sworn, depose and say that the annexed printed copy of Notice Intention to Appropriate Water was taken from the The Northwest Post a newspaper which during the whole time of publication of said notice herein-after stated, has been and is printed and published in the City of Billings County of Butte and State of South Dakota. That the said notice was published in said newspaper on the following dates: Sept 5, Sept 12, Sept 19, Sept 26, 1907 in each and every issue of the full number thereof, the first publication being made on the 5th day of September 1907 and the last publication on the 26th day of September 1907, upon which days or times of publication aforesaid the newspaper was regularly published, and that during the whole time of said publication he was one of the printer and publishers of the said newspaper.

R. O. Fellows

Subscribed and sworn to before me this 16 day of Oct A. D. 1907

J. W. Van Horn
Notary Public, Auditor Butte County, S. D.

Permit No. 23Water Division No. 1 Grand River Water District

Certificate of Application of Water to Beneficial Use.

Deposition of Holder

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

Ans. Sarah J. Cox; Housewife; Cox, Harding Co.,
S. Dakota.

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. I am the original appropriator

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

Ans. Number 23 - August 20, 1907.

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

Ans. Crooked Creek - North - 3346 - Johnson Co. S. Dak.
Secs. 3 & 34, T22N + 23N. R5E. B. 11W.

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

Ans. Storage Reservoir 117' ac. ft. capacity and Canal
including capacity 2.5 sec. ft.
Eagle's Nest Reservoir and Cox Canal.

Ques. 6. State for what purpose water is used, and describe place of use. (If for irrigation, name each subdivision in which used, and number of acres in each subdivision that have ACTUALLY been irrigated with said water.)

Ans. Irrigation of Desert Lands Sec. 26 - SE "SE" - 13.87
ac.; SW "SE" - 20.36 ac.; SE "SW" - 7.11 ac.; Sec. 34 - NE "NE" - 3.07
ac.; Sec. 35 - NW "NW" - 13.00 ac.; NE "NW" - 28.00 ac.; NW "NE" - 38.00 ac.;
NE "NE" - 36.00 ac. + 154.00 ac. all in T22N R5E B. 11W.

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

Ans.

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

Ans. One second foot for each 70 acres of land
flowing continuously during irrigation season.

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. I am the original appropriator.

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

Ans. Season of 1909 - Ditch flowing full continuously from July 10 to Oct 15.
Season of 1910 - Ditch flowing full from April 6 to June 1 and a part of time from June 6 to July 10.

(Sign.) *Edward H. Cat*

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 *Bellevue*, County of *Butte*, State of South Dakota, on this *21st* day of *July*, A. D., 1911.

Carl Adams
Examining engineer

Permit No.23.....

Proof of Application of Water to
Beneficial Use.

DEPOSITION OF HOLDER.

Amount of water.....2.5.....second feet

Source.....Crooked Creek.....

County.....Harding.....

Purpose.....Irrigation.....

Place of Use. SE¹ SW¹, S² SE¹, Sec. 26;

N² Sec. 35; NE¹ NE¹, Sec. 34, T. 23 N.

Range 5 E. B. H. M.

Date of priority August 12, 1907

RECEIVED

SEP 27 1911

OFFICE OF STATE ENGINEER,
PIERRE, S. DAK.

Received and filed...September 27, 1911.

Permit No. 23Water Division No. 1 Grand River Water District

Certificate of Examination of Works

Report of Examining Engineer

To the State Engineer, Pierre, South Dakota:

Dear Sir: I hereby certify that in accordance with your letter of authorization dated Sept 13,
1907, I have this day made a thorough examination of the diversion works constructed by
Sarah T. Cox, of Cox, P.O.
Harding County, South Dakota, holder of permit No. 23, issued
upon application No. 23, bearing date of priority of August 20, 1907, authorizing the
diversion of 2.5 second feet of the waters of Crooked Creek for irrigation
purposes. I have to report on the condition of the same as follows:

The diversion works comprise: a storage reservoir of 187 ac. ft. capacity,
made by earth dam 19.3 max. height, length 790 ft. faced
with dry laid stone wall 1 ft. thick - 12" dia
outlet with gate valves. Canal 1.7 mi. long, 6 ft. water
line, 3 ft. bottom, 1 ft. deep, grade 1/80. Capacity 2.7 sec. ft.
and the system is in the following condition: Entirely completed on lines of
original application, plus 2 ft. raise of dam and water line
The point of diversion is located North 3340 ft. from 1/4 Sec. Cor. to
Sec. 34, T. 22 and 23 N. R. 5 E. B. H. M.

The works are capable of diverting and conveying to the place of use 2.5 second-feet of water,
which is to be used for irrigation

The legal sub-divisions to be irrigated are: S²SE⁴ + SE⁴SW⁴ Sec. 26,
NE⁴NE⁴ Sec. 34, N²NW⁴ + N²NE⁴ Sec. 35 in T. 23 N. R.
5 E. B. H. M. comprising area of 320 acres, of
which 154 acres have been irrigated.
comprising a total of _____ acres of land.

The domestic use intended comprises _____

The utilization for power, mining, or other beneficial uses comprises: _____

Witness my hand, this 21st day of July, A. D. 1911:

J. C. Bailett
Examining Engineer.

Permit No. 23...
Water Div. No 1 Grand R. Water Dist.

Certificate of Examination
of Works

Dated July 21, 1911

Stream Crooked Creek

County Harding

Amount 2.5 Second Feet

Date of Priority August 19, 1907

Recorded in Book 1 Page 52

Filed in the office of the State Engineer this
27th day of Sept. A. D. 1911

State Engineer.

By Deputy.

RECEIVED

SEP 27 1911

OFFICE OF STATE ENGINEER,
PIERRE, S. DAK.

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 23

WHEREAS, On the nineteenth day of August A. D. 1907

SARAH E. COX

of Andover County of Butte and State of

South Dakota duly made application (No. 23) to me for a permit to use 2.5

cubic feet per second of the waters of Cronkro Creek

County of Butte State of South Dakota for irrigation

purposes; and

WHEREAS, On the twenty-third day of October A. D. 1907

Permit No. 23 was issued to said applicant for the diversion of said water and providing for the com-

pletion of the works of diversion therein described on or before the twenty-third day of

October

A. D. 1900 and for the application to beneficial use of said

water on or before the twenty-third day of October A. D. 1910

and,

WHEREAS, On the twenty-seventh day of September A. D. 1911

the holder of said permit duly made proof of the completion of adequate works for the diversion of 2.5

cubic feet per second of said waters, as evidenced by Certificate No. 23

dated July 21, 1911, confirming the completion of works of sufficient capacity for

diverting and conveying to the place of intended use 2.5 cubic feet per second of water,

with date of priority of August 12, 1907, and,

WHEREAS, On the twenty-seventh day of September A. D. 1911

proof was duly made of the application to beneficial use of 2.5 cubic feet per second of

water;

For irrigation of the NW¹/₄ of SE¹/₄, SW¹/₄ of SE¹/₄, SE¹/₄ of SW¹/₄, Section

34 NW¹/₄ of NE¹/₄, Section 34; NW¹/₄ of NW¹/₄, NW¹/₄ of NW¹/₄, NW¹/₄ of NW¹/₄, NW¹/₄ of

NE¹/₄, Section 35; Township 23 N., Range 6 E. B.R.M.

NOW, THEREFORE, By virtue of the authority vested in me by the laws of the State of South Dakota, I hereby grant and confirm to HAROLD F. COX

of COX the holder and owner of said permit No. 23

a water right, dating from August 19, 1907, to the use of 3.5

cubic feet per second of the waters of Crocked Creek

in the County of Harding and State of South Dakota, or so much thereof as may be

necessary for the purposes hereinbelow mentioned, to be diverted at North 3240 feet from quarter section corner to sections 3 and 34, Townships 22 and 23 N., Range 5 E.

and conducted to and upon SE $\frac{1}{4}$ of SE $\frac{1}{4}$, SW $\frac{1}{4}$ of SE $\frac{1}{4}$, SE $\frac{1}{4}$ of NW $\frac{1}{4}$, Section 30; NE $\frac{1}{4}$ of NE $\frac{1}{4}$, Section 34; NW $\frac{1}{4}$ of NW $\frac{1}{4}$, NE $\frac{1}{4}$ of NW $\frac{1}{4}$, SW $\frac{1}{4}$ of NW $\frac{1}{4}$, NW $\frac{1}{4}$ of NW $\frac{1}{4}$, Section 35, Township 23 N., Range 5 E. B.H.M.

for the purpose of irrigation

subject, however, to the laws of the State of South Dakota applicable to a license for the use of the waters of the State, and subject, also, to the local or community customs, rules and regulations which have been or may be adopted from time to time by a majority of the users 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 Pierre, South Dakota,
this 24th day of September A. D. Nineteen
Hundred and Eleven

State Engineer.

STATE OF SOUTH DAKOTA

Water License No. 22

To SARAH F. COX

Source of Supply Crooked Creek

Harding County

Am't 2.5 Sec. Feet

Point of Diversion N. 3340 ft. from
1 sec. cor. Secs. 3 and 34, T8.
22 and 23 N., R. 5 E., B. H. 4.

Place of Use SW 1/4, Sec. 34,
T8 N., Sec. 35; NE 1/4, Sec. 34;
T. 22 N., R. 5 E., B. H. 4.

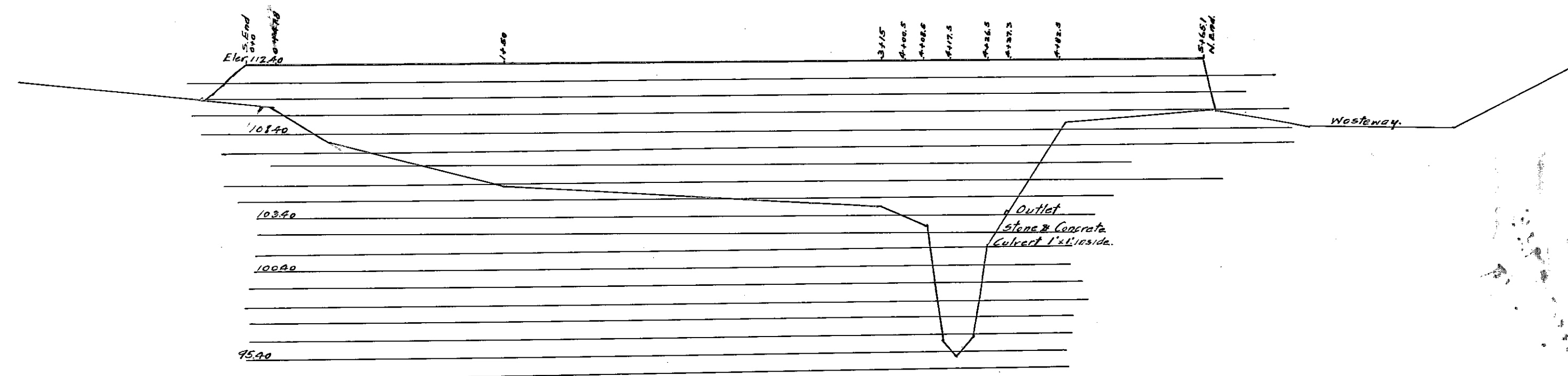
Purpose Irrigation

Date of Priority August 19, 1907.

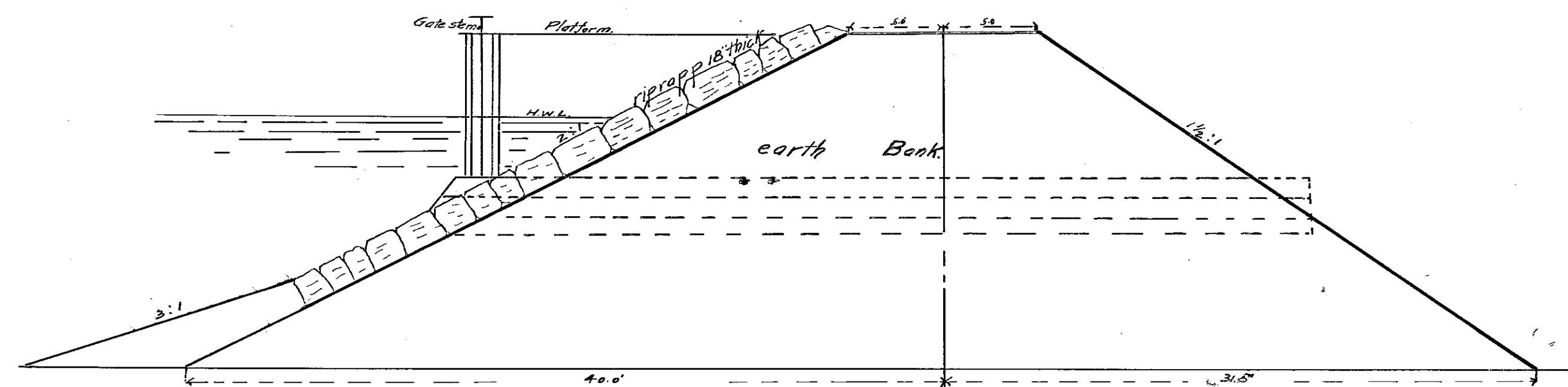
Recorded October 23, 1907.

In Book 1 of Record Page 52

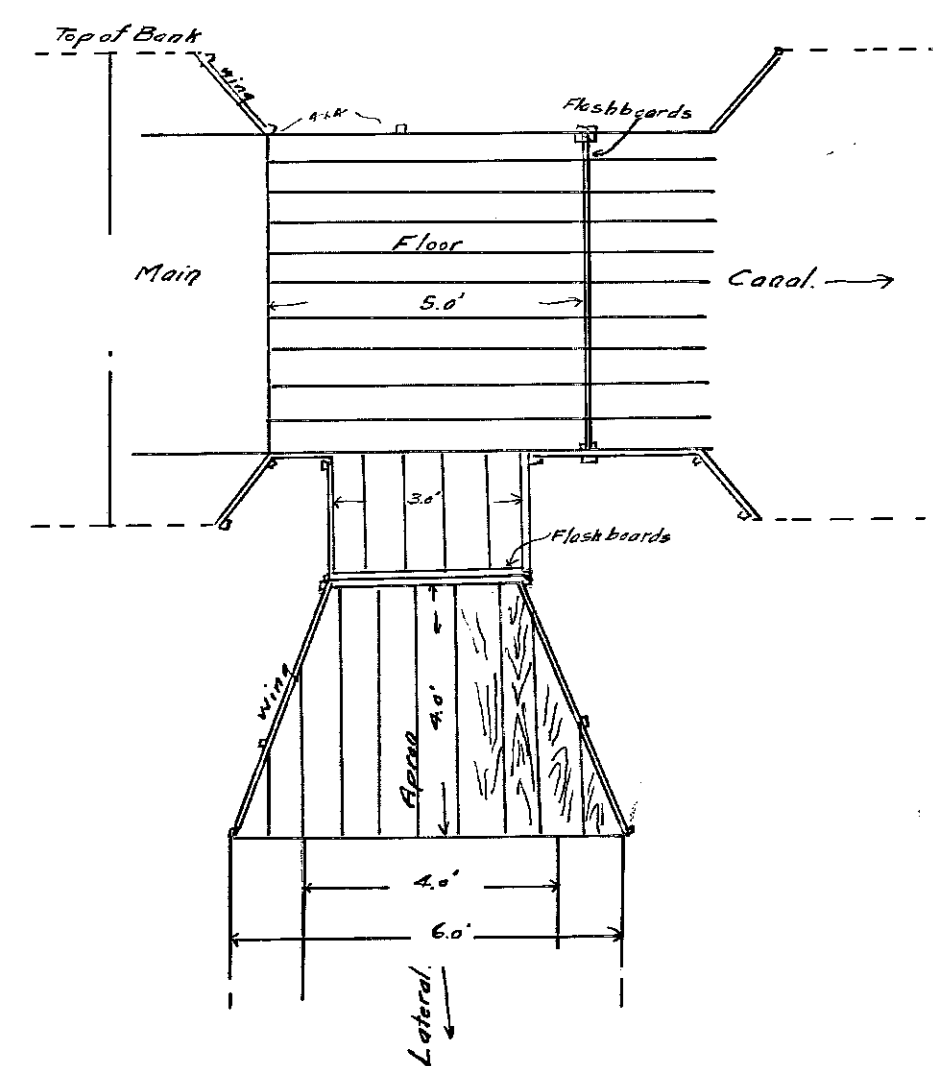
PROFILE OF EAGLES NEST DAM. - center-line
Scale Hor 1 inch = 60 ft. Vert 1 inch = 6 ft.



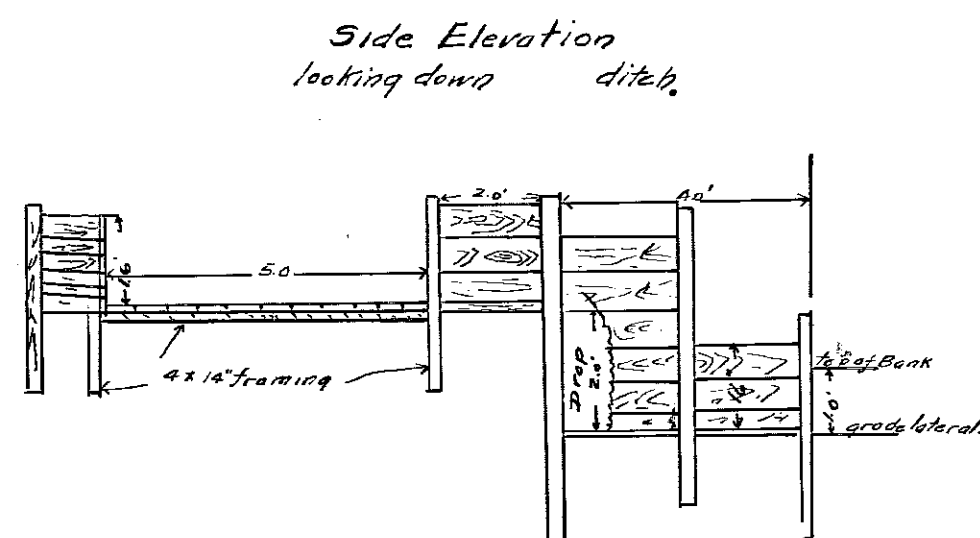
CROSS SECTION AT STA. 4+17.5
Scale 1 inch = 6 ft.



Contents of dam = 38759 cu yds. of earth and 370 cu yds. of stone. Front slope protected by ashlar riprap 15" thick. Outlet is a stone and cement concrete culvert 17" square inside with walls 17" thick Northwestern rectangular iron headgate at upper end operated from platform.
Natural wasteway over sod 20' wide; elev. 10840 at north end of dam.
Natural wasteway over sod 20' wide elev. 10810 at south end of dam.



Dividing Sluice
at Sta 32+24 on Cox Canal.
Initial point



State of South Dakota ss.
County of Perkins }
I, Borge H. Berreson being duly sworn upon my oath say:
That I am the engineer of the Sateren Extension to the Eagles Nest Reservoir and Canal; that the Survey and map thereof were made by me and that I have read the accompanying application and know of my own knowledge that the statements therein made are true.

Borge H. Berreson
Deputy State Surveyor.

Sworn and subscribed to before me this 21st day of Feb., 1912

Alfred Smallley
Notary Public, S. Dak.

MAP
SHOWING

SATEREN EXTENSION

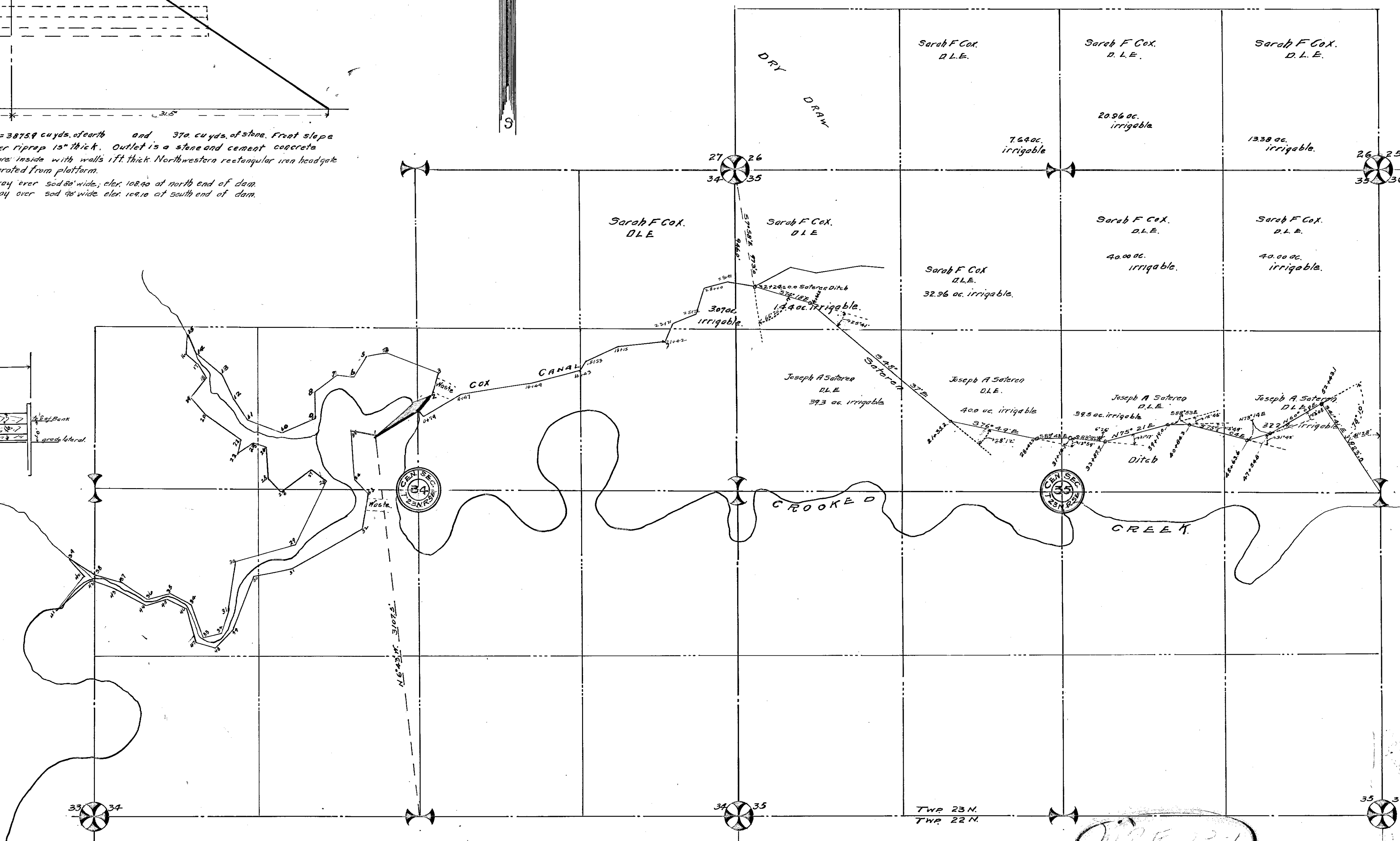
TO

EAGLE'S NEST RESERVOIR AND COX CANAL.

IN SECTIONS 34 AND 35, T. 23 N. R. 5 E. B. H. M. BUTTE COUNTY SOUTH DAKOTA
Scale 1 inch = 500 ft.

Comprising the irrigation system on the Desert Land entry of SARAH F. Cox under S. D. M. ORIGINAL APPLICATION No. 23 for 25 sec. feet of water. Total area irrigable under this application is acres

Crooked Creek is a perennial stream mean discharge during irrigating season is 15 sec. ft. Drainage area = 15 sq. miles. Maximum flood discharge = 70 sec. ft. Eagles Nest Reservoir has area on high water line of 31.45 ac. Max. capacity = 137.56 ac. ft. Available capacity above outlet = 117.16 ac. ft.
Cox Canal is 17 miles long 7 ft wide on water line. 5 ft wide on bottom water is 1 ft deep grade .53 ft. per mile.
Application is being made to extend ditch as shown on map so as to irrigate 1500 acres on the Desert Land Entry of JOSEPH A. SATEREN, under S. D. M. and for right to appropriate 2.15 sec. ft. per second of the waters of Crooked Creek, thru the above works.
Sateren Ditch is 2245 ft. long. Excavation Sateren Ditch = 900 yds.



W. R. F. 23-1
Map 1131

[illegible]

H. M. Drummell
Notary Public
My Commission expires July 30, 1910.

comprising the irrigation system on the Desert Land Claim of Sarah F. Cox, P.O. Ludlow, S.D. Prepared to accompany her application for a permit to appropriate the waters of the State for irrigating purposes, from Creeked Creek, a perennial stream, having a discharge of 1.5 sec ft. during the irrigating period. Drainage area 7.5 sq. miles. Maximum flood discharge 70. 500 ft. Eagles Nest Reservoir. Area of High Water Line 8,495 acres. Maximum capacity 137,560 ft. Available capacity above outlet 112,16 ac.ft. Cor Canal is 1.7 miles long, 7 ft wide on water line, 5° ft wide on bottom, 1° ft deep, grade 5.3 ft per mile; Contents, 2,000 cu.yds. Discharge 2.5 sec. ft. Lateral is 0.83 miles long. Total irrigable area = 178.32 acres. August 8, 1907. Scale - 1 inch = 500. feet.

August 8, 190.