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No. 16881  
No. 16888

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IN THE  
**Supreme Court**  
OF THE  
**State of Colorado**

CITY AND COUNTY OF DENVER, CITY  
OF COLORADO SPRINGS, and SOUTH  
PLATTE WATER USERS ASSOCIATION,  
Plaintiffs in Error,

vs.

UNITED STATES OF AMERICA, NORTHERN  
COLORADO WATER CONSERVANCY  
DISTRICT, COLORADO RIVER WATER  
CONSERVATION DISTRICT, F. E. YUST,  
CLAYTON HILL, GRAND VALLEY  
IRRIGATION CO., and GRAND VALLEY  
WATER USERS ASSOCIATION,  
Defendants in Error.

Error to the  
District Court  
of the  
County of Summit  
HONORABLE  
WM. H. LUBY,  
Judge

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SPECIFICATION OF POINTS  
and  
BRIEF OF PLAINTIFF IN ERROR  
CITY AND COUNTY OF DENVER

---

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NOV 18 1952

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FILED IN THE  
SUPREME COURT  
OF THE STATE OF COLORADO



Ray F. Frey Company

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**No. 16881**

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## State of Colorado

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Defendants in Error.

Error to the  
District Court  
of the  
County of Summit  
HONORABLE  
WM. H. LUBY,  
Judge

---

### SPECIFICATION OF POINTS

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1. The trial court refused to allow Denver to present its theory of its own case by refusing to admit or consider substantial, relevant, material, and properly offered evidence of diligence submitted by Denver. Examples of this error include:

A. Rejection of Exhibit C (Appendix, Map Section), "Amended and Composite Map and Statement of the Denver Municipal Water System," filed in the office of the State Engineer January 19, 1928, showing the Blue River unit of Denver's Transmountain Diversion System in relation to the then existing water plant of Denver (f. 1497, reoffered but not admitted, f. 1746 and 2038).

B. Rejection (f. 2090) of Exhibit I (Appendix, page 229) showing the capital investment made on the Denver Water System for each of the years 1935 through 1949, totaling nearly twenty-three million dollars, and shown by admitted and tendered evidence to be in substantial part for utilization of waters of the Blue River (f. 1587-89, 1812-13, 1828-30).

C. Rejection of testimony showing the interrelation and interdependence of the units of the Denver Water System including the Blue River unit (f. 1728-34, 1813, 2121).

D. Rejection of testimony that Denver expended substantial sums of money on the perfection of its Transmountain Diversion System including the Blue River unit (f. 1503).

E. Rejection of testimony that in 1928 Denver appropriated \$50,000 from its general revenues in addition to expenditure out of water revenues for work on the Blue River unit, together with work on other Western Slope units (f. 1504-1513).

F. Rejection of testimony that in 1929 Denver appropriated \$156,000 from its general revenues in addition to expenditure out of water revenues for work on the Blue River unit, together with other Western Slope units (f. 1519-1522).

2. The trial court substituted its judgment for that of the duly constituted public officials of Denver in the matter of selection of the mechanical devices for development of the Denver Water System.

3. The trial court construed evidence of enlargement of Denver's Blue River unit as evidence of abandonment of that unit in the face of positive evidence of intention to enlarge rather than to abandon.

4. The trial court entered decrees defining Denver's Blue River water rights contrary to the evidence both as to date and amount of priority.

5. The trial court failed to apply the Doctrine of Relation in fixing the priority dates for Denver's Blue River water rights.

6. The trial court, in its decrees relating to Denver, refused to apply the usual and accepted standards of diligence upon which it properly awarded appropriation dates to others.

7. The trial court, by awarding Denver decrees of a later date and in lesser amount for its Blue River unit than those to which it was entitled, deprived Denver of property rights of inestimable monetary value (upon which it has already expended more than a half million dollars) in contravention of the following provisions of the Colorado Constitution: Article II, Sec. 6, 14, 15 and 25, and Article XVI, Sec. 6.

8. The trial court failed to complete the work of adjudicating the water rights upon which claims were filed with it as required by law and thus deprive Denver of the advantages which would have arisen from such determination.

9. The trial court erred in failing to award Denver the following:

A. To the Blue River Diversion Project, 1600 cubic feet per second of time, 1200 second feet as of July 4, 1921, and 400 second feet as of October 19, 1927.

B. To the various reservoirs served by said Blue River Diversion Project, amounts as follows:

Two Forks Reservoir	345,882 acre feet
Ralston Reservoir	12,758 acre feet
Cheesman Reservoir	79,000 acre feet

Eleven Mile Canyon Reservoir	81,917 acre feet
Marston Reservoir	19,800 acre feet
Antero Reservoir	33,000 acre feet
Reservoir 22	113,077 acre feet



## INTRODUCTION

On March 10, 1952, in general water adjudication proceedings for Water District No. 36, the District Court of Summit County entered conditional decrees awarding Denver 788 second-feet of direct flow water from the Blue River with a priority dated June 26, 1946. Denver seeks decrees for 1600 second-feet, of which 1200 second-feet should be dated July 4, 1921, and 400 second-feet dated October 19, 1927.

Review of both the date and the size of the priority awarded Denver is imperative. The late date given in the decree effectively denies Denver any water from the Blue River, and, if the errors committed by the trial court be allowed to stand, will stop its growth after another ten or twelve years. It will force Denver to abandon all value in some \$586,000.00 of expenditures made year by year, from 1921 to the date of hearing, in the systematic and diligent development of the Blue River unit of its Transmountain Diversion System. It will also jeopardize to an undetermined degree, more than \$20,000,000 expended by Denver in construction of facilities for diverting, storing, purifying and delivering water from the tributaries of the Colorado River, for the use of Denver and adjacent areas dependent on it for their water supply.

The real opponent to Denver's claims on the Blue is the United States Bureau of Reclamation. Whether it will directly and in its own name present its contentions in this Court is in some doubt. The United States, after submitting itself to the jurisdiction of the trial court, filing its claims, and participating in those proceedings for over five years, "withdrew" knowing full well that its theories would be advanced by others who hope to find indirect benefit from having the Blue River made a Reclamation Bureau preserve. We consider that with-

drawal of no effect and we have continued here to name the United States a defendant in error.

Denver's appropriation of Blue River water took definite form in 1921 and antedated by at least ten years any plans formulated by the Bureau. In 1932, at the Bureau's request, and relying on the prospect of financial assistance from the Government, Denver supplied it with a list of Denver's claims to Western Slope water. (f. 1525-1527) The Government already had in its files Exhibit U showing rights-of-way needed from the Government for the project. (f. 1444) Exhibit B, showing the general scheme of development of the Blue, had been filed in the U. S. Land Office December 5, 1927. (f. 1501-2) This, and other exhibits, were filed in the office of the State Engineer, for all to see.

Then in 1933 the Bureau commenced its surveys for the Colorado-Big Thompson project with visible work at Granby Reservoir and at Adams Tunnel. In 1936 it surveyed its Green Mountain Reservoir at a location on the Blue some 50 miles below Denver's diversion point at Dillon. By 1943 the Bureau had completed a 152,000 acre-foot reservoir at Green Mountain. The Bureau uses 52,000 acre-feet of this storage to replace water taken from the headwaters of the Colorado and carried through the Continental Divide to the Big Thompson project. The Bureau claims the remaining 100,000 acre-feet for other future undetermined uses. (District Exhibit A)

The Colorado-Big Thompson Project will not be injured by recognition of Denver's claims. Denver's claims *do not* conflict in any practical sense with an annual 152,000 acre-foot fill of Green Mountain Reservoir. Even in the lowest years, after first satisfying Denver's prior claims by tunnel diversion at Dillon, there will be enough water at Green Mountain to supply in full the 52,000 acre-foot requirement for replacement water. There

—7—  
*Green*

will also remain at ~~Blue~~ Mountain sufficient water to provide substantially all of the remaining 100,000 acre-feet of future undetermined use water. In an extremely low year, there might be a conflict to the extent of a few thousand acre-feet between Denver's early priorities (if awarded by this Court) and the 100,000 acre-feet of future use water. (f. 4377) The September 27, 1927, priority Colorado Springs is seeking for the ten or twelve thousand acre-feet it would divert at Hoosier Pass above Dillon in a dry year would, if granted, reduce the amount of water at Dillon for Denver, but would have little effect at Green Mountain because almost half of the water in the Blue at Green Mountain comes into the river below Dillon.

The real conflict is occasioned by the power claims of the United States. The Bureau, in order to get control of the *entire* Blue, put in two generating stations at Green Mountain dam capable of taking directly into the turbines, the entire flow of the Blue at *high flood stage*, a condition lasting not more than six weeks per year. (f. 4394-98) It overbuilt this hydro-plant four or five times, ignoring economy and sound planning in an attempt to jump Denver's Blue River claims of which it had direct knowledge from the information it had obtained from Denver and from a constructive knowledge by reason of official filings in the office of the State Engineer. (f. 1532) It is this wasteful seizure of the entire flow of the Blue River that threatens to consign Denver's future to the mercies of Bureau of Reclamation officials.

It is a matter of general public knowledge that the Bureau of Reclamation in spite of its Blue River power claims, is still planning a Blue-South Platte development, and it is a matter of record that Denver and the Bureau are co-operating in that planning. (Exhibit E, Appendix p. 214, and Exhibit T, Appendix p. 234, f. 1548-1575) Only a student of Bureaucracy will fully understand how

the Bureau of Reclamation could get itself into a position in which its Green Mountain Power Plant is in needless conflict with other phases of its existence pertaining to cooperating (at vast expense) with Denver in real development of the Blue. Aside from the conflict with the Bureau, Denver's claimed conditional decrees do not conflict with any water users from the Blue River (f. 1595-1606), or from any other segment of the Colorado River.

The evidence shows that Denver is entitled to a Blue River priority dated July 4, 1921 for 1200 second-feet and a priority of 400 additional second-feet by enlargement under date of October 19, 1927. Denver initiated these rights by survey, followed up by the statutory filings and by continuous work including extensive and substantial physical construction.

Historically, preliminary reconnaissance of the Blue was made by Denver City officials as early as 1914. Then in 1918, Denver's water system became municipally owned, managed by the Board of Water Commissioners. The Board took cognizance of the inability of the South Platte River to furnish a supply of water for the growing city. In 1921 the Board of Water Commissioners began vigorously to prosecute work on a second source of supply from the tributaries of the Colorado River. To this end it undertook expensive and painstaking surveys, designing its Transmountain Diversion System to reach waters of the Fraser, Williams Fork and Blue rivers, tributaries of the Colorado, by transmountain tunnels. Separate maps and statements were filed on each unit of the System, including Eastern Slope reservoirs where the water would be held for use. A filing on the Blue River unit was made in 1923, and a further filing in 1927 showing enlargement to substantially its present form. (Exhibits A and B, Appendix, Map Section)

On January 19, 1928, Denver filed in the office of

the State Engineer its "Composite Map and Statement of the Denver Municipal Water System," Denver's Exhibit C. (Appendix, Map Section; not admitted, f. 1497) This map shows Denver's then existing sources of supply (the tributaries to the South Platte River) in their relationship to the Colorado River sources. Filings for the individual structures comprising the various units of the system, including the Blue River unit based on surveys commenced July 4, 1921, were incorporated in Exhibit C by reference to earlier filings in the office of the State Engineer. Denver's rights to divert water from two of these Colorado River tributaries as of July 4, 1921, through the Fraser and Williams Fork units, were set at rest by this Court in 1939. (*Denver v. Sheriff*, 105 Colo. 193.) In each year since 1921 Denver has expended time and money on its Blue River unit, the amount now aggregating more than half a million dollars directly on the unit itself, and \$23,000,000 on the interrelated system.

So important is this case that we have prepared and are filing as an Appendix to this Brief a separate volume consisting of a condensation in narrative form of testimony taken at the trial and including reproductions of the principal exhibits.

## STATEMENT OF THE CASE

The decrees under review were entered in general adjudications had in Water District No. 36 to determine priorities for purposes of irrigation (Cause No. 1805 in the District Court of Summit County and No. 16888 in this Court) and for purposes other than irrigation (Cause No. 1806 in the District Court of Summit County and No. 16881 in this Court). Denver filed its Statement of Claim in each case. (f. 11-39 and 4-32, respectively) The actions were consolidated for hearing under No. 1805. Since substantially identical pleadings, motions, protests and other papers were filed in each case, reference will be made to the record in Case No. 1805 unless otherwise specified. Folio references to Case No. 1806 will be italicized.

Denver seeks 1600 second feet of direct flow from the Blue, to be diverted at Dillon into a 23-mile trans-mountain tunnel terminating at the North Fork of the South Platte River near Grant, under priority date of July 4, 1921, as to 1200 second feet and under priority date of October 19, 1927, as to the remaining 400 second feet. The purposes are correctly stated in the decrees and are not in controversy here.

Numerous statements of claim were filed including those on behalf of Defendants in Error United States of America, Northern Colorado Water Conservancy District, Colorado River Water Conservation District, F. E. Yust and Clayton Hill. Belatedly, after all evidence was in, and the decree prepared, Grand Valley Irrigation Company, and Grand Valley Water Users Association, Orchard Mesa Irrigation District and Palisade Irrigation District sought to introduce evidence in the case.

Protests against Denver's claims were filed by several claimants, who, at the trial subjected Denver's testimony to extensive cross-examination. In response

to their objections, much relevant and material evidence offered by Denver was excluded by the trial court. On the record as it stands, Denver proved:

A. Denver's efforts to secure water from the tributaries of the Colorado River were made in good faith, such water being needed to meet the growing demands of the Denver Metropolitan area which the over-appropriated South Platte River was unable to supply. (f. 1583, 1797) The Blue River unit was, from the first, an integral part of Denver's Transmountain Diversion System. (Exhibit Z; Exhibit C, Appendix, Map Section)

B. To meet the growing need, Denver first acted through its Public Utilities Commission (predecessor to the present Board of Water Commissioners), employing two engineers, J. B. Lippincott and R. I. Meeker, to investigate and report on an additional water supply for Denver. (f. 1421-22, 1725 and 1750) Lippincott's report, Exhibit V, entitled "Preliminary Report for a New Water Supply for the City of Denver," was made in 1914 and recommended transmountain diversion from the tributaries of the Colorado River. Meeker's report, Exhibit W, dated May 18, 1914, is entitled "A Transmountain Water Supply from the Fraser, Williams Fork and Blue River for the City of Denver," and made the same recommendation. It was these investigations that gave the 1914 date to the various filing maps made by Denver for its Western Slope water projects. (f. 1447)

C. In 1918 Denver created a non-political Board of Water Commissioners to exercise all City powers regarding water matters, including all powers of the former Public Utilities Commission of Denver. (f. 1423-32)

D. The Denver Water Board employed George M. Bull, an experienced water engineer, to make a thorough study of the problems incident to the appropriation of water needed by Denver from the tributaries of the Colo-

rado River. (f. 1435-41) On the basis of this work Mr. Bull made a report to the Board dated June 16, 1931. (Exhibit P, Appendix, p. 230)

E. The Water Board on behalf of Denver appropriated water from the three tributaries of the Colorado, including the Blue River. Exhibit A, the Map and Statement for the Blue River unit, was filed in the office of the State Engineer on May 31, 1923, (f. 1443, 1736; admitted f. 2038) and was based on the survey commenced by Bull July 4, 1921. (f. 1439-44) The same date is established in Denver's Fraser River and Williams Fork decrees. (f. 1440, *Denver vs. Sheriff*, 105 Colo. 193 (1939)) During 1923 Denver took the first steps to secure rights of way for the Blue River unit over federal lands (f. 1454, Exhibit U) and prosecuted its applications (f. 1499) until they were finally granted in 1932. (f. 1501-2)

F. In 1922 the Board of Water Commissioners had an over-all comprehensive engineering study made by Messrs. Cory, Maury and Crocker (f. 1442-9) dealing with water needs as affected by population growth, physical plant requirements, and the availability of water resources. Their recommendations are found in Exhibit Z, dated August 15, 1922, a 95-page printed booklet entitled "Report of Engineering Board of Review to Board of Water Commissioners."

G. Thereafter the Denver Water Board instructed Mr. Bull to further develop the plans for the Blue River unit. He took a survey party into the field in the summer of 1926 (f. 1481, 1743) and that work resulted in the enlargement represented by Exhibit B, filed in the office of the State Engineer October 19, 1927, and filed with the United States Interior Department as a basis of right of way acquisition December 5, 1927. The right of way was granted late in 1932. (f. 1484, 1501-2)



H. Concurrently with the work above outlined, reservoir sites in the South Platte watershed were surveyed by Denver, so located as to be able to receive the waters of the Blue, the principal one being Two Forks Reservoir, at the junction of the North and South Forks of the South Platte River, with operating and power sites at Grant, Estabrook, Strontia Springs and Waterton. (f. 1454, 1933-34, Protestants' Exhibit 32, Map and Statement of Two Forks Reservoir Enlargement, filed November 3, 1926)

I. The whole system as an integrated and complete system of many inter-related parts was shown in the Map and Statement filed with the State Engineer January 19, 1928. (Exhibit C, Appendix, Map Section; rejected f. 1497)

J. In 1928, Denver started work on the preliminary right of way problem for Two Forks Reservoir of elimination of conflicting public use of the bed of the site for railway purposes. The elimination of this conflict was accomplished in 1942. (f. 1515-18) Detailed survey work, diamond core drilling of the dam site, digging of test pits, and stream gauging, together with acquisition of privately owned land within the Two Forks Reservoir site, continued up to 1948, the date of the last acquisition of privately owned right of way. (Exhibit YY, Appendix, p. 186, particularly Work Orders Nos. 3301, 3424, 3841, 4334, 6586, 6610 and 9427, Appendix, p. 188 f.f., Exhibit AA, Appendix, p. 237)

K. Between 1928 and 1932, surveys for the power lines, to carry the electrical energy to be generated by the Blue River unit, were run and a survey of the line of the tunnel by the tedious but exact triangulation method was made, this being desirable because of the extreme length of the tunnel, the necessity for various headings to meet far underground, and the probability that geologic study would require changes in alignment.

(f. 2003-19) Subsequent intensive study of the original line of the tunnel did indicate bad ground in certain areas which required changes in alignment of the tunnel. (f. 2023) Geologic study of the new line was completed in 1945. (f. 2024)

L. A protracted drought reached its severest stage in 1933. The stress of national financial crisis existed at the same time. During this period the Denver Board of Water Commissioners threw all its resources into completion of the already driven Moffat Tunnel. (f. 1592, 2026) Denver repeatedly offered proof at the trial that in the period 1932 to 1942 extreme exertions were being made on the Moffat Tunnel and Williams Fork units of its Transmountain Diversion System. Denver established and endeavored to show in greater detail that its whole pattern of work in these years, including the work being done in facilities to distribute water, filter it and pump it on the Eastern Slope, was devoted to the building of a single system. The refusal of the trial court to consider the Denver water plant as a single system appears throughout the trial, but is summarized in the record at f. 1729-32.

M. From September 17, 1942 through 1945, excavation work was done at the West Portal of the Blue River Diversion Tunnel (f. 1612, 2029-31); clearing of timber and acquisition of land for the proposed large diverting dam proceeded. (Exhibit YY, Appendix, p. 186 Work Orders Nos. 3350, 3356, 3357, 3813, Exhibits AA, Appendix, p. 237 and Exhibit H, Appendix, p. 227) Work was commenced at the East Portal of the Diversion Tunnel in June, 1946, and continued to the present. Total expenditures on the tunnel up to the time of trial aggregated \$306,518.30. Expenditure by years on the Denver Municipal Water System from 1935 to 1949, inclusive, is shown in Exhibit I, Appendix, p. 229, which was offered but rejected. (f. 2090)

The opponents to Denver's case set forth their objections in written protests in which they urged the trial court to deny Denver *any priority whatsoever* (this, in effect, is what it did) for these reasons:

A. They assert that Denver has an adequate water supply from sources other than the Blue River.

This is contrary to the proven facts; the theories advanced by protestants are contrary to the *Sheriff* case, *supra*.

B. They contend that Denver's Blue River priorities cannot relate back farther than the date there was physical construction on the ground such as would give notice to all other appropriators of the nature and extent of Denver's appropriations, and they say that Denver did not do any such work until it started east portal work in 1946.

This has never been the Colorado law; it is contrary to Chapter 90, Section 195, C. S. A. and the decisions of this Court, *infra*.

C. They contend that the filing statutes are unconstitutional.

These statutes have been in force for more than 40 years; no basis to question their validity exists.

D. They contend that a synopsis of an engineering report, printed in pamphlet form as Senate Document No. 80 of the 75th Congress, has the force and effect of law, implements the provisions of the Colorado River Compact, and for all practical purposes prevents Denver from completing appropriations from the Blue River.

This misinterprets the report; the legal theories back of this contention would place Colorado water law completely in the hands of Bureau engineers.

E. They assert that Denver has not made beneficial use of the waters of the Blue River.

Our whole system of conditional decrees was developed to give appropriators assurance of determined priority dates before completion of their works; the objections of protestants are based on legal theories contrary to the *Taussig* case, *infra*.

Denver's position is summarized immediately below.

## SUMMARY OF ARGUMENT

### I

Denver appropriated water from the Blue River, on July 4, 1921, and enlarged its appropriation on October 19, 1927, in amounts needed for Denver's growing population. The work for Denver's Transmountain Water System, consisting of three major units of which the Blue River project is one, started by survey July 4, 1921, lead to the filing by Denver in the office of the State Engineer of its Map and Statement covering its Blue River appropriation in 1923, and the filing of its enlarged Map and Statement in 1927. A comprehensive Map and Statement showing inter-relationship of all parts of Denver's Municipal Water System was filed in the office of the State Engineer January 19, 1928.

### II

The work done by Denver, including investment in the years 1927-49 of \$580,000 in the Blue River unit of its Transmountain Water System, investment of \$12,000,000 in the other two units of that same system, together with the investment of \$10,000,000 in facilities and structures to be used in common by all three units of the transmountain system, constitutes due diligence in the development of its appropriation.

### III

Improvements of the mechanical design of diversion

and carriage works which do not increase the burden of Denver's appropriation on the stream, are normal incidents to the development of a project of this magnitude. They do not defeat the application of the Doctrine of Relation and they are not evidence of abandonment of the priority date originally claimed for the project.

#### IV

The final decree should establish the priority of each appropriator who submitted claims, including the United States and Northern Colorado Conservancy District, each of which participated in the adjudication proceeding for five and one-half years before "withdrawing."

#### ARGUMENT

##### I

DENVER APPROPRIATED WATER FROM THE BLUE RIVER IN 1921, ENLARGED ITS APPROPRIATION IN 1927, EACH TIME IN AMOUNTS REASONABLY REQUIRED TO MEET ITS NEEDS.

Denver's Municipal Water System is an enormous enterprise. It is the life blood of a half million people, approximately 40% of Colorado's population. The responsibility of meeting that need was placed upon the Denver Board of Water Commissioners when it was created by Charter in 1918. That responsibility has not been shirked or evaded. In 1920 the number of people served by Denver's Water System was 260,000. (f. 2696) From that date to 1930 the number increased 23% to 320,000; from 1930 to 1940 it increased 15% to 370,000; from 1940 to 1950 it increased 27% to 470,000. (f. 2696)

The water required to meet such growth was of immediate concern to the then newly organized Board. They and their predecessors sought and obtained the best of expert advice. They presented the problems of growth first to R. I. Meeker, and J. B. Lippincott (Exhibits V

and W), then to George M. Bull (Exhibit P), and finally to Harry T. Cory, Dabney H. Maury and Herbert S. Crocker (Exhibit Z). Each warned of the pressure of mounting population against the limited South Platte supply and each recommended development of a second water source from the headwaters of the Colorado.

The population served by the water system is increasing on the schedule forecast by Messrs. Cory, Maury and Crocker and will reach 1,000,000 by the year 2000. (Plate 1, Exhibit Z) This forecast is as valid today as it was thirty years ago. The population growth experts called at the trial by each side bracketed this figure, Denver's experts predicting between 976,000 and 1,230,000 and Protestant's experts predicting 800,000 to 1,000,000 for that year. (f. 2225, 2741, 2759, 2696)

In 1921 the Board of Water Commissioners took definitive steps to build its Transmountain Diversion System. On July 4, 1921, it sent George M. Bull into the field to commence the survey of the transmountain tunnels for the Fraser, Williams Fork and Blue River units of the system. A Map and Statement for each unit, including Exhibit A for the Blue unit, was filed in the office of the State Engineer in 1922-23. Study of engineering design continued. The principal reservoir site available for storage of Transmountain water, Two Forks, at the junction of the north and south forks of the South Platte, was surveyed and greatly enlarged in 1926. (Protestant's Exhibit 32) In that same year Mr. Bull was sent back to the Blue unit to improve its design and enlarge its capacity. His survey of that year resulted in an enlargement of the appropriation and improvements in the diversion plans which eliminated use of many miles of high altitude open canals. This plan was reduced to Map and Statement form, Exhibit B, and filed in the office of the State Engineer October 19, 1927. (Appendix Map Section)

Malcolm Lindsey, as legal adviser to the Board, reviewed the filings and the work that had been done, (f. 1410-11) and on January 19, 1928, Denver filed Exhibit C in the office of the State Engineer, its "Amended and Composite Map of the Denver Municipal Water System," showing its existing works and the various units of the Transmountain Diversion System. This map included the details of all planned structures, incorporating them by reference, including references to Exhibits A and B. The interrelation of the units of Denver's Transmountain Diversion System was now fully of record in the office of the State Engineer. Exhibits A, B, and C are reproduced in the Map Section of the Appendix.

This Court has specifically approved the conservative and painstaking methods used by Denver to make its Western Slope appropriations. In *Denver v. Sheriff*, 105 Colo. 193 (1939), this Court, in the first two pages of its opinion, commented upon Denver's population growth, upon the recommendations of the engineers, and upon the filings on the Fraser and Williams Fork rivers. After discussing other points, this Court said at page 202:

"\* \* \* Counsel miss entirely the outstanding fact that more than one-third of the population of the state is now seeking a measure of security in water supply by the construction and operation of a water system on which there has been expended approximately \$12,000,000.00. The concern of the city is to assure an adequate supply to the public which it serves. In establishing a beneficial use of water under such circumstances the factors are not as simple and are more numerous than the application of water to 160 acres of land used for agricultural purposes. A specified tract of land does not increase in size, but populations do, and in short periods of time. With that flexibility in mind, it is not specu-

lation but the highest prudence on the part of the city to obtain appropriations of water that will satisfy the needs resulting from a normal increase in population within a reasonable period of time. *Colorado Springs v. Colorado City*, 42 Colo. 75, 85, 86, 94 Pac. 316. 'Courts are not to shut their eyes to the realities of business life.' *Barkin Construction Co. v. Goodman*, 221 N. Y. 161, 116 N. E. 770."

Even Protestant's witness, Riter, a Bureau of Reclamation official, admitted that developing Denver's Western Slope appropriations at a rate geared to a population increase to 1,000,000 by the year 2000 A. D. was reasonable and prudent. (f. 2793-4)

Denver needs water from the Blue. As previously pointed out, the lower Court's decree will stop Denver's growth within the next ten or twelve years. Tested by the mandate of the *Sheriff* case, Denver made and gave full public notice of a valid appropriation of water from the Blue River commenced by survey July 4, 1921, enlarged October 19, 1927, in amounts reasonably required by its rate of growth.

## II.

### DENVER HAS EXERCISED DUE DILIGENCE IN THE DEVELOPMENT OF THE BLUE RIVER UNIT OF ITS WATER SYSTEM

The legal doctrine that every water right created by appropriation takes its priority date by relation to the date upon which the first step, showing intent to appropriate, was taken, subject only to due diligence being shown in the diversion and beneficial use of the water, is too well established in this Court to require protracted argument.

*Ophir Silver Mining Co. v. Carpenter*, 4 Nev. 534 (1868) contains one of the earliest definitions of due



diligence as it applies to water rights. This definition has been cited with approval and quoted at length or paraphrased in every western state. Our own court, in *Highland Ditch Co. v. Mumford*, 5 Colo. 325, 336, paraphrased the Nevada court's definition in this form:

"To constitute due diligence does not require unusual efforts or expenditures, but only such constancy in the pursuit of the undertaking as is usual with those in like enterprises. Such assiduity as shows a *bona fide* intention to complete it within a reasonable time."

The rule is applied in *Sieber v. Frink*, 7 Colo. 148, 153, and our court brought the doctrine to its logical conclusion in *Water Supply Co. v. Larimer & Weld Irr. Co.*, 24 Colo. 322 (1897), where the water right of a reservoir initiated in 1890, but not built until 1893, was held superior and senior to a reservoir initiated in 1891 and completed in 1892. Judge Campbell in his opinion in that case assumes the doctrine of relation to be so well settled in Colorado that he cites no supporting authorities.

*New Loveland & Greeley Co. v. Consolidated Home Supply Co.*, 27 Colo. 525 (1900) approves the doctrine, but holds the facts insufficient in the particular record to show that the intention to appropriate was "manifested" in any visible or public way at the early date claimed by the defeated party. When the present Colorado Map and Statement Act, Ch. 90, Sections 27-33, 1935, C.S.A. was adopted in 1911, replacing an earlier statute which had not been legally enacted, a method by which an intent to appropriate water may be officially "manifested", came into use. Denver has followed the provisions of that Act meticulously, and the comprehensive plan of the Denver Municipal Water System,

filed under that Act, has been a notice to all the world since at least as early as January, 1928 of the interrelated use of the various units of the system, and the filings of earlier dates (1923 and 1927) have been notice to all the world of Denver's intention to appropriate the water designated in each particular filing.

*Conley v. Dyer*, 43 Colo. 22 (1908) again approves the doctrine of relation. Here this Court says expressly with respect to elapsed time measuring due diligence, page 28, “\* \* \* what shall constitute this reasonable time depending upon the facts and circumstances with each particular case.”

*Holbrook Irr. Dist. v. Ft. Lyons Canal*, 84 Colo. 174 (1928) reviews the earlier Colorado cases and applies the doctrine of relation as the facts in that particular case require. The matter of particular pertinency in that case is the use of a composite map showing diversion plans for several district ditches and reservoirs drawing water from different streams. That map was received in evidence and in the short opinion on rehearing, p. 198, this Court expressly states that in determining diligence respecting the several parts of the System, it adopted a “unit rule;” that is, “to allow credit for work on different parts of their several structures to the system as a whole.”

The unit rule, announced in that case, applies with full force to Denver's present claim. All of the evidence is that Denver has a single integrated and interrelated water system (f. 1790-91, 1625, 1649-50, 1658, 1702, 1829, 1926). Even Protestant's witness Riter, a Bureau of Reclamation official, when discussing the use of eastern slope reservoirs for western slope water, stated that it was one system and would inevitably be so operated (f. 2864)

The record in the present case establishes beyond question (Malcolm Lindsey, f. 1491-1612; Gross, f. 1744-

1830) that this overall plan for a comprehensive Denver Municipal Water System substantially in the form so clearly published to all the world and to all junior appropriators in the Map and Statement (Exhibit C—not admitted, f. 1497) filed on January 14, 1928, in the office of the State Engineer, has continued to be and still is the basic pattern followed by Denver in the building of its water supply.

Over twelve years ago in *Denver v. Sheriff*, (supra) this Court considered Denver's water system as thus designed. The Fraser River (Moffat) and Williams Fork segments of the System were then before this Court. Exhibit K, in the record of the *Sheriff* case, is the identical system map which is Exhibit C in this case. In the second paragraph of its opinion this Court described what Denver has as "a water system" and "the Denver Municipal Water System." In the *Sheriff* case priority dates for Denver's Fraser River and Williams Fork water rights were, under the Doctrine of Relation, established as of July 4, 1921, the date of the commencement of the survey by Mr. Bull of the Colorado tributary sources (f. 1439-44, 1735-36). The language there used by this Court is still pertinent and states the background of law and fact to which the trial Court should have given heed in the instant case.

*Taussig v. Moffat Tunnel Co.*, 106 Colo. 385 (1940) arose out of that same Fraser River adjudication. This Court said, p. 387:

"\* \* \* The water company [a corporate water claimant not connected with Denver] asserts, and the evidence sustains its assertion, that all of the conditionally decreed rights involved constitute one system, for the collection of water on the Western Slope, to be transported to the Eastern Slope for use, with provision for replacement or compensating water for the benefit of any appropriators on the Western

Slope, for water of which they would be deprived. The ditches and reservoirs belonging to the water company, and for which decrees were granted, derive their supply of water from either the Fraser River itself or from tributaries or subtributaries thereof. The Fraser in turn is a tributary of the Colorado river. The water not having been put to any use at the time of the hearing or the rendition of the decrees, only conditional decrees were entered.

\* \* \*

“The primary objections to the decrees presented for our consideration involve a construction of this section 195. [Chap. 90, C.S.A.] Was there any evidence of claims and proofs of partially completed or partially perfected appropriations to satisfy the provisions of the section? The record discloses the following steps taken by the water company: Surveys by the predecessor, as applied to the entire system of the water company, were commenced July 2, 1932; the survey work for all component parts was performed by C. L. Chatfield, a licensed engineer, and other engineers working under his supervision and direction, including the preparation of maps for filing with the state engineer; the contents of these maps were set forth in numerous map exhibits; rights of way and options thereto were acquired, and after a period of two and a half years the water company obtained from the Moffat Tunnel Commission, subject to the rights of the City and County of Denver, a right of way through the Moffat Tunnel for carriage of its water, the charge fixed therefor being twenty-five cents per acre foot, with a minimum of \$10,850 per year, to be paid by the water company to the Moffat Tunnel District; considerable effort was made to obtain rights of way over the public domain, which so far

has not been successful. As for construction work, the record discloses that test holes were drilled at the Ranch Creek Reservoir; that work was performed in the way of clearing timber along the proposed ditch lines; that hill slopes were taken for many miles along the ditch lines; that timber along such lines was classified in respect to lands over which rights of way would have to be obtained, and the survey work was completed in respect to the component parts along the entire system. Approximately \$10,000 was spent on this project by the predecessor of the water company, and about the same amount by it up to the time of trial.

“Objectors contend that no conditional decree may be entered until the diversion and also the application of water to a beneficial use have been wholly or partially completed. Are there such absolute requirements under section 195, *supra*, as contended? We think not.

“Long prior to the enactment of section 195, quoting with approval from *Ophir S. M. Co. v. Carpenter*, 4 Nev. 534, 544, we said ‘Although the appropriation is not deemed complete until the actual diversion or use of the water still if such work be prosecuted with reasonable diligence, the right relates to the time when the first step was taken to secure it.’ *Sieber v. Frink*, 7 Colo. 148, 153, 2 Pac. 901.

“It is clear that section 195 applies only to ‘claims and proofs with respect to partially completed or perfected appropriations.’ The requirements are that the claims and proofs, and the financing and construction, be prosecuted with reasonable diligence, ‘under all the facts and circumstances surrounding and bearing upon such claim of appropriation.’ All the facts and circumstances

surrounding these claims indicate an enterprise of considerable magnitude. Only under the circumstances before us would it be possible for private enterprise to bring water from the Western Slope to the South Platte basin on the Eastern Slope. Until there is a reasonable assurance culminating in conditional decrees, such as are before us, it would not be possible for any private enterprise to risk such a large amount of capital as is necessary to complete the same. In effect, to require the water company to complete its project before granting it any decree, as objectors contend is necessary, would constitute a denial of the constitutional right to divert unappropriated waters to a beneficial use."

At page 36 *infra* we discuss in more detail acts done by Denver which should have been considered under the unit rule and held by the trial court to prove diligence. First, however, we discuss the proof of Denver's work directly applicable to the Blue River project which permeates the whole record of this case.

The trial court did receive the evidence of work done by Denver, directly on the Blue River unit, and, as the case stands, this proof, covering the whole period 1921 to date of trial, requires entry of a decree for 1600 second feet of direct flow diversion at or near Dillon from the group of streams coming together near that point, viz. the Blue, the Snake, and the Ten Mile, with a priority date of July 4, 1921, as to 1200 second feet and priority date of October 19, 1927, as to an additional 400 second feet. If the trial court had not persistently rejected the further evidence pertinent under the unit rule, the record would be even more complete.

The principal acts and expenditures by Denver directly in furtherance of the Blue River project during the period subsequent to July 4, 1921, established by evi-

dence admitted by the court, fell into the following classes:

*Survey on the 84 mile collection canal system and 4½ mile tunnel.* George M. Bull and his party spent the summer of 1922 surveying the short tunnel and the 84 miles of high altitude collection ditches, siphons, and short tunnels, reduced the survey to Map and Statement form, and filed the same, Exhibit A, in the office of the State Engineer on May 31, 1923. (f. 1443, 1735-36; Exhibit A, Map Section, Appendix, Work Order 2805-C, Appendix, p. 187)

*Survey and geologic work on 23-mile tunnel and its diversion works.* In 1926, George M. Bull and his party returned to the field to survey a simplification of the means of diversion and an enlargement of the Blue River unit which was reduced to Map and Statement form, Exhibit B, and filed in the office of the State Engineer October 19, 1927. (f. 1482-91; 1742-44; Exhibit B, Appendix, Map Section; Work Order No. 4842, Appendix, p. 189) In 1931-2, H. R. Oliver installed triangulation survey monuments and staked the tunnel line so that detailed geological studies could be made. (f. 1758-61; 2008-19; Work Order 8256, Appendix, page 193) Work by Lovering and Wilson indicated faulted areas on the tunnel line and they suggested dog legs to avoid the bad ground (f. 1758-62, 2019-22) Oliver established two more survey monuments and staked the modified or "Montezuma" line (f. 1762-68, 2012-15), and core drilling and geological work was done to determine the nature of the new ground. (f. 1764-68; 2023-24; Work Order Nos. 3913, 5197, 3574 and 3840, Appendix pages 216, 217, 214, and 210 respectively) Joint studies with the Bureau evolved the large forebay modification of the diverting works which was surveyed

as Dillon Reservoir, (Exhibit D; f. 1770-1), core drilled and examined geologically. (f. 2033-35; Work Order Nos. 2986, 3842, Appendix pages 197 and 211, respectively)

*Right of way and land acquisition for tunnel and related works.*

In 1923 Exhibit U, a copy of Exhibit A, was filed with the Department of the Interior for acquisition of a right of way for the 4½ mile tunnel. (f. 1476) On December 5, 1927, Protestant's Exhibit 5, a copy of Exhibit B was filed with the Department for a right of way for the 23 mile tunnel, which was granted later in 1932. (f. 1496-1502) Two shaft sites for the long tunnel were established in 1942 and rights of way obtained. (f. 2014-15, 2051) Land acquisitions at the east and west portals of the tunnel for the Dillon reservoir were made. (Work Order Nos. 3375, 4448, 3249, 3590, Appendix pages 206, 212, 212, 214, respectively) The acquisitions are listed in Exhibit AA, Appendix, page 237, and the cost and date of acquisition shown.

*Negotiations with Reclamation Bureau for financing the project.*

The Water Board made efforts to obtain a Federal project. Mr. Lindsey gave the Bureau a list of all of Denver's claims, prepared, filed and processed an application for a \$100,000 P.W.A. grant to the Bureau to study the Blue project (Exhibit Q), obtained the grant in 1936, gave the Bureau a memorandum of Denver's recommendations, (Exhibit R) and, after the \$100,000 had been spent, obtained another \$75,000 grant. (f. 1527-31, 1540-42) Repeated conferences were held on questions relating to the specific plan to be adopted. (f. 1552-53) Matching funds with the Bureau commenced in 1941. (Exhibit E, Appendix, p. 219) In that



year an Engineering Board of Review was appointed consisting of one member each from Denver, the Bureau, the South Platte Water Users Association, and the Colorado Water Conservation Board, and the Dillon Reservoir modification worked out. (Exhibit D) A contract for further matching funds was executed, (f. 1560) and Denver's Blue River tunnel was finally recognized (Exhibit T, Appendix p. 234) as the best plan by the Engineering Board in 1946. (f. 1547-77) These events are treated more fully at pages 34-36, this Brief.

*Construction work on the tunnel.* Denver felt that it could not wait for the Bureau to make up its mind, so started construction on the tunnel at the western portal in 1942 and eastern portal in 1946, (f. 1611, 1773) at a total cost, to the time of trial, of \$306,000. (Exhibit H, pages 227-28, Appendix.)

*Survey and Geologic Work on Eastern Slope Reservoirs and for Power Generation.*

Two Forks will be the principal storage reservoir to receive Blue River water with Grant, Estabrook, Strontia Springs and Waterton as additional sites. (f. 1934-5, 1980-1) Blue river water as it flows towards Denver will also generate power as a product of its fall at the power sites shown on Exhibit S. (f. 1972-77, 2297-99)

In the years 1924-31, at a cost of \$27,000, the reservoir site at Two Forks was surveyed for an enlargement, a Map and Statement filed in the office of the State Engineer November 3, 1926, and the dam site diamond drilled. (f. 1996-2005; 2106-2114; Work Order Nos. 4121, 4334 and 4604, Appendix pages 188-9) Additional operating reservoir sites were also surveyed.

Denver obtained a preliminary permit from the Federal Power Commission to work out the engi-

neering details of its power system. (f. 2124-26) Over the years 1929-35, at a cost of \$26,000, in response to the Federal Power permit requirements, Strontia Springs reservoir site was surveyed, test pits dug to determine the dam foundation, stream gauges put in near Dillon on the Snake and the Ten-Mile, and a conduit survey made from Kassler to Grant and from the South Platte up the South Fork to Rainbow Lodge. (f. 2005-07; Work Order Nos. 6585, 6586, 6594, 6599, and 6610, Appendix, pages 190-193). Further design work at Two Forks was done in 1935-42. (Work Order 9427, Appendix page 196) In the years 1942-47, Two Forks was further core drilled and redesigned at joint expense with the Bureau, Denver's part of the cost being \$48,000. (Work Orders 3301, 3424, 3680, 3841, 3653, Appendix pages 198, 207-10.) In 1944-47 in cooperation with the U. S. Geological Survey topographic maps of North Fork of South Platte were prepared at a cost to Denver of \$15,000 (f. 1816-7; Work Order No. 3846, Appendix page 211).

In 1927, Exhibit N, a copy of the Two Forks Map and Statement, were filed with the United States for a Federal right of way. (f. 1786-88) In 1928 Denver started proceedings before the I.C.C. to obtain relocation of railroad tracks running through the site. The railroad in 1943 brought its own proceedings and was permitted to abandon the road. (f. 1515-18) Land for the reservoir was purchased from time to time. (f. 1518-19, Work Order Nos. 3356, 3646, 3752, 3384, Appendix pages 205, 208-209, 213, respectively.) Exhibit AA, Appendix pages 237-38, shows the land acquisitions for Two Forks by dates and cost, the aggregate cost exceeding \$100,000.

In testing the sufficiency of the acts briefly summarized

above to meet the legal requirement of due diligence, these circumstances must be kept in mind.

The Blue River project, which is only one vital part of the whole Denver Water System, is estimated to cost \$100,000,000; \$30,000,000 for the tunnel alone, and \$70,000,000 for other structures. (f. 1892-94) These are sums that require financial planning.

The years 1927 to 1937 produced a very acute and burdensome problem. A severe drouth lasting year after year forced Denver to concentrate its manpower, its technical staff and all its available funds in the development of those parts of its Water System which could be made to yield water at the earliest possible date. The Fraser River Project, which is an integral unit of this same Transmountain Diversion System, and with respect to which the pilot bore of the Moffat Tunnel under the mountains was already in existence and already under lease to Denver, offered water sooner than any other part of the system. It is clearly shown (f. 1580-87, 1797-1813, 1883-88) how that emergency work delayed active construction work on the Blue River tunnel.

During those years Denver did geological and geophysical work and core drilling along the proposed route of the Blue River tunnel and perfected its engineering plans. Two significant accomplishments were attained: (1) The main tunnel was rerouted by putting a dog-leg in it without substantial change in location of either portal. This avoided extensive areas of faulted rock. (f. 1762-8, 1848-49) (2) A plan was evolved during the joint engineering studies between Denver and the Reclamation Bureau for decreasing the cost and improving the efficiency of the project. (f. 1951-72)

These two improvements in design saved some \$10,000,000 in estimated cost (f. 1914), and decreased total rock work enough to save more years in construction time than were used in the study and planning of which

they are the result. The design improvements also increased the net power earnings to help pay for the project by \$200,000 per year. (f. 1777)

Another factor in the determination of a reasonable construction period is to be found in the rate of population increase. The figures and the accurate forecast arrived at thirty years ago by Water Board engineers (Exhibit Z) show that actual use of Blue River water can not be postponed beyond 1965. (f. 1894, 2521, 2695, Exhibit M) The *Sheriff* case, *supra*, stated that a municipality has the right not only "to appropriate a sufficient volume of water for immediate use, but by prudent management to acquire by appropriation an adequate supply for a reasonable time in the future." Protestants' witness Riter admitted that a construction program geared to a predicted 1,000,000 population in the year 2000 is a reasonable one. (f. 2793-94) Acceleration of a particular unit at the risk of either inferior design or premature freezing of large capital investment funds would be a waste. The law does not make municipal waste a condition precedent to the creation of a water right.

Neither does the law turn the requirement of due diligence into a construction race. The handicaps in such a race would have no relationship to the validity of the claims. Very obviously a claimant with all the resources of the United States can build a \$1,800,000 hydro-electric plant (f. 94, 104) big enough to swallow the whole Blue River at flood stage (f. 4394-8) in less time than a single municipality can design, finance and build a 23-mile tunnel, reservoirs, filters, power plants, and pipe lines needed to make water available to its inhabitants living 65 miles from the diversion point at an estimated cost of \$100,000,000. (f. 1892)

Chapter 90, 1935 C.S.A., Sec. 195 states that if a claimant

"\* \* \* has prosecuted his claims of appropriation and

the financing and the construction of his enterprise with reasonable diligence under all the facts and circumstances surrounding and bearing upon such claim of appropriation, the district court shall enter a decree fixing and determining the priority of right of each such partially completed appropriation as of the date from which such reasonable diligence shall be shown to have been exercised. \* \* \*

Exhibit YY, Appendix, page 186, summarizes the yearly direct cost and accumulated direct cost on the Blue River unit of certain specific items of work. Details are shown on the work orders following the summary, Appendix, pages 187 to 218, and also on Exhibit ZZ, Appendix, page 242. Some \$83,030 was spent on work of this type in the eleven years, 1921 through 1932, the year when the Blue River tunnel right of way was granted. (f. 1502) In the next 8 years, 1933 through 1940, \$8,655 is shown to have been spent on similar specific work items. It was during these later years that millions were being spent (years 1935-42) on the Moffat and Williams Fork units of Denver's Transmountain Diversion System. Putting these two units into operation required the full physical energies of Denver's Engineering Department and the full financial energies of its people. In addition to the construction expenditures shown on Exhibit YY, Denver took other steps in this period which fully satisfy all diligence requirements.

The statute quoted above states that if a claimant prosecutes the "*financing* and construction of his enterprise with reasonable diligence under the facts and circumstances," the claimant is entitled to a priority. Most large projects require a planning stage, a stage when effort is devoted to arranging financing, and a stage of building. Lack of physical construction during the financing stage is permissible if efforts to arrange financing proceed with due diligence. In other words, a gap between the planning and the start of construction

can be filled with a program of financing prosecuted with diligence which is reasonable under all of the facts and circumstances. Planning, financing and building are not required to be going on simultaneously. Of necessity each phase takes its orderly place and time.

The "facts and circumstances" are that in 1933 there was no market for an issue of Denver Municipal Water Bonds of a size required to build the Blue River Tunnel. It will be recalled that at the time President Roosevelt was inaugurated in March, 1933, the whole country faced a financial crisis. To meet that crisis Congress enacted many types of emergency legislation in 1933 and 1934. This legislation was in turn implemented by the various governmental agencies then and later created. By 1935 the possibilities of obtaining a P.W.A. project to build the Blue River Tunnel were opening up. Before Congress would authorize projects of such size, an independent engineering survey was required. (f. 1535, 1547-48) For water projects, the investigation was made by the Bureau of Reclamation.

In 1935 Denver filed with the P.W.A. a petition that \$100,000 be allotted to the Bureau of Reclamation to make a study of the Blue River project. (f. 1540-42, Exhibit Q) The \$100,000 was obtained in the spring of 1936 and shortly thereafter Mr. Lindsey presented a memorandum (Exhibit R) to the Bureau of Reclamation officials, containing Denver's recommendation for the study of a project which would put Denver's Blue River water through the 23-mile tunnel for domestic use in Denver, together with other water for irrigation and the reclamation of land east and south of Denver. Exhibit Q indicates that the Bureau had already received \$150,000 to make an engineering study of what later developed into the Colorado-Big Thompson Project.

In 1936 the Bureau put its survey crews into the Green Mountain area. (U. S. Statement of Claim, f. 84,

95) In 1937 Senate Document 80 appeared, a pamphlet which gave the first published hints of the Bureau's program to try to control the entire Blue.

Prior to the filing of the Green Mountain Reservoir Map and Statement on July 22, 1938, the Bureau had given Denver a set of plans for taking Denver's Blue River water into the Williams Fork watershed and then into the Fraser River watershed, through the Moffat Tunnel, then into the Platte below Denver, on the basis of which Denver would take water from the Platte by exchange. Subject to Denver's use, this new water would increase the supply of irrigation water in the South Platte. (f. 1547-51) A conference was held June 1, 1938, with Bureau of Reclamation officials, and it was explained to them by Denver's engineers why this program was unsatisfactory. (f. 1552) Denver then obtained for the Bureau another \$75,000 grant (f. 1560) and in 1941 (Exhibit E, Appendix, p. 219) and again in 1943 (f. 1560) entered into joint agreement for matching money to be spent on joint investigations. An Engineering Board of Review, having one engineering member appointed by the Bureau, one by Denver, one by the South Platte Water Users Association and one by the Colorado Water Conservation Board, held its first meeting December 12, 1941. (f. 1564-5) Various plans and programs were considered and finally in 1946 the Engineering Board recommended the use of the Blue River tunnel. (Exhibit T, Appendix, p. 234)

Section 195, Chapter 90, C.S.A. (cited *supra*) requires that diligence be exercised in planning, financing and constructing a water development system. The facts demonstrate that Denver's efforts from 1933 to 1942 to obtain Government financing of the project amply fulfill those requirements. The delays between the turns that the negotiations took during this period were caused by the Bureau. (f. 2305-06)

In 1942 the Fraser and Williams Fork units of Denver's Transmountain System were nearing completion. The time was inexorably drawing nearer when Blue River water would have to be delivered to Denver users. This did not admit of waiting longer for the Bureau to make up its mind. It had also become apparent to Denver that the Bureau viewed the Blue River as its preserve and that Denver's claims to Blue River water would be honored by the Bureau, only to the extent its officials chose. Consequently, in 1942 Denver started construction work on its Blue River tunnel and has prosecuted the work ever since. (Exhibit H, Appendix, p. 227) A change in attitude on the part of the Bureau could still result in the remainder of the Blue River tunnel being completed at joint expense and operated jointly for the benefit of Denver and an Irrigation Conservancy District.

To the proposition of Denver's opponents that a priority may not date back earlier than the commencement of physical construction, Denver takes the position that the law has never required an appropriator of water blindly and unintelligently to commence physical construction before determining the exact place and final design of the construction to be undertaken. Moving dirt at a diversion site, in most cases, gives no real information about the size or nature of the appropriation. It is not nearly as informative as official maps. Because of the magnitude and complexity of the Denver Water System, Denver contends that the extensive and protracted planning and financing were necessary and that these steps, coupled with the physical work done constituted real diligence.

We turn now to further consideration of the unit rule, *Holbrook Irr. Dist. v. Ft. Lyons Canal*, supra, page 22. In addition to all that Denver has done for the direct construction of the Blue River unit itself, it has, throughout the period from 1928 to date, spent enormous



sums upon the orderly development of its whole Municipal Water System. The complete integration of that system and the inclusion within the system of the Blue River unit as a vital part were published to the world in Exhibit C, filed January 19, 1928. As previously pointed out on page 22 of the brief, *all* of the evidence is that Denver has an integrated water system.

The evidence admitted by the trial court proves that during the years 1935-1942, Denver was building the Fraser River and Williams Fork units of its water system. (f. 2026-27, 2579) The trial court excluded Exhibit I, Appendix, page 229, showing the monetary measure of the diligence. That exhibit shows that by 1938 Denver had invested \$6,100,000 in its Western Slope Collection System, Moffat Water Tunnel, South Boulder Creek Diversion System, and Ralston-Clear Creek Diversion System, and another \$6,100,000 on Pumping Stations, Lakes and Reservoirs, Conduits and Filtration and Sterilization Plants. This is the "\$12,000,000" investment referred to in the *Sheriff* case, *supra*. By the time of trial in this case another \$400,000 had been invested in the first group of structures and \$2,700,000 in the second group.

Denver invested \$5,100,000 in its City Distribution System in the years 1935-49, the investment in each of nine of the years exceeding one-third million dollars. This system presently distributes water from all sources and will ultimately distribute Blue water (f. 1823-30).

Special reference should be made to the \$8,300,000 invested, 1935-49, in Lakes and Reservoirs and Conduits leading into them and from them. Each Eastern Slope reservoir, by exchange, will store Blue River water just as Eleven Mile Canyon, Antero, Lake Cheesman, and others presently store Williams Fork and Fraser River water, and as Reservoir 22 (now building) will store Williams Fork and Blue River water. (f. 1649-53, 1926-

31) Williams Fork Reservoir on the Western Slope is presently used to release compensating water during Fraser River and Williams Fork diversions and will have the same function for the Blue. (f. 1654-58)

The construction program described would meet all requirements of the due diligence rule even if direct work on the Blue River unit had been reduced to nominal amount. A headgate is of no value without a ditch to carry the water from the headgate to the land, nor a ditch of value without laterals to distribute the water. The contention made by the Protestants and adopted by the trial court, that evidence must be confined to acts directly done on the Blue River unit alone, is not the law. The evidence produced by Denver and the extensive additional proof offered established that the whole system by which Denver proposes to divert, store, filter, put under pressure, and distribute water is a complete system, including the Blue River unit, well designed to serve the half million people now dependent on Denver for domestic water and the additional half million to be served in the years immediately following the present.

### III

#### DENVER COULD LAWFULLY MODIFY THE DESIGN OF ITS DIVERSION SYSTEM WITHOUT LOSS OF PRIORITY

It is doubtful if any large system for making beneficial use of water was ever finished exactly as it was originally drawn on paper. The larger and more complex the undertaking, the more likely it is that intelligent progress will open up improved approaches to the solution of the problems of the particular units or structures. Diligent work and study have resulted in major economies and improvements in the diversion structures for Denver's Blue River unit so that its physical features, reflecting the improvements that have been made, now

show considerable departure, in their details, from the plans of 30 years ago when filings were first made in the office of the State Engineer. Those original filings, however, gave fair notice to the world of what natural water resources were to be controlled by the vast machinery of the project and of the effect which that project would have upon juniors.

In 1923, when Denver's first filing was made, and in 1927 when its enlargement filing was made on the Blue, the law had already been established that an appropriator could go forward, perfecting and improving the diversion plan, and be protected by the law against subsequent appropriators who might design to use the water thus claimed.

Only one subsequent-conflicting appropriator of significant size has appeared: the United States of America, which in these adjudication proceedings sought a 1936 appropriation date. It does not seek to consume the water. It simply seeks to have the entire Blue River made a sort of wilderness area, flowing downstream untouched in order that at one point, 50 miles below Dillon, its full volume may pass through a set of power turbines intentionally built at least four times as large as any economic considerations can justify. It is perfectly clear that the Bureau had full notice of Denver appropriations, and that Denver's modifications in design did not alter the amounts of water to be controlled by Denver so as to affect the Bureau plans.

*Phillips Investment Company vs. Cole, et al.*, 27 Colo. App. 540, 150 Pac. 331 was decided in 1915. There the appropriator developed the use of his water right by using a succession of diversion points and accomplished his appropriation sometimes by short time storage and sometimes by diversion and immediate use, but always by controlling the same general water supply. His method of appropriation underwent considerable evo-

lution and finally had shaken down into a definite pattern by the time an adjudication proceeding got under way. This situation met the full approval of the Court of Appeals which said (p. 542 of 27 Colo. App.) :

“The Evidence tends to show that from 1900 to 1906 practically all the water in the creek, whether stored or not, was used by Messenger. For that reason under the peculiar facts of this case, surrounding the development and use of his water right, as the seepage increased, and prior to any right acquired or claim made by plaintiff in error, it is immaterial whether the water was first stored or detained in the reservoir, and thence taken to the land, or permitted to flow directly to the place of diversion and use. The change resulted in no greater draft on the waters of the stream, either in volume or time of use. The necessity, as well as advantage, of holding water in the reservoir while the seepage was first developing, so as to accumulate a volume or quantity sufficient for practical use, is obvious. Plaintiff in error is in no manner prejudiced by the alleged change from storage to diversion for immediate use; in fact the evidence shows that for a number of years the waters flowed through the reservoir or dam without being stored and were so used by plaintiffs, without objection by plaintiff in error.”

Denver's improvements in and enlargement of its Blue River unit not only did not injure other appropriators, but were an evidence of the highest degree of diligence and good judgment. The original plan, shown on Exhibit A (Appendix, Map Section) provided for control of the heavy run-off from the high peaks which create the Blue and its tributaries above elevation 10,322 through use of 83 miles of canals, short tunnels and siphons, concentrating a maximum of 1200 second feet through a 4½ miles transmountain tunnel.

The enlargement, shown on Exhibit B (Appendix, Map Section) controlled the same water, plus an additional amount, eliminating canals, siphons, and short tunnels and concentrating a maximum of 1600 second feet through a 23-mile tunnel at elevation 8840. This enlargement, filed with the State Engineer October 19, 1927, told everyone below Dillon that that 1600 second feet of water would be taken out of the Blue at Dillon and no part of it returned.

Subsequent realignment of the tunnel to avoid faulted ground to get into less costly construction areas did not change the 1600 second foot withdrawal to be made from the Blue at Dillon.

The final refinement in design was worked out between 1942 and 1946 as the fruit of the cooperative studies between Denver and the Bureau of Reclamation. In this design a much less expensive smaller bore of 788 second feet capacity was made to divert the full 1600 second feet through the 23-mile underground tunnel by placing a large detention area at the western end of the tunnel.

The smaller bore, by operating through a longer season at its maximum capacity, will, at much less expense, thus deliver the same 200,000 acre feet of water which a tunnel of 1600 second feet maximum diversion could produce.

Mathematically, 1600 second feet would produce 200,000 acre feet in about two months. The heavy run-off actually occurs in about that length of time. By holding part of that water at Dillon while 788 second feet passes through the smaller bore, the same total water is diverted but it takes five months to get to its destination instead of two.

It is well established that a direct use appropriation cannot be changed into a storage appropriation. But,

on the other hand, a temporary detention for operating purposes is quite common. Examples of this include:

- (1) Holding overnight water for increased day-time irrigation head;
- (2) Prefiltering detention to meet varying weekly or monthly domestic demands;
- (3) Post-filtering detention to meet peak loads, thus reducing the size of filters which are much more expensive to build than reservoirs;
- (4) The forebay at every river headgate in the State (on a smaller scale) ; and
- (5) Detention to create settled water of sufficient depth for practical operation of pressure pumps.

These instances illustrate how detention may be a mechanical expedient in operation rather than true storage.

So in the final plan for Denver's Blue River unit the smaller bore tunnel operating at full capacity during about five months serves the same function as the bigger bore tunnel which would of necessity be working far below capacity at all times, except during the crest weeks of the early summer run-off. The forebay accomplishes no true storage, it merely feeds the direct flow water through the mountain at a uniform operating rate.

Other appropriators should not be permitted to impose their judgment upon the means of accomplishing a diversion. The courts will not substitute their judgment for that of the duly qualified and acting public officials of other departments of the Government. The essential fact is that Denver can only secure the 200,000 acre feet it has appropriated out of the Blue, whatever the mechanical device for the accomplishment of this result, by effectively controlling Spring flow at maximum rates of 1600 second feet. To repeat what was said in the *Phillips* case *supra*,

“The change resulted in no greater draft on the waters of the stream, either in volume or time of use.”

No protestant has pointed out any respect in which any of the modifications of the original plan has or can prejudice him. The possibility of prejudice is excluded by two factors: (1) The country between the original tunnel site and Dillon is mountainous and very rough so that agricultural uses within that area are almost non-existent; and (2) in the 1936 general adjudication Denver consented to having all of the priorities adjudicated to others in that proceeding made senior to its Blue River rights. As stated in *Colorado Springs v. Yust*, ..... Colo. .... (1952) :

“\* \* \* The burden of proof on petitioner in such a proceeding requires him to meet only the grounds of injury to protestants asserted by them.”

Changes in design of large construction projects between the initial survey stage and final completion are the rule rather than the exception. Changes should be encouraged when they enable an appropriator to effectuate his appropriation more economically without injury to other appropriators. This sort of evolution in design without loss of the benefit of the doctrine of relation was before the Oregon Supreme Court in *In re Water Rights of Deschutes River and Tributaries*. 134 Oregon 623, 286 Pac. 563, (1930) There, Plaintiff, in 1900, set out to appropriate 1250 second feet of water out of the Deschutes River in Central Oregon. “Actual construction work was begun in 1903, and by the year 1904 the first diversion was effected through a flume of 70 cubic feet per second capacity taken out of the Deschutes River at the point of posting, about 4 miles above the city of Bend. By 1905 this flume had been increased to a capacity of 742 second feet, much in excess of the then

requirements of the lands under cultivation within the segregation.” (p. 567, Pac.)

Agricultural development of the region created a new and productive economy which resulted in the founding and growth of the city of Bend, which also created a problem because the main canal ran through this city. Consequently, a change of plan was adopted in which the water was diverted from the Deschutes River downstream (to the north) and below Bend. “\* \* \* A concrete dam was constructed across the river and the canal cut to a conjunction with the old Pilot Butte Canal, the work going through solid rock, which was later lined with cement, requiring a period of three years. Since that time the major portion of the water used by Plaintiff has been diverted through the North Canal, instead of through the city of Bend with all of the attending inconveniences and difficulties.” (p. 567, Pac.) By the new diversion, greater efficiency in delivery and also reduction of seepage losses were accomplished.

The issue was framed by the Supreme Court in the following language, page 568, Pac.:

“The trial court and state engineer found the appropriation, upon which this claimant’s right rests, to have been duly initiated and diligently prosecuted. The court determined that, because that portion of the appropriation, in excess of 742 second feet, was diverted through the new works of the North Canal, it could not relate back to the original appropriation. This resulted in an award to this claimant of a date of relative priority of October 31, 1900 of 742 second feet of water for the irrigation of 47,983 acres and a date of relative priority of December 2, 1907, for the balance of water necessary to irrigate its number of acres of land.

“This claimant contends that the construction of the North Canal and its dam and intake was



simply a change in the place of diversion from the Pilot Butte Development Company diversion as to a large part of the appropriation initiated by the notice of October 31, 1900. This constitutes the main complaint of this claimant."

The Court held, page 569, Pac.:

"This claimant contends that, where a change in the point of diversion is made without intent to abandon a prior appropriation to be carried in whole, or in part, through a new diversion and without injury to others, it does not waive any part of the original appropriation, citing: In re Waters of Silvies River, 115 Or. 27, 49, 237 P. 322. In that case it appeared that one Camblin appropriated water in 1886 and in 1913 constructed a new ditch at a new location through which the water was diverted. The court, at page 49 of 115 Or., 237 P. 322, 331, held the right to relate back to the original appropriation: 'The change made in the ditch, taken from the river in 1913, was a mere relocation in the place of taking out the water and not a new appropriation. The water was diverted from the same stream system. The extension of Camblin's ditch on the west side of the river, which was constructed in 1886, to his other land, does not appear to have been an enlargement nor a new appropriation, but rather the completion of the application of the water to a beneficial use. This was done with due diligence and within a reasonable time.' Turvey v. Kincaid. 111 Or. 237, 226 P. 219. Here the court sustained a change in the method of diverting water from a stream and held, in effect, that subsequent appropriators cannot complain of a change in the method or point of diversion so long as the amount of water taken is not more than the original appropriator is entitled to, and does not damage those making subsequent appropriations."

And on page 572, Pac., stated:

“We think that the progressive reclamation of the large area of land, by the predecessors in interest of the district, was in keeping with the demands of the rules of law covering such procedure, and that the doctrine of relation applies to practically the entire appropriation of 50,000 miners’ inches, under a six-inch pressure, as described in the original notice, or 1,250 cubic feet per second, or so much thereof as may be necessary to irrigate the 48,000 acres of land. First in time, first in right is the rule that should be applied. *Low v. Schaffer*, 24 Or. 239, 33 P. 678; *McCall v. Porter*, 42 Or. 49, 70 P. 820, 71 P. 976; *Caviness v. La Grande Irr. Co.*, 60 Or. 410, 119 P. 731; *In re Waters of Silvies River*, 115 Or. 27, 87, 237 P. 322.

\* \* \*

“Subsequent appropriators desiring to appropriate water from the Deschutes River, seeing this notice of appropriation, and the map of record, were provided with knowledge of the contemplated appropriation. In 1905 a flume of the size of 25 feet wide and 8 feet deep, or two or more flumes of equivalent capacity and a canal of a size sufficient to receive and conduct the waters from such flume, had not then been constructed by the Pilot Butte Development Company or its successors. The appropriation was not complete. The canal and diversion works had then been constructed of sufficient size to meet the requirements for irrigating the land then reclaimed and embraced in the original proposed reclamation project, but the construction contemplated by the notice of appropriation had not been carried out. Subsequent appropriators would have been benefited by the failure of the Pilot Butte Development Company and its successors to have com-

pleted the works to a size mentioned in the notice of appropriation. The Arnold Irrigation Company, among others, took such chance and made a subsequent appropriation.”

This Court recently passed on a similar question in *Colorado Springs v. Yust*, supra, where a change in point of diversion resulted in the interception of water from 830 additional acres. Said our Court:

“The only injury alleged or asserted by protestants is that claimed to result from enlarged use in time and volume by petitioner. The amount of such enlarged use, and the resultant injury, if any, to protestants, would appear to be approximately ascertainable. Petitioner here introduced evidence as to the extent of additional water intercepted by means of the proposed change and resultant injury, which protestants permitted to go unchallenged. Under such circumstances, change of point of diversion should be decreed subject to condition which would compensate protestants for such injury.”

In *Downing v. Copeland*, ..... Colo... ..... (1952), this Court said,

“\* \* \* Plaintiff’s right to divert and use water from the stream at the headgate of their ditch included the right to make and change the necessary dams, channels or other diversion works within the stream bed which might be necessary to enable them to continue the diversion of water at their headgate, \* \* \*”

In the case at bar the United States, when it built Green Mountain Reservoir, took its chances on what water would be left after completion of Denver’s Blue River unit of its transmountain diversion project. When we examine the evidence in this case, we find that none of the changes in plan made by Denver were with a view

to abandoning its Blue River unit or any portion of it. Instead every change that was made fortified and extended Denver's intention to make the appropriation and by the most economical and feasible means to be devised. The claim statement of May 23, 1923, based on a survey commenced in 1921, which is Denver's first Blue River filing in the office of the State Engineer of Colorado, gave notice to the world of Denver's claim on its Blue River unit. This claim was not in any sense abandoned in the subsequent filing of 1927, (Exhibit B) where the statement of claim specifically negatives any idea of abandonment of the original filing in this language:

“Work was commenced by survey on the 21st day of March, 1914, as stated in filing No. 13758 made by this claimant in the office of the State Engineer of Colorado for the Blue River Diversion Project. After said filing No. 13758 was made, investigations were continued and it was determined that it would be more economical to locate said Project at a lower elevation and accordingly this amended map, with statement, is filed to show the relocation of the Project at such lower elevation.”

Filing No. 13758 referred to in Exhibit B is the filing map which became Exhibit A in this case.

When Denver filed its map of the Dillon Reservoir in the office of the State Engineer in 1942, it could hardly be said that this was a departure from or abandonment of the Blue River unit of its transmountain diversion system. The statement, which was a part of the filing map, stated “This reservoir is a part of the Denver Municipal Water System, principal features of which are shown on Filing No. 14,894 in the State Engineer's office.” This last mentioned filing is one made in 1928 and is Exhibit C. The Dillon Reservoir statement is found on Exhibit D, which also shows that the Dillon Reservoir, in addition to being used for domestic and

other purposes, including storage, was also to be used for "regulation and adjustment."

The development of the Dillon Reservoir is shown by the filing in the State Engineer's office and by the testimony in this case to be an integral part of Denver's System of water development. In its function of tunnel forebay it represents a modification in design providing for an improved method of "regulation and adjustment" of the water supply involved which obviously is in furtherance of an intent to appropriate rather than an intent to abandon water.

"It is well settled that in the appropriation of water any means adopted to convey it to the place of use is legitimate for the purpose of appropriation." *Turvey vs. Kincaid*, 111 Oregon 237, 226 Pac. 219, 221.

In a nutshell, Denver has improved the design for its system of diverting its Blue River water in a manner which will save \$10,000,000 (f. 1777) and divert the same water as before the design was changed. Denver is presently drilling a 788 second-foot tunnel which the evidence shows (f. 1778-80) would be the first step of a 1600 second-foot tunnel. If the law be held to bar the adoption of these economies, Denver will, when the pilot bore is complete, increase the size of the tunnel to a 1600 second-foot capacity in order to get the water it has to have. We submit that the law is not as found by the trial court and that this Court should sanction a priority for Denver's Blue River Diversion unit for 1600 second feet, with a date as to 1200 second feet no later than July 4, 1921, and as to 400 second feet additional no later than October 19, 1927, without penalty for any change in design which will save money for the people of Denver.

#### IV

### A DECRETAL ORDER SHOULD BE ENTERED RELATING TO THE CLAIM OF THE UNITED STATES AND NORTHERN COLORADO WATER CONSERVANCY DISTRICT.

As elsewhere in this Brief stated, the United States of America and the Northern Colorado Water Conservancy District filed maps and statements of claim in the office of the State Engineer of Colorado in conformity with the adjudication statutes of Colorado, and in January, 1944, appeared in the District Court of Summit County in these adjudication proceedings and filed therein their petition and statement of claim asking the trial court to adjudicate the claimed priorities claimed by them. (f. 78-110, 90-119) After the United States and the Northern Colorado Water Conservancy District had thus filed their claims in the adjudication proceedings, they actively participated in the conduct of proceedings for five and one-half years, and then on the 11th day of July, 1949, on which date an instrument captioned "withdrawal" was filed. The full text of that instrument appears at f. 276-77 and 340-41. While, as is pointed out elsewhere in this brief (pp. 5-7), Denver's claims do not affect the storage water required for the Conservancy District, there is a vital conflict regarding the power claims of the U. S. for the entire Blue. The fact remains that after the "withdrawal" the United States and the Northern Colorado Water Conservancy District took the position of not actively participating in the adjudication proceedings, although they at all times had attorneys and others present in the guise of "observers."

Neither the United States nor the Northern Colorado Water Conservancy District introduced any evidence in support of the claims which they had previously filed. When the taking of evidence was completed, the trial court gave all interested parties the opportunity to sub-

mit suggestions to be incorporated in the findings of fact, conclusion and decree. Denver requested a decretal order reading in part as follows:

“\* \* \* that any and all rights of the United States and of the Northern Colorado Water Conservancy District and each of them to divert or use water from the Blue River or its tributaries in Water District No. 36 is junior and subordinate to all priorities decreed herein.” (f. 619; incorporated by reference, f. 538)

There is no express denial of this request in the record, but that it was not granted and was actually denied is evidenced by the fact that the requested provision, or anything similar thereto, is not found in the court's findings of fact, conclusion or decree.

The very purpose of Colorado's adjudication statutes is to adjudicate the relative priorities of *all* appropriators of water from the public streams. Elaborate proceedings to accomplish this purpose are set forth in the statutes. The statutes also make the water rights of those who refuse or fail to submit their proof, junior to the rights of those who prove their claims. 1935 C.S.A. (Official Vol.), Chap. 90, Sec. 186; S.L. 1943, Chap. 190, Sec. 13, p. 622. In the proceedings relating to the withdrawal, the United States and Northern Colorado Conservancy District were warned that Denver would ask that this result be expressly stated in the decree. (f. 845)

On the record as it stands, the claims of the United States and of Northern Colorado Conservancy District were filed, and no evidence was introduced by those claimants in support thereof. Protestants against Denver's claims did, however, introduce evidence which had the incidental effect of showing that the United States built its Green Mountain Reservoir to a capacity of 156,475 acre feet, including about 4000 acre feet of dead storage (f. 4449), the work being completed by May 27,

1943. (f. 2899) Section 185, Chapter 90, provides that statements of claim must be filed before evidence can be offered. Then Section 186 provides that no claim of priority of any claimant who shall have failed or refused to offer evidence shall be regarded by any Water Commissioner in distributing water in time of scarcity until such time as such party shall have, by application to the Court having jurisdiction, obtained leave and made proof of priority of right to which such ditch shall be justly entitled, nor until a decree adjudging such priority shall have been entered.

Under Colorado statutory procedure, the State Engineer, Division Engineers and the Water Commissioners can deliver water only in accordance with decrees. 1935 C.S.A. (Official Vol.), Chap. 90, Sec. 160; S.L. 1943, Chap. 190, Sec. 15, p. 624. These State Officials are entitled to know, from the decree entered in these proceedings, who is entitled to water and who is not entitled thereto and their relative priorities. This point is doubly important when we consider that a decree, when entered and recorded, is made *prima facie* evidence in any suit or proceeding in which it may be relevant. 1935 C.S.A. (Official Vol.), Ch. 90, Sec. 160; 1943 S.L. Chap. 190, Sec. 13, p. 622.

We submit, therefore, that it was error on the part of the trial court, after the United States and the Conservancy District had availed themselves of the judicial machinery of this State, to have failed to conclude its judicial function by defining the rights of the United States of America and of the Northern Colorado Water Conservancy District with respect to the projects covered by the claims they each had filed in these proceedings. The failure of each of these parties to introduce evidence in support thereof should have been noted and the effect of the statute declared.



V.

RELIEF REQUESTED

The points which we have presented in the foregoing sections of this Brief are summarized at pages 16-17, *supra*. They establish the validity of Denver's appropriation of Blue River water, the diligence used in development of those rights, and the vital need for their recognition.

We have pointed out the numerous errors of the trial court. These errors affect the substantial rights of Denver in two major ways:

- (a) The trial court limited Denver's direct flow priority to later date and smaller size than required by the proof, and
- (b) The trial court failed to include any decretal orders relating to the United States and Northern Colorado Water Conservancy District.

To correct the first error, this Court should order the trial court to enter the 1600 second foot conditional decree for direct flow requested by Denver, 1200 second feet as of July 4, 1921, and 400 second feet as of October 19, 1927. The evidence admitted before the trial court establishes Denver's right to such an order.

An order establishing these rightful dates for Denver's water appropriations places it in a position senior to any claim for either storage or power made by the United States, because the earliest date claimed for Green Mountain Reservoir (as completed at 156,475 acre feet of which about 4,000 acre feet is dead storage) in this proceeding is April 17, 1936. This storage right, in spite of its junior date, will normally fill each year from accretions to the Blue below Denver's intake. Whatever be the magnitude or merits of any power claims of the United States, they are of no earlier origin than the storage right.

It is apparent, therefore, that when the first point is corrected, the urgency, from Denver's point of view, of correction of the second point is greatly reduced. Nevertheless, the need for certainty and stability of water rights on the Blue requires this Court to order the trial court to complete its work and expressly to declare that the rights of the United States and of the Northern Colorado Conservancy District are junior to the priorities here awarded.

Respectfully submitted,

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