

March 9, 1938.

The Rio Grande Compact Commission,  
Mr. S. O. Harper, Chairman,  
Mr. M. C. Hinderlider, Member for Colorado,  
Mr. T. M. McClure, Member for New Mexico,  
Mr. F. B. Clayton, Member for Texas.

Gentlemen:

The Engineering Advisers of your Commission have held three meetings, the first in Santa Fe from November 22 to 24, 1937, the second in Los Angeles from December 15 to 27, 1937, and the third at Santa Fe from March 3 to 9, 1938. The first meeting was largely devoted to consideration of the general factors affecting the discharge of Rio Grande at the Colorado-New Mexico State Line and the delivery of water into Elephant Butte Reservoir. At the second meeting more detailed consideration was given to these matters, and certain schedules of deliveries were developed. Additional schedules were developed and other features discussed at the last meeting to consider matters referred to the committee by the Compact Commission at its meeting of March 3, 1938.

We avoided discussion of the relative rights of water users in the three States, and were guided throughout our work by the general policy - expressed at the meeting of the Compact Commission in October - that present uses of water in each of the three States must be protected in the formulation of a Compact for administration of the Rio Grande above Fort Quitman, because the usable water supply is no more than sufficient to satisfy such needs.

The Rio Grande above Fort Quitman, which constitutes the part of the drainage basin in which the Commission has primary interest, is divided naturally into three sections:

(a) The San Luis Valley, comprising the drainage area above the Lobatos gaging station on the Rio Grande near the Colorado-New Mexico State Line;

(b) The Middle Rio Grande from Lobatos to Elephant Butte Reservoir and the drainage basins of streams tributary to the river in this section;

(c) The balance of the Rio Grande Basin between Elephant Butte and Fort Quitman, including the Juarez Valley in Mexico.

#### SCHEDULED DELIVERIES AT LOBATOS

A consistent relationship has long been noted between the combined inflow of the major streams to San Luis Valley and the outflow of the Rio Grande at Lobatos. This relationship, however, may be disturbed in the future due to construction of storage reservoirs, and we have therefore prepared separate schedules applicable to the Conejos and Rio Grande stream systems. This is a departure from previous plans but has no practical disadvantage and has certain definite advantages; variations in discharge of the contributing streams will automatically be taken into account, particularly if storage reservoirs are constructed; and it will also enable the San Luis Valley water users to apportion among themselves their relative responsibility for meeting the obligation of Colorado.

The flow of Conejos River at its confluence with the Rio Grande was found to bear a close relation to the combined discharge of Conejos River near Mogote and its principal tributaries below that point. The following values express that relationship for the past ten years.

DISCHARGE OF CONEJOS RIVER

Quantities in thousands of acre feet

<u>Conejos Index Supply (1)</u>	<u>Conejos River at Mouths (2)</u>
100	0
150	20
200	46
250	76
300	111
350	150
400	191
450	235
500	280
550	328
600	375
650	424
700	480

Intermediate quantities shall be computed by proportional parts.

(1) Conejos Index Supply is the natural flow of Conejos River at the U.S.G.S. gaging station near Mogote for the calendar year, plus the natural flow of Los Pinos River at the U.S.G.S. gaging station near Ortiz and the natural flow of San Antonio River at the U.S.G.S. gaging station at Ortiz, both for the months of April to October, inclusive.

(2) Conejos River at Mouths is the combined discharge of branches of this river at the U.S.G.S. gaging stations near La Sauses (Los Sauces) during the calendar year.

When from the total discharge of Rio Grande at Lobatos there is subtracted the contribution from Conejos River, a close relationship also is found to exist between that residual quantity and the discharge of Rio Grande near Del Norte. The following values express the relationship for the past ten years.

DISCHARGE OF RIO GRANDE EXCLUSIVE OF CONEJOS RIVER

Quantities in thousands of acre feet

<u>Rio Grande at Del Norte (3)</u>	<u>Rio Grande at Lobatos less Conejos at Mouths (4)</u>
200	60
250	65
300	75
350	86
400	98
450	112
500	127
550	144
600	162
650	182
700	205 <del>4</del>
750	229
800	257
850	292
900	335
950	380
1 000	430
1 100	540
1 200	640
1 300	740
1 400	840

Intermediate quantities shall be computed by proportional parts.

(3) Rio Grande at Del Norte is the recorded flow of the Rio Grande at the U.S.G.S. gaging station near Del Norte during the calendar year (measured above all principal points of diversion to San Luis Valley) corrected for the operation of reservoirs constructed after 1937.

(4) Rio Grande at Lobatos less Conejos at Mouths is the total flow of the Rio Grande at the U.S.G.S. gaging station near Lobatos, less the discharge of Conejos River at its mouths, during the calendar year.

The obligation of Colorado to deliver water in the Rio Grande at the Colorado-New Mexico State Line in each calendar year shall be 10,000 acre feet less than the sum of the quantities set

forth in the above tabulations, except for such departures from  
 normal deliveries as are provided for below. The application of  
 either schedule shall be subject to the provisions hereafter set  
 forth and appropriate adjustments shall be made for: (a) any  
 change in location in gaging stations; (b) any new or increased  
 depletion of the natural runoff above inflow index gaging stations,  
 and (c) any trans-mountain diversions.

SCHEDULED DELIVERIES INTO ELEPHANT BUTTE RESERVOIR

The relation between the amount of water in the Rio  
 Grande above the principal agricultural areas in New Mexico and in-  
 flow to Elephant Butte Reservoir is quite erratic, due primarily to  
 wide variations in the discharge of tributary streams. Your Com-  
 mittee tried many devices to minimize the influence of such tribu-  
 tary inflow and found that there was a reasonable relationship be-  
 tween the discharges of Rio Grande at the Otowi Bridge and San  
 Marcial gaging stations when the months of July, August and Sep-  
 tember were excluded.

The following values express that relationship for the  
 period prior to 1930.

DISCHARGE OF RIO GRANDE EXCLUSIVE OF  
JULY, AUGUST AND SEPTEMBER AT OTOWI  
BRIDGE AND SAN MARCIAL

Quantities in thousands of acre feet

<u>Otowi Index Supply (5)</u>	<u>San Marcial Index Supply (6)</u>
100	0
200	65
300	141
400	219
500	300
600	383
700	469
800	557
900	648
1 000	742
1 100	839
1 200	939
1 300	1 042
1 400	1 148
1 500	1 257
1 600	1 370
1 700	1 489
1 800	1 608
1 900	1 730
2 000	1 856
2 100	1 985
2 200	2 117
2 300	2 253

Intermediate quantities shall be computed by proportional parts.

(5) The Otowi Index Supply is the recorded flow of the Rio Grande at the U.S.G.S. gaging station at Otowi Bridge near San Ildefonso (formerly station near Buckman) during the calendar year, exclusive of the flow during the months of July, August and September, corrected for the operation of reservoirs constructed after 1929 in the drainage basin of the Rio Grande between Lobatos and Otowi Bridge.

(6) San Marcial Index Supply is the recorded flow of the Rio Grande at the gaging station at San Marcial during the calendar year exclusive of the flow during the months of July, August and September.

Although the foregoing relationship does not reflect possible changes in consumptive use during the summer months between Otowi and San Marcial, and tributary flow in other months still results in considerable variation, we recommend its use as a schedule of deliveries. The obligation of New Mexico to deliver water at San Marcial in each calendar year exclusive of the months of July, August and September, shall thus be the quantity determined from the relationship set forth in the above tabulation. The application of this schedule shall be subject to the provisions hereafter set forth and appropriate adjustments shall be made for: (a) any change in location of gaging stations; (b) depletion after 1929 in New Mexico at any time of the year of the natural runoff at Otowi Bridge; (c) depletion of the runoff during July, August and September of tributaries between Otowi Bridge and San Marcial, by works constructed after 1937; and (d) any trans-mountain diversions into the Rio Grande between Lobatos and San Marcial.

#### ALLOWABLE DEPARTURES

There will be natural variations in the relationships between the discharge at the control stations in the future, as in the past, and reasonable departures must be expected. Furthermore, departures which are caused by storage of water in reservoirs at time of flood should be permitted, subject to proper safeguards.

#### Definitions

The following terms will be used repeatedly and are here defined:

(a) Annual Debits - are the amounts by which deliveries in any calendar year fall below scheduled deliveries.

(b) Annual Credits - are the amounts in any calendar year by which actual deliveries exceed scheduled deliveries.

(c) Accrued Debits - are the amounts by which the sum of all debits exceeds the sum of all credits over any common period of time.

(d) Accrued Credits - are the amounts by which the sum of all credits exceeds the sum of all debits over any common period of time.

(e) Normal Release from Elephant Butte - is equal to an average of 790,000 acre feet per annum; provided that this amount shall be adjusted for any gain or loss in usable water resulting from the operation of any reservoir below Elephant Butte; provided, further, that water released from Elephant Butte reservoir for the generation of power which encroaches on flood control capacity of and which is not subsequently released from another reservoir for irrigation of Rio Grande project lands plus deliveries to Mexico, shall be deemed to have been released for such purposes, excepting only when such release for power is made by an agency beyond the control of any of the States contrary to the formal protest of New Mexico or Texas or any irrigation district thereof.

(f) Project Storage - is the combined capacity of Elephant Butte Reservoir and all other reservoirs actually available for storage of usable water between Elephant Butte and Courchesne, but not more than a total of 2,638,860 acre feet.

(g) Usable Water - is all water in Project storage which is available for release in accordance with irrigation demands, in-



cluding deliveries to Mexico.

(h) Unusable Spill - is the amount of water which is actually spilled from Elephant Butte Reservoir or released for flood control in excess of the current demand for irrigation of Rio Grande Project lands plus deliveries to Mexico and which is not stored in another reservoir for subsequent release for such uses; provided that, if the actual releases from Elephant Butte Reservoir from the time of previous unusable spill have aggregated more than the sum of the normal releases, the time of occurrence of spill shall be adjusted by the difference between the total actual release and the accrued normal release.

#### Limitation on Debits

In the case of Colorado, no annual debit nor accrued debit shall exceed 100,000 acre feet, except as either or both may be caused by storage of water in reservoirs constructed after 1937 in the drainage basin of the Rio Grande above Lobatos. Within the physical limitations of storage capacity in such reservoirs, Colorado shall retain water in storage at all times to the extent of its accrued debit.

In the case of New Mexico, the accrued debit shall not exceed 200,000 acre feet at any time, except as such debit may be caused by storage of water in reservoirs constructed after 1929 in the drainage basin of the Rio Grande between Lobatos and San Marcial. Within the physical limitations of the storage capacity in such reservoirs, New Mexico shall retain water in storage at all times to the extent of its accrued debit. In computing the

magnitude of accrued credits or debits, any annual debit greater than 150,000 acre feet shall be taken as equal to that amount, plus all gains in the quantity of water in storage in such year.

If ~~any~~ in any year the aggregate of accrued debits of Colorado and New Mexico exceeds the difference between the total capacity of Project storage and the amount of usable water then in storage, such debits shall be reduced proportionally to an aggregate amount equal to the minimum unfilled capacity in that year.

If in any year there is unusable spill from Elephant Butte reservoir, all accrued debits of Colorado and New Mexico shall be cancelled, and no debits shall be considered in that year other than gains in the amount of water in storage in reservoirs prior to the time of spill.

Limitation on Credits

In the case of Colorado, accrued credits in excess of 100,000 acre feet at any time shall be not considered, provided that accruals in any amount may be applied to offset debits caused by storage in reservoirs, and provided further that accrued credits at the end of each year shall be reduced by ten percent to compensate for evaporation losses therefrom in Elephant Butte reservoir. In computing the amount of accrued credits or debits, any annual credits in excess of 150,000 acre feet shall be taken as equal to that amount.

In the case of New Mexico, accrued credits in excess of 200,000 acre feet at any time shall not be considered, provided that accruals in any amount may be applied to offset debits caused

by storage in reservoirs, and provided further that accrued credits  
 at the end of each year shall be reduced by ten percent to compensate  
 for evaporation losses therefrom in Elephant Butte Reservoir. In  
 computing accrued credits or debits, annual credits in excess of  
 150,000 acre feet shall be taken as equal to that amount.

At the time of unusable spill from Elephant Butte Reservoir  
 the aggregate credits of Colorado and New Mexico shall be reduced  
 by the actual amount of such spill at Elephant Butte in proportion  
 to their respective credits at the time of such spill, and no  
 credits shall be considered in a year of spill.

Other Limitations

Neither Colorado nor New Mexico shall increase the amount  
 of water in storage in reservoirs constructed after 1929 whenever  
 there is less than 400,000 acre feet of water in storage available  
 for use in the Rio Grande Project. On or about January first of  
 any year any authorized representative of the water users in the  
 Rio Grande Project may demand of Colorado and New Mexico the re-  
 lease from storage reservoirs of accrued debits, and such releases  
 shall be made by each in proportion to the total debit of each and  
 in amounts sufficient to bring the quantity of usable water in pro-  
 ject storage to 600,000 acre feet by March first and to maintain  
 this quantity in storage until April thirtieth.

In event any works are constructed after 1937 for the pur-  
 pose of delivering water into the Rio Grande from the Closed Basin  
 in San Luis Valley, Colorado shall be credited with the amount  
 of such water delivered, provided the proportion of sodium ions  
 shall be less than 45% of the total positive ions in that water

when total concentration of salts in such water exceeds 350 parts per million.

### Gaging Stations

The difficulties and cost of securing reliable records of stream flow at San Marcial are increasing and may become insurmountable. In order to be prepared for such an emergency, immediate steps should be taken to insure that reliable records of discharge will be secured at or near San Acacia, San Marcial and below Elephant Butte reservoir to permit substitute schedules to be adopted, if necessary.

The above gaging stations, together with other gaging stations referred to in connection with the schedules set forth herein, should be operated by the Commission, directly or in cooperation with an appropriate Federal agency. At each gaging station the equipment, methods and frequency of measurements should be such as to produce reliable records. Additional gaging stations should be installed and operated where necessary to carry out the intent of any Compact.

### RECOMMENDATIONS

In submitting this analysis of conditions and our recommendations for your favorable consideration in the formulation of a permanent Compact, we ask that you recognize that many of the factors influencing our conclusions were not possible of close determination and that the effect of changes of salinity of the Elephant Butte supply since 1930 was left for future adjustment. Accordingly, we recommend that all of the provisions hereof be reviewed five years hence.

We are satisfied that no material expansion of the irri-

gated area in the Rio Grande Basin above Fort Quitman will be practicable without importations from other watersheds. Good use could be made of this water in each of the States, but we deemed that the allocation of any supply so obtained constituted a matter of policy beyond our province. Accordingly, no recommendation is made.

We recommend that the normal release from Elephant Butte Reservoir be deemed to be an average of 790,000 acre feet per annum, adjusted for any gain or loss of usable water resulting from the operation of any reservoir below Elephant Butte.

We recommend that deliveries by Colorado and New Mexico shall be in accordance with the schedules and applicable provisions hereinbefore set forth.

It is our opinion that the application of all of the recommendations and provisions set forth herein will be equitable to each State and will permit the maximum practicable use of the waters of the Rio Grande.

Respectfully submitted,  
COMMITTEE OF ENGINEERING ADVISERS

E. B. Debler  
E. B. Debler for the United States

R. J. Tipton  
Royce J. Tipton for Colorado

John H. Bliss  
John H. Bliss for New Mexico

R. A. Hill  
Raymond A. Hill for Texas.

I CONCUR:

H. C. Neuffer  
H. C. Neuffer

CHARLES WARREN  
COUNSELLOR AT LAW  
MILLS BUILDING  
WASHINGTON, D. C.

December 21, 1937.

Frank B. Clayton, Esquire,  
Attorney at Law,  
El Paso, Texas.

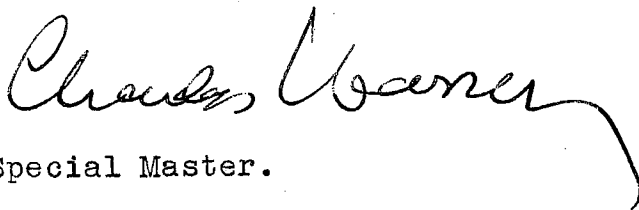
My dear Mr. Clayton:

I deeply regretted to learn from Major Burges when he was here in Washington last week that you had been ill. I am glad to learn from Judge Hanna yesterday, however, who happens to be in Washington, that you are now convalescing. I hope that your recovery will be speedy, and I send you my cordial regards and best wishes for a happy Christmas for you and your family.

It will probably relieve your mind to know that the Supreme Court of the United States yesterday entered the following order:

"Upon consideration of the motion of the complainant State, presented by Charles Warren, Special Master herein, to defer hearings before the Special Master, and of the communication of the Special Assistant Attorney General of the State of New Mexico stating that the State of New Mexico and the attorneys for the Middle Rio Grande Conservancy District agree to a continuance, it is ordered that further hearings before the Special Master be deferred until April 1, 1938, or such date thereafter as the Special Master shall determine."

Cordially yours,



Special Master.

CW/ceh

PROCEEDINGS

of the

RIO GRANDE COMPACT COMMISSION

held

at

Santa Fe, New Mexico,

March 3rd

to

March 18th,  
inc.

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Santa Fe, New Mexico,  
March 3, 1938.

The Rio Grande Compact Commission was called to order at 2:30 P.M., March 3, 1938, by the Chairman, in the Council Chamber of the City Hall at Santa Fe, New Mexico, whereupon the following proceedings were had:

MR. HARPER: Before proceeding with our order of business I will ask each of the commissioners to state for the record the representatives of their respective states who are present at this meeting. Mr. Hinderlider, may we hear from you?

MR. HINDERLIDER: Mr. Chairman, members and advisers: For Colorado there are present M. C. Hinderlider, River Commissioner, Attorney General B. F. Rogers, legal adviser to the Commissioner; Judge Clifford Stone, attorney for the Colorado State Water Conservation Board; Royce J. Tipton, Engineering Adviser to the Compact Commissioner; Attorney George M. Corlett, representing the Rio Grande Water Users' Association; Oscar Lindstrom, Secretary of the same association; Ralph Carr, Attorney representing the Conejos River Water Users' Association; B. Goudy, attorney representing certain interests in the San Luis Valley. There will be other representatives of the water users in the San Luis Valley with us tomorrow. Do you want to enter their names?

MR. CORLETT: J. C. Smittel, one of the board of directors; Corbin Wright, President, Rio Grande Water Users' Association; F. Higel, also member of the board of directors; James A. Reed, member of the board of directors; Omar Underwood of Del Norte and George Voss of Del Norte.

MR. HINDERLIDER: I believe those that have been named will be all that will be here representing Colorado or its interests.

MR. HARPER: Mr. McClure, may we have the names of your representatives.

MR. MCCLURE: Mr. Chairman and Members of the Commission and advisers: Representing New Mexico there are Thomas M. McClure, Rio Grande Compact Commissioner; Frank H. Patton, Attorney General of New Mexico; Governor A. T. Hannett, Spec. Asst. Atty. General, counsel for the Interstate Streams Commission of New Mexico; John H. Bliss, engineer adviser; R. H. Hanna, counsel for the Middle Rio Grande Conservancy District; Fred E. Wilson, counsel for the Middle Rio Grande Conservancy District; William Brophy, counsel for Middle Rio Grande Conservancy District; Edwin Mechem, counsel for Elephant Butte Irrigation District; N. B. Phillips, Manager of Elephant Butte Irrigation District; H. C. Neuffer, engineering adviser for Middle Rio Grande Conservancy District; Stanley Felipe, Asst. Chief Engineer Middle Rio Grande Conservancy District. There may be others who will come into the meeting at a later date and they will be named at the time they arrive.

MR. HARPER: Mr. Clayton, may we hear from you.

MR. CLAYTON: Mr. Chairman and Gentlemen: For the State of Texas there are present Frank B. Clayton, Rio Grande Compact Commissioner for Texas; C. S. Clark, Chairman Board of Water Engineers for the state from Austin; Major Richard F. Burges, attorney for El Paso County Water Improvement District No. 1, El Paso; Raymond A. Hill, Los Angeles, consulting engineer for the state of Texas; Allen Laflin, Albuquerque, engineer for the State of Texas. There will be present at a later date Asst. Attorney General H. Brady Chandler of Austin; Roland Harwell, Manager of El Paso County Water Improvement District No. 1. There is



also in attendance F. S. Robertson of San Benito, Secretary of Water Conservation Association of the Lower Rio Grande Valley; and A. L. Montgomery of San Benito, attorney representing Water Conservation Association of Lower Rio Grande Valley.

MR. HARPER: Professor Barrows, will you please state the names of the representatives of the Nation Resources Committee present.

DR. BARROWS: Mr. Chairman and members of the Commission: Frank Adams and H. H. Barrows, members of the consultant board for the Rio Grande Joint Investigation; Harlow M. Stafford, engineer in charge of the Joint Investigation; J. C. Stevens, consulting engineer for the Joint Investigation; N. C. Grover, Chief Hydraulic engineer of the Geological Survey and member of the Water Resources Committee; Vincent M. Miles, assistant to Attorney General Cummings, and legal consultant of the National Resources Committee.

MR. HARPER: There are also present as advisers to the Chairman, Mr. E. B. Debler, Hydraulic Engineer of Bureau of Reclamation and H. J. S. DeVrees, district counsel of the Bureau of Reclamation. If the name of anyone has been overlooked, I hope he will speak out or forever after hold his peace.

At the last meeting of this Commission, which was held September 27th to October 1, 1937, the decision was reached to delegate to the engineering advisers of each of the Commissioners and the engineering adviser for the Chairman, the task of preparing a report setting forth certain factual data bearing on the state line flow schedules. A resolution was adopted, which I will read to refresh your memories. (reads) "In line with the conversation had by the commissioners, I move that one engineering consultant of each state, together with Mr. E. B. Debler, meet in Santa Fe, or such other place as they may mutually elect, on October 25th, for the purpose of discussing the engineering features, particularly of the state line deliveries and deliveries at San Marcial, in order to determine if they can arrive at a determination of general principles and if possible agree on the details of the deliveries, and the engineering factual data which should underlie the compact. Also that the meeting of the commission itself be deferred to such date as may be mutually agreed upon, pursuant to the call of the chairman."

The engineering committee held one meeting in Santa Fe and a later meeting in Los Angeles, and submitted a report under date of December 27, 1937, copies of which I believe have been furnished the commissioners and all interested parties. I trust that the representatives of each of the states who are concerned in this matter have had time to analyze this report and that the commissioners are prepared at this time to state whether this report meets with their approval, and if not, to bring out any points on which they are not in agreement with the findings of the report. If the commissioners have no other suggestion to offer, I would suggest that we proceed to discuss this report and in particular to give any of the representatives here an opportunity to state whether the report is agreeable to them.

MR. CLAYTON: May I suggest that we proceed with the states in the order they have been called on heretofore to get the views of the commissioners.

MR. HARPER: Very well. Mr. Hinderlider, what have you to say in reference to this report?

MR. HINDERLIDER: I will say that Colorado is satisfied with the gen-

eral conclusions arrived at by the engineering committee. There are certain items, however, which we will want to discuss at greater length a little later on, but in view of the fact that the commissioner for New Mexico has heretofore, in writing, voiced objections to the findings of the engineering committee, I feel that the proper procedure at this time would be for Mr. McClure to present in more detail, than was done in correspondence with the chairman and the other two members, those points which he does not concur with in the findings of the engineering committee. I apprehend such a procedure will open the entire report for general discussion, at which time Colorado probably will want to present certain views as a result of the findings of the engineering committee.

MR. HARPER: Are you prepared to go ahead, Mr. McClure?

MR. MCCLURE: I don't remember the date of the letter I wrote to Mr. Harper, but I believe it was about January 18th. After receiving the engineering committee report and making a preliminary analysis of it, I came to the definite conclusion that from New Mexico's standpoint that there should be one or two distinct basic changes in the report and some minor changes that were not quite so important. I will go through the major changes which we consider should be made in the report. First, New Mexico feels that the Otowi index supply in relationship to the Elephant Butte usable water supply is not an accurate or good basis on which to set up a schedule at San Marcial or Elephant Butte. We feel that that schedule should be based on the Otowi index supply to San Marcial in that supply and not to the Elephant Butte Usable water supply. For the next change, it was stated that natural flows would be used on these control points or stations. We feel that recorded flow should be used instead of natural flow. On page 8 of the report, second paragraph, New Mexico feels that due to Indian rights there might be some new development over which New Mexico has no control; therefore that paragraph should be changed to include only development that New Mexico would have control over. In regard to the normal release from Elephant Butte, New Mexico is not satisfied, and cannot be satisfied, with the figures set up. At the same time we feel that ~~some~~ there should be some definite consideration or basis for Mexican diversions and losses, as that paragraph refers to adjustments of saving or loss due to Mexican use. Under project storage of the Elephant Butte, there is an indefiniteness in that paragraph regarding the 2,638,860 acre feet. As we understand it, there is flood control water included in that, and that paragraph should be made definite in regard to these flood control waters. On pages 11 and 12 of the report, which deals with the limitation of credits in regard to unusable spill, we feel there should be a clarifying of this paragraph in relation to what might be accomplished on debit that Texas has over normal increase in regard to theoretical spill. Before that, on pages 10 and 11, the paragraph on reduction of debits, we feel that the word "actual" should be added to the capacity of project spill. The first line after the word 'total' on page 11. The first paragraph under other limitations is very indefinite and a clarification of that paragraph should be made. Also, we feel that the question of power should be considered in that paragraph, and there should be included in the report a relationship between operation of El Vado in regard to the three summer months that have been eliminated from this schedule. Those are the major exceptions that New Mexico takes to the report.

MR. HARPER: May we hear from you now Mr. Clayton?

MR. CLAYTON: On the whole, we are satisfied with the report. It may

be that as this discussion proceeds we may have suggestions primarily for the clarification or phraseology of the report in certain particulars. Most of them are of minor importance. I am not prepared to speak at this time with reference to the objections which the commissioner for New Mexico has just offered, but I would suggest that the commissioner from New Mexico give us, in writing, the gist of the statement he just made so we can take it under consideration. I must say, however, that Texas does not concur with the view expressed by Mr. McClure in his letter to you, to which he has just referred, under date of January 25th, that the engineers representing the several states and the United States exceeded their authority in this report. As I see it, they did precisely what they were instructed to do, and in general the principles that they laid down we believe to be sound. When we offered the suggestion at the last meeting that the engineering advisers meet and try to work out a basic formula, we had in mind definitely that they were to work out a schedule of state line deliveries based upon experiences in the past, and as I understand it, that's what they attempted to do in this report. Texas is willing to proceed with the negotiation for a compact based upon the report of the engineers. As I say, if there are any suggestions for modification of the report, we would like to have them in writing in order that we can digest them and prepare to answer them. In particular I should like a statement, either now or later, from the Commissioner of New Mexico as to what he considers a proper figure for a normal release from Elephant Butte or supply in the Elephant Butte.

MR. HARPER: Mr. McClure, could you arrange to furnish each of the commissioners and the chairman, later in the afternoon but before this evening, a written statement of your objections so they would have time to consider them this evening?

MR. MCCLURE: I can furnish a partial statement on that, but I don't think it necessary to go into the major details of working out these various changes, or showing these changes by a written statement. My suggestion would be that the engineering committee meet again and go into these discussions from that standpoint. I would be glad to state now the major defects I think are in more or less basic principles, or the basis that they laid their report on, but as far as going into all the details of the other things, I think it would save time and accomplish much more if the committee would meet again and attempt to clarify the indefiniteness and see if they can arrive at a basis which New Mexico has suggested in regard to the two index supplies, Otowi against San Marcial instead of Elephant Butte usable, and also on a basis of releases from the Elephant Butte Reservoir. Our main objection, of course, is on the basis of Otowi to the usable water supply. It doesn't show the past picture in any way, or even arrive at it closely, and I think it can definitely be shown by engineering data. In that case it might be that it would cast reflections on the release, and for that reason I would like to make the suggestion, and if necessary the motion, that the engineering committee do meet and arrive at a clearness of these paragraphs, as well as see if they can reach an agreement. As far as the statement I made that they exceeded their authority, I do think they did. If they had tendered actual factual data in regard to these releases and in regard to the relationship of the control points and stations, it would have been different. However, it was strictly a compromise and I don't think any compromise or any division lies in the hands of the engineering committee but should be brought before the commission. I certainly didn't understand at the time the resolution was passed that that would be the condition. I understood they would determine what had been done in the past and set up schedules accordingly and submit it to this commission. That was not done either in releases from Elephant Butte or in relationship between Otowi

and San Marcial as the resolution requested.

MR. HARPER: Do you wish to make a formal motion?

MR. MCCLURE: I will be glad to make a motion that the engineering committee meet again to clarify and reword the report that they submitted to the commission. I might add it may not be necessary to adjourn this meeting; there are other points on this compact which might be taken up while they are in session. We might take other phases besides the engineering phase, but I do think before we can arrive at any definite conclusions from an engineering standpoint, we will have to have more information from the committee.

MR. HARPER: My idea in making the suggestion that you furnish a written statement is not that you should go into very much detail, but only furnish a summary of something that you had written when you made your presentation so the commissioners could have before them a precise statement of each of the points raised. I believe that would be helpful in guiding them in their future procedure.

MR. CLAYTON: I confess I cannot see at this time the point of having another meeting of the engineering advisers without the compact commissioners. This report was agreed to unanimously by the engineering advisers; they spent a great deal of time in its preparation and when they signed it, I can see they believed that they were recommending for adoption into the compact, or to serve as a basis for a compact, the data, facts and figures which they believed to be reasonably accurate, within the limitations which they express in the report itself. It seems to me it would reflect on these four engineering advisers to go into another conference by themselves for the purpose - as Mr. McClure says - of a clarification of their report, certainly until the matter has been further thrashed out here in meeting of the commission and the points of difference, if any, aired. My suggestion would be, if there is anything in this report that needs clarification, that the engineering advisers who prepared it be called upon by any of the commissioners, or for that matter, by the representatives of the National Resources Committee, for an explanation in order that we may all have it. If they arrived at certain conclusions in this report with which any of the commissioners take issue, those points should be made known. In other words, since the committee of engineers have met and gone over this thing thoroughly, and I might say strenuously, I can't see that anything could be accomplished by giving it back to them without specific instructions as to what they are to do, and for that reason, Mr. Chairman and gentlemen of the commission, my suggestion would be, in opposition to the motion made by Mr. McClure, that we take up the report for discussion here and now and if it needs clarification, let's get the explanation here.

MR. HARPER: Mr. Hinderlider, have you anything to say on this subject?

MR. HINDERLIDER: Mr. Chairman, Mr. McClure has voiced the feeling that the engineering committee has exceeded its authority given under a resolution which the commission adopted at its last meeting, and has pointed out certain objectionable points or conclusions which may have considerable weight. I would not, myself, be disposed to object to an immediate meeting of the engineering advisers if such procedure would expedite the work of the commission. I do not personally think it is necessary, as Mr. Clayton has just stated. I think the commission could proceed to analyze the report and all those objectionable points mentioned by Mr. McClure could be discussed in detail at the same time. If, perchance, the business of the meeting will be expedited, I see no serious objec-

tion to adjourning this meeting until tomorrow to give the engineers an opportunity to meet this evening to see if they can reach common ground on some of these points. There are a few items to which Colorado will later direct its attention and raise questions which will need clarification and possibly some alterations, but I think probably they are not of major consequence at this time. I suggest Mr. McClure present in more specific form to the commission a statement of his objections so if the engineering committee is called together this evening to give it further consideration, they will have specific points before them for definite consideration. It may be such procedure will result in saving some time rather than try to proceed at this time before the whole commission. Either plan is agreeable to me.

MR. HARPER: In order to get this matter before the commission, Mr. McClure has made a motion and unless a second is made to that motion, the matter will have to die.

MR. HINDERLIDER: I am inclined to think that out of courtesy we should accede to his request. I doubt if we can make much progress as long as one of the commissioners is dissatisfied.

MR. CLAYTON: I don't object to the engineers furnishing the commission with any clarification needed, but I am at a loss to know what instructions we should give the advisers if they are asked to go over this report.

MR. HINDERLIDER: I would suggest they consider Mr. McClure's objections.

MR. MCCLURE: The first objection I made to the report would automatically require a definite new schedule in the relationship, and it would require work by the committee to compile that new schedule. That is based on engineering data which has been checked and analyzed since the report was made and was not checked and analyzed in Los Angeles on the basis on which the report was made. On that basis alone I would think the engineers would have to meet in order to arrive at that new schedule on the new index supply.

MR. HARPER: It seems to me before we can instruct the engineers as definitely as you imply in your statement in regard to revamping this schedule, we must, in courtesy to them, give them a chance for full expressions of their views as to whether they are willing to reconsider their findings and compilation of data on these various points. It would seem to me all we could reasonably ask the engineers to do at this time would be to ask them to review the summary statement which you would make setting forth your objections and ask them to report back to the commission as to whether they are willing to consider revamping their conclusions along the line you suggest. If they report back they are willing to do it, then the commission may instruct them to go ahead; and if, on the other hand, they are of the majority opinion that they could not consider revamping the data which they have already submitted, then the matter will be back to the commission as a whole to decide. Would you have any objection, Mr. Clayton, to the engineering advisers meeting this evening after Mr. McClure has presented a summary statement of his objections, asking the engineers to report back to the commission as to whether they can see their way clear to go into the questions which Mr. McClure has raised to the extent of revamping their entire report? If their conclusion is in the negative then the commission tomorrow would have to consider the objections in regular session.

MR. CLAYTON: Do I understand that you propose the engineering advisers meet again with a view to determining whether some other basis of

allocation or deliveries can be arrived at?

MR. HARPER: Not precisely. It was my view they should meet again with a view to determining whether they would feel justified in reconsidering any fundamental basis of their report in the light of Mr. McClure's objections. If they are not so willing to do, then the matter would have to come back to the commission and we would have to take up Mr. McClure's objections.

MR. CLAYTON: I cannot see any objection to that. I am afraid this report was the result of a great deal of strenuous labor and I am afraid much more time will be consumed by the engineering advisers which may turn out to be profitless discussion. I have no objection to the engineering advisers meeting with the view that you just mentioned. That's entirely satisfactory.

MR. HARPER: It might expedite the progress of the deliberations of the commission if we give the engineering advisers an opportunity to get together for an informal discussion having before them these several points which Mr. McClure has raised.

MR. CLAYTON: I think that's entirely all right.

MR. HINDERLIDER: They have submitted a report and it may be that report should be considered upon its face rather than they meet again and revise it.

MR. HARPER: They should certainly have their chance to express their collective views as to whether these points raised had any bearing on their findings which they would care to consider. We would not ask them at this time to go into the matter of revision of the report in any form. But I will be glad to ask them for their individual views at this time.

MR. HINDERLIDER: May I ask first, Mr. McClure have you available factual data, figures and analysis of such data which would be available to the engineering advisers at this time to indicate to them the certainty of your objections as to this schedule which they worked out?

MR. MCCLURE: We have an analysis of this in the office, to the relationship of the control stations which we feel is the basis the report should be made on.

MR. HINDERLIDER: Unless you already have such figures it might be a waste of time to open up the whole thing by the engineers.

MR. MCCLURE: We have the figures showing the difference it does make. The relationship of Otowi to the Elephant Butte was not accurate. We made a complete analysis of that.

MR. HARPER: The advisers should be given a chance to express their views as to whether they feel their report should be re-opened. In order to determine that question they must have a statement from Mr. McClure listing these points and they must have a chance to consider these in a meeting of their own.

MR. CLAYTON: That's a much narrower scope than if they went into new figures at this time.

MR. HARPER: As to the suggestion that we ask the views of the engineers at this time, do you think we should proceed to do that?

MR. HINDERLIDER: I think that certainly should be done, as a matter of courtesy to our engineering advisers. I would ask Mr. Tipton to express an opinion as to whether or not he would be agreeable to go into the matter of the figures and the protests submitted by Mr. McClure.

MR. TIPTON: This is an advisory committee of the commission and I think should follow the wishes of the commission. If the commission thinks the report should be reviewed in view of Mr. McClure's objections, I think the committee should do that. I have no objection to meeting with other members of the committee to determine whether or not there should be changes made. I have no objection to taking Mr. McClure's objections and considering them with a view to changing figures if they should be changed. I think the text of the report in some places needs clarification. While basic data was thoroughly analyzed certain major premises were assumed, upon which the whole report was based and those premises I don't think should be changed. However, the method of expressing certain of the sections of the report probably need some change for clarification rather than any change in principle, but those are matters which the engineering committee should take up with the commission. I am at the disposal of the commission.

MR. HARPER: Mr. Bliss.

MR. BLISS: I have had time since the Los Angeles meeting to analyze the various data and schedules together and agree that the changes which Mr. McClure has suggested should be made. I would be willing to meet with the other members of the committee and see if such changes can be made.

MR. HARPER: Mr. Hill.

MR. HILL: I think the engineering advisers should very properly meet to discuss in committee what position they should take. So far as expressing at this time as to whether any changes are desirable, the committee is in no position to make any such statement - we don't have the data upon which to base any statement.

MR. HARPER: Mr. Debler.

MR. DEBLER: As I see it this committee was organized for the purpose of assisting the commissioners, and as such I am sure everyone of us is ready to consider anything the commissioners wish to pass to us to work on. I have no objection whatever to this meeting which has been suggested. I believe, however, we should have for consideration at this time the material on which Mr. McClure has based his objections. Only by having such material before us could we hope to arrive at any conclusion with regard to consideration as to conclusions adopted by the committee.

MR. HARPER: The engineering advisers have all expressed themselves agreeable to meeting in this preliminary way, and I will be glad to entertain a motion to put that into effect if the commissioners see fit to do so. Mr. McClure's motion was too broad for this purpose - that the engineering committee should meet and revise the whole report. As I understand our feeling now is that the engineering advisers should meet and report back to the commission tomorrow as to whether they feel they should undertake the revision of the report.

MR. MCCLURE: I'll withdraw my former motion and make the motion that the engineering committee meet and decide whether they shall take up the revision of the present report that has been submitted.

MR. HINDERLIDER: That's exactly what the motion was before - to revise the report. It is my understanding that was not the purpose; it was to meet and decide after receiving, in writing, Mr. McClure's objections and see if in the minds of the committee they are well founded and if so, then entertain the question of whether they would attempt a modification of the report in harmony with such suggestions, or report back to the commission.

MR. MCCLURE: My motion is for them to go into the report and determine whether it is advisable to revise it.

The motion was seconded by Mr. Hinderlider and unanimously carried.

MR. HARPER: Is there anything further to come before the meeting this afternoon?

MR. DEBLER: As these engineering advisers are to meet, I would like to make the suggestion that the committee be authorized to call before it any individuals it may desire to hear with respect to the objections which Mr. McClure has made.

MR. HARPER: I don't think there will be any objection to that. I believe it should be understood that the meeting of the engineers is not to be public.

MR. DEBLER: The engineers only, but that we be authorized to call such witnesses as we may wish to hear.

MR. HARPER: You can take that for granted. If there is nothing further at this time to come before the meeting I will entertain a motion for adjournment. If there is, I will be glad to stay.

MR. CLAYTON: I move that the commission recess until 10 o'clock tomorrow morning to receive the committee of engineers report.

The motion was seconded by Mr. Hinderlider and unanimously carried. Whereupon at 4 P.M. the meeting recessed until 10 A.M. March 4, 1938.

Santa Fe, New Mexico,  
March 4, 1938.  
10:30 A.M.

MR. HARPER: I understand the engineers have completed a review of the objections which Mr. McClure submitted yesterday and that they are now ready to submit their report back to the commission. I will ask Mr. Debler to present that report.

MR. DEBLER: Mr. Chairman and members of the commission: The Compact Commissioners on March 3, 1938, in open session, instructed this committee of engineer advisers to review a statement to be submitted by the Compact Commissioner of New Mexico on New Mexico's objections to the December 27, 1937, committee report and to report back to the commission whether such objections warranted the committee in reconsidering its report. The Compact Commissioner of New Mexico thereafter submitted a statement, copy of which is hereto attached, of such objections, and the committee of engineer advisers report thereon as follows:



Opening Paragraph and Paragraphs 1 and 2:

New Mexico proposes a substitute plan for the control of operations by New Mexico interests above Elephant Butte Reservoir. The committee has heretofore considered some alternatives to the plan adopted by it but stands ready to give further consideration to the New Mexico plan upon submission by New Mexico of its alternate plan, including applicable curves, tables and other details and including a tabular comparison with the committee plan, of resulting stream flows.

Paragraph 3:

New Mexico desires to be relieved of responsibility for Indian or other operations beyond its control. The committee believes this matter is one of policy for determination by the Compact Commission.

Paragraph 4:

New Mexico claims that 800,000 acre feet of water exceeds both past uses and requirements below Elephant Butte Reservoir. The committee is agreeable to reviewing any data in support of this claim not heretofore available to the committee.

Paragraph 5 and first sub-paragraph thereof:

New Mexico desires a figure adopted for present use by Mexico. The committee has heretofore discussed this matter but failed to reach common ground by reason of the meager data available. It is suggested that New Mexico present its conclusions, together with all supporting data for review by the committee.

Second Sub-paragraph of Paragraph 5:

New Mexico insists that treaty provisions be carried out and that Texas or the United States be made responsible therefor. The responsibility for observance of the treaty with Mexico is one of policy for determination by the Commission.

Third Sub-paragraph of Paragraph 5:

New Mexico objects to a judicial interpretation by the committee on Mexican Treaty obligations. Since no interpretation was made, this objection has no point.

Paragraph 6:

As explained to us by the New Mexico member, this paragraph aims to secure clarification. The committee is agreeable to such clarification.

Paragraphs 7 and 8:

These paragraphs aim at revision of features governing operation of Elephant Butte Reservoir. A further discussion may show some changes warranted.

Paragraph 9:

New Mexico desires to compel avoidance of power waste at Elephant Butte Reservoir. The committee is agreeable to preparing such a provision.

The committee stands ready to consider written specific requests by any Commissioner for clarification of the intent of any of the provisions of the committee plan.

Respectfully submitted,  
Committee of Engineering Advisers  
E. B. Debler, for the U.S.  
R. J. Tipton for Colorado  
John H. Bliss for New Mexico  
R. A. Hill for Texas.

Objections of New Mexico to the Engineering  
Report Filed with the Rio Grande Compact  
Commission on December 27, 1937.

New Mexico objects to the use of the Otowi Index Supply and Elephant Butte Index usable water supply as a basis for deliveries to San Marcial. This should be changed to a delivery to San Marcial based on an Otowi Index supply to a San Marcial Index supply, excluding the months of July, August and September.

1. The best relationship which existed in the past is expressed by a curve showing the relationship of Otowi to San Marcial. The numerous indeterminate factors that enter into the picture of usable supply in the reservoir will reflect greater inaccuracies than will the San Marcial method in using this as a basis for deliveries. These factors are bank storage, withdrawal of bank storage, the determination of silt content on an annual basis, and losses occurring from the San Marcial gaging station to the reservoir.

2. New Mexico objects to natural flow at the Otowi station and insists upon recorded flow. Natural flow debits us with El Vado storage during the spring months, with no credit when this stored water is released during the months of July, August and September.

3. On page 8, second paragraph of the report, provision should be made so that New Mexico would not be responsible for any new diversions or use above Otowi over which she has no control, such as Indian development.

4. New Mexico objects to a normal release from the Elephant Butte based upon 800,000 acre feet of water annually. This is far in excess of past and present average releases and is far in excess of their project needs.

5. New Mexico insists that a definite figure be set up as the average quantity diverted to the Republic of Mexico during the period 1938 to 1937, inclusive. This to be used as a basis for determining the quantity of water which will be saved so that due credit may be given to New Mexico, Colorado and Texas.

New Mexico likewise insists that a definite method of determining the amount of saving shall be fixed and established.

New Mexico insists that the treaty rights be carried out and the responsibility of carrying out such treaty provisions be definitely placed either with the state of Texas or with the United States.

New Mexico takes the position that it is no part of the duty of the engineering committee to place a judicial interpretation upon the treaty obligations to Old Mexico.

6. New Mexico insists upon a determination of the exact elevation of water in Elephant Butte Reservoir, which shall determine the maximum capacity of project storage.

7. New Mexico insists that, on pages 11 and 12, paragraph on reduction of credits, the following clause shall be added: "...provided that Colorado and New Mexico credits shall not be reduced by any quantity of theoretical unusable spill caused by the adjustment of actual water in storage by the quantity by which project releases exceed the normal release."

8. New Mexico suggests that the first paragraph under "Other Limitations" be changed to read: "... that only sufficient water shall be released from storage debits to bring project storage up to 400,000 acre feet," or some other method for attaining the same result.

9. New Mexico believes that under "Other Limitations" a paragraph should be included so that any water released from Elephant Butte reservoir for power development which is not stored in another project reservoir for subsequent release for irrigation purposes shall be considered as part of the normal release.

MR. HARPER: What is the pleasure of the commission in regard to this report? Have you any suggestions? Mr. Hinderlider have you any suggestion to offer as to procedure?

MR. HINDERLIDER: It would probably be more proper for Mr. Clayton to reply to that.

MR. HARPER: Mr. Clayton, will you come to the rescue?

MR. CLAYTON: It seems to me the report here seeks to have the commissioner from New Mexico furnish the data and other figures on which they predicate their demands. It would seem proper to me, therefore, that the request of the committee be acceded to if the commissioner from New Mexico wishes to insist upon their demands in order that the committee of engineers can proceed further.

MR. HARPER: Do you concur in that?

MR. HINDERLIDER: I concur.

MR. HARPER: May I ask Mr. Debler and the other members how long you anticipate it would take to go into these various matters which you indicate a willingness to review?

MR. DEBLER: It is my impression it would take, on the first matter, which is probably the most important, two or possibly three days to consider the material which New Mexico might submit, for committee discussion and for the hearing of any others whom we might wish to interrogate or to ask for guidance on the alternate plan. There are no other matters for discussion by the committee which I believe would take more than probably half a day to reach a conclusion on. If I am wrong in my estimate, I hope these other gentlemen will correct me.

MR. HARPER: Mr. McClure, do you have your data in such shape it can be submitted without delay to the committee of engineers?

MR. MCCLURE: It is, I think, yes sir.

MR. CLAYTON: I suggest in view of what Mr. Debler said, that each of the engineer advisers representing the states express their views as to how long they think it will take to review the data to be submitted by New Mexico in order that we may have the views of all the advisers.

MR. HARPER: That's a good suggestion. Mr. Tipton.

MR. TIPTON: I believe Mr. Bliss could answer that because he knows what shape New Mexico's material is in.

MR. BLISS: I don't believe Mr. Debler has understated the time; it will take at least 2 or 3 days to consider this proposed schedule.

MR. HARPER: Would you estimate that by Monday morning you might have the matter reviewed?

MR. BLISS: It might be possible.

MR. HARPER: Do the other engagements of the engineers to the commissioners make it convenient for them to stay with this over next week?

MR. TIPTON: I have to be in Topeka on Tuesday or I might possibly not have to be there until Wednesday. I will have to talk that over with Judge Stone.

MR. HARPER: I haven't discussed this particular question with the commissioners, but I feel we should make every effort to carry on our

negotiations here just as far towards conclusion as possible at this meeting and not turn this matter over to the engineers with a view to having them report back to the commissioners at some future date. If any of the commissioners have any view contrary to that I would be glad to have them so state.

MR. MINDERLIDER: I heartily concur in your statement.

MR. CLAYTON: If we are going to compact, we ought to compact now. We have delayed this thing as long as it should be delayed. We have no way of knowing whether another report by the committee wont be objected to. We should consider these problems as they arise and reach common ground or find out we will not be able to. I can see no advantage to further delay.

MR. MCCLURE: I dont feel New Mexico can consider the report as part of a compact, or a basis to compact on as it is now. If there are other things to be discussed and necessary in a compact at this time, I think they can be taken up while the engineers meet. On the basis of the engineers' report, as I stated in my letter to you, it would be a waste of time for New Mexico to even consider that report as a basis to arrive at a permanent compact on.

MR. HARPER: We understand your position clearly, but the point I wanted to bring out was whether it was your view, after we get this revised report from the engineers, to stay right here to determine whether or not we will be able to reach an agreement on the revised report, not the report as it now stands.

MR. MCCLURE: Absolutely so; my time is available until the compact is reached or not reached.

MR. HARPER: I will hold everyone here until we reach a compact.

MR. CLAYTON: Since our discussions so far have been taken up with the committee of engineers report, I think it will be proper to incorporate in the proceedings the report of the engineers and correspondence had between members of the commission with reference to it prior to this meeting in order that they may all be made a matter of record.

MR. HARPER: I will see that that's done. We have now agreed on a course of procedure and it seems to me we should immediately let the engineers start on a review of their report if that is at all possible. I would like to have the views of the commissioners as to whether the commission should go ahead and attempt to discuss some of these matters which are not to be covered by the engineers report, or whether we should simply wait until the engineers have completed their review. What is your pleasure on that?

MR. CLAYTON: It occurs to me that there are other matters which might properly be considered by the commission during the deliberations of the committee of engineer advisers. For instance, if we agree upon an allocation of the waters and program of deliveries, there will still be the question of setting up machinery for the carrying out and enforcement of the provisions of the compact, and general provisions of the compact that do not relate to engineering matters, and those I should think could be profitably considered by the commission while the engineers are meeting, and probably we can get that matter out of the way.

MR. HINDERLIDER: It has been my feeling all along that the paramount question for arriving at a decision upon this compact is the equitable division of the waters of the river, and I have felt very strongly that that matter should be disposed of, if at all possible to reach a decision, before other questions are injected into our discussions which might, as we say, have the effect of muddying the water. There may be certain points which might profitably be discussed by the commission and their advisers pending the further report of the engineering committee. Before agreeing to the suggestion made I should like to have a little time to discuss this point with my legal adviser, the attorney general, who is present, and if possible agree upon such points as might be fruitful of further discussion by the commission, possibly including some of those points referred back to the commission by the engineering advisers. Therefore, before committing myself on that, I would like to discuss the matter briefly with my advisers.

MR. HARPER: I suggest the meeting recess for 10 or 15 minutes to permit informal discussion. Meanwhile, the engineers could get together and make preparations to start their work of review. (10 minute recess.)

MR. HINDERLIDER: In view of the fact, Mr. Chairman, that the question propounded will require considerable discussion between the commissioners and their advisers, I suggest that we recess until 2 o'clock this afternoon at which time we can report back here as to the advisability of discussing further the questions presented looking to the formulation of a compact outside of the question of the equitable division of the waters of the river.

MR. CLAYTON: Do you propose the committee of engineers go ahead with their deliberations?

MR. HINDERLIDER: That, I feel, is paramount and must be settled one way or another.

MR. CLAYTON: Will you incorporate that in your motion?

GOV. HANNETT: Before a motion is put, I have a suggestion which I think will save a lot of time. On the engineering committee Mr. Bliss represents the State of New Mexico; the engineering expert for the Middle Rio Grande Conservancy District is Mr. Neuffer. Since that district is the most vitally interested area in New Mexico as to the effect of this compact, we believe it will save time if Mr. Neuffer is included in this engineering committee. Otherwise at the end of three days Mr. Neuffer will probably have to spend three more days checking these figures, and for that reason we make the suggestion that he be included in the engineering committee.

MR. HARPER: I have no doubt the engineering committee will be glad to keep Mr. Neuffer advised as negotiations proceed, but ~~we~~ I would feel we should leave it to the committee as to what extent they wish Mr. Neuffer to participate in their deliberations since Mr. Neuffer is not a member of the committee.

GOV. HANNETT: We will withdraw that suggestion then.

MR. HARPER: I am just expressing my individual views. I will be glad to hear from others.

JUDGE MECHEM: I would like to inquire whether the gentlemen here represent the state of New Mexico or the Middle Rio Grande Conservancy District. We have the largest interest in the Elephant Butte Irriga-

tion district of any of the subdivisions in the State of New Mexico and Mr. Neuffer doesn't represent us.

GOV. HANNETT: As a practical matter, we all know that any compact entered into here would be absolutely futile unless the legislatures of the various states ratify it. If the Middle Rio Grande Conservancy District goes before the legislature and objects to any compact we enter into here, its just as certain as two and two makes four that it wont be ratified. For that reason the engineering expert of that district has got at least to have the opportunity to check our figures before we bind ourselves, and that's all we ask. If the committee wants to exclude him, that will be all right with us, but it will take an additional two or three days<sup>s</sup> time.

JUDGE MECHEM: My only objection was to have him substituted for the state's expert.

MR. HARPER: This committee has been set up by formal action of the commission and consists of the engineering advisers of each of the three commissioners, in addition to the engineering adviser to the chairman, and any changes in the make-up of that committee of course would have to be accomplished through formal action of the commission. What I stated a few minutes ago was in the nature of a suggestion so as not to disrupt the committee but at the same time accomplish what Governor Hannett is trying to do. I am sure the committee will be glad to have Mr. Neuffer confer with them as they go along so there will not be any time lost when their report is submitted in asking him then to go over what they have done. I would like to have Mr. Debler express the views of the committee. We are instructing them to undertake ~~and~~ a task and I think we ought to let them express their views as to how they wish to conduct their meetings.

MR. DEBLER: I might say that this matter was presented yesterday when I suggested we have authority to call in anyone we wanted at any time to consult with us on these matters. We have no idea of excluding anybody, but at the same time there are discussions coming up where it is advisable that the participants be, in the main, the official representatives of the commissioners representing the states themselves. I believe, as has heretofore been stated, that would avoid loss of time which Governor Hannett fears, and at the same time I believe it will avoid having too large a committee as that always slows up operations. Its only proper that if any one state or district has more than its official representatives present, that privilege must be accorded to all other interests and it might be an unwieldy committee.

MR. HINDERLIDER: May I suggest, without having heard from the other commissioners, a happy solution might be for Mr. Neuffer to be considered a witness before the engineering committee without any authority to advise or formulate any policy or cast any vote in the committee. I dont know whether that would be agreeable to Mr. Debler and the other members of the committee or not. Its unfortunate, of course, that we find something of a division among the water users in any one of our states, but I have felt all along that the commission and engineering advisers could not very well invite in and take the views of all the different factions of the different states, or we probably will never get anywhere. There must be someone to represent all interests, but at the same time it might be possible to alleviate this situation - or it may be the commissioner from Texas or New Mexico might have a better suggestion.

MR. CLAYTON: I dont think we would have any objection to the suggestion made by Mr. Hinderlider. We have no say as to who shall constitute New Mexico's representation on that committee. It seems to me the idea was to confine it to one representative from each state and if we are going to enlarge it the chances are we will make it unwieldy. I think its entirely up to the committee to have observers or witnesses to the extent to which they think they should take part in the deliberations - it would be up to the committee primarily. As far as Texas is concerned, the suggestion made by Mr. Hinderlider is satisfactory.

MR. HARPER: Will that meet your requirements?

MR. MCCLURE: The only thing in regard to that is that what we desire is to have Mr. Neuffer with the committee, not as a member, but if a question comes up that could be clarified as to the attitude of the conservancy district, why he would be present to do so. It would be an imposition on Mr. Neuffer to wait around here for 2 or 3 days subject to call when these things might be ironed out in a minute if he was in the meeting. We dont intend him to be a member of the committee, but more or less available to the committee for his suggestions when they want him.

MR. DEBLER: That's what the committee had in mind. Whenever we are discussing matters where we feel he is going to be helpful, we could have him in the room with us.

MR. HARPER: What do you have to say Mr. Neuffer?

MR. NEUFER: I haven't any objection. I want you to understand that all I want is information, to know what I've got to consider. As the report was submitted I tried to get information on it but I couldn't. I asked Mr. Bliss and I understood him to say he wrote for the information, but we couldn't analyze the proposition. An item I asked particularly about was the Elephant Butte water supply, the matter of the 800,000 acre feet. I asked him how they arrived at that with no basis of analyzing it and he said they just set up that figure. We have no closed door on this but we do want to be able to analyze the data upon which the figures are arrived at. Otherwise, we would have to go in and work out something of our own and we would like to save time. I dont want to sit around here - I have other things to do and it is quite a sacrifice to go into this matter at this time but we want to help in every way we can. I dont want to tell the committee what to do, but when they do arrive at a figure we would like something tangible to make a study of. I will be available if they want me but if they wont call me for a day or two I want to be out of town. I haven't any pre-conceived ideas on this entire matter. The report may be perfectly all right but we haven't been able to analyze it.

MR. HINDERLIDER: As I understand it, the commissioners from Colorado and Texas are in agreement on this, and I would like to inquire if the commissioner for New Mexico is in accord with the other two states with respect to Mr. Neuffer appearing before the committee.

MR. MCCLURE: As I stated, I am in agreement, but if it is a case of holding Mr. Neuffer here for a day or two and may be not calling him, I think it is an imposition. However, I do think it can be arranged by having him available only in an advisory capacity for suggestions or if he would want information on the analysis of certain factors, he would know just what steps were taken. Whether he can do that best by waiting around and then going over it, I dont know.

MR. WINDERLIDER: I move that the matter be left to the discretion of the engineering committee. (Seconded by Mr. Clayton and unanimously carried.)

MR. HARPER: The matter will be left to the discretion of the committee. I am sure the committee will give Mr. Neuffer every opportunity to learn what is going on and to get the full benefit of his views. Is there a motion for recess pending?

MR. FRED WILSON: As one of the attorneys for the Middle Rio Grande Conservancy District I appreciate the courtesy you have shown in permitting us to be present and listen to your deliberations. I want to say our attitude is one of helpfulness and hope. We are perhaps as anxious as anybody that a compact be arrived at, but I want to say frankly that the attitude you have taken here this morning is a matter I cannot understand and I do not think its a matter that can be explained successfully to the average ordinary person in New Mexico. Just why a committee should be appointed by this commission to hold secret meetings is more than I can understand, and it seems to me that your committee should welcome the presence of Mr. Neuffer at all times because it will save time. If you dont do that you will go through the same thing you did this morning, and frankly I dont understand, and I dont believe its fair, to have secret sessions of this character with your committee. So far as I am concerned, if Mr. Neuffer's services are not desired by the committee, I will withdraw him as well as the legal representative.

MR. HARPER: I feel that we are magnifying unimportant matters into something out of all proportion with the facts. I dont think anything like a secret meeting is intended. The only reason that the engineering committee was delegated to prepare certain factual data in conference among themselves was to permit them to do that work without interruption, as it would be impossible for them to sit around a table and do that with unlimited access by representatives of every interest here in this room. There is nothing secret about any deliberations carried on here, and I would like to correct that impression. The engineering committee is not going to exclude anyone, I dont believe, but at the same time they want to be free to carry on their studies and complete them in two or three days' time without too much interruption. I repeat what I said a while ago - I am sure this committee, knowing them as I do, are going to be frank with Mr. Neuffer and keep him informed as they go along about every detail of their deliberations. At the same time the committee is responsible for its report and we must give them freedom to conduct the details of their meeting as they see fit in the hope that all of those present can look at the matter in that light and not with the impression that they are trying to exclude anybody or any interest. Not only Mr. Neuffer, but there are other representatives from other states who no doubt will want to be accorded the same privilege.

MR. WILSON: I think it should be.

JUDGE MECHAM: On behalf of the Elephant Butte Irrigation District, we have no objection to Mr. Neuffer or any other representative of any special interests being present. We dont object to that at all; the only thing we did object to was that Mr. Neuffer should be substituted for a representative of the state engineer's office to represent the State of New Mexico.

MR. HARPER: If there is nothing further, I will entertain a motion



for recessing as Mr. Hinderlider suggested a moment ago.

MR. HINDERLIDER: If possible before voting on that motion, I should like to state that so far as Colorado is concerned, we have a multiplicity of problems in the San Luis Valley - possibly not as serious as appear to have arisen between the Middle Rio Grande and the interests under the Elephant Butte project. We conceived that if every interest in our state had been permitted to come in and inject questions of what they considered their rights, it would have had the effect of clogging, or bogging down, our deliberations. Personally I regret - I am not speaking for Colorado at this time, but I personally regret any difference between elements in any of our three states. We are faced with a practical problem, however, and to the end that we may ultimately reach a decision in this matter, which is devoutly hoped for by all of us, I feel the commissioners should take a stand at this time of not precluding the presence of any designated representative from any part of the basins in any of our states if they want to be heard by any of this engineering committee. I think it would be a mistake to make such representative a member of the committee, but they certainly should have the opportunity to appear before the engineering committee and submit any factual data they have, and I so move if it is not already the consensus of opinion of the commission that such opportunity be afforded to Mr. Neuffer, or anyone else who represents an interest in New Mexico as well as the other two states. The engineering committee is trying to ascertain the facts; they are a fact finding body for the enlightening and advising of the three compact commissioners in their deliberations, and we should, of course, have all the facts as nearly as we can obtain them. The door should not be closed to the ascertainment of all the facts within reasonable bounds certainly.

MR. HARPER: Mr. Hinderlider made a motion; do you all understand its import without repeating it?

MR. HINDERLIDER: I didn't intend to include all those statements in a motion, but it is my feeling it should be the sense of the commission that the commission, through the engineering advisers, was not seeking to close the door to anyone who has the opportunity and capacity to submit facts for the information of the engineering advisers. (Seconded by Mr. Clayton and unanimously carried.)

MR. HARPER: We now have up for consideration the motion which Mr. Hinderlider made previously to recess. (Seconded by Mr. Clayton and unanimously carried.)

Whereupon at 11:30 A.M. the meeting recessed until 2 P.M.

MR. HARPER: (2:15 P.M.) Mr. Hinderlider, are you ready to report on plans for the next day or two?

MR. HINDERLIDER: Mr. Chairman and gentlemen of the commission: The meeting this morning recessed until this afternoon for the purpose of deciding whether or not it would be helpful and advisable for the commission to take up for consideration other pertinent points or features of a proposed compact pending the further report of the engineering committee. While Colorado has no objection to a consideration at this time of other features which doubtless will have to be considered before entering into a compact, we believe that it would be in the interest of the conservation of time and energy, and probably eventually expedite the conclusions of the commission if it were to recess

at this time until the engineering committee is ready to report which, I understand, may be some time Monday. In making this suggestion it is not the idea that the conference should adjourn, or any of the parties who are necessary to this conference go home, but that they remain here subject to the call of the chairman for receiving the engineering committee's report, after which time it may well be that the conference ~~sk~~ could give its time and attention to the consideration of further points which will have to be taken up eventually.

MR. HARPER: Do you concur in Mr. Hinderlider's remarks?

MR. CLAYTON: Mr. Chairman and gentlemen: We have no objection to the procedure suggested by Mr. Hinderlider so long as it is understood that this, as he expressed it, is not an adjournment but a recess only until the committee of engineers is ready with their report. It may be, as he says, that it will be in the interest of conservation of time if some of the matters that may come up before the commission are thrashed out within the state delegations and perhaps informal meetings of the commissioners with their counsel. That is something that we can take up among ourselves, but I should be very much opposed to seeing this meeting adjourned indefinitely and called back at some future time. I think while we are here, as long as there is any possibility of settlement, we should thrash it out, and with that reservation, we have no objections to Mr. Hinderlider's suggestion.

MR. HARPER: Mr. McClure do you have any objections to this procedure?

MR. MCCLURE: New Mexico has no objections to the program outlined by Mr. Hinderlider. Since all of the members, under his suggestion, are going to remain here, it might be they could keep their mind on some of these additional things and iron them out among their own constituents so they would be in a better position when these matters do come up to take action immediately. The only other suggestion I would like to make at this time would be, as Mr. Hinderlider intimated, there might be some minor changes in the report. If he could get Mr. Tipton to bring those out perhaps we could iron those out during the present engineers meeting and expedite those, rather than waiting to take them up at a later date after the report is finished. That's all I would suggest.

MR. HARPER: The feeling appears to be unanimous we should recess and hold ourselves in readiness to meet at any time. At this time we will recess the meeting until not later than 10 o'clock Monday morning, and such earlier time as circumstances may justify in calling the commission together, but in any event not later than 10 ~~am~~ o'clock Monday. Meanwhile, I suggest that we follow Mr. McClure's idea in having informal conferences to crystalize the ideas of each delegation and possibly among the different commissioners on various points. If there is nothing further at this time, the meeting will be recessed until 10 o'clock Monday morning. (Recessed at 2:45 P.M.)

Santa Fe, New Mexico,  
March 7, 1938.

At 10 o'clock the Committee of Engineering Advisers not being ready to report, the meeting was postponed by the Chairman to 10 o'clock Tuesday morning, March 8, 1938.

Santa Fe, New Mexico,  
March 8, 1938.

The Committee of Engineering Advisers not yet being ready to report, the Chairman postponed the meeting to 10 o'clock Wednesday, March 9, 1938.

Santa Fe, New Mexico,  
March 9, 1938.

At 10 o'clock the committee of Engineering Advisers not yet being ready to report, the Chairman postponed the meeting to 10 o'clock Thursday, March 10, 1938.

Santa Fe, New Mexico,  
March 10, 1938.

MR. HARPER: (10:15 A.M.) The record, I believe, shows that this meeting was recessed last Friday to meet Monday morning at 10 o'clock. As you know, we have postponed the meeting from day to day until we could receive the unanimous report signed by the Engineering Committee, and that report has now been submitted to the Chairman and copies have been distributed to each of the Commissioners. I think the expressed views of the Commissioners is that the report be read at this time for the information of those who have not yet had a chance to look it over. I will ask Mr. Debler to read the Engineering Committee report.

MR. DEBLER: (reads) March 9, 1938.

The Rio Grande Compact Commission,  
Mr. S. O. Harper, Chairman,  
Mr. M. C. Hinderlider, Member for Colorado,  
Mr. T. M. McClure, Member for New Mexico,  
Mr. F. B. Clayton, Member for Texas.

Gentlemen:

The Engineering Advisers of your Commission have held three meetings, the first in Santa Fe from November 22 to 24, 1937, the second in Los Angeles from December 15 to 27, 1937, and the third at Santa Fe from March 3 to 9, 1938. The first meeting was largely devoted to consideration of the general factors affecting the discharge of Rio Grande at the Colorado-New Mexico State Line and the delivery of water into Elephant Butte Reservoir. At the second meeting more detailed consideration was given to these matters, and certain schedules of deliveries were developed. Additional schedules were developed and other features discussed at the last meeting to consider matters referred to the committee by the Compact Commission at its meeting of March 3, 1938.

We avoided discussion of the relative rights of water users in the three States, and were guided throughout our work by the general policy - expressed at the meeting of the Compact Commission in October - that present uses of water in each of the three states must be protected in the formulation of a Compact for ~~the~~ administration of the Rio Grande above Fort Quitman, because the usable water supply is no more than sufficient to satisfy such needs.

The Rio Grande above Fort Quitman, which constitutes the part of the drainage basin in which the Commission has primary interest, is divided naturally into three sections:

(a) The San Luis Valley, comprising the drainage area above the Lobatos gaging station on the Rio Grande near the

Colorado-New Mexico State line;

(b) The Middle Rio Grande from Lobatos to Elephant Butte Reservoir and the drainage basins of streams tributary to the river in this section;

(c) The balance of the Rio Grande Basin between Elephant Butte and Fort Quitman, including the Juarez Valley in Mexico.

SCHEDULED DELIVERIES AT LOBATOS

A consistent relationship has long been noted between the combined inflow of the major streams to San Luis Valley and the outflow of the Rio Grande at Lobatos. This relationship, however, may be disturbed in the future due to construction of storage reservoirs, and we have therefore prepared separate schedules applicable to the Conejos and Rio Grande stream systems. This is a departure from previous plans but has no practical disadvantage and has certain definite advantages; variations in discharge of the contributing streams will automatically be taken into account, particularly if storage reservoirs are constructed; and it will also enable the San Luis Valley water users to apportion among themselves their relative responsibility for meeting the obligation of Colorado.

The flow of Conejos River at its confluence with the Rio Grande was found to bear a close relation to the combined discharge of Conejos River near Mogote and its principal tributaries below that point. The following values express that relationship for the past ten years.

DISCHARGE OF CONEJOS RIVER

Quantities in thousands of acre feet

<u>Conejos Index Supply (1)</u>	<u>Conejos River at Mouths (2)</u>
100	0
150	20
200	46
250	76
300	111
350	150
400	191
450	235
500	280
550	328
600	375
650	424
700	480

Intermediate quantities shall be computed by proportional parts.

(1) Conejos Index Supply is the natural flow of Conejos River at the U.S.G.S. gaging station near Mogote for the calendar year, plus the natural flow of Los Pinos River at the U.S.G.S. gaging station near Ortiz and the natural flow of San Antonio River at the U.S.G.S. gaging station at Ortiz, both for the months of April to October, inclusive.

(2) Conejos River at Mouths is the combined discharge of branches of this river at the U.S.G.S. gaging stations near La Sauses (Los Sauces) during the calendar year.

When from the total discharge of Rio Grande at Lobatos there is subtracted the contribution from Conejos River, a close relationship also is found to exist between that residual quantity and the discharge of Rio Grande near Del Norte. The following values express the relationship for the past ten years.

DISCHARGE OF RIO GRANDE EXCLUSIVE OF CONEJOS RIVER

<u>Quantities in thousands of acre feet</u>	
<u>Rio Grande at Del Norte (3)</u>	<u>Rio Grande at Lobatos less Conejos at Mouths (4)</u>
200	60
250	65
300	75
350	86
400	98
450	112
500	127
550	144
600	162
650	182
700	204
750	229
800	257
850	292
900	335
950	380
1 000	430
1 100	540
1 200	640
1 300	740
1 400	840

Intermediate quantities shall be computed by proportional parts.

(3) Rio Grande at Del Norte is the recorded flow of the Rio Grande at the U.S.G.S. gaging station near Del Norte during the calendar year (measured above all principal points of diversion to San Luis Valley) corrected for the operation of reservoirs constructed after 1937.

(4) Rio Grande at Lobatos less Conejos at Mouths is the total flow of the Rio Grande at the U.S.G.S. gaging station near Lobatos, less the discharge of Conejos River at its mouths, during the calendar year.

The obligation of Colorado to deliver water in the Rio Grande at the Colorado-New Mexico State Line in each calendar year shall be 10,000 acre feet less than the sum of the quantities set forth in the above tabulations, except for such departures from normal deliveries as are provided for below. The application of either schedule shall be subject to the provisions hereafter set forth and appropriate adjustments shall be made for: (a) any change in location in gaging stations; (b) any new or increased depletion of the natural runoff above inflow index gaging stations, and (c) any trans-mountain diversions.

SCHEDULED DELIVERIES INTO ELEPHANT BUTTE RESERVOIR

The relation between the amount of water in the Rio

Grande above the principal agricultural areas in New Mexico and inflow to Elephant Butte Reservoir is quite erratic, due primarily to wide variations in the discharge of tributary streams. Your Committee tried many devices to minimize the influence of such tributary inflow and found that there was a reasonable relationship between the discharges of Rio Grande at the Otowi Bridge and San Marcial gaging stations when the months of July, August and September were excluded.

The following values express that relationship for the period prior to 1930.

DISCHARGE OF RIO GRANDE EXCLUSIVE OF  
JULY, AUGUST AND SEPTEMBER AT OTOWI  
BRIDGE AND SAN MARCIAL

Quantities in thousands of acre feet

Otowi Index Supply (5)

San Marcial Index Supply (6)

100	0
200	65
300	141
400	219
500	300
600	383
700	469
800	557
900	648
1 000	742
1 100	839
1 200	939
1 300	1 042
1 400	1 148
1 500	1 257
1 600	1 370
1 700	1 489
1 800	1 608
1 900	1 730
2000	1 856
2 100	1 985
2 200	2 117
2 300	2 253

Intermediate quantities shall be computed by proportional parts.

(5) The Otowi Index Supply is the recorded flow of the Rio Grande at the U.S.G.S. gaging station at Otowi Bridge near San Ildefonso (formerly station near Buckman) during the calendar year, exclusive of the flow during the months of July, August and September, corrected for the operation of reservoirs constructed after 1929 in the drainage basin of the Rio Grande between Lobatos and Otowi Bridge.

(6) San Marcial Index Supply is the recorded flow of the Rio Grande at the gaging station at San Marcial during the calendar year exclusive of the flow during the months of July, August and September.

Although the foregoing relationship does not reflect possible changes in consumptive use during the summer months between Otowi and San Marcial, and tributary flow in other months still results in considerable variation, we recommend its use as a schedule

of deliveries. The obligation of New Mexico to deliver water at San Marcial in each calendar year exclusive of the months of July, August and September, shall thus be the quantity determined from the relationship set forth in the above tabulation. The application of this schedule shall be subject to the provisions hereafter set forth and appropriate adjustments shall be made for: (a) any change in location of gaging stations; (b) depletion after 1929 in New Mexico at any time of the year of the natural runoff at Otowi Bridge; (c) depletion of the runoff during July, August and September of tributaries between Otowi Bridge and San Marcial, by works constructed after 1937; and (d) any trans-mountain diversions into the Rio Grande between Lobatos and San Marcial.

#### ALLOWABLE DEPARTURES

There will be natural variations in the relationships between the discharge at the control stations in the future, as in the past, and reasonable departures must be expected. Furthermore, departures which are caused by storage of water in reservoirs at time of flood should be permitted, subject to proper safeguards.

#### Definitions

The following terms will be used repeatedly and are here defined:

(a) Annual Debits - are the amounts by which deliveries in any calendar year fall below scheduled deliveries.

(b) Annual Credits - are the amounts in any calendar year by which actual deliveries exceed scheduled deliveries.

(c) Accrued Debits - are the amounts by which the sum of all debits exceeds the sum of all credits over any common period of time.

(d) Accrued Credits - are the amounts by which the sum of all credits exceeds the sum of all debits over any common period of time.

(e) Normal Release from Elephant Butte - is equal to an average of 790,000 acre feet per annum; provided that this amount shall be adjusted for any gain or loss in usable water resulting from the operation of any reservoir below Elephant Butte; provided, further, that water released from Elephant Butte Reservoir for the generation of power which encroaches on flood control capacity of and which is not subsequently released from another reservoir for irrigation of Rio Grande project lands plus deliveries to Mexico, shall be deemed to have been released for such purposes, excepting only when such release for power is made by an agency beyond the control of any of the States contrary to the formal protest of New Mexico or Texas or any irrigation district thereof.

(f) Project Storage - is the combined capacity of Elephant Butte Reservoir and all other reservoirs actually available for storage of usable water between Elephant Butte and Courchesne, but not more than a total of 2,638,860 acre feet.

(g) Usable Water - is all water in Project storage which is available for release in accordance with irrigation demands, including deliveries to Mexico.

(h) Unusable Spill - is the amount of water which is actually spilled from Elephant Butte Reservoir or released for flood control

in excess of the current demand for irrigation of Rio Grande Project lands plus deliveries to Mexico and which is not stored in another reservoir for subsequent release for such uses; provided that, if the actual releases from Elephant Butte Reservoir from the time of previous unusable spill have aggregated more than the sum of the normal releases, the time of occurrence of spill shall be adjusted by the difference between the total actual release and the accrued normal release.

#### Limitation on Debits

In the case of Colorado, no annual debit nor accrued debit shall exceed 100,000 acre feet, except as either or both may be caused by storage of water in reservoirs constructed after 1937 in the drainage basin of the Rio Grande above Lobatos. Within the physical limitations of storage capacity in such reservoirs, Colorado shall retain water in storage at all times to the extent of its accrued debit.

In the case of New Mexico, the accrued debit shall not exceed 200,000 acre feet at any time, except as such debit may be caused by storage of water in reservoirs constructed after 1929 in the drainage basin of the Rio Grande between Lobatos and San Marcial. Within the physical limitations of the storage capacity in such reservoirs, New Mexico shall retain water in storage at all times to the extent of its accrued debit. In computing the magnitude of accrued credits or debits, any annual debit greater than 150,000 acre feet shall be taken as equal to that amount, plus all gains in the quantity of water in storage in such year.

If in any year the aggregate of accrued debits of Colorado and New Mexico exceeds the difference between the total capacity of Project storage and the amount of usable water then in storage, such debits shall be reduced proportionally to an aggregate amount equal to the minimum unfilled capacity in that year.

If in any year there is unusable spill from Elephant Butte reservoir, all accrued debits of Colorado and New Mexico shall be cancelled, and no debits shall be considered in that year other than gains in the amount of water in storage in reservoirs prior to the time of spill.

#### Limitation on Credits

In the case of Colorado, accrued credits in excess of 100,000 acre feet at any time shall be not considered, provided that accruals in any amount may be applied to offset debits caused by storage in reservoirs, and provided further that accrued credits at the end of each year shall be reduced by ten percent to compensate for evaporation losses therefrom in Elephant Butte Reservoir. In computing the amount of accrued credits or debits, any annual credits in excess of 150,000 acre feet shall be taken as equal to that amount.

In the case of New Mexico, accrued credits in excess of 200,000 acre feet at any time shall not be considered, provided that accruals in any amount may be applied to offset debits caused by storage in reservoirs, and provided further that accrued credits at the end of each year shall be reduced by ten percent to compensate for evaporation losses therefrom in Elephant Butte Reservoir. In computing accrued credits or debits, annual credits in excess of 150,000 acre feet shall be taken as equal to that amount.



At the time of unusable spill from Elephant Butte Reservoir the aggregate credits of Colorado and New Mexico shall be reduced by the actual amount of such spill at Elephant Butte in proportion to their respective credits at the time of such spill, and no credits shall be considered in a year of spill.

#### Other Limitations

Neither Colorado nor New Mexico shall increase the amount of water in storage in reservoirs constructed after 1929 whenever there is less than 400,000 acre feet of water in storage available for use in the Rio Grande Project. On or about January first of any year any authorized representative of the water users in the Rio Grande Project may demand of Colorado and New Mexico the release from storage reservoirs of accrued debits, and such releases shall be made by each in proportion to the total debit of each and in amounts sufficient to bring the quantity of usable water in project storage to 600,000 acre feet by March first and to maintain this quantity in storage until April thirtieth.

In event any works are constructed after 1937 for the purpose of delivering water into the Rio Grande from the Closed Basin in San Luis Valley, Colorado shall be credited with the amount of such water delivered, provided the proportion of sodium ions shall be less than 45% of the total positive ions in that water when total concentration of salts in such water exceeds 350 parts per million.

#### GAGING STATIONS

The difficulties and cost of securing reliable records of stream flow at San Marcial are increasing and may become insurmountable. In order to be prepared for such an emergency, immediate steps should be taken to insure that reliable records of discharge will be secured at or near San Acacia, San Marcial and below Elephant Butte reservoir to permit substitute schedules to be adopted, if necessary.

The above gaging stations, together with other gaging stations referred to in connection with the schedules set forth herein, should be operated by the Commission, directly or in cooperation with an appropriate Federal agency. At each gaging station the equipment, methods and frequency of measurements should be such as to produce reliable records. Additional gaging stations should be installed and operated where necessary to carry out the intent of any Compact.

#### RECOMMENDATIONS

In submitting this analysis of conditions and our recommendations for your favorable consideration in the formulation of a permanent Compact, we ask that you recognize that many of the factors influencing our conclusions were not possible of close determination and that the effect of changes of salinity of the Elephant Butte supply since 1930 was left for future adjustment. Accordingly, we recommend that all of the provisions hereof be reviewed five years hence.

We are satisfied that no material expansion of the irrigated area in the Rio Grande Basin above Fort Quitman will be practicable without importations from other watersheds. Good use could be made of this water in each of the States, but we deemed that the allocation of any supply so obtained constituted a matter of policy beyond our province. Accordingly, no recommendation is made.

We recommend that the normal release from Elephant Butte Reservoir be deemed to be an average of 790,000 acre feet per annum, adjusted for any gain or loss of usable water resulting from the operation of any reservoir below Elephant Butte.

We recommend that deliveries by Colorado and New Mexico shall be in accordance with the schedules and applicable provisions hereinbefore set forth.

It is our opinion that the application of all of the recommendations and provisions set forth herein will be equitable to each State and will permit the maximum practicable use of the waters of the Rio Grande.

I CONCUR:

(Signed) H. C. Neuffer

Respectfully submitted,  
COMMITTEE OF ENGINEERING ADVISERS  
(Signed) E. B. Debler for the United States  
" R. J. Tipton for Colorado  
" John M. Bliss for New Mexico  
" Raymond A. Hill for Texas.

MR. HARPER: Thank you, Mr. Debler. I think I can speak for all of the members of the Commission when I say we are very deeply appreciative of the untiring efforts which the Engineering Committee has devoted to this very difficult task. I know they have worked night and day and have been confronted with difficulties which only could be surmounted by the broadest viewpoint of the problems confronting each of their states. I also wish to express appreciation for the very fine assistance which Mr. Neuffer gave to the committee. What is the pleasure of the commission as to disposition of this report?

MR. HINDERLIDER: Mr. Chairman, in view of the fact the Commissioner for Colorado received a copy of the report of the Engineering Advisers just before we came into this conference, I feel it highly necessary that Colorado's delegation have an opportunity to digest the results of the report. Unless the Commissioners from the other two states, with their advisers, at this time wish to have the report as presented more definitely clarified on some of the points, I suggest the Commission now recess until - let's say, in the morning possibly, or whatever time is mutually agreeable to the Commissions, for a further study of the report just presented.

MR. HARPER: I will be glad to hear the views of the other commissioners.

MR. HINDERLIDER: I might ask that additional copies of the Engineering Committee report be provided, not only to the commissioners, but their respective delegations.

MR. HARPER: Yes, we will see to that.

MR. MOCLURE: Mr. Chairman, New Mexico concurs in the suggestion of Mr. Hinderlinder. I don't believe there are any points which are necessary to be cleared up now, at least, and I believe we should recess.

MR. CLAYTON: Mr. Chairman, we are prepared to proceed at any time. However, it is entirely satisfactory to recess until the commissioners from New Mexico and Colorado feel they are ready to proceed.

MR. HINDERLIDER: May I also state it will be necessary for my engineering adviser, Mr. Tipton to be in Topeka, Kansas, Saturday morning to attend a hearing there on the Colorado-Kansas Interstate suit. It will be very necessary for Mr. Tipton to be with us in our discussions of this report, and we hope that from the present moment to the time he has to leave, to proceed at least with partial discussions.

MR. HARPER: May I suggest to Mr. Hinderlider that you inform the Chairman at the earliest moment when you will be in a position to resume deliberations. I take it you are asking for perhaps more time than either of the other two delegations. I am not sure about Mr. McClure's requirements. But if it is at all possible to meet later in the day I will be glad if you will so advise me; otherwise we will count on meeting tomorrow morning at 10 o'clock.

MR. HINDERLIDER: We will so advise you at the earliest possible moment, but 10 o'clock tomorrow we think will be satisfactory.

MR. HARPER: Is there anything further to come up for discussion before we recess? If not, we will recess with the understanding that we will meet not later than 10 o'clock tomorrow morning, and earlier if circumstances permit. (11:45 A.M.)

Santa Fe, New Mexico,  
March 11, 1938.  
10 A.M.

MR. HARPER: We recessed yesterday to give the several state delegations an opportunity to review the Engineering Committee report, and I believe it is in order at this time to proceed with disposition of this report. Therefore I will ask if the Commissioners have any action to offer on the disposition of that committee report?

MR. HINDERLIDER: Colorado moves that the report of the Engineering Committee, under date of March 9, 1938, be received and accepted as a basis for further discussions in the negotiations looking to a permanent compact. (Seconded by Mr. McClure and unanimously carried.)

MR. HARPER: I will be glad at this time to have any suggestions from the commissioners as to procedure in considering the formulation of a Compact, or any other matters that you desire to present in that connection.

MR. HINDERLIDER: Mr. Chairman, having adopted the report just offered, I presume that the next order of business will be for the various commissioners to present any points contained in that Engineering Committee report which may require further clarification or change. In that connection, may I suggest that this be informal discussion, off the record, so we can all speak frankly.

MR. HARPER: If that is agreeable to the other commissioners, this informal discussion will be off the record.

\* \* \* \* \*

At 12 o'clock the meeting recessed until 2 P.M.

MR. HARPER: (2 P.M.) The meeting is now open for resumption of the discussions. I understand Mr. Hinderlider wishes to take up something further.

MR. HINDERLIDER: I stated before we recessed there may be other items Colorado would want to present, but on second thought I think there is nothing now that we care to present in connection with the Engineering Committee report.

MR. HARPER: Did the engineers go over these matters on which they were asked for additional information this noon?

MR. DEBLER: We did. I think as long as Mr. Hill did the writing, I will ask him to do the reading. - - I will substitute for that, -

We have gone over these matters and have agreed on a redefinition of some of these terms that were not so clear. There was one controversial matter at issue and that was this matter of the stage of project storage when the upstream reservoirs ceased storing. It has been determined to make that 400,000 acre feet for the entire use below Elephant Butte. In other words, for the project and Mexico, this 400,000 acre feet in excess of the normal release of 790,000 acre feet of usable water. The whole thing will be written up in the form of a report which will cover this matter and the matter of clarification of several of these provisions, specifying the intent of the committee with regard to one or two minor matters, one of which was this question of losses in upstream reservoirs on water belonging to the Rio Grande project. The committee intended, and will so state, that the Rio Grande project share in the evaporation losses in these upstream reservoirs in the proportion of storage held in these reservoirs in the same manner it was proposed to have them share in reservoir losses at Elephant Butte.

MR. HILL: That last statement you made - as I understand it, the principle adopted by the committee was that each state should share in reservoir losses in proportion to the amount of water in those reservoirs belonging to the respective states regardless of what reservoir.

MR. DEBLER: That's right. We have not arrived at any arbitrary figure for these other reservoirs and we may not be able to do so before two of us have to leave, but at any rate the committee now recommends that that be done and be provided for in the Compact.

MR. CLAYTON: Does the figure at Elephant Butte remain the same?

MR. DEBLER: While that was arbitrary, my idea is it will not be changed enough to talk about.

MR. HILL: The point I want to make clear - the figure of 10 percent which was figured on one and zero percent which was figured on the other, the same principle applies to both. You don't close the door on the 10 percent and then change the zero.

MR. DEBLER: I don't want to leave the inference that that 10 percent is very far away from what our idea is as to the actual storage. I want to avoid that impression, that the 10 percent is far off, but we didn't determine what the percent should be but we are agreeable and so recommend that it be determined for the others in the same manner.

MR. CLAYTON: That's not something you determine each year, is it?

MR. DEBLER: I am not sure about that, because the situation is a little different with regard to Elephant Butte. The change in storage is not so big in any one year and the difference in losses during the year does not vary much by reason of change in storage, but with respect to the other reservoirs it is very materially different. The El Vado reservoir fluctuates between full and empty almost every year, and the Wagon Wheel Gap reservoir will also, so it will be a little different, but nevertheless the intention is they shall share pro rata on the basis of the capacity used during the year in some way. Whether it will be one specific figure to be applied at the end of the year, or a specific percentage, or whether it should be something different will be a matter which we will think about a little more.

MR. HARPER: Are there any further matters for discussion in connection with the engineers report?

MR. MCCLURE: In paragraph (e) on page 8, there is some confusion

over that word 'average' of 790,000 acre feet. I wonder if we can get a little explanation from the engineers on that release at Elephant Butte?

MR. DEBLER: I would say we know that their releases in some years will exceed 790,000 acre feet and in other years will fall below that, so that's the reason the average is to be employed.

MR. MCCLURE: What I am getting at, what would be the effect if it would continue, say, at 850,000 acre feet continuously? What safeguards are there on that?

MR. DEBLER: Two things come into play on that. One is that if the reservoir is falling, then when the reservoir gets to a stage of 400,000 acre feet at which the upper reservoirs must cease storing, that 400,000 acre feet is adjusted for excess releases. In other words, for a period of five years the project has taken 10,000 acre feet a year too much, then project storage would have to come down to 350,000 acre feet before the upper reservoirs would cease storing. The other point at which that becomes important is when the adjustment of credits is brought about at a time of approaching spill, because at that time if there has been too much water drawn out, while it's a little complicated and I don't want to explain it in detail, but there is a penalty right there.

MR. MCCLURE: If your reservoir approaches an actual spill point and it's short, say 100,000 acre feet, which has in turn been over released, from the normal, then it becomes spill. That would remove any debits.

MR. DEBLER: Those are the two points at which it becomes effective. So long as the reservoir hits neither one, it has no effect, except, of course - I will put it this way - if the United States is still operating the reservoir, we are going to bear down awfully hard so those boys down there don't short themselves in low periods as they have in the past.

MR. HARPER: Any further questions regarding the engineers report? Apparently there is nothing further for discussion in regard to the engineers report. Are there any matters which the commissioners wish to take up now as a general policy or administrative provisions outside of the scope of the engineers report?

MR. HINDERLIDER: I suppose we will have the typewritten corrections of the engineers some time this evening?

MR. HARPER: Yes.

MR. TIPTON: I might state the suggestions we have to make are to clarify these various matters and to remove all doubts which were expressed this morning in respect to these provisions. I think they will be entirely acceptable to the Commission.

MR. MCCLURE: To expedite matters in drafting a Compact, I move that two members from each state's attorneys be designated as a committee to draw a tentative draft of the compact, and meet as a committee to which the commissioners of the states will be available to sit in if they wish. Also, of course, the drafting committee will have use of the engineers or any other resources they want to arrive at a tentative draft of a permanent compact.

MR. HINDERLIDER: Does your motion also carry the provision that any

matter which any state wants to submit to this drafting committee would, of course, be received?

MR. MCCLURE: I think so, - yes.

MR. CLAYTON: As I understand it, the motion is that each commissioner appoint two legal advisers to a committee to prepare a tentative draft which will incorporate in substance the report of the engineers and provide administrative machinery, etc.; that the commissioners are free to sit in with the committee and can be called upon by the committee, and that the engineering representatives of the commissioners are likewise subject to call when engineering questions arise to a point on which members of the committee desire advice?

MR. MCCLURE: I would say a tentative draft of the compact, and also, as Mr. Hinderlider suggests, any one from the states can submit whatever they desire to this committee.

MR. CLAYTON: Its understood it wont be binding until passed on by the commission.

MR. HARPER: You stated, Mr. Clayton, this committee might bring in a report similar to the report of the engineers. My understanding was that Mr. McClure had in mind that they submit an actual draft of a compact in rough draft form. Is that right?

MR. MCCLURE: Yes sir, which they would recommend for consideration by the commissioners.

MR. HINDERLIDER: I would like to offer an amendment to that motion. I feel that the arrangement should be such as first suggested by Mr. McClure - that the drafting committee consist of two attorneys designated by each commissioner and that the committee would actually make a preliminary draft of the compact for final submission after it is discussed by all of the states and the respective commissioners of the states. I have no objection to the commissioner of each state being called in by this committee, but I do believe that the matter of drafting the preliminary compact should be left to this committee, with the provision that if the committee members of any state desire the commission to come in from time to time for advice, that might be all right.

MR. CLAYTON: That's entirely all right.

MR. HARPER: I dont think it will be necessary to repeat the motion. I think you all grasp the intent. (Seconded by Mr. Clayton and un-animously carried.) Are you prepared to designate your representatives on the legal committee? If so, we will proceed to name them.

MR. HINDERLIDER: For Colorado, George Corlett and Ralph Carr.

MR. MCCLURE: For New Mexico, Gov. A. T. Hannett and Fred Wilson.

MR. CLAYTON: For Texas, Major Richard F. Burges and Judge Edwin Mechem.

MR. HINDERLIDER: What is there that the Commissioners can do pending submission of this tentative draft of the compact?

MR. HARPER: I dont know of any other business at this time.

MR. MCCLURE: Should there be a representative of the United States on that drafting committee?

MR. HARPER: Mr. DeVrees is the only legal representative here and he will not be available, so I have no other representative. The Committee will report back to the Chairman when they are ready to report to the Commission and we will be ready to call a meeting. One question before we recess. Is there a complete understanding in regard to administrative provisions which will go into this compact? Will the attorneys be able to proceed and ~~the~~ draft those administrative provisions without further consultation with the Commission as a whole?

MR. HINDERLIDER: I am inclined to think that's a matter we might well leave to the committee. It will not be final, I assume.

MR. HARPER: If that's the understanding, it's satisfactory. If there is nothing further, we will be recessed subject to the further call of the Chairman. (2:40 P.M.)

March 11, 1938/

The Rio Grande Compact Commission,  
Mr. S. O. Harper, Chairman,  
Mr. M. C. Hinderlider, Member for Colorado,  
Mr. T.M. McClure, Member for New Mexico,  
Mr. F. B. Clayton, Member for Texas.

Gentlemen:

At your meeting this morning you asked that we clarify certain parts of our report of March 9th. We have reviewed those features of the report and recommend the following for your favorable consideration:

1. The definition of "Normal Release from Elephant Butte" shall be disregarded and the following definition shall be substituted:

Actual Release - is the amount of usable water released from the lowest reservoir comprising project storage.

2. The definition of "Unusable Spill" shall be modified to read as follows:

Unusable Spill - is the amount of water which is actually spilled from Elephant Butte reservoir or released therefrom for flood control in excess of the current demand on project storage, and which does not become usable water by storage in another reservoir; provided, that if the actual releases of usable water from the time of previous unusable spill have aggregated more than an average of 790,000 acre feet per annum, the time of occurrence of spill shall be adjusted by the difference between the total actual release and releases at such average rate.

3. The recommendation on Page 13, dealing with normal release, shall be changed to read as follows:

We recommend that the normal release of usable water from the lowest reservoir comprising project storage be deemed to be an average of 790,000 acre feet per annum.

4. The first sentence following the caption "Other Limitations" shall be changed to read as follows:

Neither Colorado nor New Mexico shall increase the amount of water in storage in reservoirs constructed after 1929 whenever there is less than 400,000 acre feet of usable water in project storage; provided, that if the actual releases of usable water from the time of previous unusable spill have aggregated more than an average of 790,000 acre feet per annum, the time at which such minimum stage is reached shall be adjusted by the difference between the total

actual release and releases at such average rate.

5. The intention of the second provision in the first paragraph following the caption "Other Limitations" was that debit water should be released at the greatest rate practicable under the conditions then prevailing and that the aggregate release of debit water should be limited to the amount which would enable a normal release to be made from project storage in that year.

6. The provisions for reduction of accrued credits to compensate for evaporation losses from Elephant Butte Reservoir shall be eliminated, and in lieu thereof the following general provision shall be substituted:

To the extent that accrued credits are impounded in reservoirs between San Marcial and Courchesne, and to the extent that accrued debits are impounded in reservoirs above San Marcial, such credits and debits shall be reduced annually to compensate for evaporation losses in the proportion that such credits or debits bore to the total amount of water in such reservoirs during the year.

Respectfully submitted,  
COMMITTEE OF ENGINEERING ADVISERS  
(Signed) E. B. Debler for the United States  
" R. J. Tipton for Colorado  
" John H. Bliss for New Mexico  
" Raymond A. Hill for Texas.

Santa Fe, New Mexico,  
March 17, 1938.  
5:30 P.M.

MR. HARPER: The Commission is called together at this time for the purpose of receiving the draft of proposed Compact from the Legal Committee. What is your pleasure?

MR. HINDERLIDER: I move that the draft of Compact be received and taken under advisement by the Commission. (Seconded by Mr. Clayton and unanimously carried.)

MR. HARPER: We will recess until 8 o'clock tonight in order to give the Commissioners time to go over the Compact. (5:45 P.M.)

8:00 P.M.

The Commissioners not having had sufficient time to study the Compact, the Chairman postponed the meeting until 10 A.M., Friday, March 18, 1938.

Santa Fe, New Mexico,  
March 18, 1938,  
10:30 A.M.

The Commissioners met, together with their engineering and legal advisers, and made certain changes in the draft of Compact heretofore submitted. Whereupon the meeting then recessed until the final draft of Compact could be prepared. (11:15 A.M.)



March 18, 1938.  
5:15 P.M.

MR. HARPER: Before we proceed with our business, in view of the number of distinguished governors present, the photographer has stated he would like a picture of the Commission, together with the governors. \* \* \* As most of you know, we have met here for what we have labelled the concluding meeting of the Rio Grande Compact Commission. We have had seven sessions here in Santa Fe during the last four years, and we, the members of the Commission, know that we are now approaching the end of our labors. The Compact has been drafted, redrafted, checked and double checked, referred to the engineers, to the drafting committee of attorneys, back to the engineers and then to the Commission. This afternoon we read it over carefully, checked every word, and it is my understanding that each of the Commissioners is now ready to approve this Compact which I have before me and affix his signature thereto. I suggest that a motion is in order at this time for the approval and adoption of this Compact before recommending the signatures of the various commissioners.

MR. CLAYTON: Mr. Chairman and gentlemen of the Commission: I move the adoption of the Compact as it was discussed, and as it is before us now, and that the Commissioners affix their signatures in quadruplicate originals to the end that the master original may be sent by the Chairman, Mr. Harper, to the Secretary of State to be kept in the archives of the United States Government, and that one of the other three originals be sent to the Governors of the respective states. I further move that carbon copies of each of the originals be signed by the Commissioners to the end that each of the commissioners may keep one in his file. (Seconded by Mr. Hinderlider and un-animously carried.)

MR. HARPER: The Commissioners will now proceed to sign the Compact, beginning first with Mr. Hinderlider, Commissioner for Colorado. \* \* \* The Compact has been duly signed by the three State Commissioners and by the representative of the President as approved, copy of which is attached hereto. What is the pleasure of the commission as to further procedure?

MR. CLAYTON: Before making a motion to adjourn, I think that each of the states should be congratulated upon this compact. I know we all feel it is fair and equitable and represents a happy solution of our common problems. I want to express my own very deep personal appreciation to the Chairman of this commission. If it had not been for his moderating influence, it would have been practically impossible, in my judgment, to have arrived at a compact, and I think I speak for the commission when I say that Mr. Harper is due the thanks of the commission. It seems to me that this compact we have signed today is an historic document in that it ends the controversies and disputes which have existed between the signatory states for many years. We all know during the progress of these negotiations at times our tempers became hot and we said things perhaps we regretted later, but on the whole, the officials and advisers who participated in this, have viewed it from the constructive viewpoint of the entire Rio Grande Valley above Fort Quitman, and it is in that light, and with that attitude that we are signing this today. I should like to have the views of the other commissioners on that, following which I move we adjourn.

MR. HINDERLIDER: I should like the opportunity to read into the record a statement from the Commissioner for Colorado, if I may do so at this time. First, I desire to express to Mr. R. J. Tipton, my engineering adviser, throughout these long years of negotiations, and to his able associate engineers, Messrs. E. B. Decler, John H. Bliss, Raymond A. Hill and H. C. Neuffer, my very deep appreciation

for the splendid work they have accomplished under most trying conditions, which has provided the formula for the accomplishment of the final objective of the three states; viz, the equitable division of the waters of the Rio Grande, the chief obstacle all these years to an interstate understanding. Without their work a compact between these states would not have been possible. To Dr. H. H. Barrows and his associates, Prof. Frank Adams, Harlow M. Stafford, N. C. Grover and John C. Stevens and their corps of able assistants, our appreciation and gratitude for constructive thought and effective effort in pointing the way, and providing the factual data in an unbiased manner which was so essential to a full understanding by each state of not only the physical conditions within that state, but also those in our sister states, without which factual information there would have been no common fund of information upon which the three states probably could have agreed. To the legal advisers of the water users and the states of Colorado, New Mexico and Texas, Hon. George M. Corlett, Hon. A. T. Hannett, Attorneys Ralph Carr, Burris Goudy, Fred Wilson, William Brophy, Maj. Richard F. Burgess, Edwin Mechem and to Judge Clifford Stone, my personal legal adviser, I desire to express my sincere appreciation for their wise counsel, and the statesmanship shown by them in resolving the difficult and, at times, seemingly insurmountable questions of law and equity, and for their exercise of that fine spirit of tolerance, so essential in the attainment of our objective - a permanent understanding between these three states based upon equity and justice - without such wise and constructive work no such understanding was possible. To Mrs. Ethel Stevenson, our most efficient and gracious secretary who has had the responsibility of recording and typing in orderly manner, the records of the deliberations of the Commission during all these years of its labors, and now the final draft of this momentous document which we have just signed, I desire to extend my personal thanks and appreciation for a job well done.

And to Chairman Harper and my fellow commissioners I desire to extend this expression of my respect and regard for your exemplification of the principles of tolerance, fair play and patience. I can only hope that in the future when we may be called upon to administer this treaty, I may be so fortunate as to merit the same feeling of confidence and esteem that I have long had for you. However, if we do not stand together now, we will most certainly hang together later. Let us hope that in ~~an~~ after years our epitaph will not read as follows:

Although he was guiltless of intent at wrong doing,  
The signing of the Rio Grande Compact was his un-doing.

(Applause)

MR. MCCLURE: Mr. Chairman and Fellow Commissioners: I don't know of any further ground to be covered that has not already been covered by Mr. Clayton and Mr. Hinderlider in regard to appreciation and thanks to all who have furnished information and participated in the drafting of this document. I do personally wish to extend my appreciation to all those mentioned by Mr. Hinderlider and Mr. Clayton and concur fully in all the remarks they have made. I have spent almost five years in work on this document at the various meetings. I have been Commissioner for New Mexico during that time and it has always been a pleasure to negotiate these meetings with my fellow commissioners.

MR. HARPER: Fellow Commissioners, you have left very little, I am afraid, for the Chairman to say. I appreciate your kind expressions, which I am sure I do not deserve. I have served here only in the

capacity of a referee and onlooker, most of the time, from the sidelines, but I do want to here express my personal appreciation for the fine consideration, patience and tolerance which has been exhibited by each of you commissioners in your deliberations here during the last four years. After all we could eliminate 99 percent of the misunderstandings in this world if we could only place ourselves in a position to see the other fellow's viewpoint, and I think that's what this commission has accomplished. I also wish to express my sincere appreciation, and the official appreciation of the commission, for the fine work which has been accomplished by the committee of engineers. I am frank to say that without the work which they did we never could have written a compact. They gave unstintingly of their time, night and day, and everyone of them should be given a major portion of the credit for the results we have accomplished here; Mr. Tipton, Mr. Hill, Mr. Bliss and Mr. Debler. I also wish to express my sincere appreciation of the fine work which was accomplished by the drafting committee of attorneys: Messrs. Corlett, Stone, and Carr for Colorado; Messrs. Hannett and Wilson for New Mexico, and Messrs. Barges and Mechem for Texas. Furthermore, I want to express a sincere word of appreciation for the fine assistance which has been given us by the National Resources Committee, particularly by Prof. Barrows, Prof. Adams, and Messrs. Stevens, Grover and Stafford. Those of you who attended the last meeting when we were addressed by Prof. Barrows, I am sure received a lasting impression from the talk which he gave us, and I, for one, feel that without the fine effort he devoted to this task, and the fine understanding which he brought to us, that our efforts perhaps would have failed. I feel that what we have done here today is more than simply sign a compact between these three states for the division of this water - we have established a precedent here which will stand in all history as meeting the test of democracy successfully. We have shown that three states can get together on a common meeting ground and work out their mutual problems in a spirit of understanding, without invoking the assistance of any super-authority or submitting to the dictation from any source whatsoever. I feel after all that that will go down in history as perhaps the principal accomplishment of this Rio Grande Compact Commission.

Finally I want to say, in spite of the fact that we have had many discouragements in facing what everyone looked upon as a hopeless task, and we were all ready to fold up and quit at different times, I will look back on this experience as one of the finest I have ever had in my life, and of the fine associations I have had here, individually, with each of you, I will cherish always.  
(Applause.)

MR. CLAYTON: I now move that we adjourn sine die. (Seconded by Mr. McClure and unanimously carried.) 5:45 P.M.

copy - Mr. McClure to Mr. Harper

January 25th, 1938.

Mr. S. O. Harper, Chairman,  
Rio Grande Compact Commission,  
Customhouse,  
Denver, Colorado.

Dear Mr. Harper:

On the eighth day of January, 1938, I received a copy of the report of the committee of engineers to the Rio Grande Compact Commission under date of December 27, 1937, which you enclosed with your letter of January 4th, 1938. The report has been submitted to the engineers, attorneys and officials of the Middle Rio Grande Conservancy District, the area in New Mexico most affected, and under date of January 13, I received a letter from Mr. Neuffer, consulting engineer for the Middle Rio Grande Conservancy District, a copy of which is hereto attached.

I have given the report additional study since receiving Mr. Neuffer's letter, and I am in thorough accord with the position taken by Mr. Neuffer in his letter. I have discussed these with others in authority representing the State of New Mexico, and we have reached the conclusion that it would be a waste of time for the compact commissioners to meet and accept the report as a basis for negotiations of a new compact without clarification of the provisions of the report. It is too vague and indefinite in some respects; nor does it set up sufficient of the data used by the committee to work out the relationship of the flow at various stations; likewise, the report fixes a basis for water supply to the State of Texas, which, in my judgment and in the judgment of others in authority in New Mexico, is so far out of reason that it could not be considered as a basis for negotiations.

Furthermore, the engineers in their recommendation plainly exceeded their authority. I understand that their authority was to present basic facts upon which the commissioners themselves might arrive at a permanent compact. It appears that, instead of reporting accurate basic data, a compromise on basic data was reported.

I believe that it will save time and further the reaching of an ultimate agreement between the various states for the engineers to reassemble at the earliest possible moment and give the matter further study.

Very truly yours,

(Signed) Thomas M. McClure  
State Engineer

TMM:m cc: Mr. Frank B. Clayton  
cc: Mr. M. C. Hinderlider

February 4, 1958

S. G. Harper, Chairman  
Rio Grande Compact Commission  
Customhouse  
Denver, Colorado

Dear Mr. Harport:

I have reviewed Commissioner McClure's letter to you under date of January 25, 1958, from which it is noted that he takes strong exception to the report of the Committee of Engineer Advisors to the Rio Grande Compact Commission, and is of the opinion "that it would be a waste of time for the Compact commissioners to meet and accept the report as a basis for negotiations of a new Compact, without clarification of the provisions of the report".

Mr. McClure also asserts that the report in question is too vague and indefinite, and does not set up sufficient data used by the Committee to permit a check of the relationship of stream flow at various river stations, and concludes that, instead of reporting accurate basic data, the conclusions of the Committee of Engineers are based upon a compromise of basic data.

Mr. McClure reaches the conclusion that it is necessary for the Engineer Advisors to give further consideration to their studies prior to attempts at further negotiations.

It seems to the writer that Mr. McClure should not unqualifiedly accept the views of Mr. Neuffer; that the Committee of Engineers should call in consultation the engineers of the Middle Rio Grande Conservancy District, for the reason that it was agreed by the Compact Commissioners that the engineering phases of the subject matter be referred to a Committee of Engineers, on which each state had an

S. O. Harper — 2

2-4-38

engineering advisor. Such designation was largely for the purpose of avoiding confusion and delays which would result from a multiplicity of opinions between conflicting interests in each state.

It is our feeling that any internal or intra-state differences with the views of the Engineering Advisor of any state should be composed with such Advisor. I feel that it will be impossible to reach an interstate agreement so long as every individual group of water users is permitted to inject and insist upon individual points of view.

As has been repeatedly stated in previous conferences, Colorado has taken the position that she is entitled to parity with the two lower states, in the development of her water resources in the San Luis Valley. It is our understanding that the report of the Committee of Engineers attempts to suggest a basis upon which this could be accomplished without material injury to the interests of any of the states involved, and, therefore, could be accepted in principle as a basis of further discussions and negotiations by the Compact Commission, in its attempt to reach an interstate agreement.

It is felt that, prior to a further meeting of the Committee of Engineers, as suggested by Mr. McClure, he should specifically and definitely point out the items in the said report to which he takes exception, and indicate the particular points upon which he desires further information. Doubtless such information may be obtained from Mr. Bliss, his Engineering Advisor.

When such information has been submitted by Mr. McClure, the members of the Commission will be able to determine if further meetings of the Committee of Engineers would be helpful.

Very truly yours,

*M. C. Henderson*  
Commissioner for Colorado

CC: Mr. McClure  
Mr. Clayton  
Mr. Carr  
Mr. Corlett  
Attorney General