

COLORADO WATER CONSERVATION BOARD  
215 State Services Building  
1525 Sherman Street  
Denver, Colorado 80203

August 29, 1963

M E M O R A N D U M

TO:           Members:   Colorado Water Conservation Board and  
  Colorado Water Investigation Commission.

FROM:         F. L. Sparks, Director.

SUBJECT:     Ruedi Reservoir Geologic Investigation.

Attached hereto is a copy of a report rendered by a committee of the Rocky Mountain Association of Geologists pertaining to the geology of the proposed Ruedi Reservoir. The Bureau of Reclamation discounts paragraphs 1 and 2 of the report as having no effect upon the proposed reservoir site and disputes paragraph 3 which states that the true water table lies substantially below the floor of the reservoir basin.

One interesting aspect of the report is that it states in the first paragraph that the committee "has carefully studied the evidence presented July 30, 1963, by representatives of the Bureau of Reclamation". However, one of the purported signers of the report, a Mr. Ben H. Parker, was not present when the Bureau of Reclamation presented its evidence and was not known by us or the Bureau to be a member of the committee until the report was issued.

Regardless, however, of whatever the free advice of these geologists may be worth, it now appears advisable to constitute a committee of nationally known engineering geologists who have had great experience in connection with dam site geology. Accordingly, members of our staff and the engineering committee of the South-eastern Colorado Water Conservancy District will meet with the Chief Engineer of the Bureau of Reclamation tomorrow morning, Friday, August 30, 1963, to the end that a committee of at least three nationally recognized geologists shall be appointed to make a recommendation on the Ruedi Reservoir site. It is anticipated that some of such geologists will not be readily available for such a task and we therefore expect to compile a list of at least six. The committee eventually selected will be paid for their services.

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August 26, 1963

Mr. Arthur A. Brunton, President  
Rocky Mountain Association of Geologists  
Denver, Colorado

Dear Sir:

The Ruedi Reservoir Committee of the Rocky Mountain Association of Geologists has carefully studied the evidence presented July 30, 1963, by the representatives of the Bureau of Reclamation on the feasibility of the proposed Ruedi reservoir site. The committee concludes the proposed site is not suitable for the following reasons:

1. The proposed reservoir is located on a salt anticline in which core drilling has demonstrated the presence of solution cavities in gypseous rocks in and near the site.
2. The general instability of the area is shown by the presence of a gypsum plug within the proposed reservoir. The contortion of this intrusive mass and inclusion of brecciated material in it, as well as other active intrusions in the region, indicate that this rock has been in motion in recent geologic time. This movement almost certainly continues to the present. Accelerated movement would be triggered by the load of any water which might be impounded in the reservoir. Further movement of the gypsum plug almost certainly would induce fracturing which would impair the reservoir.
3. Although it has been contended that the water table is tributary to the reservoir site, loss of drilling fluid and erratic water levels in test holes imply that a series of perched water tables prevail in the area. These erratic water levels show that the true water table lies substantially below the floor of the reservoir basin.

Respectfully submitted,

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David M. Evans

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Ben H. Parker

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Warren O. Thompson

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Franklin A. Thurman

It is anticipated that when the committee is finally selected it will be submitted to this Board for approval as well as to the Southeastern District. For that reason we will participate in selecting the initial list of qualified geologists.

FLS:lk  
Enclosure