

Ditch Treating Produces Results

Bentonite, a colloidal clay of volcanic origin, which is the base of many cosmetics, is rapidly earning a place as an ally of irrigation.

This mineral—used, too, in the manufacture of steel and plastics as well as the lining for smoking pipes—appears to have answered the problem of preventing soil-damaging seepage from irrigation canals.

Bentonite is found in many sections of the west, including Montana, Wyoming and the Dakotas.

It is useful in lining irrigation canals because it expands 15 to 30 times when wet. Water is freely absorbed, and when thoroughly wet, bentonite forms a gelatin-like mass which resists the passage of water through canal walls and other porous earthworks.

Cost Is Low

Bentonite is economical, too, and the cost of lining a canal with the clay is only about one eighth the expense necessary for concrete. Concrete lining was long considered the most certain solution to the serious seepage problems.

Lining a canal with bentonite is a relatively simple proposition. First the canal is cleaned, about an inch of dry, coarse bentonite spread over the walls and bed and then a layer of protective dirt, sand or gravel applied to complete the job.

Extensive experiments with bentonite canal lining in the irrigated west in the last five years—including tests on the Huntley project near Billings—have indicated the method is successful. Regional Director H. D. Comstock of the federal bureau of reclamation says:

First bentonite job in this area was the lining of about a mile of the main Huntley project canal at Ballantine in 1940. This canal was losing water rapidly, making costly drainage of near-by lands necessary.

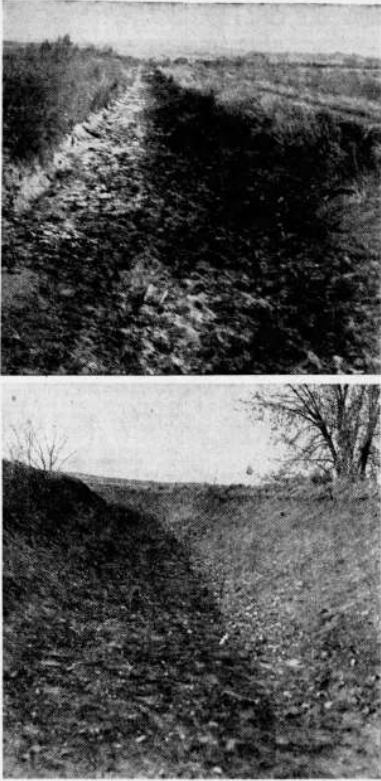
Material Saving

Bentonite lining reduced this water loss very materially and in the four years since the canal was lined the clay has given every indication of holding up over a long period of years.

In addition to preventing water seepage, canals lined with bentonite appear to remain clear of weeds and other plant growth longer than unlined ditches, and also hold their shape better.

At the present time, another section of the Huntley project canal about 10 miles east of Ballantine is being lined with bentonite. The bentonite for this job is obtained from a deposit near by.

S. A. Balcher, manager of the Huntley project irrigation district, is in charge of the canal lining in that area.



The upper photograph shows a ditch on the Huntley project emptied of water and which had not received any treatment. Such a ditch is said frequently to be the cause of damaging seepage. Treatment of ditches with bentonite, as shown in the lower picture, has resulted in prevention of such seepage, reclamation officials say.

Bentonite Lining of Water Canals Produces Results

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