Channel From Little Rock to the White River Could Be Constructed for Less Than $10,000,000 and Would Open New Transportation Field for State.

By COL. JOHN R. FORDYCE

Arkansas has a great wealth of natural resources which she cannot consume and which she cannot export because transportation costs are too great. Costs of transportation cannot be reduced to any great extent by either the railways or truck line. It is possible, however, to materially improve the situation by constructing a canal direct from Little Rock to the White river.

The location of Little Rock in early days was determined by the fact that it was at the crossroads of the southwestern and the northwestern trail. This gave the point a strategical business advantage which is still held. Little Rock is, as never before, the logical center for the assembly and distribution of goods in the state. In addition, it is the political and geographical center of the state. The principal commercial need at present is a practical method of connecting the Little Rock or North Little Rock railway yards with the water transportation system of the Mississippi valley. In considering this need, it must be remembered that it is economically practical to improve the Arkansas river from Little Rock to the Mississippi river. The chief engineers of the army have had a report prepared which indicates that it would cost $67,000,000 to create this channel for year-round water transportation and, in addition, would require a large sum annually to maintain it. On the other hand, it would cost less than $10,000,000 to construct a canal from North Little Rock to the White river and provide a water way which would be large enough to enable the large barge to use in New Orleans on the Mississippi river to be brought into North Little Rock. Later on, if necessary, a canal could be made to connect directly with the Arkansas river.

The construction of a canal from North Little Rock to the White river would connect Little Rock and all of central Arkansas to a relatively dependable river so far as navigation is concerned. In times of extreme low water, the White river carries almost 5,000 seconds of foot of flow, while the Arkansas carries only 1,000 seconds of foot of flow. The White river is relatively non-flood bearing, while the Arkansas carries so much flood water at times that the Arkansas engineer has been asked to keep a channel open for navigation. While Little Rock has a fall of only three tenths of a foot per mile, the Arkansas falls seven tenths of a foot per mile. This means that less aggregate motive power would be required for a barge to make a round trip between two points equally distant on the White river than on the Arkansas.

The distance from Little Rock to the Mississippi river by the Arkansas river route is about 177 miles. The distance down canal and White river is 167 miles by one route and 155 by another. It therefore not only would be cheaper to construct a canal to the White river from North Little Rock, but the route via the White river would actually be shorter than the Arkansas river route.

This map shows the location of the proposed canal from DeValls Bluff, connecting the Arkansas and the White rivers. In the upper right hand corner is the proposed canal from Poplar with the Mississippi.

The proposed canal has been described as connecting North Little Rock and DeValls Bluff, it is evident that all of the towns near the canal would benefit, as turnouts basins can be constructed which would enable barges to be set out for loading and unloading at each town. All towns located on the White and Black rivers would also benefit by the increased traffic which the improvement of these rivers would bring.

The construction of the proposed canal might also offer another great advantage in that, at some later date, it may prove possible to improve the Black river channel above its junction with the White river and to connect the Black river with the Mississippi by a canal from near Poplar to just below Cape Girardeau. This connection might be made by a canal which could occupy an old lowland channel of the Mississippi river. The water distances from DeValls Bluff, north by this route, would be approximately as follows: White river, DeValls Bluff to Newport, 123 miles; Black river, Newport to Poplar Bluff, 160 miles; by canal from near Poplar Bluff to Mississippi river, 60 miles. This is a total of 358 miles. The lowland formations in this area would be comparatively cheap to excavate and no cuts over 19 feet in depth would be required.

If the northeast canal and river connection were made, it would be possible for the water-borne freight from the Ohio river and the upper Mississippi river, as well as from Chicago and the Great Lakes, to reach the water frontage points by from 200 to 600 miles. Such a project would be partially carried on outside Arkansas, but the economic advantage would be a substantial part in the development of northern Arkansas.

President Roosevelt has outlined plans for a great interior development program which he hopes to carry out. Let us bring the transportation question to his attention. Surely our great natural advantages, our wealth of minerals and our waterways should be developed for the benefit of our own people and for the nation.

Arkansas already has on its statute books laws under which such canals can be built. Connected action on the part of its people is now required to start this great project which would employ thousands of men and make possible the increased development of our raw materials and bring new wealth into our community.

Geology of Proposed Route and Mineral Freight.

By GEORGE C. BRANNER

The location which has been suggested by Colonel Fordyce for a barge canal connecting North Little Rock with DeValls Bluff and the possible extension of a water route northwest through the channels of White river and Black river to the Mississippi near Cape Girardeau, an interconnecting canal, takes full advantage of the presence of the Mississippi embayment of the Gulf Coastal Plain of the southern United States. This embayment is a great bluff-accumulated lowland centering along the Mississippi river as far north as Cairo. Its extent is shown on the index map above. The embayment has an east-west width in the latitude of Little Rock of approximately 400 miles, at Newport 350, at Poplar Bluff 250, and comes to an end near Cairo. The surface of the embayment in Arkansas is for the most part, made up of fresh water-laid sands, gravels and clays which are usually from 50 to 250 feet in thickness.

Crowley's Ridge is the only major highland area in the entire embayment. This is a remnant of a former highland, most of which in eastern Arkansas has been removed by erosion. The location of the ridge is shown in Figure 1. The proposed water transportation development from DeValls Bluff is confined to the lowlands between this ridge and the western edge of the Mississippi embayment. A fact of interest in connection with (Continued on Page 16)
Ohio has long been talking about a three-state canal to connect the Ohio river with Lake Erie. The active proposal at present is less ambitious than that, but still one of great magnitude. It is known as the Tri-River Improvement Project, and contemplates the canalization of the Mahoning, Shenango and Youngstown rivers to connect the great Youngstown industrial area with the Michigan canal system.

Thanks to its location on the canalized Ohio river system, the Pittsburgh steel district enjoys favorable water and rail-and-water rates for its products all the way down to New Orleans. The competing Youngstown and Birmingham districts are seeking to have conditions equalized. The advantage of the DeValle Bluff canal would be that the White river is more reliable than the Arkansas for navigation. As planned, this canal would enable Mississippi river barges to reach Little Rock.

SIGN APPLICATION FOR CANAL FUNDS

$8,554,816 Sought From Public Works Administration By Mayors

An application for the Public Works Administration for an appropriation on the railroad and canal project from the east bank of the Arkansas river to DeValle Bluff was signed by the mayors and special commissioners of the cities along the proposed route of the canal at a meeting in the Little Rock Chamber of Commerce board rooms yesterday.

Wallace Townsend, president of the chamber who was elected general chairman of the committee sponsoring the canal several weeks ago present, A. M. Lloyd of Little Rock, consulting engineer for the project, read the application and explained the other divisions of the report, which included the engineer's report, a report by George C. Branner, state geologist, and a traffic survey by J. C. Murray, traffic manager of the chamber.

It has been previously pointed out that revenue for the canal will be collected on tolls for tonnage, warehouse facilities and water sold to rail voters for irrigation purposes. The total earnings available for interest and bond redemption at the end of 30 years will be $7,500,000.

Tonnage Estimated

Mr. Lloyd has estimated that the available tonnage will be 860,000,000 and charges will amount to $30 per ton. Charges for tonnage will be 860,000,000, but the canal would not make any loan because the original proposal of making the Arkansas navigable from Tulsa to the mouth of the Missouri or White river would be impracticable because of the suspended cost, $400,000,000. If necessary, the application to the Board of Review and for Congress authorizes the improvement, Little Rock again can compete with other cities which now hold the trade advantage.

PREDICTS GRANTING OF LOAN FOR CANAL

New York Publication Forecasts $8,780,000 Expenditure on Arkansas Project.

A prediction that the application for a loan of $8,780,413 for constructing a DeValle Bluff-North Little Rock canal from the federal Public Works Administration will be approved by the Commerce and Industry, New York, publication, in an article in the November issue.

Several copies of the magazine went to the Little Rock Chamber of Commerce, which is sponsoring the project. The article pointed out that the annual charge of 30 cents per ton for canal tonnage would be necessary to keep the canal in operation.

It said the canal would mean much to the development of the White and Arkansas rivers. The article was a picture of Little Rock taken from an airplane.

REPOR ON CANAL PROJECT ASKED

Early Hearing Requested By C. C. Hart on Little Rock Arkansas Canal Committee Chairman

The Public Works Administration in Washington has asked the Arkansas Basin Committee, of which R. M. Graham of Tulsa is chairman, to review and make a report on the Little Rock-DeValle Bluff canal project. The canal, the advantage of the canal project and the value of the Arkansas River in year ending in 1953 will be considered.

Mr. Townes has requested an early hearing, as he is an early hearing in Little Rock. Mr. Townes said he had no personal interest in the canal, but he believed the project would be of great benefit to the state.

In his opinion the railroad would not be able to compete with the White river in the territory in which the canal is to be built.

The canal would connect the Arkansas with the White river, which, Mr. Townes said, is navigable to a distance of six-foot depth at which the river would be navigable to a distance of eight-foot depth.

The benefit of the canal would be the same as the benefit of the Little Rock canal, which would be the benefit of the Arkansas River.

In conclusion, the committee would be able to meet the requirements of the canal at a cost of $2,000,000.

Low freight rates made possible by rail traffic have caused great loss to the canal company, which is a commercial concern and does not control the Missouri river.

The little Rock, Mr. Townes said, will show a loss in population since 1906.