THE UNIVERSITY OF TEXAS AT AUSTIN
Bureau of Economic Geology
March 14, 1939
Typeset from original stencil, December 1979

MINERAL RESOURCE SURVEY
Circular No. 24

A mineral resource survey of Texas is being conducted by the Works Progress Administration, the Bureau of Economic Geology of The University of Texas acting as sponsor. The purpose of the survey is to assemble information and make it available to the public. The mineral resource survey is helping in the location of mineral products, from some of which it is reasonable to suppose industries of value to the State may be developed. The following report is based on work done in Henderson county.

REPORT ON THE GRAVEL RESOURCES OF HENDERSON COUNTY, TEXAS
by Glen Evans, Supervisor

Gravel deposits are found in Henderson County in the stream terrace deposits of Trinity River and of its tributary, Cedar Creek. These deposits were examined in detail in the vicinity of Trinidad. It was found that four terrace levels contain gravel. The top of the lowest of these terraces is 10 to 15 feet above the level of the flood plain, and the base of the terrace is below flood plain level. The gravel lies in the lower part of the terrace deposit, the upper part being loam and silt. This terrace lies adjacent to the river flood plain or adjacent to the flood plain of Cedar Creek.

The top of the next higher terrce is at an elevation of 20 or 25 feet above the flood plain and the base near or slightly above the flood plain level. As in the lower terrace the gravel lies in the basal part of the terrace deposit, the upper part being sand with some silt. Where the lower terrace is present it lies between this terrace and the flood plain, and where the lower terrace is absent the flood plain extends to the margin of this second terrace.

The third terrace above the Trinity River is likewise the most extensive of the terraces adjacent to Trinity River in this county. The top of this terrace is 50 to 60 feet above the flood plain and the base is from 5 to 10 feet above flood plain level. When the two lower terraces are present they lie between this high terrace and the river flood plain. Much but not all of the gravel that is being produced in the region of Trinidad is in the region of this third terrace and it was the gravel deposits of this terrace that were most carefully investigated. Numerous borings made into these deposits indicate that the gravel has a thickness of 12 to 15 feet, underlying a much greater thickness of silt and loam. Owing to the great thickness of the silt and loam above the gravel, the deposits can be worked only on the hill slopes where the greater part of the overburden has been removed by surface wash. Such localities are found adjacent to Cedar Creek, as on the Bishop farm north of Trinidad, and on slopes adjacent to Trinity River on which are located the Wharton and Boatright gravel pits.

The gravel deposits of this terrace may be divided into two parts. The upper part, 6 or 7 feet in thickness, contains some but not a large amount of clay, while the lower part, also 6 or 7 feet in thickness, is a much cleaner sand. For this reason the upper approximately half of the gravel deposits of the terrace are better for purpose of road construction than the basal, cleaner gravels. The difficulty with the gravel is a lack of sufficient clays to make the best binding material. Of the type of gravel of the deposit there is, however, abundant material for road building and other purposes. All of the land for several miles north of Trinidad, between Trinidad and Trinity River, is underlain by this gravel and sand. However, as already indicated, it is workable only on the slopes where part of the overburden has been removed. It is necessary also to select favorable working localities on these slopes.

A fourth and higher terrace gravel deposit occurs topping the hills. These highest terrace gravels occur chiefly as remnants and usually not more than a few feet in thickness.