

THE UNIVERSITY OF TEXAS AT AUSTIN

Bureau of Economic Geology

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MINERAL RESOURCE SURVEY

Circular No. 25

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 Houston County.

REPORT ON THE MINERAL RESOURCES OF HOUSTON COUNTY, TEXAS

by Horace Harrington, Supervisor

Introduction

Houston County is located geographically in the center of east Texas. Physiographically it is located in the Red Lands, according to Deussen (1), of the west Gulf Coastal Plains section of the Coastal Plains province of the Atlantic Plain division.

The county consists of a land area of 762,752 acres or about 1192 square miles. It is bounded on the north by Anderson County, on the northeast by Cherokee County, on the east by Angelina County, on the southeast by Trinity County, on the southwest by Madison County, and on the west by Leon County.

PHYSIOGRAPHY

In general, the surface of Houston County is gently rolling and sloping. Broad slopes are characteristic of the central and southern portions of the county while the northern portion is typically rolling.

Houston County is bounded on the east by Neches River and on the west by Trinity River. It is into these two rivers that all of the surficial drainage of the county eventually passes. Dendritic drainage characterizes the eastern one-third of the county, whereas that of the western two-thirds is somewhat sub-dendritic, trending generally southwestward.

ECONOMIC RESOURCES

Coal. — Outcrops of lignite were found in a number of places in the southern and southwestern portions of the county. The depth to workable quantities of lignite varies from 30 to 60 feet. Much has been mined. A bed of lignite, 6 feet thick, underlies the region just north of the town of Lovelady. Lignite also outcrops along Trinity River.

Oil. — Oil has been encountered in the Carrizo sand at a depth of 2100 feet, east of the town of Lovelady. No commercial production has yet been made from this part of the county. There is a small oil field 4 miles east of the town of Weldon.

Natural gas. — Natural gas has been produced east of the town of Lovelady and is being produced west of the town of Grapeland.

Building stone. — A gray, medium-grained, quartzitic sandstone, excellent for building purposes, is located 3 miles east of the town of Weldon. There is another outcrop of sandstone about 2 miles southwest of the town of Holly. Both outcrops of sandstone may be reached by truck in fairly dry weather.

Opalized wood, in the Fayette formation, is abundant enough to be of economic value for building purposes.

An iron-bearing sandstone outcropping 14 miles southwest of the town of Crockett is also of value as building stone.

Gravel. — Two kinds of gravel are available in commercial quantities in Houston County. Iron ore gravel caps the hills both east and west of the town of Latexo. Large quantities of this gravel have already been hauled from a gravel bed 1½ miles east of Latexo, but a large quantity remains. A gravel bed located 2½ miles northwest of Latexo was tested, showing approximately 18,000 cubic yards of gravel. This gravel contains some clay and would make a good base.

A bed of flint gravel, 16 miles southwest of the town of Crockett, is estimated to contain approximately 15,000 cubic yards of gravel. A thin layer of flint gravel lies throughout the southern portion of the county but is not in workable quantities.

The iron-bearing conglomerate which caps the hills of the northeastern portion of the county would make good road material if crushed.

Sand. — Sand is present in Houston County in large quantities. The Sparta formation is composed chiefly of sand, and the Yegua formation outcrops in this county. The Sparta sand is a gray, medium-grained sand, while that of the Yegua formation seems to be coarser.

Iron. — Iron ore is quite abundant in the eastern half of the county, particularly in the northeastern portion. It is also present in appreciable quantity in the northwestern portion of the county. It is not near enough to a market, however, to be of commercial value.

(1) Deussen, Alexander, Geology and underground waters of the southeastern part of the Texas Coastal Plain: U.S. Geol. Surv., Water-Supply Paper 335, 365 pp., 1914.