

# POPE COUNTY OCHRE MEETS TESTS; TO BE SHIPPED IN CARLOTS

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Russellville, Nov. 16.—The Smith Mining Company Inc., of Russellville, has completed the opening of a shaft into a cave on Norristown Mountain, two miles southwest of Russellville, and will begin shipping a pigment deposit, contained by the cave, in carload lots within a few days, Reece A. Caudle, attorney for the firm, reported.

Mr. Caudle said the pigment is in much demand, having been found to contain 86.9 per cent oxide of iron, the substance necessary for manufacture of Venetian red paint, the nation's major supply of which has been imported from Italy in the past.

Preliminary surveys made recently failed to reveal the extent of the ochre deposit, but it appears to be extensive, Mr. Caudle said.

The ore will be transported to railroad cars by truck and several men will be employed when shipping is started, Mr. Caudle said.

## Assay Laboratory To Serve State.

The Smith company announced the employment of Troy W. Carney, Fort Smith chemist and assayer, to have charge of a public assaying laboratory being set up in the Smith-Caudle building on North El Paso avenue, just north of the Missouri Pacific railway. Officials of the company said this will be the first laboratory of its kind opened in the state and will be equipped to do all types of assay work.

In the past most Arkansas mineralogical specimens have been sent to laboratories outside the state, and several days have been required to receive reports. The opening of the Russellville laboratory should assure Arkansas mineralogists much faster service. The state mineral survey laboratory at Little Rock also has done some assay work for prospectors.

## Work Continues On Manganese Process.

Work was started Thursday on construction in the Smith-Caudle building of a pilot plant for final testing of the company's secret process, announced recently, for purification of manganese ore with phosphorus content. The process is said to be an inexpensive chemical treatment of the crushed ore to remove the phosphorus and preserve it as a by-product, purifying and raising the grade of the manganese, chief mineral in the manufacture of steel and No. 1 metal in the nation's armament program.

If the Smith process proves as effective in the commercial laboratory as it has in the testing laboratory, it will revolutionize the manganese mining industry, opening up unlimited stores of ore in Arkansas and other states that have failed to meet government specifications in the past, due to phosphorus content, officials of the company believe. A patent has been applied for on the process, which was worked out by Chemist Carney over a period of three years.

## Gazette 2-19-45 Arkansas and Its Ochres.

Despite the abundance of yellow, brown and red ochres in Arkansas there has been little commercial development of the deposits. Some of the ochres are known to be suitable for making paint. In former years a number of farmers on Crowley's Ridge painted their barns with a mixture of the local pigment. An item of 50 years ago, reprinted in the Gazette's News of Other Days, tells of a deposit of ochre which had been discovered in 1893 near Monticello.

The ochres are earthy derivatives of iron ores. The red comes from hematite or iron oxide and the yellow and brown from limonite, a hydrous iron oxide. The Arkansas ferrous pigments occur chiefly in connection with the limonite deposits of the Tertiary age in the southern and eastern parts of the state, although they are found elsewhere. In South Arkansas high hills often contain clays, sandstones,

gravels and nodular iron ores. Frequently capped with sandstone, the hills have resisted the erosion which wore down surrounding lands. A narrow strip, the Lafayette formation, which has gravels, sand and nodules of limonite, borders the summit of Crowley's Ridge. The Arkansas limonite usually is in the form of nodules or concretions.

This ore was formed in lagoons and lakes which were connected with an extension of the Gulf of Mexico several million years ago. Then the cli-

mate was quite warm and lush vegetation grew along the shores. Many of the lagoons had stagnant water, with much decaying vegetation. Geologists believe that the ancient coast country here resembled the present Louisiana marsh and bayou region. Streams emptying into the pools brought mineral salts from weathered rock inland. Chemical precipitation took place and iron formed at the bottom of the bogs. Geologists base their belief on the fact that iron concretions don't ordinarily form in open water. Fossils of plants moreover indicate these conditions.