

FULL MINERAL SURVEY IS BEING MADE IN COUNTY

Howard Co. 3-26-38
FEDERAL WORKS PROGRESS ADMINISTRATION HAS MADE POSSIBLE EXTENSIVE JOB.

FOR PUBLIC USE

Information Collected Will Be Available to Public When Completed and Verified.

The federal government, through the Work Progress Administration has made possible a state-wide mineral survey, which includes Howard county, and work has been started here under the supervision of R. E. Cargile, who has a crew of fourteen men. The survey is sponsored by the Arkansas Geological Survey. Outside contributions, such as rent, maps, transportation, equipment, etc., are required.

The information collected will be available to the citizens, city and county officials or organizations, and will be used as the basis for future development. It will give information which has heretofore been unknown. It is the first inventory ever made of the state's resources by sections.

Many citizens of the state have offered their services by giving information on various resources in their community.

The state mineral survey is the people's survey. It is as accurate informative and as useful for future development of the community as you make it.

The object of this project as set forth in proposed data, is as follows:

The location and classification of all of the mineral resources of this state and compilation of that information for public use will be of great and permanent value to the state and nation. This will lead to the development of new industries, the location of strategic and deficient minerals necessary to national defense. It would assist greatly in reducing present and future construction costs of all types of road building.

It is the intention of this project to make as complete a survey of the various mineral products of the state as may be possible, with the money allocated, and the time available.

The project is based on district and county units. Districts usually consist of a number of counties, each to be in charge of a district supervisor who will be responsible for the work in his district. County supervisors will report to the district supervisors.

Parts of Howard county have often been suspected of being rich in mineral deposits, but there has never been development sufficient to determine the mineral wealth here, and this survey, which will be thorough and which will cover nearly all of the county, should determine definitely if there are mineral deposits of sufficient value to warrant development. Since the information secured will be available to all citizens, property owners may find out what has been found on their property.

Huge Deposit Of Kaolin Reported

Howard Co. August 6-38

Special to the Gazette.
 Hot Springs, Aug. 6.—The Arkansas Geologic Survey, a WPA project sponsored by the Arkansas state Geological Department, under direction of Dr. George C. Branner, state geologist, has discovered "millions of tons of kaolin," varying in colors from white, pink, light and dark red, in Howard county, it was reported here today.

So important was the find considered that a company has been formed the past week with a capital stock of \$25,000 to mine and manufacture the by-products of kaolin. Mr. Mhoon said the plant will be built at Nashville.

Kaolin Has Many Uses.

Mr. Mhoon said that the new deposit means much to the state. He said that aluminum is the major by-product of kaolin, and from it come three grades of aluminum, iron-free, pure aluminum and sodium aluminate.

"The latter is used extensively," Mr. Mhoon said, for water purification purposes and by textile industries. Arkansas is making an effort to obtain textile and other industries, and now the state has a new inducement to offer.

"From kaolin we also get a dust, which is the carrying base for orchard spray and also a base for arsenic in cotton sprays. From kaolin also comes olate, used in the manufacture of lubricating oil and greases, and in the paint industry as a dryer.

I have been informed by officials of the new company that the plant to be erected at Nashville will be equipped to

produce aluminum hydrates and aluminum phosphates."

Mr. Mhoon said "there appears to be no end to the quantity of kaolin." He said that the deposit had every indication of aggregating "millions of tons," and that he had heard that the state Highway Commission has placed an order for several thousand tons to be used in road construction.

Bentonite Also Discovered.

Mr. Mhoon said a deposit of Bentonite had been found in Howard county. Its quality and quantity remain to be determined.

Bentonite is used by major oil companies for filtration purposes, Mr. Mhoon said.

"It is my understanding that Colonel Barton, president of the Lion Oil Company, El Dorado, wrote Dr. Branner asking if any deposit of Bentonite had been found in the state," he continued. "It is said to be highly regarded by oil companies. They have found Bentonite in Howard county, and it appears as if it is a big deposit. Its quantity and quality will be determined within a few days."

Howard County Aug 6 New Aluminum Source Discovered by WPA In Howard County

Hot Springs—Rex Mhoon, district supervisor of the Arkansas geologic survey, a WPA project, sponsored by Dr. George C. Branner, state geologist, announced Saturday the discovery in Howard county of "millions of tons of kaolin." The by-product, he said, consists of aluminum, from which also are derived three grades, iron-free aluminum, pure aluminum and sodium aluminates. Kaolin discovered by the survey workers, Mhoon said, was white, pink, light and dark red.

The discovery was followed by formation of a company of Howard county residents, with capital stock of \$25,000 for the mining and manufacturing of the by-products. The factory will be erected in Nashville, Ark. Mhoon also said he anticipated another important announcement within a few days of the location of a deposit of Bentonite, used by major oil companies for filtration purposes. The quality and quantity is yet to be determined, he stated. The Kaolin deposit, however, he regards as of immense value to Arkansas.

MAKING PROGRESS

ON MINERAL SURVEY IN HOWARD COUNTY

Howard Co. Sept 1938
 Excellent progress is being made on the mineral survey of Howard County which was begun in April, deposits of the following mineral having been discovered and located: Antimony, cinnabar, copper, zinc, Barium Sulphate, Gypsum, Kaolin clay and Rose Rock. According to J. K. Rankin, supervisor of the survey in this county, there is only one other known deposit of rose rock in the United States besides the one in Howard county. Mr. Rankin estimated that it will take twelve months to complete the survey in Howard county. He advises that his crew has prospected over 200 sections in the county to date.

The purpose of the survey is to determine what minerals are found in this area, the location of each deposit of each mineral found and compile this data and make it available to mining companies who are interested in investigating this section which may possibly result in some mines being opened in this county which would give profitable employment to many of our citizens.

Mineral Survey Discloses Valuable Deposits in Howard

Howard Co. April 1939
Many Kinds of Minerals Are Worth Large Sums If Properly Exploited, Survey Office Says.

The mineral survey which has been in progress in Howard county since April, 1938, is a part of the state-wide WPA project sponsored by the State Geological Survey. The work in Howard county is under the direction of J. K. Rankin, county supervisor. The 19 field workers have been supplied from the WPA rolls of that county.

Of the 602 square miles in Howard county, 490 square miles will be investigated. The work of the survey includes the search for new or hitherto unknown deposits, the securing of accurate information as to the location and extent of all known deposits, and of taking samples of all minerals for analysis and testing at the laboratory in Little Rock.

So far as the work has progressed according to reports of the county supervisor, new discoveries have been made in deposits of kaolin clay, ilmenite, antimony ore, gypsum, barite, cinnabar and bentonite.

Colored kaolin clay has been found about 3½ miles north of Nashville, and one-fourth mile from a railroad. Test holes indicate that this material extends at a depth of 13 feet over an area of about one square mile.

A deposit of ilmenite has been found 12 feet thick and covering more than 50 acres in the area eight miles southwest of Nashville and three miles north of Mineral Springs. This mineral occurs as a fine sand and is used in the manufacture of steel. Samples sent to the laboratory in Little Rock show the content of iron and titanium, which are the principal components of ilmenite. While this deposit is of easy accessibility, located on the center Point and Mineral Springs highway, there is no record of any attempt to develop it.

Antimony is a metal used principally to alloy with lead in order to increase hardness. It is used in alloys to make bullets, solder and battery plates. It is also used in the manufacture of rubber, enamel ware and chemicals. Veins of antimony ore 100 feet deep are found in the area 7 miles northwest of Derks on the Saline river. Veins are found in nine other sections. Renewed interest is being shown in a mine started at this site some years ago by inquiries received as the result of this survey.

Deposits of gypsum have been located by the survey in the extreme eastern part of the county, also in the central part, within five miles of Center Point. Gypsum is used in fertilizer, in making crayons, as a filler for cotton materials and as a base for paint and wall plaster. It is also used in making various grades of paper, as an ingredient of certain disinfectants and in the manufacture of cement.

Barite has been found in two locations in Howard county within the last two months. At a point eight miles north of Nashville in the eastern part and at a point three miles south of Dierks. This material, which looks like quartz, is used in the manufacture of paint to give it a gloss, for refining and bleaching sugar, and to add to the weight of paper pulp and as a base for rat poison.

Deposits of cinnabar have been found in the northeastern corner of the county, near Muddy creek. Similar deposits in Pike and Clark counties are now being developed. Cinnabar is the mineral from which mercury is made and is best known in thermometers. Other principal uses are for drugs and chemicals, recording instruments and gauges, germicides and many other things. It is worth more than a dollar a pound.

The bentonite located by the survey is in the eastern part of townships 9 and 8 South, near state highways 4 and 26. This clay has been used principally for thickening mud used in rotary drilling in the oil industry. It is also used extensively in bleaching earth. It can also be used for making a paper-like substance.

Other minerals located by the survey include copper and zinc minerals, limestone, lignite and several good gravel deposits, none of which has been worked.

So far data has been collected on 575 water wells and 73 springs in the county. In the extreme southern part of the county wells are drilled to a depth ranging from 290 to 612 feet. Twelve of the wells are artesian wells, the average depth of these being 418 feet and the daily flow ranging from 600 gallons to 42,420 gallons; the water generally being soft. Dug wells are from 8 to 60 feet deep and the water sometimes containing sulphur and lime.

Of the 63 springs examined the most important is the group at Center Point meetin ground. The 12 springs at this point all flow soft water except the one sulphur spring. Their combined flow is 10,000 gallons a day.

All property collected by the field workers on the survey, together with the records of analyses from the laboratory at Little Rock will become the property of the State Geological Survey. On the completion of the work of the survey in the state this information will be issued in bulletin form under the direction of Mr. George C. Branner, State Geologist.

HOWARD

WPA MINERAL SURVEY LISTS HOWARD COUNTY MINERALS AND ORES

Special to the Gazette.

1939
Nashville, Mar. 25.—Search for hitherto unknown mineral, ore, gravel and clay deposits in Howard county has been unusually fruitful since the statewide Mineral Survey started its survey in this county in April, 1938.

With much ground yet to be covered, the survey workers, under direction of J. K. Rankin, county survey supervisor, have discovered deposits of kaolin clay, ilmenite, antimony ore, gypsum, barite, cinnabar and bentonite.

Nineteen workers engaged on the survey project were taken from Howard county WPA rolls.

In addition to seeking new deposits, the survey is attempting to compile accurate information on the location and extent of all known deposits. Samples of all minerals located are sent to the survey laboratory in Little Rock for testing.

All data collected by field workers, together with records of analysis of samples, will become the property of the state Geological Survey. Upon comple-

tion of the state survey, the information gained will be printed in bulletin form under direction of Dr. George C. Branner, state geologist.

Discussing the various deposits discovered in Howard county to date, Supervisor Rankin said colored kaolin had been found about three and one-fourth miles north of Nashville and one-fourth mile from a railroad. Test holes indicate this material extends to a depth of 13 feet over an area of about one-fourth square mile.

A deposit of ilmenite 12 feet thick and covering more than 50 acres was located about eight miles southwest of Nashville and three miles north of Mineral Springs. Ilmenite occurs as a fine sand and is used in the manufacture of steel. Samples sent to the mineral survey laboratory in Little Rock show the content to be iron and titanium, which are the principal components of ilmenite. While this deposit is of easy accessibility, located on the Center Point and Mineral Springs highway, there is no record of any attempt to develop it.

Antimony Deposits.

Antimony is a metal used principally to alloy with lead in order to increase hardness. It is also used in the manufacture of rubber, enamel ware and chemicals. Veins of antimony ore 100 feet deep were found seven miles northwest of Dierks on Saline river. Veins were found in nine other sections. As a result of the survey, renewed interest is being shown in a mine started at this site some years ago.

Many Uses for Gypsum.

Deposits of gypsum have been located by the survey in the extreme eastern part of the county and in the central part, within five miles of Center Point. Gypsum is used as a fertilizer, in making crayons, as a filler for cotton materials, as a base for paint and wall plaster, in making various grades of paper, as an ingredient of certain disinfectants and in the manufacture of cement.

Barite has been found in two locations in Howard county within the last two months, one about eight miles north of Nashville, the other about three miles south of Dierks on the Dierks and Possum Hollow road. This material, which looks somewhat like quartz, is used in the manufacture of paint to give a gloss, for refining and bleaching sugar, to add weight to paper pulp and as a base for rat poison.

Cinnabar Valuable.

Deposits of cinnabar have been found in the northeastern part of the county near Muddy creek. Similar deposits in Pike and Clark counties now are being developed. Cinnabar is the mineral from which mercury (quicksilver) is made. Principal uses are: For drugs and chemicals, recording instruments and gauges and germicides. The present market price of quicksilver is \$93 for a flask of 76 pounds, an advance of \$3 within the last week, Mr. Rankin said.

The benonite deposits located by the survey are in the eastern part of the county near highways 4 and 26. This clay has been used principally for thickening mud used in rotary drilling in the oil industry. It also is used extensively as a bleaching earth. Recent investigations at the Massachusetts Institute of Technology indicate that it can be used for making a paper-like substance.

Other ores and minerals located in Howard county by the survey include copper and zinc, limestone, lignite and several good gravel deposits, none of which has been worked.

Wells, Springs Studied.

Workers on the project have collected data on 575 water wells and 63 springs. In the extreme southern parts of the county wells are drilled to depths of 290 to 612 feet. Twelve of the wells investigated are artesian wells; average depth of which is 418 feet. The daily flow ranges from 600 gallons to 52,420 gallons. The water generally is soft. Ordinary wells are from eight to 60 feet deep, the water of some of these containing lime and sulphur. These wells are, for the most part, in the central part of the county in regions adjacent to Center Point and Dierks.

Of the 63 springs examined the most important are in the famous group at old Center Point camp meeting ground. Eleven of these springs flow soft water; one flows sulphur water. Their combined flow is 10,000 gallons a day. There are 26 springs in this township.

Mr. Rankin said the survey had received excellent co-operation from land owners. The Dierks Lumber Company is contributing financial aid each month for the transportation of the field crew. The Nashville Chamber of Commerce is co-operating by paying office rent and maintaining a display of samples found by the survey. Nashville citizens have provided funds for installing a water testing station by public subscription.

The supervisor has received requests from the Warne Steel Company of Oklahoma and the A. D. Green Fire Brick Company of Missouri for information on any deposits of manganese the survey may locate. Other requests for information have been received from concerns interested in clays and antimony ore.

THE MINERAL SURVEY SHOWS NEW DEPOSITS

4/14/39 Nashville, Tenn

SEVERAL HERETOFORE UNKNOWN MINERALS FOUND IN HOWARD COUNTY ALREADY.

SOME VALUABLE

New Discoveries Include Kaolin, Ilmenite, Antimony, Gypsum, Cinnabar and Bentonite.

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Of the 602 square miles in Howard county, 490 square miles will be investigated. The work of the survey includes the search for new or hitherto unknown deposits, the securing of accurate information as to the location and extent of all known deposits, and of taking samples of all minerals located for analyzing and testing at the laboratory in Little Rock.

So far as the work has progressed, according to reports of the county supervisor, new discoveries have been made in deposits of kaolin clay, ilmenite, antimony ore, gypsum, barite, cinnabar and bentonite.

Colored kaolin has been found in Sections 2 and 11, Twp. 9 South, Range 27 West, which is about 3½ miles north of Nashville, and one-fourth mile from a railroad. Test holes indicate that this material extends at a depth of 13 feet over an area of about one square mile.

A deposit of ilmenite 12 feet thick and covering more than 50 acres has been located in Section 12, Twp. 10 South, Range 28 West. This is about 8 miles southwest of Nashville and 3 miles north of Mineral Springs. Ilmenite occurs as a fine sand and is used in the manufacture of steel. Samples sent to the laboratory in Little Rock show the content to be iron and titanium, which are the principal components of ilmenite. While this deposit is of easy accessibility (located on the Center Point and Mineral Springs highway—"Dildy road") there is no record of any attempt to develop it.

Antimony is a metal used principally to alloy with lead in order to increase hardness. It is used in alloys used to make bullets, solder and battery plates. It is also used in the manufacture of rubber, enamel ware and chemicals. Veins of antimony ore 100 feet deep are found in Sections 13 and 16, Twp. 7 South, Range 29 West, which is seven miles northwest of Dierks on the Saline river. Veins are found in nine other sections. Renewed interest is being shown in a mine started at this site some years ago by inquiries being received as a result of the survey.

Deposits of gypsum have been located by the survey in the extreme eastern part of the county, also in the central part within five miles of Center Point. Gypsum is used as a fertilizer, in making crayons, as a filler for cotton materials, and as a base for paint and wall plaster. It is also used in making various grades of paper, as an ingredient of certain disinfectants and in the manufacture of cement.

Barite has been found in two locations in Howard county within the last two months. At a point 8 miles north of Nashville in the eastern part (Twp. 8 S., R. 27 W.) and at a point 3 miles south of Dierks on the Dierks and Possum Hollow Road in the western part

made and is best known in thermometers. Other principal uses are for drugs and chemicals, recording instruments and gauges, germicides and many other things. The present market price of quick-silver is \$93 for a flask of 76 pounds, an advance of \$3 within the last week.

The bentonite deposits located by the survey in Howard county are in the eastern part in Township 9 South, and Township 8 South, near state highways No. 4 and No. 26. This clay has been used principally for thickening mud used in rotary drilling in the oil industry. It is also used extensively as a bleaching earth. Recent investigations in the Massachusetts Institute of Technology indicate that it can be used for making a paper-like substance.

Other minerals located by the survey include copper and zinc minerals, limestone, lignite and several good gravel deposits, none of which has been worked.

So far, the workers on the project have collected data on 575 water wells and 63 springs in Howard county. In the extreme southern parts of the county wells are drilled to a depth ranging between 290 and 612 feet. Twelve of the wells investigated are artesian wells; the average depth of these is 418 feet and the daily flow ranges from 600 gallons to 42,420 gallons; the water generally is soft. Dug wells are from 8 to 60 feet deep, the water of some of these containing lime and sulphur. The dug wells are, for the most part, in the central part of the county, in regions adjacent to Center Point and Dierks.

Of the 65 springs examined, the most important is the famous group at old Center Point camp meeting ground. The twelve springs at this point all flow soft water except the one which flows sulphur water. Their combined flow is 10,000 gallons a day. There are 26 springs in this township.

Mr. Rankin reports having contacted virtually all land owners in the territory so far inspected and that excellent cooperation has been extended. The Dierks Lumber Company is contributing financial aid each month for the transportation of the field crew. The Nashville Chamber of Commerce is cooperating by paying office rent and maintaining a display of samples found by the survey. The citizens of Nashville have provided the funds for installing a water testing station by public subscription.

Mr. Rankin has received requests from the Warne Steel Company of Oklahoma and from the A. D. Green Fire Brick company of Missouri regarding any deposits of manganese the survey may locate. Other requests for information have been received from concerns interested in clays and antimony ore.

All data collected by the field workers, together with the records of analysis of samples from the laboratory in Little Rock will become the property of the state Geological Survey.

On the completion of the work this information will be issued in bulletin form under the direction of George C. Branner, state geologist.

The state office of the mineral survey is at 117 North Victory street, Little Rock. Robert C. Beckstrom is the state supervisor and R. E. Vandruff is the technical supervisor of the project.