

**SURVEY FOR MINERALS
BEGAN HERE MARCH 7
Carroll Co.
Mar. 9, 1938**

A new state-wide mineral survey to be made by the Work Progress Administration thru the sponsorship of the Arkansas Geological Survey will be started in 31 counties today, Floyd Sharp, state W P A administrator said.

Headquarters for the project, said to be one of the largest white collar projects ever undertaken by the WPA will be at 117 Victory street.

Robert C. Beckstrom will be supervisor

Purpose of the project is to "locate, measure estimate, and describe; test and map the accessible resources of the state such as construction materials minerals, and water tables for use in determining their adaptability for economic use of the state."

A total of 450 workers will be employed in the 31 counties.

The work will be extended to include 55 counties later, Mr. Sharp said.

Total employment in all the counties will be 600 with approximately 15 workers for each county.

Supervisors for the counties were selected by Mr. Sharp with the cooperation of Kenneth O Warner, state personnel director and Dr. George C. Braner, state geologist.

A two week school was conducted and persons with the highest grades were selected, Mr. Sharp said.

Additional supervisors in the counties to be included later will be selected from applicants with a "preferred" application. —Arkansas Gazette.

Summers Little, former resident of Eureka Springs but recently of Little Rock has been appointed supervisor for Carroll county.

**Carroll Personal Appeal
"Daily Times-Echo" 3-16-38
Editor Daily Times-Echo: 1938**

I take this means of making a personal appeal to the citizens of Eureka Springs in the matter of certain specific cooperation as concerned with the state mineral survey of Carroll county.

This survey will, at a very early date commence the business of locating measuring, estimating, describing, testing and mapping accessible resources in Carroll county to determine their adaptability for economic use.

The distinct value of such a comprehensive survey is not to be disregarded.

It can become a project of marvelous benefit to you if you cooperate and accept the project as yours and part of your responsibility to the development of Carroll county and the state of Arkansas.

Now, the state mineral survey is financed by W P. A. funds and as such, there immediately arises the need of certain "contributions" as provided by the WPA regulations. I want to emphasize the fact that these contributions will be charged off as cash and are, by and large, one of the most important responsibilities incurred in the securing of this most valuable survey.

The contributions in general are listed as follows:

Transportation and facilities for field personnel.

Office space and fixtures (Eureka Springs) This is a major contribution item and cannot be charged off as cash if located in the court house.

Utilities: Light and heat.
Typewriter: I will contribute this item.

Tools: Ax, pick, etc.

Such other items as would be incidental to this survey as maps, laboratory, facilities etc.

The office of the state Mineral survey of Carroll county is temporarily located in the court room of the court house, Eureka Springs, through the courtesy of Mr. Cleat Grigg, the county judge.

May I urge you to respond to this appeal by calling by the office and enlisting your cooperation

Charles S. Little,
Supervisor, State Mineral Survey for Carroll county.

**MINERAL SURVEY
OF THIS COUNTY
HAS COMMENCED**
"Carroll Co."
"Echo" 3-23-38
**Persons Knowing of Meteorites
Within the County Are
Requested to Report**

Actual field work was commenced Monday on the State Geological Survey sponsored state mineral survey for Carroll county.

The work was started only after a thorough school for personnel was conducted in the county court house here.

The survey is comprehensive and thoroughly worthwhile in that it will ultimately map the entirety of Carroll county section by section.

Mineral deposits in commercial quantities will be given particular attention in conjunction with the formal mapping of the cultural effects of the county.

Summers Little, Carroll county supervisor for the state mineral survey is interested in contacting parties having unusual or interesting mineral deposits on their property.

Mr. Little has also requested persons knowing of meteorites within the county to contact his office at the Harmon playground.

Mr. Little reports splendid cooperation on the part of the county officials, city officials, the Chamber of Commerce and civic groups.

Special credit is given County Judge Cleat Grigg and the county for the contribution of transportation facilities for the field personnel and to the Womans Club of Eureka Springs for the contribution of office space in the office of the Harmon Playground.

A cordial invitation is extended to the people of Carroll county to visit the office of the state Mineral Survey for Carroll county.

**"Courier" Carroll Co.
FIELD WORK FOR MINERAL
SURVEY STARTED MONDAY
5-24-38**

According to Summers Little, Carroll county supervisor for the State Mineral Survey, actual field work was commenced Monday on the state geological survey sponsoring the mineral survey for Carroll county. The work was started only after a thorough school for personnel was conducted in the county court house here.

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He reports splendid cooperation on the part of county officials city officials, the Chamber of Commerce and civic groups. Special credit is given County Judge C. D. Grigg and the county for the contribution of transportation facilities for field personnel and to the Woman's Club of this city and the City of Eureka Springs for the contribution of office space at the Harmon Playground.

A cordial invitation is extended to the people of Carroll county to visit the office of the State Mineral Survey for Carroll county.

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Report of the County
State Geological Survey
Carroll Co. 7/15/38

The State Mineral Survey for Carroll county under the sponsorship of the State Geological Survey reports splendid progress in its work in the county.

Since March 1st a total of 200 square miles have been inventoried by the mineral survey.

Since Carroll county occurs geologically in the ordovician, devonian and Mississippian systems particular effort is being given to a comprehensive catalogue of limestones.

This information is so mapped, described, estimated, sampled and tested as to give interested parties in the future concise picture of Carroll county's most valuable Geologic resource together with facilities and accessibility.

The limestone of this county are utilizable as raw and burnt lime fertilizers, building stone, as a flux in smelting iron and steel in the manufacture of high magnesian lime, as crushed stone and many others.

There is an abundance of highway building material such as Chert, river and clay gravel in this county.

Deposits of Calcitic Onyx, Galena, Spearite, Chalcopyrite and iron pyrites occur here.

As to the use of the limestones of this area for agricultural purposes a quotation from "Outlines of Mineral Arkansas Resources" is explanatory "Lack of Comprehensive surveys and development work make it impossible even to approximate the extent of Arkansas resources in the matter of minerals suitable for fertilizer.

It is definitely known however, that in variety, quality and quantity these minerals are of great potential value, perhaps exceeded only by petroleum, coal and Bauxite.

In the northern part of the state large areas of limestone and dolomite (magnesian limestone) await development.

It is expected that some months yet will be required in the completion of this mineral survey.

Carroll County Mineral Survey Well Underway

WPA Crews Find Large Quantities of Sand- stone in Ozarks.

A mineral survey in Carroll county is two-thirds complete and a wide variety of minerals have been located during the past 10 months since the work was started in this county as a part of a state-wide WPA project carried on under the direction of Dr. George C. Branner, state geologist, and sponsored by the state geological survey, it was announced yesterday.

The project includes tabulation of data on water sources, caves, railroads, highways, power transmission lines, bridges and dams, Charles S. Little, county supervisor said. Mr. Little has headquarters in Eureka Springs.

Of the 641 square miles in the county, the WPA survey crews have checked 422 square miles.

Minerals which have been located and mapped thus far, in commercial quantities are limestone, sandstone, dolomite and road materials. Members of the survey also report small deposits of galena, iron pyrites, Mexican onyx and clays. Of the 206 samples of specimens submitted to the Little Rock office, 179 have been identified and classified.

Limestone has been located in large quantities in the northwestern part of the county. Crushed limestone is valuable as a fertilizing agent. Estimates of the survey indicate that millions of tons of this fertilizer are present in Carroll county and much of it is easily accessible by highway. Six crushers are now in operation in Carroll county.

Sandstone is found in the sections adjacent to those in which limestone is found in the northern part of the county. The St. Peter sandstone, which is a high purity silica sandstone useful as a supply of glass sand, is present in very large quantities.

Much Sandstone Found.

Dolomite is a magnesian limestone used principally for building and road construction; it is also used in the manufacture of rock wool. A single deposit of dolomite two miles south of Eureka Springs is 20 feet thick and estimated to contain 1,000,000 cubic yards. It is found in thickness ranging to 100 feet.

Carroll county has an abundance of road making material in the sand, river gravel, and clay gravel found in many sections.

The water wells and springs of Carroll county are receiving particular attention by the survey. The workers record on their field sheets every well, spring, stream, creek and branch in every section. So far the crew has investigated 526 wells and 136 springs, including municipal water supply systems.

This survey also records the location of all highways, county roads, improved and unimproved, and the trails made by CCC. All power transmission lines have been mapped. This information will be used in correcting county maps now in use.

On the completion of the work, all samples, field sheets and records taken by the field workers in Carroll county will become the property of the Geological Survey. Robert C. Beckstrom is the state supervisor for Works Progress Administration and R. E. Vandruff is the technical supervisor of the state-wide projects.

Mineral Survey Maps Location of Many Deposits and Resources in County

For the last ten months a mineral survey has been in progress in Carroll county. This is a part of a statewide WPA project sponsored by the State Geological Survey in these counties known to have valuable mineral deposits. Besides minerals the survey includes the surface and ground waters, caves, railroads, highways, electric power transmission lines, bridges, dams and all other cultural features—those improvements made by man. The county supervisor is Charles S. Little, whose headquarters are at the Harmon Playground, Eureka Springs.

The entire 641 square miles of Carroll county's area will be examined during the course of the work. Of this area 422 square miles have been covered.

Minerals which have been located and mapped thus far, in commercial quantities are limestone, sandstone, dolomite and road materials. Members of the survey also report small quantities of galena, iron pyrites, Mexican onyx and clays. Of the 206 samples of specimens submitted to the Little Rock office, 179 have been identified and classified. The mineral survey has been engaged in accurately locating and mapping all deposits, estimating the extent of such deposits and of taking samples for analyzing at the laboratory in Little Rock in order that the value and use of the material may be determined.

Limestone has been located in virtually inexhaustible quantities in the northwestern part of the county. It occurs in shades of pink, red, carrying shades of gray, gray-brown and blue. Besides its value as a building material, crushed limestone is valuable as a fertilizing agent. Plant growth is retarded in soil having acid condition; this is neutralized when lime is added to the soil. If burned, lime penetrates soil more rapidly. Estimates of the survey indicate that millions of tons of this fertilizer are present in Carroll county and much of it is easily accessible by highway. The mineral survey has aided the Soil Conservation Service in indicating the deposits, their nearness to roads and the logical points at which lime crushers could be built. Six crushers are now in operation in Carroll county.

Sandstone is found in the sections adjacent to those in which limestone is found in the northern part of the county. The St. Peter sandstone, which is a high purity silica sandstone useful as a supply of glass sand, is present in very large quantities.

Dolomite is a magnesia limestone used principally for building and road construction: it is also used in the manufacture of rock wool. A single deposit of dolomite two miles south of Eureka Springs is 20 feet thick and estimated to contain 1,000,000 cubic yards. It is found in thickness ranging to 100 feet.

Carroll county has an abundance of road making material in the sand, river gravel, clay gravel and chert found in many sections

by the mineral survey. Near Highway No. 21, two miles north of Oak Grove is a deposit of hard, blue, broken chert containing 1,370,000 cubic yards; two miles south of Grandview, near the North Arkansas Railroad is a gravel deposit containing 2,000,000 cubic yards. In Township 20 N, Range 25 W. (four miles southeast of Eureka Springs), a deposit of clay gravel 30 feet thick has been located and mapped.

The water wells and springs of Carroll county are receiving particular attention by the survey. The workers accurately record on their field sheets every well, spring, stream, creek and branch in every section, with its name, when known, and its present or potential use. So far the crew has investigated 526 wells and 136 springs, including municipal water supply systems.

In Carroll county the water supply for domestic use is from three sources: wells, springs and cisterns. In the northern and northwestern sections—according to the survey reports—due to the limestone formation—the water in both springs and wells is hard. Because of this quality in the water many families use rain-water cisterns. The wells, for the most part, are drilled, the depth ranging between 25 feet and 150 feet. In the vicinity of Green Forest the wells are dug, the depth varying between 11 feet and 60 feet. Occasionally a well is found to have soft water, but cisterns are numerous in this locality. The 1,700-foot well in the town of Green Forest has a capacity of 45,000 gallons daily for the population of 817; the reservoir has a storage capacity of 50,800 gallons.

The city of Berryville, with a population of 1,200, has a water supply from Johnson Spring, five and one-half miles south of the town. The daily consumption of 50,000 gallons is from two reservoirs, of 100,000 gallons and 325,000 gallons respectively. No chemicals are used in treating this water for city use, as it is naturally soft. Records of the survey show that many wells and springs are used by private families in Berryville and vicinity.

This survey also records the true location of all highways, county roads improved and unimproved, and the trails made by CCC. Notes have been made on the location of all bench marks, witness trees and location monuments. All power transmission lines have been mapped. This information will be used in correcting county maps now in use.

At the beginning of the work of the project in Carroll county, Mr. Little appealed through the newspapers of Eureka Springs for cooperation of the citizens by furnishing means of transportation and facilities for doing field work, and for assistance in locating mineral deposits. County Judge C. D. Gregg furnished transportation and for a time gave space in the court house for office headquarters. Later the Woman's Club of Eureka Springs

provided space at the Harmon Playground for this purpose. The Chamber of Commerce, city officials and various civic organizations have lent valued assistance in supplying utilities, office equipment, heat, etc. Superintendent R. L. Smith and Principal M. E. McCall of the high school have donated the use of their geographical records of Northwest Arkansas for the benefit of the survey.

On the completion of the work, all samples, field sheets and records taken by the field workers in Carroll county will become the property of the State Geological Survey. This information will be organized and compiled under the direction of George C. Branner, State Geologist, to be published as a County Report and made available for those interested.

The state offices of the Mineral Survey are at 117 North Victory street, Little Rock. Robert C. Beckstrom is the State Supervisor for Works Progress Administration and R. E. Vandruff is the Technical Supervisor of the Project.