TO TAKE OFFICE JULY 1
Will Be His Aim to Take Up Father's
Laments Where He Left Off,
Days News Official

GEORGE C. BRANNER,
STATE GEOLOGIST

Son of Eminent Scientist Will Be Appointed by Governor Today.
May 31, 1927.

Geologist to Seek Fund to Widen State's Mineral Research

Brancker Hopes to Show State's Mineral
Resources of Importance. F. 2-7

Tucked away in a corner of the office of the state agency that handles Arkansas' oil and gas division, the agency is preparing to show the state's mineral resources of importance.

The study is being conducted by Mr. C. Branner, who sits in a chair and attends a meeting of the state government with a smile.

Mr. Branner, who is the son of a world-renowned scientist, hopes to show that the state's mineral resources are of great importance.

The study has been underway for some time, and Mr. Branner is confident that the findings will be of great significance.

Mr. Branner is working with a team of scientists and geologists to gather data on the state's mineral resources.

The goal is to show the significance of the state's mineral resources and to provide a basis for future development.

The study will take several months to complete, and Mr. Branner expects to have the final report ready by the end of the year.

The information gathered will be used to help make decisions about the state's mineral resources and to guide future development.

The study will also provide valuable information to businesses and individuals interested in the state's mineral resources.

Mr. Branner is hopeful that the findings will be of great benefit to the state and that they will be used to attract investments and to promote the state's mineral resources.

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STATE'S MINERAL WEALTH DISCUSSED

Geologist Estimates Value of Natural Resources at $64,000,000.

Arkansas' wealth in natural minerals has been thoroughly mapped by the state's mineral resources project, the results of which have been compiled into a detailed report.

The report, which was compiled and issued by the state's mineral resources project, estimates the value of the state's natural resources at $64,000,000.

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New Program of Geological Research Will Be Started in July

With the inauguration of the new program of geological research in Arkansas early in July the state geologist will have a much larger staff and an improved set of field equipment with which to pursue his studies. The program will be devoted to the exploration and mapping of the mineral resources of the state, and the work will be carried on under the general direction of J. H. Becktham, United States District attorney, stationed at Little Rock.

The survey will be divided into two main parts, the first covering the eastern half of the state and the second the western half. The eastern part of the state is composed of a series of faulted anticlinal ranges which extend from the Mississippi River to the Arkansas River. The western part of the state is composed of a series of faulted synclinal ranges which extend from the Arkansas River to the Red River.

The survey will be carried on by a series of field parties, each consisting of a geologist, a draftsman, and a photographer. The geologists will make detailed surveys of the mineral deposits, the geologists will make detailed surveys of the mineral deposits, and the photographers will make detailed surveys of the mineral deposits.

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State Geologist Shows Ark

George C. Branner Also Gives Outline of Soil and Data Reviewed and Interpreted—Possibility of Big Oil Field

A broad and comprehensive survey of Arkansas's mineral, soil, and water resources is attractive and authoritative set forth in a 328-page report compiled by Dr. George C. Branner, state geologist. The book, "Arkansas: Geology of the State" comes out from the press and will be available on July 1. In the generation of this information all available data on the state's resources has been collected, subjected to the expert analysis and interpreted in its commercial aspects with a degree of thoroughness never before attempted.

The material is concisely presented and conveniently arranged, and while the text is largely technical and statistical, it is primarily a work intended for the general public, expressed in clear, concise language illuminated by numerous charts and graphs that help to make the subject matter readily comprehensible.

The title is "Arkansas: Geology of the State," published by the state of Arkansas and the University of Arkansas.

The author, Dr. George C. Branner, is state geologist and professor of geology and mining at the University of Arkansas. He has been associated with the state's geological survey for many years and has written extensively on the state's mineral resources.

The report contains a detailed description of the state's geological features, including its mineral resources, soil conditions, and water supplies. It includes a comprehensive geographical and geologic map of the state, as well as detailed charts and tables that provide a wealth of information on the state's resources.

The report is significant for its detailed analysis of the state's mineral resources, which are critical to the state's economy. It includes a detailed examination of the state's coal deposits, as well as information on its oil and gas resources. The report also provides valuable insights into the state's geological history, including its formation and evolution.

The report is an important resource for anyone interested in the state's geological resources, and it is a valuable tool for researchers, policymakers, and industry professionals.

The report is available at the state's geological survey website and can be purchased from the state's geological survey office. It is a valuable resource for anyone interested in the state's geological resources and their implications for the state's economy.
Geological Project
By Making "Two Dollars Year Regardles"s

Despite the disheartening discovery that the very near the state geologi-
ical department has remained below the production level of five years ago, the
year was a very prosperous one for the industry. The corporation has been
successful in securing new deposits, and the operations have been
continued without interruption.

Another interesting feature of the year was the discovery of a new
ore deposit near the town of Mineral City. The deposit is located in the
northeastern part of the state, and is expected to bring new life to the area.

In addition to the new deposit, the company has also continued its
exploration work in the vicinity of the old workings, and has made
significant discoveries in several areas. The company has also been working
on the development of new mining methods, which should help to increase
production in the future.

Overall, the year was a very successful one for the company, and the
management is looking forward to continued growth and success in the
coming years.

Oil Sources Nilfed

2) A new oil well in the northwest corner of Southeast Ark

The importance of such a work has been emphasized in the geological
field, and it is generally agreed that the presence of oil in the area is
of considerable significance. The discovery of oil in the area is
expected to have a profound effect on the economic development of the
region.

The new well is located in the northwest corner of Southeast Ark
and is expected to produce significant quantities of oil. The discovery
of oil in this area is a significant milestone in the development of the
region's petroleum industry.

The geological significance of the discovery is further enhanced by the
fact that the new well is located in an area that was previously considered
not to be productive. The discovery of oil in this area is a testament to the
value of continued exploration and the importance of maintaining an open
mind to new possibilities.

In conclusion, the discovery of oil in the northwest corner of Southeast
Ark is a significant milestone in the development of the region's petroleum
industry. The importance of this discovery cannot be overstated, and
the potential benefits are significant. The region is expected to see
continued growth and development as a result of this discovery.

History of Coastal Plain
Is Prepared by Geologist

Area of Southeastern and Eastern Arkansas and Louisiana
Extends From the Gulf of Mexico to the Ouachita Mountains.

The geological history of the coastal plain area of Arkansas and Louisiana
is a topic of great interest to geologists and other scientists. This
area is characterized by a rich history of geological events that has
resulted in the formation of a unique and diverse landscape.

The coastal plain area extends from the Gulf of Mexico and the
Ouachita mountains, and is home to a variety of geological formations.

The early geological history of this area is dominated by the
formation of the Ouachita Mountains, which are a result of
the collision of the North American and the Gulf of Mexico plates.

The coastal plain area is home to a variety of geological formations,
including the Coastal Plain, the Ouachita Mountains, and the
Mississippi Delta.

The coastal plain area is also home to a variety of geological features,
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New Geological Map of State is Being Prepared.

GEOLOGICAL MAPS of Arkansas have been prepared by the U. S. Geological Survey, which will be released soon. The maps will show the location of the various mineral deposits in the state, including coal, oil, gas, and other minerals. The maps will also show the geological formations that make up the state, including the Ozark dome, the Ouachita mountains, and the Arkansas River valley.

NATIONAL GEOLOGICAL SURVEY is preparing an official map of the state, which will be published soon. The map will show the location of all the mineral deposits in the state, including the various geological formations that make up the state. The map will also show the location of the various oil and gas fields in the state, including the Ark-La-Tex field, which is one of the largest oil fields in the world.

Mysteries of the Sunken Land Exposed

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New Geologic Map of State Is Completed After Three Years

Copies May Be Obtained From State Geological Survey.

—Dr. Branner Discusses Arkansas Mineral Resources.

Oil Limits Indicated.

"The oil and gas produced in this section thus far has indicated the reservoirs and in the cretaceous and thinner portion of the upper cretaceous sections. The cretaceous is, as the result of these investigations, of interest. George C. Branner, state geologist, announced yesterday. The combination of economic and scientific information in a large number of sources and maps has been awaited with great interest by many engineers, geologists, and others. It will be sold at an expense of $1.50 at the deposit office, or 25c by mail. It is printed in 31 colors and shows the geographical location of the numerous formations found in the state. North-east and west-west geologic cross sections are shown, together with the state, counties, and oil fields and other geologic features in the Arkansas.

In conclusion, geologists have found the geology and mineral resources of the information for oil and gas exploration. These maps will form the basis of a more detailed understanding of the oil and gas situation in southern and eastern Arkansas.

"All of the basins found in Arkansas is immediately adjacent to the Ozark and Mississippi interior zone, which occupies the Ouachita and Arkansas river valleys. The commercial development of Arkansas is very nearly all confined to the cretaceous and eastern Arkansas.

A VALUABLE CONTRIBUTION.

For more than 50 years Mr. Branner has had the mineral resources of the state other than information gained from federal and state governments which enjoyed only a very limited circulation. Of course, they had had their schools in that day because "Arkansas had everything found in every other state."—J. A. W. C.

Dr. Branner says: "The commercial development in Arkansas is very nearly all confined to the cretaceous and eastern Arkansas. The commercial development in Arkansas is very nearly all confined to the cretaceous and eastern Arkansas. The commercial development in Arkansas is very nearly all confined to the cretaceous and eastern Arkansas.

For example, the minerals of the cretaceous basin have commercially developed are zinc, lead and zinc, copper, silver, water, and gas. Practically all of the zinc is obtained in the Bonneville zinc district and the commercial development in Arkansas is very nearly all confined to the cretaceous and eastern Arkansas. The commercial development in Arkansas is very nearly all confined to the cretaceous and eastern Arkansas.

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This map has been prepared by the Arkansas Geological Survey with a recognized geologist at the head, who immediately began the compilation of all such valuable data in a map from which you could learn a great deal more about your resources than our geologists learned in a lifetime of experience.

The map is printed in 31 colors and shows the detailed surface distribution of the numerous formations found in the state.

It is an established fact in geology that in certain strata, formations, or whatever you may choose to call them, can be found certain products. Therefore, geologists waste no time in seeking such products in formations to which they are "not" peculiar. "Engineers may thus use the map as a guide to the mineral deposits of the state and as a means to prevent unprofitable search for minerals in areas where occurrence is unlikely," Dr. Branner says.

The value of the map to the layman lies in the fact that it will "enable any person with some understanding of the state's mineral resources to locate various areas through which the deposits of certain minerals may be expected." This map is a completion of a contribution to the economical development of Arkansas. It gives us another sound argument in behalf of our contention that it has a "wonder state."
Ozarks Have Plenty of Natural Wonders

BY TOM SHIBAS.

The Arkansas Ozarks have enough natural wonders and picturesque spots to amaze even the most seasoned traveler. Many of the natural interesting things are accessible only to people who live adjacent to them, and to whom they are not just common, but rare. One of the most unusual is the Diamond Cave and Mammoth Spring, which are known in all parts of the United States.

The Ozark streams have few Wellesley national park with its blue mountains, but deep down in the mountains is the beautiful Flat Rock Hollow, where there is a delightful spring. On quiet days, one can hear for several hundred feet away. It emits a low, mellow, musical whistle, and if one paused that way at night, and was not aware of the sounds that they would think someone was asleep and snoring lightly.

There is a cove and a spring near the mouth of the White River. It will flow for an hour, then cease, then start to flow again. Somewhere back in the underground water channel is a natural check valve, that causes the phenomenon.

The Rockies have many famous mountains, but probably not one as picturesque as the Flat Rock in the sky just back of Mountain View county, seat of Bourbon county. Here is a certain condition that was found way down in old Flat Rock. The shades below are well preserved in the hills. When you roll through those hills you pass in the mountain on state Highway 49 between Marshall and Lawrence county, you go over The Devil's Backbone. This is one of the best views of the Flat Rock in Bourbon county, and a Hill cove in Lawrence county.

There is a tree in a cove in a blue sapphire meadow blue on White River, three miles above Callow Roark, on which the sun has never shone. The blue sapphire meadow is blue, but its color is the most noted cavers in the United States.

unconquered never penetrates, the mouth of the cave.

Flat Rock has a hidden cove that is not visible, where some caves have been found that are able to be seen only from inside. The underground water channel is a natural check valve, that causes the phenomenon.

Independence county has a cave hidden in the rocks, and where rocks have been found that are able to be seen only from inside. The underground water channel is a natural check valve, that causes the phenomenon.

Indemnity county has a Reis cave, in which there is still a stream, and its bones bone. It is said that it was the scene of an Indian battle in the early days, and that the caves made their last stand in the area.

The largest turtle we have ever seen is the blue sapphire meadow blue on White River, three miles above Callow Roark, on which the sun has never shone. The blue sapphire meadow is blue, but its color is the most noted cavers in the United States.

Ozarks-Hemmed-In Hollow Little Known Wonder of Ozarks

BY RALPH A. BULL.

Harrison, March 14—Natives have offered to theView of travel ers along the Flat Rock Hollow. Turtles have been found that are able to be seen only from inside. The underground water channel is a natural check valve, that causes the phenomenon.

Hemmed-In Hollow has been found in the same general area. It was a delightful sight. Turtles have been found that are able to be seen only from inside. The underground water channel is a natural check valve, that causes the phenomenon.

A few years ago, Mr. Bruce, said, one of the most unusual things he had seen was a small patch of water that had run for several years. He had seen it in the same general area. It was a delightful sight. Turtles have been found that are able to be seen only from inside. The underground water channel is a natural check valve, that causes the phenomenon.

This picture gives an idea of the depth of Hemmed-In-Hollow, a hole a mile wide and a mile high, in a mountain in northern Newton county.

This picture was taken in the middle of the hollow, where the cliffs are over 40 feet high. At any other time the water is too cold to be fishing. The cliffs on all sides are nearly vertical, a mile wide and a mile high, in a mountain in northern Newton county.

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Mr. O'Neill and his wife lived on the place long enough to "prove up" on the homestead. Their daughter, already gaining recognition in the world of art, visited them several times and is well known to the natives thereabouts, as well as in Harrison where she spent a large part of one summer.

About 14 years ago the elder O'Neill left their homestead and went to California. The cabin burned and the land was sold or given to friends in the West and ownership of that part of the Hollow now rests in those Californians. The old burn trail is barely discernible and practically impassable.

Mr. Bruce has a vision of one-time owning all of the Hollow and transforming it into a deer preserve. By fencing in a small stretch near the lower end of the canyon, and closing the one or two gateways through the cliffs, once used by game, no animal could escape, he says, and the Hollow would provide just the environment in which deer would thrive.

The visitors are convinced that Mr. Bruce is right about the difficulty of escape from the Hollow. They made their exit on the other side from which they entered by climbing Alpine-fashion from one ledge to another, resting frequently, but finally reaching the top again for a last view of one of the most beautiful, yet almost unknown phenomena of the Arkansas Quartz.
State Geologist Presents Graphic Pictures of Subterranean Arkansas

By GEORGE C. BRANNER,
(State Geologist.)

The two sections shown in the illustration give fairly clear pictures of the surface structure of north and south Arkansas. These sections have been exaggerated about 10 times to make the relationships clearer. The maximum thickness of the sections being a little less than four miles.

Naturally, no one can have complete information of the rock at such a great depth, but the general relationships shown are dependable ones; in order to explain a great many facts which have been secured from deep wells and from the age and structure of the surface formations, it is necessary to assume them.

For instance, in the north-south section (map drawing), it is apparent that the age of the surface beds in the vicinity of Mountain Home belong to the same group as those which occur near Benton. We find also that the beds near Mountain Home have a slight inclination to the south. If we go south from Mountain Home we find the rocks are very gently inclined to the north and the beds of the central part of the Arkansas river valley. From there beds we pass to successively older rocks until we come almost to Benton, at which point the age of the formations is approximately the same as was the age of the rocks upon which we started.

We also find that the geologic structure is from northern to central Arkansas, the surface beds are more and more gently folded. From these facts and from deep well records, we reach the conclusion that the rocks lie in a great regional trough of the general character shown.

In the west-east section (lower drawing) the older rocks of the state are shown reaching the surface near De Queen. Those extend downward, creating a great structural trough and, conforming each other, reach the surface again in Alabama. This trough is filled with sediments derived by erosion from the Quaternary, Tertiary and Cretaceous beds, the surface of which make up the Gulf Coastal Plain.

The sections also illustrate the fact that if we know what surface formations are to be found in any portion of the state, we shall know, at least in a general sense, what minerals we may expect to find. If we are looking for commercial bodies of coal, for instance, we shall notice many in Arkansas or in the Ouachita mountains, in the Gulf Coastal Plain, but will give our atten-
Little Rock Is Situated on 'Wrinkle' of Earth's Crust

BY GEORGE C. BRANNER

The construction and extent of the central road from Pulaski Heights through the Negro settlement near Pulaski Heights and along the Arkansas river to the Southwest, the Lincoln avenue has necessitated the cutting away of the sides of some of the hills along the way, and has revealed in the exposure of the bedrock in an interesting manner. As Chastain road slopes downward from Edge Hill, sandstone beds are exposed for several hundred yards. These changes almost entirely to laminated sand, gravel, and clays, resting upon the Carboniferous rocks which serve as a basement.

On the other hand, the Carboniferous rocks near Little Rock are of relatively great age (probably something like 30,000,000 years), and are usually hard and consolidated clays, limestones, and sandstones, and have been subjected to enormous pressures which have folded and displaced them. Both the Gulf Coastal Plain beds and the Carboniferous beds were originally deposited as sediment on the bottoms of seas which have long ago disappeared of a great structural trough known as the Big Rock Syncline, which is one of the first of the great "wrinkles" created on the north flank of the Ouachita uplift.

The flank of this great structural trough extends at least eight miles southwest of Little Rock. The axis of this "down fold," which is about 22 miles long, passes through the center of the Little Rock National Park Company's quarry, and is the United

The above drawing shows a cross section of the Big Rock Syncline, or great structural trough, near the center of which Little Rock is situated.

States Highway No. 65 just south of Levy. The northwest flank of the fold may be seen in the bluffs along the Rock Island railroad tracks for several miles northwest of Pulaski station, the rocks there being tilted to the south. The central portion of the trough is made up of a series of sandstone known as the "Jenkins sandstone" formation. This sandstone has provided all the rock quarried at Big Rock. The lower part of the trough is made up of the "Stanley shale" formation. Both formations are of Mississippian, or early Carboniferous age.

The accompanying map shows the distribution of the Jackfork sandstone and Stanley shale formations in Little Rock and vicinity. Both of these formations are of great area extent in Arkansas and have been traced across the state into Oklahoma. The Jackfork sandstone has a maximum known thickness of 6,000 feet in Arkansas and the Stanley shale 5,400 feet.

It is interesting to consider the enormous periods of time which the slow deposition of the sand and clay which formed the Carboniferous rocks found in Little Rock alone represent.

If we assume an average of 10 degrees of these rocks of 100 years, and if we assume that one can walk across three miles of the upturned edges of these beds within the city limits, the thickness of the beds measured at right angles to the position in which they were laid down is approximately 1,920 feet.

If we assume an average rate of the deposition of the beds to be 100 years to the inch, this appears to be a conservative estimate, the time required for the formation of these beds alone is more than 9,000,000 years.

'Bubbling Well' in Vicinity of Stamps Arouses Interest.


The Stamps, Ark. - Indications of natural gas in a well on the J. M. Ogle place five miles north of Stamps, appears favorable to Stamps people who have visited it. The gas well, which is only 22 feet deep, began four weeks ago to produce slightly, but has increased in size and volume daily until it is now flowing at the rate of 15,000 cubic feet per hour. The water in the well looks like it's huge fire was blazing the water.

Four main jets of gas coming in from the side veins appear with other small jets all over the well and one in the center. The water is clear and shows no sign of oil.

G. C. Branner, state geologist, says that the 'bubbling well' is not likely to be of any considerable amount of natural gas, but may be a small pocket of natural gas, commonly known as "manned" gas, may be responsible for the disturbance of water in the well. He says it might be a small pocket of natural gas in size and volume, but that it is still too small to be a "manned" gas. The indications are that the gas and water in the well are strongly impregnated with sulfuric acid and are likely to prove injurious if the gas is not exhausted, as he said.
Erosion, Maker of Scenery

The Mountains Were Carved by the Eroding Elements, Wind and Water, Which Work Slowly but Surely Through the Ages. Except for Them, the Ozark Mountains Would Have Remained a Great Plateau.

By TOM SHIRAS

Erosion is the greatest destructive force in the Arkansas Ozarks. During the past thousands of years, approximately one-half of the entire surface of the section has been cut away to an average depth of about 200 feet and the material carried down by the surface drainage to the Gulf. To try and conceive the total weight of this material would be like trying to conceive of the weight of a roof many thousands of square miles in extent.

If no erosion had taken place, the Arkansas Ozarks today would be an undulating plain, with sloughed streams and no beautiful mountains or scenery. The soil probably would have been deep and black, and the farms laid out in square blocks rather than in the trellis-like pattern they are today. The section would have the topographical appearance of the plains sections of Texas and Oklahoma. The winter climate would be much more severe and the summers hotter with hot winds.

Erosion is a destructive force that is active all the time, but for the most part its action is so slow that no one notices it. In that respect it is like interest on a debt, or the hands of a clock, but its action is as certain and sure as death itself.

While erosion is taking place everywhere its action is faster in a mountain section, because one of its principal agents is water, and water moves faster and cuts deeper flowing down steep hillside.

Many people not familiar with the geological history of the Ozarks, imagine that the Ozark mountains were thrust up from below. The fact is they were eroded out of existence. Away back yonder in the distant yesterdays interior forces of the earth caused a bulge in the Ozark region. This action left the section in the shape of a plateau.

Erosion then began its work of shaping the surface into what it is today. Rafts fell and the surface water wore out stream beds, and hollows, and the underground water attacking the weak places or cracks, cut out caves and underground water courses, which discharge on the mountainsides in the shape of springs.

All of the beautiful Ozark Mountain streams flowed at a much higher level 10,000 years ago than they are flowing now, and in the dim yesterdays they ran across and around what are mountains tops today.

During the ice mining boom in 1814, 1815, 1816 and 1817 many evidences that these streams flowed at a much higher level were found. When J. C. Shepard was operating the Sure Pum mine on Water creek, in Marion county, miners dug a cut through a creek gravel bar containing mud shells that was nearly 100 feet higher than the present bed of the stream. How long it took erosion to lower the bed 100 feet is problematical, but to say the least it was many thousands of years.

Every beautiful bluff along the White river and its tributaries is an outstanding example of what erosion has done in the Ozarks. At one time or another the tops of these bluffs represented the low banks of the streams. Now they are hundreds of feet above the beds of the streams. The rugged, cedar-clad faces represent the lines of running of the surface rock, the material washed away between them in bold relief overlooking the stream.

Many beautiful examples of erosion can be found in the Ozarks. Sugar Leaf mountain near Heber Springs in Cleburne county, stands out by itself, with a bluff some 30 feet high on top of it, making one of the most beautiful mountain pictures in the territory. Because this mountain was of porous and harder material than the rest of the stuff around it, it stood the ravages of erosion better and held its own against time, its natural enemy. Eventually, however, erosion will level this mountain.

Water as an element in erosion acts in two ways. The water in the streams is always cutting, cutting, wearing down the bed and banks. Most folks would think that this is the only manner in which water assists erosion in its destructive work, but rain plays its part as well.

Rain striking the face of any limestone ledge softens it and carries off a part of its lime value in solution, leaving a little soft shell on the face. When this little soft shell dries, the wind comes along and keeps wearing at it until it finally breaks through the shell and exposes outside more wind, and hundreds of rains and wind, and the fact of the rock is cut back half an inch. In a thousand years maybe a foot, and so erosion takes its toll.

Wind plays a very important part in the destructive forces of erosion. The action of water alone would probably not be half as fast if it weren't assisted by wind. Water softens and decays and wind carries away the debris. Wind tears at every little crack in a rock, blowing out the debris to make a larger opening for water to percolate in and hurry its work of destruction. Every cloud of dust raised by the wind means that billions of small grains of matter have been torn away from soil. Its destructive work never stops. Somewhere the wind is always blowing.

Erosion has cost the Arkansas Ozarks millions of dollars in land values. The first time the writer ever visited the big botttons on the lower White river he wondered how many thousand acres of top soil in the hills it took to create these rich, level fields. The amount of material carried by rivers in much greater, wind, and hundreds of rains and wind, and the fact of the rock is cut back half an inch. In a thousand years maybe a foot, and so erosion takes its toll.

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Breezes Blow on Petit Jean

Noted Rendezvous of Summer Visitors Is One of the Most Attractive Resorts in Arkansas — For Many Years a Settlement Has Existed on the Mountain Top, and the State Y. M. C. A. Camp Is Held There Every Year.

By D. MOORE MITCHELL

July 19, 1935

A group of Preachermen landed at the foot of Petit Jean mountain in early days after a long voyage across the ocean and up the Arkansas, and ascended the rugged mountain in quest of gold. One of their party was dubbed "Petit Jean" because of his small size. This little member of the party could not stand the hardships and became ill. Then it was that "Petit Jean" disliked his identity, she had donned man's clothing to be near the man she loved. When she died she was buried on the mountain and it was called Petit Jean in her honor.

The mountain faces east in the form of a horseshoe, with two points, Sunrise and Blue Point, forming the ends. Not so long ago an immense rock fell from Blue Point causing consternation among the inhabitants below. To the west, breaking into many ranges, is what the natives call "Little mountain." The Petit Jean river flows at its base and empties into the Arkansas. The brow of the mountain, except a few gaps, is held in place by enormous boulders. The mountain from each brow slopes to the center, where Cedar creek takes up the waters. It flows to a steep precipice, over which, in rainy seasons, the water goes with a roar, but settles to a more tranquil state when dry weather comes. It is known as Cedar falls. For many years there has been a settlement on the mountain. Settlers came, presumably from the mountain sections of the older states, and seem to be indigenous to the soil. The old road south of Sunrise Point passed through what was called "Stout's Gap," which was named for the owner of a large plantation at the base. Mr. and Mrs. Stout were cultured and went on a prospecting trip up the river they were so impressed with the beauty of the mountain and the fertility of the soil that they bought the place later known as the "Stout plantation." The road went across the mountain with neighboring roads diverging (for the mountain top is a miniature country, with hills and valleys and long stretches down the west side through what is now known as York's Gap. Then the road was changed to the north side of Sunrise Point, winding around the point near the recent acquisition to the Y. M. C. A. camp. On the west side, with its home hanging, it seems, perilously on the side of the mountain, lived Dr. Jackson, who practiced medicine in the rich Garden bottoms. When the old-timers came down the mountain across the Stout's ferry over the Arkansas river on their semi-annual trading trip, they could see the mountain across the lowlands on their return and approached it reverently. Even the children loved the mountain and would call it "my little Petit Jean Mountain."

Years later settlers came from the Eastern states, presumably attracted to this out-of-the-way place by an advertising campaign. Mr. and Mrs. Middleton came from New York. Sturdy German settlers come from Pennsylvania. One can understand why they should think the mountain suitable to grow grapes and fruit. One of these settlers, Mr. Brown, built a large house and operated a hotel during the summer.

Young people have gone to the mountain on outings for many years and families have camped out for respite and cool nights and pure water. Most of the natives of the mountain have died and younger members of their families have sought other homes. Not many of the old stock remain.

Near New Haven lives Miss Celeste Goodrich, one of the descendants of the settlers from the East, who is known as one of the "Goodrich girls." Recently Miss Celeste had an opportunity to sell her inheritance, a steep mountainside, but after consulting a lawyer she was advised that she wasn't offered enough. It was the last chance.

A Mr. Nelson, manager of the Stout plantation, erected what is known as "The Tom's House." Many people visit the mountain and the mansion planned to build a home above the farm to take care of those who wanted to stay awhile on the mountain top. It was a pretentious structure for its day with a stone foundation and a superstructure of two and a half stories. It was a great undertaking to haul the stone and dressed stone, which had been shipped from Little Rock by boat, up the mountain. This house now is the administration building of the "Y" camp. In old days the people on the mountain must have been annoyed by visitors seeking lodgings. One little shack with a lean-to had this sign: "Positively no boarders taken here!"

Several years ago a young doctor came to the mountain for his health. Dr. T. W. Hardison and his wife have been instrumental in developing the mountain from an educational and scenic viewpoint. His skills as a physician have limited the mountain and adjacent country, but his ability as a writer has gone abroad. His articles have appeared in the leading magazines of the country. It is to Dr. Hardison that the state is indebted for the Petit Jean State Park.

Top—Left to right: View of the Arkansas river and Pointe Remove creek from the "Point" of Petit Jean mountain. The mountain, approached from the highway to the east.

Bottom—View of Cedar Falls in the state park.

Missouri Pacific Railway Company turned over 2,500 acres to the state. In 1919 Dr. John L. Hunter conceived the plan of making a Y. M. C. A. camp on Petit Jean. It comprises "The Closet House," to which a large dining room has been added, a wonderful auditorium in a natural amphitheater overlooking the river, Tumble Inn and College Lake. This is at Sunrise Point. Farther down the south brook from the Y. M. C. A. camp is the beautiful Hugh D. Hart Lodge. The first effort to make Petit Jean serve the state as a gathering place for various meetings was made in 1935. Petit Jean just this distinction to Mount Nemo by one vote. Many gatherings since then have been held on the mountain top.

Geological Survey Prepares to Erect First Sign Giving Background of Rock Formations

Tourists and residents of Arkansas who have visited the geological background of huge boulders, state and national park formations along the road should be prepared to receive an interesting presentation from a geologist. The program, which will provide for several stops along the highways in the vicinity of the mountain and adjacent country and will show the location of the ridge with reference to the surrounding land, will be made.

CROSS SECTION OF CROWLEYS RIDGE NEAR FORREST CITY SHOWING ITS GEOLOGIC STRUCTURE

CROWLEYS RIDGE, WITH A LENGTH OF 10 MILES, A WIDTH OF 3 MILES, AND A SLOPE OF FROM 100 TO 250 FEET, IS A REMANENT OF HIGHER LANDS WHICH ONCE EXTENDED ACROSS EASTERN ARKANSAS AND SOUTHEASTERN MISSOURI. THESE LANDS WERE COMPOSED OF SANDS AND CLAYS LAID DOWN ON THE BOTTOMS OF ANCIENT SEAS, AND OF GRAVELS AND SANDS WHICH WERE LATER WASHED OVER THE EXPOSED SEA BED BY FRESH WATERS AND OFF THE SLOPES OF LOSS WHICH WAS WASHED OR BLOWN SOUTHWARD FROM THE LAKE BED. THIS HIGH LAND WAS LATER REMOVED BY MOVING STREAMS WHICH EVENTUALLY LEFT THE BEDS WHICH COMPOSE THE UPLANDS TO THE EAST AND WEST OF THE RIDGE.

Large signs similar to the one shown above are to be erected at various points throughout Arkansas by the State Geological Survey to provide residents and tourists with information of interest concerning geological formations in adjacent territory. The above sign will be one of the first to be erected and will be placed on Highway 79 in Prairie City, where the highway crosses Crowley's Ridge and where interesting formations are expected to be viewed.

Highway 79, near Forrest City, Crowley's Ridge formations: Highway 79, near Hot Springs, rock formations which have the same name as the famous hot springs possible highway leading to the Mountain Park, and Mount Vernon, cross-section of the mountain showing various formations and their origin; Highway 62, near Rebera Springs, geological formations in this area; Highway 11, south of Winnie, geological structure in mountains in this area.

Brenner, who is a member of the National Society of Professional Engineers of the United States, said for erection of signs at a later date in the state parks at Mt. Nebo, near Durandville, and at Devil's Den, west of Winfield. These signs will give data on geological formations in mountains surrounding the parks.
Arkansas Needs Greater Balance Between Income and Debt, Says Geologist

By GEORGE C. BRANNER
(State Geologist)

Among the sixteen states in the Union usually classified as "the South," Arkansas, in 1933, ranked fifteenth in the value of manufactured products, wages paid in manufacturing, percentage of persons employed in manufacturing, and number of factories.

Contrary to these indications of comparative low agricultural development, in 1933, stood the Arkansas state agricultural products, twelfth in the quantity of cultivated land and thirteenth in the value of minerals produced.

In state mining, Arkansas ranked ninth in 1933. The state's per capita income in 1932 was $81.86. In the same year, the highest was the Union, while Arkansas had an allocation for debt service of approximately 23% of its taxes collected.

The situation is therefore one of basic and large scale industrial debt service which indicates an imperative need for the development of all of the wealth-producing possibilities in the state. No consideration of the standard of living of its citizens can be maintained or improved.

Although there is no simple solution to this problem, one obvious approach is the creation of new industries. Further development of present industries will utilize the wealth of raw materials and the varied geographic advantages of the state to the fullest. As a result, the future may bring about a period of prosperity.

In addition, the state's location plays an important role in the development of new industries. The state's location on the Mississippi River provides easy access to markets.

In conclusion, Arkansas needs a greater balance between income and debt. By diversifying its industries and improving its infrastructure, the state can improve its standard of living and ensure a brighter future.

Dr. Branner Urges More Survey Work

Makes Recommendation in Report of State Geologist Survey

The Arkansas Geological Survey, under the leadership of Dr. George C. Branner, state geologist, has been working to survey and map the state's resources.

Dr. Branner has emphasized the importance of survey work in the development of new mineral industries. He has recommended that the state invest in survey work to identify new mineral deposits and assess their potential.

Survey Urged For Benefit Of Industry Research Would Lead To Development Of New Mineral Industries

A state geological survey may render great assistance to industry by leading to the development of new mineral industries. Dr. Branner has recommended that the state invest in survey work to identify new mineral deposits and assess their potential.

Survey work would lead to the development of new mineral industries. It would also help to increase the value of the raw materials produced in the state.

To Talk In East St. Louis

Dr. Branner Plans To Talk in East St. Louis

Dr. Branner, state geologist, left Little Rock yesterday for St. Louis, where he will talk before the St. Louis Geological Society and tell of the development of the limestones in the state.

In Washington he will provide over a meeting of the National Association of State Geologists Thursday and Friday. The geologists will take part in the meeting on the limestones which are of interest to the Washingtonians.

The meeting was planned as a result of the discussions at a meeting of the National Association of State Geologists last year in New York.

Dr. Branner said that the job is not that of a single individual but of a group of individuals. The members of the group are the state's geologists and mining engineers.

Dr. Branner plans to talk in East St. Louis on Wednesday afternoon before the St. Louis Geological Society and the State Geological Society.

GEOLOGICAL SURVEY

The Geological Survey has issued a new report on the geology of the state. The report includes maps and descriptions of the state's mineral resources.

The report also includes a list of mineral resources, a survey of coal beds, and a description of the mineral resources of the state.

The report provides valuable information for mineral development and economic planning.

The following are some of the highlights of the report:

- The state's coal resources are abundant and varied.
- The state's iron ore resources are significant.
- The state's limestone resources are extensive.
- The state's other mineral resources, including gold, silver, and zinc, are also significant.

Dr. Branner urges the state to invest in survey work to identify and develop new mineral resources. By doing so, the state can improve its economy and create jobs for its citizens.

Dr. Branner urges the state to invest in survey work to identify and develop new mineral resources. By doing so, the state can improve its economy and create jobs for its citizens.
ROADSIDE GEOLOGY

By GEORGE C. BRANNER

This state-wide road construction program of Arkansas which has been carried forward so actively in recent years has meant a great deal to geologists. Usually, in order to familiarize himself with the character of the rocks in various regions, the geologist must climb over the hills and break open the surface rocks here and there with a hammer, often being able at best to get only a very incomplete picture of the section of the rocks at any one place. Now, in many areas, he may drive along in the comfort of his automobile over a smooth, modern highway whose construction has caused to be revealed, like a great picture, the layers of rock which make up the surface of the earth. A few minutes' examination of one of these cuts by the roadside will often save a geologist hours of work.

The most complete exposures in the state are in the Ouachita Plateau where the beds lie nearly flat and a winding road cut from the top of a mountain to the bottom will often expose nearly the entire rock section in detail. For example, a trip along Highway 62, immediately west of Eureka, clearly exposes hundreds of vertical feet of the beds. Anyone may observe there the entire series of flat-lying rocks from the well-known "Boone" or "Mississippian" limestones which cover hundreds of square miles in the Ouachitas, to the dolomites which lie hundreds of feet beneath.

There are other remarkably fine exposures along Highway 71 between Fayetteville and Alma. Fayetteville lies on the "Boone" line, and the road passes from this formation through thousands of vertical feet or more of recent beds which lie over it. A very fine series of exposures can also be seen along Highway 9 between Melbourne and Sylamore, where, in several places, over 700 feet of the vertical section from the "Boone" line, through the well-known St. Peter sandstone, (from which glass sand is obtained) to the underlying dolomites, is exposed. Still another excellent series of exposures occur on Highway 25 between Lakeview and the south Independence county line, where the winding road cuts through a vertical section of about 1200 feet of the flat-lying beds. South of Marshall on Highway 65 is an especially fine exposure of the black marble beds. State Highway 76 from Benton to Hot Springs exposes the shales and sandstones which make up the central core of the Ouachita Uplift. Between Kirby and Murfreesboro State Highway 7 cuts across many thousands of feet of sandstones and shales which make up the Ouachita Plateau.

These and numerous other exposures have been of sufficient interest to students of geology to attract geological societies and many geologists to the state. Their motor tours are often laid out with reference to the best routes for observing the rocks which are exposed in the road cuts.

It is planned to erect signs on some of the best exposures in order that the local geology may be more appreciated by the tourist. The first of these signs is to be installed near Forrest City, on a cut in Crowley's Ridge, where the sign will show the structure of the ridge.

Fifty Years Ago

(Arkansas Gazette, April 2, 1887.)

Prof. J. C. Branner has accepted the position of state geologist of Arkansas and will be here soon to begin his work. From the testimonials Governor Hughson has received he is satisfied that a better man for the place could not be found. Professor Branner formerly was with the Geological Department of the University of Indiana.

Mr. BRANNER ON COMMITTEE.

Appointment of Dr. George C. Branner, state geologist, on the Committee on Surveys and Maps of the American Engineering Council, was announced yesterday by Dean Potter, president of the council. Dr. Branner is president of the American State Geologists.