Mammoth Compared 
With Other Springs

Just how mammoth is Mammoth Spring? The United States Geological Survey catalogue it as a spring of the first magnitude, but lists several others, including two in the Ozark region of Missouri, as large.

Whereupon the loyal citizens of Mammoth Spring are moved to retort with some heat that the United States Geological Survey doesn’t know what it’s talking about. Their spring is the largest single spring in the State.

As a matter of fact, the Survey officials admit that the cataloguing of springs according to size is a difficult proposition, and that the figures are not only provisional but likely to be inaccurate.

In an introduction to a paper on “Large Springs in the United States,” Oscar Edwood Melson of the Survey writes:

“Given an attempt is made to compare the large springs in the United States with respect to their size, the quantity of water they discharge, serious difficulties are encountered in determining what constitutes a spring of the first magnitude. First of all, it is very difficult to determine what constitutes a single spring. The water in the Ozark region training from a single opening and may issue from a great many openings, which may be close together or scattered over a considerable area. What is called a single spring in one locality may be equivalent to what in another locality is regarded as a group of springs, each of which has an individual name. This difficulty is made especially perplexing by the present lack of detailed maps or other data regarding most of the large springs.”

Other difficulties pointed out by Mr. Melson are the fact that some springs fluctuate greatly while others remain nearly constant and the further fact that springs are occasionally grouped together in what is known as a spring run, and may be equated to a single spring according to minimum, maximum and average discharge.

Anyway, the Survey has found there are 46 springs of the first magnitude in the United States, that is, springs having an average discharge of 100 cubic feet per second or more. Eight of these are in the Ozarks, seven being in Missouri and one in Arkansas, the latter being in Arkansas. The other major springs are in Florida, Alabama, Texas, Idaho, Montana, Oregon and California.

In this chapter on “Springs in Remote Palaeo-Geologic Limesite and Karst Regions,” Mr. Melson lists the large springs “which are in part with the very large springs of the country, although not quite equaling the largest springs in the central part of the country, as the springs in the area of volcanic rock in the Northwest.”

Information regarding the springs in the Ozark region was obtained for the Survey’s paper from “brief descriptions and miscellaneous discharge measurements in water-supply paper” of the United States Geological Survey, reprinted by C. J. Ruhle of the Missouri Engineering Experiment Station, and United States Geological Survey survey and the Missouri State Bureau of Geology and Mines.

Again the writer points out that “the discharge data for different springs are, however, not entirely comparable, because for some springs they include estimates that were probably too large, and because the measurements were made at different times, and, therefore, represent different stages of the springs. Until continuous records of discharge of all the springs have been obtained for a period of several years it will be impossible to determine which of them have an average discharge of as much as 100 feet per second or how fast they run in maximum, minimum and average discharge.”

The Survey’s list of Ozark springs of the first magnitude and its figures for their average discharge follows:

- Big, 498 cubic feet per second; Cerro Gordo, 492; Mammoth, 250; Meramec, 182; Double, 130; Wells, 110; Bennett, 100.

An early estimate of the discharge of Mammoth Spring is in the records of the Ozark Geological Survey is 4,000 barrels a minute, or equal to 877 cubic feet per second. But even that figure does not satisfy the citizens of Mammoth Spring, who claim through their newspaper, the Chamber of Commerce, that their famous spring flows at the rate of 500,000 gallons a minute, which is equal to 1,285 cubic feet per second.

However, even if we accept the latter figure of 290 cubic feet per second, we find that Mammoth Spring is well named.

A second-feet of water’s equal to about 640,000 gallons a day. Hence, if Mammoth Spring could supply all the water of Lake of the Ozarks, the population of 1,100,000 would not need more than 106 gallons a day. In 1910, according to Mr. Melson, the average daily consumption of water in New York City was 8,500,000 gallons, or about 1,260 cubic feet per second.

Thus, if we accept the figures of Mammoth Springs, the Arkansas lumber could supply the city of New York with 640,000 gallons a day, or 877 cubic feet per second. Hence, if we accept the figures of Mammoth Springs, the Arkansas lumber could supply the city of New York with 640,000 gallons a day, or 877 cubic feet per second.

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In the case of the Ozark region, the Mammoth Spring is one of the most famous springs in the United States. It is the largest spring in the United States, and its discharge is equal to the discharge of 40 springs in the Ozark region.

The water is described as having a high alkalinity and is used for domestic purposes. It is also used for irrigation purposes.

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Several thousand barrels a day are supplied to the town of Mammoth Spring, and the water is pumped from a large number of wells and springs in the vicinity. In addition, the water is supplied to a large number of homes and institutions in the vicinity.

In conclusion, the Mammoth Spring is a remarkable and valuable water resource for the Ozark region.

EXCAVATION DISCLOSES ANOTHER HOT SPRING

Hot Springs, Ark., Nov. 30—(AP) A new hot spring was discovered here today.

The new spring bubbled forth when uncovered during excavation work on the Ozark Springs Mountains, where for many years 46 thermal springs have flowed.

Calculations by George Bonnin, assistant park supervisor, gave the new spring yielding 49 gallons a minute at a temperature of 145 degrees Fahrenheit.

DIGGERS FIND FIVE NEW HOT SPRINGS

One Exceptionally Large With Temperature of 112 Degrees.

Special to the Post-Dispatch.

Hot Springs, Ark., Dec. 17—Workmen employed by the Wicken Engineering and Construction Company while excavating for the construction of a new reservoir pump house near the office of the national hot springs, one of which was reported to be exceptionally large, with temperature of not less than 112 degrees Fahrenheit, were here today.

The new hot springs were discovered by excavation done by the Post-Dispatch near a deposit of magnesium which recently was discovered.

Three New Hot Springs Are Found At Resort

Hot Springs, Ark., Dec. 17—Discovery of three new and exceedingly hot medicinal springs flowing out of the side of Hot Springs Mountain from which 46 other government controlled hot springs flow, was announced by engineers working on a federal reservoir project here.

Each of the five springs was discovered by excavation done by the Post-Dispatch near a deposit of magnesium which recently was discovered.

Survey of Springs 3/4/6

In State Proposed

Blacks are being prepared by the Arkansas Geological Survey for use in making a comprehensive survey of all springs in the state. Several thousand barrels will be mailed to all springs in the state, and the survey will be made to determine the temperature of the water and its mineral content. The survey will be completed by early in the year.

The data collected will be used to determine the best areas for future development of the springs as tourist attractions. The survey will also be used to determine the potential for developing the springs for commercial purposes.

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Old Springs of Little Rock

Among Other Advantages as the Site for a City Were the Fine Springs Found Here by the Pioneers...

The One Near the County Jail Had Been Used by the Indians Long Before

White Men Came Adventuring Up the River.

By FLETCHER CHENAULT.

Little Rock was a choice location for a city because it was the first, platnom the explorers found when they navigated the Arkansas River. The point of rocks here was the first high ground they reached after leaving New Orleans. Day after day a landmark plain studded thick with cottonwood forest had stretched out on both sides of the river.

They must have realized at once that here was a best location for a settlement in the wilderness, but daring adventurers of those days were forced to consider other details of home-siting, the most important being the necessity of purity drinking water. That meant springs, cold and clear even during the hottest summers. We may assume that game was abundant wherever they reared their log-cabin homes but excellent springs also were desirable.

These springs—they still exist beneath the city but here lost their usefulness—were the beginning of the city's water supply. Deep wells were bored in time and many others built, but it was not until 1834 that a water distribution system was installed, and several years after that before its use became general. In 1844 many springs continued in use and water still is taken from springs in the suburbs. It is a fact that spring water has been used in Little Rock more than a century. Picnic parties use it now when they motor out to Boyle park for an evening meal over a camp fire.

In this modern age, however, it is necessary for the health authorities to maintain constant supervision over spring water in the cities. Water from open springs in the outskirts of the city is analyzed at regular intervals to make sure it contains no disease germs. Frequently the analyses from springs shows danger of supply, and other diseases, and the public is warned not to use it. A few days ago one of the springs in Boyle park was closed because of unsanitary conditions surrounding it.

In early days there was little danger from contamination. Pocky disease germs had not followed the flag. Men who worked in stores and also the housewives washed only a shirt distance to scoop up water fresh from subarcanian passages. Most of the springs emptied into the town branch, at that time an open stream running through the heart of the city, and others emptied into the river above Main street. Still others flowed into Sawgrass branch and reached Pouchie by that route, and eventually the river.

When a campaign was launched in 1830 to move the territorial capital from Arkansas Post to Little Rock, one writer in the Gazette gave a glowing description of the site proposed for the capital, and concluded: 'Several springs of good water issue perpetually from the hills—a blessing which, west of the Mississippi river, is seldom met with.'

The most noted spring of early days is the one a few yards west of the county jail, which now is walled up, from which Spring street derived its name. This is believed to have been a favorite rendezvous for Indians perhaps a century before Little Rock was incorporated. It was a noted watering place for the Indians, and an expedition headed by Captain Hillard, believed by many to have been Jean Lafitte the pirate, came up from New Orleans in search of gold.

Details of this expedition set forth in Pope's "Early Days in Arkansas" are claimed to be authentic because they were narrated to the author by Maj. Jacob Poynt, a well-known planter of Crystal Hill, in 1833. Mr. Pope was so impressed by Major Poynt's narrative that he recorded the salient facts at the time and referred to them many years later when compiling his history.

In 1809, according to Major Poynt, a hunter known as Tramell found a piece of quartz near Crystal Hill which contained gold. It was sent to New Orleans to be analyzed and created excitement among the swashbuckling adventurers of that city. An expedition was organized by the mysterious 'Captain Hillard' and in that same year the adventurers reached the site of the future capital of Arkansas. The camp of the spring was made famous by Indian visitations.

The magnificent spring referred to, Mr. Pope wrote, or rather dictated, for he was blind, "has a history far older than the history of Little Rock. It was known far and wide among the Indians, who

Some of the best known springs in the early days of Little Rock. The one shown in the upper left-hand corner of the map at the foot of Spring street was a favorite rendezvous of Indians before the pioneers came. The noted spring at Dr. Cravens Peyton's home on Main street between Third and Fourth streets is the present location of the Gus Blass Company Furniture store. Other springs were at the present location of the Western Union Building, Gus Blass Company retail building and the Boyle building, and there were two in the block bounded by Third, Fourth, Scott and Cumberland streets. The old Bell spring was at Capitol avenue and Perry street.

pumped the spring water into the sewers, but when explosions were made for the Gus Blass Company building, the flow from the Boyle spring decreased. There was a large spring under the Western Union building at Second and Main streets, and another under the Gus Blass furniture store on the east side of Main street. Many others, too.

Miss Georgina Woodruff, daughter of William K. Woodruff, founder of the Gazette, has a clear memory of most of the popular springs that one flowed in the downtown section of Little Rock. They were:

In the yard at Mrs. King's home on Fourth street, between Scott and Cumberland streets.

At the Old Christian church, known as "Grotto Church," because the town clock was in its steeple, between Third and Fourth and Scott and Cumberland streets.

On Baptist Church Avenue near Perry street on part of the Bell property, which was bought by Miss Fannie Bell's mother, daughter of William K. Woodruff, a half century ago.

At the Woodruff home on east Ninth street was a clear white sulphur spring.

This water was sometimes used, but mostly for the water of domestic purposes at the Woodruff home coming from a deep well.

At Ralahigh springs, Twenty-fourth and High streets, a swimming pool, one of the "matatorium," was built about 35 years ago. Gum springs, in the vicinity of Fifth and McCombs streets, supplied most of the water for domestic use in that neighborhood and still supplies water through pipes.

Dickinson Bragg, dean of Arkansas newspapermen who has lived in Little Rock since Randolph days, except a few years in St. Louis, remembers when the spring at Dr. Peytons home was a popular rendezvous and practically a public institution. Whenever there was a parade down Main street in hot weather the patrons, and even the spectators, made frequent trips to this spring to quench their thirst. Cold lemonade was usually served there in the Peytons to their friends.

These springs of Little Rock were the scene of many social and political gatherings, not only in Randolph days, but long after the Civil War. Even those in private yards were regarded as quasi-public property, and thirsty wayfarers who followed the paths to them always found a good cup of cool hanging near by. It was before the days of great disputation. The water was cold, sweet and pleasant in winter and summer.
Three New Hot Springs Found On Hot Springs Mountain.

Special to the Gazette. [No date, no page]

Hot Springs, Aug. 25.—Three new and very hot medicinal springs have been discovered on Hot Springs mountain, where 47 other springs of the same kind, all controlled by the United States government, are located. The three new springs are situated near the mouth of the famous “Bath House Row,” near a recently discovered deposit of magnesium.

The capacity of the three new springs has not been determined, as no effort has been made to develop them or close them. It is believed, however, that the flow will add considerably to the 1,500,000 gallons of the hot curative water from the 47 other medicinal springs that flow daily in the bath houses. It was announced that the number of baths had increased 25 per cent this year over the corresponding period of 1912.

Architects who have been here from the National Park Department, Washington, propose to turn one of the recently discovered hot springs into a waterfall and permit it to cascade in a 20-foot fall, which would flow over projecting rocks opposite the Arlington hotel and adjacent to Poinsett street. The new springs were discovered while government men were making preliminary investigations of the rest of the two concrete driveways and walk running from Reserve avenue to Poinsett street and past the new Army-Navy General hospital.

The cross-marks on the above map show the location of the salt springs granted to Arkansas by Congress in 1806.

The new crosses with six revolutions of land around each, were granted to Arkansas by Congress in 1806 in a supplemental act to the act admitting Arkansas into the Union. The act provided that the springs and the surrounding sections of land were to be selected by a state commission and were not to include springs the rights of which already were vested in individuals. It provided also that the state should not sell the corners and tract nor lease them for longer than 15 years. 

The 3-1/2 cents postage paid by you on your letter to me from the mouth of White. I will pass to your credit in liquidation of your note given to me for that amount based you at the Catholic church, and I will not take your letters out if the postage is paid. Dave, the forgery was written in a hurry, and I think if you can read it at all you will be satisfied that there is enough of it, so I will close it. I might add, however, that I was not pleased with the fact that is attributed to the ladies in letters. I might have embraced the whole matter in one letter.

The hot springs show greater gas pressure and increased heat.

Hot Springs, May 4.—The exceptional activity of the telegraphy of the springs in recent hot springs that have marked an important feature of the springs which have developed greater heat than ever before, according to the latest government records. New springs, it seems, have been under observation for over a year by Dr. William Coleman, superintendent of Hot Springs National Park.

The spring has a capacity of over 200,000 gallons daily. It is located at the base of Hot Springs mountain. It is a hot spring. It was said, contains evidence of gas and some kind, but it was not until workmen engaged in digging the spring in connection with the testing it flowed into the new reservoirs that are being built. The new reservoirs will be used to contain water, and they contain a large tank which is being filled with water. The amount of water in the tank is being increased day by day, and it is expected that the new reservoirs will be in use by the end of the month.

Your letter from the mouth of White was not received until last night, and it is on account of the failure of the East ern Express was not opened by me until last night, as I understand that the bridge over the Nuckase River has been washed away. I called on your mother yesterday and informed her of your safe arrival at the mouth, etc. I asked the telegraph boy to send to Mrs. Crease relative to the matter you requested, but he was not at home.

The letter was received by the old school fund, and the proceeds of the sale were paid to the owner. The letter was sent to the bank, who later became Mr. Peay’s (in-law) “I will certainly be glad to have you come and see me. I am in the matter arranged. I believe that Mr. Comfort is now the attorney for the bank.”

I will not venture to your decision at the mouth; knowing your great desire to get back as soon as possible. I can very well imagine your impatience, but it is always the case that when we are in the greatest hurry we seem to make the slowest progress; therefore advise you to be patient, as while I am advising you to be patient I should be advising that you start on your journey at your leisure.

I am writing to-day to request that you will kindly advise me as to what kind of gas is in the spring. Gas, natural gas, or the gas which comes from the reservoir, this gas has been observed to have a peculiar pressure. It is in my opinion that this gas is not a gas, but a liquid, as the pressure is increased in temperature very materially. It is from a former 150 degrees Fahrenheit, and contains greater evidence of gas than has heretofore been characteristic of any other spring, is sufficient reason for the attention of the mineralogist to pay it more than passing attention.