

OLD SALT WORKS IN THE STATE

By W. H. Halliburton.
Gazette Magazine Section 1-9-38

From article in Arkansas Gazette. "Progressive Pioneer" by Edgar B. Chestnutt, Editor. Magazine section, Little Rock, Sunday, October 24, 1937.

The Barkmans soon had white neighbors. John Hemphill, who settled in 1811, was among the founders of industry in Arkansas. Observing the Indians using a crude method of getting salt from the saline waters of a bayou that in high water was tributary to the Ouachita, he substituted a more scientific way. It is presumed that as de Soto traveled south from Hot Springs in 1542 it was at this same spot that he bartered with the savages for salt for his men and horses. Hemphill built up a profitable commerce within the next decade, selling salt to other pioneers up and down the rivers for many miles. Barkman, too, manufactured salt and sold it to early settlers.

New Salt Dome in Mississippi Reported

Jackson, Miss.—Discovery of a salt dome in section 28-14-15w, Lamar county, south Mississippi, by Sun Oil Company, that started a geophysical and leasing campaign across the entire southern part of the state, extending into southwest Alabama, featured activity in Mississippi for 1937. Sun is drilling its fourth hole in an effort to find production on the flanks of this dome.

Only recently Southern Natural Gas Company discovered a salt dome in section 35-6n-1w, Hinds county, central Mississippi, but abandoned the hole at 4,346 feet. Future plans have not been announced, but a second test is expected early in 1938. Two other domes are believed to exist in this general area.

Fred E. West and Westbrook-Thompson and Stewart have secured an indefinite extension for commencement of geophysical work on 500,000 acres they secured the option on from the state in and around Mobile Bay. Government objection to the state granting this lease has been withdrawn, it is reported. The work was to have started six months from last October 18.

"Indians in primeval times, de Soto in 1542, pioneers in the 1800s and Confederates of the Civil war obtained salt from the wells located here. John Hemphill in 1812 on this spot opened one of the first manufacturing plants in Arkansas, a salt refinery."

This is quoted from a large bronze marker cast for the Arkansas Centennial Commission to be embedded in a stone monument at a point one mile east of Arkadelphia by the side of state Highway No. 8.

There is no romance in salt today, but there was in the Nineteenth century, in the Eighteenth century, and before that. Today we say, "Please, pass the salt," and it is handed to us, as a matter of course. When the household supply gives out, it is about the easiest thing to be replenished.

But there was a time in Arkansas when salt had to come on a steamboat or by slow moving wagons drawn by oxen, the journey requiring weeks. Salt was a necessary article, for the cattle, the horses, for curing meat and preserving the hides and furs of animals prepared for shipment to New Orleans, St. Louis and other markets by the pioneers.

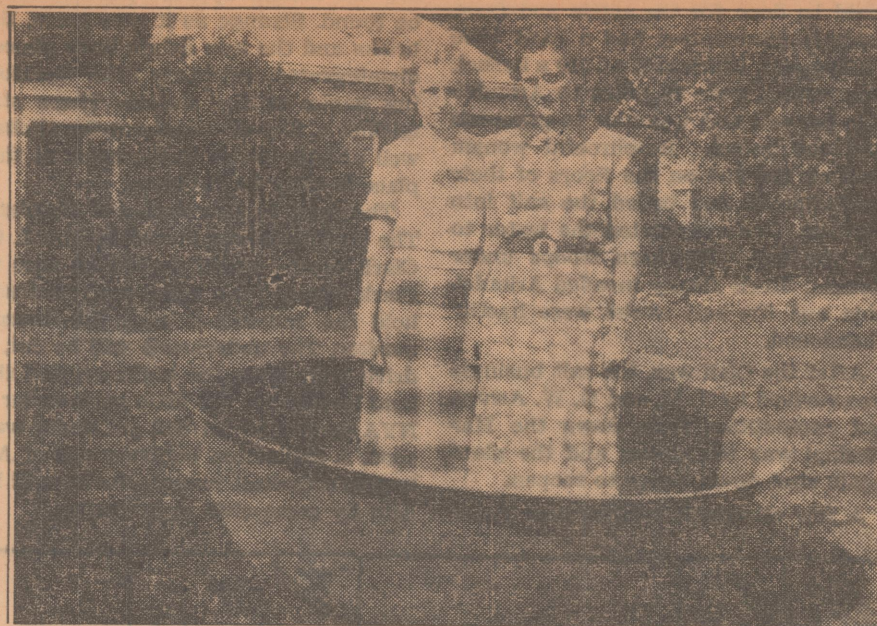
It is not surprising that the Indians valued so highly the few sources of salt in what is now Arkansas. It is recorded that Hernando de Soto and his Spaniards while encamped at the "Fountain of Youth," now known as Hot Springs, grew excited when some Indian dropped a chance remark about salt being obtainable three days' journey to the south, at a place where saline water welled up from the bowels of the earth. De Soto's horses and men were in need of salt and thither they went and found it.

A member of de Soto's party, a recorder or historian, the Gentleman of Elvas, believed to have been Don Alvaro Fernandez, wrote after visiting the salt wells on the bank of a creek near the Ouachita river: "The Indians make it along the stream which, when it ebbs, leaveth it upon the upper part of the sand. And because they cannot take it without much sand mingled with it, they throw it into certain baskets which they have for the purpose, broad at the mouth and narrow at the bottom and set it in the air upon a bar, and throw water into it, wherein it falleth. Being strained and set to boil upon the fire, the salt remaineth in the bottom of the pan."

An episode in the Centennial pageant at Arkadelphia in 1936 consisted of a ceremony depicting the bartering between de Soto and the Indian chiefs for a supply of salt. Indian baskets were used in the act, borne in solemn dignity by Caddo maidens to the white men of de Soto's band, to the beat of the tom-tom and other primitive instruments of music.

One encyclopedia says salt exists in only 15 states, not including Arkansas. This is because commercial deposits or mines are not known here as they are in lower Louisiana, in Utah and some other states. Before days of rapid transportation, a salt spring or stream was valued highly, just as the one near Arkadelphia was in primitive times and during the days of pioneering.

It is believed the Indian's crude salt manufactory was responsible for the settling of early Arkansas near the big bluff on which now sits the 100-year-old city of Arkadelphia. At any rate, there came here from South Carolina, in 1811, John Hemphill, who quickly saw an opportunity and took advantage of it. He made a bargain with the Indians and obtained possession of the salt works, installing better utensils and using a better method of refining the salt. Hemphill used metal pans and great iron kettles in which he boiled the salt water until it was evaporated and left the salt resi-



Miss Caroline McCorkle (left) and Miss Marjorie Meador of Arkadelphia standing in an old 200-gallon iron pot used to manufacture salt near Arkadelphia 100 years ago.

due in the bottom. He is said to have built up a lucrative commerce in salt before he died in 1825. Mrs. Hemphill sold the salt works to two men named Easley and Gentry, who got larger pans and further improved the refining process. Salt was made for the pioneer trade until after 1850, when heavier deposits were located and worked in Louisiana. Then it was cheaper to import salt to Arkadelphia than it was to make it from the salt wells.

But when the Civil war began and communications were interrupted, the old salt works near Arkadelphia were revived. The Confederate government sent Capt. J. M. King to investigate

all other difficulties would melt away like snow before a Chinook wind. Waking early he reviewed the situation. Had he been wise in promising Merrie her freedom? Perhaps Peachy's idea was best.

Even the cheerful Slim advocated closing her mouth for good and all. Curt recoiled from the thought. Merrie was a sweet little thing.

Under ordinary circumstances he could have been very fond of Merrie. Oh, to be carefree again. Just how had he become involved in a situation where crime was necessary?

But there it was. Step by step he had been led into shady activities by the crying need for money. One thing had led to another. But it mustn't end in murder.

Or, after all, should it? Perhaps he'd better start with a clean slate. Another thing which weighed on Curt's mind was Peachy Low. Just how was he to rid himself of her?

He found the water to be 50 per cent salt and accordingly M. S. Carpenter, a steamboat man in the Southern army, was detailed to Arkadelphia, which was his home, to supervise the plant. Several wells were sunk to a depth of 40 to 50 feet, which furnished a large flow of salt water. Hand-hewn logs were used for the frame of a sizable building, Negro slaves doing the cutting and hewing. Big iron pans were made from discarded steamboat boilers which were ripped apart and spread out. This salt plant was operated day and night by changing shifts of Negro men.

Many tons of salt were refined and shipped out in canoe-shaped receptacles. The local inhabitants had to get along on a small minimum. Corn soaked in salt water was the best that could be done for the cattle and farm animals. Housewives had a hard time getting salt, which sold at \$10 a bushel. One woman rode 50 miles to Arkadelphia for salt and was able to purchase just one pound. Resourceful women took up the dirt on the floors of their smokehouses and boiled the salt into

about \$13 a ton for salt cake and importing around 175,000 tons of it a year. American paper makers are paying from Germany.

E. M. Allen, president of the Mathieson Alkali Works, said today that the company's plant at Lake Charles, La., would start producing salt cake in October on a basis sufficient to supply the needs of the United States. He said that the American-made salt cake is superior to the imported variety.

The importance of the new product was enhanced by the possibility of the use of kraft pulp in the manufacture of rayon and by the inclusion of 15 to 20 per cent of kraft pulp in making newsprint paper.

The Southland Paper Company's new plant at Lufkin, Tex., was understood to be designed for the production of 150 tons a day of newsprint paper on this basis.

solution, then evaporated the water to get the salt. Northern troops under General Steele finally invaded Arkadelphia and the salt works were hastily abandoned.

After the Civil war, the salt business was revived by J. M. and G. W. Ashby, but competition from down the Mississippi was too strong and the plant again shut down, never to reopen.

A few other salt springs near Arka-

delphia were found and their owners operated them for a few years. There are still in existence on as many farms within a few miles of the city, four big round iron kettles which were used by pioneer salt refiners. The larger of these are of 200-gallon capacity. One was on exhibition here during the Centennial season in 1936. It was on a float representing Clark county in the Centennial parade in Little Rock. The farmers use the kettles for watering their live stock. It is the hope of those promoting the little park and historical marker at the site of the old salt wells to procure one of the big kettles for placement there.

That the pioneer salt manufacturers built their plant well is evident at the site today. Large hewn oak timbers protrude above the ground and they are not rotten. Cypress planks are to be found. Strange as it may seem, the bricks and the iron debris have almost disintegrated. Brickbats litter the sloping banks of the stream. There still trickles a tiny stream from the choked well and the water in the creek at this place is salty to the taste.

The spot is deserted and desolate. The land here was owned by the J. G. Clark estate, which deeded an acre to Clark county for a small park that will hold the monument and the bronze marker. The underbrush will be cut, a drive built from the highway, and the land leveled for the little park under a NYA project which will get under way soon. A dedication befitting one of Arkansas's earliest manufactories will be held by some civic organization.

Production Of Salt Cake To Start Soon

7-27-39

New York, July 26 (AP).—A \$2,000,000-a-year import, essential to Kraft paper-making, may be replaced by a made-in-America substitute which its originators said today is better than the present product. It is salt cake, a chemical compound which replaces the sulphur and caustic soda lost in the manufacture of kraft paper from wood.

NEW FORM OF SALT MAY BRING JUMP IN WOOD PULP OUTPUT

Gazette 8-22-40

By HOWARD W. BLAKESLEE.

(Associated Press Science Editor.)

New York, Aug. 21.—A new, slightly sweet form of salt, made for bleaching, was announced today with the claim that it was of wartime importance because it might free the United States from dependence on foreign wood pulp.

The sweet salt is sodium chlorite. It is common table salt, sodium chloride, with two oxygen atoms added. This chemical has been known for 100 years but the announcement said this was the first time its bleaching properties had been developed and large-scale industrial production perfected.

Industrially the salt is a new heavy American chemical. The announcement came from the Mathieson Alkali Works, Inc., of New York. At Seattle today, two of the company's chemists, J. F. White and G. P. Vincent, reported it to the Technical Association of the Pulp and Paper Industry.

The announcement said the sweet salt would bleach the pulp of kraft paper to a high degree of whiteness, without weakening the fiber. Kraft tends to yellowness. More whiteness and less weakening were claimed than for the present common bleaching powders.

The salt also is useful for bleaching straw for hats, cotton, rayon and other cellulose fibers, flour milling, starch manufacture and some plastics.

"Since it makes possible the production of wood pulps of all types and qualities heretofore unobtainable with American raw materials and methods," the two chemists said, "it promises to make us independent of foreign products and to bring about a permanent increase in our output of wood pulp."

This salt is white when pure, yellowish in the industrial form. Add one more atom of oxygen to it and it becomes sodium chlorate which is used in explosives. Subtract one oxygen atom and it makes the common bleaching powders known as hypochlorates.

Lots of Salt But Some Piece Below the Surface.

In pioneer days in Arkansas salt was obtained by evaporating waters of brinish springs. Today there is known to be a large salt deposit in Union county, but it is 5,960 feet, or more than a mile, below the surface.

The deposit was discovered in 1932 when the Lion Oil Company, co-operating with several other concerns, sank a test well in the East Smackover oil field to determine the character of the underlying formations. Drilling stopped in the salt at a depth of 7,255 feet, then the greatest depth reached in any well in the Gulf Coastal plain of Arkansas. Analyses showed that cores from 5,974 to 5,980 feet contained 92.05 per cent sodium chloride, and the sodium chloride content of samples from 6,094 to 6,104 feet was 95.93 per cent. The deposit at Jefferson Island, Louisiana, which is discussed in a New Orleans Times-Picayune article, runs 99.94 per cent sodium chloride.

The Union county bed is truncated, but geologists do not know whether the deposit is a dome that earth stresses forced up into later formations or whether it is a layered bed shaped by erosion. It occurs among formations of the Trinity period, one of the stages of the Age of Reptiles, but H. W. Bell says in his "Discovery of Rock Salt Deposit in Deep Well in Union County, Arkansas," that he believes the bed is older. He thinks it might belong to the Permian period, when salt deposits formed in the Texas region.

The depth of the Union county salt would make pit mining impracticable, but it has been said that a British practice could be followed. Fresh water could be injected into the deposit, and the brine removed for crystallization.

Salt, sulphur and limestone are widely used in the chemical industries as well as for other commercial purposes. Arkansas possesses all three, and there has been development of limestone and sulphur resources.