

# DEPOSIT OF BARITE WILL BE DEVELOPED AFTER LONG DELAY

3-6-40 Gazette

Another opportunity to develop Arkansas's rich mineral resources was claimed by outside interests yesterday.

A national lead company, manufacturer of paint products, bought 260 acres covering barite deposits north of Malvern, Hot Spring county. The reported price was \$15,000.

Beneath 40 of the acres lies an estimated 1,096,942 tons of barite, from which lithopone, a white paint pigment, is made. The latest available market quotation was \$3.43 a ton. The remaining acreage, which has not been cored, may cover other deposits.

Dr. George C. Branner, state geologist, identified the barite in 1932. Several trees were blown down in a heavy wind storm and their roots revealed the mineral's presence. He made tests on four 10-acre tracts nearby and estimated the deposits less than 100 feet deep to be 1,096,942 tons.

## First Interest Last Week.

The geologist published a report of his findings the same year, describing the high quality of the barite and the commercial possibilities of its production. Hundreds of copies were distributed but no one displayed interest until last company called at Dr. Branner's office and inquired:

"Is there any barite in Arkansas?"

Dr. Branner brought out a copy of his booklet, written seven years ago. He directed his visitor to Hot Spring county. The purchase of land resulted.

Lithopone is utilized in the manufacture of paints, patented drilling mud and chemicals.

## Previous Delay Recalled.

The discovery and long-delayed development of barite deposits paralleled the history of the richest bauxite mines in the United States near Benton.

Records of the Arkansas Geological Survey revealed that Dr. Branner's father, Dr. John C. Branner, announced the identification of bauxite in Pulaski and Saline counties in 1891. Although the elder geologist told the world, through pamphlets, of the presence of the valuable mineral, no one took the announcement seriously until 1899.

Several ineffectual efforts were made to capitalize on the ore from which aluminum is processed. In 1896 a small operation produced about 40 tons in Saline county. A year later, E. Metzner attempted to process aluminum salts at Malvale but the venture did not prosper.

## Mellon Unit Operates in 1899.

In 1899 the Pittsburgh Reduction Company, a Mellon company, began development of bauxite deposits near Bryant. The present production company was the result of that beginning.

"That's the history of the state's natural resources," said Dr. George C. Branner. "The great aluminum deposits were discovered and announced eight years before they were bought and developed. Yet, since 1899, more than \$50,000,000 worth of aluminum has been produced from those mines that were anyone's for the taking."

The barite deposits of Hot Spring county were exploited following publication of a book, "Barite Deposits in Hot Spring County, Arkansas," written by Bryan Parks and Dr. George C. Branner, state geologist, in 1932. The book has been referred to as the "Barite Bible."

The deposit was discovered in 1900 when a well was being dug on the Casey homestead near Magnet Cove. When the well was cleaned out in 1911, John Inglis, then county surveyor, submitted samples of the ore to Joe Kimzey, now state senator. Mr. Kimzey found more barite sticking to the roots of trees blown down in 1915.

## Unique Deposit In America.

Although barite is found in other sections, the particular type of the ore being produced by the Magnet Cove corporation is said to be similar only to a barite ore found in Austria.

"The Agricultural and Industrial Commission is pleased to have companies like the Magnet Cove Corporation established in Arkansas," Mr. Reed said yesterday. "Plants of this type are especially valuable since they take Arkansas raw materials and manufacture them into finished products. The state thus received not only the value of the raw materials, but also the value added by manufacture. Arkansas people get jobs processing Arkansas raw materials."

## Barium Company To Expand Plant

Democrat 12-15-40

The Magnet Cove Barium Corporation, which already operates the largest barite flotation plant in the world at Malvern, is planning to expand and increase production, it was revealed yesterday by the State Agricultural and Industrial Commission.

The industry is a new one established in Arkansas during 1940. Operations were started last June. The plant represents an investment of \$125,000, employs 45 men and has a daily output of 65 tons.

The slime flotation process of non-metallic minerals is the only one in use in the United States and was developed by L. R. Harrison, general manager of the plant.

Barite now being produced is used in deep well drilling, principally oil wells, and about 50 per cent of the plant output is now exported to Trinidad and to several South American countries.

The new equipment to be installed, probably this week, will increase production somewhat and will give a higher grade product. Production of a higher grade barite will enable the company to sell to paint, glass and rubber manufacturers.

Information on barite deposits in Hot Spring and surrounding counties, which led to development of the present plant, was furnished after exploration of the area by the state geology department.

## Barite Mined In Arkansas

Travels Far

Democrat 1-5-41

Malvern—This city, the birthplace of the Arkansas Power and Light Company, is the home of the first and only barium plant in the state, and the sixth in this section of the country. The plant is electrically equipped, the equipment having been recently installed.

The other plants are located, one in Georgia, two in Tennessee, two in Missouri.

The Magnet Cove Barium Company plant, laboratory and office are located on Main street, one block north of the business district, on the Rock Island railroad.

It represents an investment of \$125,000, and building of the plant was started in June, 1940, with Harry B. Brown, native of Tennessee, as executive vice president, and L. R. Harrison jr., native of Florida, as manager.

Barite is a silver-white metallic substance, a little harder than lead. It is processed into a finely-ground, gray powder.

The raw material is mined at Magnet, Hot Spring county, nine miles north of Malvern, and hauled to the plant, where it is ground up, mixed with chemicals, and the barite comes to the top in foam and runs over the side.

This foam is put through a drying kiln and finally is thickened, pulverized and sacked.

Serves Many Purposes. Barite is used for many purposes, among them in paint, in pottery to keep bubbles out of the clay, to soften water, in teeth fillings, and in oil-drilling mud.

The use in paint is much the larger one, this market having taken more than 60 per cent of all the barite produced over the period from 1920 to '29.

The barite turned out here goes into well-drilling mud, and about

half of the production is exported to Trinidad and other points in the West Indies, and to several South American countries.

The Froth flotation process, which is employed in preparing the mineral, was developed and patented by Mr. Harrison, the general manager of the plant.

The barite is shipped in 100-pound kraft paper bags, made at the Camden, Arkansas, paper mill. About 65 tons are turned out daily, and the plant employs 50 local people. Discovered in 1911.

The barite deposit of Hot Spring county was discovered in 1911, when a well on the Casey homestead, near Magnet Cove, was cleaned out. John Inglis, now of Butterfield, then county surveyor, submitted samples of the ore to Joe W. Kimzey of Magnet, now state senator. Mr. Kimzey found more barite sticking to roots of trees blown down in 1915.

While barite is found in other sections, the particular type of ore at Magnet Cove is said to be similar only to a barite ore found in Austria.

Another industrial development is under way in the Magnet Cove barite field. A big paint company is putting in a plant near Butterfield, and operations on an extensive scale are predicted.

Barite is used in making luminous paints, as well as a "permanent white" paint.

\$225,000

## Barium Plant Established

Special to the Gazette. 2-6-41

Pine Bluff, Feb. 5.—Establishment of a \$225,000 barite plant in the Magnet Cove area of Hot Spring county by the Baroid Sales Division of the National Lead Company was announced today when the Arkansas Power and Light Company confirmed reports it was building a 13,000-volt transmission line from Malvern to serve the new industry.

Barite is used as a mixer with mud in oil field drilling operations, as a deoxidizing agent for the ceramic industry, and as an ingredient in manufacture of paint, glass, rubber and other materials. The Hot Spring county deposits were discovered in 1900.

The plant is being constructed of concrete and steel and will be air conditioned.

The Magnet Cove Barium Corporation, which operates a barite plant in Malvern, is preparing to double capacity of its plant. The Malvern plant, which started operations last June with an initial investment of \$125,000, employs about 45 men and has an output of 65 tons daily.

## Titanium Plants Expected.

It also was reported today that a titanium plant, practically is assured for Magnet Cove. Titanium is used in producing steel, and is mixed with chemicals to make smoke screens. A new process involving separation of the titanium ore by blowers, is planned for this plant.

## Many Expansions for Defense.

Kenneth Johnson, industrial sales engineer for the Arkansas Power and Light Company, said that many Arkansas industrial plants have increased production to handle defense orders.

"In the last two months we have contracted to supply an additional 61,000,000 kilowatt hours per year to new industries and industries that are expanding operations," he said. "Because of four large inter connected systems, we were able to contract for this amount of power. The increased supply will provide for expanded operations in saw-mills, woodworking plants, textile plants and other stable industries. The new army camp at Little Rock and the cinnabar operations were also a part of this new load. The fact that we were able to guarantee this amount of power immediately is a pretty good indication that there is no power shortage in our territory. We are working with several other industries that are planning to locate in the state."

## New Line to Serve Stone Plant.

The new transmission line will extend from the Malvern substation through Butterfield to the new barite plant. It will serve a large rock crushing plant at Butterfield.

## Barium Industry Asks Lower Freight Rates.

Gazette 3-26-41

An important new industry will open a fight to obtain freight rate reductions on all Arkansas railroads at a joint Arkansas Corporation Commission and Interstate Commerce Commission hearing at the Hotel Marion at 10 a. m. today.

It is the Magnet Cove Barium Corporation, which is producing about two carloads of barite ore

daily. The National Lead Company will complete a \$150,000 plant in the same area near Malvern April 15 and is expected to produce six to eight cars daily.

The Magnet Cove company contended that rates on crude barium ore or barite in carload lots intrastate (\$4.50 a ton) are "unjust and unduly discriminatory."

Barite is used in manufacturing high grade glass. It eliminates bubbles. Corporation Commissioner Joe W. Kimzey of Magnet said it also is used to control gas and water pressure in oil wells and in the manufacture of paints.

Mr. Kimzey said the hearing will be an important one for the barite mining area because of the proposed development program. He said the Malvern district holds the most extensive deposits of barite in the world.

## New Baroid Plant Asks

## Tax Exemption

Democrat 7-11-41

Exemption from state taxes as a new industry under a 1939 tax exemption measure has been asked for the new \$250,000 "baroid" plant of the National Lead Company near Butterfield, Hot Spring county.

E. Smith Reed, engineer of the Agricultural and Industrial Commission, has completed an inspection of the property and will make his report to the next meeting of the commission.

The recently completed plant processes barytes or heavy spar. The product is widely used in oil well drilling being known as "oil well mud."

## Case Involving Crude Barite Ore Rates Reopened.

Gazette 11-20-41

Reopening a case involving carload rates on crude barite ore shipped by the Magnet Cove Barium Corporation, Malvern, to eight states, the Interstate Commerce Commission has set a "short procedure" rehearing in which positions will be used.

T. E. Wood, Arkansas Corporation Commission rate chief, who participated in arguments before the I. C. C. at Washington last week, said the state commission objected to rates recommended by an I. C. C. examiner who held a hearing in Little Rock. The examiner recommended 20 per cent of the first class rate in this territory. The Missouri rate is approximately 13 per cent of first class.

The I. C. C. action was regarded as favorable to Arkansas. The examiner will hear no additional testimony.

## \$160,000 BARITE PROCESSING PLANT IN OPERATION SOON

Special to the Gazette. 11-23-41

Hot Springs, Nov. 22.—The state's newest industry, a \$160,000 plant for processing barite, located in the Magnet Cove area, between Hot Springs and Malvern, will be ready for full operation before the end of the month. Work was started on it several months ago, following surveys by geologists, which showed exceptionally large deposits of barite. The plant, however, is under the supervision of the Baroid sales division of the National Lead Company.

Magnet Cove nestles in the lap of mountains and hills, and the barite mine is two miles east of the little settlement. The mill, office and other units are located on top of the largest ridge. A good dirt road has been built to the mill. At Butterfield, on the Chicago, Rock Island and Pacific tracks, the second important adjunct to the mill is located. It consists of storage, packing and loading facilities for shipment.

Several years ago the Magnet Cove barite deposit attracted nationwide attention. Scientists and geologists from all sections of the country went there to inspect the deposit. An official of the National Lead Company said that there was enough barite in sight to last 10 years, even if the company mined 500 tons daily.

As the Magnet Cove terrain is broken repeatedly by "faults," the

barite deposit contains much foreign matter and is not nearly as pure as the barite of Missouri, officials said.

## Near to Market.

The vastness of the Magnet Cove deposit and the availability of shipping facilities explain the present large scale exploitation. Butterfield is much nearer the oil fields of Texas and Oklahoma than Missouri or other places from where barite is sent.

A large Diesel power shovel is used at the mines in "stripping" operations, which expose the barite veins and greatly facilitate production. The ore is loosened by blasting. A fleet of trucks carries it to the mill a half mile away.

One can get a real lesson in thrift and economy by watching the processing of barite. For instance, dirt from the stripping operations was used in constructing a water supply dam, the lake formed covering almost seven acres. The dirt also was used in building the road to the mill, in leveling the ground around the mill site and also at the Butterfield packing plant. It is a dirt with some substance almost akin to cement gravel and packs easily.

There are six steps in handling the barite at the mill: Coarse crushing, gravity concentration by jigs and tables, fine grinding, flotation, dewatering, drying and loading.

Thrift and saving again are seen in the handling of all waste materials, which with solutions obtained in the processing, are sent to an earthwork reclaim dam, which was constructed across a small ravine directly below the mill site.

The reclaim water dam plays an important part. Clarified water is sent to the mill for reuse, thereby lessening the amount of fresh water needed; complete elimination of stream pollution is obtained, and a large storage section is created for low-grade waste materials, which some day may have value.

Officials pointed out that the mill design permits utilization of the entire run-of-mine, enabling recovery of commercial values in the low grade ores, which otherwise may be discarded as waste.

The Baroid division also has at Butterfield a 3,000-ton storage silo and a packing plant, which feature the most modern dust collecting system.

"This serves two purposes," said H. A. Neustaedtler, who came from St. Louis as general manager of this new enterprise. "We safeguard the health of our employees and at the same time minimize loss of a valuable product."

During construction of the plant and its various units, more than 40 men were employed, and when the mill is in full operation from 50 to 60 will be employed. Showers and dressing rooms are provided for the miners.

The Baroid Sales Division is in the charge of George Ratcliffe, Los Angeles.

Used Widely in Oil Production. The product when shipped is known as baroid and is used as a weighting material for servicing oil well drilling operations. Because of its weight, it often prevents an oil well from blowing itself in prematurely.

O. J. Benston is superintendent and chemist. He stays busy with his test tubes. Asked if he is on the track of something important, he smiled and replied, "There's nothing so interesting as research!"

Other members of the staff include Harold Schroeder, engineer and electrician; Henry Dye, construction foreman, and Edward Murry, clerk and bookkeeper.

## Magnet Cove Barite Plant New Industry

### Product, For Use In Oil Fields, Soon To Be Processed.

Gazette 11-23-41

Hot Springs—A \$160,000 plant near Magnet Cove for the processing of barite is nearing completion and is expected to be ready for full operation before December 1, officials announced yesterday.

The new industry was started several months ago after geologists working in this vicinity found an exceptionally large, but not a high grade, deposit of barite two miles east of Magnet Cove.

The mill, which will be operated under the supervision of the baroid sales division of the National Lead Company, is located on top of the largest ridges in the vicinity along with the offices and other units. An earth road has been built from the main highway to the plant.

## Barite Will Be Processed At Texarkana

3-10-40 Gazette

The National Lead Company of New York, which recently bought a rich, untouched deposit of barite near Malvern, will process the mineral at Texarkana.

The company, discovering a seven-year-old report by the Arkansas Geological Survey which identified the barite in huge quantities, bought 260 acres in Hot Spring county last week. The location and value of the property were described in a report written in 1932 by Dr. George C. Branner, state geologist.

The deposit is situated eight miles north of Malvern and four miles northeast of Butterfield. The mineral is used as a white paint pigment and in the manufacture of patented drilling mud for oil wells. The deposit beneath 40 acres of the tract was reported by Dr. Branner to contain 1,096,000 tons valued at about \$3.50 to \$4 a ton. The remainder of the property has not been tested.

## Use Plant at Texarkana.

The company has obtained tentative possession of a plant at Texarkana formerly operated by the George S. Metham Paint Company and the Southern Acid and Sulphur Company. It was said, Plans for production include trucking the mineral from the mines to Malvern and shipping by rail to Texarkana.

It was learned that the Melwhite Company of Houston, Tex., obtained acreage in the same territory several months ago and trucked several carloads of the mineral to Hot Springs, where it was washed and ground before being shipped to Houston. This company has shipped no barite since December.

## Barium Plant To Be Ready June 1

5-12-40

Special to the Gazette.

Malvern, May 11.—The manager of the Magnet Cove Barium Corporation has notified the Malvern Chamber of Commerce that he hoped to have the first unit of the refinery in operation near June 1, running three eight-hour shifts. The mine will start operation in full swing, employing eight trucks to supply the ore to the refinery.

This will add another good pay roll for Malvern.

## BARIUM PLANT TO EXPAND TO MEET INCREASED ORDERS

Gazette 12-15-40

Already the largest barite flotation plant in the world and only user of the slime flotation process of non-metallic minerals in the United States, the Magnet Cove Barium Corporation's plant at Malvern will be expanded soon to care for new orders, E. Smith Reed, industrial engineer for the Arkansas Industrial and Agricultural Commission, reported he had been informed by company officials yesterday.

The operations were started in June, 1940, with an initial investment of \$125,000. The plant now employs 45 men and has an output of 65 tons a day. H. B. Brown is superintendent.

The flotation process being used was developed and patented by L. R. Harrison, general manager of the plant. The barite now being produced is used in deep well drilling operations. About 50 per cent of the plant's output is exported to Trinidad and other points in the West Indies and to several South American countries.

## Higher Grade Product Planned.

New equipment will be installed next week which will increase production and give a higher grade product, company officials said. The production of a high grade barite will enable the company to sell to paint, glass and rubber manufacturers.



Storage, packing and loading facilities have been erected at Butterfield on the Chicago, Rock Island and Pacific tracks.

Nation-wide attention was attracted to the barite deposits at Magnet Cove a few years ago when geologists and scientists from over the country visited the area. An official of the National Lead Company estimated that there is enough barite in the site to last 10 years with the company mining 500 tons daily.

Baroid, a barite product, is used as a weighting material for servicing oil well drilling operations, and the fact that the Magnet Cove plant is so much nearer the oil fields of Texas and Louisiana than the Missouri deposits was a great factor in the erection of the new plant. Freight rates are reduced greatly.

"Stripping operations" at the mine are conducted with a Diesel power-shovel which greatly facilitates production. The ore is loosened by blasting. Dirt separated from the ore during the processing has been used to construct a water supply dam at the plant, and a seven-acre lake has been formed.

A 3,000-ton storage silo is also located at Butterfield and the packing plant has a modern dust-collecting unit which keeps down that danger.

H. A. Neustaedter, St. Louis, general manager of the plant, said more than 40 men were employed continuously during the construction of the plant and that between 50 and 60 will be employed when the plant is in full operation.

Use of the product in preventing new oil wells from "blowing out" and wasting valuable oil which could be used for defense purposes, has made the barite doubly important.

Other members of the plant staff include O. J. Benston, superintendent and chemist; Harold Schroeder, engineer and electrician; Henry Dye, construction foreman, and Edward Murry, clerk and bookkeeper.

## **Barium to Be Produced At Magnet Cove**

Gazette 4-24-42

Washington, April 23 (AP).—Congressman W. F. Norrell (Dem., Ark.) said tonight the Magnet Cove Barium Corporation would enlarge its facilities at Malvern, Ark., to produce barium, for use in manufacture of incendiary bombs and tracer bullets.

Mr. Norrell said the plant enlargement, to cost between \$50,000 and \$100,000, would be financed by the company and that the War Department would take the product.

### **I. C. C. Reduces Freight Rates On Ground Barite.**

Gazette 5-7-42

Railroad freight rates on ground barite produced in Hot Spring county were ordered reduced by the Interstate Commerce Commission yesterday from 20 to 14 per cent of the first class schedule.

Rate Chief T. E. Wood said the Arkansas Corporation Commission will issue a similar order regulating rates on intrastate shipments not later than June 9.

A representative of the I. C. C., following a joint hearing with the Corporation Commission at the Hotel Marion several months ago, filed a report with his agency stating that 20 per cent of the first class rate would be fair.

The Magnet Cove Barium Corporation, which invested about \$1,000,000 in the field, protested when its rate was increased from \$4.50 to \$6.80 a ton on carload shipments from Magnet Cove to Houston and Beaumont, Tex. The latter rate represented 20 per cent of the first class rate.

Mr. Wood filed a brief with the I. C. C. and went to Washington where he argued the barium company and Corporation Commission case, which he succeeded in reopening. Yesterday's order reduced the rate to 14 per cent of the first class rate, or to \$4.80 a ton from Magnet Cove to Houston and Beaumont.



# SENATORS SLOW TAX BILL ACTION WITH SPEECHES

Gazette 1-15-44

## McClellan Proposal Accepted.

(By the Associated Press.)  
Washington, Jan. 14.—Completion of revenue sections of the \$2,275,600,000 tax bill, undertaken by the Senate today, was washed out by a flood of unexpected oratory on subjects ranging from the soldiers' vote to international relations and food subsidies.

The senators were forced into a Saturday session, to clear the way for action on controversial amend-

ments to the war contracts renegotiation law Monday.

The Finance Committee will meet Monday. Senators believed Chairman George (Dem., Ga.), who had been conferring with army and navy representatives, might submit some compromise proposal.

A four-man minority of the committee has criticized the proposed amendments on the ground they are too favorable to war contractors whose profits are renegotiated under the act.

### Barite Made Subject To Depletion Allowance.

Most of the amendments acted upon today were highly technical or of minor general importance.

The Senate ratified a 20 per cent tax on cosmetics and toilet preparations. That compares with the present rate of 10 per cent and the House figure of 25 per cent.

Senator McClellan (Dem., Ark.) added barite to a list of minerals subject to a 15 per cent depletion allowance in computation of excess profits taxes.

Senator Davis (Rep., Pa.), a member of the Finance Committee, conceded the bill might be bettered in some respects "but in general it is directed toward the long-range welfare of the nation."

largest producer of barite, but since the war began the industry in the United States has greatly expanded. In 1941 Arkansas, California, Georgia, Colorado, Missouri, Nevada, South Carolina, Tennessee, Texas and Virginia mined 483,391 tons.

Arkansas Gazette  
1-27-45

### Arkansas's Barite Deposits.

Discovery of barite near Caddo Gap, Montgomery county, should enable Arkansas to compete better with other states which produce the ore. The find resulted from an examination of the locality made by the state Geological Survey about two years ago. Heretofore the deposit near Magnet Cove, Hot Spring county, was the only one known in the state. It was discovered in 1900 when a well was being dug, but extensive mining did not start until 1939.

The Baroid Sales Division of the National Lead Company and the Magnet Cove Barium Corporation produce approximately 15,000 tons of ground barite from the Hot Spring county deposit each month. The former company, which has leased the Montgomery county find, is enlarging its plant at Malvern. The January issue of the Engineering and Mining Journal reports that samples of ore from the new location indicate an extensive deposit of good quality.

Barite is a heavy, white mineral, occurring in regions where thermal waters replaced calcareous rock with barium sulphate. Tests which the United States Bureau of Mines made at Magnet Cove showed that the mineral bearing waters moved up along dipping folds of rock.

"Driller's mud" manufactured from barite is often used to facilitate the drilling of oil and gas wells, and the mineral is added as a filler in the manufacturing of paints, linoleum, cloth, rubber, oilcloth and paper. The ceramic industry uses it in glazing and enameling.

Germany in 1833 became the world's