

GREAT DEPOSIT OF BARITE DISCOVERED

Million Dollars Worth of Valuable Mineral in Hot Spring County.

Special to the Gazette.

Hot Springs, Nov. 26.—A valuable mineral known as barite, in quantities greater than ever before discovered in one deposit in the United States, has been found on land a mile east of the Magnet postoffice, Hot Spring county.

Extensive mineral right leases have been obtained from the Malvern Lumber Company and a man whose farm contains a great deposit of the mineral. The leases are held by M. Norden, well known mining engineer, who, having heard of mineral deposits in this state, has spent several months in the vicinity of Magnet Cove prospecting. The barite lies outside Magnet Cove, however, Norden has been making his headquarters in Hot Springs.

He has located about 250,000 tons of the barite, which ranges in prices from \$6.50 a ton in the natural state to \$75 when ground and refined. Barite, known scientifically as "barium sulphate," has supplanted lead as a filler for paint. It also is used in the manufacture of rubber, oil cloth, shades, and linoleum. It is used extensively by oil field operators for mudding when drilling at a great depth. The barite has very high specific gravity, and due to its composition resists the strongest acids and gasses.

Morden has operated in California, Arizona, and other Western states. He has investigated thoroughly the barite deposit. (Several shafts have been sunk to a depth of 35 feet without going out of barite.) The surface was stripped for a distance of 50 by 200 feet and additional shafts put down, which also revealed the mineral, making the deposit, Morden said, one of the greatest ever discovered in this country. A rough estimate of the value of the deposit thus far uncovered is a million dollars.

Morden has shipped from Butterfield several carloads of the mineral and has orders that will keep him busy. Paint manufacturers have heard of his "find," and are communicating with him. He plans to erect a mill to grind the barite. About \$35,000 will be spent for machinery.

Morden consulted George Branner, state geologist, who verified the information.

Magnet Cove is known for the great variety of minerals it contains. Not only are minerals found there in numbers unknown to other sections, but craters of extinct hot springs. A compass, because of the extensive mineral deposits, practically is useless in Magnet Cove, and when radio first started to sweep the country experts went to Magnet Cove for experiments and found that because of the mineral deposits, static there was eliminated.

The Wil-Nor Development Company of Phoenix, Ariz., a mineral exploration and development concern, qualified to do business in Arkansas. The company will maintain a branch office at Hot Springs, with Mrs. Beatrice Norden as agent. GAZETTE - 12-9-30

Mining of Barite Deposit Will Begin Next Month.

Special to the Gazette. 12-30-30

Hot Springs, Dec. 29.—Development of the barite deposit discovered by Moritz Norden, mining and chemical engineer of Los Angeles, near Magnet Cove, is expected to get under way early in January. Arrangements are being made to install a mill to grind the product. Norden says that if he had the mill in operation now he would be able to ship on orders more than 1,000 tons of barite daily.

H. L. Williams, chief engineer of the Mineral Point Zinc Company of New Jersey, which has subsidiaries throughout the country, registered at the Arlington and later, accompanied by Norden, visited the barite deposit. Williams said he believes it has no equal in the world.

The Rock Island railroad has opened negotiations with Norden for a spur track from Butterfield. The State Geological Survey, in a preliminary report, gave Norden 10,000,000 tons of barite in sight. Since the survey has been made the deposit has been extended, Norden said. Norden says he can place the deposit on the market at a profit of \$20 a ton.

Eastern Capitalists to Inspect Barite Deposit Near Magnet.

Special to the Gazette. 1-4-31

Hot Springs, Jan. 3.—That Eastern capital may interest itself in developing the big barite mineral deposit discovered about three weeks ago near Magnet by Moritz Norden, mining engineer of California, was indicated in a telegram Norden received today from Paul E. Williams, financier of New York, who said he and P. F. Cusick would arrive here the latter part of the week to confer with Norden regarding installing of a mill. Both Williams and Cusick are reputed to be millionaires. The former has been associated, Norden said, with him in previous successful mineral development projects.

W. M. Weigel, mineral technologist of the Missouri Pacific railroad, today arrived from St. Louis and inspected the deposit, which he said is the largest he had ever known and, he believes, the largest of its kind in the world. Norden has extended the barite ridge a distance of 2,200 feet, with an average width of between 60 and 75 feet. Weigel also said he believed that the barite was of an exceptionally high quality and that he would place the facts before the Missouri Pacific officials, so that steps may be taken to secure some of the freight business when Norden begins active mining of the barite.

"Barite is merely one of a number of valuable minerals that have remained undeveloped in Arkansas," Norden said tonight. "There are others I have every reason to believe I have located in commercial quantities, one in particular being many times more valuable than barite. Next year will see, in my opinion, national attention directed to Arkansas by reason of the effort being made to develop its very valuable mineral resources."

ASSURE CARS FOR MARKETING BARITE

ROCK ISLAND WOULD RUN TRACKS TO DEPOSIT IN HANDLING TONNAGE

Shaft Deepened to 34 Feet With Mineral of Highest Grade Obtained by State Geologist.

Realizing the immense tonnage and consequent business that would follow, officials of the Rock Island railroad are taking steps to render every assistance possible in placing the barite discovery into the hands of the large number of industries that use that mineral. Yesterday J. N. Bethea, division freight agent of the Rock Island, made a personal inspection of the deposit, accompanying Moritz Norden, California mining engineer and discoverer of the barite, to the Magnet Cove sector.

Mr. Bethea stated that the discovery had received serious consideration by the Rock Island and after he had obtained first hand information and convinced himself that the predicted tonnage had in no sense been over-estimated, he informed Norden that the railroad would grant the low industrial rate usually extended to infant industries in an effort to further a new mineral development project in the state.

"I had heard this deposit was big, but one has to see it to appreciate the immense tonnage you have of the mineral here, and considering the market there is for barite, I am certain that, if necessary, the Rock Island would be willing to run its tracks to the deposit. This barite would mean much business."

Among the other visitors yesterday to the deposit was Byron Parks, of the state geological department. On December 17, last year, Mr. Parks completed a preliminary report for Dr. George Branner, state geologist, in which he said there was not less than ten million tons of the mineral in sight. At that time the deposit had been uncovered not more than 1,000 feet. At the present time Norden has extended the mineral find a distance of 2,100 feet, with a width averaging from fifty to seventy feet.

Also, when Mr. Parks made his first survey the first pit had been put down only to a depth of 21 feet. Yesterday he went down 34 feet, with the barite still in sight, and at the bottom of the pit he collected several samples of the mineral, which, he said, appeared to be the highest possible quality. There is no telling from surface indications how far down the barite extends, so Norden yesterday installed hoisting equipment, and will

follow the barite down, no matter how deep it goes.

"Within a very short time I hope to be able to start shipping and filling some of the orders that await attention," said Norden. "I am just as anxious as any one to know how deep the barite goes. The deeper we go the richer appears the mineral, and I was glad that a representative of the state geological department yesterday was able to go down almost twice the depth he did when there last month and personally inspect the mineral and get samples. There is no doubt now concerning the barite deposit. It is, I believe, the largest of its kind ever discovered in one deposit in any part of the world. Mineralogy does not show anything to compare with it. Arkansas is certain to profit as the home of this big discovery."

To Begin Operating Barite Mill Within 90 Days.

Special to the Gazette. 4-7-31

Hot Springs, April 6.—Shipment of barite from the deposit discovered near Magnet Cove about three months ago by Moritz Norden, California mining engineer, will begin before the end of the month, according to Paul E. Williams, New York financier, who said that \$200,000 will be spent for mining machinery, and the mill will be in operation within 90 days.

Mr. Williams, accompanied by P. F. Cusick, also well known in New York financial circles, was met here by M. S. Williams Jr., and Herman Cornell, both of Tulsa, who are identified with oil interests in Oklahoma, and other states. They are interested also in the barite development.

Williams said he realized there has been comment because of delay in development of the barite deposit, which was due to investigations that had to be made regarding the probable size and quality of the deposit.

Arrangements have been made with the Arkansas Power and Light Company for a special line, and engineers for the Rock Island and Missouri Pacific railroads have visited the place with a view of extending tracks, Williams announced. Shipment of the raw product will be started in 10 days, he said.

Obtain Option on Area Rich in Mineral Deposits.

Special to the Gazette. 5-25-31

Murreesboro, May 24.—Senator Joe W. Kimzey of Magnet and associates have obtained 12-month option on the farm of T. M. Duke, consisting of 120 acres, three miles southwest of Murreesboro, on which is located a deposit of barium. Samples assayed show a content of 81.51 barium, 15.63 calcium carbonate, 1.01 silica, and only .46 oxide of iron, which is said to be a highly satisfactory test. Tests are to be made soon to determine the quantity of the deposit and if satisfactory, developments of the property will be started.

INSPECTS BARITE DEPOSITS.

H. A. Buehler, state geologist for Missouri, has been in Hot Springs several days inspecting the barite deposits in that section and making a study of the quality of the product with a view of determining commercial possibilities of the deposit. He

came to Little Rock last night to confer with State Geologist G. C. Branner regarding the barite area, which was discovered by the Arkansas Geological Survey.

Deposits of Barite May Prove Valuable to State

Add barite to the wonders of the Wonder state.

If you visit the office of George C. Branner, state geologist, and ask him to show you some barite, he will hand you a hunk of dark-gray, fine-grained rock so heavy it will strain your wrists to hold it unless you are prepared for its weight.

That is barite, which is used in the manufacture of paint, barium chemicals, and such miscellaneous items as playing cards, linoleum, rubber goods, artificial marble and ivory, fireworks, phonograph records, printers' ink, sealing wax, and many other products.

In short, since it is a heavy, white, opaque mineral, chemically inert, it makes an excellent filler.

There is plenty of barite in Arkansas. Just how much is not known yet, nor has it been established yet how commercially valuable the mineral may be to the state.

Mr. Branner ventured the prediction that Arkansas could become one of the principal producers of barite "if the known deposits are marketable." To rank among the principal barite-producing states—Missouri and Georgia—Arkansas would need to develop an output of around 100,000 tons a year. That would not be impossible, he believes, even if no more deposits are discovered. And there is every reason to believe that there is much more barite in Arkansas than has been discovered.

But is it marketable? Well, Mr. Branner sent samples to the U. S. Bureau of Mines Experiment Station at Rolla, Mo., and Fred D. Devaney, associate metallurgist, reported in March:

"We find that this material can readily be concentrated by a flotation process after grinding to 150 mesh. Flotation concentrates were made which had a tenor of 97.25 barium sulphate" (the important element) "1.76 per cent silica, and .11 per cent iron, with a recovery of a large percentage of the barite."

The expert added: "As you undoubtedly know flotation concentrates are generally re-floated several times and the middling products are re-treated. In plant operation the recovery of barite would be considerably higher than shown in the above table, as some of the barite in the middlings would be recovered. The overall recovery probably would be close to 90 per cent."

"In as much as barite is at present being successfully concentrated by a similar flotation process in California, the process may be said to have gone beyond the experimental stage, and there is every reason to believe that the ore you sent us can be satisfactorily concentrated by the flotation process."

Furthermore, the Southern Acid and Sulphur Company of St. Louis is now exploring the field in Hot Spring county and making further tests of the ore.

The Arkansas Geological Survey also has a man, Bryan Parks, at work preparing a report on the deposit, together with a geological map of the area, which will be published soon in bulletin form.

The history of the discovery of barite in Arkansas is related by Mr. Branner in the June 8 issue of the Engineering and Mining Journal. According to the article, the existence of this loose surface rock in the southeast corner of Section 10, Township 3 south, Range 17 West, Hot Spring county, has been

known to local residents since about 1900.

"In 1911," Mr. Branner wrote, "John Ingalls took a piece of this rock to Joe W. Kimzey of Magnet P. O., who identified it as an impure barite. Mr. Kimzey later roughly traced the extent of the deposit from the distribution of the float rock and by digging shallow pits."

"In September, 1928, a specimen brought to the Arkansas Geological Survey by E. E. Bonewits of Little Rock was analyzed by the survey and found to contain 82.6 per cent barium sulphate, 12.98 per cent silica, .75 per cent ferric oxide, 1.18 per cent calcium oxide, .12 per cent magnesium oxide, and .71 per cent sulphate other than barium."

"Attempts were made by the survey to interest persons in a detailed examination of the deposit, but it was not until the fall of 1930 that Moritz Norden of Hot Springs was informed of the deposit by the survey, and, with the assistance of Mr. Kimzey, examined the area."

"Mr. Norden caused two trenches to be dug across the outcrop of the deposit and put down several shallow test pits. Following this a test shaft was sunk to a depth of 28 feet during November and December, 1930, and January, 1931. Except for the first two and a half feet, the shaft penetrated bedded impure barite, showing thereby that the deposit is very probably one of some size."

"One of the trenches above referred to apparently cuts across about 85 feet of barite down the slope of the hill, and indicates a thickness, measured vertically to the bedding plane, of about 46 feet at that point. A considerable amount of drilling remains to be done before a final estimate can be made as to the quantity of material present."

"The deposit is located in a thickly timbered, hilly region. The elevations of the hills above the valleys are usually from 100 to 200 feet. The test shaft lies about two and a half miles northeast of Magnet postoffice by county and country roads. Magnet is about three miles, by graveled state Highway No. 6, from Butterfield station on the Rock Island railroad."

"Structurally, the barite occurs along the north side of an east-west trading

synclinal valley typical of the region. Its length is approximately two miles and it is closed at the east end. The bedded barite, which has an average slope of about 43 degrees at the shaft, conforms with the inclination of the adjacent strata in the syncline. About three-eighths of a mile west of the shaft the dip increases to 61 degrees, while at the east end of the syncline it decreases to 26 degrees."

"The barite has been traced for a total of about three-quarters of a mile along the north flank of the syncline. The formation containing the barite is probably the lower portion of the Stanley shale formation of the Mississippian system."

"The barite bearing material presents the appearance of a medium-gray sedimentary rock, stained by narrow, irregular, reddish bands. A study of many hand specimens and also the microscopical study of the rock leads to the belief that the barite has replaced some other mineral, possibly silica or lime. The specific gravity of the rock varies from 3.8 to 4. . . ."

"The fact that the barite deposit lies only about two and a half miles east of the well-known Magnet Cove area of intrusive, igneous rocks, suggests that the barium salts have originated in the Cove and have replaced material in adjacent sedimentary beds. However, it is to be noted that barium salts have not been reported as one of the major constituents of the rocks of the Magnet Cove area. The presence of titanium oxide in the barite is suggestive as to its origin, however, as many of the Cove rocks contain this mineral."

Because of the indication that the barite originated in the Cove, Mr. Branner, explained, it is reasonable to assume that it replaced, through water flow, sedimentary beds in other valleys similar to and near the valley where the barite deposits have already been found. Mr. Branner believes thorough tests would reveal the mineral in large quantities in several other nearby valleys.

Barite is so heavy that an acre of it a foot deep would weigh 5,500 tons. Mr. Branner believes it would be possible to mine at least 100,000 tons a year from the deposits already uncovered.

Crude barite sells for about \$6.50 a ton f. o. b. the mine.

SEATTLE BROKER HELD IN ARKANSAS

Much Sought Head of Closed Investment Firm Arrested at Hot Springs.

Seattle, Sept. 1.—(AP)—A five months search which led all the way across the United States and into Mexico ended today in Hot Springs, Ark., with the locating of Paul E. Williams, who fled from Seattle last spring after the closing of his brokerage house, Sheriff Claude G. Bannick said tonight.

Bannick arraigned a warrant for Williams' arrest on grand larceny charges to Hot Springs authorities and said immediate steps would be taken for his extradition.

The brokerage house, known as Paul E. Williams & Co., had offices in Seattle, Spokane, Bellingham and Walla Walla as well as the principal cities of California and in New York.

Deputy Prosecutor Arthur E. Bailey Jr., said shortages in the accounts of the different offices would total "more than \$1,000,000."

The specific charge against Williams, Bailey said, accused him of stealing \$175 worth of stock which Miss Ruth B. Wells, Seattle, had entrusted to him, as collateral for the purchase of other shares.

The deputy prosecutor said as soon as Williams was brought back to Seattle he will be charged with grand larceny on from 20 to 30 other counts.

Interest in Barite Holdings Acquired by Colonel Fordyce.

Hot Springs, Sept. 1.—An option has been given Col. John R. Fordyce to buy 80 acres of barite holdings near Magnet Cove of the Will-Nor Development Company, controlled by Moritz Norden, his wife and Paul Williams of New York.

Colonel Fordyce, it was said, will attempt to interest capital in the development of the property. Discovery of what is said to be the largest deposit of barite in the United States was made several months ago by Norden, a California mining engineer. The Arkansas Geological Survey sent one of its men to the Magnet Cove sector, and estimates the deposit at approximately 10,000,000 tons of barite.

FUGITIVE BROKER UNDER HEAVY BOND

Paul E. Williams, Wanted in Seattle, Wash., Blames Associates for Arrest.

Hot Springs, Sept. 2.—Paul E. Williams of Seattle, Wash., who was arrested here early today at the request of Seattle officers on charges of grand larceny, is being held in jail. At a hearing before Circuit Judge Earl Witt today his bond was fixed at \$10,000, but Seattle authorities tonight requested that he be held under \$50,000 bond. Williams had failed to make bond late tonight.

Williams fled from Seattle about six months ago after the collapse of his chain of brokerage houses. He had been sought in nearly every state and in Mexico. He is charged specifically with misappropriating \$175 worth of stock entrusted to him by Miss Ruth B. Wells of Seattle, but he also is wanted on about 30 other charges, officers were advised.

Habeas corpus proceedings, instituted today by Williams' attorney, seeking his release until an extradition hearing before Governor Parnell, were deferred until Monday.

Williams told officers he has been here since April. He was interested in the development of barite deposit in this state, and holds stock in the Will-Nor Development Company, which he and Mr. and Mrs. Moritz Norden control.

Williams today accused the Nordens of having informed Seattle authorities that he was in Hot Springs. He said the Nordens brought about his arrest to prevent him from attending the annual meeting of stockholders of the Will-Nor Development Company at Phoenix, Ariz., September 14.

The company was organized in Arizona but Williams exhibited a copy of a letter received by one of the stockholders from William Coxon, secretary of the Arizona Corporation Commission, saying the Will-Nor Development Company does not hold a permit to sell or issue any of its stock in Arizona. The letter was dated August 25, 1931.

Williams also displayed an agreement between Norden and himself whereby Williams was to advance Norden funds for prospecting the barite deposits. The statement, drawn in March, 1930, indicated that Williams had advanced \$6,000 to Norden prior to the failure of Williams' brokerage business. It specified that barite deposits discovered by Norden should become the property of the Will-Nor Development Company. Williams said his difficulties with the Nordens arose when Norden discovered barite near Magnet Cove and permitted his wife to obtain a lease in her own name to a 40-acre tract containing large deposits of barite.

Norden had the Will-Nor Company domesticated in Arkansas, but permission to sell stock in this state was not granted by Arkansas authorities, Williams said.

At the last meeting of the company's stockholders it was agreed to give Col. John R. Fordyce of Hot Springs an option to purchase the barite holdings of the company, with the exception of the 40-acre tract held by Mrs. Norden, Williams said.

WARRANTS ACCUSE MINING PROMOTERS

Discoverers of Barite Deposit Charged With Illegal Sale of Stock.

Hot Springs, Sept. 7.—Warrants were issued today for the arrest of Moritz Norden, German mining prospector, who discovered the big deposit of barite near Magnet Cove; his wife, Beatrice Norden, and Paul E. Williams, partner of the Williams in the Will-Nor Development Company, charging them with violation of the law in connection with the sale of stock in the company.

The warrant was served on Williams, who already was in jail here. The warrants for the Nordens will be served as soon as they return from Pike county, where they are inspecting the recently discovered cinnabar deposits. The complaint against Williams charges that he sold and offered for sale capital stock of the Will-Nor Development Company, a corporation organized under the laws of Arizona, without first securing a permit from the Arkansas Railroad Commission.

Transactions of the Nordens and Williams were called to the attention of Prosecutor Emory, he said, when Williams last week was arrested on information from officials in Seattle, Wash., who alleged that Williams was wanted on a grand larceny charge in connection with a chain of brokerage establishments that failed following the stock market crash several months ago. Williams has been held in \$10,000 bond. He announced he would fight requisition. Habeas corpus proceedings will be heard in Williams' behalf Thursday morning.

Over 8,000 shares of stock in the Will-Nor company Prosecuting Attorney Emory said, have been sold. Preliminary hearing will be held Wednesday.

REQUISITION HONORED.

Governor Parnell yesterday honored a requisition from the governor of Washington, requesting that Paul E. Williams be returned to that state on a charge of grand larceny growing out of failure of an investment house with which he was associated. Williams was arrested at Hot Springs recently on a charge of selling stock in a mineral development concern without approval of the Securities Division of the Arkansas Railroad Commission. These charges will be dropped, it was said. Williams first asked for a hearing on the extradition request but withdrew the request. 7-16-31

Branner Issues Report On Barite Deposit

An exhaustive report of 52 pages, entitled "A Barite Deposit in Hot Spring County, Ark.," a valuable accessory mineral, which may eventually form the basis of a new mineral industry in this state, was issued the past week by George C. Branner,

state geologist, and is being widely distributed.

Field work incident to the assemblage of data contained in the report was done by Bryan Parks, who prepared the text of the bulletin with the assistance of Mr. Branner. The publication was typewritten and mimeographed in the office of the Arkansas Geological Survey.

In his letter transmitting the report to Governor Parnell, Mr. Branner said the barite deposit described is unique in this country as to its size and method of occurrence, and will, it is believed, eventually form the basis of a new mineral industry in this state. He said there is a possibility of finding other barite deposits in the area which has been studied and suggestions are made for further prospecting.

SURVEY OF BARITE FIELD COMPLETED

State Geologist Predicts It Will Form Basis of New Industry.

A survey of a large deposit of barite in Hot Spring county has been completed by the Arkansas Geological Survey, and in his report to Governor Parnell, the state geologist, George C. Branner, predicted it will "eventually form the basis of a new mineral industry in this state."

The field work on the survey was done by Bryan Parks. The text of the 52-page report was prepared by him, with the assistance of Mr. Branner.

A detailed report of the preliminary survey, which included the sinking of a test shaft, with a map of the area, was published in the Gazette several months ago.

Mr. Branner reported that the barite deposit is unique in this country as to its size and method of occurrence, and said there is a possibility of finding other barite deposits in the area which has been studied.

"It is possible," the report reads, "that at least 1,000,000 tons of barite over an area of about seven acres are available 100 feet or less below the surface of the ground."

Barite is a heavy, inert, white mineral and can be mined and milled comparatively cheap. Its principal use is in the manufacture of lithopone, a white paint pigment, but it has many other uses.

Barite Deposits Are Declared Valuable

Hot Springs, Feb. 15.—(Special.)—A 52-page descriptive booklet on the Hot Spring county barite deposit, located about 12 miles from this city, has been received by the chamber of commerce. The booklet was prepared by Bryan Parks with the assistance of George C. Branner, state geologist.

Mr. Branner, in a communication to Governor Parnell informed the governor that the deposit is a large one and probably will start a new mineral industry in the state.

Barite contains the metallic element barium. Its compounds are used in the making of pigments and for other commercial purposes.

New Process May Increase Barite Output

Officials of the state Geological Department said yesterday that a new mining process for separation of barite from its ores, announced at the annual meeting of the American Institute of Mining and Metallurgical Engineers in New York Monday, may cause an increase in mining of the product in Arkansas.

A bulletin issued recently by Dr. George C. Branner, state geologist, said barite deposits in Hot Spring county are unique in this country as to size and method of occurrence. Barite is used in manufacture of linoleum, rubber tires, white pigment for paint, etc. The mineral is widely distributed in Arkansas in small quantities, having been found in the lead and zinc districts of northern Arkansas and in Pike, Garland and Hot Spring counties. Deposits in Hot Spring county are larger than any others so far surveyed.

The new method, known as "froth flotation," has been used before for separation of metallic ores, but was applied only recently to non-metallic minerals. The process for separating barite was announced by metallurgists of the United States Bureau of Mines. It is designed to separate the mineral after the ore has been milled.

Many Deposits Of Barite in State Reported

Geologist's Survey Shows Mineral Found in Hot Spring County.

The white mineral barite, for which a new mining process was reported to the American Institute of Mining and Metallurgical Engineers yesterday, eventually may form the basis for a new mineral industry in Arkansas, State Geologist George C. Branner says in a report on the deposit.

The Arkansas barite deposit in Hot Spring county is described by Dr. Branner as unique in this country as to its size and method of occurrence. He said there is a possibility of finding other barite deposits in the area which has been studied.

Used to manufacture lithopone, barite is employed extensively in making linoleum, rubber tires and white pigment. It also makes barium chemicals.

"Barite is a mineral which is widely distributed in small quantities in various types of rocks in Arkansas," says a report on the Arkansas deposit compiled by Bryan Parks of the Arkansas geological survey.

"It has been found in the manganese and in the lead and zinc districts of northern Arkansas, in southern Pike county and in Garland county.

"However, with the exception of the deposit in Pike county, the occurrences which have been known are not likely to be deposits of commercial value, the barite being an accessory mineral of only minor importance.

"A deposit of barite has been discovered in the extreme northern part of Hot Spring county. It has been prospected and shows promise of becoming an important addition to the non-metallic mineral resources of Arkansas.

"The deposit, which is an impure, bedded barite, is at present unique in the state in its character, its magnitude and in its method of occurrence."

The survey shows that barite was produced in the United States in Missouri, Georgia, Tennessee, California, South Carolina, Virginia and Wisconsin.

Barite heretofore has been purified only by washing, by the gravitational method. The new process, applicable especially to the southern barites, is flotation, something old in mining but never before applied to barite.

This method separates barite from its impurities, causing either one of them, or the barite itself, to float like suds on top of a mixture of water or other chemicals.