

# RECORD REVIVAL IN RUSH ZINC FIELD AS NEW MINES OPERATE

Gazette 7-11-37

By TOM SHIRAS.

Special to the Gazette.

Rush, July 10.—This place, like Rip Van Winkle, is awakening from a 20-year nap. During the World war, Rush was the largest zinc ore producing camp in the South, and the largest unincorporated town in Arkansas. Night and day for four straight years, air drills bit into the ore and ore bearing rock, and a dozen huge concentrating plants ground it up and concentrated it, preparing it for market. Then the price of zinc ore flopped. Mining men deserted the camp, mills rotted, and the population dwindled to nothing. The camp went to sleep and has slept for two decades.

The price of zinc ore has doubled during the last few months, and an air of expectancy hangs over the camp. Rush creek that comes tumbling down out of the mountains, has a more encouraging murmur. One hears the rattat-tat of air drill coming from a mine up on the mountainside. A truck loaded with ore dashes around the sharp bends in the road. The birds seem to be singing a sweeter song this spring than they have for 20 years.

**Six Properties Being Worked.**  
Six properties in the Rush district are now in operation and producing free ore, which is in good demand by the smelters. A number of other properties are scheduled to start work soon, which will step up production. Most of the operations are small operations, no mills being operated at this time. The Monte Christo Mining Company, however, has a new plant nearly completed, which will be put into operation as soon as it is finished. A good body of ore at this mine promises continuous mining and milling operations.

The Morning Star Mines, the largest concern in the camp, have leased a small portion of their property for free ore mining, and the men who are operating it are making a fair production. The company is represented at Rush by J. K. Lyons, who has been there for 16 years. They own the Morning Star, Red Cloud, Red Cloud No. 2, Philadelphia and Ben Carney mines, all big producers during the war. Mr. Lyons has an idea of a big central milling plant to handle the ore from their entire group of properties, which Mr. Lyons thinks will reduce costs considerably. This idea has been put into practice in the Tri-State District and is working out successfully. Some crude ore is being hauled as far as 35 miles to a central milling plant. The longest haul for the company, at Rush, would be about half a mile. The crude ore would probably be sent from the different mines to the milling plant by a system of overhead trams.

While mining at Rush, has been status quo, since the bottom fell out of the price of ore, two decades ago, the Lyons family, which consists of Mr. Lyons and his wife, have not been idle. Mrs. Lyons has devoted her time to raising fine Persian cats and has some wonderful animals in her cattery. Mr. Lyons has devoted his time to a thorough study of the ores of the camp and to local mining problems.

## Other Metals Found.

Among other things he has discovered is that the ores of the camp carry other metals besides zinc, the principal one being cadmium. Cadmium is the mineral that gives the bright yellow color to a zinc ore locally called turkey fat. Cadmium is used in making an alloy from which high class bearings are manufactured, and is worth now, approximately 90 cents per pound. Cadmium cannot be recovered from the zinc under the regular heat and retort method of reduction. It can be recovered however, by the electrolytic process, and a plant of this kind would no doubt pay in this section of the state. Local ores would probably run as high as six pounds of cadmium to the ton, which would add about \$5.40 per ton to the price of the ore if it could be recovered. In many cases, especially when the price of zinc ore was low, the cadmium value would represent the difference between profit and loss.

## Plan New Plant.

Case Brothers, who have a lease on the Edith Mine, near the mouth of Rush creek, where it runs into the Buffalo river, contemplate the installation of hydraulic equipment to mine the ore. The ground at this mine is mostly clay and boulder, with no supporting roof, different from most of the mines in the camp. The owners of the lease expect to remove the clay and other dirt from the free ore and boulders, by water, thrown from a high pressure nozzle, in much the same manner as hydraulic gold mining was carried on in California, in the early days. They have an unending water supply in Buffalo river, a few hundred yards from the mine. If this plant is installed it will be the first of its kind in the North

Arkansas field, and will be watched by mining men with interest.

## Conditions Changed.

Local conditions for mining in the Rush Camp have changed since the boom during the World war. The changes have lowered mining costs considerably. Good roads and lower freight rates have been the two greatest factors in the reduction. It was really a feat in horsemanship for a man to take a team and wagon and pull a ton ore from Rush, to the shipping points 20 years ago. Miners had their choice of Yellville, 13 miles distance, or Buffalo, 10 miles distance. In bad weather with heavy hauling these roads would become well nigh impassable. The writer has seen three mule teams on a wagon loaded with one ton of ore, and they had a hard time to get through.

Today this condition is entirely changed. A truck with as much as it can haul, can leave Rush and be in Yellville, in an hour or less. Freight from Yellville, to the smelters used to average around \$2.75 per ton in carload lots, and much higher in smaller quantities. The hauling from the camp and the freight combined used to total from \$7 to \$8 a ton. Incoming machinery and supplies carried the same high rates. In an interview with Roscoe Hicks, who is now operating the Mackintosh mine, he said: "I get all of my ore hauled from the camp to Yellville, now, for \$1.25 a ton, and the freight rate from Yellville, to the smelter at Fort Smith, where I have been selling my ore, is \$1.60 a ton making a total cost for freight and haulage of \$2.85 per ton." This shows a reduction of about \$5 a ton over the old costs. The same saving is made on incoming machinery and supplies. Labor is not so high as it was during the boom days. All in all ore can be produced in the camp now at from \$6 to \$9 a ton cheaper than it could during the World war.

There are many other indications that Rush is coming back into its own within the next few months, and that many strange faces will be seen on the creek. The Middle Western zinc fields have been heavily mined during the last quarter of a century and no doubt their ore reserves are rather expended. One of the most important of these fields made 27 per cent of its entire production last year from tailing piles, which goes to show that the above statement is not far fetched. It is time for a new zinc field to spring into prominence and production. The North Arkansas zinc field is the only virgin field in the United States, that the writer knows of.

## Rare Zinc Mineral Found in Arkansas

Gazette 8-6-37

Special to the Gazette.

Batesville, Aug. 5.—A rare zinc mineral, "hopeite," heretofore found only at the zinc mines at Altenburg in France, has been discovered in the territory surrounding the zinc mines at Lynn, near Strawberry. Credit for the discovery goes to Miss Koleta Walker of near Newark who has gained recognition through her mineralogical findings. An unidentified friend mailed the specimen to Miss Walker and she sent it to Dr. G. C. Branner, state geologist. Later the specimen was sent to Dr. K. S. Reinhardt, New York metallurgist and chemical engineer, who officially confirmed the discovery as "hopeite." In Brust and Penfield's "Manual of Determinative Mineralogy" the mineral is defined as a hydrous zinc phosphate of the formulae  $Zn_3(Po_4)4H_2O$ , of a grayish white color, a vitreous luster, a hardness of 2.5 to 3, and a specific gravity of 2.75 to 2.8.

## Rare Mineral Is Found Near Walnut Ridge

Democrat 8-10-37

State Geologist George C. Branner said today a specimen of ore taken from zinc fields in Lawrence county had been tentatively identified as "hopeite," a rare mineral listed by authorities as mined in France and North Africa.

Dr. Branner said that because of its rarity, hopeite's commercial value was not well-established in this country. He planned to forward the specimen to Washington for a further check by the United States Geological Survey.

Identification of the ore, he announced, was made by Miss Koleta E. Walker of Newark, a member of the American Institute of Mining and Metallurgical Engineers, who reported she obtained the specimen from a zinc mine west of Walnut Ridge and near Lynn.

Encyclopedias describe hopeite as "probably a hydrous phosphate of zinc."

"Due to its rarity, it has slight commercial value," said Dr. Branner. "zinc sulphide and zinc carbonate will continue to be the backbone of the Arkansas zinc mining industry, due to their abundance."

## Another Car of High Grade Zinc Shipped From Rush.

Gazette 9-26-37

Special to the Gazette.

Yellville, Sept. 25.—Another carload of high grade zinc ore is being loaded out from here to a Fort Smith smelter by Aud Goodall, ore buyer and merchant at Rush, who received satisfactory returns on a 50-ton car sent out a few days ago. The ore was bought from local free ore miners in small lots at the mines and trucked to the railroad. As an example of what the individual miner with crude equipment of only hand tools may do in this district, one miner, working a strip lease on the Paymaster property near Yellville cleared \$45 on his output that took him 10 days to mine, while getting out a liberal milling ore tonnage.

Mining scouts from the tri-state district and other outside points have been cruising this district lately, spotting zinc locations, while new leases are being taken by home miners.

While making a crop and working at odd times on his lease, a farmer-miner here has a production record of \$241 since last February.

## Yellville Zinc Mining District Enjoys Prosperous Year.

Gazette 1-16-38

Special to the Gazette.

Yellville, Jan. 15.—During the past year the Ozark district shipped approximately 1,150 tons of zinc ore and 200 tons of lead. All zinc shipments consisted of free carbonate ore in lump form as it came from the mines. Most of the lead was milled concentrates from the H. C. Urschel operation at Ponca, Newton county. The zinc production was made entirely by local miners working individual properties. Approximately 25 different diggings contributed to the zinc output, the greater part of which came from the Rush-Buffalo mining region in Marion and Searcy county.

Producers sold their ore at the mines to local buyers who took it up in truck lots and assembled car lots for shipment. Practically all of the zinc was shipped to smelters at Fort Smith and Coffeyville, Kan.

Work of free ore miners has proved valuable in more ways than is represented by the several thousand dollars in returns for ore sold. Incidentally, new discoveries of rich ore deposits have been made, while development extensions thus accomplished affords additional proof of commercial mining merit at several properties.

Wherever free ore has been mined in the district it is found to represent only a small proportion of the true mineral values, as compared with accompanying volume of milling ore encountered in the same ground. It is safe to assume that values represented in milling ore removed and placed on the mine dumps while mining free ore will more than equal the returns realized on the latter, to say nothing of new development values.

## New Activity In Calamine Zinc Field

Gazette 2-6-38

Calamine, Feb. 5.—The Calamine zinc field, which takes in parts of Lawrence and Sharp counties, is beginning to show life again. While there is no boom, prospectors are seeking zinc outcrops in the surrounding hills, and a considerable amount of active mining work is in progress. Two new mills are under construction, and by early spring the field promises to be producing again.

The largest operations in the field are about 10 miles apart. Ed Thoma, George Dixon and Porter Daniels, all of Mountain View, have taken leases on the Wilkinson land, near Grange, in Sharp county, and are opening up a mine. They have proven up a face of jack (zinc sulphide ore) approximately 100 yards wide. They don't know how long it is or how deep it penetrates. They will move a drill on the property within the next few days and prove up the depth. The ore they have taken out is good mill ore of very high quality, and will top the market when it is cleaned.

## Mill On Penn Land.

J. F. Lassiter of Batesville has the machinery on the ground, on a lease on the Penn land, a mile and a half east of Lynn, in Lawrence county. There are 56 acres in the lease and they have a fine showing of high grade jack, that apparently runs around 10 per cent. The ore is disseminated through a hard dolomite. Roy Jeffery and C. A. Keys of Batesville, have interested themselves in this lease and will help in the construction of the mill. Mr. Jeffery said he would move a compressor and jack hammer to the property soon and start active mining operations. It will probably take 60 days to erect the mill and set the machinery that is now on the ground, and by that time they should have plenty of crude ore out to put the plant in operation. Work that has been done on the property consists of shallow shafts that were sunk to check on the width of the vein. It is about 200 feet wide, with the length and depth undetermined. A drill hole about one-quarter of a mile from the present workings has penetrated the ore body to a depth of 210 feet.

## Mill Near Lynn.

J. F. Lassiter has recently completed a mill for the Cook Lead and Zinc Company, near Lynn and the owners of the property expect to start operations soon.

## Field One of First.

The Calamine zinc field, was one of the first zinc fields in the United States to produce and smelt zinc ore. The first mining and smelting operations were started there in 1857. The process of smelting zinc ore is rather complicated compared to the reduction of other base ores. Under heat the zinc raises as a gas which condenses back into metal. In 1857, experiments in smelting zinc were carried on both in New Jersey and in the Calamine field in Arkansas. It is a question which of these two places produced the first spelter or slab zinc produced in the United States. Operations in the Calamine field, that year were of short duration. They were started again in the sixties and a large amount of ore was mined and smelted. It was hauled to the mouth of Strawberry river, with ox teams and boated down the Black, White and Mississippi rivers, to New Orleans, and shipped to Germany, where it was used as a war metal by the Germans in the Franco-Prussian war. The remains of the old smelter are still in evidence at Calamine.

## Myth About Old Mine.

A myth that has sprung up since these old operations, is that they were smelting silver instead of zinc, and that they paid their men off in silver dollars that were made by them, and that sometimes when the men received them they were so hot that they couldn't hold them in their hands.

Because the company was experimenting with a new smelting process, they were probably very secretive about their operations, and this started the counterfeiting myth. The ore was smelted in small retorts made from fire clay, and charcoal, which was burned in the neighborhood, was used as the heat agent.

This same section of north Arkansas, was also the scene of the first iron mining and smelting operations in the state. The furnace was located on the banks of Big creek, near Jesups, and a dam and water wheel was used to develop water power with which to operate their big hammers and furnish air for their blast furnaces. The ore was mined from the surrounding hills. These operations were carried on before the Civil war.

## Lead and Zinc Mining May Be Resumed in Newton County.

Special to the Gazette. 3-6-38

Jasper, March 6.—Possibility that lead and zinc mining would reopen on a considerable scale in Newton county was seen with the filing of articles of incorporation with the Secretary of state by the Oklahoma Lead and Zinc Company. The company owns 160 acres in the rich Ponca field, 16 miles north of here, and is said to be shipping ore now. A slump in prices at the close of the World war caused mining to be suspended in this county, which has no railroad. Since then highways have been built and shipping of ore is not so expensive. With prices at a fair level, mining again may become a source of income for this section.

## New Milling Plant For Zinc Mines

Special to the Gazette. 4-10-38

Rush, Ark., April 9.—Arrangements have been made by Van Buren, Crawford county, smelting interests to install a central custom milling plant for this camp, which will handle crude ore from all the zinc mines now operating without milling facilities. This is the kind of a plant the small mine operators in this camp have been praying for for the last three years.

It is understood that the structure will be a modern milling plant that will handle the ore of this camp successfully. It is expected that construction work on the plant will begin in the next few weeks.

## Thousands of Tons Waiting.

There are thousands of tons of crude carbonate of zinc ore now in the mine bins here awaiting milling. Most of this ore is now under contract to the men who plan to construct the new mill, and they will have a large tonnage on hand when the plant is completed.

During the World war, this camp, which is the largest zinc ore producing camp in Arkansas, shipped thousands of tons of zinc ore, most of it being carbonate of zinc. Because the best slab zinc that can be produced from virgin ore can be produced from the carbonate ores here, it was in strong demand at that time and eight big mills were in operation on disseminated ore and hundreds of free ore mines were operated.

Immediately after the war the price of ore slumped, the Picher, Okla., camp was opened and operations practically ceased here. When the price of ore recovered three years ago many of the smaller operators went back to work, mining free ore, and a considerable tonnage has been shipped since that time. In mining the free ore, which is ready for market as it comes from the ground, fully as much crude, or disseminated, ore is mined, which has to be milled before it can be marketed. Because the camp has had no custom milling facilities this ore has accumulated in the bins and when milled by the new mill should produce a large profit on the last three years operations.

## Favorable Operating Conditions.

At the close of the World war and the slump in prices, the larger mines at this place had more ore developed in the ground than at any other time in the history of the camp. Mining could not be carried on profitably after the slump, because of bad operating conditions. The ore had to be hauled to Yellville, 13 miles, by mule teams over impassable roads during bad weather. Freight rates to the smelters were also high. Good roads now lead to the camp and five-ton loads can be handled cheaply by truck, which has cut down the cost of cartage. Railroads have reduced rates on ore, and other operating conditions have been vastly improved. Mining can be carried on now in the camp at a much lower cost and on a much lower price than during the war boom. The construction of this new mill will put the camp on a satisfactory operating basis again.

Gazette 4-10-38

Harrison, Ark., April 9.—Another car of ore, making the fourth since the first of the year, was shipped to Coffeyville, Kan., this week by John Dirst, ore buyer for the Missouri and Arkansas railway. Most of it was from Rush Creek, the Confederate and Bald Hill mines. Twenty-one tons were shipped by Will Maxey from the mine he opened a few months ago on Morning Star mountain. He has taken out about 100 tons of free ore during those months and reported in Yellville this week that he had made another rich strike.

## Rich Strike on Zinc Lease Near Yellville Reported.

Special to the Gazette. 4-23-38

Yellville, April 22.—Will Maxey of Rush has reported a rich strike on his zinc lease, from which he mined a carload of free ore. The workings are said to be showing improvement as operations continue. Mr. Maxey says the new mine has shipped more than 100 tons of free ore since it was opened a few months ago.

# INEVITABLE DEVELOPMENT SEEN FOR ARKANSAS'S ZINC DEPOSITS; REDUCTION PLANT TO BE SOUGHT

Gazette 6-12-38

Commercial development of Arkansas's zinc deposits, about which much has been said and written but the exact extent of which has yet to be determined, was seen as "inevitable" by George C. Branner, state geologist, yesterday.

Mr. Branner was questioned concerning possibility of renewal of activity in the state's zinc deposit areas following a district meeting of the state Council of Science and Industry at Harrison Thursday night. At the meeting discussions were held concerning deposits in the state and possibilities of location of an electrolytic ore reduction plant in the zinc deposit areas.

Mr. Branner, who has recently completed a study of zinc ore deposits, zinc production and uses in the United States, reported that the known reserves of recoverable zinc in the nation on January 1, 1938, were "approximately 6,000,000 short tons, at a price of about six cents per pound, at St. Louis, Mo."

## Exhaustion of Supply Forecast.

"As the average domestic rate of production in the past 10 years has been 534,822 short tons of recoverable zinc, the estimated reserves will be sufficient to last approximately 11 years, or into 1949," he conjectured.

"With the decrease of national reserves, the price of the metal may be expected to advance slowly, and with this a more intensive development of the domestic ore deposits should progressively take place. The importation of foreign ore, especially from Canada, may be expected to occur in increasing amounts.

"It is anticipated that, for these reasons, the amount of ore mined from the Arkansas zinc deposits, which are confined principally to Marion, Boone, Newton, Searcy, Lawrence and Sharp counties, will increase progressively during the next decade."

Mr. Branner said a total of 27,424 short tons of recoverable zinc was estimated to have been produced in the Arkansas fields from 1906-1935. The metal was valued at \$5,274,578.

The largest portion of the ore—21,876 short tons of zinc concentrates, of which about one-half was pure zinc—was produced during the World war, in 1917. The price then was from nine to 10 cents a pound at St. Louis. The price now is about four cents. Production then was strictly a matter of price, observers commented.

## 1917 Development 'A Price Matter.'

Development ceased in the Arkansas fields when the price was depressed as a result of a sharp decline in demand for the metal at the conclusion of the war. Principal uses of the metal are in the formation of alloys, bronze, and in die castings. More than 30 pounds of the metal is used in the construction of a single automobile, one publication showed.

At present, there are four electrolytic plants for one reduction in the nation—two in Montana, one in Idaho and one in East St. Louis, Ill. The latter plant has been inactive for some time. Zinc produced from such plants is 99.99 pure metal. There are 18 heat treatment plants in the nation now, according to reports. Purity of metal secured from the "roasting plants" is almost as high as that produced through electrolytic processes.

Mr. Branner said an attempt would be made to have a survey made, to determine the exact extent of recoverable zinc—which could be mined economically—by the United States Geological Survey and the Arkansas Geological Survey, co-operatively.

## Branner an Authority.

Mr. Branner, a lieutenant colonel in the United States Organized Reserves, has been assigned to the secretary of war to complete studies with reference to mineral deposits and supplies in the nation. His study on zinc was accepted and lauded highly by the Army and Navy Munitions Board recently.



## Many Speakers, Ideas, Presented At Harrison Conference.

6-12-38

Special to the Gazette.  
Harrison, June 9.—At a district meeting of the state Council of Science and Industry, held at the courthouse last night, George Branner, state geologist, was asked to have an engineer make a survey of the north Arkansas zinc and lead field, and make an estimate of the ore reserves in the field.

The figures will be used in connection with efforts to secure location of a electrolytic ore reduction plant in the field. Mr. Branner said it was probable that an engineer might be placed in the field to assemble the data desired.

Delegates from five counties in this district were present at the meeting. Bob Hall, secretary of the state Chamber of Commerce; Mr. Branner; H. K. Thatcher, secretary of the state Agricultural and Industrial Commission; Charles Gillette, state forester; W. M. Weigle, mineralogist for the Missouri Pacific Lines, and L. Hatch, who proposes to locate a electrolytic ore reduction plant in the north Arkansas zinc and lead field, were present.

### Hall Discusses Chemistry.

Mr. Hall gave a 15-minute talk on chemistry and its purpose. "One of the purposes of chemistry is to find new uses for agricultural products in industry, and we are beginning to make some gains along this line," he said. "Arkansas is over-agriculturalized and needs to be brought into balance. This can be done by finding new industrial uses for agricultural products and by the bringing of new industries into the state. It is frequently said today that we have no frontier. That is a mistaken idea.

"The South today is the new industrial frontier of the United States and Arkansas is one of its far flung outposts, with an abundance of raw material for development. It is not the lack of chances the state is offering today that keeps industry out, but handicaps. We have got to rectify these handicaps before we can hope for much new industry.

"The workman's compensation bill has to be passed and we have to put our taxation of industries on a competitive basis with other states. Twenty-six states are now offering some kind of tax exemption for new industries. Everyone should sign the petitions for both of these new laws which are now being circulated."

### Thatcher Outlines Commission Work.

Mr. Thatcher gave a talk on work now being done by the state Agricultural and Industrial Commission. "We are making some headway with our work, but about the most we can do is to talk, because the legislature which created our department failed to make any appropriation for it and we have no money to work with," he said. "What we need most is plants to take care of our raw material. Today most of our raw material is being shipped out of the state for manufacture. It seems to me that we could manufacture it in the state just as well as others can manufacture it out of the state. This would give us new and additional income. There is a big opportunity in Arkansas, and especially in this section of the state, for livestock development. North Arkansas is leading the state in this line but it has plenty of room for additional development."

### Branner Forecasts Development.

Mr. Branner forecast an early development of the zinc field. "The average production of zinc ore in the United States at this time is 534,000 tons. The domestic ore reserves are estimated at 6,000,000 tons, and this means that new sources of supply will have to be found. North Arkansas has a virgin field and sometime in the near future they will have to come here for their ore," he said.

Mr. Branner, with a series of geological maps, also gave a report on the mineral resources of the state, covering every section and discussed the various minerals and commercial stones.

### Timber Conservation.

Mr. Gillette made a short talk on the value of conservation work as applied to the growth of timber. "Most of the old stands have been cut but we can grow new ones," he said. "The annual growth of commercial timber in Arkansas once was estimated to be 1,125,000 feet. With three years of protection, it is estimated that this growth has been doubled. With both protection and management we expect the growth to increase to 6,000,000,000 feet. The annual cut now is about 2,500,000,000 feet. In a few years we will be able to offer new industries that use timber, about 3,500,000,000 feet above what we are cutting now, and maintain the growth."

Mr. Gillette indicated there is a possibility this section of the state may be sought as a location for paper mills. The second growth mountain pine which is abundant over about 100 square miles taking in parts of Searcy, Van Buren, Cleburne and Independence counties, is the same variety of

pine they are making paper from in Louisiana and south Arkansas, he said. Mr. Weigle discussed conditions necessary for successful operation of an electrolytic zinc plant. Cheap power, in large quantity would be required, he said, to operate a plant, and the power would have to be located close to the plant.

Henry Hand of Yellville made a short talk on the ore supplies of his section and laid stress on the improved mining conditions that have been developed during the last few years.

Louie Watkins, president of the Harrison Chamber of Commerce, presided.

## Proposal For Zinc Smelter Submitted

6-19-38

Special to the Gazette.  
Yellville, June 18.—A proposal for establishment of an electrolytic zinc and lead smelter in the Ozark mining district was submitted by F. E. Hatch of Little Rock to the Yellville Chamber of Commerce and the Ozark Mine Owners League this week. Mr. Hatch, as patentee of the process, suggested that a plant of 100 tons maximum daily output of refined metal be set up in five units of 20 tons each, and to start with one unit—adding other units as ore production requires.

The daily supply of ore necessary to maintain smelter operation at 20 tons of zinc would be 33 tons of jack or sulphide of 60 per cent grade, or 50 tons of carbonate of 40 per cent grade, it was said. In response to the question of whether such rate of ore supply could be had in this district, the Mine Owners League submitted figures on the record of past production here which show an average daily shipment of 44 tons during the year 1916 and 74 tons daily in 1917. This production was largely from newly-opened mines, the development and equipment of which was slow, since most of them had to depend on returns from sales of current output to finance their way. Because of impassable roads during several months each year, none of the mines was able to get in full time.

## Extensive Zinc Deposit Found In Sharp County.

6-18-38

Special to the Gazette.  
Evening Shade, Aug. 17.—What promises to be an extensive deposit of zinc has been discovered by members of the mineral survey crew of the WPA for Sharp county, the supervisor, C. P. Whitney of the Blauville section reported. The deposit is west of Calamine in the geological stratum which bears the same name and which gives the town its name.

One vein is said to be 28 inches long, two inches thick of an unknown depth. Zinc mines formerly were operated at Calamine, but were closed for no apparent reason 50 years ago. Many rumors were circulated at that time, but no one knew why the expensive equipment for mining and smelting was abandoned. The owners, who live in the East, still pay taxes on the land on which the deposits are found.

## Optimism In Zinc-Lead Mining Area

9-18-38

Special to the Gazette.

Yellville, Sept. 17.—A feeling of optimism among those interested in the zinc and lead mining industry, in view of the late improvement in some of the heavy industries, such as steel, automobiles and the building trades, all of which draw heavily on zinc stocks under normal business activities, is evident in this area.

Under the slump which had prevailed since August, 1937, zinc production has been cut short by reason of curtailed demand, together with decline of ore price levels below cost of production at a profit. J. H. Hand of Yellville, a mining engineer, who has been actively engaged for several years in helping to promote mineral development in Arkansas, and particularly in the Ozark zinc region, said here today.

During 1936-37 renewal of activities for zinc production made considerable headway, mostly in the Rush creek district and vicinity, near Yellville, Marion county, and out from St. Joe, in Searcy county. Mr. Hand said. During the first nine months of 1937, around 1,000 tons of free high-grade zinc ore was mined and sold by local miners while they were developing new ore bodies, mostly on several locations. The ore brought a gross price of about \$20 a ton without having to be milled, while the only equipment for mining, as a rule, consisted of picks, shovels, and

a little dynamite.

### Ore Sold at Diggings.

The miners sold their ore to local buyers at their diggings, realizing a living wage from their output. As an example, one miner who made a crop in the meantime, produced and sold \$250 worth of ore between the first of February and October from his lease. During the two years, several outside enterprises became interested in mining projects on a substantial scale, some of them acquiring leases and starting erection of mine and mill equipment. But from August to November the price of ore fell off nearly one-half with the result that practically all such operations were suspended.

Responding to the step-up of the past two months in some lines of business, the price of zinc has made perhaps a higher percentage of advance than that of any other basic commodity. The feeling prevails that zinc prices will go still higher as business may improve with the fall season. In that case, a return of development activity in the Ozark district is assured, as inquiries for mines and leases of merit are being renewed from different states, Mr. Hand said.

### Zinc Reserves Getting Low.

Another vital factor that tends to stimulate more interest in the zinc industry, especially in undeveloped territory, is the startling revelation, through a recent world-wide survey, that zinc reserves of the United States and other countries are getting near the point of exhaustion, insofar as the older established centers of zinc production are concerned. The survey referred to, and which commands recognition by government authorities, discloses that zinc reserves in the United States were approximately 6,000,000 tons at the beginning of 1937. With an annual zinc consumption of more than 500,000 tons over a 10-year average in this country, it is apparent that unless new sources of production are opened up, the country soon may face a grave emergency, since zinc is essential in manufacturing industries and in war materials.

### Ozark Only Untapped Region.

As far as is known to the mining profession, the Ozark district of North Arkansas is the only untapped area of zinc resources remaining in this country to be developed upon a comprehensive mining scale. Records of past production, resulting mainly from development experiments afford proof that ore deposits are of uniform high quality and commercial extent, where prospect tests have been opened for more than 1,000 feet into the ore formations, while ore output from those works returned profits to operators. From present prospect workings, which barely scratch the ore formations in a few places, a production of approximately 80,000 tons has been realized. Ore reserves now in sight through extent of prospect workings and reasonably anticipated through extensions of those developments onto adjacent grounds, are conservatively estimated by competent mining judges at 1,000,000 tons. As undeveloped ore bearing formations in other areas of the field are explored and proven the extent of ore reserves doubtless will disclose far greater magnitude, as expressed in an opinion by the late Dr. John C. Branner, former state geologist, when he said in his official report on that field: "So far as the extent of the ore deposits is concerned, it is safe to say that it is so great that it is unknown. Prospecting that has been done has not uncovered the hundredth part of the ore bodies."

Establishment of electrolytic smelting works in the Ozark zinc and lead area has received considerable attention in the past year or so, but recession of the past several months has not been inspiring to such projects, and nothing has been done on that line further than selection of an approved location. It is reported that this undertaking is to be renewed as mining conditions improve.

## Reports Say 'Ghost Town' May Revive

10-30-38

By CARUTH S. MOORE.

Evening Shade, Oct. 29.—Sharp county's ghost town, Calamine, may return to life. Sixty years ago lead and zinc were being mined and smelted in large quantities at Calamine. Expensive equipment had been purchased and installed by the Arbuckle Mining Company and other Eastern syndicates. A large "hotel," which also served as a sort of clubhouse for workers, was erected. Half the population of that end of the county worked in the mines and smelting plants.

The settlement received its name for the place where the ores were found. The larger lodes of ore were just beginning to be touched, old timers will tell you. The deposits were apparently almost inexhaustible, they say.

### Shut-Down Unexplained.

Suddenly, something happened. What

it was is still a mystery. Everything was going full blast. In fact, the residents will tell you that preparations were in the offing to enlarge the works. The laborers were dumfounded, upon going one morning to their tasks, to be met with the announcement that "the mines had closed down."

That was all they ever knew. The men who superintended the work had vanished overnight. Various stories began to get about. One was that silver had been mined and minted.

The buildings rotted down. Much of the equipment was carried away. Pipes were used to run water into stock pens. One may occasionally even today see the smelting pans being used for chicken watering pans or flower beds.

The mystery of the desertion remains unsolved. The owners or their representatives and heirs, in more probability, continue to pay taxes on their holdings around Calamine. The explanation probably is that poor transportation facilities existing at that time made the mines less profitable than the residents thought.

### Believe Deposits Larger Than Realized.

Interest is reviving in Calamine deposits of ore. The WPA mineral survey has recently uncovered a new stratum of zinc. This, hitherto unknown, runs along a little creek west of the settlement, and is said to indicate that the ores may be more widespread than was formerly thought. Some leases have been taken and a shaft or two been sunk.

Word is going around that "the mines may reopen." Residents are beginning to recall how "my father told me there was ore at the head of a certain creek branch." They will tell you: "I know a bluff where the ore runs back a long ways, and I haven't ever showed it to anybody," and so on.

## Zinc Mining Near Yellville Resumed After Price Raise.

10-31-38

Special to the Gazette.  
Yellville, Oct. 30.—Several carloads of zinc ore have been shipped from mines in the Rush creek district south of here, where Yellville miners have resumed operations, following a 20 per cent advance in zinc prices. Operating hand jigs, the miners are getting out high grade free ore and are erecting a large custom mill at making good wages. Outside interests are reported considering plans a central point in the district.

## Mineral Survey Will Provide Report on Zinc Reserves.

11-4-38

A long and loud plea of business and financial interests—particularly those of north Arkansas—that "somebody" compile accurate reports and estimates on the reserves of zinc in north Arkansas, has been answered, George C. Branner, state geologist, announced yesterday.

Dr. Branner said Howard Millar, mining engineer of Murfreesboro, and several assistants, had departed for Yellville, Marion county, on a special assignment to make a field study of the zinc reserves in connection with the WPA-financed state mineral survey.

Impetus was given the move to secure accurate figures on the zinc deposits at a series of meetings in north Arkansas held during recent months at which discussions were held concerning possibility of establishing an electrolytic zinc smelting plant in the area.

Zinc was mined in proportionately large quantities in the area before and during the World war, but decline in prices for the ores curtailed production.

Mr. Millar is a graduate of the Missouri School of Mines and Metallurgy, Dr. Branner said.

## Lead Deposits Of North Arkansas

12-11-38

By Tom Shiras.

Special to the Gazette.

Mountain Home, Dec. 10.—Lead was the first of several ores to be mined in the north part of Arkansas, and if and when the mining industry in this section finally gets under good headway, it will probably lead the list in importance. Lead ore deposits are widely scattered over Newton, Searcy, Carroll, Boone, Baxter, Marion and Lawrence counties, and enough prospecting and mining has been done to prove that rather large deposits exist in a number of localities.

The search for lead ore in north Arkansas has been fraught with adventure, high hopes, disappointments, success and failure. It was the first lure to lead prospectors into the hill section of the state, and will probably be one of the strongest inducements to prospectors in the future. It is the highest priced ore mined in the Ozarks, is always in demand, and promises quick money for the prospector or miner who is fortunate enough to find it in commercial quantities.

# STUDY OF ZINC, LEAD ORE DEPOSITS BEGUN BY MINING ENGINEER

11-20-38

Special to the Gazette.

Yellville, Nov. 19.—Howard Millar, mining engineer and geologist who has been employed by the state Geological Survey to make a survey of the zinc and lead ore reserves in the north Arkansas field, has spent the last week going over the territory seeking sources of data for the work.

The territory covered by the survey will include six counties: Marion, Baxter, Boone, Newton, Searcy and Carroll. All have lead and zinc deposits and records of commercial shipments. Marion county has been the largest producer of the six. The big production of the field was made during the World war. Since that time the price has been too low to work large mines profitably. During this period a considerable amount of ore has been mined by small producers, however.

In an interview, Mr. Millar said that he would cover Marion county first, and that his work in the county would be done in the Rush creek district, which is adjacent to Rush creek, on Buffalo river. He will make headquarters in the county seat of each county while he is carrying on the work.

### Seek Minimum Figure.

While it is virtually impossible to establish an accurate tonnage of the maximum reserves of zinc and lead ores in the district, by checking the output from all the mines that have produced ore and taking into consideration the mineral-bearing territory a minimum can be established.

An estimate of the ore reserves is necessary to provide prospective investors in the field something of an idea of what they can expect to find in the way of ore tonnage, if they open new mines.

The heaviest production of zinc ore that has been made since operations started in the field has been in Marion county. The heaviest production of lead ore has been made in Newton county from mines in the vicinity of Ponca, an inland village. Zinc, a small town on

### Schoolcraft First Prospector.

The probable existence of lead ore in large bodies in the Ozark region was the incentive that brought Henry Rowe Schoolcraft, scientist and geologist, into the territory. He left Potosi, Mo., in the fall of 1811, discovered the source of the Current river, found the head of the Northfork river, prospected it to its mouth, and thoroughly explored what are now Baxter, Marion and Boone counties. He also made a foray into south Missouri.

After his Missouri trip, he returned to the mouth of Beaver creek, in what is now Taney county, Missouri, and located from that point down White river to Batesville, from Batesville, he went northeast through what are now Independence, Lawrence, Randolph and Clay counties, back to Potosi. He was the first geologist to report the occurrence of lead in north Arkansas, mentioning discoveries at Bull Shoals on White river in Marion and Baxter counties, and on Strawberry river in Lawrence county. That was 120 years ago, and prospectors have been hunting for it ever since, with more or less success.

### First Lead Was for Bullets.

The first lead that was mined in north Arkansas was mined by the early settlers, for bullets. Later it became one of the early day industries and several lead smelters were operated. In 1851 lead was mined in Boone county, and smelted at a smelter on West Sugar Loaf creek. The product of this smelter was hauled by ox teams to Springfield, Mo., the nearest market. Before the Civil war there were two lead smelters at Lead Hill, in Boone county. The town derived its name from this industry. Two other smelters were operated in 1873 and 1874. Most of the ore came from shallow diggings, but several deep shafts were sunk on Short Mountain, in Marion county, from which a good production was made. All in all these two smelters produced over 100,000 pounds of refined lead, which was marketed at Springfield and Marshfield, Mo.

Early day lead smelters were also operated in Newton county. One was operated by the Boston Mountain Mining and Smelting Company near the head of Cave creek. It was in operation nearly two years, and produced several carloads of refined lead. Its output was hauled to Russellville and shipped over the old Little Rock and Fort Smith railroad, to Pittsburgh, Pa.

Another lead smelter was operated in Newton county in 1878, by a Mr. Vipan, which produced 50 tons of refined lead.

the Missouri Pacific railroad in Boone county, has produced the largest tonnage of zinc silicate that has been produced in the field. Most of the rest of the zinc ore production has been zinc carbonate. The production of zinc sulphide ore, or jack, has been light, although there are prospects for a large production of this ore in future years.

### First Reported in 1818.

North Arkansas probably has the largest area of zinc bearing formations in the United States. Henry Rowe Schoolcraft first reported the presence of zinc and lead ores in the territory in 1818 and 1819, when he made a study of the territory. Early in the Nineties John C. Branner, state geologist, made a favorable report on the field, and its development started.

But because of bad roads and other bad mining conditions the field was not greatly developed, although some ore was shipped. Mining was continued in rather a desultory manner until 1914, when the World war broke out and ore went to \$135 a ton. During the years of 1914, 1915, 1916 and 1917, the field really boomed and millions of pounds of ore were produced. After the war the price dropped and has been down since. Since 1917 the production has been light.

### Conditions Far Better Now.

A great many changes have taken place in the territory since the boom that made for better and cheaper mining conditions. Roads have been built so trucks can now be used for hauling, freight rates have been reduced, and

the field is on a competitive basis with Midwestern and Western fields.

After looking the field and conditions over, Mr. Millar expressed belief that it has a bright future. The ore is here and the mining conditions are not bad.

His idea on development is a central plant in each camp operated by an individual or company that will mill ore on a custom basis and buy all that is produced. Plants of this description would not only give small operators a local cash market for their product, which would start a large number of men to work on leases, but would be a strong influence toward the development of large ore bodies.

### May Establish Plant This Year.

A plant of this character will probably be located in the Rush camp this winter. There is enough mill dirt already piled up on the dumps there to keep it in steady operation for several months.

Another early day lead smelter in Newton county was operated by the Arkansas Mining and Prospecting Company, on Buffalo river, south of Boxley. This plant produced 80,000 pounds of refined lead which was hauled to the railroad at Eureka Springs for shipment. In 1889 William Bennett operated a lead smelter in Newton county, but there is no record left of his production.

### Confederate Army Operated Mines.

During the Civil war, the Confederates operated several lead mines in the vicinity of Bull mountain, in Marion county, and shipped their output to New Orleans, via the White and Mississippi rivers, to be manufactured into munitions for use by the Confederate army. They also mined and refined saltpeter, for the manufacture of powder in the same locality. A number of large cast iron kettles that were used in the refining process are still in existence in Marion and Baxter counties, and are now used to scald hogs during hog killing time in the late fall and early winter.

Lead smelting was finally abandoned in north Arkansas because of declining prices and the long, overland haul to market. Lead was discovered in south Missouri, railroads were built, and north Arkansas smeltersmen could not compete with new conditions.

While the smelting of this ore was discontinued, mining has continued, and there hasn't been a year during the last half century that it hasn't been produced in commercial quantities.

Prospecting during these years has widened the known lead bearing area of the territory, and operations in future years will probably see a large tonnage of the ore produced annually.

### Investigations of Lead Deposits.

While thorough investigations of the zinc deposits of the north Arkansas field have been made, the lead deposits have been given only superficial study. Most of the lead mined to date has been



mine from shallow diggings, with little invested capital. The major part of the tonnage has been free ore, that comes out of the ground ready for shipment without milling. Except in the Boxley district in Newport county, where this ore occurs in fissures, ore bodies of this character are not usually very large.

These shallow ore bodies are encountered in the north parts of Baxter Boone and Marion counties and on Upper Cave creek and in the Boxley district in Newport county. The Boxley district has probably produced more lead ore than any other part of the north Arkansas field.

While in other fields deep ore is generally encountered in the same territory that produces shallow ore—and this would probably be true of the north Arkansas field—the search for deep ore has been negligible. The reason for this is probably because deep prospecting has to be done with power drills which entails the investment of considerable money.

#### Few Deep Tests.

The only prospecting for deep ore of any consequence that has been done in North Arkansas has been around Dodd City in Marion county. Disseminated ore was encountered at 170 feet. It runs in dolomite, will mill out about six per cent and is extremely high grade. It occurs in a blanket formation but not enough drilling was done to determine its extent. One deep shaft was put down, which proved the drill hole.

The lead ore found in north Arkansas is of fine quality, seldom running less than 80 per cent metallic lead, which is the base it is sold on, and in many instances running up as high as 83 per cent. It carries a silver content of approximately two ounces to the ton, which is not enough to make it valuable for this metal.

The lead ores in the north part of the state are probably the basis for many of the lost silver mine legends. There is scarcely a county in the hill section that hasn't several legends of this nature and someone is searching for lost silver mines most of the time.

#### Second Carload of Ore Shipped From Newton Zinc-Lead Mine.

Special to the Gazette.  
Jasper, March 10.—W. A. McCurry and B. Bateman, who are operating the Blue Bluff mine near here, have just shipped their second car of ore in 60 days.

They are operating the property, which consists of 160 acres, under a lease. It produces both lead and zinc carbonate, the latter predominating. They are mining the ore at the 52-foot level with a shaft and drifts. The ore occurs in a fissure 20 feet wide. Most of it is free ore and ready for the smelter as it comes from the ground. As much wash ore comes out with the free ore, operators contemplate installing a hand jig to wash and concentrate this ore. The price of zinc carbonate is only \$14 a ton at Harrison.

Mr. McCurry also is cleaning out a shaft on the King Solomon mine, which adjoins the Blue Bluff property, from which he hopes to obtain a good production. This mine also produces lead and zinc carbonate with lead predominating. Lead now is much more desirable than zinc, as it brings about \$45 a ton. Mr. McCurry formerly operated mines in the Zinc camp in Boone county.

**LOW PRICE,  
NOT LACK  
OF TONNAGE  
RETARDS  
STATE'S ZINC  
MINING**

5-21-39

By TOM SHIRAS.

Special to the Gazette.  
Mountain Home, May 20.—Low ore prices, rather than lack of tonnage, are responsible for lack of development of lead and zinc deposits in several north Arkansas counties, Howard Millar said yesterday after completing a survey of approximately 200 mines and prospects in Marion, Searcy, Newton, Boone, Benton and Carroll counties.

A resident of Murfreesboro, Pike county, Mr. Millar is making estimates of ore reserves in north Arkansas in connection with the statewide mineral survey sponsored by the Arkansas Geological Survey. He will make his final report about August 1, after studying ore deposits in Baxter, Lawrence and Sharp counties.

Development of cheap electricity through construction of proposed power dams on the White river and its tributaries and an increase in ore prices would result in the building up of an important zinc mining and smelting industry in this section of the state, Mr. Millar believes as a result of his survey thus far.

There has been a demand for several years from investors in zinc and lead properties in the field for some kind of a report on potential ore reserves of the area.

One of Mr. Millar's recommendations for development of the zinc field in north Arkansas is that deep drilling be done on known shallow ore deposits. Most of the zinc ore shipped from this section is zinc carbonate, which usually is found high on the mountains close to the surface.

Most generally accepted theory is that this was deposited by surface waters that had percolated over and through zinc sulphid ore, picking up some of the ore in solution. It is considered possible that valuable beds of sulphide ore lies beneath these upper runs of carbonate.

Expressing belief there is sufficient commercial zinc ore in the north Arkansas field to support a large zinc industry, Mr. Millar said:

"I think central milling plants in each of the several districts will solve the production problem when the price of ore justifies development. Each plant should have sufficient capacity to process and concentrate all the ore mined in a particular district. They either should maintain a cash market for ore or operate on a custom basis."

No large company has operated in the north Arkansas zinc field since the World war. Small operators have no facilities for milling the mill ore produced, hence they mine primarily for free ore, which is found in chunks, ready for the market as it is taken from the ground. Utilizing the mill ore, which has to be treated before it is marketable, requires much equipment.

Mr. Millar also thinks zinc smelters or electrolytic plants should be operated in the field to convert the clean ore into metal. He said with such plants operating, other plants using zinc as a raw material might locate here.

The metallic content of manganese as well as zinc ores can be abstracted by the electrolytic process, which is one of the reasons construction of White river power dams is being urged. The territory has no coal or gas and use of wood is not economically feasible.

Arkansas carbonate of zinc ores is adaptable to all metallurgical and chemical purposes to which zinc ores can be put. The best grade of slab zinc that can be processed from virgin ores is obtainable from our zinc carbonates. For this reason the field, with cheap power available, might be attractive to chemical plants.

One of the first efforts to smelt ore in the United States was made in 1857 at Calamine, Sharp county. It was not a financially successful venture. A considerable amount of zinc ore was mined and smelted at Calamine in the '60s and some of it even was shipped to Germany for use in the manufacture of munitions for the Franco-Prussian war.

#### Plans For Reopening Smelter Studied.

Special to the Gazette.  
Van Buren, June 10.—Plans for reopening the smelter near Van Buren were discussed by local business leaders at meetings here this week. Built during the World war, the plant recently was reconducted. It normally employs about 300 persons.

At a mass meeting in the Van Buren High School auditorium Tuesday, it was decided to send a delegation to Joplin, Mo., to confer with officials of the Eagle Picher Company relative to resuming operations at the smelter, which was shut down several months ago. The delegation's plans are to be worked out by Roy Taylor, president of the Van Buren Merchants' Association.

Roy Madden, resident manager for the company, was in Henryetta, Okla., this week for conferences with B. A. Troutman, general manager of the smelters at Henryetta and Van Buren. The delegation will delay its trip to Joplin until it learns the outcome of Mr. Madden's conferences.

The committee organized this week to work toward the reopening of the smelter, which is a valuable industry for Van Buren, is composed of William Kirchman, chairman; C. J. Franklin, Grady Putman, Mr. Taylor, Edgar Covey and Ray A. Sangster.

#### Sharp "Ghost Town" May Be Revived.

By CARUTH S. MOORE.  
Evening Shade, July 22.—It is rumored Sharp county's ghost town, Calamine, may be revived. This village, in the southern part of the county, was a scene of activity in the way of the mining and smelting of lead and zinc ores as far back as 1870. These ores still exist there in great quantities.

Expensive equipment was installed at Calamine a half century ago by an Eastern syndicate which owned the mines. Large buildings housed the operations. A hotel and a clubhouse were built for the lodging and entertainment of owners. These were rather "swank" places for the times.

But everything was stopped overnight. When workers came to the plants one morning they found the doors closed and signs up stating "Operations Suspended." More than that, the owners seemingly had vanished into thin air.

Rumors flew thick and fast. Many more or less logical stories are told as to the cause of the sudden cessation of mining and smelting. The most plausible explanation is that the expense of hauling the smelted products to market over the almost impassable roads of that day made the cost of operating too high to be profitable.

The buildings decayed. Much of the equipment was carried away. Pipes were used to carry water to stock pens. Today one may see the huge smelting pans being used as watering pans for poultry and as flower boxes. Taxes on the mining property are paid yearly by heirs of the original owners. The persons paying the taxes live in the East, and vouchsafe no information to letters of inquiry.

Interest is reviving in the Calamine section. The recent WPA mineral survey uncovered hitherto unknown veins of lead and zinc. The new deposit follows the course of a small creek, seeming to indicate the ore field may be larger than was supposed.

A few "scouts," believed to have been sent by the property owners, have been examining the veins of minerals. Letters of inquiry from various sections of the country have been received.

Word is going around the mines may be reopened. There is talk, too, that the federal government may buy up stores of minerals as a preparedness measure.

#### Survey of Deposits in Three Counties Started.

Special to the Gazette.  
Evening Shade, Sept. 16.—A special survey of lead and zinc deposits is under way in Sharp, Lawrence, and parts of Independence counties with Paul Millar of Little Rock in charge, with headquarters at Batesville.

It is presumed the data is being assembled because of the European war. Should the war continue long or involve other nations, there would be a greatly increased demand for minerals used in the manufacture of munitions. Manganese, of which there are large quantities in Independence and adjoining counties, would play a major role. Prices of all such ores already have advanced and miners are expecting increased activity in the ore bearing areas.

Mr. Millar said the survey will attempt to show location and approximate amounts of various minerals and facilities of transportation.

#### Zinc Mine Near St. Joe To Be Reopened

8-9-39  
Special to the Gazette.  
St. Joe, Aug. 8.—J. C. Shepherd, who produced most of the zinc ore in north Arkansas from 1912 until after the World war, has begun operations at the Bald Hill mine, about 20 miles west of here, in Newton county. He is rebuilding an 80-ton mill on the property and will have it in operation soon.

The ore will be shipped from St. Joe. The ore is a mixed lead and zinc, but easily concentrated. In addition to the Bald Hill mine proper, Mr. Shepherd has a working option on 1,500 acres which belongs to the American Zinc Lead and Smelting Company. The Old Confederate, another mine on this acreage, was worked during the World war. During the War Between the States, considerable lead and salt peter were produced on the land, the latter being recovered from caye clays. Both the lead and salt peter were mined by soldiers in the Confederate army, and used for munition purposes.

Has Mined In Mexico.  
Since leaving Arkansas in 1919, Mr. Shepherd has been engaged in gold and silver mining in old Mexico, living in the city of Chihuahua. He says that conditions there now are such that mining operations cannot be carried on successfully. When one starts prospecting, he has to get the permission of the government and he has to have permission to stop, he said. If an ore body of real value is found, the government is quite likely to take it over, as it has taken over the oil properties, he added. Business conditions are very uncertain there, he reported.

This is the second time Mr. Shepherd has left Mexico and come to Arkansas. He first came during the Villa revolution. Starting with a very small production of zinc ore in the Rush camp, in Marion county, he increased his production to thousands of tons annually and kept it up until the price dropped after the World war. He expects to start with a small production this time and build it up as conditions warrant.

#### Zinc, Lead Mining On Increase

9-17-39  
Special to the Gazette.

Mountain Home, Sept. 16.—When slab zinc reached six cents last week it started more prospecting for zinc and lead in this section than since the World war. Several miners from other points are investigating the field with a view of starting operations, and many small prospectors are in the field, hunting for new ore crops and investigating old ones. The price for lead ore reached \$64.50 last week, and sulphide of zinc ores, \$40. Carbonate of zinc, which is north Arkansas's principal zinc ore, was bringing from \$30 to \$35.

Because the price has been so low since the World war zinc and lead mining in this section has lagged and little ore has been mined. The principal ore producing counties are Marion, Boone, Baxter, Searcy and Newton. Marion county has been the heaviest producer.

J. C. Shepherd, who produced the largest tonnage of zinc ore during the World war, has entered the field again, and has a mill at the Bald Hill mine in Newton county nearly completed. He expects to get into production in 30 days. This mine produces lead and zinc, as do several other mines on the property he has under a working option.

Sees Higher Prices Ahead.  
"Even before the European war, the zinc situation was looking much better," Mr. Shepherd said. "The surplus is not as large as it has been and better prices were expected with-

out the war entering into the picture. With the war demand, I look for prices to go much higher than they are now and for zinc ore for this field to be in strong demand.

"Carbonate ores from this section were in strong demand during the World war. A better slab zinc can be smelted from them than any other virgin ore. The smelters, too, can handle them cheaper because they do not require roasting before going into the retorts."

The largest producing camps in the north Arkansas field during the World war were Rush, in Marion county, and Zinc, in Boone county. Both of these camps have begun to show new life during the past 10 days and will be on a producing basis soon.

#### Prepare For Lead Mining Operations

10-1-39

Special to the Gazette.  
Harrison, Sept. 30.—Several truck loads of machinery and equipment for the mine and ore reducing mill which is being equipped on property east of Lead Hill, Boone county, owned by the Nancy J. Mining Company Inc., of near Peel, Marion county, arrived in Harrison this week and is being removed to the mines.

Fred Hart, superintendent of the mining operations, who came here recently from Texas, said that the mine is expected to be a big lead producer.

Reports from the town of Zinc, in eastern Boone county, indicate old mines and equipment there are being cleaned and the machinery and buildings repaired and made ready for operation. The Rush field also is reported as active, as are other scattered mines over Boone, Searcy, Newton and Marion counties.

J. C. Shepherd, who during the World war days was the largest zinc mine operator in north Arkansas with his Big Hurricane and Rush field mines, is not operating on a large scale at the Bald Hill mine in the eastern part of Newton county near Bass. He has 300 tons of the zinc and lead ores already on the "dumps" ready for milling. Hauling of concentrates to the railroad at St. Joe was started this week.

John H. Spear, geologist of Miami, Okla., is inspecting mineral deposits of this section and doing some prospecting work in company with L. A. Watkins, executive vice president of the Missouri and Arkansas Lines, whose policy is to promote mineral shipments from this section to augment the freight haul of the railroad. Mr. Spear is visiting with his uncle, John Ed Watkins, father of L. A. Watkins.

#### Little Rock Interests Obtain Everton Zinc Mine Lease.

10-15-39 Gazette  
Special to the Gazette.  
Everton, Oct. 14.—M. L. Birch and associates of Little Rock have leased the Margarite mine here and will incorporate the property. This is one of

the oldest zinc mines in this section, and while it has not been mined extensively it has produced a substantial tonnage of ore. Work on the property recently shows a continuation of the ore body, and a satisfactory tonnage of high grade zinc carbonate has been mined. The work thus far consists mostly of cleaning up the old drifts and getting the ground in shape for steady production.

#### Geologist Completes Survey Of Zinc Ore Reserves.

10-18-39 Gazette  
Special to the Gazette.  
Mountain Home, Oct. 17.—Howard Millar, geologist and mining engineer of Murfreesboro, retained by the Arkansas Geological Survey to compile figures on zinc ore reserves in the state, has completed his task. A report of his findings will be published.

For the last two months he has been working in Sharp and Lawrence counties, in the vicinity of Black Rock and Calamine. He described one body of zinc carbonate ore in that area that lies just beneath the top soil in a cotton field.

#### MINERAL ASSETS

10-22-39

Special to the Gazette.  
Harrison, Oct. 21.—L. A. Watkins, executive vice president of the Missouri and Arkansas railroad, and John Speer, geologist of Miami, Okla., who has been working with the railroad recently, have been investigating mineral prospects near Batesville and Heber Springs. Mr. Watkins long has backed a program of mining and industrial development in the railroad's shipping territory to increase the carload shipments originating on the system.

Peel Barham, who owns the Dago mining property at Zinc, leased the mines recently to L. E. Brayden of Dallas, Tex., who has cleaned the mine and is working a crew of miners. He will start shipments of ore soon. The Jack Pot mine near Zinc is being operated by a group from Memphis, Tenn.

It is reported that the Bald Hill and Confederate mines in east Newton county, operated by J. C. Shepherd and associates, will begin operation of the reducing mill machinery soon. Mining has been at a standstill the past two months because of the drought and water shortage. Springs which supply the reservoir at the Bald Hill mill are flowing again. The ore haul will be made to St. Joe for shipment.

Mines at Zinc in the Rush field and at Ponca have been cleaned out, and are ready for operation if prices of zinc ore advance. A survey of the Big Hurricane mining property, 17 miles south of Harrison, has been completed by Mr. Shepherd and favorable reports on working large deposits there with an easy haul to the railroad at Pindall in Searcy county, are indicated.

The Margarite mine near Everton east of Harrison, owned by John Potts, has been leased to M. L. Birch and associates of Little Rock, who will begin operations at once. The mine in the past has produced large tonnage of high grade zinc carbonate.

#### FATHER OF STATE'S ZINC MINING

Gazette 10-29-39

By TOM SHIRAS.

Ever since Henry Rowe Schoolcraft, a Massachusetts geologist and scientist, made his foray into the Arkansas Ozarks in search of minerals in 1818-19, zinc has been a magic word among the hardy adventurers in mining in the northern part of the state. There was a zinc boom in the "eighties" and another one in the late "nineties" that did not expend itself until 1905, but no ore production of any consequence was made during these periods. They were periods of active prospecting and mineral land sales.

While the pioneer mining men of the field were a hard working, optimistic, adventurous lot, and discovered most of the prospects which later become producers, none was able to develop the mines or make any are production of consequence.

During the Villa revolution, mining became a hazardous industry in Old Mexico, and mining men in that country had to find new fields in which to operate. J. C. Shepherd, who was brought up in the silver mining industry in Old Mexico, selected the north Arkansas zinc and lead field as his new location, and came to Rush, in Marion county, in July, 1912. In the subsequent years it was his production, for the most part, which established the area as a commercial field, with ore deposits capable of large production.

One of the necessities for the success of an independent in the mining industry is a spirit of optimism. Despite that, Mr. and Mrs. Shepherd had lost most of their possessions in the Villa revolution, they carried a spirit of optimism into the Rush camp.

The price of zinc ore was very low at that time, and the camp was suffering from a severe attack of zinc mining "blues." Things brightened up after the Shepherds arrived.

From 1912 until the end of the World war Mr. Shepherd produced 16,000 tons of zinc ore, with a gross value of more than \$1,000,000. The Rush camp, which had a population of approximately 200 when they arrived, increased to about 3,000 in 1916, and everyone had a job at good wages. The price of ore slumped in 1918, and Mr. and Mrs. Shepherd went back to Old Mexico in 1921.

July seems to be a fortuitous month for these hardy adventurers. Because mining conditions became very bad in Mexico last year, Mr. and Mrs. Shepherd returned to Arkansas the past July. Mr. Shepherd started operations in Newton county, with St. Joe as his shipping point. His ore production is beginning to flow from the smelters again from the Bald Hill and Old Confederate mines at the head of Cave creek.

#### Disproved Report Of 'Pocket Field.'

Until Mr. Shepherd came to the field in July, 1912, it had been publicized badly. Mining men in other sections of the country were told that the north Arkansas field was just a pocket field, and that these ore pockets were small; that there were no well defined leads of ore, which meant of course, that there were no real commercial deposits of ore.

J. C. Shepherd was the man who disproved this erroneous report, and he seems to have done the job successfully. One never hears anyone knock the field now.

#### Learned Mining Under Illustrious Father.

Mr. Shepherd's experience in mining was gained mostly in Old Mexico. A. R. Shepherd, his father, was the last governor of the District of Columbia, serving under the Grant administration. He is credited with changing the physical appearance of the atonal capital from a rather tawdry city with narrow streets, into the beautiful city it is today. His memory is honored in the capital by a statue of him set on the lawn of the Treasury building.

Mrs. Shepherd, formerly Sarah Clifford, came from a leading Washington family. She is a niece of Robert Lansing, secretary of state under President Wilson.

#### Started in Rush Field On 'Shoe String.'

When Mr. Shepherd arrived in the Rush field in 1912, the price of ore was low, and he had only a very short shoe string on which to operate. Many young miners were unemployed. After Mr. Shepherd looked over the prospects he gathered this group around him, and they went to work, the boss himself not being loathe to swing a pick when necessary. Each one of the boys who started with him became a mine manager in a few years.

After he got a small production started, he began to study the ore outcrops in the camp and decided that there must be well defined veins back in the bowels of the mountains. He soon verified this assumption. He found that the veins of zinc carbonate lay in and along the fault lines, running parallel to the surface hollows. Many of the early day prospectors cut these veins and dove on into barren ground, which led to the assertion that the field was a pocket field.

#### World War Brought Ore's Major Boom.

Mr. Shepherd's first operations were on the Morning Star, oldest mine in the Rush camp, the Ben Carney and the Climax. During 1912 he also was associated with Martin Littleton, a well known New York lawyer in the operation of the Red Cloud mine, at the mouth of Rush creek. As time passed, and he became better established, he took over the Philadelphia and Monte Christo, on Clabber creek; the Sure Pop on Water creek, and the Big Hurricane, near Pindall, in Searcy county. He equipped all of these properties with large concentrating plants and other modern equipment for both mining and recovery of ore. When the World war started and the price of ore rocketed, he kept on increasing his production. Late in 1917, however, the price of ore nosedived, leaving him holding the proverbial sack, which consisted of a huge investment in mines and equipment.

While the price of zinc ore slumped with practically no demand at all, shortly after the United States entered the war, the price of manganese began to soar. Import shipments were cut off, and government agencies began to clamor for production of domestic manganese. Mr. Shepherd, in company with countless other mining men from the Middle Western zinc and lead fields, went to the Batesville-Cushman manganese field and started to mine this much needed war mineral. The manganese boom lasted until the Armistice was signed, and then this industry collapsed.

Zinc ore prices rose some after the war, and he resumed operations on the Big Hurricane mine in Searcy county. In 1921 ore prices and mining conditions became so bad he had to suspend. Leaving Arkansas, after nine years of



operations on zinc and manganese, he returned to Old Mexico, and turned his attention to gold, silver and lead ores. Now he is back in Arkansas to stay.

His present operations in Newton county are in a section full of historical mining lore. The Old Confederate mine took its name from the Confederacy, and furnished a large volume of lead for munition purposes for the Confederate army. Some of the antiquated mining machinery used at the Old Confederate mine in war days still lies rusting in an old field near the mine. A large tonnage of saltpetre also was recovered during the War Between the States from clays mined from caves on Cave creek, in this section. It was used by the Confederates for the manufacture of powder.

Zinc and lead mining in the north Arkansas field has always been most active during war periods, when the price of ore is up. Usually during peace times the price of ore is either average or low. Because of better conditions, other mining fields operate during both high and low periods.

### Marketing Facilities Now Much Improved.

Until just a few years ago, conditions in the north Arkansas field were very bad, and mine operators had everything to fight if they kept going. Most of the mining camps are located from five to 30 miles from shipping points, and there were nothing for operators but rough, mountain trails over which to haul their production. During very wet times, it took as many as three teams of mules to pull one ton of ore from Rush to Buffalo, on the White River Division of the Missouri Pacific, one of the shipping points for the Rush camp. Supplies and machinery were as hard to move in.

Mr. Shepherd sees in the steady improvements made in the past few years an indication that the industry will regain its position in north Arkansas. Once fully under way again, it would continue as a stable industry, he believes.

### Advent of Water Power To Induce Home Processing.

Improved county roads now lead to every camp in the field. From the camps farthest from the railroad points a truck can whisk five tons in one hour. Hydroelectric development on the White river and its tributaries during the next few years, also promises cheap industrial power, which will be an inducement to capital to locate electrolytic reduction plants in the territory to recover the metal from the ore. This would save an enormous amount of money spent annually in shipment of ore.

## M. & A. DEVELOP INDUSTRIES

Gazette 11-5-39

By CLYDE GREENHAW.

Harrison, Nov. 4.—Utilization of the vast amount of resources available along the Missouri and Arkansas Railway line with a view to developing commercially Arkansas's zinc deposits and establishment of new industries which not only will create new jobs but will increase freight shipments for the road is the main industrial program sponsored by the road's officials the past few months, L. A. Watkins, executive vice president, said today.

Coal possibly will be added to the railroad tonnage in the near future, Mr. Watkins said. New coal deposits in Cleburne county extending from the vicinity of Miller and Heber Springs in an easterly direction about 25 miles were discovered with extensive prospecting last week. Extent of the coal deposits in the vicinity and laboratory analysis of samples of the ore are excellent, and officials plan to make thorough investigation with a view to drilling. The coal found is small but is of a high grade quality, and the vein ranges from four to eleven inches thick and from the surface to 14 feet under ground. Mr. Watkins said he still was studying the area, hoping to find a substantial and bigger vein of coal than has been found yet. The coal is located on privately owned land, but the M. & A. officials are trying to interest the Central State Life Insurance Company, owners of the land in the area, in prospecting on the land and in some drilling. Mr. Watkins has been working on the project for nearly a year, and spent last week in the vicinity with John Speer, geologist of Miami, Okla., who is here assisting Mr. Watkins.

There is a large deposit of tripoli near St. Joe in Searcy county, Mr. Watkins said. Tripoli is used for polishing materials and sometimes for filtering processes and is used in the chemical field. He now is trying to develop a market for the deposit.

There is a large deposit of tripoli near St. Joe in Searcy county, Mr. Watkins said. Tripoli is used for polishing materials and sometimes for filtering processes and is used in the chemical field. He now is trying to develop a market for the deposit.

### New Deposit of Marl Already Being Sought.

Marl and black marble deposits near Leslie in Searcy county and a deposit

of calcite near Eureka Springs in Carroll county have been prospected and surveyed by Mr. Watkins and Mr. Speer.

Great encouragement of these mineral developments by the railroad and also to the development of the manganese deposits north of Marshall in Searcy county and at other points along the line has been given by federal authorities under the strategic Minerals bill, which would provide greater mineral supplies for use in case of war, the mining of manganese being especially stressed.

Mr. Watkins examined the deposit of calcite near Eureka Springs last week. Calcite is used extensively in abrasives, paints and in the chemical industry.

Operators from Tulsa are trying to lease through the M. & A. Railway both the deposit of marl near Leslie uncovered by Mr. Watkins and the deposit of calcite near Eureka Springs. Marl is a clay high in calcium content, used extensively in fertilizer and in various manufacturing enterprises.

Black marble deposits on the Cove creek farm of William Stephenson, north of Leslie, are being developed by a group headed by J. B. Skinner of Little Rock. The deposit is said to have some of the finest black marble found anywhere in the world, rivaling that imported from Belgium, which heretofore has supplied the American market with its finest grade. Promotion of this enterprise as well as other mineral projects along the line, is to increase the volume of freight shipments originating in the road's territory.

### Four New Lead, Zinc Operators in Field.

About four new zinc and lead operators have come into the field in the past 30 days, Mr. Watkins said. Zinc and lead prices have advanced now to where it is profitable, and the Manda Industries Co., headed by Mr. Watkins, will continue to buy the ores, paying all that the market will allow, Mr. Watkins said. "We are buying the ores to get the freight out of it for the railroad and to encourage and promote mining industry in this area." More than 100 carloads of free ore has been bought by the company and sold in the past 30 months. Railroad centers are more accessible to mining fields with improvement of roads and highways since the World war, until now ores are hauled direct from the mines in trucks, while formerly wagons and teams were used.

### Custom Mill Planned in St. Joe Vicinity.

Negotiations have been under way for several months for establishment of an ore mill on the railroad line at or in the vicinity of St. Joe. The mill would be in the form of a central custom milling plant which will handle crude ore from all the zinc mines operating without milling facilities. This would be the kind of a plant the small mine owners have been praying for, and railroad officials believe that it would be one of the best ways of getting zinc and lead deposits in this territory developed and greatly stimulating the mining industry.

### \$50,000 Planing Mill At Shirley Ready Soon.

Another new industry being established on the railroad is a new planing mill at Shirley in Van Buren county by the Pierce-Young Lumber Company of Morrilton. The investment will reach approximately \$50,000 and the mill probably will be in operation within a week, Mr. Watkins said. Timber and rough lumber will be brought in from the territory north of Shirley and from other saw mills, and will be finished at the Shirley mill for shipment over the line. It is expected heavy shipments of the finished lumber will be made over the line.

The Lincoln Creosote Company at Heber Springs, which started operations last March, has added another cylinder to the plant, which doubles the output shipment, Mr. Watkins said. The plant is used in treating posts, poles and piling and shipped to the western Mississippi valley.

### Four-Year Livestock Program Pays Dividend.

Four years ago, the M. & A. Railroad started the livestock development program in co-operation with the Security bank of Harrison and the Chamber of Commerce. At that time Mr. Watkins was president of the Harrison Chamber of Commerce. Livestock has been improved greatly and Mr. Watkins says he feels highly gratified in the results of the program, in that it is providing a sure cash income and at the same time building up the soil. Farm youths too have become interested in better livestock. More than 50 carloads of purebred ewes have been shipped into this section and distributed along the line between Eureka Springs and Gilbert within the past two years.

### Increased Demand Seen For Iron Pyrite Ore.

Nearly a half-million tons of iron pyrite ore has been drilled out of a deposit uncovered in the past few

months by M. & A. officials in Carroll county, a mile north of Freeman Switch and two and a half miles north of Berryville. Approximately \$10,000 has been spent in exploration, drilling and survey work by the railroad. Located too far from the iron and steel industries, the ore was deemed of little value heretofore, but now may prove of economic value. A market for the ore has been developed in recent years in St. Louis, Mo., Tulsa and Bartlesville, Okla. For the past two years the market on iron pyrite declined, due to the low price of sulphur, which comes mostly from Louisiana and Texas, Mr. Watkins said. Iron pyrite is used largely in the manufacture of sulphuric acid.

Railroad officials believe that it will be best to start moving this product within the next few months because of war activities, and expanding market and a general increase in business otherwise. The increased demand for sulphuric acid probably improved prices on pyrites, Mr. Watkins said. After consulting with two major companies in this general area in the past two weeks, officials believe that production of the iron ore can be started soon. The only operations of the plant at Freeman Switch would be mining and crushing and the ore then would be loaded into freight cars and shipped to market. It is believed that there is a large supply of this material in the vicinity of Berryville, with the vein located on 88 acres owned by the Manda Industrial Co.

### Newton County (Mo.) Lead And Zinc Moving Regularly.

Increased activity in prospecting for minerals caused the Manda Industrial Co. to start prospecting an area along the railroad line in Newton county, Mo., for lead and zinc, early in 1938. Approximately \$7,000 was spent in drilling and prospecting the zinc and lead developments at Stark City, Mo., which now is being mined by the Eagle-Fischer Mining and Smelting Co. This is one of the projects being developed and sponsored by the officials of the railroad. Stock piling at Stark City has been carried on for several months. Tuesday the M. & A. began moving its 1,072d car out of the mine. Operations will continue indefinitely, Mr. Watkins said.

## ZINC MINING IN STATE RESUMED AT ACTIVE PACE

Gazette 11-12-39

### Munition Sales May Buoy Price.

Special to the Gazette. Harrison, Nov. 11.—With the prospect of munition sales, bringing a higher price for zinc, operations in this area were carried on at a quickened tempo this week.

Harry Primrose, member of the Primrose & Duty firm of Ponca, Newton county, and operator of the old Eleventh Hour Mine near Ponca, brought a truckload of low grade zinc ore here Monday and sold it to J. C. Durst, buyer for the Manda Corporation. He announced hauls will be made regularly. He said that the shaft is being cleaned out at the mine and he is hauling in the low grade ore, preparatory to mining in the main shaft. Mr. Primrose announced that most of the Ponca mines are operating or soon will be placed in good condition for working. Opening of the Ponca concentrating mills has been delayed.

### Lucky Dog and Jack Pot Mines to Be Reopened.

Operations at the famous Lucky Dog and Jack Pot mines, near Bruno in Marion county, likely will be started soon, W. E. Angel, well known merchant of Bruno, reported here.

Mr. Angel said that Bruno now is more accessible from Harrison by way of Yellville since completion of the new WPA highway from State Highway 14 to Bruno last week. Extension of electric lines to the Bruno community a year ago also has benefited his section greatly, Mr. Angel said.

### Coon Hollow Mine To Start Producing Soon.

A. W. Smith, Harrison lawyer and operator of the Coon Hollow mine near Zinc, on a leased 140-acre tract, announced here this week that the mine will start producing ore for shipment soon. Mr. Smith said the output of the mine is a high grade carbonate. This

mine was one of the best producers in the field during the World war.

### Water Shortage Delays J. C. Shepherd's Mines.

J. C. Shepherd, veteran zinc mine operator, announced that work in the Bald Hill and Confederate mines in Newton county, near Cave creek post-office, has been held up because of water shortage. As soon as there is sufficient water flow, operations at the Big Hurricane mines south of Western Grove, will be started by Mr. Shepherd.

### Arthur Lead Mill Being Prepared for Reopening.

Preliminary work for operating the old Arthur lead mine, near Peel, located on a 160-acre tract, and owned by the Nancy J. Mining Company, has been in progress for several weeks and included construction of an ore mill. The mine will have a capacity of 100 tons daily and a crew of 28 men will work in three eight-hour shifts. The mine-run ore is said to average 10 per cent pure. Offices of the mining company possibly will be located in Harrison. Fred Hart is general manager and R. S. Hart is superintendent. Title to

the property was cleared during the past six months by Mr. Hart.

### Zinc Deposit Near Pindall Investigated.

John Speer of Miami, Okla., employed by the Missouri & Arkansas Railway as geologist, spent the past week near Pindall, Searcy county, investigating a zinc deposit uncovered by a farmer while digging a well.

### Zinc Shipped From Eleventh Hour Mine.

Special to the Gazette. Harrison, Nov. 25.—A carload of zinc ore from the Eleventh Hour mine of Primrose & Duty near Ponca, Newton county, which had been trucked to Harrison and loaded on the ore docks here for shipment was shipped over the Missouri and Arkansas railway to a smelter at Coffeyville, Kan.

## ORE MILL LOOMS AT HARRISON TO MEET BIG NEED

### Many Operations Would Benefit.

12-11-39

Special to the Gazette. Harrison, Dec. 9.—Establishment of an ore reducing mill in Harrison, which would handle mill ore from the Newton county mines, south Searcy county and the Zinc, Lead Hill and other Boone county mines, looms here with increased activity among the smaller mining properties and the working of the accumulations of mill ore in the old mines left when the free ore was taken out feverishly in 1917 and 1918 and sold at war prices.

Scores of small ore deposits have been uncovered, well scattered over the north Arkansas mining field, and these can be worked by the pick and shovel method and made to bring good returns to the miners, the promoters believe. They cited that for the past two years miners of smaller veins have kept about a carload of ore moving weekly from the Missouri and Arkansas Railway ore docks at Harrison and Marshall.

Mining activities during the past week included shipment of two carloads of ore from Harrison to the Coffeyville (Kan.) smelter. The ore was trucked here from the W. T. Wells and the Eleventh Hour mines of Primrose & Duty near Ponca, Newton county, and was shipped through J. C. Durst, buyer for the Manda Corporation. Ore mills of 100 tons daily capacity are being installed by L. E. Brayden at the Jack Pot Mine near Zinc, and at the old Canton mine near Marble City, under the supervision of L. E. Richardson, superintendent.

Findings of the mineral survey in Newton county have not been completed fully but they will reveal zinc and lead ores are found in nearly every township in the county, J. G. Huddleston of Western Grove, employed on the state mineral survey in Newton county, said. Extent of undeveloped veins would have to be determined by further prospecting, he said.

## J. C. SHEPHERD AGAIN LEASES BIG HURRICANE

### Zinc Mine Was Big Producer Before.

12-17-39

Special to the Gazette. St. Joe, Dec. 16.—J. C. Shepherd, who has a lease on the Bald Hill, Confederate and other properties in this section of the north Arkansas zinc and lead field, has just concluded a lease with Eastern interests for the Big Hurricane zinc mine in Searcy county. Sometime next year he will equip this property with a modern milling plant.

The property lies about a half mile off Federal Highway 65, between Pindall and Western Grove, and is accessible to shipping points on the Missouri and Arkansas railroad. Mr. Shepherd owned this property during the World war and shipped several thousand tons of ore from it during that period. At that time it was equipped with a modern 100-ton concentrating plant, which he expects to duplicate.

Lies On St. Joe Fault. The entire property consists of 640 acres and is traversed by the St. Joe fault, an ore bearing fault which runs through this section for considerable distance. As far as this fault has been prospected, it has shown ore. The Speer and other mines beside the Big Hurricane, are located on it, and there is good reason to believe that the ore body is continuous throughout its length, Mr. Shepherd said.

The upper part of this fault carries carbonate, the jack or sulphide ore lying beneath the carbonate. Most of the ore produced by Mr. Shepherd during World war days was carbonate. During the later days of his former operation of the mine he reached the jack and it was very rich.

### Zinc Carbonate Dug From Farm Hollow.

Special to the Gazette. 1-14-40 Harrison, Jan. 13.—Arch Richesin of near Murray, Newton county, brought a truckload of free zinc carbonate ore here which was dug out of a hollow on his farm on the Little Buffalo river in Newton county. It was said to test about 40 per cent. The ore was bought for shipment from the Missouri and Arkansas railroad docks here.

## BRIEF SPELL OF GOOD WEATHER A BOON TO MINERS

1-21-40

### Traces of Silver Reported.

Special to the Gazette. Harrison, Jan. 20.—Mining activities were resumed this week in some sections of North Arkansas in the interim between the severe cold and heavy snows of the past three weeks and the new freeze, the latter part of this week.

M. M. Hall, farmer in the Cane Branch area, Newton county, south of Western Grove, announced here that in his prospecting for ore on his farm he believes he has uncovered traces of silver mixed with zinc ore.

W. H. Parton who uncovered a vein of zinc ore several weeks ago while trying to change the course of a spring on his farm at the mouth of the Cane Branch creek, also is believed to have uncovered traces of silver, Mr. Hall said. Activities of Hall and Parton have caused others to prospect for minerals in the Cane Branch area. Mr. Hall says the zinc deposits uncov-

ered in the Cane Branch area are near the old Belle of Wichita mine on lower Cave creek, which was a good producer 20 years ago.

### Gold Prospecting Checked By Snow.

Ira Andrews of Limestone, Newton county, while buying provisions here said that the "gold boom" was buried under the snow, which has halted prospecting for gold, in progress there for several months.

Despite bad weather conditions, Paul Springer, operator of a mine near Murray, Newton county, hauled five tons of high grade ore to the ore docks in Harrison this week.

The cold weather has slowed mining operations in the Zinc field, Larry Doyle, operator of the Coon Hollow mine, said. However, several pick shovel miners have signed leases and will operate on a small scale. Mr. Doyle says he will furnish a steady market for whatever ore is produced in large or small quantities.

Investigation of phosphates in the Hill Top area, eight miles south of Harrison on land owned by R. A. Cox, will be started as soon as the weather permits, C. R. Caughey, employed on the state mineral survey in Boone county, said. Extent of undeveloped veins would have to be determined by further prospecting he said. Mr. Cox has uncovered small deposits on his 80-acre farm.

Mine development in the Zinc area has just started, with great ledges of

ore yet to be uncovered. S. T. Valentine of Zinc reported here. Much of the prosperity in the Zinc at present is caused by the spending of money by the Missouri Pacific railroad in construction of two all-steel bridges across Sugar Orchard creek and other employment, which will be continued for several weeks. The construction work is furnishing Zinc workmen a substantial payroll.



# LEAD PRODUCTION NOW PROFITABLE IN PONCA FIELDS

2-18-40

Special to the Gazette.

Ponca, Feb. 17.—Mining activity in the Ponca mining fields of Newton county has increased and many new zinc diggings are being opened. Lead now is a paying product of the Ponca fields, and several truck loads have been hauled to the Joplin (Mo.) markets. The Manda Corporation at Harrison will be in the market within the next few weeks for lead. J. C. Durst, buyer, announced. Production previously was not heavy enough for buying the mineral, Mr. Durst said.

Miners and truckers are optimistic over the future of the mining industry in the Ponca field, with uncovering of a good vein of Galena lead at the Bert McCarthy mines, being operated under lease by Charley Christian. The lead vein is located in a natural fissure or a draw, which comes to the surface on the mountain side. He also is producing a fair grade of zinc carbonate, which seems to be plentiful.

## Zinc Production On Increase.

Doyle Villines of Ponca, who operates a truck line to Harrison, has hauled three rail carloads of zinc ore

from the Baker and the Brewer mines in the past six months. W. T. Wells operates both mines and has four hand jigs in operation. He probably will produce a car a month of zinc carbonate concentrates by this method. He also will produce some lead.

J. H. Wright, operating for an Oklahoma company the old Clark mining properties, adjoining the Baker and Brewer mines, shipped a truck load of lead to Joplin the past week.

Lead drybone and zinc carbonate are mined from a good fracture, well

mineralized, at the Chimney Rock mine, where a cable system is used from the mine with a crusher and hand jigs installed at the top of the mountain.

Mack McQuary has opened a new mine north of the Brewer mine and is shipping a good grade of zinc ore. Harry Primrose of the Eleventh Hour Mine also is making substantial shipments of both zinc and lead.

In the Rush Creek district exceptionally good ore of zinc carbonates is being mined from the old Red Cloud, Silver Hollow, McIntosh, Philadelphia, Yellow Rose and Morning Star mines, all being operated by small producers under contract. Between 15 and 20 tons a week are sold to the Manda Corporation from these mines.

# Snows Provide Water, Mining Be Resumed

2-25-40

Special to the Gazette.

Harrison, Feb. 24.—Mining operations delayed in the north Arkansas mining area because of insufficient water, will be resumed within a few days. Springs and wells started flowing this week, following heavy snow-fall the first part of the week. Much of the snow melted as it fell, adding much needed moisture to Ozarks farm lands and starting the flow in springs, wells and smaller streams.

J. C. Shepherd will begin operations at the Bald Hill mine in Newton county. The water supply in the reservoir at the mines and springs now is sufficient to start operations, and Mr. Shepherd is arranging to put the concentrating mill in operation.

## Much Ore on Dumps.

Already a considerable quantity of ore is on the dumps ready for the milling and it is expected that the ore haul will be started soon. The ore will be trucked to the Missouri and Arkansas railway at St. Joe, the route crossing the Buffalo river at the Richland ford. Soon after the Bald Hill mine begins operation, it is expected that Mr. Shepherd will begin operation of the Big Hurricane mine, south of Western Grove.

George Jones, operating the Red Cloud mines under lease in the Rush district, brought 14 tons of zinc ore to the Missouri and Arkansas ore docks last week for shipment to the

Coffeyville (Kan.) smelters by the Manda Corporation, buyers.

Thirty tons of ore is on the dumps at the mines ready for removal to the ore docks, but bad weather conditions have slowed trucking of the ore to Harrison. J. C. Durst, buyer for the Manda Corporation, said, A carload of ore was shipped last week to the Coffeyville smelters and another shipment is ready, Mr. Durst announced.

The old Alma mines, near Zinc, owned by Mr. Kirkwood, are being operated under lease, and a high grade zinc silicate is being mined.

# ANOTHER MAJOR LEAD FIELD FOR ARKANSAS SEEN

2-25-40

## Located in South Newton County.

Special to the Gazette.

Jasper, Feb. 24.—Lead outcrops on a major fault in the south part of Newton county, discovered by the state mineral survey, may lead to the opening of a new major lead field in the Arkansas Ozarks.

"While this fault has been known for years and has been classed as one of the major faults in the United States, it had never been mapped or prospected," Ralph Huddleston, Newton county supervisor of the survey, said.

"It has a displacement in places of as much as 500 feet, and meanders from the southwest corner of Newton county, slightly northeast for 12 miles," he reported. "While we have not been able yet to correlate this fault with the fault on which the Bald Hill and Confederate mines are located, it is probable that they are connected."

## Extends of Finds Must Be Determined.

The mineral survey crew spent several weeks on this fault mapping and prospecting it. It found lead outcrops at nearly every small opening it made along its course. They did not drive drifts or tunnels on any of the small openings made. Whether there are large deposits of lead along the fault remains for miners and prospectors to determine. The conditions, however, seem to be very favorable for commercial deposits of ore.

All the outcrops were found at the contact point of the Batesville sandstone and the Fayetteville shale. Most of the lead and zinc ore in North Arkansas is found below the Boone chert formation, the formations above having eroded. Southwest Missouri mines are all above the Boone chert, the formations above this not having eroded in that area. This is also true of the formations lying along this new ore bearing fault in Newton county.

The survey in Newton county, under the supervision of Ralph Huddleston, has been in progress for 18 months, and about 60 per cent of the Newton county has been covered. In this area all of the metallic and non-metallic minerals have been surveyed, mapped and sampled. Most of the county yet

to be covered lies around Boxley and Compton. Some of the best mines and prospects in Newton county lie in this area, and a detailed survey of this region will take considerable time.

## Many Non-Metallic Metals Also Found.

Besides the metallic minerals, the survey has disclosed that Newton county is rich in non-metallic minerals. Building stone, marble and limestone are present in inexhaustible quantities, and some excellent deposits of phosphate also have been discovered.

Coal has also been discovered in two places. In the vicinity of Compton, in the northern part of the county, and near Lurton, in the southern part. It has been mined commercially from mines in both sections, but no large production has been made. Several farmers in the Lurton section have reported that in drilling water wells they have gone through coal veins eight feet thick. The coal veins in this region lie on the highest points.

Much iron pyrite and hematite also have been found. The pyrite was found in disseminated form near Ponca City, and the hematite iron ore has been found in several different sections of the county.

# Mud Hinders Bald Hill Operations

3-3-40 Gazette

Special to the Gazette.

Harrison, March 2.—Although there is sufficient water supply at the mines operated by J. C. Shepherd in Newton county, operation of the Bald Hill mine, near Cave creek, is being delayed because of mud hindering operation of trucks around the mine. Mr. Shepherd and Fowler Belcher of St. Joe are directing shipping of several carloads of zinc ore from Mansfield, Mo.

Bill Thompson, employed at the Canton zinc mine, near Pruitt, in Newton county, said a new shaft had been extended 25 feet down and will be sunk another 25 feet to a vein of zinc ore located by drills. The concentrating mill has been placed in operation.

## Good Ore Reported In Calamine Section.

3-3-40

Special to the Gazette.

Smithville, March 2.—The Calamine, or east section of the north Arkansas zinc and lead field, which embraces several townships in this section of Sharp and Lawrence counties, is showing some activity.

Barr and Mathis, mining men of Coffeyville, Kan., have taken a lease on the F. M. Smith property consisting of 80 acres four miles west of Smithville, and are at work. Most of their work has been prospecting, and they have located some good runs of ore. Samples of rich jack (sulphide ore) have been taken from some of their shafts. The property was worked years ago, but at that time conditions were bad. Good highways which run into all sections of the field now make mining much easier than it was years ago.

The first zinc ore mined in north Arkansas was mined in the Calamine field. One of the first zinc smelters erected in the United States was put in operation at Calamine in 1857. All that is left of the old plant is the foundation.

# PRICE LOW BUT ORE PRODUCTION PAYING PROFIT

3-4-40

## Steady Shipping Expected.

Harrison, Feb. 10.—Despite a low market on ores, mining operations are continuing at an active pace in the North Arkansas fields. Even the pick and shovel methods, by which production costs on zinc ores range from \$5 to \$9 a ton, are affording good re-

turns, J. C. Durst, buyer for the Manda Corporation, reported. He said carbonate ores are bringing approximately \$17 a ton. Most of the present mining is being done on a small scale, the ore being reduced by hand jigs.

During the first World war sulphide ores brought from \$100 to \$108 a ton, while zinc carbonate brought \$80 to \$84 a ton at the bin, Mr. Durst, who owned and operated an interest in the Silver Hollow mine in Marion county during the war, recalled. Zinc sulphide carbonates sold at the smelters for \$100 a ton.

The present price of \$17 per ton for zinc carbonate is less than one-third the war price, while the present price of lead is more than one-third the war figure.

## Tariff Policy Blamed for Price.

The nation's tariff policy receives the principal blame for the low price of ore. Removal of the tariff on ore has enabled Mexico, Canada and other countries to undersell producers in the United States. The ore imports last year totaled one-half the entire production of Arkansas, Oklahoma, Missouri and Kansas, Mr. Durst said.

The war created an abnormal demand for ores and miners profited handsomely. The tariff removal has had the opposite effect on the normal price of ore.

## Carload of Zinc Ore Nets \$522.

A car of zinc ore shipped two weeks ago by Larry Doyle and Charley Smith, operators of the Coon Hollow mine, near Zinc, netted \$522, they reported on receiving a report from the Coffeyville (Kan.) smelters this week. The ore tested 23 per cent carbonate and 7.1 per cent lead, Mr. Doyle said.

A car of high grade ore, bought from the Newton county and zinc fields, will be shipped Monday by the Manda Corporation to the smelters from the M. & A. ore docks in Harrison. Mr. Durst expects that a car a week will be shipped henceforth.

# MANY TUNNELS AT COON HOLLOW BEING REOPENED

3-4-40

## Second Carload Of Zinc Shipped.

Special to the Gazette.

Zinc, Feb. 3.—Mining operations were started again here this week, after having been slowed down two weeks by sub-zero weather. One car of zinc silicate was shipped from the Coon Hollow property last week, and another this week. This property is being operated on a percentage basis by the miners. The property was one of the largest producers of zinc silicate in the north Arkansas field during the World war, and all of the old tunnels are being opened up and prospected. Those which show good runs of ore will be worked. At the present time six tunnels are in operation. Ten or 12 more will be opened up as fast as the miners can get to them. Some of them have caved in and all of them have to be retimbered.

## New Shipping Docks To Aid Industry.

The Missouri Pacific railroad is building a big ore loading dock at Zinc, and another at Bergman, seven miles up the road, so that ore can be loaded easily from the docks to the cars. Miners have been handicapped by lack of loading facilities, but the construction of these two docks will make loading easy for them and cut down overhead.

E. P. ("Pete") Barham has taken a lease on 40 acres in Mineral Hollow,

two miles west of Zinc, and has opened up an 18-inch face of free ore in his diggings. He is operating in two tunnels. One is 70 feet in length and the other about 50 feet. He expects to start shipping ore soon. His ore is high grade zinc silicate.

W. R. Nally of Zinc has started operations on a 20-acre lease adjoining the Almy tract. He has his tunnel back in the mountain 85 feet and has a fine face of rich ore running about 20 per cent. He expects to drift into free ore as he pushes his heading back.

# ORE MILL NEARS COMPLETION AT CANTON ZINC MINE

3-4-40

Special to the Gazette.

Jasper, Feb. 10.—The concentrating plant at the Canton mine on Lower Mill creek, between Jasper and Harrison, which has been under construction for the past four months, will be completed in a few days. Practically all that operators have left to do is to place belts on the fly wheels and start the engine. The construction of the mill was delayed several weeks by sub-zero weather.

The property on which the mine is located consists of 285 acres and is owned in fee by W. A. McCurry, who has been mining in north Arkansas for the past 25 years. The present operations are being conducted by Pete Barker, L. F. Richardson and Ray Zeck, all experienced miners from the Joplin (Mo.) field. They negotiated a 10-year lease.

## Crusher Has 75-Ton Daily Capacity.

The mill was constructed from rough lumber, and while it could not be classed as a modern plant, the equipment is good. It consists of a big jaw crusher, one set of rolls, hoisting engine, metal jigs and a large engine that operates on distillate, which will furnish power. The plant will handle approximately 75 tons of crude ore a day. Mr. Richardson is mine boss.

The operators will mine by the shaft and drift method. Their main shaft is 25 feet deep and cuts the ore at that

level. They have some water to contend with, and have to keep a pump in operation to keep the underground workings dry. One 60-foot drift leads off from this shaft into the mountain, with two headings. One of these headings is 40 feet wide, the other 20 feet. Both are in good ore, which runs in a blanket vein from six to seven feet thick. The roof over the ore vein is hard, white sand stone, which reduces timbering to a minimum. The ore is jack or sulphide ore, and they estimate the vein runs about 10 per cent. There are several other shafts and open cuts on the property which also show good faces of ore.

## Nearness to Highway To Aid Shipping.

The conditions for mining at the Canton are very favorable. The mine is not more than 200 yards from Highway 7, which runs from Jasper to Harrison, and hauling costs will be low compared to those of more isolated properties.

The Canton mine is one of several mines and prospects on Mill creek, a small mountain creek which heads in the vicinity of Marble Falls, and dashes down a steep mountain incline into Buffalo river, about five miles from the big springs from which it starts. The creek will furnish plenty of water for milling purposes, even in the driest weather.

# Three Mines Producing In Rush Camp

3-17-40

Special to the Gazette.

Rush, March 16.—Three zinc mines in the Rush camp are shipping ore regularly. They are the Red Cloud, Mackintosh and Silver Hollow.

The Red Cloud, owned by J. K. Lyons and associates is being worked under lease by William Maxey and Alton Seaton, Rush miners. Their production is all gray and yellow carbonate, and they are mining approximately a ton a day. The Red Cloud formerly was mined for jack or sulphide ore. Several weeks ago the present lessees prospected the tunnels and found a run of carbonate about six feet wide and three feet thick and negotiated for a lease. They are selling their ore to the Manda Industrial Corporation at Harrison.

Roscoe Hicks and Gus Sester, who with other associates have a lease on the Mackintosh mine on Rush creek, are making a small production of carbonate.

The only free jack being mined in the district is being produced at the Silver Hollow mine, about a mile below the mouth of Rush creek on Buffalo river. Charles Tighe and Les Cogman have a lease on this property and are taking their ore from an old tunnel about a quarter-mile from the opening. The vein is about four feet wide and six inches thick. They have to move a lot of rock to get the ore, but are making a steady but small production.

# Barker Buys Zack's Canton Mine Interest

3-10-40

Special to the Gazette.

Harrison, March 9.—Roy Zack of Joplin, Mo., has sold his interest in the Canton mine and mill, near Pruitt in Newton county, to J. A. Barker, who already owned a large share in the property.

Leonard Richardson is associated with Mr. Barker in the operation of the mining property.



# MINING ON LARGE SCALE BEGUN AT BALD HILL PLANT

14-40, 4

Special to the Gazette.

Harrison, April 13.—Mining operations on a large scale were started this week at the Bald Hill mine, near the Newton-Scarce county line, in the Cave Creek area, and soon truckloads of the refined ore will be moving from the mill to the ore docks at St. Joe for shipment over the Missouri and Arkansas railway to smelters in Kansas and Missouri.

## Preparations Under Way Since September.

J. C. Shepherd has leased the Bald Hill, Confederate, Big Hurricane and other mining properties in the area. The Bald Hill and Confederate mines were two of the heaviest ore producers of zinc during the World war. The ore mill has been restored at the mines and prepared for operation last September by Mr. Shepherd.

Operations were delayed because of insufficient water supply caused by the prolonged drouth during the summer and fall, many of the springs and wells being dried up. Recent rains have replenished the streams and there is an abundance of water at the mill and in the large reservoir, fed by a spring above the mill sufficient to operate the flotation system.

Approximately 50 men will be employed in the mining and milling operations and on the ore hauls to St. Joe and car loadings there, when the mines are in full operation. After the Bald Hill and Confederate mines are placed in operation, Mr. Shepherd plans to start operations at the Big Hurricane mine south of Western Grove.

## Mixed Ores Reported In Limestone Area.

C. Pellham, owner of land in the Limestone area in the Newton county mountains, said that there is a mixture of ores, with a showing of gold, silver, rich zinc and lead deposits. The land is under lease to Hutchinson & Mays, a company of miners, including Dr. W. A. Hamilton of Clarksville, and on which a rich vein of gold was reported uncovered in December. Mr. Pellham believes there is a real treasure in the ore although it may not assay as heavily as first expected. Prospecting carried on by the group indicated that there is assurance the mines in the Limestone area will produce some gold and silver with good showings of zinc and lead. Mr. Pellham said. Extensive excavations have been made, but work temporarily has been halted until arrangements are made for handling the ore, he said.

The Jack Pot mine, near Zinc, operated by L. Braydon of Dallas, Tex., is producing a good grade of ore and zinc silicate, which runs a little better than a 42 grade, J. C. Durst, buyer for the Manda Corporation of Harrison, said. The mine is operated 14 hours a day with use of a crusher, rolls and hand-jigs.

Charley Christian, operator of the Bert McCarthy mines in the Ponca (Newton county) field, under lease, is producing a good grade of zinc and free lead of good quality. Development is in progress, opening up new ground with prospects of a good vein of lead. Showings in a cross-cut also are good. Mr. Durst said, as well as the main leading.

Mr. Durst bought 34 tons of ores from the Ponca field, 20 tons from the Zinc field and the balance to make up a 56-ton car shipment from the Rush field.

# Drag Line To Clean Out Big Hurricane

4-21-40

Special to the Gazette.

St. Joe, April 20.—J. C. Shepherd, who has a lease on the Big Hurricane mine, near Pindall, will install a drag line on the property soon and start to excavate the old ore bearing pit, which was filled with silt and rock during a cloudburst several years ago. "We will use this equipment in cleaning out the old pit to a depth of 60 feet, which will put us down to the ore body," Mr. Shepherd said. "Beginning at that depth, we will sink to water level on the ore and work the ore from drifts leading from the shaft."

The old pit was about 150 feet in length, 70 feet in width and 60 feet in depth. When the property was being worked before and during the World war, crude ore was taken from the surface to the bottom of the pit, the lower runs being very rich in "jack." At that time it was one of the largest producers in the field.

Mr. Shepherd reported that milling operations at the Bald Hill mine in Newton county are progressing satisfactory, and good values are being recovered from the crude ore. The Bald Hill is producing both lead and zinc carbonate.

# First Carload Of Iron Ore Shipped

4-28-40

Special to the Gazette.

Russellville, April 27.—Dr. R. L. Smith, president of the new Smith Mining Company of Russellville, announced today that the first carload of hematite iron ore, mined in the company's mine at Crystal Springs 15 miles west of Hot Springs, was shipped this week. He said a carload of manganese ore will be shipped from the mine next week.

The Crystal Springs mine is said to be the first mine in Arkansas to market iron ore commercially. It was opened two weeks ago and employs eight men.

Edward Stone of Tucson, Ari., who was brought to Arkansas through the influence of Harvey C. Couch, president of the Kansas City Southern railroad and the Arkansas Power and Light Company, will come to Russellville soon to examine mineral resources in this vicinity, Dr. Smith said.

The first shipment went to the Standard Brake Shoe Company of Pine Bluff and Memphis, headed by Ed S. Dilley, and will be used in the manufacture of brake shoes for railroad cars.

Manganese ore will be marketed through Reed Dennison of Cushman.

# Ore Shipping Is Under Way

4-28-40

## Revives Hopes at St. Joe of Recovering Former Activity.

St. Joe—With the placing of two carloads of refined zinc ore on the loading dock on the siding of the Missouri and Arkansas railway here last week, the recently inspired hope of the townspeople that it would again become an important ore shipping center seems closer to realization.

This hope was raised six months ago when J. C. Shepherd, who in World war days was the largest zinc mine operator in north Arkansas, returned from his Mexican silver mines which were closed because of Mexican opposition to foreign operators, and once again entered this field.

The hope was held in suspense for several months when it was learned that there was a shortage of water to operate the ore mills at the Bald Hill mine, 15 miles west of St. Joe, in Newton county, which Mr. Shepherd had leased and which was to be the scene of his largest mine operation. The long summer

and autumn drouth had dried up the springs which furnished water for operating the flotation system at the mill. Now the springs are running and there is an abundance of water in the reservoir.

## Leases Zinc Mine in North Arkansas Area

St. Joe—Announcement is made of the leasing of another of the mines which in World War days was one of the largest producers in the north Arkansas zinc field, and which for 20 years has been idle.

Ed Mays, well known Leslie resident and formerly operator of the big stave mill business there, last week leased the Evening Star mine, located about 12 miles northeast of Marshall, the parties leasing the mine being a group of Oklahoma operators who have secured other leases in that territory.

One of the provisions of the lease is that a fully equipped mill shall be put on the property and in operation within 120 days.

# Zinc Miners Prepare For Better Days

May 5, 1940

Special to the Gazette.

Harrison, May 4.—Although the price of zinc ore is not justifying great activity among larger mine operators in the north Arkansas field, many properties are being cleaned and the mills repaired, with many operators apparently anticipating good days ahead.

Ed Mays of Leslie has leased the Evening Star mine, located about 12 miles northeast of Marshall, to a group of Oklahoma operators who also have obtained other leases in that area. A provision of the lease stipulates that a fully equipped mill shall be put on the property and in operation within 120 days.

The Evening Star was one of the largest producers in the north Arkansas zinc mining field during the World war, but for the past 20 years has been closed. It is located near the old Jack Pot, Maumee and other mines in the Buffalo river area. A fortune in ores was taken from these mines many years ago.

J. C. Shepherd, who in World war days was the largest zinc mine operator in north Arkansas, has started operations at the Bald Hill mine in Newton county.

Mr. Shepherd plans to reopen the Big Hurricane, near Western Grove, as soon as a custom ore mill is established near St. Joe. The mill will be constructed on the M. & A. railway on the banks of Mill creek, a mile north of St. Joe, by a group from Bentonville, L. A. Watkins, president of the M. & A. railway, announced. A quarter-million dollars worth of ore was shipped from the Big Hurricane mine during the World war. Mr. Shepherd has guaranteed to supply the custom mill with 100 tons of ore daily. Other miners in the Tomahawk, Water Creek and Rush fields also will truck ore to the mill.

# Coon Hollow Zinc Mill Site Leased

5-19-40

Special to the Gazette.

Harrison, May 18.—Charles B. Wier, photographer of Fort Worth, Tex., has leased the mill site in the Coon Hollow Mining district, near Zinc, and work was started this week cleaning the property preparatory to setting up machinery. The Coon Hollow Mine was a good producer during the World war.

An air compressor and drill or the jack-hammer method will be used to expedite tunnel and drift mining at the site. The pick and shovel method is used by most of the miners in the Zinc area.

An excellent deposit of mill ore has just been exposed, Mr. Wier said. Machinery is expected to arrive soon. Prospecting on 120 acres between Zinc and Bergman and owned by Mr. Wier has been under way for the past 15 months and there is a good showing of zinc.

Manganese Deposit Surveyed. L. A. Watkins, president of the Missouri and Arkansas railway, and Fred Durst, mining engineer, spent this week in a survey of a manganese deposit uncovered in White county, near Letona, on the M. & A. railway. The Arkansas state Mineral Survey has been asked to survey the deposit to determine the extent.

# Will Soon Begin Taking Out Ore

DEMOCRAT 5-27-40

St. Joe—A force of men were put to work at the Big Hurricane mine a mile west of Highway 65, midway between Western Grove and Pindall, Monday morning, to begin cleaning up the property preparatory to operations.

J. C. Shepherd has a lease on the property and will direct operations. He is operating two zinc mines in southern Missouri and the Bald Hill mine in the east part of Newton county, where an ore concentrating mill is in operation.

It is not yet determined in what manner the ore from the Big Hurricane will be handled. A short time ago it was announced that a custom mill would be built at St. Joe of extra large capacity for milling ore, and that Mr. Shepherd had said 100 tons daily of ore for milling would be supplied from the Big Hurricane, which being located only a mile from the paved highway, would make trucking easy.

It is said the construction of the mill at St. Joe is still under discussion and that plans are that if constructed it will accommodate also the mines in the Tomahawk and Water Creek country, as much as 15 miles northeast of St. Joe, from which section large quantities of free ore are now being brought to the railroad.

Mining activity continues over this whole field, especially among the smaller operators and the pick and shovel miners.

# Coon Hollow Gets New Equipment

6-2-40

Special to the Gazette.

Harrison, June 1.—Equipment for expediting mining was set up this week at the mill site in the Coon Hollow mining area, near Zinc, by Charles B. Wier of Fort Worth, Tex., who has leased the site. Equipment includes an air compressor and drill. Two jack hammers were placed in operation at two separate openings with tunnel and drift mining methods followed.

An agreement has been formed with several other independent miners for use of the equipment in drilling. Mr. Wier said, and all miners of the Coon Hollow mining district are planning to form a club, whereby the ore output will be pooled for shipment in carload lots.

Mill Considered. In the event that it proves practical and profitable, a mill for running lower grades of the minerals may be constructed, Mr. Wier said. This is the only method of profit for some of the low grade ores. About 30 or 40 per cent carbonate ore zinc is the type of ore encountered at the present, Mr. Wier said.

Preparations are being made to rid the old shaft of water for exploration for further mining. Ancel Davis is foreman in charge of drilling. Mr. Wier will remain at the mining area for the next four weeks supervising the work.

# Survey Of St. Joe Fault Planned

GAZETTE 6-30-40

Harrison, June 29.—Test drilling for mineral ores in the north Arkansas mining area in Searcy county was started this week in the St. Joe fault, L. A. Watkins, president of the Missouri and Arkansas railway and member of the National Defense Committee for Arkansas, announced.

The drilling program calls for 20 deep holes, which, it is believed, will be an exhaustive test for the St. Joe fault. Drills and machinery for the large scale drilling will be provided by the Missouri and Arkansas railway, while funds for the operations, including fuel and labor, will be supplied by federal agencies. The drilling was started at the old zinc mines northwest of St. Joe running in an easterly direction for more than 20 miles to the vicinity of the Maumee and Jack Pot mines on the Buffalo river.

As a result of the national defense program, prices in zinc ore are expected to advance. Two car loads of zinc ores, bought by the Manda Corpora-

tion at Harrison, are shipped weekly to smelters while five cars are shipped weekly from the Stark City mines in Missouri.

Results of the drilling program will determine whether an ore concentrating mill will be established at St. Joe, Mr. Watkins said. Options and leases already have been secured by mining interests in the drilling area and if the indications point to rich veins, installation of a large capacity ore mill would be a necessity.

## Mill at Zinc Completed.

Completion of an ore concentrating mill in the Zinc mining field will be completed within a few days, Larry Doyle of Harrison, who is operating the old Alma mine, in the Coon Hollow mining field, announced this week. The Alma was a good producer during World war days. Completion of the ore mill was delayed by equipment, the final shipment being received this week.

James Crumpacker, brakeman on the M. & A. railway working out of Neosho, Mo., has leased the mining property of John Roy in the Lead Hill fields. Both zinc and lead deposits have been mined in recent years from this property.

# 14 Mines Operating In Zinc Camp

7-14-40

Special to the Gazette.

Zinc, July 13.—Fourteen zinc mines now are operating and producing in the Zinc camp, and the production, while small, is running about two cars a week. A large per centage of the production is zinc silicate. A small amount of free jack or sulphide ore is being mined.

## Mill at Gloria Begins Production.

The first mill to be put into operation in the camp since the first World war, was started Tuesday afternoon at the Gloria mine. This property is owned by the Almy heirs, and is under lease to Larry Doyle and Albert Ahola. They have a good run of disseminated silicate in the mine and it should produce enough crude ore to keep the plant in steady operation. The mill has a capacity of approximately 35 tons a day.

Five tunnels on the Coon Hollow property, which is under lease to Larry Doyle and Andy Smith, are in operation and producing. The drilling is now being done with jack hammers, a compressor having been installed. The miners pay rent for the equipment on a basis of number of feet drilled. The Coon Hollow has been producing since the beginning of the new European war.

The Jack Pot mine is producing both free ore and milled ore. The disseminated ore at this mine is passed through a crusher and over one set of rolls, and is cleaned on two hand jigs. Another set of rolls and a sizing screen will be added to the crushing equipment soon, and one or two more hand jigs put in operation, which will treble the production of the property. Operators have a nice face of free and disseminated silicate ore in their tunnels, with one small face of free jack.

William Thornton and Dudley LaFoon, who have a 300-foot lease on the Almy property, which runs clear across the 40, including what is known as the old Cat Hole, are making good production of free ore. Most of the ore is coming from the floor of an old tunnel, which former operators overlooked.

L. B. Forsee, who owns the old Madison mine near Zinc, is operating the property in a small way, and is making a nice production of free silicate ore.

Pearl Whitesides is producing free ore on the Vina Jackson 40 in Buck Hollow.

Richard Evans, who has a lease on a good free ore dig in Finny Hollow, near Zinc, is making a small production.

## Ben Lacey Mining Lead Near Zinc.

The first lead ore produced in the Zinc camp in many years is coming from a lease now being operated by Ben Lacey, about three and one-half miles west of Zinc.

Farther west, at the foot of Oregon mountain, near Bergman, Ed Driver and William Shooks are operating on a lease on the Jones property, and are making a small production of both free lead and silicate.

Peel Barham, operating on a 40-acre lease two miles west of Zinc, is making a good production of free silicate.

Luther Timbrook of Zinc is work-

ing a 120-acre lease near Elixir Springs and is making a small production of both free lead and zinc ore. This property is known as the Rose-water mine.

The old Minnie Lee mine near Zinc is now under lease to Arvil and Raymond Timbrook, Fay Whitesides and Gordon Brown. They call themselves the Big Four, and are making a good daily production of ore from the property.

# Jack Pot Mine Bought By New Firm

7-14-40

Special to the Gazette.

Harrison, July 13.—The Arkansas Production Company, Inc., of Little Rock, has bought the ore concentrating mill and taken over the lease of the Jack Pot mine, near Zinc in Boone county, L. A. Watkins, president of the Missouri and Arkansas Railway, announced today. Operations will start Tuesday. Ore products will be brought to Harrison and sold to the Manda Corporation for shipment to the markets.

The company expects to handle 50 tons of dirt daily after a few minor changes are made in the mill. The company is an Arkansas corporation owned exclusively by Arkansas citizens, Mr. Watkins said.

It has been the policy of the railroad officials to try to get Arkansas people interested in financing home-owned industries and with the Arkansas Production Company starting operations in this area the plan is beginning to get under way, Mr. Watkins said.

"National defense activities," we believe, "are going to increase the price of zinc, and lead and we think now is the time to become more active than we have been in the mining

# Shepherd Mill At Alice Mine Completed

Gazette 7-14-40

Special to the Gazette.

Mountain Home, July 13.—J. C. Shepherd, who took a lease on the old Alice mine in Ozark county, Missouri, just north of the Arkansas line, has completed a mill on the property and now has it in operation. He is shipping three cars a week and expects to increase this production. This property was operated early in the 1900's by the Dwyer interests, who also operated an oxide plant at West Plains, Mo. The ore is a low grade carbonate of zinc ore, carrying about 26 per cent zinc and 20 per cent iron. The present production is going to a chemical concern, which manufactures paint pigments from it. Mr. Shepherd also is making a fair production at his Bald Hill mine in Newton county, Arkansas, near St. Joe.

## New Equipment For Jack Pot Mine.

Special to the Gazette. 8-4-40

Zinc, Aug. 3.—Installation of new equipment in the concentrating plant at the Jack Pot mine, near here, has been completed this week. It consists of a bucket elevator, another set of rolls and a rotary sizing screen. This equipment will give the mill a larger production capacity, and will size the crushed crude ore better before it reaches the jigs, which will make concentration easier. Concentrating now is being done on three hand jigs. Power jigs will be added later.

With the new equipment now being installed, the plant will be able to crush and concentrate approximately 25 tons of crude ore a day. The mine has a big tonnage of disseminated crude ore in the faces, and a considerable amount of free ore comes out with it. A compressor and jack hammer, which will increase the production of crude, have been added.

Larry Doyle and Albert Ahola, who are operating the Gloria mine on the Almy land near Zinc, have made several small shipments of silicate concentrates since they started their mill last month. There are large faces of disseminated crude ore in the old tunnels on this property.



# Ponca Field Producing Lead, Zinc

8-4-40

Special to the Gazette.

Ponca, Aug. 3.—Shipments of both lead and zinc ore are being made regularly from Ponca, and with developments now planned, the production should be doubled by late fall.

Pete Wells, who has leases on the Brewer and Baker mines here, is the largest producer in the district. He is being assisted in concentrating the crude ore from the Baker mine by Jack and C. Hymer, Ray Trindle and Orin Troutman of Joplin, Mo. They have set up a hand jig by the creek at the foot of the hill below the mine and are hauling; crude from the mine to the jig. The crude from this property is very rich. Two of the men working only two and a half days recovered two and a half tons of lead and two tons of zinc carbonate. These Joplin men have all mined in the Tri-State field. They say that the Ponca district offers a wonderful opportunity for zinc and lead mining.

In an interview with Pete Wells, regarding the Baker and Brewer mines, he said:

"The Baker mine which I am working under lease, contains 160 acres and is a good producer. The openings on the property consist of one shaft 125 feet deep, with several drifts, one big open cut and one tunnel. These are all in ore. Galena, dry bones (or lead carbonate, and carbonate of zinc are the ores mined on the property. All of the openings are in true fissures.

"The Brewer mine, which adjoins the Baker, is located on a 40-acre lease. The principal opening on the property is a 65-foot shaft, from which a number of drifts with good ore faces run. This mine also produces galena, dry bone and zinc carbonate. Crude ore from this mine is now being cleaned by sluicing and hand jigging. There is a 100-ton concentrating mill on the property, which I expect to get into operation soon. It has no concentrating tables and I expect to add several of these to the equipment."

In addition to the leases on the Baker and Brewer mines, Pete Wells owns 400 acres of good zinc land on Buffalo river, below here.

The Christian mine, three-quarters of a mile above Ponca, on Adds creek, is also making a good production of lead and carbonate. It is operated by Charles Christian of Hill Top. He has a carload of ore on the dump now awaiting shipment.

The ore here also occurs in a fissure vein and mining operations are carried on by a series of shafts and drifts that follow the vein.

Mr. Wells said that hundreds of tons of drybone (lead carbonate) had been thrown into the waste piles as waste, when it was really valuable ore. It looks like limestone rock, but is very heavy, and carries from 60 to 75 per cent lead. Considerable ore has been recovered from the waste piles and cleaned on hand jigs.

**Zinc Field Review Compiled**

A review of the Ozark zinc and lead district has been compiled by J. H. Hand, manager of the Ozark Mine Owners League. The review contains facts and information pertaining to ore deposits and mines in the field. Published in a 49-page booklet, the review lists the developments and properties of 45 representative mines. Membership dues of the Mine Owners League helped pay for the limited investigation.

## Smelter At Fort Smith To Expand

9-1-40

Special to the Gazette.

Fort Smith, Aug. 31.—A fifth furnace block, which will increase the capacity of the plant from 50 tons of slab zinc daily to 60 to 70 tons, will be placed in operation at the Athletic Mining and Smelting Company smelter here about next Saturday, Raymond F. Orr, vice president and general manager,

said today.

The block has been under construction since June, with approximately 60 men engaged in the work.

Construction of the furnace block gives the plant five furnace blocks or 10 furnaces, with 4-160 retorts. The addition will require an increase in the working crew from 185 to about 200 men, Mr. Orr said. All other departments of the plant already were of sufficient capacity to handle the production of the expanded plant.

**To Use More Coal.**

Mr. Orr said the company's fuel consumption will be increased about 25 per cent and the company will buy about 25 per cent more "dead" coal for use in the retorts. The plant has been using about 1,000 tons of "dead" coal a month from the Huntington field. "Dead" coal is coal "weathered" so that it has no steaming qualities.

The dead coal is mixed with the raw ore in the retorts, where under terrific heat the ore is distilled.

The plant has been running for a year on its present schedule, seven days a week. Orr said that the average wage of workers, exclusive of salaries, is \$5.70 a day. The men are employed on a shift basis, and 40 per cent of them are on the job five days a week, and 60 per cent six days a week. However, the plant is in operation seven days a week.

The slab zinc is used by galvanizers, rolling mills and brass manufacturers.

**War Affects Plant.**

The war has affected the local plant, indirectly, Orr said. It has stopped the importation of slab zinc from Belgium and other European countries, which before the war had been favored by a reduced tariff.

"As a matter of fact," said Orr, "if this war keeps up, England soon will have to be importing slab zinc from the United States."

Another thing has happened, which affects the plant in another way. The local firm formerly bought all its ore from the Joplin field, but this field now cannot take care of all its orders, and the plant is buying ore not only from Joplin but from New Mexico and from a new field in Illinois, which never before produced ore for a smelter.

A month ago the Arkansas Smelting Company at Van Buren added two furnace blocks or four furnaces. The staff of employes was increased 15 to 20 men.

## Zinc Mining Pay Rolls Up

Revival in Four-County Area Gives Employment to 300

Democrat 8-19-40

Zinc—Cleaning up of old zinc mines and renovating of ore reducing mills in this field was begun six months ago with the hope that the European war would bring an advance in the price of zinc to the level of 1914-18. Owners said they were preparing their mines and mills for full production "just in case."

The price advance has not yet arrived, but many of the mines and mills are operating at a moderate profit, and in the neighborhood of Zinc 50 men are employed as "pick-and-shovel" miners and are earning good wages.

Last week a new operator entered this field in the famous Coon Hollow district, where several mines and two reducing mills were already in operation. Charles B. Wise of Fort Worth, Tex., has taken a lease there on the site of an old mine and mill, and is associated in the venture with Ancil Davis on whose land the mine is located.

Mr. Wise has placed an order for mining machinery, including a large capacity air compressor, which will furnish power to the jack-hammer drills in this mine and also to operators on adjacent properties. An unusually high grade of zinc carbonate has been found on this property and tunnels and inclined shafts will be constructed to make the main leads available.

L. C. Rayden, operator of the Jack Pot mine, and Larry Doyle, operator of properties in Coon Hollow, both have mills in operation for reducing their ore, and are making shipments from the Missouri Pacific station at Zinc.

William Thornton, one of the largest operators taking out free ore, is trucking to Harrison and shipping over the Missouri & Arkansas railway. Several small operators in the Zinc field are also shipping from Harrison.

It is estimated that the revival of zinc mining in Boone, Searcy, Marion and Newton counties has kept more than 300 workers from applying for WPA jobs.

The J. C. Shepherd mines now in

full operation in the eastern part of Newton county are supplying more than a carload of milled ore each week for shipment from St. Joe. Lead and zinc shipments from the Ponca field in Newton county are sending two carloads a week to the smelters at Coffeyville, Kan., and other points.

## Good Strike Of Lead Ore Reported

10-6-40

Special to the Gazette.

Harrison, Oct. 5.—James Crum-packer, who operates a lead mine on Short mountain, five miles east of Lead Hill, reported a good strike of lead ore this week. He has leased the John H. Roy mine.

New mining machinery was hauled to the mine this week to expedite mining operations. Shipments of lead ore are slated to start moving soon. The mine is located in the area which has become famous for its lead mines, operated profitably in the early '90s' and from which the town of Lead Hill derived its name.

**Oklahoma Firms Interested.**

Miami and Picher (Okla.) mine operators are becoming interested in the mineral developments in the north Arkansas region, J. R. Harlin, well-known mine operator of Miami, said this week while on a tour of the zinc and lead areas in Boone, Marion and Newton counties. He said that major interests may undertake operations on a large scale.

## 500-Pound Chunk of Free Lead Ore Recovered.

Special to the Gazette. 10-14-40

St. Joe, Oct. 12.—J. C. Shepherd, who is operating the Bald Hill and Old Confederate mines near here, has a power shovel in operation at the latter mine. Most of the dirt the machine is recovering is mill dirt. One day this week, however, it turned up one chunk of free lead that weighed approximately 500 pounds. Mr. Shepherd also has completed a log washer. The mill dirt is passed through this first, which removes all of the clay and other solubles and the solids are passed through a regular ore concentrating mill. Lack of water is impeding his milling operations.

## Water Needed At Several Mines

Gazette 10-14-40

Special to the Gazette.

Harrison, Oct. 12.—Active mining and milling operations at several of the producing mines in the north Arkansas area have been retarded the past two weeks because of a shortage of water. Leases on old proven mines are being obtained and new prospects are being developed over the northwest Arkansas zinc and lead field.

Milling operations have been stopped because of a water shortage at the Bald Hill and Confederate mines in the eastern section of Newton county, Fowler Belcher, mine superintendent, said. The mines are two of the J. C. Shepherd properties. However, the steam shovel at the Confederate mine still is in operation cleaning out the old pits and opening up new ore veins. As soon as mining operations are resumed at the Bald Hill and Confederate mines, it is expected that the power shovel will be transferred to the Big Hurricane mine, south of Western Grove, which in World war days was one of the heaviest zinc producers in the north Arkansas field.

**Copper Mine May Be Tested.**

Negotiations are under way with several large mining interests for leasing of proven ore deposits and also new prospects if war markets create a demand for further operations of the zinc and lead mines. George McClain of Maumee, one of the largest owners of mineral lands in this area, said here this week. He is the owner of the old Tomahawk copper mine, seven miles northwest of Gilbert. Drilling operations may start soon at the Tomahawk to determine the extent of the copper ore deposits.

**Roads No Longer Hindrance.**  
N. A. Palmer of San Antonio,

Tex., has been here conferring with Mr. McClain with a view to reopening some of the mines in which both men are interested. Mr. Palmer operated the famous Jack Pot mine, 15 miles south of Yellville, in the World war days. Mr. Palmer said that one obstacle to profitable mining operations 20 years ago was the long ore hauls to the railroad over poor, mountain roads. Road improvement, including a network of farm-to-market roads built over this entire area in the past two years, has solved this problem and large trucks now can operate from railroad points to inland mining properties. A. J. Deu-Pree and Tanner DeuPree, who have mining interests in this section, accompanied Mr. Palmer.

## Addition Made To Gloria Mine Lease.

Special to the Gazette. 10-14-40

Zinc, Oct. 12.—Larry Doyle and Albert Ahola, who have a lease on the Almy tract, and are now operating a small mill, have bought a lease on an additional 300 feet from William Thornton. The old Gloria zinc mine is located on their new holdings, and is producing a large tonnage of mill dirt, practically all of which is silicate of zinc. The mill is making a production of approximately three tons of clean ore a day, on the days it is in operation.

Mr. Thornton has a lease covering most of the 40 acres of the Almy tract, which lies across the hollow from the Gloria, and will continue operations there. He is mining both free ore and mill dirt, cleaning the latter on hand jigs.

## Democrat Enters Zinc Field

Ponca—One of the largest entrants into the zinc and lead field of north Arkansas in point of acreage of land leased during the past few months is W. O. Kruger of Atlanta, Ga., who has either leased or bought 3,600 acres of mineral lands in the Newton county area between Western Grove and Ponca, and now has a force of 20 men employed in that area prospecting some of land and developing known deposits. The work in Newton county is being directed by E. M. Walker of St. Joe, who directed many mine operations in World War days.

## Pleas Green Lead Mine Has New Lessee.

Special to the Gazette. 11-24-40

Harrison, Nov. 23.—B. G. Ragland of Cave City has leased the Pleas Green lead mine three miles east of Lead Hill. The mine is producing a large output of lead and Mr. Ragland plans to use a larger crew soon.

Mr. Ragland believes he has one of the largest lead producers in this section. He also is interested in other mines in this area and believes that material needed in the defense program soon will give stimulus to lead and zinc mines in this area.

Gazette 12-10-40

Increased demands for zinc has enabled Arkansas's second zinc smelter to enlarge operations. It is the Arkansas Smelting Company at Fort Smith, employing about 200 persons.

Both companies were closed during the depression and resumed operations about two years ago on limited scale.

## Christian Operations at Ponca In Steady Production.

Special to the Gazette. 12-15-40

Harrison, Dec. 14.—Steady hauls of mineral ores to the Harrison markets are being maintained by Charles Christian, zinc and lead mine operator of Ponca, Newton county, A. W. Casey of Boxley, said. A good weekly pay roll for pick and shovel miners also is maintained by Mr. Christian. Activity in the manganese and other mines operating in the Ponca, Boxley and Kingston fields has been slowed down until the mass of ore accumulated on the dumps has been hauled to market, Mr. Casey said.

## Arkansas Employes of Zinc Firm Receive Bonuses

Gazette 12-25-40

Miami, Okla., Dec. 24 (P).—The Eagle-Picher Mining and Smelting Company announced Christmas bonuses of two per cent of annual salaries for 2,600 workers today. Unofficial estimates placed the total at around \$50,000. Those receiving bonuses included 1,500 mine and mill workers in the tri-state areas; 425 smelter workers at Henryetta, Okla.; 250 workers at Galena, Kan., and 275 at Van Buren, Ark.

The St. Louis Smelting and Refining Company gave like bonuses to 320 employes. Most of the smaller lead and zinc companies gave employes turkeys and hams.

## U. S. Declared Short of Zinc And Copper

Gazette 1-16-41

New York, Jan. 15 (P).—C. Donald Dallas, president of Revere Copper and Brass Inc., said today "there simply isn't sufficient copper and zinc available in the country to supply the demand."

"Even at our [company's] present capacity production," Dallas said, "running six days a week, three shifts, we are facing a shortage of raw materials. Substantial increases in productive capacity now under way will make this condition extremely serious."

"Copper mines in the United States are operating at capacity yet stocks are being reduced at the rate of about 20,000 tons a month and there is practically no copper for sale at the present time. Hence, buyers are bidding premiums for what small lots are offered."

The federal deal to bring in 100,000 tons of foreign copper, starting in March, Dallas claimed was inadequate. He suggested (1) lowering the present import tariff to two cents a pound from four cents; (2) or by setting the tariff at two cents a pound in a reciprocal treaty with some country, which would automatically bring other copper producing nations under the most favored nation clause, and thus allow copper to flow in.

**Zinc Shortage Acute.**

The situation in zinc is still more acute, Dallas said, "because there is a bottleneck both in prime Western and in the refined grades necessary for the manufacture of cart-ridge brass."

Dallas estimated 1942 zinc consumption in excess of 1,000,000 tons. This contrasted with other estimates that use would increase from around 800,000 tons in 1939 to about 800,000 in 1941. In 1942, he added, consumption would be still greater as new brass mill production developed.

## Zinc, Lead Field Expects 'Lift' Soon

1-19-41

Special to the Gazette.

Harrison, Jan. 18.—There has not been much increase in the production of lead and zinc in the north Arkansas field thus far this winter, but an anticipated higher price soon promises to step up the production in the early spring.

J. C. Shepherd, who is operating the Bald Hill and Old Confederate, in Newton county, and the Alice mine in Ozark county, Mo., is making a good production at this time at the Alice, and is operating his mill at the Bald Hill. He recently moved his power shovel from the Old Confederate to the Alice and is producing a big tonnage of carbonate. He also is operating a mill on the same property. By more thorough washing and concentrating, he has raised the grade of the ore produced at the Alice to a satisfactory metallic content, which gives him a better market.

Roy Dardin has a small custom mill in operation in the Rush Creek district in Marion county, and is making a fair production of concentrates. A considerable part of the crude he now is passing through the plant is coming from the dumps, at mines that have been operated for the last several years for free ore.

**John Dirst Plans Mill.**

John Dirst, who has a lease on the Silver Hollow mine in the Rush Creek district, contemplates erecting a mill on the property soon.

The Gloria mine in the Zinc district in Boone county, still is operating part time and producing a small quantity of zinc silicate concentrates.

Operations in the Ponca district in Newton county have been continuous all winter, but the production has not been large.

Pete Wells, operating the Baker and Brewer properties, continues regular shipments. Most of his production is coming from the dumps at the Brewer mine. A large amount of dry bone (carbonate of lead) was thrown into the dumps by former operators, who evidently did not know its value. He is hand-picking and hand-jigging this crude.

He also is getting some galena.

Charles Christian, who is operating the Ponca mine, sold a car of mixed ore this week.

W. A. McCurry, a pioneer miner in the field, who has a lease on the Chimney Rock property, expects to start operations soon.

## Prices of Zinc And Scrap Held Too High

Gazette 1-25-41

Washington, Jan. 24 (P).—The contention that prices of scrap and secondary zinc were unduly high was advanced today by the Defense Commission following a conference with representatives of the industry. Leon Henderson, defense commissioner in charge of price stabilization, said the group agreed to submit a report in a few days on how requirements of customers may be adequately met during the national defense preparation.

"Although the price of primary zinc has remained at 7.25 cents per pound at East St. Louis the past four months, some producers of secondary zinc recently have been charging premiums above the price," the commission said. "The price of zinc scrap, source of the secondary zinc, has jumped sharply."

"It is clear that the actual tonnage of metal which has been sold above the base price is very small compared to sales of primary and secondary zinc. Nevertheless, the sales are undoubtedly an unsettling influence on the market."

"Some secondary producers and scrap dealers have contributed to the situation by 'over-reaching'—trying for the highest price obtainable. In addition, consumers have been made unduly anxious by exaggerated rumors of shortages and high prices."

## Priority On Zinc Held Inevitable

Gazette 1-26-41

New York, Jan. 25 (P).—Trade quarters here today said establishment of a priorities system for zinc was "inevitable" because of inability of the industry to supply defense, British and civilian needs.

National defense officials asked that unnecessary buying of zinc temporarily be suspended to keep price levels stable. The commission charged that prices of scrap and secondary zinc were unduly high.

Users who need zinc for such urgent projects as army cantonments find it possible to obtain immediately only trifling amounts. Waiting lists are maintained and delivery dates stretch months ahead in some instances.

Representatives of the industry met with government officials several months ago and planned expansion of production to meet this year's requirements. Those estimates have been abandoned because of unforeseen demands, and the industry is planning to add still more production facilities.

**Smelter Capacity Weak Link.**

The smelter branch is the weak link. Ore can be obtained in practically unlimited quantities.

Supplies of all grades of zinc in the hands of producers now total between 10,000 and 15,000 tons. In December roughly 65,000 tons were shipped from refiners to consumers. Producers have on hand less than one week's supply, lowest since September, 1937.

Stocks have decreased despite an increase in production in December to the highest level on record, or to nearly 60,000 tons. Latest government figures, as of October 31, disclosed inventories of around 92,000 tons in the hands of all consumers.

Next move probably will come from Washington, where Leon Henderson, price commissioner in charge of price stabilization, is awaiting a report from the industry on how future needs may be met adequately.



## Stabilization of Zinc Prices to Be Sought.

Washington, Jan. 30 (AP).—Leon Henderson, price stabilization commissioner for the Defense Commission, said today measures would be adopted soon to end "the present unstable and dangerous price situation" in the zinc scrap and secondary zinc markets.

Recommendations have been submitted by an industry committee appointed by Harry Goldstein, president of the National Association of Waste Material Dealers, to represent zinc scrap dealers and secondary smelters. Henderson said its report merited "careful analysis."

## Rogers Hotel Owner to Head New Mining Firm.

Special to the Gazette, 1-21-41.  
Rogers, Jan. 20.—Earl A. Harris, bakery and hotel owner here has been elected president and treasurer of the Harris Mining Company by the stockholders. Incorporation papers and application for a charter have been mailed. The company was formed several weeks ago to operate zinc mines near Aurora, Mo. The company owns 100 acres on which there are two shafts, one 283 feet and the other 254.

Wayne Stair, production superintendent, was named vice president, and Loren J. Ely of Bentonville, secretary.

## Lead Mine Being Opened Up In East Boone County.

Special to the Gazette, 2-2-41.  
Harrison, Feb. 1.—Thomas W. Wilmoth of Fort Worth, Tex., and L. E. Foresee of east Boone county have leased 40 acres of the John Roy mining property, near Peel, and are opening a new lead mine. Surface lead ore is making a good showing, Mr. Wilmoth said here, and a fair grade of ore has been uncovered in a new 12-foot tunnel leading to the new mine. Two other men also are employed at the mine.

## Power for Zinc Mines Sought

Democrat 2-6-41.  
Thomas Fitzhugh, chairman of the State Department of Public Utilities, and State Geologist George Branner scheduled a conference with Rural Electrification Administration officials in Washington today on a proposal for a transmission line from the Grand River dam in Oklahoma to north Arkansas zinc and lead fields.

## REA Asked To Construct Power Line

Gazette 2-7-41

Washington, Feb. 6 (AP).—Three Arkansas officials asked the Rural Electrification Administration today to examine proposals for financing power lines to serve a group of lead and zinc mines in north Arkansas.

They were Thomas Fitzhugh, chairman of the Arkansas Department of Public Utilities; Dr. George C. Branner, state geologist, and H. K. Thatcher, executive director of the Arkansas Agricultural and Industrial Commission.

The officials said Gov. Homer M. Adkins had advanced a plan to make low-cost electrical power available for lead and zinc mining and milling both as a national defense measure and as a method of improving economic conditions in the mining area.

The Arkansans suggested that the REA finance a transmission line from the Grand River dam, in Oklahoma, to the Arkansas lead and zinc fields. Such a line, they said, would provide a source of low-cost wholesale power to two existing REA systems, the Carroll Electric Co-operative, and the Ozark Rural Electric Co-operative. They estimated that the cost of putting the district on a production basis would be about \$614,000.

The possibility of eventually making electricity available for development of a manganese field east of the lead and zinc district also was discussed. The officials planned further conferences with the REA before returning to Arkansas.

## No Priorities on Zinc, Nickel And Aluminum.

Gazette 2-8-41.  
Washington, Feb. 7 (AP).—Some industrial consumers, concerned over possible shortages of aluminum, zinc and nickel, have asked the Office of Production Management to establish a system of priorities, it was learned today.

Officials indicated imposition of priority controls in the near future was improbable, and would be avoided if possible. Before resort to direct control, it was said, the OPM probably would ask producers to allocate deliveries or attempt by other means to work out orderly plans of distribution to industrial consumers.

Although priorities have been applied to army and navy supplies and some semi-finished products essential to the armament program, none has been issued on raw materials.

## Zinc Mining Areas May Get REA Power

Democrat 2-9-41.  
The possibility of getting REA power lines into the zinc mining sections of the state "looks favorable," but considerable more study is needed before the project is submitted to the Rural Electrification Administration, Thomas Fitzhugh, chairman of the State Department of Utilities, said last night.

Mr. Fitzhugh had just returned by plane from Washington, D. C., where he conferred with REA officials and H. K. Thatcher, director of the State Agricultural and Industrial Commission, on the matter.

The two Arkansas men are seeking to obtain a REA transmission line from the Grand River Authority dam in Oklahoma, to the zinc mining areas of the state.

Mr. Fitzhugh said the REA was prepared to install the lines if the project could pay its way.

The fact that the zinc areas are widely scattered, and mine owners tentative plan to use the power for mining only, and not for smelting purposes, are creating difficulties in obtaining the program, Mr. Fitzhugh said. He added an effort was being made to induce the mine owners to install electric smelting plants, thereby using more power and making the transmission lines more justifiable.

## Power Line Will Depend Upon Potential Industrial Load.

Gazette 2-13-41.  
Construction of a power line from the Oklahoma Grand river dam to the north Arkansas zinc and lead region apparently will depend on the potential industrial load, Rural Electrification Administration officials indicated in Washington conferences with Arkansas representatives last week.

Development of the Arkansas zinc district would offset the steadily increasing national zinc shortage, Dr. George C. Branner, state geologist, informed defense authorities. Known recoverable zinc reserves there are estimated at from 125,000 to 200,000 tons, with a possibility of considerably more being developed.

State Geological Survey estimates during the past two years regarding reserves in 174 Arkansas zinc mines were submitted.

Dr. Branner, Chairman Thomas Fitzhugh of the Utilities Commission and H. K. Thatcher, director of the Agricultural and Industrial Commission, conferred with William Knudsen, Office of Production Management director, and Congressman Clyde T. Ellis of Bentonville regarding the construction of defense power facilities at the Norfolk dam.

## Zinc Test Drills Uncover Carbonate.

Special to the Gazette, 2-16-41.  
Harrison, Feb. 15.—Test drilling operations along the fault line extending from Yardell, south of Western Grove, to the Big Hurricane mine and thence across the northern part of Searcy county to Maumee, have progressed to a point east of the Big Hurricane, Ras Gaines and W. T. Davidson, farmers living in the area, reported.

Test drilling was started several weeks ago when the drill rigs were located there by the Missouri and Arkansas railway officials from Stark City, Mo. Labor is being furnished by federal agencies.

Most of the producing zinc mines in Searcy county are along this fault line. Drilling first was started west of the Big Hurricane, and the drills have struck a sheet of carbonate of zinc not more than 30

feet below the surface at the deepest, the farmers said. Drillers say that the sheet seems to be found at many places along the fault line and that it easily can be mined with a power shovel.

Some work is under way at the Big Hurricane, one of the J. C. Shepherd lease properties, and it is expected that operations on a larger scale will be undertaken soon. Power shovels will be used to move the dirt over the shallow carbonate of zinc deposits.

## Mill Planned At Lone Star Zinc Mine

2-23-41

Special to the Gazette.  
Harrison, Feb. 22. — Erection of a 100-ton capacity concentrating ore mill was started this week at the Lone Star mine in Searcy county, one and a half miles south of Maumee, N. W. Palmer of Harrison, one of the owners, announced.

The mine is being operated by the Ozark Zinc Mining Company, Inc., composed of Mr. Palmer, Pate Dillard of Mull and Guy Sherrill of Alexandria, La.

Machinery and equipment was hauled this week to the site. Equipment includes air compressor drills. Hand drills were used this winter during the prospecting period in the tunnel and surface mining, Mr. Palmer said, and a quantity of high grade zinc carbonate is piled on the dumps waiting for the mill to be completed.

Mr. Palmer operated several zinc mines in this section during the first World war, including the Lone Star mine.

## Says Loans More Needed Than REA

Gazette 2-23-41

Yellville, Feb. 22.—Belief that the federal government could assist North Arkansas's zinc and lead industry much more by opening up credit to finance production and milling of ore than it could in approving a \$614,000 REA line which state officials have requested was expressed by J. H. Hand of Yellville, manager of the Ozark Mine Owners League, today.

Because the present problem fundamentally is not one of power but of lack of machinery, expenditure of \$614,000 for an REA line would be "getting the cart before the horse," he declared.

Mr. Hand, long a leading figure in the state's mining field, said that members of the league were heartened by the interest shown by state officials but believed that an expensive REA line would be useless now.

First announcement of the proposal was made from Washington, D. C., by Thomas J. Fitzhugh, chairman of the Arkansas Utilities Commission, and Dr. George C. Branner, state geologist. The dispatch quoted these officials as saying that Governor Adkins had advanced a plan to make low-cost electrical power available for lead and zinc mining and milling, both as a national defense measure and for improving economic conditions in the mining area.

Mr. Hand estimated that \$614,000 would enable 20 mills of 100 to 200-tons-per-day capacity to be built. He expressed doubt that electricity always would be the cheapest form of power, especially in the remote areas. No details of a loan system whereby the government would aid lead and zinc miners was suggested. The R.F.C. makes mining loans only for strategic and critical minerals.

Efforts "Appreciated."  
Mr. Hand said that efforts to obtain the REA line would be appreciated by mine owners, mine workers and the residents of the section not now enjoying electricity. Such a line, however, would not effect the desired goal, he predicted, due to the lack of available machinery. He said that power was one of but not the foremost requisite for a mining boom in the field. "During the war period of 1915-18, several local mines were equip-

ped with mills of 75 to 150 tons daily capacity, mostly built on short term leases, and mills were dismantled as leases expired after the war," he said. "Shipments of zinc ore during 1917 amounted to 24,000 tons. Most of the mines were in their better stages of production when they were closed down, and they now carry ore reserves, such as to assure quick and large production. But their operation is out of the question since they are without facilities for economical mining of the ore or for putting it in condition for marketing."

Says Power a Minor Item.  
"It is therefore obvious that the first and paramount essential factor is equipment for mining and milling before zinc production can be established in this field on a substantial basis, even at the best proven mines, and that power facilities, even if offered as a gift, could not serve local mining interests any useful purpose until these other essentials can be made available. In view of such a situation, it would seem logical to procure financial aid first for mine and mill equipment, particularly since the power factor is a minor item in the operating cost of a mine."

He said that the cost of a mill of a capacity of 100 tons daily was from \$25,000 to \$30,000 and the cost of a 200-ton mill was approximately \$40,000. These figures include cost of individual power units of 80 to 90 horsepower, he said. He said Diesel engines often were preferred except where large amounts of power made electric rates preferable power units of 90 to 100 horsepower. He said oft-quoted estimates of \$200,000 as the cost of a zinc mill were designed to keep potential mining investors out of the Arkansas field.

Mr. Hand said that present distributors of electricity in the field had offered "moderate" rates but that lack of equipment had prevented acceptance.

He estimated that if \$614,000 were spent in equipping 20 mines and mills at a cost of \$30,000 each, the section could produce 150 tons of concentrates daily. Such a set-up would employ 400 men, he said.

"The present problem is not that of power but the implements with which to prosecute mining in strong productive fashion," he concluded. "If private enterprise fails to act, then the government might consistently broaden its policy of aid to England, so as to stimulate its supply of zinc by furnishing us tools to work with, not on lend-lease basis, but on a sound loan basis."

## Production In Zinc Camps Steady

Special to the Gazette, 3-16-41

Rush, March 15.—While the production of zinc ore in the Rush camp during the last few months has been small compared to that of World war days, it has been steady.

The camp now has one custom mill in operation. It was installed several months ago by Roy Darden and Claud and Ralph Huddleston. Because of lack of mining equipment, the small producers have not been able to keep enough mill dirt rolling to keep it in operation steadily.

It has operated approximately 30 days since it was built and has produced 150 tons of concentrates. Most of the dirt milled has been hauled in from old dumps. It has been a big help to the small miners, however, as it has taken care of the mill dirt which they mine with the free ore, and has given them a larger profit on their operations.

War Not Big Stimulus.  
The present war has not stimulated the zinc mining industry here as the World war did. Ten big mills were in operation in the camp during that period, and hundreds of tons of ore was mined and sold weekly. Rush then was one of the largest unincorporated towns in the South, having a population of more than 3,000 persons. The price of ore then ranged from \$60 to \$80 a ton. Now the top is around \$24 (40 per cent ore). Mining conditions now are much better, however. Formerly a team required from a day to a day and a half to haul a ton of ore to shipping points. Now as much as five tons can be whisked to one of several stations in from 40 minutes to an hour and a half. Several small operators in the

## PONCA DISTRICT ORE SAMPLES RICH IN VALUABLE CADMIUM

By TOM SHIRAS, 3-23-41

Special to the Gazette.  
Ponca, March 22.—Pete Wells, who operates the Baker and Brewer zinc and lead mines here, reported an assay of lead and zinc ore that showed a cadmium content of 20 per cent, which is the largest amount of this rather rare metal shown in any assay ever reported in north Arkansas. Cadmium metal is said to be worth 80 cents per pound. A ton of crude carrying 20 per cent would produce 400 pounds of this metal, which would be the richest crude ore ever discovered in the north Arkansas zinc and lead field.

Mr. Wells has not run this cadmium to its "lair," but expects to. Several days ago he had eight pieces of ore assayed as a whole, which he had taken from an old mine dump. It is common knowledge that zinc carbonates in some sections of the north Arkansas field carry a small content of cadmium. When he had the ore samples assayed for lead and zinc, he also tested for cadmium. He was astonished at the cadmium content. "Right away I am going to take the same kind of samples I had assayed as a whole from the dump, and have them assayed separately; then I can find it," he said.

One Per Cent Previous High.  
The eight samples he had assayed as a whole were samples of dry bone (lead) and zinc carbonate. He probably will find the cadmium in the zinc ore, as this is the ore it always is associated with. Until Mr. Wells had this assay made, no zinc in the field ever had been reported carrying over one per cent cadmium, and most of it less than this. His discovery might be an important one to the Ponca district,

camp are producing. Faytie Hand, working on leases on the McIntosh and Philadelphia, is producing free ore and some mill dirt. Roscoe Hicks also has a lease on the McIntosh property and is making a small production.

Claud Huddleston, who has a lease on the Edith, is making a small production of free ore. The property is managed by Will Maxey, who is opening up some new ground. There is a rich face of ore in the old heading in this mine, but the old drift, 600 feet long, leading to the heading, has not been cleared out, and cannot be worked. A group of Little Rock men is investigating the property and expects to open it up and put a mill on it soon. They also are investigating other properties in the camp. The Red Cloud, directly across Buffalo river from the Edith, also is making a small production of free ore.

Yellville Dock Planned.  
A group of men in Yellville are organizing the Ore Producers Association, with a small capital stock, to buy ore in small lots. They estimate there are 20 prospects in Marion county which would produce ore if worked, and expect many of them to be worked when a small lot market is opened in Yellville. They expect to be in operation in about 30 days.

The Zinc camp in Boone county still is making a small production. Larry Doyle, who was instrumental in getting a mill on the Almy property, which he had leased, has sold his interests to John Dirst and Art Gootley, who are operating the property.

In the Ponca district in Newton county Pete Wells is operating the Baker and Brewer properties and making a small production. He is shipping approximately 10 tons a month of mixed lead and zinc ores, most of which he is recovering from old dumps.

Charles Christian, who operates the Ponca mine, is producing approximately a carload of mixed lead and zinc ores a month.

Clara Wright, operating the 16th Section mine in the Ponca City district, is sinking a shaft into an old drift.

The greatest drawback to production in the north Arkansas field is lack of operating capital. To Open Zinc Mines Democrat 3-24-41  
St. Joe—J. C. Shepherd, who has been operating the Alice mine near West Plains, Mo., for several months with a steady production of zinc ore, states that within six weeks he will put in operation the three other large producing zinc mines under his control. These are the Bald Hill

which is in Newton county. Investigations in other sections of the zinc and lead field might also disclose it in larger quantities than hitherto found.

Cadmium is a white metal with a slight bluish tinge by reflected light. It is whiter than lead or zinc, but less than silver, has a high luster when polished, and breaks under a gradually increasing strain, with the fibrous or scaly fracture characteristic of a soft, tough metal. It is somewhat harder than tin, but not so hard as zinc and like the former metal it emits a peculiar cracking sound when bent. It is malleable and may be rolled into thin sheets. Chemically cadmium belongs to the diatomic group of elements. Its symbol is Cd, and its equivalent 58. It is used principally in alloys, making some more hard and brittle and others more malleable, according to the mixture.

Usually Associated with "Jack."  
Practically all of the cadmium found in the world is found associated with zinc ore. In some "jack" or zinc sulphide ore, sulphide of cadmium runs as high as three per cent. This however, is unusual. It also is found in the carbonates and silicates of zinc in most sections which produce these ores, but in an undetermined state of combination, as it usually is not found in quantity sufficient to be appreciated by the analysis of samples.

If further investigations by Mr. Wells prove that the carbonate of zinc ores in the Ponca district carry cadmium generally in any such quantities as his assay showed, these ores will be in strong demand, and at a much higher price than they have been selling for since mining started in that section years ago.

and Confederate mines near Cave Creek postoffice in Newton County, the Big Hurricane mine south of Western Grove, and the William Campbell mine north of St. Joe, the latter two mines being in Searcy County on the famous St. Joe fault line.

## Mill Planned At Walters Mine.

Special to the Gazette, 3-30-41

Harrison, March 29.—The Walters Mine, three miles east of Harrison on Crooked creek, has been leased by Berry Ragland of Cave City from J. S. Johnson of Harrison. In World war days the Walters mine was a big producer and was rated as one of the most valuable zinc mines in this area. It is easily worked with a large outcropping of zinc ore on the face of a bluff.

Mr. Ragland plans installation of a concentrating mill. The mine is near the railroad, eliminating the problem of trucking ore long distances, which has been one of the problems for profitable operation of the mines in this area.

Four producing mines of the J. C. Shepherd properties will be placed in operation within six weeks, Mr. Shepherd announced. These are the Bald Hill and Confederate mines near Cave Creek in Newton county, the Big Hurricane mine south of Western Grove and the William Campbell mine, north of St. Joe, the latter two mines being in Searcy county on the famous St. Joe fault line.

Mr. Shepherd has been operating the Alice mine near West Plains, Mo., for several months with a steady production of zinc ore.

An alleged price discrimination against north Arkansas Smithsonite ore is said to have retarded mining operations the past few months. J. H. Hand, manager of the Ozark Mine Owners League, has been promised an investigation of the alleged discrimination by Leon Henderson of the National Defense Commission and Paul M. O'Leary of the Price Stabilization Division.

## Kansan Surveys Zinc Ore of Marion County.

Special to the Gazette, 4-13-41

Yellville, April 12.—J. A. Lower of Wichita, Kan., has been in Marion county this week investigating the zinc mines and deposits of the county with a view of acquiring several properties and building a large plant to mill and concentrate the ore. The aviation industry requires much zinc at this



time, and if he starts operations here, it is expected that his metal output will be taken by the aviation industry in Wichita.

Zinc is being used for making dies used for stamping metal parts for planes.

## CHARGES ARKANSAS ZINC PENALIZED \$8 A TON BY INDUSTRY

Special to the Gazette. 4-13-41

Yellville, April 12.—A price discrimination against the North Arkansas zinc field amounting to \$8 a ton was charged in a report filed with Leon Henderson, head of the Office of Price Administration and Civilian Supply, by J. H. Hand of Yellville, manager of the Ozark Mine Owners League. The charge was based on a comparison of prices paid for zinc ore in the Tri-State field (Missouri, Oklahoma and Kansas) with those paid in Arkansas's Mr. Hand said.

"Today they are paying \$48 a ton in the Tri-state field for jack or sulphide ore that runs 60 per cent zinc (1,200 pounds of metal)," Mr. Hand reported. "The highest price they offer for our high grade carbonates, which run 40 per cent, and contain 800 pounds of metal is \$24 a ton. On this price basis the Tri-state field operators get four cents a pound for the metallic content of their ore and the Arkansas operators, three cents, or 25 per cent less."

Operators here believe that this difference in price is one of the reasons that the development of the zinc industry here has lagged since the first World war. It seems apparent that some of the large producers, who virtually control the zinc smelting industry of the Southwest, are unfriendly toward new production projects, and resort to price squeeze methods in order to suppress competition, operators charge.

The Department of Justice which will start an inquiry April 24 to determine whether a current "serious shortage" in high class zinc used in defense industries is due to other than natural trade causes.

So critical is the zinc shortage that the OPM (Office of Production Management) wants the army to use substitutes for galvanized sheeting and pipes in camp construction. Zinc is essential in galvanizing.

### Housley Mine Near Glenwood Sold to Florida Resident.

Special to the Gazette. 4-25-41

Hot Springs, April 24.—Officials of the Housley Mining Company of Hot Springs announced today sale of the Housley mine, 22 miles southwest of Hot Springs and near Cedar Point, Hot Spring county, to Mrs. Lena P. Price-Williams of Jacksonville, Fla. The mine is said to have produced zinc, lead and silver.

About 15 acres was involved. Mrs. Price-Williams has acquired other acreage near Glenwood.

Reported "strikes" of ore have sent residents and visitors scurrying to the mine several times during the last 30 years, but most of the short-term lease operators were forced to abandon operations when their funds became exhausted.

Martin A. Eisele, Hot Springs business leader and former superintendent of Hot Springs National park, is president of the Housley firm, while Tom K. Martin is secretary. Approximately 15 Housley heirs are stockholders. The mine was acquired nearly 50 years ago by E. Vander T. Housley, early Hot Springs resident.

## Production Of Zinc Still Lagging

Special to the Gazette. 5-18-41

Harrison, May 17.—Even with the advanced price, the production of zinc ore has not shown much increase during the last 30 days. Because most of the camps have no milling facilities, the free ore mines have stacked up a large tonnage of mill dirt, or crude ore, which would represent a good profit if milled. This now represents a frozen asset.

Walter Milum recently opened up a good prospect of both jack and

carbonate on his farm near Pyatt in Marion county. He probably will lease this prospect soon. It shows some free carbonate and a lot of disseminated carbonate and jack adapted to milling.

B. H. Ragland, operating on lead

fault, which has been in progress several months, is said to be revealing some good deposits of ore. Three holes have been sunk.

John Dirst and Art Goatley, who are operating the Gloria mine in the Zinc camp, are making the largest production in the camp. During the last few weeks they have opened up some new ore faces and are getting more mill dirt to the mill, which they now operate nearly every day. Their daily production runs from three to five tons.

The Christian mine in the Ponca district is producing steadily, making about a car of free mixed ore monthly.

### Lone Star Mill To Serve Two Mines.

Special to the Gazette. 6-15-41

Yellville, June 14.—N. W. Palmer, who is operating the Lone Star zinc mine near Mull, Marion county, will start construction soon on a 100-ton mill. Since he has been operating the mine most of his production has been free carbonate. Joe DePree, his brother-in-law, is operating the Silver Run mine in the same section. Ore from both mines probably will be milled on the new plant.

Art Goatley of Zinc, who was injured by a bar falling from the rafters of the mill at the Gloria mine, is recovering. The accident happened about three weeks ago, when one end of a crowbar, used in straightening out a pulley on the overhead line shaft, was left on the line shaft. When the mill started, the shaft knocked the bar off and it struck Mr. Goatley in the back.

John Dirst, who has been working the Jack Pot for the last six weeks, has produced 30 tons of silicate concentrates. The crude ore was milled at the Gloria mine.

L. A. Lowry, who recently took over the Darden mill at Rush, Marion county, is adding an extra elevator and a concentrating table. The Edith mine in the Rush camp is producing some free ore.

J. C. Shepherd is dewatering the shaft at the old Campbell mine on the St. Joe fault, near St. Joe, Searcy county. Plans for the operation of the property have not been released.

See clipping under  
limestone, 6-1-41--  
"Zinc-Lime Mill  
Planned at Black  
Rock"

## Zinc Mines To Re-Open Near St. Joe

Democrat 6-7-41

St. Joe—J. J. Inman and Dr. W. F. Hetzband, Joplin, of the American Zinc, Lead and Smelting Co. of St. Louis and Joplin, this week made an examination of the company mining property here. The mines belonging to the American company are the Old Confederate and the Bald Hill mines, located near St. Joe in the Cave Creek area.

These properties are leased to J. C. Shepherd and carry both jack and carbonate of zinc, as well as much free lead ore. Mr. Shepherd is reopening the old workings which have been big producers at various times since before the Civil War their largest period of production being during the last years of the first World War. Mr. Shepherd is also working the Campbell mine at St. Joe, known as the Excelsior, and will shortly reopen the Hurricane mine between Pindall and Western Grove.

Mr. Inman was enthusiastic concerning the prospects for the realization of top prices on the output of zinc sulphide ore from a number of mines in this area. He states that his company will be glad to buy all this form of ore from this district and will pay top price for delivery at the Ft. Smith smelter. He informed also that the freight rate on this ore would be \$1 a ton under the freight charge on ore shipped outside the state. The sulphide or jack is selling at \$48 a ton.

The only smelter in this area tak-

ing zinc carbonate ore is the Ourks Co. at Coffeyville, Kan. They convert it into pigment or oxide, and do not make slab zinc or spelter. It is reported that when a steady supply of zinc carbonate can be assured many smelters will supply the special furnace blocks for handling the carbonate.

Inman urged that special effort be made in getting the known jack deposits opened up and in operation while the price is good. He says that smelters are now 200,000 tons behind current orders for zinc metal.

The representative of the American Co. also conferred with H. H. Hand, manager of the Mine Owners' League of Yellville. Mr. Hand is also advising mine owners over this area to take advantage of the present satisfactory prices to resume zinc production.

## Prominent Geologist Expresses Faith in Arkansas Zinc Field

Yellville Mountain  
Echo 6-11-41

Below is a recent statement by Hon. Joe W. Kimsey, a geologist of recognized ability, and who lately was chosen by Governor Adkins as a member of the Arkansas Utilities Commission. Having served in several sessions of the legislature as representative, and as senator from his county and district, Mr. Kimsey has made a reputation as an advocate of developing the mineral resources of Arkansas, as well as for rugged honesty in the conduct of state and business affairs. His comments here on the zinc and lead situation in North Arkansas are timely and to the point. Every one who is interested in advancement of zinc and lead mining industry in Arkansas will welcome this kind of "Sales Talk" from official source as a change from critical and negative representations, of which this district has been administered an overdose heretofore.

During World War days there developed an urgent need for zinc, and the inability of the older and long proven areas to meet the needs of the government and its war industrial activity spurred various and sundry to seek out new sources which would lend themselves to immediate profitable exploitation, as a result of which many people of meagre or less means floundered into the yet virgin districts of northwest Arkansas, where now remains evidence of their near mining efforts; evidence of un-facilitated endeavor, where men were interested primarily in "getting at the best first" and getting away with the easy profits while the war should last. In some of these evidences lie tragedy in that circumstances of the moment led men to discard and pass over obvious and sound procedure to reach and gather the more luscious and ripening fruit; in this way many zinc and lead deposits were cluttered and clamored over for "high grade" to the discredit of the district as a potential long time source of a dependable nature. These things are no particular discredit to many of the operators who were active in the field at that time, and under conditions then existing, but for ourselves and others at this time to permit ourselves to be deceived to the extent of believing these former "prospectors" exhausted the field is, and should be a discredit to ourselves.

Because older and more developed fields have long since settled down to their long time basis of systematic underground mining of ore of no better quality than the ores of Arkansas is no sound reason why we should condemn "our own children" simply because they may have gotten their faces dirty by association through no fault of their own.

Because the zinc supplies have been meeting normal demands has been

no particular grounds upon which Arkansas should content herself to not attempt to market some of its products and enjoy some of the normal profits; but more especially is there no good reason why we should refrain from realizing on these things while there is a shortage of zinc which not only holds out great promise of more profit, but in addition creates a duty to our national welfare which men of means and ability should not overlook; nor should they allow themselves to be misled as to the workability of our zinc deposits as may have been the case in respect to other Arkansas minerals, by people who for some peculiar reason may have been and who may now be more interested in preventing new production than in any new sources which might offer competition to their private or corporate interests, or possibly their national or even international designs. In this connection it might be said: Any person or interest who would knowingly play into the hands of possible intrigue to the extent of smothering facts which would, if allowed to be known, lend strength to our State and Nation, should not enjoy the distinction of a worthy citizen, nor be allowed to enjoy the prerogatives of leadership.

Where during the World War No. One days the mountainous sections of northwest Arkansas were traversed only by trails, there are now miles of highways suitable for transportation by truck of the lead and zinc ores to railroad points from whence they can be carried over comparatively short hauls to smelting centers; and where it was practically impossible to carry suitable mining and milling machinery during those days, heavy equipment can now be delivered economically and with dispatch.

Sphalerite (zinc sulphide) and Smithsonite (zinc carbonate) with Galena (lead sulphide) beckons from the hill slopes and valleys of Marion, Newton, Searcy, Boone and Baxter counties and some adverse publicity to the contrary notwithstanding, no person has been able to disprove the estimates and opinions of competent authorities who have by diligent search convinced themselves that, these deposits will produce over a long period a sufficient amount of zinc and lead to place Arkansas in a prominent column in respect to the nation's needs for these important metals.

Zinc and lead ore prices are now at attractive levels and though data on Arkansas sources are belated, it is possible still for enterprising interests with co-operation and sanction of state and Federal departments to offset much that has been lost by our failure to have assembled and ready at the outset of the present world conflict the facts herein referred to.

### Campbell Zinc Mine Nearing Production.

Special to the Gazette. 6-29-41

Harrison, June 28.—Operation are under way at the William Campbell mine, a mile north of St. Joe, near the old lime plant siding of the Missouri and Arkansas railway. Work is being directed by J. C. Shepherd.

Operations will be resumed soon at the Bald Hill mine in eastern Newton county, and after these two are in full operation, the Big Hurricane mine, south of Western Grove in Searcy county, also will be worked. Mr. Shepherd said.

Drills have located extensive veins of the high grade zinc ore already found in the main shaft at the Campbell mine, and it is expected this mine will be a big producer. From 12 to 15 men will be employed.

### Tri-State Search For Zinc Deposits

Mountain Echo  
Yellville 6-25-41

A recent press report from Joplin

states that a research campaign is being started in the Kansas sector of the Tri-State mining district, in an effort to discover new deposits of zinc. The Zinc and Lead Producers Association of that entire district is joining in the search. This move goes to emphasize the commonly known fact that the principal known ore reserves of that field are nearing the border line of exhaustion. If new ore deposits cannot be found in that area, millions of dollars worth of mining and milling equipment there soon will be idle from lack of pay ore ground. Naturally those operators had rather spend money in the hope of finding ore deposits, still unknown in that field, than to tear down and move into another field, or quit entirely. It is stated that the present shortage of zinc supply is a factor in stimulating this new research campaign which is to be conducted under the direct supervision of the state geologist of Kansas, who is wide awake to advancement of mining industry in his state. While the state of Kansas, through its official agent, is taking a risk chance to hunt for zinc deposits that may, or may not be found, the state of Arkansas has large, known and visible zinc reserves, ready for quick production under proper equipment; but some official agencies in Arkansas have seemed afraid to invite mining enterprise to take a chance here, lest such ventures might go wrong in some way.

### Lone Star Mill To Be Started at Once.

Special to the Gazette 7-13-41

Maumee, July 12.—Construction of one of the largest zinc concentrating plants built since the World war will start this week at the Lone Star mine, located one and a half miles east of Maumee. The property is owned by N. W. Palmer and associates, and will be in active production as soon as the mill is completed.

The plan will have a capacity of 150 tons of crude ore a day. Gilbert, on the M. & A. railroad will be the shipping point. Mr. Palmer has been working on the property for several months and has proven up a five-acre mineralized zone. The top part of the ore body is carbonate. It is underlain with jack or sulphide. The crushing and concentrating equipment of the mill will consist of a large jaw crusher, three sets of rolls, three jigs and three concentrating tables. The tables will handle the fine ore.

## Zinc Sulphide Mining Gains In Rush Camp

Special to the Gazette. 7-13-41

Yellville, July 12.—Considerable activity is developing in the Rush camp on Buffalo river in Marion county, and in other sections of the north Arkansas zinc field. New production efforts are being turned toward jack or sulphide ore rather than carbonates and silicates. This is because of the low price and poor market for the latter. Jack now is bringing \$48 per ton for 80 per cent ore concentrates and is in strong demand. Carbonates and silicates are bringing \$24, with a very sluggish market.

Most of the carbonates and silicates that have been mined in the north Arkansas field during the last few years have gone into the manufacture of paint pigments and none into slab zinc. The reason for this is that very little of this class ore is mined in the United States, and smelters are not prepared to handle it in small quantities. If and when the production of carbonates and silicates climbs to 1,000 or more tons a month, special smelter blocks will be put into operation to take care of it, and will convert it into slab zinc.

During the last few years Roscoe Hicks of Rush has been working the McIntosh mine on Rush creek under a lease. During his operations he shipped considerable free ore, produced a lot of mill dirt and



# Prospecting in the Ozarks

Early Mining in Northern Arkansas Had Its Hardships Comparable to Those of the Distant West's Most Picturesque Days.

By Tom Shiras

opened up four good headings in the mine. He recently subleased the property to I. A. Lowry and associates of Wichita, Kan., and they started active work in the round this week. They have a 10-ton mill in operation and the mine promises a good steady production.

The Edith mine in the Rush camp has recently been taken over under lease by the Chase Mining Company, a newly formed organization of Wichita (Kan.) operators, and active work is in progress. Pat McCormick, a miner who was active in the development of the camp during the World war, is employed by the company. They are driving new tunnels back under the mountain to the old face, which was a very rich working face, at the time the zinc mining industry collapsed after the World war. A large tonnage of mill dirt is being taken from these tunnels. The company will start the erection of a modern 100-ton concentrating plant soon to handle the production of crude. The Edith was one of the large producers in the Rush Camp during the World war.

A group of Joplin (Mo.) men have taken a lease on the Beulah and Zinc Basin properties in the Rush camp and will start operations soon. The Beulah is one of the few mines in the camp which produces strictly sulphide ores and it is said a mill will be erected on the property as soon as the mine is cleaned out and headings opened up.

An excellent run of ore has been uncovered on the old Mulholland mine on Rush creek. This property is owned by Lon Berry, Kin Reed and Harve Keeter, all of Marion county, who have been working it for several weeks. All the work that has been done has been in open cuts. Some sulphide ore that runs as high as 50 per cent has been mined, in addition to some high-grade carbonate. Some boulders of pure carbonate of zinc weighing as much as 100 pounds have been produced.

John Dirst, ore buyer for the Manda Corporation, who owns a lease on the Batey mine in the Jimmy Creek district north of Yellville, said he expected active operations to start on the property soon. The Batey produces only sulphide ore of a high grade and the vein there is very rich, producing a concentrate that will average over 60 per cent metallic zinc.

J. C. Shepherd, who recently took over the Campbell mine at St. Joe, in Searcy county, has bought the mill at the Jack Pot mine near Zinc and is moving the plant to the Campbell. The Campbell mine produces sulphide ore.

## Lucky Dog Mine Under New Lease.

Special to the Gazette, 8-3-41

Harrison, Aug. 2.—George Andrews and Ernest Ray have leased the Lucky Dog mine in Searcy county from B. G. Lewallen and are installing a complete ore reducing mill and crusher. The building is nearly completed, and most of the machinery has been installed.

The Lucky Dog mine was a big producer during the first World war days. It is located about seven miles east of St. Joe. After the post-war slump in zinc prices, the mill was abandoned and much of the milling machinery on the site was carried away by gangs which plundered deserted mine mills and sold the machinery for junk.

The new mill is of 100-ton capacity. The new owners say the mine and mill will be back to former level of production soon.

Mr. Lewallen, Missouri and Arkansas railroad agent at Marshall for many years, and Pete Reeves have a lease on 1,000 acres of the Dowdle lands on Silver Hill, where they hope to uncover the fabled lost silver mine of Indian Woodard.

Power drills were moved this week from the Lucky Dog mine to the site, a mile west of Highway 65, where it tops Silver Hill, south of Buffalo river, and where the operators believe they have discovered the entrance to the "lost" silver mine. Mr. Reeves said a tunnel must be drilled to release the waters of a subterranean lake and then he believes the ledge of silver ore will be found.

Gazette 8-10-41

Generation after generation of sturdy adventurers for 122 years have braved the hardships of the Arkansas Ozarks to make fortunes from zinc and lead mining.

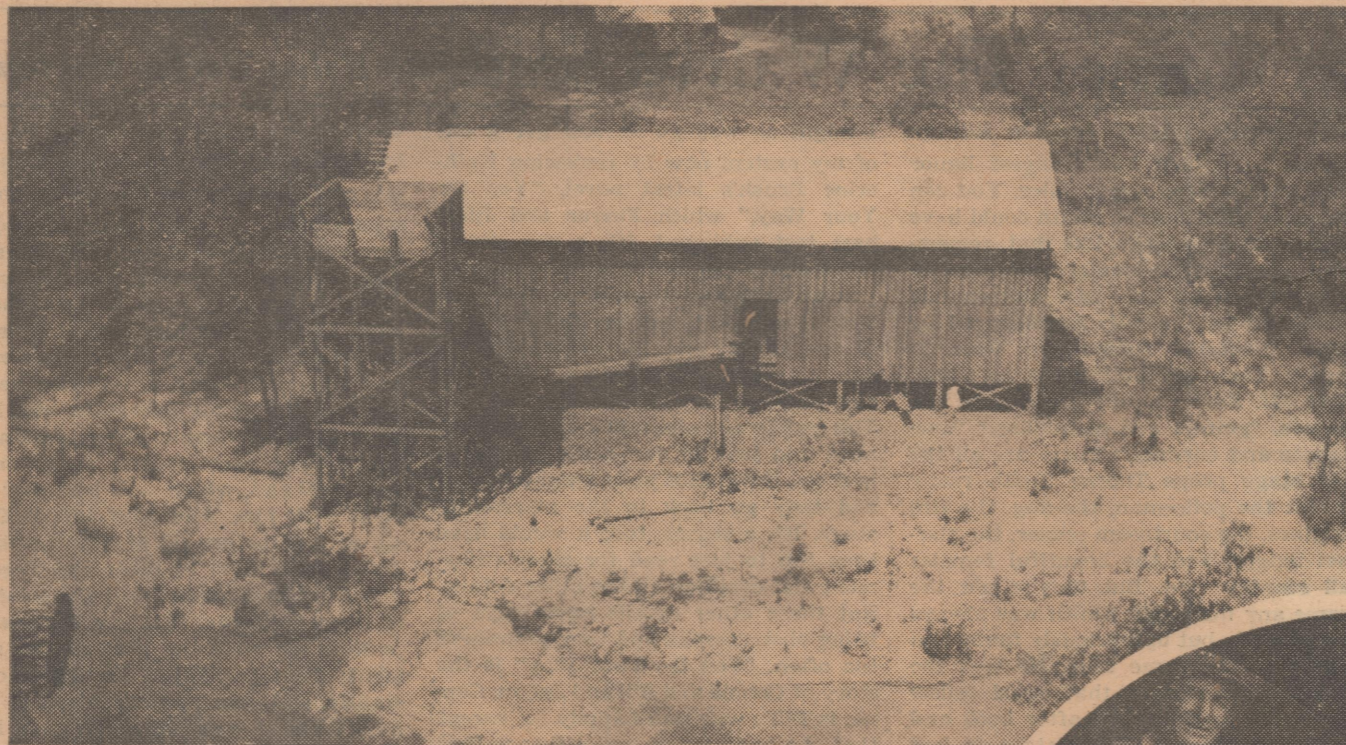
An eye-ful of the hardships some of the earlier prospectors had to endure can be had from an interview the writer had 30 years ago with John Wolfer, who with T. M. Alexander and two other partners opened the Morning Star mine on Rush creek.

He said: "We had no money to carry on mining operations or to buy provisions with. Just our picks and shovels and old-fashioned muzzle-loading rifles. We lived on Buffalo river catfish and venison so long that we grew thin and gaunt. I finally traded my interest in the mine for all the cove oysters and soda crackers I could eat."

In a recent interview with J. A. Ingram of Clinton, grandson of T. M. Alexander, one of Wolfer's partners, he said: "My grandfather received \$65



Workers in a Boone county mine are hand jiggling ore in the picture above. At the left is a scene at the Monte Cristo Concentrating Plant, Rush Creek Camp, Marion county.



Free silicate of zinc ore, ready for shipment, is being examined at a zinc camp in Boone county in the picture below. At the right are tunnel miners in the zinc mines of Boone county.



for his interest in the mine."

The first prospecting for lead and zinc on record was done by Henry Rowe Schoolcraft, a geologist and scientist, who came to the Ozarks from Water-vleat, N. Y. Schoolcraft left Potosi, Mo., on November 6, 1818, with three companions, a Mr. Brigham of Massachusetts, a Mr. Pettibone of Connecticut and a hunter named Roberts. Mr. cut and a hunter named Roberts. Mr. day and he turned back. Mr. Roberts, the hunter, deserted the fourth day, and Schoolcraft and Pettibone continued

their adventure alone. They were hardy New England individuals, but neither was a hunter and a great deal of time they had barely enough food on which to survive.

Their course lay from Potosi, Mo., to the head of the Current river, thence to the head of the Big Northfork, down the Northfork to its mouth, back up the river to the mouth of Pigeon creek, in Baxter county, and over the divide to the White river. They then went up White river to the mouth of Beaver, thence through what are now Boone



and Marion counties across the state line into Missouri and over the southwest Missouri zinc and lead field. From that point they came back to the mouth of Beaver, then by canoe to Batesville, overland from Batesville through Independence, Sharp, Lawrence and Randolph counties to the Missouri line and to Potosi, the point from which they started. Schoolcraft was the first writer to record the presence of lead in north Arkansas. He also identified manganese, zinc and iron ores.

ried on in the vicinity of the town. The first mining and smelting operations carried on there started in 1851. The settlers dug the ore from clay pockets and brought it to a smelter operated by William Bennett. Two other lead smelters were operated there before the Civil war. One was owned by a man named Fine. In 1871 Colonel Childers operated a smelter in the Lead Hill territory and continued for three years. Another lead smelter was operated in this vicinity by an Illinois company early in the 70's. Major Durham, the only lead smelter-



man of early days whom this writer ever met, operated a smelter between Lead Hill and Dodd City, Marion county, late in the 70's.

Major Durham, like other early mining men, was a hardy character. One morning I met him at Dodd City, and he told me of a rich strike of jack he had made at his Paradise mine, eight miles distant, and asked me to go over and write a news story about it. On the way over the next morning, he discussed his early life with me. He had served in the Union army as a cavalryman, and he told me about the numerous, saber wounds he received in one battle. He sensed that I was a little skeptical and stopped in the road, pulled off his overcoat and stripped to the waist. Some skilled Confederate cavalryman had operated on him a dozen times or more, and as he stood there showing me the red scars, criss-crossed across his torso, he said: "I guess you'll believe it now."

Lead smelters also were operated in Newton county, on Cave creek in 1876 and 1877, by the Boston Mining and Smelting Company; another was operated by the Missouri and Arkansas Mining and Prospecting Company, near Boxley, in 1882 and 1883. The pig lead produced in Newton county was hauled to Eureka Springs and Russellville and shipped by railroad to destination. That produced in the Lead Hill area was hauled by team to Springfield, Mo., where a lead market was maintained.

Lead smelting as an industry in north Arkansas ended late in the 80's. Southwest Missouri mines had started production, and because they were located on railroads and conditions were better, Arkansas smelters could not compete with them.

The first zinc mining and smelting in north Arkansas was in Sharp county in 1857. It is said that the zinc ore smelted at Calamine at this time was the first to be smelted in charcoal retorts in the United States. The smelting operations were done by the Independence Mining Company, which also mined the ore it smelted. A Mr. Hoppe of St. Louis was one of the principals, and a Mr. Faber, general manager of the operations. The operations of this company were stopped by the Civil war, and their equipment was used or destroyed by the Confederate army.

Early in the 70's the Independence Mining Company sold their holdings to the American Zinc Company, and this concern operated the mines and a smelter for about two years. The only evidence left of these operations is the old foundation on which the smelter set, and the abandoned mines.

Early miners in the Calamine region were well received by the pioneer citizens, but those that entered the western part of the district were not so fortunate. Former State Geologist John C. Branner, speaking in one of his reports of early conditions in this section of the field, said:

"Prospecting in the western part of the zinc region began in a modest way in about the year 1886. The early prospectors were men of small means and large faith. It is almost impossible today to realize the difficulties they had to contend with. At that time very few people living in the zinc region knew zinc ore when they saw it, and fewer still believed that it would have any value. The prospectors were looked upon as unbalanced, were openly derided, and in some instances were compelled to defend themselves 'vi et armis,' against attacks made for the purpose of driving them out of the country.

"In contrast with this modest beginning was the rush into this same region in 1899, when every conveyance going into the zinc region was literally crowded for months by miners and prospective miners entering this new field."

It was not an easy journey from any of the Middle Western or Southern cities to the new zinc and lead mining field in those days. Many of those from the South came as far as Batesville on the railroad, then took a steamboat to the most convenient up-river point, then went by hired conveyance or by one of the old stages that used to ply through the country. Others came to West Plains, Mo., by rail and by stage to destination. By this route

it was 52 miles to Mountain Home, 70 miles to Yellville and 100 miles to Harrison. Others came to Eureka Springs by rail and to destination by stage.

The first reliable geological guidance the early prospectors and miners of the north Arkansas field had was when John C. Branner, father of George Branner, present state geologist, was appointed state geologist in 1887. He made his first survey of the field shortly after his appointment, and after his report was published, miners had a chart to work by. Jack (sulphide ore) was about the only known zinc ore in the field before his report came out. He predicted that large deposits of zinc carbonate would be found, and his predictions have come true. Most of the ore shipped from the field is carbonate and silicate.

Reuben Willett, who represented the Edgar Zinc Company of St. Louis, was the first ore buyer in the field, with headquarters at Yellville.

Other early day mining operations in north Arkansas that have been recorded in history are the operations in Newton and Marion counties that were carried on by the Confederate army. In the Cave creek area in Newton county and the Bull Mountain area in Marion county, they mined lead for bullets and saltpeter, from which they manufactured gunpowder.

The saltpeter was the residual nitrate deposit from bat guano, that filtered into the underlying clay in the caves. George Foster, a long-time citizen of Mountain Home, who has been dead for many years, and who was a member of the company that engaged in saltpeter mining, once explained to the writer the process they used to extract it from the cave clays.

They mined the clay from the caves and ran it in crude dump cars to huge hoppers, built along the same style as the old-fashioned ash hoppers, in which the mountain housewives used to leach lye from wood ashes. The hoppers were kept full of this clay and a small stream of water was kept constantly trickling through them. This water picked up the saltpeter in solution, and was evaporated in huge castiron kettles, the saltpeter gathering as salts in the bottom of the kettles after the water was boiled off.

Most of the lead and saltpeter recovered in this section by the Confederates was moved by small boats down the White river to the Mississippi and thence to New Orleans. Few of these cargoes were captured by the Federals but they finally located the sources of supply, raided them and stopped production.

The Old Confederate lead mine near the head of Cave creek in Newton county took its name from these operations and some of the old equipment used by the Confederates is still lying in an old field close to the mine. A number of old kettles used in refining saltpeter are still in existence in Baxter and Marion counties. Eben Woods of Flip-pin owns one of these historic kettles, and, notwithstanding the fact that it was badly cracked around the rim by the Federals when they captured the plant, it still holds water and he uses it to scald hogs in at butchering time.

The only zinc smelter ever built in the western part of the zinc field was built at Rush by John Wolfer and associates, who opened up the Morning Star mine. It was built of stone and is still standing.

Years ago the writer met John Wolfer, who was living in a small log cabin on a mountain farm in the southern part of Baxter county, and he told the story of why the smelter was built.

"It was not built to recover zinc values," Mr. Wolfer said. "We sent some of our zinc carbonate to an assay office back East for assay, and they sent us back a report showing that it carried very good silver values. There was no transportation at that time and we could not sell the zinc ore at a profit, so we thought we might smelt this ore and save the silver.

"The chemists to whom we sent our samples proved unreliable. We put in a lot of hard work constructing the smelter and burning charcoal to fire it with. The first charge we fired proved to us that we had wasted our efforts.

No silver ran out at the bottom, and because the smelter was not of the retort type, the zinc values went up the flue and into the air in fumes, making brilliant rainbows."

It is said that the largest piece of zinc ore ever taken from the ground in the United States was mined from the Morning Star mine in 1903 and sent as an exhibit to the St. Louis World's Fair. It weighed 12 tons and was shipped by flat boat down the Buffalo and White rivers to Batesville, where it was sent by rail to destination.

Besides the natural hardships, consisting of no roads, no railroads and hard ore markets to reach, early miners had to combat the bitter tongues of other zinc and lead miners in the United States. The field was classed 'my miners and mining land owners in other fields as a field of no commercial importance; they said that its ore deposits ran only in very small pockets and had no value.

These charges were refuted by the hardy men who came into the field at the beginning of the World war to mine and ship thousands of tons of zinc, which was badly needed at that time.

But because mining conditions were still not equal to those of other fields, operations were nearly suspended when the price of ore dropped after the war. In 1939 things began to pick up again.

Mining conditions in north Arkansas today are on a par with other fields. Good roads lead to all camps. Phone and mail service is available. Freight rates are lower. There is easy access by truck to mining supply houses and plenty of good labor is available.

Other zinc fields are nearing exhaustion and geologists now class the north Arkansas field as the only virgin field left in the United States. It is probable that within the next decade zinc mining will be one of the largest industries in the northern part of this state.

#### Activity Increases in Zinc Mining Operations.

Special to the Gazette. 8-6-41

Harrison, Aug. 5.—Prices of zinc ores which are climbing to a point where mines in the north Arkansas field can be operated at a profit, is providing a stimulus for opening new fields.

Much activity in the mining industry is in evidence at almost all of the old producing zinc mines in this area, and new ones will be placed in operation soon. Roy Hand of Yellville, reported here. Mr. Hand is associated with his father, J. H. Hand, secretary-manager of the Ozark Mine Owners League.

Particular activity is noted in the Rush field. Stanley Hanford and associates of Batesville have installed an ore concentrating mill at the Leader mine and will put it in full operation with Pat McCormick as foreman. The Edith mine at Rush also is being equipped with a mill and is expected to become a heavy producer.

There is increased activity in the Big Hurricane, Campbell, Lucky Dog, Silver Run and Evening Star mines in Searcy county, the Bald Hill, Confederate, Christian and other mines in Newton county, and in the zinc and lead mines in Boone county.

### Mining In Rush-Buffero Area Picks Up

Special to the Gazette. 8-10-41

Yellville, Aug. 9.—A revival of mining activity in the Rush-Buffero zinc district appears to be on the way at last.

C. S. Freeburn and associates of Wichita and Emporia, Kan., are reopening the Edith mines with a double-track tunnel and have cleared the site for construction of a 100-ton milling plant, having bought the mill equipment, which is being moved onto the site. The new mine workings have tapped the rich ore vein from which the old Edith Mining Company of New York made a car load of zinc concentrates a day during former operations. Operators have proven up the ore run on an area 800 feet long by 600 feet wide, and have not reached the extent of the deposit in either length or width. In addition to this ore body, which is on the upper run in the mountain, the new operators,

who are experienced in deep mining in the Tri-State district, have disclosed a rich deposit of ore on the lower levels. However, they are pushing operations to get the upper run equipped for production, after which the lower run will be opened.

**Leader Mine Being Reopened.**  
Stanley Handford of Batesville and associates in Little Rock have joined Pat McCormick, a veteran mining superintendent at Rush in opening the Leader mine. This property has 1,000 feet of underground prospect workings, from which approximately \$50,000 worth of zinc ore has been mined and sold. One of the Leader tunnels penetrates a rich run of zinc sulphide ore.

I. A. Lower and associates of Wichita, Kan., began operation of their mill on the McIntosh lease this week.

N. W. Palmer and associates of Dallas, Tex., after having spent several weeks opening up extensive ore reserves at the Lone Star and Silver Run mines, are building a 100-ton mill.

J. A. Cushing, a mining engineer of Los Angeles, Cal., has a force at work reopening the Hazel Dell mine. He also is reconstructing a road to the Silver Hollow mine for clients who have acquired leases for the announced purpose of extensive mining and milling operations.

J. H. Melton and associates of Dallas, Tex., are investigating properties.

Local miners are shipping free ore under leases from J. H. Hand, manager of the Mine Owners League, on the Paymaster and Mine Sixteen properties.

Mill construction work at the Excelsior and Lucky Dog mines is being rushed.

## 50-T on Mill Completed At McIntosh

Special to the Gazette. 8-24-41

Rush, Aug. 23.—J. A. Lower of Wichita, Kan., who has a lease on the McIntosh zinc mine here, when he has completed a modern 50-ton mill, installed mining equipment this week to supply the mill with its daily capacity of crude ore.

The new equipment consists of a large compressor and engine and three large air drills. With this equipment operators easily can keep the mill supplied with crude. They have four headings in the mine, each about 12 feet wide and 10 feet high, which run approximately 12 1-2 per cent high grade carbonate ore.

The McIntosh is one of the oldest mines in the Rush Creek camp. Roscoe Hicks, who hold the original lease, has mined 500 tons of free carbonate ore on the property during the last six years. The mine is being operated by Mr. Lower, under a sub-lease from Mr. Hicks. The property is owned by the McIntosh Zinc Mining Company of Lynn, Mass.

## LONG AWAITED RISE IN PRICE OF ZINC BOON TO INDUSTRY

Special to the Gazette. 9-15-41

St. Joe, Sept. 13.—The price of north Arkansas zinc carbonate and silicate ore has been advanced from \$17.50 to \$25 a ton, and many new small free ore mines are being opened up.

The Manda Corporation, which buys most of the ore now produced in the north Arkansas field, is running ore trucks all over the field, picking up small lots at the smaller mines. Sulphide ore is bringing \$48, the same price being paid in the tri-state district. This price is expected to advance to \$60 within two weeks, which would raise carbonate and silicate ores to around \$35 a ton.

**Two Mills Begin Operations.**  
Two new 100-ton mills started operations this week and are operating steadily, and the production of the field during the next 30 days is expected to double.

The new mills are located at the Lucky Dog and Campbell mines, both in the St. Joe district. Both are milling crude sulphide ore.

The Campbell mine is a shaft mine, the ore coming from two fine headings in drifts that run out from the bottom of an 80-foot shaft. Another shaft sunk near the mill will be producing soon. This property is being operated by J. C. Shepherd and associates. They also operate the Bald Hill, Confederate and Hurricane mines.

A new 70-foot shaft recently has been completed on the Hurricane and is now in good carbonate ore. The free ore is being shipped and the crude is being stacked up and will be milled as soon as a contemplated mill is constructed on the property.

**Lengthy Water Line Planned.**

Two new shafts have been sunk on the Bald Hill property and are in good carbonate and lead ore. Some sulphide or jack ore also has been encountered in these shafts. To supply sufficient water to the mill for all-year operations, a pipe line four miles long is being surveyed and probably will be completed in 60 days.

**Gloria Mine Has New Lessee.**

In the Zinc camp in Boone county, the Old Vet Mining Company, headed by R. G. Johnson, William Black, Charles and Otis Keys and R. K. Brown of Rogers, have leased the Gloria mill from Larry Doyle and are remodeling it. They have other mines leased in the district from which they will draw crude ore to keep the plant in operation.

### Marion County Zinc Mining In Appreciable Gain.

Special to the Gazette.

Yellville, Sept. 13.—More miners are taking to these hills to prospect for new free ore diggings and to revive old prospects, as some of those already engaged have been making lucky strikes, and cashing in on their mining ventures.

**Ground Hog to Be Reopened.**

Charley Boyd and associates are continuing development extension while recovering some high grade free ore at the Prince Fred property in the Cow creek area near Buffalo City. Work is expected to be started soon on reopening the Ground Hog mine in the same vicinity. This mine has made a large yield of free ore.

Gillam, Lundy and Ott took out their second truck load of ore last Saturday from their lease on a strip of the Paymaster mine property just east of Yellville. Since their first shipment two weeks earlier, they spent about a week taking up a stope in the tunnel floor to connect with a lower ore run which they are working near the 300-foot heading. This ore grades above 43 per cent zinc content. A night crew was employed at the mine, beginning Monday.

Handford and McCormick have broken through the rim rock into what appears to be a master ore body on the old Leader lode near the mouth of Clabber creek. This development is on the east side of the hollow, from which \$50,000 worth of ore has been mined. The new working is mainly to explore the extent of the ore reserves.

Chase Mining Company of Wichita, Kan., is making good headway on construction of its mill at the Edith mine.

Gentry and Dean, owners of the Yellow Rose, which joins the Edith property, recently put a force to work, opening a new tunnel to the south of the old mine workings.

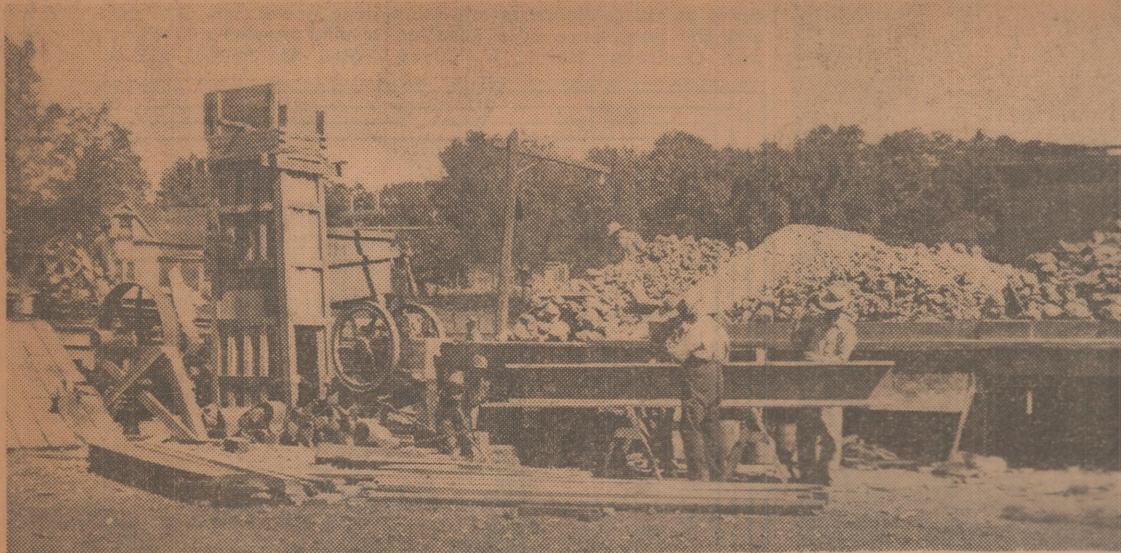
The shaft at the Beulah mine near Rush was pumped out last week for inspection by St. Louis interests, who are said to be taking over the mine for operation on the lower ore level.

**Lone Star Tests Favorable.**

To get his operations at Lone Star mine, south of Rush, out of the guessing stage, as to ore yields to be expected from milling, N. W. Palmer, the lessee, had 10 tons of average mine run ore milled and obtained a recovery of 16 per cent in concentrates, carrying 42.60 per cent zinc content. The test was made on the Lower custom mill at Rush. Mr. Palmer said he has around 3,000 tons of similar grade ore out at Lone Star and plenty of reserves in sight. He is constructing a mill at that mine to treat output from it, also from the Silver Run mine nearby, which he has leased.

I. A. Lower has been doing some road repair between Rush and Cedar creek, preliminary to trucking ore from his lease at Carbonate Point mine on Cedar creek to his custom mill at Rush.





Harrison, Sept. 27.—An ore mill and crusher have been installed at the loading platform of the Missouri and Arkansas freight depot in Harrison by the Hurricane Mining Co. The machinery was shipped here from West Plains, Mo. The mill has a capacity of about 50 tons daily.

## Zinc Mining Gradually Picking Up

Special to the Gazette. 10-12-41

Yellville, Oct. 11.—Without attendant boom sentiment, the zinc mining industry gradually is picking up in the Ozark district, with a slow gain in production, while substantial development operations and mill equipment at several properties are under way.

Owners of most of the better proven properties manifest no anxiety to dispose of their holdings at present, in view of growing demand for zinc, together with obvious shortage of supply that is facing industrial and defense requirements. All feel that a material advance in price of ore must sooner or later take place in order to stimulate increased production, where dependable zinc ore reserves are known to be available.

While during former mining activities here the carbonate and silicate of zinc deposits received preferred attention, by reason of being more plentiful near the surface, and therefore more cheaply mined than the deeper beds of higher grade sulphide ore, the latter now is getting a play. Old drill records that disclose important runs of jack deep below the valley levels in many places, are being consulted. Old prospect shafts that were sunk into the lower run have been reopened in some instances. For example, J. C. Shepherd, a former large producer of carbonate ore only in this field, has reopened the Excelsior mine shaft near St. Joe, in which a good run of jack appears around the 100-foot level, and recently started operations there under mill equipment.

Under the direction of J. A. Cushing, mining engineer from Los Angeles, the Silver Hollow mine tunnel on Buffalo river near Rush, is being dewatered. This mine is opened for 1,300 feet into the mountain. The heading is 50 feet below the level of river bed. Zinc sulphide only is found in the last few hundred feet of the drift.

**New Olympia Ore Stratum.**  
 A lease was recently closed on the old Olympia mine at Kingdon Springs in Jimmy creek district north of Yellville. Disclosure of the name of the lessee is not authorized. Four drill holes at 400-foot intervals, to depth of 150 feet below creek level, and verified by a shaft, through 40 feet of disseminated zinc sulphide ore, afford the chief basis of present interest in this property, although it had been unnoticed since these explorations were made many years ago, because it is a jack proposition.

The Marican Mining Company of Wichita, Kan., which is reopening the Edith mine at Rush, has considerable new ground blocked out, and is driving ahead, pending completion of a 100-ton mill under construction, for which the machinery has been received at the mine.

Interesting features of renewed operations at the Yellow Rose mine at Rush are found in the opening of a continuation of the ore run at a point several hundred feet to one side of the old mine workings; also discovery of a lower ore stratum in a shaft at the old mine

entrance. Gentry and Dean, owners, are conducting these operations with a view to regular production.

**Mill Planned at Leader Lode.**  
 Stanley Handford of Batesville and associates in Little Rock having reopened the old Leader Lode in Rush camp, under direction of Pat McCormick, an expert miner, are preparing to equip the mine with a mill as early as material and machinery can be provided.

Mill construction is proceeding at the Lone Star mine near Maumee, under supervision of N. W. Palmer of San Antonio and Dallas, Tex. A milling test of average mine run ore from that property, made at Lower's custom plant at Rush, gave a recovery of 16 per cent zinc carbonate concentrates of 42 per cent grade. Mr. Palmer estimates that he now has 3,000 tons of similar grade ore already stacked out for milling.

## Output Of Zinc Gaining Gradually

Special to the Gazette. 11-16-41

St. Joe, Nov. 15.—Three concentrating plants in the St. Joe area are running steadily, and the output of zinc ore gradually is increasing.

The Big Hurricane, Excelsior and Bald Hill properties have been united into one company, which now is the Hurricane Mining Company. A deep shaft has been sunk on the Big Hurricane into a good deposit of carbonate ore, consisting mostly of rich mill crude. A mill probably will be built on this property soon.

The mill on the Excelsior or Campbell mine near St. Joe is in operation most of the time. It is producing a straight jack or sulphide zinc concentrate that runs around 60 per cent. The main shaft has been driven to a depth of 75 feet. Four drafts offshoot from this shaft into a mineralized fracture that runs parallel with and only a short distance from the St. Joe fault. Ore now is being produced from the headings in three of these drifts. The largest heading carries a face of jack about 20 by 20 feet. The other two headings are smaller.

Two other mineralized fractures run about 100 feet from the one they are working in now and cross-cut drifts will be made to reach these soon. Their crude ore runs about 10 per cent. The ground equipments consist of two air driven drills. The mill is one of the best equipped in the field. The crushing equipment consists of one 100-ton jaw crusher, three sets of rolls, one cleaner jig, one rougher jig and one Wilfrey table. The latter is used to catch the fine ore. The plant is operated by a 60-horsepower oil engine.

**Two New Bald Hill Shafts.**  
 Operations at the Bald Hill mine have increased since two new producing shafts have been sunk. One is 80 feet deep and the other 70. Producing shafts have been driven from each shaft, and all shafts are in rich carbonate mill dirt. They are getting approximately 20 per cent recovery from their crude. The mill operates about 12 hours a day and operators are having no more difficulty in getting plenty of water for continuous operation. J. A. Barker is associated with J. C. Shepherd in the operating management of all the Hurricane Mining Company's properties.

The Lucky Dog mine, located on Rock creek, about eight miles from St. Joe, is in operation most of the time. It is producing about 12 tons of high grade sulphide concentrates a week. The mine is being operated by the Rock Creek Mining Company, whose stockholders are of Tulsa, Okla. It is under the management of N. J. Andrews of Joplin, Mo. The mill is of 75 tons capacity and was built by Art Goatley, who is foreman of milling operations. The mill is of modern design and turns out a very clean product that runs around 60 per cent metallic zinc. The mine is a tunnel mine, driven 150 feet into the mountain. Their face of crude runs about eight by 40 feet. The recovery is around five and six per cent. After everything gets tuned up and operations get in full swing the Lucky Dog's production promises to show a good increase over that of today.

**High Water Floods Some Tunnels.**  
 Mining in the Rush Creek camp in Marion county was hampered somewhat by recent high water on Buffalo river. The Silver Hollow got a big dose of the overflow and pumps are working now to dewater the tunnels. It is expected that a mill will be installed at this mine soon.

Lon Berry of Yellville and associates, who own the Mulholland mine in the Rush camp, have opened up a good face of free carbonate. During the last two weeks 16 tons of high grade carbonate have been sold from the property.

Operations at the Edith mine, in the Rush camp, under the supervision of Mr. Maxey, foreman, are going along steadily. Operators have driven their new tunnel back to the old face and are producing a good tonnage of free carbonate ore and building up a big reserve of crude for milling purposes. Twenty tons of free ore was produced and sold from the property this week. They gradually are accumulating material for the construction of a mill, which will be built in a few months.

The mill on the McIntosh mine is operating part time. Besides milling their own ore, operators also do some custom milling.

Stanley Hanford of Batesville and Pat McCormick of Rush, who own the lease on the Leader Hollow mine, have driven their main tunnel into a fine deposit of ore and are working out plans for a new mill.

The price of carbonate ore has been increased to \$29 a ton delivered at Harrison, with 75 cents a point increase for all ore running over 40 per cent and the same amount per point decrease for ore under that.

## Chicago Group to Build Zinc Mine Near Harrison.

Special to the Gazette. 11-16-41

Jasper, No. 15.—John Stone and associates of Chicago, who have leased the Big Jumbo mine on Big Buffalo, 3 1-2 miles from Jasper will start the erection of a mill soon. It is a dry process mill and the machinery is in shipment now. The Big Jumbo is a jack mine, the ore outcropping on a high bluff on the banks of Buffalo river. The Chicago men also have leased large tracts of other mineral bearing land in this section.

## 400-Pound Boulder Of Zinc Unearthed.

Special to the Gazette. 11-23-41

Harrison, Nov. 22.—A boulder of pure zinc, weighing more than 400 pounds, was unearthed by Eli Wages on the Bald Hill mining property near Cave creek in eastern Newton county, this week. Mr. Wages is doing some independent mining on the property under lease

to the J. C. Shepherd interests. Mr. Wages is mining several tons of free ore each month, which is trucked to Harrison for shipment.

## Work Started On Pilot Rock Mine.

Special to the Gazette. 11-30-41

Yellville, Nov. 29.—The Pilot Rock Mining Company, recently organized by Texas and Oklahoma interests, has started work on the Pilot Rock mine in the Dodd City camp in north Marion county. Among the principal stockholders are W. E. Weston, Dallas, Tex., and Fred P. Branson and Mamie S. Hammonds of Oklahoma City. While the construction of a new mill is planned, it will not be built until after sufficient headings are opened up to keep it supplied with crude. The Pilot Rock is one of the older mines in northern Marion county and produced a large tonnage of ore during the World War. It was under the management of Neal Dodd at that time. The mine produces both lead and zinc.

## Zinc, Lead Mining Gains Steadily

Special to the Gazette. 12-14-41

St. Joe, Dec. 13.—The number of new prospectors and mining men drifting into the north Arkansas zinc and lead fields is increasing weekly, and it is expected that mining operations in the field will show a big increase in 1942 over 1941.

Men representing Memphis capital have been negotiating for properties around Rush, Marion county, and probably will take over some of them soon. A thorough drilling test in another part of the field by one of the larger zinc companies is expected to be started soon. Much more interest is being taken in the field by outside investors than at any time since the war started.

**Carbonates Shipped to Detroit.**  
 Arkansas carbonates have found a new market in Detroit. All of the carbonate purchased by the Manda Corporation at Harrison is crushed and pulverized before shipping. After this process a much more satisfactory assay can be made of the shipments. This ore now is being used by a Detroit concern instead of tin for rustproof purposes, and it is working very satisfactorily.

The Hurricane Mining Company, operating the Bald Hill, Excelsior and Hurricane mines in the St. Joe section is making a good, steady production, shipping two cars of ore weekly, with their production increasing. Ore from the Bald Hill is a mixed ore. That from the Excelsior is sulphide or jack. There is plenty of water for continuous operation of both mills. Some of the highest grade carbonate ever found in the field is being mined at the Bald Hill from new shafts. It runs from 40 to as high as 50 per cent as it comes from the ground.

**Edith Mill Nearly Completed.**

The mill at the Edith mine in the Rush camp nearly is completed. Bill Maxey, foreman, said that it probably will be in operation by the first of the year. The building is finished, the jigs installed and the other machinery is being set. For the last year all of the free ore has been separated from the mill ore and sold. This month all the ore from all the headings is going into the mill ore pile. Operators estimate their stock of mill ore now runs about 2,000 tons, which will get the plant off to a good start when it is completed.

Pumping operations are in progress at the Silver Hollow mine. John Dirst said that he will have the drifts free of water next week.

The Lower mill at the McIntosh mine in the Rush camp is in operation part time. Work is also being pushed on the Leader.

## MAJOR FIRMS MAY ENTER ZINC FIELD OF NORTH ARKANSAS

Special to the Gazette. 1-4-42

Mountain Home, Jan. 3.—Because the demand for both jack and carbonates is much stronger than last year and the price has been raised several dollars on both grades, it is expected that the production of zinc ore in the North Arkansas field will be much greater in 1942 than in 1941.

Three mills are in operation now, a fourth one will be completed early this month, and several more are planned. These plants produce jack and carbonate concentrates. A much larger production of free ore by pick and shovel miners also is anticipated.

## Largest Middle Western Firm Now Making Tests.

Two large concerns are expected to enter the north Arkansas field soon. One is one of the largest zinc and lead concern in the Middle West. The Manda Corporation has been obtaining leases along the St. Joe fault for the last 30 days and now has 9,000 acres under lease. The big Middlewestern concern will start drilling operations soon to prove up ore deposits, and if these prove satisfactory, will start extensive mining operations.

The Detroit rust-proofing concern now using carbonate ores instead of tin also is expected to enter the field early this year, either to finance several operating mines, so they can be equipped adequately or take them over and operate them.

## Prices Much Lower Than in World War 1.

Activity in the north Arkansas field at this time, however, is much less than it was when the World War started in 1914. In just a few months after it broke out hundreds of men poured into the Rush creek and Buffalo river areas and areas around Zinc, in Boone county, and Dodd City, in Marion county, and started operations. There is no such interest displayed today. The price was the big factor which started the activity then. Jack brought around \$135 a ton, against \$68 now, and carbonates brought up to \$85 against a top of \$36 now.

## Carbonate Replaces Tin As Rust-Proof Agent.

The demand for carbonate ore is much heavier now than it ever had been in the field before. It has been discovered that Arkansas zinc carbonates can be used in rust-proofing sheet metal, formerly rust-proofed with tin. Tin is a vital defense metal at this time, and much of the supply has been allocated to munitions. This situation opens up a strong, new market for carbonates. The present available supply represents only a small portion of the demand. Most of the carbonate ores used for replacing tin have been going to a large rust-proofing concern in Detroit, Mich. One mining concern in the north Arkansas field which has been supplying the Michigan firm's demand for carbonates has fallen considerably short of supplying the tonnage needed. This shortage was not caused by lack of ore in the ground, but lack of proper equipment to mine it in the tonnage wanted. Lack of this equipment is caused by lack of finance.

L. A. Watkins, president of the M. and A. Railway Company said the chief problem confronting the zinc mining industry of north Arkansas is that the field is "badly underfinanced. We have plenty of ore, but we do not have the money to properly equip our mines for maximum production."

## Government May Aid Production With Loans.

It is expected that new money for financing mines operating on good, proven deposits can be had from the Defense Metals Corporation, and a representative of north Arkansas miners will go to Washington soon and make applications for necessary loans.

## Iron Pyrites of Carroll County May Be Mined.

There is some possibility now that the big deposit of iron pyrites near

Berryville, in Carroll county, will be mined. For many years sulphuric acid was manufactured from iron pyrites running over 50 per cent sulphur. It still is used to some extent for this purpose, but pure sulphur has replaced it at many plants. With the latter the process of manufacture is much quicker. If operations are started, production probably will go to the new chemical plant at Chotau, Okla.

The investigation of phosphate deposits in Independence and Izard counties, which will be started soon, is expected to be extended into Searcy and other counties, where there are known deposits of phosphate.

## Operations Resumed At Campbell Mine.

Special to the Gazette. 1-18-42

Harrison, Jan. 17.—Mining operations at the Campbell mine, a mile north of St. Joe and operated by the Hurricane Mining Company, were resumed this week after work had been halted the past week because of the frigid weather.

W. P. Campbell of St. Joe owns the land on which the mine is located. Good shipments of ore are being shipped from the mine and concentrating mill. Mr. Campbell said, and larger pumps are being installed to take care of the water in the deep shafts, which are being worked.

Mr. Campbell is one of the pioneers of that area. More than 40 years ago he was a guide for the Branner surveying party of which Herbert Hoover, then a kid surveyor, was a member. He and Mr. Hoover camped together.

## PEGGING OF ZINC PRICE AT 11 CENTS BOON TO ARKANSAS

Special to the Gazette. 1-25-42

Harrison, Jan. 24.—As a result of the government pegging the price of zinc spelter at 11 cents at East St. Louis, a wave of prosperity is in store for all zinc mines in the north Arkansas field, J. C. Dirst, miner in the Rush field, asserted here.

Mr. Dirst formerly was mineral buyer for the Manda Industrial Corporation and now is interested in several mines in the Rush field. He has formed a partnership with N. J. Cushing of Los Angeles, Cal.

The 11-cent price is for all new zinc production and is one-third above the present price, Mr. Dirst said. Most Arkansas mines have not been operated in recent weeks because of weather conditions, and practically all the output from this section will go as new production. Most of the output from the Tri-State field will remain at the old price, the increase over the average for the past two years being rated as new production, Mr. Dirst stated.

The government guarantee that the price shall remain at the 11-cent level for the next two and a half years is encouraging expansion of mining enterprises in the North Arkansas area, and the installation of large capacity ore mills is expected.

Mr. Dirst and Mr. Cushing are operating the Silver Hollow, Lonnie Boy, White Eagle, Silver Queen, LaRue, Lucky Tiger and others in the zinc mining area. Plans are under way for installation of 250-ton capacity ore concentrating mill at Rush by Mr. Dirst and his associate.

## Rock Creek Firm Loses Mining Lease.

Special to the Gazette. 1-25-42

Harrison, Jan. 24.—Chancellor J. M. Shinn ruled that the claims of the creditors involving the Rock Creek Mining Company of Searcy county should be sustained and also established their priority as a lien against the property.

Bennie Terrell et al were suing the Rock Creek Mining Company, whose property included the Lucky Dog, northeast of St. Joe, and other zinc mines in the Tomahawk area; Bert Lewallen and Fred Sanders. Others were intervenors as owners of the land on which the mines and mill are located. The plaintiffs alleged labor, mechanics and other debts were due from the company. Judge Shinn advanced the case on the docket at Marshall so that the production of zinc, a defense metal, might not be stopped.

The company's lease on the mine property was ordered canceled because of failure to comply with the terms of their lease from Mr. Le-



wallen and the others. Thirty days was given the company or anyone else who might desire to reorganize the company and operate the mine before the sale of the property. If a new company is not organized or the old company makes a new lease and settles the established claims, the property will be sold to pay the debts, Judge Shinn ordered.

Leo Godwin of Harrison, temporary receiver, was appointed permanent receiver and was instructed to preserve the property and sell it if necessary.

Evidence showed that the mine was a good ore producer, and efforts will be made to put it into full operation again. A 100-ton ore mill has been set up at the Lucky Dog mine.

## Market For Zinc Sought

Democrat 1-25-42  
Efforts to obtain a market for northwest Arkansas zinc have been started by the State Agricultural and Industrial Commission.

Information on zinc ore available in that section of the state was compiled by John Bransford, head of the Agricultural and Industrial Commission and data was forwarded to H. K. Thatcher, Arkansas' Washington representative, who previously has been doing promotional work in behalf of the Arkansas ore.

## DRY CONCENTRATING SYSTEM TO BE USED AT NEW ZINC MINE

Special to the Gazette. 2-1-42

Harrison, Jan. 31.—North Arkansas' first zinc ore plant using a dry concentrating process in place of the usual hydraulic system is being installed at the site of the Haskett mines, six miles north of Jasper on the Big Buffalo river. The lands are under lease to the Big Jumbo Mining Company of Chicago, Ill.

The new zinc concentrating process is said to be the invention of Earl Stumpf, inventor of the Stumpf air-flow cleaning machine, which revolutionized work in the coal fields. Dry processing of other ores has been done many years, but the system has not been used previously in north Arkansas. The water floating system has proved effective in concentrating Arkansas ores, but obtaining water throughout the year has been a problem at some mines.

John Stone, a mining and machinery expert from Chicago, is directing the installation of the machinery and the erection of the mill. Large crushers, air compressors and other machinery arrived here via the M. & A. railway 10 days ago and was removed by truck to the mine site.

**Giant Hammer to Be Used.**  
Another feature of the company's operations will be the use of a giant steel hammer, half the size of an automobile and operated by engines, which will be used to break down the ore, eliminating the necessity of using dynamite in the tunnels.

Company trucks will bring the concentrates to Harrison, and they will be shipped via M. & A.

**Price Pegging Spurs Activity.**  
Pegging of zinc spelter at 11 cents by the government is reviving zinc mining operations in north Arkansas, since most ore will be classified as new production, receiving the premium price.

## Prosperity Seen For Zinc Miners

Democrat 2-1-42

Harrison—J. C. Dirst, for several years mineral buyer for the Manda Industrial Corporation, on the M. & A. Ry., and now interested in several mines in the Rush field in partnership with N. J. Cushing of Los Angeles, Cal., while in Harrison recently, reported a great wave of prosperity coming to all zinc mines in this north Arkansas field, as the result of the government pegging the price of zinc spelter at 11 cents at East St. Louis.

Mr. Dirst said the 11-cent price is for all new zinc production, and is a full one-third above the present price. He stated that practically all of the north Arkansas output will go as new production, as the mines here have not been operating, while most of the output from the Tri-State field will remain at the old price, only the increase over the

average for the past two years being rated as new production.

The guarantee by the government that the price shall remain at the 11-cent level for the ensuing 2 1-2 years is encouraging expansion of all mining enterprises in this area with the installing of larger capacity ore mills at several of the mines.

Mr. Dirst and his partner now have some of the best mines in the Rush field in operation. These include the Silver Hollow, Lonnie Boy, White Eagle, Silver Queen, La Rue, Lucky Tiger and others in the heart of the field.

Mr. Dirst said that he and his associates will shortly install at 250-ton capacity ore concentrating mill at Rush to take care of the output from their mines. He relinquished his position as ore buyer for the Manda Corporation about eight months ago. His son, Fred Dirst, is now their ore buyer.

## Lucky Dog Mine Sold To Texas Firm

Special to the Gazette. 2-8-42

Harrison, Feb. 7.—George Shepps & Co. of Dallas, Tex., have bought the ore mill and mining equipment at the Lucky Dog mine, six miles northeast of St. Joe in Searcy county. The sale was made by J. L. Godwin, receiver for the Rock Creek Mining Co., which for a time owned the lease to the Lucky Dog and installed the mill.

Laborers and other creditors filed suit about a month ago against the Rock Creek company, and Chancellor J. M. Shinn of Harrison made an order establishing the rights of the creditors and appointing J. L. Godwin as receiver. Bert Lewallen and Fred Sanders, both of Marshall, owners of the land, also secured the cancellation of the Rock Creek company's lease on the Lucky Dog. Smith Henley of Harrison, attorney for the creditors, said the sale of the property was made to satisfy the creditors' claims.

While not definitely announced, it is believed that the Shepps company will move the mill and machinery from the Lucky Dog into the Rush field, where the company has mining interests. Other parties may operate the Lucky Dog.

**Test Runs Planned.**  
Test runs are expected to be made at the Edith mine at Rush and at the Lone Star mine at Maumee in Marion county next week. J. H. Hand of Yellville, manager of the Mine Owners League, announced here.

N. W. Palmer of Harrison is directing operations at the Lone Star mine, and the Edith Mine is operated by the American Mining Co. of Wichita, Kan. The lease of the McIntosh mine was taken over recently by C. S. Freeburne of Wichita, Kan., who also is operating the Edith mine.

Mr. Hand said that Mr. Freeburne plans to construct a mill at the McIntosh mine soon, while a group from Dallas, Tex., has acquired the Leader mine lease at Rush and is moving in machinery.

The premium price recently announced to be paid by the government on newly mined zinc is having a stimulating effect on development prospects in the Ozark district, Mr. Hand said.

## Sharp County Zinc Mine Being Opened.

Special to the Gazette. 2-8-42

Pleasant Grove, Feb. 7.—J. W. Bettles of Pleasant Grove, Stone county, has started mining operations on zinc ore in the Calamine field near Poughkeepsie, Sharp county. He has located a good run of sulphide ore in a 28-foot shaft recently sunk, which apparently will furnish enough crude ore for the operation of a mill, which he expects to build soon.

## Lucky Dog Mine Properties To Be Put in Operation.

Special to the Gazette. 2-19-42

Harrison, Feb. 18.—Arrangements are being made to install a modern mill and resume operations at the Lucky Dog mine property, northwest of Gilbert on the Tomahawk creek area, Robert Terrill, farmer of that area, said here today. The Lucky Dog mine has a good showing of zinc ore, it was said.

A short time ago lease-holders of the mine were involved in court proceedings, a receiver appointed, the lease cancelled and the mill machinery sold, and now is being moved to the Clabber Creek area in the Rush field.

## Smelter To Reduce Operations

Gazette 2-26-42

Fort Smith, Ark., Feb. 25 (AP).—The Arkansas Smelting Company at Van Buren will reduce operations and production by 25 per cent Sunday to cut fuel and labor costs, Roy Warren, manager, said tonight. About 125 of 350 men employed by the zinc smelter will be laid off.

Mr. Warren said an increased gas rate placed in effect last December 3 by the Twin City Pipe Line Company made the curtailment necessary. In the face of government price ceilings on metals, Mr. Warren said, the rate increase served to wipe out the company's margin of operational profits.

A. B. Harper, president of the Twin City Pipe Line Company, said the higher rate was ordered into effect by the state Utilities Commission.

## Mill Completed At Edith Mine.

Special to the Gazette. 3-1-42

Rush, Feb. 28.—The new mill at the Edith mine in the Rush camp has been completed and mining operations to supply the plant with crude ore are under way. The company is headed by C. S. Freeburne of Wichita, Kan. Development of the ore body on the property has been in progress for several months. The mine produces a high grade carbonate ore. The mill has a capacity of 100 tons a day.

## Mine Near St. Joe Closed For Improvements.

Special to the Gazette. 3-8-42

Harrison, March 7.—Mining and milling operations at the Campbell mine, near St. Joe, operated by the Hurricane Mining Company under the management of J. C. Shepherd, have been suspended temporarily while new and large compressors, pumps and other machinery are being installed, W. P. Campbell, owner of the land on which the mine is located, said.

When the mine resumes operations, the output and the capacity of the ore mill will be doubled, Mr. Campbell said.

Extensive drilling on the St. Joe fault with new and powerful machinery is under way by the Hurricane company, Mr. Campbell said, and much new mining operations is promised for that field, which is already a big producer.

The Lucky Dog, the zinc mine east of St. Joe, which was closed down a short time ago by court action and the ore mill sold, will shortly reopen it is said, and a new ore reducing mill will be installed.

## New System To Be Used In Zinc Mines

Special to the Gazette. 3-15-42

Harrison, March 14.—Installation of a dry concentrating system, replacing the usual hydraulic process used in the North Arkansas zinc mining areas, has been completed at the mine of the Big Jumbo Mining Company, six miles north of Jasper, and operations are expected to start next week. The company has 160 acres under lease in the Newton county area, and is interested in the development of other mines in that area.

This will mark the first dry concentrating process in the North Arkansas zinc mining areas. The new process is the invention of Earl Stumpf of Harvey, Ill., nationally-known inventor for air-flow cleaning machines and which have been used successfully in coal fields, John L. Stone, mining and machinery expert from Hazel Crest, Ill., said. Mr. Stone and Mr. Stumpf are directing installation of the machinery. Mr. Stone will remain in charge at the mine.

Equipment and machinery were set up in accordance with the amount of product that can be obtained, Mr. Stone said. "This is the first time that any real machinery has been installed in this section for mining ores, especially for mining on a large scale," he continued. The government is interested in seeing that the produc-

tion of zinc in the North Arkansas Ozarks can be increased so as to eliminate the necessity of importing zinc ores, he said.

**To Mine From Open Pit.**

Ores will be mined from the open pit and later drift tunneling will be followed, Mr. Stone said. The new process includes a large frost ball that weighs 3,000 pounds, hoisted with crane, which will be used in breaking down the ore, eliminating the necessity of using dynamite in the tunnels. The huge ball is hoisted by a crane, then dropped into the box of ore, breaking the ore up to cob, leaving a larger per cent of pure ore in the cob box. The ore then is run through a crushing plant and screened to equal size then it is taken through an air separator. The ore, handled by long conveyor belts leaving the cobbing box, produces about 30 tons an hour. This plan of recovery could be used in most any place because it does not require water, and there is no loss of fines making complete recovery of pure ore, Mr. Stone said.

The water floating system has been used altogether in the North Arkansas mining area heretofore, but obtaining water throughout the year has been a problem at most mines.

A test run has been made of the machinery before actual operation to synchronize the machinery.

**Other Improvements Planned.**  
Plans are under way for erection of a warehouse for zinc ore storage from the mines in this area. A smelter plant also will be erected. Both will be located in the center of activity, Mr. Stone said.

Mr. Stone said that between 40 and 50 men will be employed when production starts, in the mining of the ore and in the mill. Good hard-surfaced roads have been completed to the mining site, with a road crew working on a 24-hour shift. Several culverts were built and the road now is in good condition with good drainage the year round. Thirty men were employed on the road project.

## New Owners Take Over Ponca Mines

Special to the Gazette. 3-15-42

Ponca, March 14.—The Northwest Arkansas Mining Company, composed of Joplin (Mo.) men has taken over the Brewer, Kilgore and House mines and properties near here and have started active development work. S. C. Byrd, a former mine operator in the Joplin district, who has operated mines at Webb City and Duniweg, is in charge.

After they get sufficient ground opened up they will build a big concentrating plant that will handle 200 tons of crude ore daily. They are cleaning up the old drifts and tunnels in the Brewer mine, and expect to start a new shaft on the Brewer property soon, sinking to a depth of 135 feet or more. Ore on the properties consists of lead, lead carbonate, jack and zinc carbonate. Some cadmium also is reported.

This is the first large mining project ever started in the Ponca district, and if the ore bodies turn out as expected they will make a big production. The crude averages 10 per cent. All the mines they took over produced ore during the World war and before, but there has been little activity recently until the new concern took over.

Former operations never fully proved up the ore bodies. The ore all lies in fissures, some of them as wide as 35 feet. Most of the work done hitherto has been done on the upper parts of the fissures, no deep shafts having been sunk below water level. Geology of these fissures indicates that they may be very rich at greater depths.

## Zinc Mining Activity Resumed In North Arkansas.

Special to the Gazette. 3-15-42

Harrison, March 14.—Zinc mining activity in the Searcy and Newton county fields is being resumed by the Manda Industrial Corporation, L. A. Watkins, president of the company, announced. J. C. Shepherd also is operating the Bald Hill mine and mill near Cave Creek postoffice.

A new drill rig started this week on the Campbell mine property, north of St. Joe, and other drills will be put in operation along the fault line to further develop mining.

Workers along this fault line from the Campbell mine across the north part of Searcy county to Maumee expect to uncover larger deposits than any which have yet been developed.

New machinery is being installed in both the mine and mill at the Campbell mine, operated by the Hurricane Mining Co., with increased power for the pumps taking the water from the deep shafts. Increased mining and milling activity is expected from the St. Joe field, officials of the Manda corporation said.

The Bald Hill and Confederate properties again are in operation by J. C. Shepherd. The problem of supplying water to the ore milling operations has been solved and a steady stream of milled ore to the railroad shipping points at St. Joe and Harrison is expected to start soon.

## Says Miners Facing Need To Expand

Gazette 3-26-42

Washington, March 25 (AP).—Evan Just, secretary of the Tri-State Zinc and Lead Ore Producers Association, operating in Oklahoma, Kansas and Missouri, opposed the Treasury's plan to change the percentage depletion for lead and zinc mines before the House Ways and Means Committee yesterday. He reviewed the tax situation and said, "Percentage depletion was devised to bring greater simplicity and certainty for the taxpayer and the government."

He said it was well known Congress "intends, temporarily, to impose tax burdens which all of us realize cannot be borne permanently without serious consequences to our economic structure. The limiting factor today is the point where outright wreckage begins, rather than simple impairment. Within this limit the immediate and vital objective is the successful prosecution of the war effort."

**War Needs Great.**  
"The compelling need for metals in our war program is too well understood to require elaboration. Now, however, a new complication appears on our horizon. At the present enormous rate of output, the lead and zinc mining industry is depleting its known ore reserves so rapidly it cannot expect to continue more than five years without establishing new operations. In our own district this expectable life narrows to three years. To develop new operations in metal mining requires large capital expenditures and usually more than five years of preparation.

"Where is the mine operator to find the funds to carry on this essential development? In his own suit are two pockets from which he can ordinarily do so. In one pocket is his income and in the other are the capital reserves he has accumulated through depletion deductions. But is it perfectly evident that out of sheer necessity Congress must take nearly all the contents of all income pockets, our own included. The mine operator is reduced essentially to what remains in his own depletion deduction pocket. If you permit the Treasury to empty that, only Uncle Sam's pocket, the Treasury itself, is left to finance our necessary task.

**Fast Depleting Reserves.**  
"The cost of finding new metal ore reserves will be much higher in the future than it has been in the past. We warn Congress we have not been able to find new ore reserves as rapidly as we have depleted them in the past 10 years. In other words, the incentives to prospect for the metals are already inadequate to sustain an important lead and zinc mining industry in this country. We urge that you do not jeopardize our nation's future supply of these metals which are so essential both in war and peace."

## Hopes for Investigation Of Lead and Zinc Deposits

Gazette 3-26-42

Representative Mills (Dem., Ark.) expects investigations of lead and zinc deposits in Arkansas to be assured under funds proposed for the Bureau of Mines in the Interior Department appropriations bill reported to the House.

The bureau would receive \$651,265 for investigation of domestic sources of mineral supply.

Included in the minerals to be investigated next fiscal year, zinc and lead "occur in various parts of Arkansas."

"It is our hope that investigations will be conducted in our state and that they will disclose additional

minerals that can be utilized in the war effort," Mills said. "We have discussed the matter with Dr. R. R. Sayers, director of the bureau, and believe he is very friendly to our suggestion that these surveys be conducted in Arkansas."

## MINING OF ZINC IN NORTH ARKANSAS TO SHOW BIG INCREASE

Special to the Gazette. 4-6-42

St. Joe, April 4.—The announcement made recently by the R. F. C. that it would loan up to \$20,000 to small mine operators who are mining ores essential to national defense will give the north Arkansas zinc and lead field new capital with which to put new mines in operation, and to better equip the mines now in operation.

The greatest handicap the field has had since the second World war started has been lack of capital. Operators of many good properties have had to discontinue work because of lack of finance.

The north Arkansas zinc and lead field, is the only undeveloped field of its kind left in the United States. During the World war it produced millions of pounds of zinc and a large quantity of lead. Prices for these ores were much higher then than they are now, and the producers, once they got started, were able to finance themselves with output.

**Only Undeveloped Field in U. S.**

Not only is the north Arkansas zinc and lead field the only undeveloped field in the United States, but its ore-bearing formations cover a larger area than any other field. The counties where ore is present in commercial quantities are Boone, Marion, Baxter, Searcy, Newton, Lawrence and Sharp.

The first commercial zinc ore mined in north Arkansas was mined in Sharp county in 1857, and one of the first charcoal smelters ever erected in the United States was built and operated at Calamine, in Sharp county, in that year.

The second zinc smelter built in north Arkansas was at Rush, in Marion county, now one of the leading zinc mining camps in the field. This old smelter, built from stone, still is standing.

**Three Varieties Produced.**

The north Arkansas field produces three varieties of zinc ore—sulphide, or jack, which is the primary ore; and carbonates and silicates, secondary ores. The carbonates are a combination of zinc and limestone and the silicates a combination of zinc and silica. The sulphides run on an average of 60 per cent metallic zinc, and the carbonates and silicates, 40 per cent.

Most of the zinc ore mined to date in the field has been carbonates, and most of the mines from which this variety of ore has been produced are tunnel mines. Silicates have shown the second largest production, and are mined mostly by the same methods.

The reason these secondary ores have led over sulphide is because they can be mined cheaper. Many of these deposits lie on the upper parts of the mineralized faults and can be mined without having water to contend with. Most of the sulphide ore, or jack, lies below water level, and has to be mined from deep shafts.

Zinc metal derived from the carbonate ores makes the finest grade of metal that can be produced. During the first World war carbonate ores from the north Arkansas field were in strong demand for this reason.

**Facilities Improved.**

During the first World war mining conditions and transportation facilities in the field were bad. Other fields at that time had better conditions, and when the price of ore dropped most of the mining operations stopped.

At that time there were nothing but mountain trails leading from the mining camps to the shipping points which made transportation charges high. Because of this it was difficult and expensive to get equipment and supplies into the field. There was no electric power except that produced with Delcos, etc.

Today these conditions are changed. Good hard surfaced roads lead to every camp, and most every section has power. Trucks are used instead of mule teams.

The principal ore producing centers today in the north Arkansas field are St. Joe, Rush, Harrison, Ponca, Jasper, Pindall, Yellville and Zinc. There are many other sections, however, that probably will come into production in a few months.



Besides the financial help the R. F. C. loans will give the north Arkansas zinc field, the Batesville-Cushman manganese field probably will be assisted greatly in opening new mines and putting better equipment in the older ones.

## Make Lead Strike In Marion County.

Special to the Gazette. 4-6-42  
Flippin, April 4.—W. N. Christian, John Ballard and Albert and Walter Reed of Flippin reported they have made a good strike of lead on a lease on Fred Morton's land, about 20 miles north of here on Music creek. Most of the lead encountered comes in free form ready for shipment, they said, asserting that from three square yards of excavation they recovered 500 pounds of free ore.

## To Develop Arkansas Zinc Mines

Gazette 4-24-42  
Production of zinc and lead ore from the rich northeast Arkansas zinc field in Lawrence and Sharp counties will be started within the next 90 days, Charles Hayden Gunter, Lawrence county mining engineer, said yesterday on his return from Washington.

Mr. Gunter went to Washington in an effort to obtain government financing for development of the deposit, but through the efforts of Garrett Whiteside, secretary to Senator Caraway, obtained what Mr. Whiteside said was "a pocket-full" of propositions from private capital.

These private enterprises will begin installing machinery and equipment immediately, Mr. Gunter said, and production should be under way in the Casper and Harris mines in Lawrence county within 90 days.

Mr. Gunter said the ore will be shipped to smelters at East St. Louis, Ill., and Van Buren to be processed. It is hoped eventually to establish a smelter in Lawrence county when production becomes large enough to justify one, he said. The large zinc deposit in the field is said to be the best in the United States. The ore is approximately 63 per cent zinc. Leases on most of the deposits are held by outside companies.

## New Zinc Mill Will Be Built On Gloria Mine.

Special to the Gazette. 5-17-42  
Zinc, May 16.—The first modern mill in the zinc camp to be built since the World war will be started in a few days by the Moark Mining Company, at the Gloria mine. The title to the land is owned by heirs of W. H. Almy, who operated the mine successfully during the World war. The company is made up of Ray Anderson of Green Forest, Ernest Simpson, Sterlin Hurley and H. E. Rhu of Berryville and C. T. Rabenau. The latter is in charge of operations. Some good faces of ore have been opened up on the property since operations started several weeks ago and plenty of crude is in sight to keep the new plant operating when it is installed.

## New Interest Shown in Marion County Zinc Fields.

Special to the Gazette. 5-17-42  
Yellville, May 16.—During the last two weeks interest in zinc mining in Marion county has increased appreciably and several new concerns are entering the county. Every effort is being made by citizens here to encourage the mining of zinc for the all-out war effort.

Ambrose Estes, formerly of Yellville, who has been living at Houston, Tex., for several years, and who was active in the zinc mining industry here during the World war, has returned, and is working out plans to increase ore production. Approximately 95 per cent of the best mining land in the county is owned by non-residents. There has been little active mining work done on any of it. During the past few weeks Mr. Estes has written to all of the non-resident owners about operation plans, and has received more than 100 letters from them. Most of them have indicated their willingness to start work if some definite plan can be worked out. This effort probably will result in much new mining during the next few months.

Albert and Walter Reed, John Ballard and Scott Rorie of Flippin,

who have been working a lead prospect north of here have struck some rich disseminated ore during the past few days. The ore runs in little blanket veins between small layers of flint. If the main vein holds, it will be one of the best found in this section.

## Zinc Mine Mill at Rush to Be Operating in Two Weeks.

Special to the Gazette. 6-7-42  
Rush, June 6.—The 100-ton mill under construction at the Leader Hollow zinc mine here for several months, will be ready to operate in two weeks. The property is owned by Shepps & Co. Pat McCormack, foreman, said that the company has opened enough ore in the ground to keep the mill supplied with crude for six months. The crude will run around 10 per cent and the mill should make a good daily production after it gets started.

## Offices Opened by Zinc Mining Firm at Batesville.

Special to the Gazette. 6-10-42  
Batesville, June 9.—Offices were opened yesterday in the former North Arkansas Bank building by the American Zinc Company of Arkansas, a subsidiary of the American Zinc, Lead and Smelting Company of St. Louis, Mo. Robert Ammon, chief metallurgist of the parent company in St. Louis, will be manager.

The company will operate mines and a treatment plant for the Metals Reserve Company, a government-owned organization, in the production of manganese ores in this district. Preliminary work has been conducted by Charles R. L. Oder, chief geologist for the American Zinc, Lead and Smelting Company.

Mr. Oder said the company would begin buying manganese in about two weeks for use when the processing plant is put into operation.

## Activities at Zinc Mines Increasing.

Special to the Gazette. 6-14-42  
Yellville, June 13.—Interest in zinc mining in the north Arkansas field continues to increase and new prospectors and operators are coming in daily.

The Edith mine at Rush, operated by the Maricon Mining Company, has struck some fine ore and the 100-ton plant is operating steadily. Ore is high grade carbonate of zinc and the concentrates run 40 per cent metallic content. Ore is sold to the Manda Corporation at Harrison.

Drilling is in progress by a Picher, Okla., company on the Batey mine, on Jimmys creek, north of Yellville. It is reported drillers have struck some good runs of high grade sulphide.

Guy Moore of Jasper, Newton county, is producing a good tonnage of free carbonate ore from the Blue Bluff mine. It is sold to the Manda Corporation at Harrison.

## Rich Vein of Zinc Sulphide Ore Found Near Zinc.

Special to the Gazette. 6-28-42  
Harrison, June 27.—A rich vein of zinc sulphide ore has been uncovered at the Jack Pot mine, near Zinc, and specimens of the find were exhibited at Harrison yesterday by C. T. Rabenau, operator.

Tunnel or drift mining is followed at the Jack Pot mine, and the vein was uncovered about 50 feet in the hill, Mr. Rabenau said. Extensive operations will be started immediately, and as soon as priorities can be secured, the operators plan erection of an ore mill.

The Jack Pot mine is a part of the Almy properties which also includes the Gloria and Red Mill. The properties recently were leased by Sterling Hurley of Harrison, Ray Anderson and C. T. Rabenau of Green Forest, Harry E. Rule and Ernest Simpson of Berryville.

## Zinc and Lead Mining On Increase

Special to the Gazette.  
Black Rock, July 18.—Zinc and lead mining operations in the Lawrence and Sharp county areas are increasing, and there is a possibility that the Clear Spring settlement near here may develop into a large lead producing section.

Nearly every well that has been dug in this area recently has shown lead. Ed. J. Korn and associates who have a lease on the Gibson land in that area are sinking shaft on one drill hole that showed a vein nine feet thick. The shaft is down 34 feet, and some lead has been encountered. The vein starts at the 51-foot level. Other drill holes on the property also have shown lead. If this shaft proves up successfully, there is little doubt but that heavy operations will be started in the settlement soon.

Crusher Plant Busy.  
W. E. Verkler, who operates the Lawrence county limestone property near Black Rock, is running the plant two shifts. He is producing ground limestone to sweeten the soil on that part of the airport near Walnut Ridge, which is being sodded. He recently constructed a new office and put in a new set of scales. Mr. Verkler contemplates installing a jaw crusher and screens.

This plant soon will be crushing zinc ore. Mr. Verkler has made an agreement with L. B. McCutchen of Memphis to crush the crude ore which he will mine from the Poe property near Eaton. Mr. Verkler will do the crushing and Mr. McCutchen will install hand jigs for concentrating and cleaning.

C. H. Gunter of Smithville, who

## Drill Test Reports Will Be Available

Gazette 7-26-42

Information on the prospective drilling of the United States Bureau of Mines will be available to bona fide operating companies who are prepared to mine newly discovered ore bodies, J. R. Thoenen, district engineer for the bureau, announced yesterday.

Township plats showing drilling progress will be placed in the office of the bureau, 603 Union Life building, tomorrow. The plats will show the location of the holes drilled, and whether the holes contained bauxite.

Information concerning the amount and grade of ore discovered will be considered confidential and will be given only to the land owner by the bureau. The ownership of the land will not be made public by the bureau, Mr. Thoenen said.

A warning was issued to land owners against signing long-term leases with "fly-by-night" operators, who obtain leases to hold for speculative purposes. It was explained that the ore can be of no benefit to the land owner or the war effort unless it is extracted.

has a lease on the Casper mine near Eaton, Lawrence county, has cleaned out one of the old tunnels which is about 200 feet long and opened up a good face of jack. Zinc shows all the way from the heading to the face. The face carries a vein of practically solid jack running from 10 to 16 inches thick. The ore is very high grade running around 63 per cent metallic content. The vein proper carries about 70 per cent ore in volume. Mr. Gunter expects to be producing in two weeks.

## State Has Chance For Test Plant

July 31, 1942

Arkansas mining men believe there is some chance the state may get the \$350,000 Bureau of Mines pilot plant and laboratory for scale tests of a new process for producing zinc. Interior Secretary Ickes announced plans for the plant Wednesday.

The new process employs natural gas in a direct reduction of zinc ore into the metal. It has proved successful in the laboratory and the proposed plant will provide first commercial tests. The plant will be located somewhere in the "south-central section of the country," a Washington dispatch said.

Arkansas's stores of natural gas will be an argument for location of the plant in the state. The carbonate type of zinc ore, the principal variety found in the state, may not be suitable for the tests, metallurgists said.

Sulfide, or "jack," zinc ore is believed to be the most suitable type for the direct gas process because the sulphur vapors given off in the process would burn and thereby help the smelting. There are some deposits of sulfide zinc ore in the state. The smelting process now in use is of the blast furnace type, used in reduction of iron ore.

## Four Zinc Mines to Be Opened Near Harrison Soon.

Special to the Gazette.  
Harrison, Aug. 4.—Four of the J. C. Shepherd mines soon will be in full operation, Mr. Shepherd said today. New pumps have been installed at the Excelsior mine north of St. Joe.

The new pump equipment with a capacity of 1,200 gallons a minute, is being used to keep the 300 feet of working space free of water.

The Ball Hill mine and the mill in Newton county, near Cave Creek and the Confederate, both Shepherd mines, are being operated, and it is expected that the Big Hurricane will be in production soon. Mr. Shepherd believes that there will be great activity in the north Arkansas zinc field soon.

## Old Sharp County Zinc Mine Back in Operation.

Special to the Gazette. 8-27-42

Calamine, Aug. 26.—The old Calamine zinc district in Sharp county, one of the first to be opened in the United States, is humming with activity again. Ben H. Bryant and Jack Manning have started work on the Fugat Hollow mine near Calamine, and are developing a fine body of jack (zinc sulphide) ore. They have 480 acres under lease and have opened some rich ore pits. They expect to start a tunnel in the mountain soon, and open some big faces. They are doing their hard work with one compressor and air drills. After they get sufficient faces opened they plan to build a 150-ton concentrating plant at Calamine to process the ore from their own mine, and to mill ore from other mines on a custom basis. Zinc ore was smelted by the charcoal process at Calamine in 1857. The foundation of the old smelter still exists.

## Zinc Production May Be Increased Soon.

Special to the Gazette.  
Harrison, Aug. 15.—Production of zinc ore in the north Arkansas field has not picked up much during the past 30 days. Some operators have made application for government loans to open up their properties and buy equipment. If these materialize operation next fall probably will show a healthy gain.

Ed Mays of Leslie has been cleaning up the Evening Star mine, between Harriet and the Buffalo river ferry on State Highway 14. He probably will get it into operation in few weeks. It was mined during the World war and made a good production. The old working tunnel is 300 feet in the mountain, and carries a four-foot face of carbonate ore. He also has found good outcrops on other parts of the property.

Pat Watkins of Harrison, who buys zinc and lead ores for the Manda Corporation, reported purchases of two cars of ore during July, one from the Bald Hill, operated by the Hurricane Mining Company, and the other from the Edith and other mines on Rush creek, in Marion county. Mr. Watkins reported also purchases from J. B. Butler, operating a zinc mine near Eaton, in Lawrence county.

The Moark Mining Company, operating the Gloria and other mines at Zinc, in Boone county, have completed a small mill and shipped its first car of ore this week. The plant handles approximately 25 tons of crude ore a day. It recently opened up a rich vein of silicate in a tunnel back of the mill, which produces from four to six tons of concentrates a day running over 40 per cent metallic zinc.

## Mill for Zinc Concentrating Completed

Special to the Gazette.

Smithville, Aug. 20.—The Victory Mining Company, owned by Leo F. Willenborg and associates of Batesville, has completed a zinc concentrating mill on its property near Eaton, in Lawrence county. The plant has a capacity of 75 tons a day, and was placed in operation this week. It is located on Cypress creek, which affords a good supply of water. J. B. Butler, a pioneer operator in the Lawrence-Sharp county field, is in charge of operations.

The mining operations are carried on in shaft and strip pits. The ore is galena and jack. Besides milling its own ore, the company will operate the mill as a custom mill, which will be a big help to other operators who have no milling facilities.

T. M. Romslo, with the Bureau of Mines, stationed at Little Rock, has been in the field several days examining the operating mines and old prospects, to determine the extent of the ore bodies and their possible production.

## More Good Ore Found.

The Gibson lead mine in the Clear Springs settlement, near Black Rock, Lawrence county, is making some good showings. During the past month, the shaft has been driven from 34 feet to 40 feet and some good ore has been encountered. The drill hole on which the shaft was sunk showed eight feet of lead starting at 51 feet, with good disseminated lead ore continuing to 68 feet.

C. H. Gunter of Smithville, who owns a part of the old Graceland mine tract, has 400 tons of crude stacked up at the mine, which he probably will haul to the Victory mill. He also has a lease on the Casper property containing 380 acres. This was one of the first zinc mines opened in Arkansas. He has a report on the property made by Purdue, more than a half century ago. The vein in the old tunnel which he has cleaned out runs from 12 to 18 inches thick. He expects to start active operations on the property soon. Several other good prospects also are located on the property, one of which is a promising vein of carbonate.



## Mill Installed As Zinc Field Is Extended

Democrat 10-23-42  
Jasper—A new zinc concentrating mill and ore plant has been completed and put in operation at Jasper, and is another of the modern and permanent improvements being made in this zinc mining area, marked by the discarding of old mills and machinery.

The company is the Newton County Mining Company, headed by Chas. H. Herman, Chicago, with some local parties also interested. The plant is in charge of Peter Wells of

Jasper. The buildings were constructed of lumber cut by the company's own sawmill from timber on its lands.

The new mill will take care of ore from the company's three mines including the Keys Cap, Spanish Lamar and Brisco. The company has 2,000 acres of mineral lands and will bring its own drill rigs in for further drilling.

Mining activity is marked over this area. This week a carload of milled carbonate ore was shipped to a Ft. Smith smelter from the McIntosh mine at Rush, shipment being made from Yellville. A large force is at work at the Campbell mine at St. Joe, carloads of milled ore going out regularly over the M. & A. railroad.

Under the direction of the Little Rock office of the U. S. Bureau of Mines, an extensive drilling program has been started in the Rush field.

## From the People

(Make your letter as short as possible. If it is more than 500 words, it will be cut or returned. Your name does not have to be published, but don't send an anonymous letter or sign a fictitious name.)

12-8-42—Gazette  
Headline in the Gazette Said To Be Erroneous and Damaging.

To the Editor of the Gazette:

I am writing to call your attention to a headline in the publishing of which it seems to me you have done an injustice to a part of your own state of Arkansas which is not only an important part of the mineral possibilities of Arkansas, but is of great importance to the war effort of our country.

I refer to headline on Page 8 of your issues of December 4 as follows: "No Zinc Ore Found in Rush Area."

That is a very damaging headline to this extensive zinc district, because of the fact that many, many people will not take the time to read the entire article, which is not one-tenth as damaging as is indicated by your headline. It merely states that no zinc ore was found in the few holes drilled by the Bureau of Mines at the locations where they drilled and they themselves say in the article that this does not indicate there is no ore there elsewhere. So far as the drilling that was done is concerned, no one with any knowledge of the district expected them to find any ore at the locations where they drilled and all who have any knowledge of the district agree with Dr. John C. Branner who said approximately "the zinc ore reserves of the North Arkansas zinc district are so great as to be unknown."

Your newspaper is one of the best in the country, and your first obligation is to publish the news, regardless of whom it may hurt, but you also owe allegiance to your own state's people and it is no doubt your policy to foster development of the resources of Arkansas as much as possible; therefore, when a news item of this type comes to your editors, it seems to me they should look twice before leaping, and not unintentionally destroy the efforts of those who are trying to get development work done in any part of the state, if it is a worthy development.

With best wishes for your continued success, I am  
Harrison, Ark. C. S. Woods.

## CAPITOL Lead, Zinc Mines Said To Need U. S. Aid

Gazette 4-20-43

Financial aid from the Metals Reserve Corporation would be of much value in developing small zinc and lead mining operations in

Northern Arkansas during the war, State Geologist Joe W. Kimzey said yesterday.

Independent operators are finding it difficult to raise funds to purchase equipment and establishment of one or more stock piles by the MRC would give them sufficient funds to go ahead, Mr. Kimzey said. Stock piles could be established conveniently at St. Joe, Yellville and Harrison, he said.

The stock pile would permit the "little miners" to obtain ready cash for purchase of additional equipment, Mr. Kimzey said, as they wouldn't have to wait until they accumulated car load lots for shipment.

**Money, Equipment Needed.**  
Financing and equipment are the chief difficulties facing the state's new crew of "pick and shovel" miners, the state geologist declared. He said it is hard to find equipment after they get the necessary money. Transportation problems can be overcome, he said.

A new processing mill will be completed within the next two weeks in the Rush district, Marion county, Mr. Kimzey said, to handle ore from four old mines. Another has been constructed at Jasper, Newton county. The geologist reported increased mining activity in nearly all active fields of Newton, Marion, Boone and Searcy counties.

Harrison Daily Times  
4-20-43

## Lead and Zinc Mines Said To Need U. S. Aid

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Harrison Daily Times  
4-20-43

## RFC Loan To Lo Roy Mine

Roy F. Wernecke, partner-manager of the Lo Roy Mining Company has received notice that the RFC has granted his company a loan to further develop by the churn drilling method the mining property, near Jasper. Mr. Wernecke goes to Little Rock Thursday to confer with Wm. A. Riggs to complete all the details. Mr. Riggs was in charge of the RFC mining loans in this area before that

function was transferred to the Joplin office.

Mr. Wernecke has been a pioneer in the present drive to develop this mining field, having come here about 18 months ago and actively engaged in the work. He has sold considerable ore having gotten out some high grade zinc sulphide. He is enthusiastic concerning the future of the north Arkansas field and sees the necessity of developing the mines here to supply the great demand for the metal by the government.

Miles Brabazon of Chicago, Ill. whose interests have been in the gold producing Rocky Mountain area until the war caused a great demand for zinc, has been visiting here with Mr. Wernecke. Mr. Brabazon has been in this area several times during the past year and has the highest regard for the Newton county field, he states. He is of the opinion that this area should be exploited as soon as possible and that a great amount of high grade ore will be found.

The Lo Roy mine near Jasper has produced some of the richest ore to go from this field.

Texans Buy Tract and Start Mining Zinc.  
5-18-43

Special to the Gazette.  
Yellville, May 17.—The Hall Mountain Mining Company comprised of a group of Texas men, has bought 1,220 acres of zinc land on Hall Mountain, in Marion county and have started operations.

Owners include J. C. Jones, W. T. Hall, Fred R. Schmidt, and Milton Harbor. Several mines that were World War I producers are located on the property, among them the Truex and Willett mines. The new owners have build a new road to their properties and have started development. They have also bought mill and other mining equipment.

## Zinc Mining Shows Gains Past Month

Gazette 5-23-43

Special to the Gazette.  
Yellville, May 22.—Zinc mining in the North Arkansas field has shown some gains during the last 20 days, and from present indications, gains will continue. Three mills now are in operation.

The terrific rains the first of the week practically closed down all mining operations in the field, but they will start in a few days.

The Silver Hollow Mining Company, which has been conducting development operations eight months, is now in production. It operates the Silver Hollow and Silver Queen properties in the Rush Creek District in Marion county. Its present operations are at the Silver Hollow. This is one of the few mines in the Rush district producing jack. The biggest strike in the mine was made last week when drillers shot into a vein of ore that carried 40 per cent jack. This is one of the richest veins ever encountered in the district. Operations are directed by W. J. Cushing and John Dirst of Yellville. Art Goatley is mill superintendent.

**Music Creek Development.**  
Reed Brothers of Flippin still are doing development work on their lease on the Fred Morton land, 20 miles northwest of Flippin, on Music creek. They recently found a deposit of disintegrated carbonate ore in dust form that runs high in zinc content for which they probably will find a market. They also have encountered some good runs of carbonate.

The Excelsior mine, operated by the Excelsior Mining Company of Harrison, is in production again, producing high grade jack. It has encountered and is now testing out some new faces of ore. Doyle Palmer is in charge. He expects to ship a car of ore in May.

The Hurricane Mining Company, J. C. Shepherd in charge, is sinking its third shaft in the St. Joe fault at the Hurricane mine. He sank two others to a depth of 70 feet, 150 feet apart, struck good carbonate ore, and ran cross drifts across the fault. The third shaft is now down to a depth of 40 feet, but has not yet reached the ore horizon.

## Boone County Operations.

The Moark Mining Company, operating the Almy, Jackpot and other properties at Zinc, in Boone county, has its mill in operation and will ship a car of silicate of zinc this month. It has completed a trestle from across the narrow valley to the mill, over which it will move mill ore to their plant. As soon as flood damage is cleared up, the company will start a new prospect tunnel at the Jackpot. It recently installed a new compressor, concentrating table and drift drill. C. T. Rabineau of Zinc is in charge.

James Rogers, operating the Coon Hollow tract at Zinc, is driving a new tunnel into ground that lies behind a series of tunnels that made a big production during the World war. He has checked all of the ore-bearing ground these tunnels were driven in, and they show an average of 15.30 per cent zinc. He also has tested zinc bearing clays that run from 20 to 30 per cent and has driven into some ore through the roofs of the old tunnels.

## Little Damage To Zinc Mines By Floods

Gazette 6-13-43

Special to the Gazette.  
Yellville, June 12.—Although many mines in the north Arkansas zinc field were flooded in May, no serious damage resulted. Most of them have been pumped out and are in operation again. The situation in the field is better than it has been since the war started. Some production is being made, and new mining men are entering the field.

Buffalo river, which rose as high as it did in 1927, flooded the Silver Hollow mine, but it has been pumped out, and the machinery is dried and back in operation. John Dirst and W. J. Cushing of Yellville are in charge of operations. The Rush Creek Mining Company, operating the Lonnie Boy, White Eagle and LaRuh, will resume work soon. By late summer the Rush Creek district, which was the largest producer of zinc ore in the field during the World war, will be in good production. Most of the ore produced in the district during that period was carbonate. The major portion of the production this year will be high grade jack.

**More Drilling Expected.**  
Dr. S. A. Tréngove of Rolla, Mo., with the Missouri state Geological Survey, is assisting the Bureau of Mines, out of the Little Rock office, as consulting engineer. He and Louis Brichta spent last week inspecting mines and prospects in several areas of the north Arkansas field. It is possible that more drilling will be done in that section.

At the Hurricane Mining Company, operating the Hurricane mine near Pindall, one prospect shaft was damaged by flood waters. Operations are in the charge of J. C. Shepherd. A large tonnage of ore has been proved up on the property during the past few months with shafts and cross-cut drifts.

The Excelsior Mining Company, operating the Excelsior mine near St. Joe, had to stop operations for a short period because of flood waters. The mine has been pumped out and is in operation again. They produce a high grade jack. Doyle Palmer is in charge.

**Gets Government Loan.**  
LoRoy Wernecke of Harrison, operating the Jumbo mine on Buffalo river, between Harrison and Jasper, has obtained a \$5,000 government loan for prospect drilling purposes. He will start this work as soon as he can locate a churn driller. During the past few weeks he produced 16 tons of high grade jack, concentrating it on hand jigs.

James Rogers of Harrison, operating the Coon Hollow mine in the zinc district of Boone county, has his investigation work on the ore deposits on the property nearly completed and is planning a mill.

Reed Bros. of Flippin, doing developing work on a lease on the John Morton land, north of Flippin, have encountered another new type of ore. It is copper pyrites imbedded in lime spar. The spar is almost as clear as glass and the ore scattered through it resembles flecks of gold. The quantity has not been determined.

Arkansas Gazette  
7-11-43

## Tells of Finding Zinc and Lead in Logan County.

To the Editor of the Gazette:  
If you think this item is worth anything for defense you may publish it. In 1915 I was hunting gold in Logan county, Arkansas, but found most everything but gold. I found an outcropping of zinc, rich free rosin Jack ore, a pick and shovel layout to begin with. Booneville nearest town, four miles to shipping point. This was a zinc and lead formation that would cover a township or more. At that time the lead and zinc mines were shut down, and as I was after gold I passed it up. Now I'm too old to mine. For anyone or parties wanting a zinc or lead mine, it will pay to investigate.

A. M. Sinor.  
Star Route, Wooster, Ark.

Arkansas Gazette  
10-9-43

## State Geologist Surveys Boone County Zinc Possibilities.

Special to the Gazette.  
Harrison, Oct. 8.—J. C. Roehm, associate geologist of the Arkansas Geological Survey, is making a special study and investigation of the possibilities of zinc ore production in the Rush Creek, Marshall, St. Joe, Harrison and Jasper areas.

Mr. Roehm's work in the North Arkansas mineral field possibly will be directed toward working out two, three or four central points around which other properties could be made to serve contiguous producing properties.

Arkansas Democrat  
10-10-43

## Bureau of Mines Will Prospect Zinc Ores

Yellville—J. R. Thoenin, Little Rock, district engineer of the U. S. Bureau of Mines, has been making a trip through zinc fields. He states that drilling in the zinc districts of Boone, Marion and Searcy counties will be started this month with a view of ascertaining the extent of certain known bodies of ore.

This drilling, he said, will be different in its purpose from that done in Marion County by the Bureau of Mines several months ago. Then drilling was for the purpose of locating deep ore bodies, with no regard to the known bodies of ore at shallower levels.

In each of three reports Mr. Thoenin has made to the Bureau of Mines, he has recommended the establishment of stock piles in the North Arkansas district, which would give the smaller operators a market at all times for whatever quantity of ore they wish to dispose of. This would enable them to continue operations steadily.



# Production

## Of Zinc Ore

### Shows Gain

Gazette 11-14-43

Special to the Gazette.

Yellville, Nov. 13.—Zinc ore shipments from the North Arkansas field will show a slight gain over September and October. Government loans to mine operators appear improbable, but there is a slight possibility that one or two such loans may be made.

The Silver Hollow Mining Company, operating the Silver Hollow and Silver Queen mines in the Rush Creek district shipped a car of zinc sulphide concentrates this week, and probably will make another car before the month expires. Alvin Wight, who is connected with the company, is directing operations.

Production at the mine is showing a good increase which is attributed to a better labor situation and reconditioning of equipment, both in the mine and mill. Operators expect to keep the mill rolling four days a week instead of two. Their recovery from the crude is running about nine per cent, very high grade sulphide concentrates.

#### Exploratory Operations at Truex.

The Hall Mountain Mining Company, J. C. Jones of Yellville in charge of operations, will ship a car of high grade zinc carbonate this month. The company is operating the Truex and other properties on Hall mountain. The ore was mined from the Truex, on which miners are conducting exploratory operations. They are getting very good results, and expect to develop several good mines.

The Moark Mining Company, operating the Almy, Jackpot and other properties in the zinc district in Boone county, are in operation, and probably will turn out a car of silicate concentrates by the end of the month.

#### Bureau of Mines Active in Field.

The Bureau of Mines is active again in exploratory work in the field. A drilling program has been started and operators are sinking holes on the Hurricane mine in Searcy county. Some carbonate has been encountered. Operations are in charge of R. B. McElwaine, whose headquarters are at Harrison. Other sites where they will drill are at the Speer and Coon Hollow mines. T. M. Romslo inspected drilling operations this week. Felix A. Vogel, also with the Bureau of Mines, is in the field inspecting a big pyrite deposit near Berryville, in Carroll county, and other iron deposits in the field that might be utilized in a postwar program.