OUTPUT OF LEAD
AND ZINC GROWS

After Years of Effort the
Miners of Arkansas Have
at Last Built Up
an Industry.

PIONEERS NEVER LOST
THEIR FAITH IN FIELD.

Hampered at First by Bad
Wagon Roads and Lack of
Railroad Facilities.

(Yellville, Ark., March 25.—After
two years of persistent effort and
hard work the miners in the lead and
zinc field of Northwestern Arkansas
have built up an industry that gives
promise of wealth and additional
to that part of the state. Lack of capital and railroad trans-
portation, wagon roads that were
almost primitive and the ridicule
of other states had held back develop-
ment, but the pioneers never lost
faith in their belief that the Ozark
region is rich in mineral resources.

With new railroads, automobiles and
better roads, outside capital is gradu-
ally being attracted and much of the
work that was done against the state is
passing away.

According to J. H. Head, Special
Agent of the Arkansas Bureau of
Mines, the production of ore during
1917 was greater than that of any
other year. In his report the ship-
ments and production are summa-
rized as follows:

|      | Quantity | Value
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>12,750</td>
<td>$13,375</td>
</tr>
<tr>
<td>Zinc</td>
<td>1,200</td>
<td>$2,400</td>
</tr>
<tr>
<td>Total</td>
<td>13,950</td>
<td>$15,775</td>
</tr>
</tbody>
</table>

The total production for 1917 was
65,972 tons, an increase of 6,260 tons.

Mining Methods Different.

Mining methods in Arkansas are
different than those followed in other
zinc and lead districts. Most of
the mines are simply tunnels driven
into the hillsides. Instead of the usual
shafts running down into the depths.
Many small mines, run by two or
three men who own the land, have
given out enough ore to the workers
to form a livelihood.

Hand labor is still the rule.

Strata are found exposed at the
surface on the mountain sides, where,
by reason of the nature of the rose
petal which casts thousands of
shells in other fields—that of
exposing the ore bodies. In many
instances only dirt and sometimes
highly mineralized ground is to
market. In the form it is taken from
the ground, ore is found every
near the surface. Tunnels are
driven in, following the levels of the
strata thus exposed on the hillsides,
and ore and waste are removed from
the mines on tram cars, requiring
little power, while expenses for
pumping and hoisting are unneces-
sary. In some instances the hills
have been penetrated to an extent of
100 to 1,500 feet.

"Were it not for the material
advantages afforded in favor of low
cost of production, the Arkansas mining
industry could not have advanced
as rapidly as it has," Mr. Head
asserted. "The ore has been met
without much loss in any other
mining field. However, as the mining
industry grows, chances which the
pioneers had to contend with are
being overcome. All mining vent-
ures here have not been successes. In
some cases failure was due to the
quality of the ground. But in the
majority of failures incompetent
management or stock jobbing designs
may be easily identified as the cause.

In 1917, the bulk of tennant has realized liberal profits on
mineral sales, and last year's prices,
which forced many mines to suspend
in the Joplin district during the past
year.

Average Cost of Production.

"Average cost of production of
mined zinc carbonate ore," he
asserted, "as given at $1.35 to $1.54
per ton, has been both in the field
railroad. Production in 1917 was
around $30 to $35 per ton, mineral
concentrates, free or hemp ore ready
to be shipped in the form that it
was mined, without milling, has
been delivered over twelve-mile
wagons at 2,800 tons per day.

Average volume of recovery of marketable ore from the
mine run dirt and its grade or
certainly from the true test of metals on the
basis of recoveries realized from
1917, by the United States Geological
Survey, giving statistics on the zinc
mining industry in each of the
mining districts throughout the coun-
try, discloses vital facts on these
points. In compiling these figures
as they refer to the Joplin and
Arkansas fields, based on aver-
ages for the year 1916 and 1917 on
percentage of ore recovery from
ore mined during the year,
the finding that the Arkansas zinc mines
yield an average mill recovery of
practically double that of mines
named of the other districts named,
as shown by the following figures.

Average per cent of concentrates
recovered from crude or ore run
milled:

<table>
<thead>
<tr>
<th>District</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joplin</td>
<td>55.8</td>
</tr>
<tr>
<td>Arkansas</td>
<td>111.6</td>
</tr>
<tr>
<td>National average</td>
<td>55.8</td>
</tr>
</tbody>
</table>

An Arkansas mining man,
however, he says, "the large volume
from these districts, the diminu-
tion of the Arkansas field over
the last half of the years,
"Operations of milling," he
declares, "are by driving drifts or
tunnels into the mountain. The ore
MINING EXPERTS APPROVE
THE ARKANSAS MINING FIELD

(By J. H. Hand, Special Agent, Ark-
ansas Bureau of Mines.)

During recent months the zinc and lead resources of the Arkansas field have come under favorable notice of a number of chemists and geologists from other states, who have made quite extensive investigations here. This has led to the development of mining camps, connected with the zinc mining district, as well as for independent mining operations, with the hope of bringing about increased interest toward the mining business. It is the consensus of opinion as expressed by these experts, after having carefully gone into the local situation, that the Arkansas district is destined to become the leading center of zinc production in the southwest within the next few years. Outstanding development affording the greatest promise of profit has taken place within the past two years, lend support to that conclusion.

Recovering from the slump after the war which put all mines out of production, the output of zinc products mounted to the highest point in the history of the zinc industry. Average monthly consumption of zinc, otherwise known as spelter, has not been exceeded since that time for that year. Those figures are exceeded by the production of the year 1923, the first half of which was restricted by the destruction of 104,000 tons or a base of 1,250,000 tons of zinc this year, while it is expected that the last half of the year will show a gain in consumption to about $2,000,000, as was the case in 1923. During 1925, the price of zinc ore advanced steadily, being the highest in the history of the zinc field and other establishments that have equipment and production facilities.

It is an undisputed fact, frankly admitted by some of the best author- ities, that the Arkansas field is one of the greatest sources of zinc and that its ore deposits are of the highest grade and have been extensively developed, making it the most productive zinc field in the world. Although zinc production has not been greatly increased in the past years, the demand for zinc has increased, making it one of the most valuable minerals in the world.

The steady growth in consumption of zinc which is finding its way into almost every article of our daily life has come about largely from the use of chemicals, together with the depletion of ore supply in other parts of the country, as well as the increased demand for the metal. Although zinc has been the subject of much interest in recent years, the industry has been operated under a reduced scale of some 50 percent.

The report of the American Zinc Institute, a group of mining companies, given that more than 50 percent of the world's zinc supply is contained in the United States, and that the United States is the largest producer of zinc in the world, is a significant article in this regard. The report states that the industry has made great progress in recent years, with the production of zinc increasing at a rate of about 5 percent per year. The report also states that the industry has made great progress in recent years, with the production of zinc increasing at a rate of about 5 percent per year.

The data gathered by the mining experts and the American Zinc Institute provides a wealth of information about the mining industry, and the significance of zinc in the world economy. The report states that the industry has made great progress in recent years, with the production of zinc increasing at a rate of about 5 percent per year. The report also states that the industry has made great progress in recent years, with the production of zinc increasing at a rate of about 5 percent per year.

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Zinc Smelter Bought By New Chicago Co.

New Chicago Co. Buys Zinc Smelter Near Buren.

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Arkansas' War Minerals


By TOM SHIRAS

North Arkansas minerals have played an important part as war supplies in every war since the Franco-Prussian war and will probably play a more important part in future wars because of new ore bodies found in later years of peace.

During the Civil War large quantities of lead and salt peter were mined by the Confederates for munition purposes. Manganese from the Baskville-Cudeman field was utilized for munition purposes in the Spanish-American and World wars. Zinc from the North Arkansas field, embracing Marion, Baxter, Blount, Equality and Newton counties went into munition during the World war, and Lawrence and Sharp counties furnished a large quantity of zinc for munition purposes in the Franco-Prussian war.

During the last 40 years the zinc mining industry has shifted in North Arkansas. Most of the earlier zinc mining in Arkansas was done in western Lawrence and eastern Sharp counties, the bravest operations being concentrated around Baskville, Black Rock and Calamine. With the construction of the White River division of the Missouri Pacific and the discovery of rich ore bodies in the counties farther north and west in the state, the industry followed the new discoveries.

The ore deposits around Black Rock and Baskville are very interesting and some of the earliest mining history in the state was written around them. The district has about 30 miles from which ore has been shipped, most of which may be sulfide and carbonate of zinc. The carbonate of zinc ore from this field makes the purest slat zinc that can be smelted from virgin ore and when a war is in progress it is in great demand for munition purposes, being utilized in the manufacture of shell for the big guns.

The deposits lie in the southern Ozark mountain region, though the country containing them is far from mountainous, being gently rolling and having hills not more than 150 feet high above the valleys. Black Rock and Baskville on the Platte are the nearest shipping points. The early day miners in the field did not have railroad shipping facilities, however, and the ore and slat zinc or salt peter was hauled a distance of 30 miles or more to Black Rock, where it was shipped by boat.

The first zinc mining recorded in the region was around Calamine, in Sharp county. One class of carbonate of zinc ore is termed "calamine" and the town took its name from this ore.

A zinc smelter was erected at Calamine in 1857 by the Independence Mining Company. This concern also opened several mines and conducted a general mining and smelting business. It is said that this smelter was one of the first zinc smelters in the United States. The operations of the Independence Mining Company were not successful, and they were forced to abandon the project. The price of zinc at that time was very low, and they had too many obstacles to overcome in getting it to market.

In 1875 a second smelter was put into operation and a group of mines opened by the American Zinc Company. The ore they mined was band-picked carbonate of zinc, which they reduced to metal in their smelting plant. The total output of metal was sold by John Viehle, who had charge of the plant, to have been 136 tons. Besides this metal a large quantity of zinc carbonate was shipped.

No fuel for smelting purposes was available except wood, and consequently the ore was reduced with charcoal. Besides their mining operations they had to maintain charcoal pits, which added greatly to their overhead expenses.

The slat zinc and ore which was shipped in the rough was hauled by team and wagon to Haynie Ferry on Black River, for unloading by boat many hundreds of miles to Memphis, the nearest railroad point at that time.

Some of the ore was shipped by boat to New Orleans, and on to Kewanee Island. The metal produced at Calamine by the Independence Mining Company was purchased by the Union Metallic Cartridge Company, who used it in making shells for the Franco-Prussian war.

While zinc was very low in price in those days, being in line with other commodities, it was also very scarce, and that concern was probably a war baby of the Franco-Prussian war.

Calamine today is a very quiet little inland village with one store. The older citizens of that vicinity, however, can tell stories of activities that vie with some of the old Western mining camps, and point to the old sights of the smelters and the deserted mines as evidence.

As years have passed many stories of the richness of the mines have been told. In some tales the lead and zinc ores have been changed to silver and if one were a scrupulous person he could easily believe the old mines were as rich in silver as some of the famous silver mines of the West.

Old-timers in the Calamine section, who were associated with the operations in the early days will swear, too, that the horses at the mines and smelters were paid off in hot silver dollars. They say that they were made on the ground from the metal smelted in the smelter, but there is no evidence to bear out this statement.

In this locality much of the iron used by the pioneers of North Arkansas was also mined and smelted. The old iron furnace used to stand on the banks of Big Creek, near the town of Jesup, in western Lawrence county, and the iron was mined from the adjacent hills.

Besides the iron mines and the furnace there was a small iron mill, in which the pig iron was reduced to marketable shapes and sizes.

A dam across Big creek furnished power for the big furnaces that supplied the immense bellows for re-heating and for the large power hammers and cutters, which were used in the operation. One of the abutments of this old dam is still standing.

Northern Syndicate Securing Mining Leases at Yellville.

Special to the Gazette—Yellville, March 26—Mining leases are being taken on zinc and lead properties in this district by the United Mine Owners League for a Northern syndicate on an exploration and development program which is to continue over a ten-year period. E. H. Rand, secretary, who has local charge, said that leases have been secured on some of the best known mining properties in this field.
Every schoolew knowsthat the earth is round and has heavenly bodies which are moving around a central sun and in so doing we call the planets. The earth with its moon, sun, and planets, is inhabited by various species of living things. For many years, the moon has been known to move in relation to the Earth, or solar system. The Earth is the third planet from the Sun, and it is also one of the larger planets. The Earth is slightly tilted on its axis, which causes the seasons. The Earth's rotation around the Sun causes the days and nights.

Every student who has read about the Earth and the solar system knows that the Earth is not a perfect sphere. It is slightly flattened at the poles and bulges at the equator. This is called the oblate spheroid shape. The Earth's crust is made up of plate tectonics, which move and change over time, causing earthquakes and volcanic eruptions.

The Earth's atmosphere is composed of various gases, including nitrogen, oxygen, and argon. The atmosphere plays a crucial role in regulating the Earth's climate and providing the necessary conditions for life. The Earth's core is composed of a mixture of iron and nickel, and it is thought to be liquid.

The Earth's magnetic field is generated by the movement of molten iron in the Earth's core. This magnetic field protects the Earth from the harmful effects of solar wind and charged particles from the Sun. The Earth's magnetic field is important for navigation, as it allows sailors and pilots to determine their location.

The Earth's oceans cover about 71% of the Earth's surface, and they are vital for life on Earth. The oceans regulate the Earth's climate, support marine life, and provide resources such as fish and minerals. The oceans are also important for transportation and communication, as they connect the various parts of the world.

The Earth's lands are covered by forests, grasslands, deserts, and other types of vegetation. The Earth's landforms are shaped by the forces of erosion, weathering, and tectonic activity. The Earth's landscapes are also shaped by human activities, such as agriculture and urban development.

The Earth's atmosphere and oceans play a crucial role in the Earth's climate. The Earth's climate is determined by the balance between incoming solar radiation and the Earth's ability to absorb and reflect it. The Earth's climate is also influenced by the Earth's topography, which can affect the local weather patterns.

The Earth's climate is changing due to human activities, such as burning fossil fuels and deforestation. These activities are causing the Earth's average temperature to rise, which is leading to a range of consequences, including rising sea levels, increasing extreme weather events, and changes in the distribution of plant and animal species.

The Earth's climate is a complex system, and it is not yet fully understood. However, it is clear that the Earth's climate is changing, and that this change will have significant consequences for the future of the Earth and its inhabitants.
BIG ZINC FIELD IN ARKANSAS LIKELY

Importance Attached to the Strike on Lease in Lawrence County.

BIG MILL IS POSSIBLE

Memphis and Pine Bluff Capital Reported to Plan Extensive Development.

STATE RANKS HIGH IN OUTPUT OF ZINC

Arkansas Boasts of Being Fourth in Production of Mineral.

HAS THREE BIG SMELTERS

Largest Array of Furnaces West of Mississippi River Said to Be at Fort Smith.

By Fletcher Shanwell

Staff Correspondent of the Gazette

Fort Smith, Ark., April 24—One of the cherished preoccupations of a chronic booster is the authority to speak proudly in big figures. The removed Colonel Egyptian established the present array of furnaces at Pine Bluff, and the unfortunate Arkansas citizen who has been shamed by the results, is seeking to console himself by harping on the big figures. That is the story. And in Arkansas there are statistics galore to support the claim that 65 per cent of the most impresionable, bright-eyed optimist.

These statistics prove, for example, that Arkansas is near the top of the list of states in the annual production of such products as the Tennessee timber, coal, gas, oil, henequen, sugar, strawberries. Arkansas has the only diamond mine on the North American continent, and the only necessary factory west of the Mississippi river. Arkansas is the only state of the United States that has more than 160 years old, and it is the only state that has not been granted permission to go into community affairs for the sake of interests to those patriotic citizens who have nothing better to do than to read these articles.

Zinc Smelters at Twin Cities.

Returning to big figures: We should not forget that Arkansas is fourth in the world in the three big zinc smelters of the country are established in Fort Smith and Van Buren. Nor should we lose sight of the fact that these are the Athletic Mining and Smelting Company, the largest array of furnaces west of the Mississippi river, do much for the figures.

The Athletic Mining and Smelting Company has four furnaces with 416 tons of zinc, and 263,000 tons of ore, 167,000 tons of ore, 16,000 tons of ore, and 6,000 tons of ore, all of which is used to produce zinc. The company bought out its competitors and managed to drop the prices of zinc so that it would be able to sell it to the public for less than the original cost.

The zinc smelters at Twin Cities are among the most modern in the world. They are equipped with the latest technology and are capable of producing large quantities of zinc in a short time. The company is also known for its efficient management and strong commitment to quality.

The Athletic Mining and Smelting Company also has a fleet of modern trucks and railcars that are used to transport ore and finished products to and from the smelters. The company has a strong track record of operational excellence and is highly regarded in the industry.

Geologists Visit Lawrence and Pulaski Counties

Special to the Gazette, by C. H. Decker

Pine Bluff, Ark., April 24—A geologist team from the United States Geological Survey has been exploring the mineral resources of Lawrence and Pulaski Counties in Arkansas. The team conducted a comprehensive study of the geology of the area, collecting samples and analyzing data to assess the potential for mineral deposits.

The team's findings indicate that Lawrence and Pulaski Counties are rich in mineral resources, including zinc, lead, and silver. The team's report is expected to provide valuable information for future mineral exploration and development in the region.

In conclusion, the discovery of a new zinc deposit in Lawrence County is a significant development for the Arkansas mining industry. The presence of large-scale zinc mining operations in Fort Smith and Van Buren, along with the geothermal resources in Pulaski County, highlights the state's potential for continued growth and development in the mineral industry.
Ozarks Have Fascinating Underworld All Their Own

By RALPH J. HILL

Ponca, March 26—Crime practically unknown in this orderly settled Newton county section where Hillside Farms and Indiana Silters are from 1,700 to 2,100 feet above sea level, but they have always been there.

It is a world of tunnels following veins of lead ore into the hearts of mountains and of subterranean caverns whose crystal formations are beautiful beyond description. Today, for the first time, some images in addition to the usual formations and caverns encountered, for miners burrowing with skill and courage are now breaking through the walls of caves which have no other outlet.

Lead mining in this region is an industry beset with difficulties, discouragements and small profits, considering the present price of ore, but to students of nature and the wonders nature can perform it has its compensations.

One of these compensations is the privilege of being the first to view these caverns—an experience which carries with it the thrill an explorer gets out of discovering new worlds, now and forever. Another is the opportunity presented to seek and find fossil deposits which date back to the time ages ago when all section of the Ozarks was a part of the floor of an ocean.

Four Mines Operating

Four mines now are being worked on a small scale near Ponca, their owners firm in the belief that the market will improve and that other developments will make their labors worth while financially, eventually, especially, eventually, eventually, eventually.

The developments looked forward to include the productive building of a series of dams and locks along Buffalo river which not only would supply plenty of hydroelectric power but make Possible the transportation of ore by carriage in rail or by river. But for this development has not gone much beyond the "paper stage" and of some interest that far.

Also, since time immemorial, the exploration of silver silver in the Ozarks, and there is a small percentage of silver in most of the lead taken out, there is a future in the mind of almost every lead miner the hope that he will some day realize his dream of silver.

In the meantime, however, mine operators are trying to "break even" until the better day arrives and some of them are getting quite a kick out of the first hand study of geology and geodiversity.

Loomoinge Engineer Is Miners

One of these amateur scientists is Ross McCallough of Harrison, locomotive engineer for the Missouri and North Arkansas railroad. He is a partner with three other men, in the North Arkansas Mining Company which owns a 30-acre lease about a mile from the Ponca and which has been operating a mine on the property for six or seven years.

Mr. McCallough has put several thousand dollars into the enterprise, and if he has never realized a profit, he "certainly has put lots of fun out of it."

The engineer's enthusiasm is reflected in his reports to the men of the mine on what he has found and in the kindling of interest in the mine. That Mr. McCallough is interested in the mine and his work is a fact that is readily evident. He has a gift for talk and has a way of making his reports interesting and stimulating.

Discovery May Revolutionize Zinc Industry

Washington, July 27—The zinc industry may be revolutionized by the discovery of zinc ore 2,325 feet beneath the earth's surface.

A recent report shows that there is a large deposit of zinc ore in the state of New Mexico, and that it is of such quality that it can be worked profitably. The zinc is said to be of the highest grade, and the ore is located in a region where there is a great deal of lead and copper.

The discovery of this zinc ore is of great importance to the mining industry, as it has been the custom to mine lead and copper in this area, and the presence of zinc ore would make it possible to mine these minerals together.

The ore is estimated to contain 1,000,000 tons of zinc, and it is expected that the mine will be worked for many years to come. The ore is said to be of excellent quality, and it is expected that it will be shipped to the United States for use in the manufacture of metal products.

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MINING PROPERTIES TO BE DEVELOPED

Corporate Will Operate 1,000 Acres in Vicinity of Yellville.

Yellville, April 27.—Announcement has been made at Dover, Del., of the incorporation of the Geo Mining Corporation by J. T. Robinson & Co., of Wilmington, Del., P. T. Robinson, president of the firm of Robinson & Co., also is president of the new corporation. J. H. Hand of Yellville is named as vice president and general manager at mines, and Capt. Charles Layton of Yellville, consulting engineer.

Geo Mining Corporation has an authorized capital of $100,000 and intends to purchase and develop important mining properties near Yellville. The corporation has in hand the title to 1,000 acres daily known for the property, the underlying ore and the ore properties made substantial production of ore from preliminary development operations during the war period of mining activity in that district.

Another policy of the corporation, it is said, will be to encourage development of local mining industry through cultivating small tracts of its holdings that show merit to other operators, and contract to buy their ore. Under this plan, the "subskim" miner who needs a helping hand to get started will find aid that is sure to lead to the production of important ore values from new projects to be opened, it was said.

Rush Zinc Miners Ship Car Of Free-Ore.

Special to the Gazette.

Yellville, May 5.—J. D. Breech, operator of the Yellow Rose zinc mine at Rush, loaded a car of free ore here this week, consigned on contract to Dresser Chemical Company of St. Louis. They also shipped a quantity of higher grade ore which had been bought in small lots from other local operators on loose pop, Big Buck and Markle properties which are yielding pay dirt with development. Franks & Company have completed a small mill on their leases at the Bailey mine in Elgin Camp, and have a high grade of yield in that area, where a rich deposit of zinc, lead and silver has recently been discovered by Gilley and associates recently started work on a lease in the area mine in the Rush camp. The first round of shipments of high grade zinc ore carbonate.

Yellville Men To Reopen Zinc Mine at Rush.

Special to the Gazette.

Yellville, Sept. 19.—The McElhenny zinc mine at Rush has been leased by a local company composed of E. A. Adams, R. P. Reed and H. C. Boren, miners. Owners of the property live in Boston, Mass. The McElhenny joins the famous Morning Star group of mines, purchased some years ago by capitalists in Philadelphia, Pa. The new operators are to begin mining zinc ore at once. The work will be carried on in free ore mining fashion, since the deposit of ore is so pure that a large portion of the ore is ready for sale as it comes from the mine, without having to be milled. The product will bring about $12 a ton on the local market at Rush, under prevailing prices. On that basis, good miners will clear $12 to $15 a day.

MINING INDUSTRY INTEREST REVIVED

Lead and Zinc Properties in Ozark District Again in Demand.

Yellville, May 30.—Revival of interest in development of zinc and lead mining industry in the Ozark district is much in evidence, as leases become more in demand by local free ore miners and prospective commercial operators. Among the active mine operators are operations connected with the Lowery Bay mine in Rush camp, headed by W. G. Cochrane of Bowling Green, Ky., who has started sinking a shaft to open up the proven ore body for active mining, and is pulling muck down the ground on a 10-ton concentrator mill. Mr. Cochrane and associates are also developing, a lead mine at Fortuna, Newton county, on which they have erected a small mill.

Rush Miners, with a small crew of free ore miners at the McElhenny property in Rush camp, have mined three carloads of high grade zinc carbonate which he is preparing to truck to refineries at Yellville for shipment on an order from an Eastern smelter.

Zinc Mining Comes Back

Resident Miners in the Ozark Mineral District Have Conquered the Depression and Crop Failures by Working New Digginggs, Profiting Under Increased Prices.

By E. M. HANB

The Ozark district in northern Arkansas is one of the richest areas of zinc deposits in the United States having ore free from iron, manganese and other impurities that impair its quality. In his report of early investigations in the district, the late Dr. John C. Brander, former state geologist, said: "The extent of these deposits is so great that it is unknown where they may be worked."

The conclusion stands corroborated by other eminent geologists and mining engineers who have made later investigations during the War.

During the War the Ozark district supplied 100,000 tons of zinc ore from new prospect workings, most of which financed their own development and equipment from their initial and current costs, besides paying liberal profits to the operators.

With the collapse of the industry at the close of the war, this district, having been operated primarily upon short-term leases, worked no new workings, most of which financed their own development and equipment from their initial and current costs, besides paying liberal profits to the operators.

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The conclusion stands corroborated by other eminent geologists and mining engineers who have made later investigations during the War. A fair profit was realized on the whole, which helped to tide the various workers over many hard problems during the year. Some of these pick-and-shovel miners dug out only a few tons, while others succeeded in making considerable shipments.

Zinc has shown a strong comeback since the business upturn in 1943 and has almost doubled in price. Thus, a healthy position of zinc mining industry for the future.
First New Report Available to Mining Interests One Made by State in 1906

In 1906 the State Geological Survey published a report on land and zinc deposits in counties of Northern Arkansas. It is the first comprehensive study made by any of the State agencies in this branch of mineralogy. The report is a valuable document for mining and other interests, and it is hoped that it will be of great assistance in the development of the resources of the state.

The report is divided into two main sections: the first section covers the geological and mineralogical aspects of the area, while the second section deals with the economic aspects of the zinc deposits.

Summary of the Report

The report provides a detailed description of the geology of Northern Arkansas, including the distribution of zinc deposits. It also describes the various types of mining operations that have been used in the area, and it provides information on the methods of extraction and beneficiation.

The report includes a section on the economic aspects of the zinc deposits, including an assessment of their potential for development. It also discusses the current state of mining in the area, and it provides recommendations for future development.

The report is an important resource for mining and other interests in Northern Arkansas, and it is hoped that it will be used to guide future development in the area. The report is available for download on the website of the Arkansas Geological Survey.
MINERAL BOOM IN M. AND A. RAILROAD TERRITORY BEGUN

Gazette 5-21-36

Lead and Zinc Dome Discovered at Prices Rise

Mountains.—There is considerable excitement in this area and Marion counties. The deposit of lead and zinc ore is a large one, and there is a good possibility that it may be worked on a large scale. Many new claims have been staked, and work is progressing rapidly on many of them. The ore is a good grade of lead and zinc, and it is expected that the mine will be worked for many years to come.

The lead and zinc dome has been discovered on the west side of the mountains, and the ore is a good one. The dome is situated on a hillside, and the ore is exposed on the surface. The ore is a good grade of lead and zinc, and it is expected that the mine will be worked for many years to come.

$20,000 Loss
As Zinc Ore Mill Burns

Spotted on the Gazette. 11-18-36

The mill was destroyed by fire last night, and the loss is estimated at $20,000. The mill is owned by the Zine Mining Company, and it is situated near the Zine Mine. The mill has been in operation for several years, and it is the largest mill in the area.

Zinc Mines Active As Price Goes Up

Spotted on the Gazette. 11-21-36

The price of zinc has increased, and the zinc mines are active. The demand for zinc is increasing, and the mines are working at full capacity. The price of zinc is expected to continue to rise, and the mines are preparing for the increased demand.

Zinc Industry Hit By Burning of Mill

St. Joe—A severe blow to the zinc industry occurred last week when the Badger Zinc Company’s mill at St. Joe was destroyed by fire. The mill is situated on the St. Joe Mine, and it is the largest mill in the area.

Mining Makes Gain in North Part of State

Democrat, May 15, 1936


By WILL RICE

In the north part of the state, the M. & A. Railroad is making a push to develop the mining industry. The railroad is making a large investment in the area, and it is expected that the mines will be worked for many years to come.

Early this year the railroad purchased a large tract of land near the railroad tracks, and it is expected that the land will be worked for mining purposes. The railroad is also working on a large scale to develop the mines in the area, and it is expected that the mines will be worked for many years to come.

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Zinc Ore Milling

St. Joe—The zinc ore milling at the St. Joe Mine is in full swing. The mill is situated on the St. Joe Mine, and it is the largest mill in the area.

The mill is a modern, well-equipped mill, and it is expected that the ore will be milled for many years to come. The mill is owned by the Zine Mining Company, and it is situated near the Zine Mine. The mill has been in operation for several years, and it is the largest mill in the area.

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Zinc And Lead Mines Increasing

**Gazette 2-5-37**

Yellville, May 3—The zinc and lead mining industry in the Northwest Arkansas field, which started several months ago, is now in full swing, and the output of these ores is commencing to show a marked increase. The companies working in the area are making good progress and the production of zinc and lead is expected to reach substantial levels in the near future.

In the last few weeks, several mining companies have begun operations, and the output of zinc and lead ores has been steadily increasing. The companies have invested a significant amount of capital in the mining operations, and the results are beginning to show. The ore quality is good, and the companies are optimistic about the future prospects.

Prospects for the future are promising. The area has a large reserve of ore and the mining companies are well equipped to handle the production. The market for zinc and lead is strong, and the companies are confident that they will be able to sell their products at a good price.

Small Miner Making Money on Striping Ore

**Democrat 4-3-37**

E V E N Inexperienced Farmers Benefit From Demand for Zinc.

Yellville—Several varieties of zinc ore have been shipped from the Ozark District by local farmers. Miners here and some farmers who have not mined before, have made a good production of new minerals and opened up new areas of potential ore deposits. The capital invested in these operations is relatively small, and the profit potential is high.

Conditions are excellent for zinc mining in the area. The ore is high grade and the weather is favorable for mining operations. The farmers have invested little capital and are able to operate on a small scale. The government has provided some assistance, and the local community is supportive of the mining operations.

The farmers have learned quickly and are able to obtain good results. The ore is high grade, and the farmers are able to obtain high prices for their production. The farmers have been able to obtain loans from local banks to finance their operations, and the government has provided some assistance.

New Zine Property Opens at Yellville

Yellville—A new zine mine on the Big Hurricane mine has been opened. The company is producing a high grade ore, and the production is expected to increase significantly in the near future. The company is well financed, and the ore is of excellent quality. The mine is expected to be a major contributor to the zine industry in the area.

Couple Planning to Develop Rich North Arkansas Lead Mines

Fayetteville—A new couple has been engaged in mining operations in the rich lead belt of North Arkansas. The couple has invested a substantial amount of money in the operations and is on the verge of becoming a major producer in the area.

The mine is located on the edge of the rich lead belt and is expected to produce a large quantity of high grade lead ore. The couple is well financed, and the ore is of excellent quality. The company is expected to become a major producer in the area and to make a significant contribution to the lead industry.
There isn't a cranny in the White River Country but what has valuable mineral resources. The minerals are lead, zinc, iron, and manganese. The commercial stones are the marbles of numerous colors and textures, limestone, gneiss sand and phosphate rock. Mining and quarrying is in progress in nearly every county, the industries are just in their infancy considering the vast amount of materials there is to work on.

Lead, zinc, and iron are found in Boone, Baxter, Marion, Searcy, Newton, Lawrence and Sharp counties. Manganese is in Independence, Stone, Izard and Searcy counties. Phosphate rock, and gneiss sand are found in Izard and Independence counties. Marble and limestone are found in all of the counties.

Most of the lead and zinc ore that has been produced in North Arkansas has been produced in Marion, Boone, Newton, Searcy and Baxter counties. The first rich smelted in the United States was mined and smelted near the little village of Calumet in Sharp county.

During the World War an immense tonnage of zinc ore was shipped from the North Arkansas field. After the war the price declined to a point where it could not be mined profitably and operations were practically suspended for a number of years. The higher price for zinc ore which started about the first of this year started operations again and all parts of the North Arkansas field are active again.

Five counties in North Arkansas are producing ore this year and the industry has gained steadily since the first of the year. Zinc ore and some lead are being mined in Boone, Baxter, Marion, Boone and Searcy counties, and if the price stays up operations will be increased. Most of the mining operations are on free ore, both lead and zinc. The free zinc ore is being produced is silicate and carbonate and is ready for sale as it comes from the ground. All the lead ore that is being mined is free gneiss and is ready for market when taken out of the ground. This ore runs around 80 per cent pure lead. The silicates and carbonates of zinc run around 40 per cent. Both ores are in good demand at the smelters.

At this writing Rush, in Marion county, is the heaviest producer, there being more mining concentrated around this place than any other in the field. This was the heavy producing camp during the World War and if the price of ore stays up will gain back all of its lost ground, as there is plenty of ore in this camp. The Monte Christo Company recently completed a new concentrating plant at the Monte Christo mine in this camp and this mine promises to be a large producer.

The M. & A. Railroad with general offices at Harrison, Ark., has been one of the prime factors in getting mining industry started again. There was no local market for ore which was a great handicap for the small producer as he could not accumulate a carload before he had to sell. They employed John Dirst, a well-known mining man to purchase ore along their railroad, and shipments have steadily increased since he started to work. He buys in small and large lots which gives the small operator as well as the large one an outlet for his ore, cash in hand.

The North Arkansas field is still a mecca for the small operator. If you can find a free ore outcrop, can get a lease and have enough money to buy a pick and shovel, wheel barrel, striking hammer and powder, you can start to work. You may win and you may lose.

The carbonate and silicate zinc ores of the field not only make the best zinc ore that can be made out of crude ore, but are well adapted to chemical use as well. Some jobs are mined and no doubt some time in the future the field will produce a big tonnage of this ore, but to date, the carbonate and silicates constitute the heavy production of the field.

Manganese ore, which is a member of the iron family is found in Independence, Izard, Stone and Searcy counties. The heaviest production is made in the Batesville-Cushman field, of which Cushman, in Independance county, is the center. Manganese is used in the manufacture of steel, giving it its tensile strength.

The present European war scare has put new life into this industry and operations are heavier now than they have been since the World War.

There are two distinct varieties of manganese ore: oxide ore and carbonate ore. The carbonate ore is the primary ore of the field, being laid down in blanket veins that are continuous through the hills in which they occur. This ore has the appearance of St. Clair limestone in the vein and when first mined and for over half a century was thrown into the waste pile. Several years ago its value was discovered and shipments of this ore have been regular since that time.

The oxide ores in the field occur for the most part in pockets in the clay. Some of these pockets are extensive in area while others are not so large.

Some of the deposits occur in the form of boulder ore, chunks from the size of an egg to those weighing several hundred pounds. This class ore and the free carbonate ore is ready for market as it comes from the ground.

Other deposits are made of wash ore. This is mined through the residual clay in five pieces and has to be washed and concentrated before it is ready for the market. The washing and cleaning is done in regular washing plants, and the ore is saved with jigs and tables.

Ore from the Batesville-Cushman field commands the highest price at the furnaces, and shipments are regular. The field has produced more high grade ore during the last five years than any other manganese field in the United States and is capable of a tremendous production. The price of ore governs the production to a large extent. When the price is high, production goes up, when it is low, it declines.

While manganese is present in Searcy county, near Big Flat, these deposits have never been investigated thoroughly and none has been shipped from this section. From what the writer has seen of these ores they warrant thorough investigation, with a strong possibility of developing a producing camp in that section.

Walker H. Denison is the largest producer of manganese in the field or in Arkansas. He operates a number of properties and buys most of the ore produced in the district. He has been in the business for over half a century and might be classified as the father of the manganese mining industry in Arkansas.