

# Auto Magnates See Cinnabar As Motor Fuel

Democrat 11-12-37  
Oklahoma, Texas Men Interested in State's Quicksilver Deposits.

Amity — Renewed interest has been awakened in the cinnabar mines near Amity in the past few weeks and scouts from Oklahoma and Texas have been investigating the region covered by these mines and it now looks as though real production would be started soon.

New ledges of this ore are being discovered constantly and while there is no boom, it is creating much interest. Last week several scouts from Texas investigated the mine four miles south of Amity and were sold on the fact that there was ore in paying quantities. This mine is situated on what is known as the Deering farm and the leases are owned by O. W. Wheeler, of this place.

Mr. Wheeler said the ore taken from his mine this week will run from 30 to 50 per cent quicksilver. The development of quicksilver as a fuel is one of the reasons for this renewed interest in this product, and while this phase of its use is still in its infancy, there is a probability of its becoming one of the major fuels for motor vehicles. Experiments in this line is now being made by the General Motors Corporation.

The Midcontinent Quicksilver Corporation operating near Amity is turning out quantities of this metal. This company has a \$50,000 plant that has been in operation for several years. The Wheeler mine is one of the few located in Clark county, as most of this ore is located in Pike county.

Mining engineers believe this field will become one of the greatest quicksilver producing regions in the United States.

# Mercury Vapor to Replace Steam and Cut Fuel Costs For Ocean Liners Advocated

Democrat 11-19-37  
New York (AP)—An invention to use mercury power—the energy of hot molecules—to drive steamships and reduce the cost of shipping was announced today to the Society of Naval Architects and Marine Engineers.

The architects were informed that the Normandie, trans-Atlantic record holder, can substitute mercury for steam and cut her annual fuel bill \$400,000, with no speed loss.

The proposal for this new type of sea power was made by William L. R. Emmet, Schenectady, N. Y., engineer who started use of mercury power eight years ago. Five American plants are using it but mercury never has been feasible at sea.

An improvement in boilers, Emmet said, recently made at the Pittsfield, Mass., General Electric mercury power plant, makes it possible to extend the new hot molecule principle, and in many cases mercury can be installed on existing steamships.

Mercury power is made exactly like steam. The metal vaporizes and turns a turbine the same as steam. But it puts more of the heat of the fuel to work than does steam power.

This extra efficiency of mercury is due to a seeming paradox. Its vapor develops very little pressure. It will take a tremendous heat with very little pressure increase. Mercury at 675 degrees, for example, has a pressure equal to steam at 212, the boiling point of water. To the layman this lack of pressure seems like a handicap for mercury.

But scientists explain that steam's tremendous pressures are really only necessary evils. The heat is what really does the work. The proof that they are right is in the efficiency reports of the five power plants using mercury. With steam one pound of coal will light a 60-watt electric lamp 16 2-3 hours. With mercury the same pound will light the lamp 24 hours.

The plants all use both mercury and steam. Mercury boils at 675 degrees. After it turns a turbine, in these plants, the metallic vapor heats steam while itself turning back into a liquid ready for reheating.

The plants using mercury are the Hartford Electric Light Co., Kearney (N. J.), Public Service of New Jersey and General Electric Co., at Schenectady and Pittsfield and Lynn, Mass.

There is no danger of mercury poisoning, Emmet said. The mercury is sealed airtight and used over and over.

# New Hope for Cinnabar Mining In Arkansas Seen.

4-10-38  
Special to the Gazette.  
Arkadelphia, April 9.—A dispatch from San Francisco today saying that banks of that city had bought more than \$50,000 worth of quicksilver in the last 10 days was of great interest to Clark, Pike and Howard counties where extensive deposits of cinnabar are known to exist.

At present mining in these three counties virtually is at a standstill but informed persons say that major development is bound to come as the field becomes better known and promoted by companies with stronger financial backing.

Many discoveries of cinnabar, the mercury producing ore, have been made and there have been, from time to time, 12 to 20 mines in operation. All but a few were on a small scale, however. The Midcontinent Company has invested about \$50,000 in equipment five miles south of Amity in the eastern edge of Pike county but law suits have resulted in closing the plant. The Holmes Mining and Development Company continues to operate on a small scale and is believed making a steady profit. The Wheeler mines are dormant but Amity people say that its ore is among the richest ever found, yielding as high as 75 per cent to the ton. The Weaver mine also has shown remarkable ore, some that yields fluid mercury upon being broken open. Most of the companies have kept their leases paid even though they are not operating.

A. J. Hunter, editor of the Amity Owl, said today that mining company officials have told him that the chief drawback is lack of roads and highways in that section. A road from Amity through the cinnabar section of western Clark and eastern Pike county intersecting Highway 27 that runs between Kirby and Murfreesboro would facilitate operations greatly.

Prospectors are coming and going every week. A discovery only 12 miles west of Arkadelphia was reported today. Geologists recently found manganese in the Amity area. There is a dormant lead mine east of Amity and in Clark county.

There is a strip of territory 30 miles long starting south of Amity and running westward through Pike county that abounds in many ores.

# Cinnabar Mine Interest Increasing

4-24-38  
Special to the Gazette.

Arkadelphia, April 23.—Encouraged by reports of the purchase by banks of large stocks of quicksilver and statements that the mercury-bearing ore of Clark and Pike counties is among the richest in the world, residents of Amity and Murfreesboro are taking steps to make the potential mining areas more accessible.

It is said that the embargo placed on the exportation of quicksilver from Spain and Italy where large quantities are mined and refined has caused a shortage in this country and that the United States army will have to look to American supplies for quicksilver for munitions and other uses.

A delegation of Amity residents, including W. H. Olds, A. J. Hunter, T. W. Rose, Ed Holmes, C. W. Wheeler and others, called on County Judge Joseph Callaway here and a Pike county delegation called on Judge Tom Jones at Murfreesboro requesting that a good road be built into and through the cinnabar belt of the two counties. Existing roads are rough. The delegations received encouragement from the judges who said they would act favorably if possible.

Several Western banks are reported to be buying quicksilver and storing it in their vaults. Quicksilver is indispensable in the manufacture of certain munitions and war equipment as well as many articles of commerce. Cinnabar, quicksilver-bearing ore, is found in only a few of the American states.

# Is New Demand For Quicksilver

Daily Siftings  
Mining of Cinnabar in Clark and Pike Counties May Be Increased  
Arkadelphia 4-9-38  
Quicksilver mining in Clark, Pike and Howard counties is practically at a standstill, but those who keep informed declare major development is bound to come as the field becomes better known and promoted by companies with

stronger financial backing. Recent reports indicate that quicksilver will be in much greater demand because of wars and preparations for wars.

Numerous discoveries of cinnabar, the mercury producing ore, have been made and there have been from time to time 12 to 20 mines in operation, all but a few on a very small scale. The Midcontinent Company has invested something like \$50,000 in equipment five miles south of Amity in the eastern edge of Pike county. The company is fighting several lawsuits and have closed down their plant. The Holmes Mining and Development Company continues to operate on a small scale, but is believed making a steady profit. The Wheeler mines are dormant, but Amity people declare their ore is among the richest ever found, yielding as high as 75 per cent to the ton. The Weaver mine also has shown remarkable ore, some that yields fluid mercury upon being broken open. A majority of the companies that have come in have kept their leases paid even though not operating.

A. J. Hunter, editor of the Amity Owl, said mining company officials have said the chief drawback is lack of roads and highways in that section. A road from Amity through the cinnabar section of western Clark and eastern Pike county intersecting Highway 27 that runs between Kirby and Murfreesboro would facilitate operations greatly.

Prospectors are coming and going every week. A discovery only 12 miles west of Arkadelphia was reported. Geologists recently found manganese in the Amity area. There is a dormant lead mine 30 miles east of Amity and in Clark county. There is a strip of territory 30 miles long starting south of Amity and running westward abounding in many ores.

# Production Of Cinnabar Possible

7-26-38

Cinnabar "probably can be produced" in Arkansas "at a profit under conditions similar to those of 1936 provided the enterprise is not burdened by too great an expense in the finding of ore bodies similar to some already mined," the Geological Survey of the federal Department of the Interior reported yesterday in a report on the "Geology and Ore Deposits of the Southwest Arkansas Quicksilver District."

The report said "Geologic indications appear to warrant further prospecting and development in favorable areas. It

seems likely that in a time of national emergency, when cost is no obstacle, the Arkansas district can produce a large amount of quicksilver."

It was recalled that cinnabar was discovered near the southern border of the Ouachita mountains in 1930. "The belt in which cinnabar is now known has a length of more than 25 miles from east to west, and in most places is less than a mile wide, although it has a maximum width of about six miles."

Authors of the Arkansas report said the United States ordinarily produces only about half the quicksilver it consumes.

They said "Any new source of this essential metal is therefore of relatively great importance. For this reason, and because of the possibility of financial gain attending the development of any new mining district, the Arkansas

quicksilver district has attracted considerable attention from geologists, mining engineers and others \* \* \*"

# Mining Of Mercury On Increase

10-23-38

Special to the Gazette.

Murfreesboro, Oct. 22. — There is more activity in the mercury belt in Pike and Clark counties than has been shown since the discovery of the mineral eight years ago. Like all new mining fields it has had its ups and downs. Engineers point out that lack of capital and experience in mining this type of ore have been the chief reasons for the slow development of this district. It is believed that if properly mined the field would be one of the leading producers of quicksilver in the United States.

Sees "Bright Future."  
W. E. Thorne, an engineer of international experience and a member of two of the world's largest mining institutes, said that in his opinion the district has a bright future. The Big Six Mining Co., composed of a group of men from Mimia, Okla., is working night and day on property west of the Little Missouri river, while the Magnolia Mining Company, a new Arkansas corporation, also is working two shifts and producing high grade ore. This company is trucking its ore nine miles to a plant belonging to the Midcontinent Quicksilver Company where it is processed, but plans are nearing completion by the Magnolia company for the erection of a large induction plant on its property.

New Discovery Reported.  
The Holmes Mining Company recently made a new discovery of a high grade ore. Samples brought to Murfreesboro ran as high as \$800 a ton. The Midcontinent company also has resumed operations under a new manager, a Mr. Thomas of Hutchinson, Kan., operating its own properties as well as processing ore for the other companies.

T. J. Pate and associates of Murfreesboro have just finished prospecting a large acreage in the east part of Clark county. A mass sample of 447 tons of ore processed showed an average of nine pounds of quicksilver to the ton. Plans are under way to install a 50-ton processing plant.

The companies are receiving an average of \$1 a pound for the mercury which has been the average price for the past 10 years. The United States produces less than one-third of its supply, having imported 10,000 flasks last July.

# Corporation Will Mine Cinnabar.

1-29-39 Gazette

A corporation to mine cinnabar, the ore from which quicksilver is derived, in Clark county has been organized by T. C. Moore, W. M. Coffield and Dr. J. D. Jordan of Little Rock, and J. M. Eunson and T. J. Pate of Murfreesboro. Articles of incorporation were filed yesterday with Secretary of State C. G. Hall.

Dr. Jordan said that Clark county apparently was rich in cinnabar, outcroppings being visible in several sections. No mining operations have been conducted by the company, he said.

The articles said the purpose of the corporation, to be known as the Caddo Quicksilver Corporation of Little Rock, was to sell \$50,000 worth of stock with which to buy equipment for mining. They listed 90,000 shares of authorized capital stock at \$1 each and capital of \$2,500. Offices will be at 2812 Asher avenue.

# Big Possibility Seen in State Cinnabar

4-3-39

Special to the Gazette.

Murfreesboro, April 1.—Dr. W. E. Thorne, mining engineer, said today that undeveloped cinnabar (quicksilver) mines of southwest Arkansas may prove an important factor in the vast rearmament program now under way throughout the world. Dr. Thorne, a retired consulting engineer for the Consolidated Gold Field of South Africa Ltd. of London, England, and a member of the Mining and Metallurgical Institute of London and the American Mining Institute, has spent more than two years here studying the possibilities of the cinnabar deposits in Pike and Clark counties, which are operating only on a prospecting basis.

In an opinion directed to the newly organized Caddo Quick Silver Company of Little Rock, Dr. Thorne said that there was little doubt that the cinnabar supply located in these mines could furnish the United States with a large part of its entire quicksilver needs in-

definitely, whereas for the past several years it has been forced to depend on Spain, Italy and Austria for about 54 per cent of its supply.

He said that quicksilver is a vital necessity in the manufacture of high explosives, also it is used extensively in drugs. He said that should the nations from which we now receive our imports become involved in war, the Arkansas mines quickly could be developed to furnish enough of the mineral for any ordinary emergency.

Financing Has Retarded Development.  
Slow development of these mines has been due largely to a lack of cinnabar mining experience and finance. Prospectors who hoped to get rich quick without making any investment have been a deterrent to capitalists.

Since cinnabar's discovery here in 1930, approximately 150,000 pounds of quicksilver has been placed on the market at an average price of \$1.15 a pound. The ore has been found over an area 45 miles long and 12 miles wide. By selective mining the ore probably would run 10 pounds per ton, which in most instances doubles the output of low grade mines in other countries, Dr. Thorne said.

# Quicksilver Deposits May Pay Profit

9-17-39 Gazette

A ribbon of quicksilver deposits about 40 miles long soon will be detonating the shells of war while its owners in southwest Arkansas become wealthy.

Already the forerunner of a mining boom has developed in Howard, Pike and Clark counties. The price of quicksilver has soared from \$88 a flask August 31 to \$150 yesterday. A flask contains 76 pounds. The average price in 1938 was \$76.10, or about \$1 a pound.

Dr. George C. Branner, state geologist, obtained reports from field forces that property embracing potential cinnabar mines is in demand. Leases are being bought on a 10 per cent royalty basis.

The deposits which were discovered in 1930, and which have not been mined extensively, were described as extending from northwest of Murfreesboro, three miles east of the Howard county line, across Pike county and into Clark county, southeast to Antelope creek.

Dr. Branner said the area contains "an enormous tonnage in the aggregate" but that it is undeveloped.

The first quicksilver was mined in Arkansas in 1932. The value of the state's production ranged from \$4,311 to \$49,033 annually since then.

Yesterday's price of \$150 a flask was \$25 higher than the average for any year during the World war, Dr. Branner said. For that reason, he said mining in southwest Arkansas "should be very profitable at that price."

Other Prices Higher.  
Lead and zinc prices also have increased in the last two weeks as a result of the European war, the geologist said. The state produces much zinc, particularly in north Arkansas. Zinc prices jumped from 4.74 cents a pound August 31 to 6.1 cents yesterday. As a result, Dr. Branner said, lease activity has gained near Yellville and other towns.

Price comparisons of other Arkansas minerals reported are:  
Lead—4.9 cents a pound August 31; 5.35 cents Thursday.  
Antimony—12 cents a pound August 31; 12.25 cents Thursday.  
Manganese—Little change.

# Mine Activity Reflects High Ore Prices.

9-24-39 Gazette

Special to the Gazette.

Arkadelphia, Sept. 23.—With an increase in price from \$76 to \$150 per flask for quicksilver because of the outbreak of war in Europe, the several cinnabar mines near Amity, Clark county, and Murfreesboro, Pike county, have taken on new activity.

The Caddo Quicksilver Company, whose officers and most of its stockholders are residents of Little Rock, is preparing to erect a large refining plant to convert the ore into fluid mercury. This company organized about a year ago and now is erecting dwellings for workers. It plans to give employment to a large number of men at the mines and the refinery.

It was announced at Amity the Wheeler mine will start operations about October 1. The Hintze mine, running on a small scale, has excited its owners because traces of gold and silver have been found. Ore with traces of precious metal in it is being banked for future smelting, as quicksilver production is regarded as of more importance because of present high prices. The Gene Holmes and McElwain

mines are running at full production. The old Mid-Continent Quicksilver Corporation mine has shut down for repairs.

Owners of cinnabar deposits are optimistic in the belief that should the war be prolonged the price will be doubled, even on the basis of the present price of \$150 a flask. A flask weighs 76 pounds. Mercury, or quicksilver, is very much heavier than lead.

# Declares Arkansas Has Great Cinnabar Field.

9-38-39 Gazette

To the Editor of the Gazette:  
In an article in Sunday's Gazette, captioned "Mine Activity Reflects High Ore Prices," you seem to be striking below the belt as it concerns me and my mine in these parts.

I am not operating on a small scale as alleged by you, but on the contrary, am employing a greater number of workmen than any other mine in this district. I am not excited over gold and silver showings by my operations. Moreover, let me assure you, both such gold and silver showings, thus far, have been far in excess of mere "traces" as you would have it.

In this state your publication is heralded as an apostle of progress. Why don't you have your field reporter drop around and make a visit to the several cinnabar mines now in operation in these environs for gathering such news concerning quicksilver in Arkansas the world should know? Your state Geological Survey, by its many erroneous statements, branded the Arkansas quicksilver field as a flop when in truth and in fact we have the richest mercury deposit in Pike county in the world and my operations reflect this fact. Reliable Arkansas citizens will vouchsafe to the truthfulness of my statement that I averaged 420 pounds of mercury per ton on some of my better ores and that my average ores averaged around 120 pounds of quicksilver per ton. I am now installing two Gould "D" type distillation tubes and I wish it was possible for you to have your own representative to observe my metal recovery by these tubes when they go under heat so that some of the statements about Arkansas quicksilver can be refuted. I am selling no stock and owe no one anything and would have no use for publicity, save and except that the world know true facts apropos Arkansas quicksilver, my first love.

Come down to see me and shake hands with a friendly chap who is doing things for the great state of Arkansas; a led who will not be awaiting you with a stock certificate pad in hands ready to take your cash as I have nothing to sell in the way of stock. I will convince you that Arkansas has a real quicksilver field. W. F. Hintze, Murfreesboro, Ark.

Dr. Branner said the area contains "an enormous tonnage in the aggregate" but that it is undeveloped.

The first quicksilver was mined in Arkansas in 1932. The value of the state's production ranged from \$4,311 to \$49,033 annually since then.

Yesterday's price of \$150 a flask was \$25 higher than the average for any year during the World war, Dr. Branner said. For that reason, he said mining in southwest Arkansas "should be very profitable at that price."

Other Prices Higher.

Lead and zinc prices also have increased in the last two weeks as a result of the European war, the geologist said. The state produces much zinc, particularly in north Arkansas. Zinc prices jumped from 4.74 cents a pound August 31 to 6.1 cents yesterday. As a result, Dr. Branner said, lease activity has gained near Yellville and other towns.

Price comparisons of other Arkansas minerals reported are:  
Lead—4.9 cents a pound August 31; 5.35 cents Thursday.  
Antimony—12 cents a pound August 31; 12.25 cents Thursday.  
Manganese—Little change.

The mining property consists of 640 acres, 11 miles from Amity. Ore has been taken from a 150-foot shaft and from test pits for several months but lack of machinery has made impossible the processing of any of the ore at the mine. Approximately 500 tons of ore from the mine were processed by another quicksilver corporation at Amity several months ago to prove its mercury content.

Mr. Moore said the reduction furnace would be ready for operation at the Caddo company's mine by November 15. It will cost about \$10,000. Explaining the reduction process, he said cinnabar rock gives off a vapor when pressed and cooked. Virgin mercury results from condensing this vapor.

Fifteen men are employed at the mine, which is being worked 24 hours a day—three eight-hour shifts, so that as much ore as possible will be ready for processing when machinery is installed. Mr. Moore said quicksilver prices ranged from \$150 to \$165 for a 76-pound flask.

Three houses for employes have been erected on the mine property and three additional ones will be built soon. A boarding house is being operated for the convenience of the employes.

Dr. J. D. Jordan of Little Rock is vice president of the corporation, which was formed last January, and W. M. Coffield, also of Little Rock, is secretary-treasurer. Directors besides the three officers are: M. J. Eunson, mine superintendent, and T. J. Pate, supervisor, both of Murfreesboro, and J. E. Berry, Smackover bank president, oil company executive and drug store owner. W. E. Thorne of Murfreesboro is consulting engineer for the corporation.

Mr. Moore said all of the company's 153 stockholders are Arkansas citizens.



# Quicksilver Properties To Be Developed

Gazette 10-29-39

Special to the Gazette.

Murfreesboro, Oct. 28.—Two new companies have been organized to develop the quicksilver properties of the Southwestern Quicksilver Company and the Valley Mining Company in Pike county. The new corporations are headed by Leo Yount, R. B. McElwaine and associates.

The Valley mine is being worked at the 250-foot level, and has been producing steadily the past four months, Mr. Yount said. Work of sinking a shaft on the Parker Hill mine on the Southwestern's holdings has been started. It will be a three-compartment shaft, with two five-by-five hoist compartments and a three-by-five man-way. This shaft will be continued until it reaches the 350-foot level. A similar shaft will be started soon at the Gap Ridge mine, also on the Southwestern's property.

A power plant is being installed just west of the Little Missouri river which will generate about 350 kilowatts. The power will be used for development work at all three mines. A separate power plant is being installed at the Valley mine to generate 150 kilowatts.

A 20-ton Gould rotary furnace on the Southwestern property, erected in 1932, will be used to reduce the high grade ore from the mines. The rest of the ore will be stacked in ore piles until completion of a larger furnace.

There are about 45 men now at work in the mines, and this number will be doubled within 90 days, it was said.

Mr. Yount started work on the Southwestern Quicksilver Company's property August 8, 1931, and has been active in the quicksilver industry since. Mr. McElwaine developed the Valley mine, which has been producing four years.

# Cinnabar Industry In Rapid Gain

Gazette 12-31-39

Special to the Gazette.

Murfreesboro, Dec. 30.—The European war was credited today by mining experts with the fast development of the cinnabar mining industry in southwest Arkansas, which has just passed from the prospecting stage into what promises to become one of the largest and most profitable industries in the state.

Engineers were quick to point out that it was not the demand from the war itself which caused this sudden activity, but the fact that the war practically had shut off the entire imports of this metal to the United States, which in the past had amounted to approximately 75 per cent of its consumption, thus causing America to start looking for its own supply at home.

**New Machinery Installed.**

While the mines were discovered in 1931, very little mining other than prospecting was done until last September, when an increased demand caused a price jump from \$82.50 per 70-pound flask in August to approximately \$170 per flask in October. Since the price increase several new companies have filed incorporation papers, and at least four companies who already were in the field prospecting have bought and are installing new and larger equipment to meet the increased demand for mercury. The Big Six Mining Co., which owns a large acreage in Pike county 16 miles north of Murfreesboro and which has spent the past two years prospecting or developing its holdings, is installing new machinery which can handle approximately 30 tons of ore per day and will operate on a 24-hour basis, giving employment to about 15 men. Harold Kennedy, general manager and resident engineer of the company, said that he believed the company's mine will produce from 10 to 15 pounds of mercury per ton of ore. Mr. Kennedy pointed out that although this amount of metal might look small to the average person, it actually is comparatively large, as some mines in Spain and other countries only produce three

to six pounds of metal per ton, but have been operated profitably for the past century. He said this leaves little doubt that the development of the new field is assured.

**World's Best Field Predicted.**

The United States Mercury Co. received its incorporation papers the past week, listing its property value at \$12,000. W. F. Hintze, named as agent of the company, has prospected the company's holdings for the past eight months and believes that these holdings cover probably the richest cinnabar area ever discovered. Mr. Hintze says that a test on this mine produced as high as 480 pounds of metal per ton and had an average of 122 pounds since prospecting began. This company is installing new equipment capable of handling nine tons per day and employs 32 persons with an average pay roll of \$400 per week. Officers of the company are: C. A. Hirsch, Kansas City, president; W. F. Hintze, vice president and resident engineer.

The Caddo Quicksilver Co., whose incorporated stock is listed at \$90,000, is the only company now operating in Clark county. This company is installing equipment capable of handling 50 tons of ore per day and employs approximately 30 men. Other companies already in the field include the Mid-Continent Co., the Southwestern, the Valley Mining Co., the McElwaine Co., and the newly-organized American Quicksilver Co., whose company stock is listed at \$100,000.

# Only One Case Of Mercury Poison Proved

Gazette 3-17-40

While much "gossip" was heard concerning mercury poisoning and many reports were received of persons being salivated, in only one case was information obtained proving a workman was affected seriously by the disease. W. H. Tomlinson, associate mining engineer with the United States Bureau of Mines, reported to Ed I. McKinley, state commissioner of labor, following a survey of the cinnabar mining district of Arkansas. Mr. Tomlinson was accompanied by Wilson E. Runtun, safety engineer for the state Department of Labor.

Mr. Tomlinson reported that the victim suffered the loss of his teeth as a result of the poisoning, but his health was not affected seriously otherwise. The engineer said the poisoning resulted while the worker was employed at the retort, where the processing of ore is accomplished. He said the man subsequently was transferred underground.

Mr. Tomlinson reported that officials and employes reported that on many occasions slight attacks of poisoning resulted from workers' breathing mercury fumes while working around the retorts. None of these was serious, however, Mr. Tomlinson said. He added that there was no doubt that there was considerable more poisoning suffered than reported.

"Although we were unable to point out definite instances of chronic mercurialism in the quicksilver mining district, there can be little doubt that men after long exposure become affected to some extent. Since, as far as is known, no investigation has ever been made as to the presence or absence of this disease among the cinnabar miners in this district, considerable mercury poisoning may occur without being commonly known. And, since these mines are situated in isolated mountainous districts and native labor exclusively employed, the disease may be more prevalent than appears on the surface. It is understood that no physical examination of prospective or present employes is made or required, and that the operators are not compelled to report injuries that may occur as a result of mercurialism, making difficult the problem of ascertaining the prevalence of the disease."

**Slight Poisoning In  
Many Cases Reported.**

Mr. Tomlinson said that quicksilver may enter the body through the skin, gastro-intestinal tract, or respiratory tract, and that when a person is perspiring, it is absorbed rapidly through the skin. He said miners take additional mercury into the body by mouth while eating, smoking, chewing tobacco, etc. As mercury vaporizes at as low as 8.5 degrees Fahrenheit, the fumes inevitably are present, especially at the retorts, he said.

**Personal Hygiene  
Held Best Solution.**

"Possibly the best method of attack of this problem is through a campaign of education among both operators and employes in the quicksilver mines. Personal cleanliness and

(Wallis, Idaho "Miner" - latter part of week of Jan. 28, '40)

# QUICKSILVER TRADE RULED BY GAMBLERS

## International Manipulators Control Mercury Price Levels

Back of the recent rise in the price of quicksilver from \$150 to \$200 per flask in London is a smooth-working cartel of international manipulators, says Business Week, which practically considers the London market a branch office. About 45 per cent of the world's yearly output of mercury (125,715 flasks in 1938, excluding the Spanish wartime production) comes from mines in Italy and Spain. The United States ordinarily produces another 15 per cent.

The Italian and Spanish mines are the richest deposits in the world and production costs run from \$30 to \$40 a flask. Since the cost of production in the United States is figured normally at around \$65 a flask, all that keeps American mines running against the foreign competition in depression periods is a \$19 per flask tariff.

The Italo-Spanish mines are government-controlled and united in a monopoly. First intimation that traders had of strong-arm economic methods by the cartel came shortly after the outbreak of the war, when mercury was selling here for \$80. Before the end of September, the price had been bid up to \$170 and it has not dropped below \$130 since then. Market experts say neither increase in actual consumption nor the possibility of a shortage accounts for the price rise. They feel that European money, put up by the cartel, was behind the recent domestic price advance. The explanation is that the United States, which represents the largest share of world production outside the cartel, is too large a source of supply to be ignored by a group interested in raising the ante.

Mercury is a strategic material because about 15 per cent of production is used to make detonators for ammunition. The larger share of the market represents industrial users of mercury but, in recent years the peacetime outlets for mercury have not expanded.

There are two critical points in the price of quicksilver that are useful in analysis of the American market. When the price hits \$100 a flask, domestic mines approach capacity production (about 30,000 flasks a year); at \$130 a flask, some industrial users of mercury begin to turn to substitutes. Both critical points have been exceeded since the war began.

(Above clipping obtained from D. I. Hayes, Western Manager, American Zinc, Lead & Smelting Co., 943 Paul Brown Bldg., St. Louis, Mo. Feb. 27, 1940.)

hygiene will go a long way toward solving the problem. Since the mines are usually shallow and the workmen usually return to the surface to eat their lunch, proper washrooms should be provided and the men encouraged to always wash before eating. Smoking or taking anything by mouth while underground should be discouraged."

He also suggested provision for miners to bathe when leaving the mines, provision of exhaust system to carry away fumes, and compulsory use of respirators while cleaning the distilled mercury, preparatory to placing it in flasks for shipments.

# Arkansas Mercury Mine Near Amity Is Nation's Largest; War Demand Spurs Activity

Unheralded and unsuspected—One of the state's largest and most important enterprises in these days of armed conflict and possibilities of the United States becoming involved in the European war, are operations of the Caddo Quicksilver Corporation of Little Rock, which is operating an active mining property in Clark county, near Amity, and producing daily an output which is quickly grabbed up in the commercial market for war material.

The mine, located 23 miles west of Arkadelphia, near Amity, is operating daily with a staff of 27 employes, and to date has sold 45 flasks of mercury, or quicksilver, if you please, containing 76 pounds each, of the highest quality, at \$180 a flask.

The prospect for development is so encouraging that promoters of the mining operations are installing additional mining equipment to augment the present plant, in order to produce 12 to 14 flasks weekly to meet the demands of the trade.

Employees of the Caddo Quicksilver Corporation are comfortably domiciled in houses owned by the company.

Two cross-cut shafts are now being operated at the plant which is the largest producer of quicksilver, or mercury, in the nation today. Day and night shifts are operated daily, mining 25 tons of ore every 24 hours.

The plant is located in the center of a 640-acre tract in the foothills of the Ouachita mountains.

Officers of the corporation in charge of operations are: T. G. Moore, president; Dr. J. D. Jordan, vice president, and W. M. Coffield, secretary-treasurer, all of Little Rock.

The board of directors is composed of Mr. Coffield, Mr. Moore, R. J. Pate, M. J. Eumson, Dr. Jordan, J. E. Berry and G. A. Dodson.

A staff of engineers and assayists is employed by the company which has an authorized capital stock of \$90,000.

# \$5,000 Worth Of Quicksilver Mined Daily

5-19-40

Nine active mining operations in Pike and Clark counties are producing about \$5,600 worth of quicksilver ore daily in response to the demand for war purposes, Dr. George C. Branner reported yesterday after a two-day survey of the Arkansas field.

The state geologist said the mines, employing about 100 men, have retorts to handle 162 tons of furnace ore daily. Ordinarily five to 20 pounds of quicksilver are recovered per ton, but one operator received 60 pounds. Price of the mineral has advanced from a peace-time price of \$80 a ton to \$175, Dr. Branner said.

"Activity in the district is the greatest since the ore was discovered in 1931," he said. "About 3,500 flasks of 76 pounds each have been recovered, with about one-third of the total produced in 1939."

# Quicksilver Mines In State Are Busy

5-19-40

High prices for quicksilver have brought renewed activity in the cinnabar mines of Arkansas, Dr. George C. Branner, state geologist, reported yesterday on his return from a three-day trip in southwest Arkansas.

Arkansas mines have produced 3,500 to 4,000 flasks of quicksilver since the price rise made the mining more profitable, Dr. Branner said. About two-thirds of this production

has been made since January 1.

One rich body of ore has been struck, he said, with the operators reporting 60 pounds of mercury recovered from a ton of ore. The average recovery is five to 20 pounds. Dr. Branner spoke to the DeQueen Commercial Club Thursday night on mineral development in Polk, Howard, Sevier and Little River counties.

5-21-40

**Quicksilver Estimate Corrected.**

A statement in Sunday's Gazette which quoted Dr. George C. Branner, state geologist, as saying that the value of quicksilver ore mined in Pike and Clark counties is about \$5,600 a day was incorrect. Dr. Branner said last night. Based on the present production and market price, the estimated value would be \$1,750 a day, he said. Dr. Branner explained about 78 furnace tons are being produced daily, a ton averaging 10 pounds of quicksilver ore. The daily production of 780 pounds of quicksilver amounts to 10 3-4 flasks. At a price of \$175 a flask, a "conservative" production estimate of 10 flasks a day would be worth \$1,750, Dr. Branner said.

**Daily Quicksilver Production  
Valued at \$1,800.**

5-21-40

Daily production of Arkansas quicksilver at nine active mining operations in Pike and Clark counties is valued at about \$1,800, state Geologist George C. Branner said yesterday. Dr. Branner was erroneously quoted last week as placing the value at \$5,600.

The geologist said the higher figure was probably reached by assuming all mine operations were working at full capacity of 105 tons of ore daily. He explained that some of the furnaces are not now working to capacity and others are not yet in regular operation.

"I would estimate that the total tonnage of ore passing through furnaces now in actual use does not exceed 78 tons daily, and may be less," he said. "If the average ore recoveries for this tonnage is assumed to be 10 pounds (instead of 20 pounds) the total daily recovery would be about 780 pounds, or 10.2 flasks of quicksilver, which at \$175 per flask would



be worth \$1,785.

"It is not at all impossible that values may rise to \$5,000 per day with the full use of the present furnace installation and a slight improvement in the average grade of the ore mined. With the opening of new mines and the installation of new furnaces, the figure could go considerably higher. "At the present time, however, I believe that an estimate of about \$1,800 daily as the value of metal recovered would be liberal."

### State Demands Reports From Six Quicksilver Companies.

6-1-40

E. R. Richardson, supervisor of the state Revenue Department's Severance Tax Division, prepared yesterday to act against six quicksilver mining companies in Pike and Clark counties which have failed to report production for taxation purposes.

Production of quicksilver is taxable at the rate of 2.5 per cent of the gross cash market value, the same levy against severance of most other natural resources. Payments must be made each month when production reports are filed.

"Until recently, quicksilver mining was considered on an experimental basis and no effort was made to collect the tax," Mr. Richardson said. "Since the price has soared because of war demand it has gone beyond that stage."

The state notified the nine companies operating in the two counties in April that reports must be made and taxes paid. Mr. Richardson said six companies have failed to comply.

He said auditors will go to the mine offices in an effort to determine production. It was said the state can estimate the severance tax if denied access to the books. Certificates of indebtedness would be filed, with the circuit clerks for judgments against the companies.

### Quicksilver and Manganese To Be Needed for Defense.

6-13-40 Gazette

Quicksilver and manganese are strategic minerals in Arkansas which may be developed by the United States Bureau of Mines in connection with the nation's defense program, Governor Bailey was informed yesterday by a telegram from State Geologist George C. Branner, who was in Washington.

Dr. Branner, following a conference with the bureau's representative in charge of strategic minerals, said a project "to drill in quicksilver area has been favorably considered, but beginning date not definite." Quicksilver deposits in Pike and Clark counties are being mined. "Project to drill in Batesville manganese area under consideration," the geologist continued. He said Bureau of Mines representatives, after surveying a Sevier county area producing antimony, were "not optimistic as to the quantity of ore available and doubt if their drilling can be economically justified. I am to supply the bureau with additional data which will be considered with respect to the possibility of justifying the drilling program."

A message to the governor from H. K. Thatcher, executive director of the state Agricultural and Industrial Commission, said that a location in the Munsey building had been obtained for the state's office at Washington, established for the purpose of bringing war industries to Arkansas. Mr. Thatcher, Dr. Branner and L. A. Henry, engineer-director of the state Planning Board, went to Washington in the office.

### Quicksilver Corporation Gets State Charter.

GAZETTE 6-14-40

The National Quicksilver Corporation of Murfreesboro, organized to mine or to contract for the mining of cinnabar, quicksilver or "all other minerals," filed articles of incorporation at the office of Secretary of State C. G. Hall yesterday. The corporation, authorized to issue 2,000 shares of no par value each, will start business with a capital of \$51,000 in the form of a cinnabar lease.

Incorporators were B. D. Sponhaltz of Oklahoma City, Okla., president; Charles A. Salyer of Murfreesboro, vice president, and Rodney Janeway of Oklahoma City, secretary-treasurer, each having 338 shares; and Alfred Featherston of Murfreesboro, resident agent, six shares.

### Coring Tests for Quicksilver Urged by Branner.

GAZETTE 6-26-40

Dr. G. C. Branner, state geologist, notified Governor Bailey that a representative of the Mid-Continent Quicksilver Company of Arkansas had said the company is willing to loan a core drill outfit to the state Mineral Survey, if the survey will furnish labor to operate the outfit in the quicksilver area. The company also would furnish a director for the drilling.

Dr. Branner said he believed such a program is "desirable" inasmuch as the War Department has classified

quicksilver, found in Pike and Clark counties, as a strategic mineral. The geologist, who also notified the Mineral Survey about the offer, returned to Washington, D. C., early this week to assist the Arkansas agency there. Governor Bailey said progress reported by H. K. Thatcher, who is directing the office, is "most gratifying."

## Mining of an Important War Material, as Demonstrated Here, Seems Simple Process

DEMOCRAT 6-30-40



—Democrat Photo.

Ever see a man milk a rock? That is what E. Smith Reed, industrial engineer of the state Agricultural and Industrial Commission, is doing in the accompanying picture, and the stuff he is recovering from the rock is pure mercury, one of the most important of war materials.

The piece of ore he is holding was found in Pike county. The area abounds in rich cinnabar, the ore from which mercury is obtained. The rock shown is not technically cinnabar, but is a first cousin, and so composed that it is honeycombed with tiny globules of mercury, which can be shaken out, and is quite rare. The picture was posed by Mr. Reed, but the mercury he holds in one hand was actually shaken out of the piece of ore by a reporter. More could have been obtained by more vigorous shaking, or more simply by crushing the rock and heating.

However, H. K. Thatcher, director of the Agricultural and Industrial Commission, wanted the ore to take with him to Washington as a graphic illustration of the state's possession of war minerals.

The ore shown, as previously stated, is a rarity and usually occurs in small pockets, according to experts. Some of the mercury or quicksilver obtained in the early days of California and some Italian mercury is obtained from similar deposits.

Most mercury, however, is obtained from cinnabar, in which mercury and sulphur have been combined by volcanic or some such action, into mercury sulphide.

The extent of deposits of the type of ore shown has not been determined, Mr. Reed said, but it is known that Pike and adjoining counties abound in rich cinnabar ore. Exploitation of those deposits as part of the national defense program, is one of the objectives of the office recently opened in Washington by the Agricultural and Industrial Commission.

Recovery of mercury from cinnabar is relatively simple. The ore can be crushed and heated in any kind of still, even the crudest. The sulphur burns off and the mercury vaporizes.

In fact, it is so easily recovered, according to experts, that cinnabar mine operators have a great deal of trouble with "high graders."

These people steal the ore by pocketfuls or in similar small quantities. Even a teapot with a tight lid, and a piece of hose, can be put together into an effective still. With mercury selling at fabulous prices because of the war, the operation is a highly profitable one to the "high grader."

Mercury is an important min-

eral in industry, but it is especially valuable for war purposes since every shell, mine, torpedo and bomb and every other explosive made relies on a mercuric composition for detonation.

operator received 60 pounds. Price of the mineral has advanced from a peace-time price of \$80 a flask to \$175, Dr. Branner said.

"Activity in the district is the greatest since the ore was discovered in 1931," he said. "About 3,500 flasks of 76 pounds each have been recovered, with about one-third of the total produced in 1939.

### QUICKSILVER MINES IN STATE ARE BUSY

Pike Co. *Courier* 5-24-40  
High prices for quicksilver have brought renewed activity in the cinnabar mines of Arkansas, Dr. George C. Branner, state geologist, reported on his return from a three-day trip in southwest Arkansas.

Arkansas mines have produced 3,500 to 4,000 flasks of quicksilver since the price rise made the mining more profitable, Dr. Branner said. About two-thirds of this production has been made since January 1.

One rich body of ore has been struck, he said, with the operators reporting 60 pounds of mercury recovered from a ton of ore. The average recovery is five to 20 pounds.

## VALUABLE CINNABAR DEPOSIT FOUND ON ROLLING FORK

De Queen Bee  
Kraft Geologist Finds Sevier Specimens Appear Identical to Those of Pike County.

7-24-40  
Assurance that samples of ore taken from a tract of land on Rolling Fork river northwest of De Queen, contained cinnabar in paying quantities, was given Gordon Mabry and J. W. Penney on Monday, at Murfreesboro.

Mabry, secretary of the De Queen Commercial Club, and Penney, De Queen's "one man mineral survey," took the samples to the office of Geologist Thorn, who is head of the geology department of the vast Kraft paper mill company which owns thousands of acres near Murfreesboro and where a thriving cinnabar mining industry is now under way.

According to Mabry, the geologist instantly saw the possibilities of the samples and compared them with stones taken from the Murfreesboro mines. The stones were identical in appearance.

Thorn expressed keen interest in visiting the Sevier county deposits, Mabry said. He told of having inspected every cinnabar mine in the world, with exception of two small ones located on islands, and described the formation at the Sevier county location, although he had never seen it.

Penney believes that the Sevier county deposits cover a wide area and reach great depths, from his explorations. The area is across on the west side of Rolling Fork river from the original deposits found by Penney.

Mabry said that there is no doubt but that the mineral is now awaiting only development by those financially able to take it out in paying quantities.

### Quicksilver Mines In State Are Busy

The Owl, *Amity* 5-23-40  
High prices for quicksilver have brought renewed activity in the cinnabar mines of Arkansas, Dr. George C. Branner, state geologist, reported recently on his return from a three-day trip in southwest Arkansas.

Arkansas mines have produced 3,500 to 4,000 flasks of quicksilver since the price rise made the mining more profitable, Dr. Branner said. About two-thirds of this production has been made since January 1.

One rich body of ore has been struck, he said, with the operators reporting 60 pounds of mercury recovered from a ton of ore. The average recovery is 5 to 20 pounds.

Dr. Branner says, "I would estimate that the total tonnage of ore passing through furnaces now in actual use does not exceed 78 tons daily, and may be less." "If the average ore recoveries for this tonnage is assumed to be 10 pounds (instead of 20 pounds) the total daily recovery would be about 780 pounds or 10.2 flasks of quicksilver which at \$175 per flask would be worth \$1,785.

### \$5,000 Worth of Quicksilver Mined Daily

*Gurdon Times*  
Nine active mining operations in Pike and Clark counties are producing about \$600 worth of quicksilver ore daily in response to the demand for war purposes, Dr. George C. Branner reported after a two day survey of the Arkansas field.

The state geologist said the mines, employing about 100 men, have retorts to handle 162 tons of furnace ore daily. Ordinarily five to 200 pounds of quicksilver are recovered per ton, but one

## To Speed Up Production Of Cinnabar

Special to the Gazette. 7-27-40

Murfreesboro, July 25. — In an effort to meet nation's need for mercury in the defense program, members of 14 cinnabar mining companies voted unanimously at a meeting here last night to speed up production of mercury in the Pike, Clark and Howard county area.

The group agreed that the first step is the construction of an all-weather road and, second, a rural electric line. Tentative plans were discussed for obtaining state and government aid in the building of a road starting at Highway 8 in the western end of Clark county, running through the cinnabar belt of Pike county and ending on the east side of Howard county.

An official read a letter from the Arkansas Power and Light Company concerning a rural electric line. The letter was referred to a committee which indicated it would investigate the possibility of an REA line. Some of the larger companies are operating on electricity generated by their own power plants.

Association Formed.  
The conferees formed the Arkansas Quicksilver Producing Association. The association elected two committees, one composed of Judge Wiley Jones of Howard county, Judge Fred Kizzia of Pike and Judge George H. Wells of Clark, together with four members of the mining industries, to confer with state and government officials on the road and electric problems, the second committee, composed of four mining members, was appointed to draw up the constitution and by-laws and to nominate officers to be voted on August 8.

The Road Committee indicated that it would request the state to sponsor a WPA road.

Mines represented at the meeting, and the number of workers employed by each mine, included the Big Six Mining Co., 22; Z. B. Lewis Mining Co., 16; Arkansas Quicksilver Company, 54; Holmes Mining Co., 7; Hale Mining and Development Co., 30; Mercury Mines, Inc., 16; Southern Mining and Reduction Co., 5; United States Mercury Co., 32; J. O. Wright and E. B. Guess Mining Co., 8; Caddo Quicksilver Co., 37; National Quicksilver Co., 3; Jack Fork Mining Co., 8.

### Caddo Quicksilver Corporation Sued for \$925.69.

GAZETTE 7-27-40

J. O. Wright and E. B. Guess filed suit for \$925.69 against the Caddo Quicksilver Corporation in Circuit Court yesterday, claiming the sum was due them for mercury which escaped as gas while being processed by the firm.

The complaint said that last April 16 the plaintiffs delivered to the firm at its reducing plant near Amity 33.67 tons of ore which had a mercury content of 14.571 pounds per ton. The company agreed to recover 95 per cent of the mercury contents and agreed to extract it for \$5 per ton, the complaint said. Under those terms, the plaintiffs alleged, they should have recovered 490.6 pounds of mercury valued at \$2.23 per pound. The total value would have been \$1,094.94 less the milling cost of \$168.35, leaving \$925.69.

The plaintiffs alleged that the company was careless in processing the ore and recovered only 40.5 pounds of mercury. They said they believed the negligence consisted of applying too much heat

## Cinnabar Operators Want Roads

GAZETTE 8-1-40

Quicksilver mine operators of southern Arkansas whose industry is flourishing because of national defense needs, plan to send a committee to the state Highway Department to ask that an all-weather road be built across the Arkansas quicksilver district.

The cinnabar (quicksilver) area extends from the western edge of Clark county, across Pike county to the eastern section of Howard

county, a distance of 40 miles. Leo Yount of Amity, operator of the Arkansas Quicksilver Mines, Inc., who started development as long ago as 1931, constructed a pioneer road system for himself. The Civilian Conservation Corps later built roads, but they were not kept in good condition, Mr. Yount said. Lumber trails also have been used.

Roads in Bad Condition.  
Crowded and worn down by mine traffic, the roads "wear out" an automobile in six months, Mr. Yount reported here yesterday. Engineers and geologists have been reluctant to examine the mining areas because of its inaccessibility, operators complained. Even friends of the mine owners stay away because of rough roads.

"Getting men in and out and getting ore over the roads" is a problem, he continued. "Fuel oil and lumber for the mines also must be hauled."

Property of the Arkansas Quicksilver Mines, Inc., which employs 64 persons, is located approximately five miles south of Kirby, Pike county. The mines are six and one-half miles from Highway 27, which connects Kirby and Murfreesboro. Trucks take the ore to Amity for shipment by rail.

W. E. Thorne, W. F. Hintze, J. E. Berry and Mr. Yount, as members of the operators' Road Committee, represent 14 mines on the Roads Committee. County judges of the three counties also are members. Appointed at a recent Murfreesboro meeting at which operators agreed to speed up production, they also will seek federal and county aid for roads. The 14 mines employ more than 250 persons.

Industry Grows Rapidly.  
Dr. G. C. Branner, state geologist, estimated that nine mines were producing 78 tons of ore daily two months ago. Since then the market price has increased from \$175 to \$196 and even \$198 a flask. The 1938 average was \$76.10. The daily ore output as of two months ago, 10.2 flasks, now is worth approximately \$2,000, at \$196 a flask. The same mines have a daily capacity production of 105 tons.

Mr. Yount said the Arkansas Quicksilver Mines, Inc., has invested \$150,000 in cash, to date, and will have invested more than \$250,000 in the next six months. It is operating the Parker Hill mine. Plans have been completed to install a new 390-horsepower Diesel generating unit, power from which will be used in developing the Parnell Hill mine one mile west of Parker Hill, and the Gap Ridge mine one mile east of Parker Hill.

### Power Line Sought to Serve Cinnabar Area.

8-11-40 Gazette

A proposed rural electric line for the development of the cinnabar area in southwest Arkansas will be surveyed Thursday by an engineer from the Rural Electrification Administration, Chairman Thomas Fitzhugh of the state Utilities Commission, said yesterday. If the project is considered feasible, work on the line, to serve sections of Pike, Howard and Sevier counties, could start within two weeks, he said.

He said an effort would be made to have the REA engineer make surveys of other sections in which electric power is needed for mines.

Electricity for the co-operative might be obtained from private utilities at Murfreesboro or Glenwood. Ten mines are operating in the area.

State Geologist George C. Branner said electric service would reduce operating costs of the mines. Power is obtained from Diesel engines. Dr. Branner said no electric power was available for zinc and lead mining in north Arkansas.

## Cinnabar Mine Area May Get REA Project

Democrat 8-11-40

A proposal to extend rural electrification lines into the Arkansas cinnabar mine area, located in Pike, Howard and Sevier counties, as a national defense measure, was being considered today by the State Department of Public Utilities and the Rural Electrification Administration.

Thomas Fitzhugh, chairman of the Utilities Commission, said the proposal to extend the lines and form a rural electrification co-operative in the area, considered as necessary for advancing the quicksilver mining, was advanced by Ray Ward, an Amity mine operator, and had already been received in favor by Washington officials.



# DESPITE DISHEARTENING HANDICAPS, RICH CINNABAR DISTRICT IS PROSPERING WITH QUICKSILVER PRICE UP TO DIZZY HEIGHTS

Gazette 9-22-40

By CLOVIS COPELAND.

(Staff Correspondent of the Gazette.)  
Murfreesboro, Sept. 21.—A big increase in the price of quicksilver caused by the European war and the national defense program has caused a new boom in the rich cinnabar district of this section and provided the incentive for miners to resume their battle against bad roads and high power costs to extract the precious metal.

Prospectors who invested their all and faced the handicaps without outside assistance see a chance to reap their rewards on an abnormal market, from which they can build their own roads and provide power to continue operations when the emergency ends.

The story of the district is no different from that of other virgin fields. Prospectors have known all along that the metal was there in rich quantities. However they were forced to use gasoline motors for power and move the reduction units from mine to mine.

This has meant that much of the manpower has been used in operations other than removing the ore and extracting the quicksilver. The current price is approximately \$90 a flask (about 76 pounds) above the normal price, which means that even with crude methods of extraction, a fair profit can be realized.

Indications are that imports of the metal will be cut off or curtailed to a great extent. The United States ordinarily produces only 54 per cent of the quicksilver it consumes. This new field therefore is becoming of great importance and is being watched closely by officials of the national defense program.

Despite handicaps, the region has produced more than a million dollars worth of quicksilver since the first flask was shipped out about nine years ago.

## Industry Carried on Under Discouraging Conditions.

Cinnabar has been found in a narrow belt about 26 miles long and a maximum of six miles wide, all the way across north central Pike county and extending a short distance into Howard and Clark counties. The best road in the area is State Highway 27, which almost bisects the district.

The country is rough and cut up by the Little Missouri river and Antoine creek, both of which flood the lowlands in the fall and spring. The section has been useful only for its timber, except for some farming in the creek and river bottoms.

Little of the area ever has been inhabited. Prospectors were forced to cut their own roads to the mines, and to ford the mountain streams or construct rude bridges.

Small reduction units and only absolutely necessary mining equipment has been carried into the interior until recently, when two of the larger concerns built temporary bridges which would permit passage of trucks carrying heavier Diesel equipment.

The Arkansas Quicksilver Company plant, one of the leading producers of the area, can be reached only by traversing a six-mile road, which is knee-deep in dust in the summer and impassable with mud in the winter.

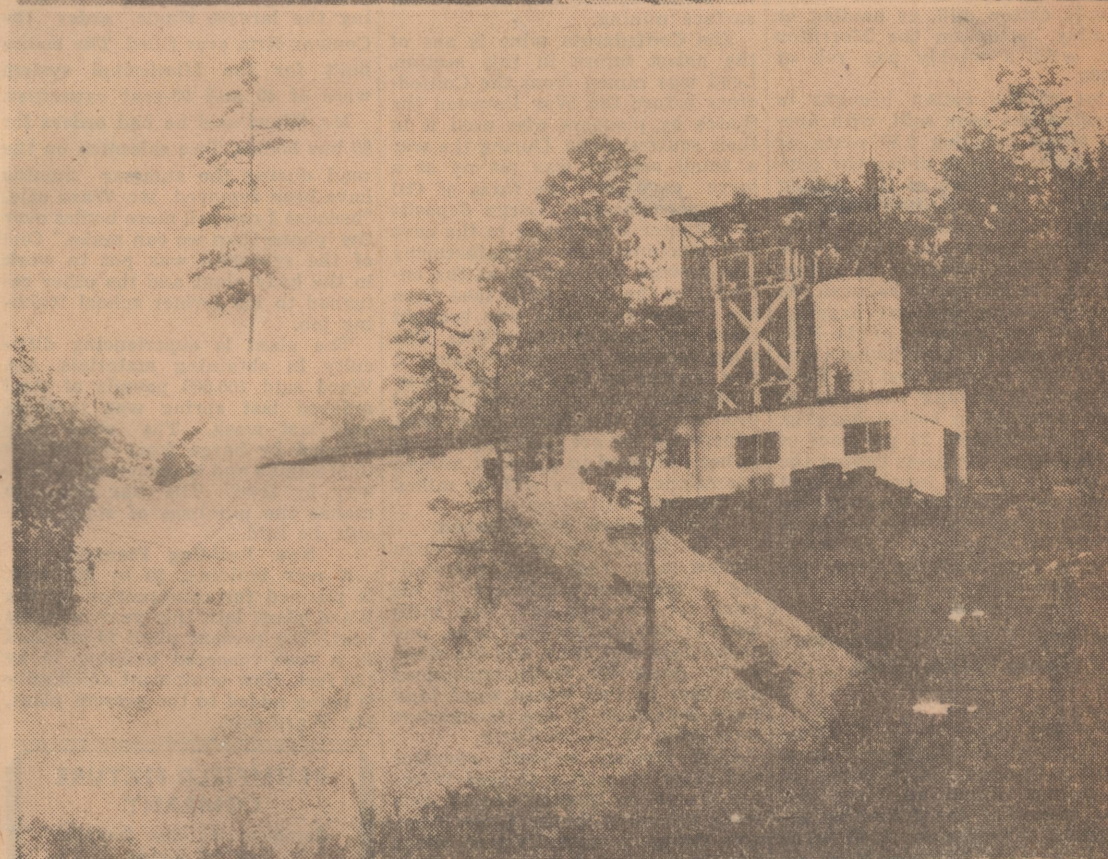
The reduction plant is situated on one side of the Little Missouri river and the principal mine of the company is on the other side. A small temporary bridge is used by trucks transporting the ore from mine to plant. This winter, small boats will be pressed into service.

Even with this system, the plant is paying dividends. The concern has purchased the latest type of mining and refining processes, and has been doing some reduction work for smaller mine units in the area.

Mining is difficult because of the nature of the underground structures.

The ore is as rich as any known deposits. Some has produced 1,000 pounds of metal to a ton of ore. This is unusual, however. The usual ore produces from 15 to 50 pounds of quicksilver per ton.

Some ore veins have been discovered on the surface, reaching to a depth of 260 feet. The veins usually take a diagonal course. Shafts follow the veins from a central shaft, from which the ore is removed in large buckets.



The top picture shows J. Barrett, left, and H. Stewart, working 260 feet under the ground in the Parker Hill mine, where the first cinnabar deposit was discovered in the southwestern Arkansas quicksilver district near Murfreesboro. The bottom picture shows the modern reduction plant of the Arkansas Quicksilver Company, where the quicksilver is extracted from the ore.

## How Quicksilver Is Produced From Cinnabar Ore.

The cinnabar ore is usually brought from the mine in large chunks then crushed into smaller sizes, from one to two inches in diameter. Then the ore is placed in large pans and placed in specially constructed heating units. The quicksilver and sulphur form a gas, which is forced through a cooling system. Here the quicksilver becomes a fluid and drops to the bottom of a second cooling system. The sulphur gas escapes through a vent.

The quicksilver is purified through the use of heated lime. It then is placed in flasks, and is ready for the market. It leaves even the crude refining plants in the purest form.

Geologists say that if roads from the mines could be improved, it would be more profitable to install large reduction plants in a central location, and bring the ore to the plants.

This would make possible a systematic reduction of certain types of ore at the same time and greatly

reduce the expense of the operation. It would eliminate waste.

The power problem may be solved within the next year. Engineers say that a dam on Little Missouri river would provide all the power necessary. However preliminary surveys have indicated that the impounded water would flood some of the most valuable mines.

Engineers of the Arkansas Power & Light Company are said to be working on the idea of supplying the area from Remmel or Carpenter dams near Hot Springs, or from other dams which could be constructed on the Ouachita river. The existing dams are not more than 30 miles from the center of the district.

## Industry's Hardy Pioneers Still Doing Business.

Most of the adventurers who opened the fields in 1931 still are operating. Leo Yount, who erected the first two plants and started mining in August, 1931, now is in charge of one of the largest and most modern plants.

Others who have been active in the development include State

Geologist George C. Branner, M. J. Shortaw, R. C. Rohrdanz, J. F. Funk, N. H. Stearn, Walter F. Hintze, N. K. Clemmensen and Ralph Cranston.

Mr. Yount still is operating the Parker Hill mine, from which the first commercial ore was removed. It still is one of the most productive in the district.

Mr. Hintze, who became interested in the ore while connected with the diamond mines, less than 10 miles from the district, is one of the successful operators. He started with a pick and shovel and a stake of less than \$50. He has financed his own operations from the beginning.

Mines in the district are being operated day and night. The operators say the field has passed the promotional stage and that the production of quicksilver in paying quantities is a reality. It is expected that production will be increased at least 25 per cent during the next two months. Additional increases will depend upon the conditions of the roads.

The miners hope to interest some agency which will construct at least a basic road system for the area, as a national defense project or as a community enterprise.

## Early Action Sought on Power Line to Cinnabar Area.

Gazette 9-6-40  
The state Utilities Commission will communicate with a Washington representative of the Rural Electrification Administration seeking early action on a proposal to extend an REA power line to the southwest Arkansas cinnabar mining area, Chairman Thomas Fitzhugh said yesterday. The proposed line would be connected with that of the Southwest Co-operative Corporation, Texarkana. Negotiations are being made with the Arkansas Power and Light Company for furnishing current.

The cinnabar area extends from Amity, Clark county, to Center Point, Howard county.

## Mine Near Amity Produces Good Ore of Mercury.

Gazette 9-15-40  
Special to the Gazette.  
Fayetteville, Sept. 14.—Ore from a mine near Amity yielded four and five-eighths ounces of mercury from 24.75 pounds of ore in a sample reduction process here, officials of the new Southern Mining and Reduction Company of Fayetteville, which owns the mine, announced. Prof. W. R. Spencer of the University of Arkansas was present at the experiment and helped improvise a retort for the process.

Officials of the new company are Hal Douglas, business manager of the Northwest Arkansas Times, president; Price Dickson, Fayetteville city attorney, secretary-treasurer, and R. E. Vandruff, Little Rock, and O. W. Wheeler and Roy Ward of Amity, vice presidents.

## Judgment of \$600 Awarded Quicksilver Company.

Special to the Gazette. 9-21-40  
Murfreesboro, Sept. 20.—The Mid-continent Quicksilver Company was awarded judgment of \$600 against the United States Mercury Company by a jury in Circuit Court here today. The suit was based on a breach of contract. The Mid-continent company alleged it had processed more than 400 tons of cinnabar ore to extract mercury for the United States Mercury Company and that a balance of \$774 was due for the processing. About 2 and 1-2 flasks of mercury is held by the sheriff under an attachment issued when the suit was filed.

Judge Minor Millwee set next Wednesday for trial of the election contest brought by County and Circuit Clerk C. G. Bolin against J. D. Thompson, for the office of representative. Each side has challenged approximately 500 votes.

## Cinnabar Mines to Get REA Line

Gazette 9-24-40

Washington, Sept. 23 (AP). — The Rural Electrification Administration announced today allotment of \$240,000 to make power available for operating 18 Arkansas cinnabar mines.

The allotment was to the Southwest Arkansas Electric Co-operative, Texarkana. The 154 miles of line would serve 403 members in Pike and Clark counties in addition to the mines. The REA said electrification of the mines would double or treble their quicksilver production and aid national defense.

## Cheaper Power Expected To Boom Production.

Gazette 9-24-40

Cheaper power will cause a new boom in the cinnabar mining district, mine operators said. Many claims, which are not being worked because of the low quality ore, will be profitable with cheap power, it was said.

Electricity is highly important in mine operations. It is used for light in the mines and to force air into them as well as operate power drills, lifts and other equipment. Most of the operators have been forced to produce their own electric power on small portable gasoline units, at high cost.

Much of the low quality ore is not removed from the mines. The new power rates will make the ore profitable.

It is probable electrical transport equipment for hauling ore from the mines to reduction plants will be placed in service when the cheaper power becomes available.

Mr. Fitzhugh said he had talked with Dr. Ralph V. Craig, Washington, assistant REA administrator, and that Dr. Craig had advised him he would send an engineer to Arkansas Thursday to discuss the proposal. A definite answer on the problem is expected within two weeks, Mr. Fitzhugh said.

Ward said the addition of rural electrical lines to the mining area was badly needed to advance the mining of quicksilver, one of Arkansas's most valuable products concerning the national defense purchasing.

## Road Plans Drafted.

Already the State Highway Department has mapped out a proposed 63-mile road to be constructed through the area as a national defense measure. Plans for construction of the route have been turned over to the Works Projects Administration along with other highway and airport plans considered important to national defense.

Several weeks ago REA officials advised that \$285,000 was available for establishment of new Arkansas rural electrification co-operatives, and added that if more REA money was needed in the state it would be available if the Arkansas projects were approved in Washington. To date the state still has approximately \$100,000 available from the first allotted fund.

## Power Line to Cinnabar Area To Be Surveyed.

Gazette 8-15-40  
A proposed rural electric line to serve the cinnabar area in Pike, Howard and Sevier counties will be surveyed today by an engineer from the Rural Electrification Administration. He will be accompanied by Thomas Fitzhugh, chairman of the state Utilities Commission; Dr. George C. Branner, state geologist, and H. K. Thatcher, director of the Agricultural and Industrial Commission.

If the project is considered feasible, work on the line could start in two weeks, Mr. Fitzhugh said. The cinnabar area is without electric power at the present.

## Cinnabar Area Likely To Get Power

Gazette 8-16-40

The Rural Electrification Administration will do "everything in its power" to build rural power lines into the cinnabar area of Southwest Arkansas, R. J. Bemish Jr. of Washington, D. C., power consultant to the REA administrator, said last night.

Mr. Bemish returned late yesterday from a tour of the area with state officials, investigating the feasibility of granting an REA loan to extend rural electric lines in the area.

He said farmers and mine operators are extremely anxious to

secure a power line and indications are the REA will assist them. Cinnabar is the ore from which mercury is obtained. Mercury is a product vital to the national defense program being used in many industries including the manufacturing of shells and firing caps.

## Present Operations Said Only to Scratch Surface.

He found the entire area experiencing an overnight boom due to the closing of Spanish deposits of the mineral which formerly supplied the greater part of American mercury. The Arkansas area formerly supplied between five and 10 per cent of the domestic consumption, he said, and indications are that it may supply as much as 50 per cent in the future. He said present operations were "only scratching the surface."

State officials making the trip with Mr. Bemish were Thomas Fitzhugh, Utilities Commission chairman; state Geologist George

C. Branner; and H. K. Thatcher, executive director of the state Agricultural and Industrial Commission.

Mr. Fitzhugh said construction of the lines would start in two weeks if the extension was considered feasible. Mr. Branner said use of electric power would reduce costs of mining operations considerably.



# Work Begun On Cinnabar Electric Line

9-27-40

Special to the Gazette.

Murfreesboro, Sept. 26.—Engineers arrived today and crews immediately started surveying and obtaining right-of-way for the 152-mile rural electric line to serve the section's cinnabar mines.

The REA has allotted \$240,000 for the project, and the War Department, seeking to speed up production of quicksilver in the defense program, has issued an order eliminating the large bond usually required of purchasers. The Arkansas Power and Light Company will furnish electricity. The line also will serve 362 farmers.

The cinnabar belt extends from twohsetern part- . . . . . the western boundary of Clark county through Pike to the eastern part of Howard county.

# Cinnabar Mining Firms Merged

Gazette 10-6-40

Murfreesboro, Oct. 5.—A consolidation of the Craig Mining Company and the Southern Mining and Reduction Company was announced here today. The new company will be known as the Craig Mining Company and has an authorized capital stock of \$100,000.

Company officials announced that they obtained a new lease on the Lula Bell property, containing 40 acres, which lies in the heart of the cinnabar belt, and also a lease on 40 acres belonging to the Ozan Lumber Company joining the Bell tract. The new leases specify that the company must go on a production basis and operate constantly at least 56 man hours per day, which would take the company out of the prospecting class and place it in the producing class. Officials said that orders already had been placed for new machinery, including a 25-ton reduction tank.

Democrat 10-6-40

# Cinnabar Power Line Hearing Date Set

Hearing on the application of the Southwest Arkansas Electric Co-operative Corporation for permission to construct a line into the cinnabar producing areas of Pike and Clark counties will be held by the state Department of Public Utilities on Friday, October 11, at 2 p. m. The Rural Electrification Administration recently approved a loan for construction of the line.

# Cinnabar Firms Involved In Sale to Remain Separate.

Special to the Gazette. 10-9-40

Murfreesboro, Oct. 8.—Roy Ward, vice president and engineer of the Southern Mining Company, said today that an article appearing in the Arkansas Gazette Sunday stating that the Southern Mining and Reduction Company and the Craig Mining Company had consolidated was in error. Mr. Ward said that the Craig Mining Company was taken over as a subsidiary by the Southern Mining and Reduction Company and will be operated and financed by the parent company as a separate holding. He said the Southern Mining and Reduction Company will continue operations.

# Cinnabar Section Power Line Started

10-16-40

Special to the Gazette.

Murfreesboro, Oct. 15.—Work was resumed today on the construction of the REA line into the cinnabar belt. Work had been suspended for 10 days while mining company and REA officials attempted to reach an agreement on the power purchase contract.

Approximately 300 farmers and farm laborers started clearing right-of-way through the district, which extends from the Clark

county line through Pike to the eastern boundary of Howard. Company officials said that the work scheduled called for the clearing of all the right-of-way in 18 days and that construction of the line will follow immediately. Several miles of rural line to serve farmers in the southern part of Pike county will be built as soon as the cinnabar line is completed. It is expected the line eventually will cover the entire rural section of Pike county.

# Expert Coming to View Cinnabar Area

Democrat 10-18-40  
Washington—An expert investigator of the geological survey division of the Interior Department has been sent to Arkansas to inspect the mercury field there for possible further expansion in connection with the national defense program. David D. Terry said today.

Dr. John Reed is the expert from Washington, and other investigators now doing field work are to join him in surveying the state's mercury deposits.

This is the result of efforts made previously by Terry and other members of the Arkansas delegation to persuade the defense agencies to develop domestic strategic minerals rather than importing them from other countries. The federal men will study the cinnabar deposits in the southwest part of the state.

# Government Buys Mercury In Arkansas

## May Open Way For Further Sales Of Mineral in State.

Democrat 10-20-40

By B. N. TIMMONS.

(Democrat Washington Bureau.)

Washington—A government contract has been awarded to Mercury Mines, Inc., for the purchase of a "substantial quantity" of mercury produced in the cinnabar district of Pike county, it was announced Saturday in a joint statement from Senator Hattie W. Caraway and Representatives Fado Cravens and David D. Terry.

The formal contract will be executed during the early part of the week, the announcement said.

It is understood, they said, "that this is the first contract to be awarded to an Arkansas firm for the purchase by the government of strategic minerals during the current armament program."

They considered the contract to be of "great value" in that through it employment will be given to men in the state and it will also "pave the way for the award to the citizens of Arkansas of other contracts for the purchase by the government of strategic materials."

It was pointed out that efforts are being made to interest the defense agencies in the development and purchase of other Arkansas minerals, including manganese, quartz crystals, antimony and bauxite.

"The government is manifesting an increasing interest in the mineral resources of Arkansas," they said, "and during the past week has sent experts from the United States Geological Survey into western Arkansas for the purpose of studying mercury and manganese deposits."

# Delivery Of Mercury To Start Dec. 1

Gazette 10-31-40

Arkansas's first national defense contract, awarded to Mercury Mines, Inc., calls for the delivery of \$120,000 worth of prime virgin mercury, 750 76-pound flasks having a unit price of \$160 per flask, in a 12-month period, starting tomorrow.

The first delivery will be made about December 1, said James F. Pigg, vice president and general manager of Mercury Mines, Inc., which received a purchase order from the Branch of Supply, Procurement Division, Treasury Department, yesterday. The flasks will be delivered to a government warehouse at Columbus, O.

Mercury Mines, Inc., maintains a Nichols-Hereschoff quicksilver furnace having a daily capacity of 50 tons at its plant, located in Pike county, seven miles southeast of Amity, Clark county. The company, a reorganization of the former Mid-Continent Quicksilver Corporation, has headquarters at 414 Union National Bank building, Little Rock.

The contract was first announced by Senator Hattie W. Caraway and Congressman Fado Cravens in Washington, October 19. The purchase is being made under an appropriation for strategic and critical materials.

# \$125,000 Purchase Of Arkansas Mercury.

Gazette 11-1-40

Washington, Oct. 31 (AP).—Senator Caraway and Representatives Cravens and Terry, Arkansas Democrats, announced today the government would buy \$125,000 to \$150,000 worth of Arkansas mercury under a contract recently awarded to Mercury Mines, Inc., Pike county, Ark.

They said the contract would give employment to about 100 persons in Pike county, direct attention to Arkansas's mineral resources and perhaps result in selection of other firms in the state for defense contracts.

# Many Jobs Provided In Cinnabar Area

11-3-40

By JAMES D. MONTGOMERY.

(Staff Correspondent of the Gazette.)

Amity, Nov. 2.—Southwest Arkansas's cinnabar field, which landed the state's first national defense contract, is providing steady and part-time employment for 500 Pike and Clark county residents, P. H. Rowe, merchant, estimated today.

Most cinnabar miners are farmers whose regular incomes needed bolstering. A comparatively small number of men handling technical details came from other states. Even Arkansas coal miners can be found in the rapidly growing industry.

The average wage for unskilled workers is 35 cents an hour, a superintendent said. Miners work eight hours a day.

\$120,000 Contract.

The plant of Mercury Mines, Inc., located seven miles southeast of here in Pike county, will deliver 750 flasks of mercury, prime virgin, clean and bright, domestic, containing at least 99.5 per cent mercury, to a government warehouse at Columbus, O., in the ensuing year, under terms of a contract with the Treasury Department Procurement Division. The unit price of a 76-pound flask will be \$160, the total amount, \$120,000. Operations will be resumed Tuesday or the early part of the following week. The first delivery will be made about December 1.

Seventy-five men will be employed. Mr. Rowe said this employment would increase his store business to the extent of \$3,000 a month.

War Boomed Market.

The European war boomed the market for mercury, which "makes the detonation" of a shell, before defense preparations started in the United States. Ammunition manufacturers have been taking a large part of the output. A chemical company has been buying from the Caddo Quicksilver Corporation at \$181 to \$183 a flask. Representatives of the Western Cartridge Company, St. Louis, Mo., recently inspected the field. New private contracts, possibly others for national defense, are expected. A power line extension of the Rural Electrification Administration is nearly complete.

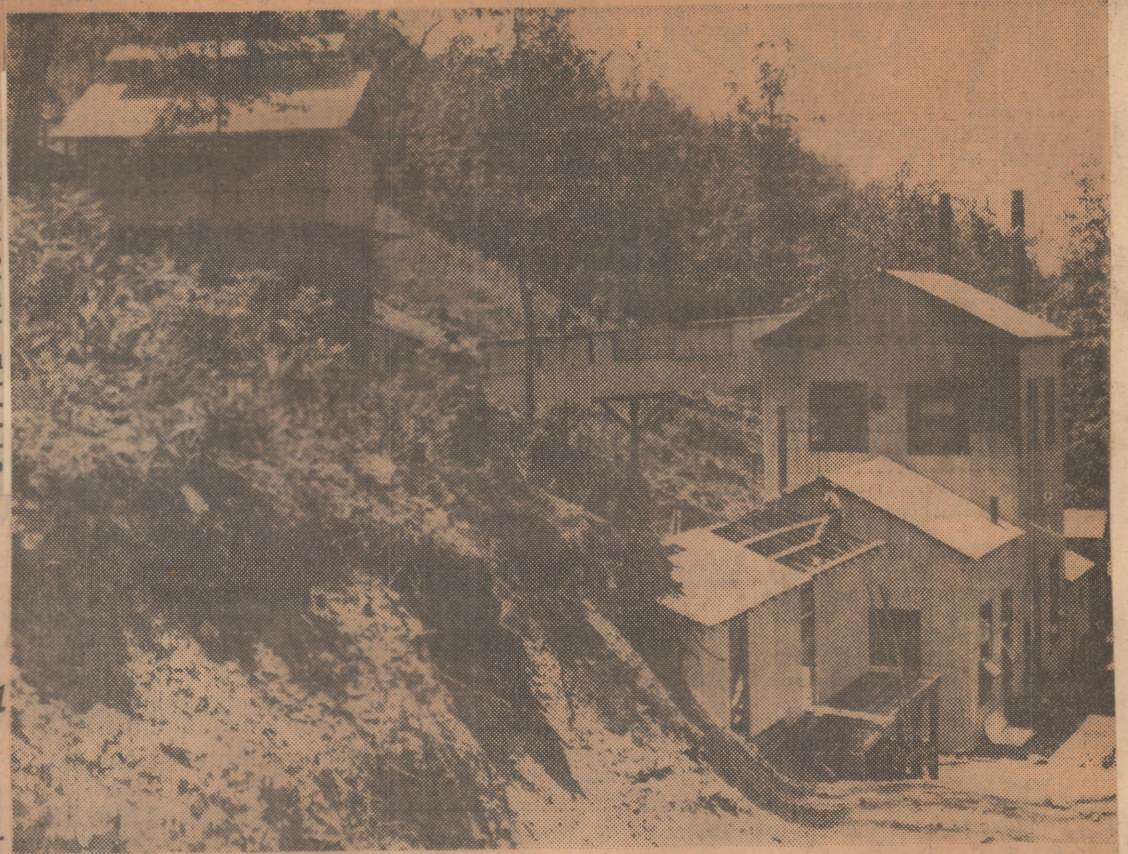
"This is the biggest potential field in the United States," Paul Reinhard, mine superintendent for Caddo Quicksilver, said. "If this were in Arizona or anywhere else in the West, there'd be a mine on every hill." Other operators reported Maj. William Thorne, mining authority at Murfreesboro, has asserted the field still could be producing 100 years from now.

The largest producer in the 26 by 6 mile field is Leo Yount's Arkansas Quicksilver Mines on Little Missouri river, described in an article in the September 22 Gazette. Mr. Yount, pioneer in the cinnabar development, formerly operated a predecessor to Mercury Mines. Geologists say Mercury, leasing 1,800 acres and owning 103, has the largest holdings.

'Grass Roots' Mining.

Mr. Rowe said one of Mercury Mines' deposits was discovered while a road was being built. A tunnel extending 60 feet into a hillside is a continuation of development which started at this road. "This is 'grass roots' mining," a

# WHERE MERCURY IS 'MADE'



—Gazette Staff Photo.

Mercury to be sold to the United States government under Arkansas's first national defense contract will be extracted from cinnabar at the plant of Mercury Mines, Inc., located on a Pike county mountainside overlooking Big Antoine creek and neighboring Clark county. The plant is seven miles southeast of Amity. The rocks and mercury obtained from them follow a down-hill route through a rough ore bin, crushed ore bin, hopper room, furnace and condensers, and packing room.

# REA Spurs Cinnabar Production

Gazette 11-5-40

Washington, Nov. 4 (AP).—Construction of additional rural power lines in Arkansas will enable the cinnabar mines of that state to step up production soon, Harry Slattery, administrator of the Rural Electrification Administration, said today.

Cinnabar is the ore from which mercury is extracted and is vital to the national defense program. Until recently, much of the mercury used in American production had been supplied from Spanish mines. Before these deposits were closed to the American market, only 5 to 10 per cent of domestic needs were supplied by a few Arkansas mines.

On September 24, the REA allotted \$240,000 to the Southwest Arkansas Electric Co-operative Corporation, at Texarkana, to serve 18 cinnabar mines, as well as 403 farmer-members. The cinnabar field in Pike, Howard and Clark counties in southwest Arkansas will benefit.

Lines Will Be Completed To  
Several Mines This Week.  
Gazette 11-5-40  
The REA lines are expected to be completed to several mines in the cinnabar area this week. Construction was delayed several weeks while mine operators and the REA agreed on rates. A contract, agreeable to both parties, was approved at a conference several weeks ago, called by the state Utilities Commission. The REA has expressed interest in construction of new lines to other areas with mineral deposits.

Mercury Of  
Arkansas  
Finds Favor  
Gazette 11-10-40  
National defense authorities are convinced there is an "almost limitless" supply of mercury in the Arkansas cinnabar mines, Will G. Akers, Little Rock lawyer, said yesterday.

He returned yesterday from Washington, D. C., after spending more than four months representing the Mercury Mines, Inc., of Murfreesboro, which obtained a \$120,000 mercury contract from the government recently.

Compromise  
On Cinnabar  
Power Sought  
Democrat 11-9-40  
Alarmed over the possibility that construction of an electric power line into the cinnabar area of Southwest Arkansas may be halted because of refusal of operators to sign contracts for power, the State Department of Public Utilities scheduled a conference with the miners in Murfreesboro at 2 p. m. today.

"We are determined to find out the cause of this trouble," Thomas Fitzhugh, chairman of the commission, said.  
R. J. Bemish, national defense consultant for the Rural Electrification Administration, which is building the line, threatened last night to abandon the project at 4 p. m. today unless the mine operators sign contracts for power. The line, now under construction, is to extend 152 miles and cost \$110,000. Already, about \$60,000 has been spent on construction.  
Abandonment of the line, it was feared in some quarters, would jeopardize the only defense contract awarded in Arkansas to date. That contract for \$120,000 worth of mercury was recently given to the Quicksilver Mines Inc., which operates in that area.  
The contract was not made, it was reported, until electric power was



assured through approval of the REA project.

Utilities Department Chairman Fitzhugh said abandonment of the power line project would be a blow to the state. It is the first project of its type ever approved by REA, he explained, and added that failure at this critical stage would not only immeasurably handicap development of the cinnabar area, but would delay exploitation of other mineral resources of the state.

Prior to meeting with the mine operators, Mr. Fitzhugh could not say what caused the situation. "An unfortunate misunderstanding" gave a rate factor might be the difficulty, he said, but added that "we are going to get to the bottom of it."

That "misunderstanding" came about in making rate revisions to meet mine operators' objections to the rate structure set up when the project was started.

Mr. Fitzhugh also said the department was anxious to rescue the Cinnabar area line because the national defense council was counting on Arkansas mercury production in its plans.

Of the 20 mines operating in the three-county area, it was said that only four operators had signed contracts to take the power. Electricity to energize the line is to be purchased wholesale from the Arkansas Power and Light Company.

Chairman Fitzhugh called the contract made with the utility firm "the most favorable rate ever made for a similar type of project." 1-14-40

## Cinnabar Area May Lose REA Line

Gazette 11-14-40

Work on a 152-mile rural electric line in Pike, Howard and Clark counties to serve more than 20 cinnabar mines will be stopped at 4 p. m. today unless mine operators sign contracts for electric power by that time. R. E. Bemish of Washington, national defense consultant for the Rural Electrification Administration, and Thomas Fitzhugh, chairman of the state Utilities Commission, said last night. Mr. Fitzhugh will meet with members of the Quicksilver Producers' Association at Murfreesboro at 2 p. m. today to deliver the message from REA.

Construction of the line, estimated to cost \$110,000, was started in September after the association tentatively agreed to contract for the electric service. A "great majority" of the producers have not yet signed the contract, Mr. Bemish said.

If construction is stopped, Mr. Bemish and Mr. Fitzhugh said they would request the REA administrator to "ask for an investigation of the obstruction of the project."

The line was approved by the REA as a national defense project to facilitate production of cinnabar, from which quicksilver is produced. One of the producers, Quicksilver Mines, Inc., recently was awarded a government contract for \$120,000 worth of quicksilver, Arkansas's only defense contract. If construction is stopped, this company will not be able to secure electric power, Mr. Bemish said.

Power for the line would be bought wholesale from the Arkansas Power and Light Company.

"Because of the need for materials in other parts of the country, it is doubtful if construction can be started again if work is halted," Mr. Bemish said. "This project is a precedent for the country and we had planned to extend lines to other areas in Arkansas with rich mineral deposits without electric service."

The Utilities Commission originated the project and secured approval of the REA.

## Cinnabar Miners Sign REA Contract

Gazette 11-15-40

By CLAUDE CURLIN.

(Staff Correspondent of the Gazette.)

Murfreesboro, Nov. 14.—A threat by the Rural Electrification Administration to halt construction on a 110-mile rural electric line into the cinnabar area in Pike, Howard and Clark counties was removed today when six of the operators signed contracts for electric power. The last remaining obstacle to the completion of the line, which operators said would hasten the development of the field, was over-

come at a conference between members of the Arkansas Quicksilver Producers Association and the state Utilities Commission here.

R. J. Bemish of Washington, national defense consultant for the REA, had said that construction would be stopped unless the contracts were signed by 4 p. m. today. Tonight he said the project will be rushed to completion. Some of the mines may have power available by Saturday morning.

**New Contract to Be Asked.**  
Operators objected to certain features of the contract. They signed after Chairman Thomas Fitzhugh of the commission assured them that the writing of a new contract to clarify the disputed points will be recommended to REA by the state commission.

The contract establishes a demand billing of \$1.50 a month per kilowatt plus energy charges of 2.5 cents per kilowatt hour for the first 50 kwh, 1.2 cents for the next 100 kwh and eight-tenth cent for all other power. The Southwest Arkansas Co-Operative Corporation, which will serve the line, will buy power wholesale from the Arkansas Power and Light Company at 8.5 mills per kilowatt hour.

Operators objected to a clause in the contract requiring them to pay a demand charge for each meter. Some of them said all meters would not be used at all time. The REA agreed to waive the demand billing on meters not in use.

Companies that signed were: Superior Mercury Mines, Arkansas Quicksilver Mines, Inc., Big Six Mining Company, Southern Mining and Reduction Company, Mercury Mines, Inc., and Wright & Guess. At least six others have indicated they will approve the contract.

**Mr. Fitzhugh Sees Warning.**  
Mr. Fitzhugh, in explaining the desire of the commission to see the line go through, said "This will be a wholesome thing for the entire state. It will be an admonition to the existing private utilities that they cannot sit idly by and say: 'If we don't develop this area then no one can.' If you had depended upon private companies, you wouldn't have this line under construction now."

He said the Southwestern Gas and Electric Company refused to build the line because its officials believed the area would not be profitable. The Arkansas Power and Light Company agreed to build the line but proposed to secure a cash contribution of \$40,000 from the mine operators, he said. REA later agreed to lend to the A. P. and L. sufficient funds to construct the line for 25 years at 2 1-4 per cent interest, but the offer was refused, Mr. Fitzhugh said.

Other areas rich in mineral deposits but without electric service would stand less chance of securing power if the line were abandoned. "Not only would it hurt you operators but it would be detrimental to the mineral development of the entire state," he said.

Mr. Fitzhugh said the rate "compares favorably with the rate offered by private companies to coal and bauxite mines," adding that it is as low as the co-operative can possibly offer "in view of what it is paying for wholesale power."

**Operators Optimistic.**  
George Buchholz, of the Mercury Mines, Inc., urged signing of the contract. He said a \$120,000 government order secured recently by his company "was predicated on this line." He said his company would be forced to spend \$50,000 for equipment to supply adequate power.

Operators predicted the cinnabar area would be developed into one "of the richest in the world." Mr. Fitzhugh said he had been assured the National Defense Commission is "counting on the production in this field to supply defense needs."

Continued lack of electric power would seriously cripple development and would prevent operators from reducing production costs, the operators said. They agreed the energy could be bought from the co-op more cheaply than it could be generated at their own plants.

## New 50-Ton Cinnabar Mill Planned

Special to the Gazette. 12-13-40

Murfreesboro, Dec. 12.—Charles A. Salyer, vice president and gen-

eral manager of the recently organized National Quicksilver Company, said today that the company has bought equipment for the installation and operation of a 50-ton quicksilver mining and production plant and that three truck loads of machinery probably will arrive here tomorrow. He said that installation will begin immediately.

Mr. Salyer said that 10 or 15 men will be employed to clear up the grounds and set up the machinery, and that 75 men will be employed when mining operations are begun.

Rodney Janeway, of Oklahoma City, secretary-treasurer of the company, is expected to arrive next week. Bert Sponhalt, president, also of Oklahoma City, will commute by plane between here and Oklahoma City to help direct the work. The company is a stock-holding company with authorized capital stock of \$100,000. Its holdings lie in the heart of the cinnabar belt.

**Death Postpones Caddo Meeting.**  
A meeting of the Board of Directors of the Caddo Quicksilver Company, scheduled for today, was postponed because of the funeral of the mine superintendent, M. J. ("Scotty") Eunson, who was killed in an automobile accident Tuesday night.

Jack Pate, official of the company, said that a successor to Mr. Eunson will be chosen soon and that the assistant superintendent may be elected to the position. Mr. Eunson was one of the organizers of the company and also was a director.

## Value of Quicksilver Shows Big Increase.

Gazette 12-22-40

The value of quicksilver produced in the Southwest Arkansas cinnabarfield this year will exceed the total amount paid for mercury from the field since major production was started in 1931, Dr. George C. Branner, state geologist, estimated yesterday. He said production was around 4,000 flasks, of 75 pounds each, daily. Prices this year have not been below \$165 a flask, the current price.

Dr. Branner said during the nine-year period from 1931 through 1939 total production in the field was 4,898 flasks which sold for \$393,261.25 The 1931 production was only 305 flasks, worth \$15,200.

Production this year would exceed 4,000 flasks, based upon the present daily output, Dr. Branner said. He estimated the total value of the production at \$700,000.

Spurred by an increased demand as a result of the defense program, operators in the area greatly expanded operations this year. At present, there are 12 active and 10 inactive mines in the Pike, Howard and Clark county fields. Seven furnaces and four retoras are also operating.

An even greater production was predicted by Dr. Branner. The Rural Electrification Administration has completed a high-voltage power line into the section to serve the mines. A continued demand would bring some 30 prospective mines into operation, Dr. Branner said.

## Ore Fissure and Plant



At Left—A fissure in a small mountain near the site of operations of the National Quicksilver Corporation, from which the peculiar orange-colored ore, cinnabar, is taken.

Heated in large retorts and then condensed, cinnabar gives up mercury, the quicksilver of the ancients, used in medicine and the commercial arts, and now much in demand by the United States government for use in its defense program.

More than 13 times heavier than water, it is now selling at about \$2.50 per pound.

The National Quicksilver Corporation is now building a reduction plant near the fissure shown.

At right, one of the reduction plants already constructed and in operation by one of several mercury producing firms operating in Pike county.

## Cinnabar, That Turns Into Magic Liquid Silver, Helps To Make Pike County Rich

Democrat 12-29-40

By BOB THOMASSON.

Murfreesboro—The development of the "Cinnabar" area in Pike county for the past three years has been slow but steady until the past six months. Since then, wars abroad, coupled with the United States defense program, has created a strong market at premium prices, and development has increased accordingly.

Seven "major" companies with working stock and capitalization of more than \$100,000 are now operating, most of them on two eight-hour shifts. "Cinnabar" has been found over an area about 15 miles in length and one-half mile in width extending from the western edge of Howard county across Pike into the eastern edge of Clark county, near Amity.

This ledge runs in a southwesterly, northeasterly direction and shafts have been driven as deep as 200 feet into the earth.

Similar to gold veins, the cinnabar veins run in fissures extending down, and then thinning out and the veins must again be located before continuing. Situated in the hill section of Pike county, nearly through the center running west and east, it has proved to be one of the really large and growing industries of the state.

The seven major companies now operating are:

Caddo Quicksilver Company, Cottrell reduction plant, with a Gould condensing system; Mr. Pate, organizer and manager.

Mid-Continent, with a Hershoff retort; Frank Pigg, manager.

Superior Mines, Inc.; Gould reduction plant recently installed; V. B. Lewis, owner and operator.

Arkansas Quicksilver Mines; Gould reduction plant, R. B. McElwaine and Leo Yountz, owners and operators.

Hales Mining and Development Company; Cottrell reduction plant recently installed; Mr. Hale, owner, and Mr. Crockett, manager.

National Quicksilver Corporation, Chas. A. Salyer, organizer and manager; now installing a huge 50-ton Gould reduction plant.

Besides these major companies are several smaller individual mines and operators who are "finding riches in them the hills."

**Experimental Period Passed.**

This area is far past the speculative period, as evidenced in the installation of costly machinery for refining the cinnabar into liquid mercury. Five hundred men are employed in the mines and reduction plants.

The ore containing the bright red crystals is mostly "hard rock" sometimes as hard as granite but most of the rock is a sandstone formation. Deep tunnels are driven back into the mountains, with experienced miners blasting and removing the ore to the surface, where it is trucked to the reduction plant. It is then subjected to an intense baking process, and the mercury is formed in the huge condensing pipes from the vapors and is collected in 72-

pound metal containers, sealed and ready for shipment to the ever growing markets.

**\$15,000 Weekly Output.**  
The writer in visiting the area, tried to obtain authentic information and the best information obtained as to the weekly production was that the production per week now is about 6,000 pounds which, figured at \$2.50 per pound, means \$15,000 per week.

Skilled labor is required for a large part of this work. "Hard rock" is costly to move but the steady development has proven that the ore is sufficiently rich to take care of this expense and pay a fair dividend.

Poor roads over the area are a handicap. The mine owners and operators have had to build their own roads. State and federal agencies have made no step toward building up a system of roads to adequately and safely provide for transportation.

Power has been some handicap in the operation of the reduction plants. Most of the mills are using Diesel power but this situation will be changed the first of January, when the power lines recently constructed under the Rural Electrification Administration at a cost of \$250,000, are energized.

Reasonably cheap power will serve the entire area. The water supply is plentiful, and the activity in this area, nine miles north of here has been one of the biggest factors in the steady growth of Murfreesboro, county seat of Pike county.

The future is hard to predict, but research engineers have estimated that the supply of cinnabar will not be exhausted within the next 400 years. The United States government has contracted with one of the larger companies for \$120,000 worth of mercury. Many and varied are the uses of mercury.

Contrary to the course of events in most new fields, there never has been any great amount of speculation here. Men with capital, after thorough investigation, entered the field, invested and worked and are now reaping some of the rewards of their faith and labor.

## Power Line to Cinnabar Field Nears Completion.

Special to the Gazette 1-4-41

Murfreesboro, Jan. 3.—Construction of the REA line into the cinnabar belt is practically complete, E. Weddig, general manager of the Killoren Electric Company, contractor, reported today. Mr. Weddig said the only thing now standing between the mine operators and electricity is lack of power which will be furnished under contract by the Arkansas Power and Light Company to the REA Co-operative Association which will resell it to the mine operators. The power company has not connected with the Co-op's line, which meets the power company's line at Antoine on the Clark county line. Construction of several miles of additional line to serve rural subscribers is scheduled to start next week.

## Power Line To Cinnabar Mines Begun

1-17-41

Special to the Gazette.

Pine Bluff, Jan. 16.—Construction of a 33,000-volt transmission line from Gurdon, Clark county, to Antoine, Pike county, to supply power for the cinnabar mines of southwest Arkansas, was started today by a crew supervised by William Cole, C. S. Lynch, executive vice president of the Arkansas Power and Light Company, announced.

"Within a few hours after we received notice that the power contract with the Southwestern Rural Electric Co-Operative Corporation, which will distribute the power, had been approved, we were ready he said. "We had materials on hand and men ready for the job."

**Power Declared Adequate.**  
Declaring that the company's ability to construct the line and supply power is additional proof that no power shortage exists or is in prospect for his company's territory, Mr. Lynch said. "Our contract for power with the Southwest Electric Co-Operative calls for a maximum of more than 17 million kilowatt hours per year. We

were able to meet this demand without even slightly disturbing our system. The line to convey this power will represent an investment of nearly \$30,000.

"Because of our flexible operations, due to interconnection, we are prepared to meet any demand from normal growth or from the defense program."

The Southwest Electric Co-Operative also will provide power for rural customers.

## Cinnabar Field Line Energized

Special to the Gazette. 2-19-41

Murfreesboro, Feb. 18.—Electricity was turned on at the Arkansas Quicksilver Mines, Inc., plant 13 miles northwest of Murfreesboro at 5 p. m. today, marking the first use of REA power in Southwest Arkansas's great cinnabar field.

The new lines were energized yesterday when the A. P. & L. connected its line with the REA line at Antoine, Pike county.

Tunnels at the Arkansas Quicksilver Mines Inc., will be electrified with REA power tomorrow, Robert McElwaine, assistant manager, said. The plant and mines previously had their own electric light plant. The Big Six Mining Company plant also is ready for REA power, and seven other companies will begin using power soon.

## Cinnabar Mine Gets REA Power

Democrat 2-19-41

Murfreesboro—The first use of REA power in Southwest Arkansas' cinnabar field was marked at 5 p. m. yesterday when the lights were turned on in the Arkansas Quicksilver Mines, Inc., plant, 13 miles northwest of here. The new lines were energized Monday when the Arkansas Power & Light Company connected its line with the REA line at Antoine, Pike County.

Tunnels in the quicksilver mines will be electrified with REA power tomorrow, Robert McElwaine, assistant manager, said. The plant and mines previously had their own light plant. The Big Six Mining Company plant also is ready for REA power, and seven other companies will begin using power.

## Governor to Visit Cinnabar Field.

Special to the Gazette. 3-9-41

Murfreesboro, March 8.—V. B. Lewis, president of the Murfreesboro Booster Club, announced today that Governor Adkins had accepted an invitation to visit Pike county early in April to inspect the cinnabar mining district and the diamond mines. He has been requested to include in his road-building program the paving of a nine-mile gap on Highway 27, the direct route into the cinnabar belt from Murfreesboro and which mine operators say is handicapping the development of the mining district. After inspection of the mines the governor will be guest of honor at a fish fry, sponsored by the Booster Club.

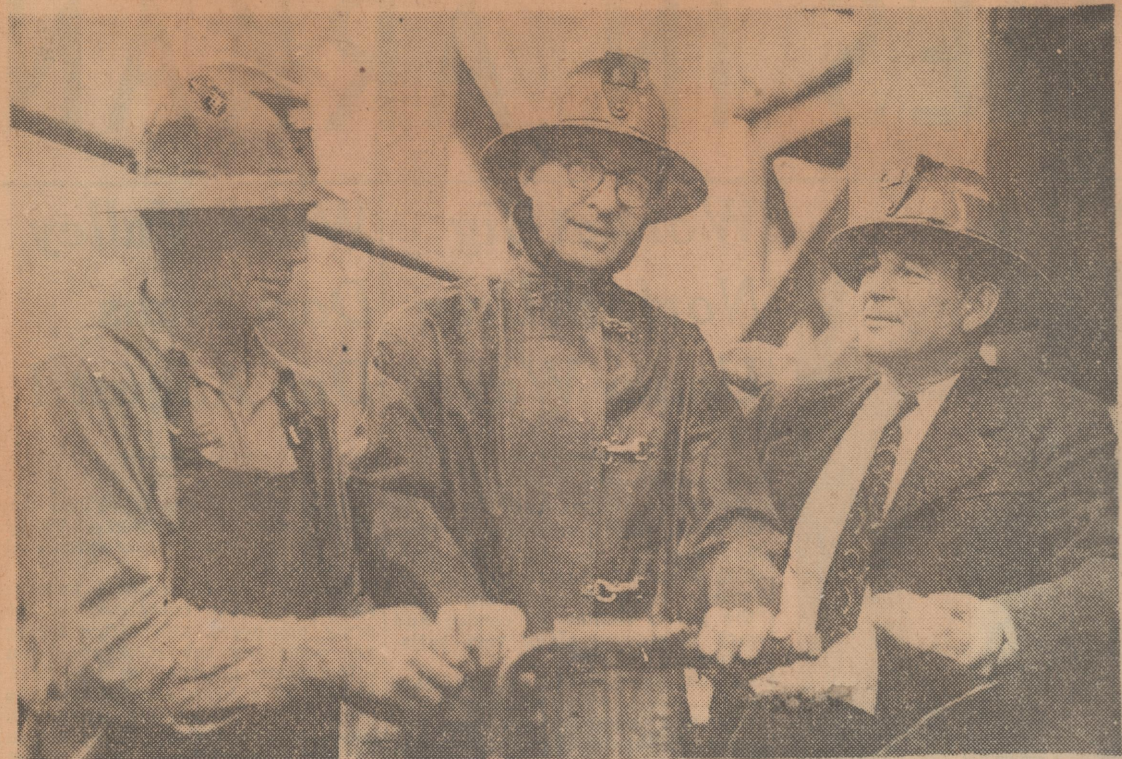
## Governor Will Inspect Mining Area Near Murfreesboro.

Special to the Gazette 4-18-41

Murfreesboro, April 15.—Plans were completed today for the entertainment of Governor Adkins and his party during their visit here Saturday when the governor will inspect the cinnabar, gypsum and diamond mines as guest of the Murfreesboro Booster Club. The Entertainment Committee was notified yesterday by the governor that he expected to arrive in Murfreesboro about 10 a. m. and would be with the club until 2 p. m. The entertainment will include a trip through the mining district and a luncheon at 1 p. m. Floyd Sharp, state WPA administrator, also has accepted an invitation to attend the program.



## EXECUTIVE TURNS MINER



—Gazette Staff Photo.  
Governor Adkins lived the life of a cinnabar miner briefly yesterday when he inspected the huge Southwest Arkansas field. He is shown here as a workman instructs him in the use of machinery at the Superior Mercury Mines Co. mill. V. B. Lewis, owner of the company (right) looks on.

## GOVERNOR SEES BUSY ARKANSAS CINNABAR FIELD

### Surprised at Size Of Industry.

Gazette 4-20-41

By EUGENE WILEY.

(Staff Correspondent of the Gazette.)  
Murfreesboro, April 19.—Voicing pleasant surprise "at the money expended and effort put forth" in the development of south Arkansas's cinnabar belt, which some mining experts already describe as the richest in the world, Governor Adkins told 100 members and guests of the Murfreesboro Boosters Club today that their plea for a better road to the ore field will not go unanswered.

Without setting a specific date, he said: "I think you're going to be well pleased before many moons; I believe that under the refunding program we can see daylight, as far as roads are concerned."

The statement was made at a fish dinner, served at the high school at the conclusion of a tour of the cinnabar field.

Primary purpose of the tour was to emphasize importance of cinnabar as a permanent industry and necessity for paving the 8.5-mile stretch of beaten gravel on Highway 27 from Murfreesboro to the center of the cinnabar belt. Highway crews had worked to make the highway presentable, but need for improvement was evident as the 10-car caravan slushed its way into the ore country through the rain.

The governor surveyed typical portions of the 30-mile mineral belt, which traverses Pike county and extends into Clark and Howard. A half-dozen mills were viewed, but only two, the Superior Mercury Mines Co. plant in the east field and the Arkansas Quicksilver Co. mill, owned by Leo Yount, in the west field, were inspected.

### Follows Path of Ore From Hillside to Storage Flask.

At the Superior mill, where V. B. Lewis, owner of the company, and president of the Booster Club, was host, the governor got a miner's view of cinnabar processing. Donning a miner's helmet and oilskin, he followed the path of the ore as it went from the hillside shaft to the steel flasks used for storing and shipping mercury.

He saw the ore, blasted from a 70-foot shaft tunnel, chuted into a rotary crusher, where it was ground to furnace mesh. He saw it fed into a 16-foot-long cylindrical oven, where in the 600-1,200-degree heat the mercury in the ore vaporized and was carried off by fan to con-

densing chambers. As mercury vaporizes at 357 degrees and condenses at any temperature lower than that, the distillation is as simple as running a homemade still.

Mr. Adkins got a thrill when he produced quicksilver with a rake. It was simply a matter of mixing the sludge—the residue after the mercury sulphide crystals had vaporized, condensed and had been drawn off in rubber buckets—with unslaked lime on an open table. The lime absorbed all the moisture in the sludge, leaving tiny balls of quicksilver, which scampered to the drain pipe on the corner of the slanting table and thence passed to the steel shipping flasks.

"Well, now ain't that hell?" jested one onlooker.

"Mister, that ain't hell, that's real money," Jesse Johnson, operator of the table replied seriously.

The half-gallon of sludge drawn off for the benefit of the party yielded 10 to 15 pounds of quicksilver, worth \$20 to \$30. Production at the mill the previous 24 hours totaled 10 flasks (76 pounds to the flask) with a value of more than \$1,000, Mr. Lewis said. He reported the day's run had been of unusually rich cinnabar.

### Tour Route Leads to Scene Of Discovery of Cinnabar.

The tour route wound through wooded hills, where the din of machinery was unknown until Crown Cox, a Murfreesboro hunter, followed his hound, Old Blue, to the crevice in the rocks while hunting possum in 1931. Determined to get his possum, he gouged the hole with one hand. It was a historic point for Old Blue. What Cox pulled out was the richest cinnabar in the world. Another Arkansas industry was born. Nearly a decade later it came into its own when the war shut off imports from Italy and Spain and sent the price to \$182 a flask.

Speakers at the dinner, at which 100 pounds of fish were served, emphasized that if the industry can get established during the present war period, the operators will be able to continue on a profitable basis even after the war's end brings the inevitable price decline.

### Importance of Highway To Field Outlined at Dinner.

Prosecuting Attorney Boyd Tackett, toastmaster, stressed the importance of the road to:

1. Accommodate the more than 300 persons employed by the 18 companies in the association, permitting them to live in town and thereby eliminate the almost impossible task of setting up living quarters "in the field," where water and sewage would present a problem.
2. Open the section's cinnabar and diamond mines and peach orchards to tourists.

Mr. Tackett said that except for the 8.5-mile stretch near Murfreesboro, Highway 70 is paved from New York to San Francisco. He said that Pike county has the only diamond field in North America but is unable to attract tourists because of poor roads.

Charles A. Salyer, vice president of the National Quicksilver Company, outlined the operators'

needs to Governor Adkins and Floyd Sharp, state WPA administrator. He said that operators originally faced four problems. Power, transportation, living facilities and industrial insurance. He added that the rural electric line energized February 18 has supplied the power at appreciably reduced cost, and that passage of the workmen's compensation law had brought the insurance within reach. He said that provision of good roads also would be the logical solution of the housing problems.

Citing the Senate's order of 70,000 flasks of mercury this year as a defense measure and the normal domestic market of 30,000 to 40,000 flasks, he said that the industry faced a market which would bear the heavy cost of getting plants under way. He said that after the ground is conditioned and machinery installed, the operators can produce for 30 to 40 per cent of their initial cost, permitting a profit in periods of reduced market prices.

### Governor Pledges Aid In Developing Field.

"Today has given me a new vision," Governor Adkins said in opening his address. He said that his administration will continue to fight for lower freight rates and plentiful and cheap power.

"I am delighted at some of the movements of the past few days, particularly with reference to sour gas," he said. "We must have cheap power and plenty of it. That is the best way to get industries."

He said that he hoped to see plentiful and cheap power assured through the White river development program, the Arkansas Valley Authority, the Blakely dam and the sour gas plant.

He said that the Lockesburg-Nashville Highway (No. 24) is included in the program for the coming fiscal year and he will endeavor to squeeze in the stretch on Highway 27 near Murfreesboro at the earliest possible date.

Mr. Sharp promised every aid in the road building.

Tribute was paid to Governor Adkins by J. C. Penix, president of the Pike County bank, former state senator and chairman of the Corporation Commission under Governor Futrell. Senator James Pilkington also spoke.

### Governor Greeted By Diamond Field Discoverer.

One of the first to greet the governor here was John Huddleston, 82, who startled the nation when he discovered a diamond on his farm near here in 1905. He does not look the part of the discoverer of the nation's only diamond field, however. He has suffered much hard luck and his sustenance now is a state pension.

## Governor Studies State's Newest Industry



—Democrat Photo.  
Governor Adkins went to the cinnabar field of Pike County yesterday to learn first hand something of the fledgling industry which will soon be bringing \$1,000,000 a year to the state. He is shown above inspecting raw ore at the shaft of the Superior mine, 14 miles north of Murfreesboro. V. E. Lewis, head of the Superior mine and president of the Murfreesboro Booster Club which sponsored the governor's tour, is at the left, and Ezra Ballard, a miner, is at the right. The governor also visited the Arkansas Quicksilver Co. mine, owned by Leo Yount and Robert Mackelwain.

## Cinnabar Mine Industry Asks Adkins' Aid

### Democrat 4-20-41 Lack of Improved Roads Cited As Greatest Handicap.

By CLAUD CURLIN.

(Democrat Staff Writer.)  
Murfreesboro—The state's cinnabar mining industry, which promises to develop into a \$1,000,000-a-year business within a few months, was put on display today for the benefit of Governor Adkins.

The chief executive, who came here at the invitation of the recently organized Booster Club, was conducted on a tour of inspection of the field by Murfreesboro business men and mine owners on a tour of inspection of the field by Murfreesboro businessmen and mine owners to acquaint him with the growing importance of the relative new industry to the economy of the state and—only incidentally, they said—to ask his assistance in getting the only road to the mine area paved.

The facts and figures presented to the governor during the whirlwind trip led him to admit at a luncheon at the conclusion of the celebration that "I had no conception of what you have here."

Because of the lack of time, Governor Adkins visited only two mines, Superior Mercury and Arkansas Quicksilver Co. He was told that operations at the seven other mines in Pike County were similar to what he had seen first hand.

\$1,000,000 Invested.  
V. B. Lewis, president of Superior Mines and head of the Civic Club, informed the governor that at the present \$1,000,000 was invested in the mining operations and that six new firms were being organized to begin operations immediately.

He estimated the present output from the field was 250 flasks of 76 pounds each of mercury a month and that this would be doubled within six months. The current price is \$180 a flask, indicating the revenue from the sale.

Possibilities for the development of the field are unlimited, speakers at the luncheon informed the governor.

Charles A. Salyer, vice president of the National Quicksilver Co., said the Arkansas field was "the largest undeveloped deposit in the world" and with the proper encouragement it could be developed to supply a large part of the United States de-

mand of 100,000 flasks a year.

The European supply of mercury, controlled by Italy and Spain, has been earmarked for the Axis powers, he declared, leaving the United States to supply "the democracies."

"Three things were necessary to attract capital for the development of the field," he asserted, listing them as an adequate power supply, workmen's compensation and good roads to serve the area.

"The first two have been accomplished but the third we still lack," he said in urging the immediate paving of an eight-mile stretch of State Highway 27, the only road to the mine fields.

"United States production at present is only one-third of the domestic demand. If the price remains at \$100 a flask, which makes it profitable to mine the lower grade ores, we can increase many times the present production in Arkansas," he said.

Mr. Salyer added that 300 men were employed in the nine mines at present, working night and day. He estimated this figure would be increased to 600 within six months.

World's Largest Field.  
Mr. Lewis declared "real mining" has never been attempted in the field, which he said was 40 miles long. "We've really been prospecting. If the present price holds up, this field will be made into one of the world's best."

The construction of a \$120,000 electric line to the mine field by the Rural Electrification Administration recently encouraged the development of new mines, Lewis said. The electric power did away with the necessity of new firms buying expensive machinery to provide their own power and reduced operating costs as much as 50 per cent in some instances, he declared.

All nine mines are using, or will use, power from the REA lines.

Speaking at the luncheon at the Murfreesboro High School, Governor Adkins promised that if it is "financially possible" the short stretch of Highway 27 would be included in the construction program for the next fiscal year, beginning in July. With construction funds made available by the refunding program, he said "I believe you can see daylight as far as your needs are concerned."

Deserving of Help.  
"When you have gone as far as you have in this work, when it is playing such a big part in national defense, you certainly are deserving of all the help you can get from the state administration," he declared.

Floyd Sharp, state WPA administrator, another guest at the luncheon, said his organization would cooperate in a program to improve roads from the state highway to the mines.

State Sen. James Pilkington Hope, also spoke. J. C. Penix, former state senator, welcomed the

governor. Prosecuting Attorney Boyd Tackett presided.

The club elected Governor Adkins, Mr. Sharp and Senator Pilkington honorary members of the Booster Club.

## New Cinnabar Plant Placed In Operation

Special to the Gazette. 6-8-41

Amity, June 7.—Production was started this week Southern Mining and Reduction Company's 30-ton cinnabar plant in the western part of the mineral belt.

Another unit of 40 tons capacity will be installed soon, officials said. The company's holdings in the eastern end of the area are being developed, and production is expected in 60 days, officials said.

### Two Residents Interested In New Mining Company

Gazette 6-11-41  
The Muddy Fork Mining Company of North Little Rock, which filed articles of incorporation in the office of Secretary of State C. G. Hall yesterday, will operate in Pike county as a cinnabar mining corporation, M. S. McCord, one of the incorporators, said. The organization will engage in exploration of mining territory, and possibly establish mining operation later, he said. In addition to Mr. McCord the incorporators are: M. J. Pruniski of North Little Rock, and Spear Reavis and H. W. Brown, both of Little Rock.



## Fortunes Lie in State's 22 Miles of Quicksilver Ore, Says Capitalist

Democrat, 10-5-41  
Hot Springs—Untold possibilities await industrialists investing in mine equipment along the 22-mile-long quicksilver deposit which runs from Howard County, through Pike to Clark County, according to Charles A. Salyer, vice president of the National Quicksilver Corporation of Murfreesboro.

Salyer, who came here to address a civic club, declared that the government surveys show that the quicksilver deposit in that section is 22 miles long and from one-half a mile to two and one-half miles.

However, despite the fact that the deposit has shown great possibilities, with some 14 pounds of mercury being obtained from each ton of ore, only 18 operators, large and small, are now engaged in active mining for the much-sought defense material. Of these operators, only eight are of any size, Salyer declared. Between 500 and 1,000 men are now employed in the mines in that section.

"With the price of mercury now running at about \$2.50 a pound, ex-

ceptionally high, new operators can well afford to buy equipment and start operations while the price is high enough to enable them to pay off that equipment," he pointed out. "After the emergency is over they will still have a good investment."

He said that it costs from \$2.50 to \$10 per ton to mine the ore and from 90 cents to \$2 per ton to furnace it. Government co-operation in the construction of roads to the mines has done much to cut down transportation difficulties. Power lines to the mines have also solved that problem.

Salyer declared that government figures show that the United States is still producing only about one-half the mercury it needs for war, medicinal and commercial uses.

Salyer also pointed out that eventually efforts will be made to mine commercially the lead, zinc, copper, antimony and manganese to be found in the same area.

He said the deposit is the largest undeveloped quicksilver field in the United States.

surveyed the workings of the Humphrey Gold Corp. properties. The report of these surveyors will be released in a short time.

## Rich Discovery Of Cinnabar Reported.

Special to the Gazette 1-31-42  
Arkadelphia, Jan. 30.—What its discoverers believe is the richest vein of cinnabar ore found in the Chalybeate mountain range near here has been located in new workings of the Humphreys Gold Corporation on International Paper Company land five miles southeast of Amity in Clark county. The site is 25 miles northwest of Arkadelphia.

O. M. Walker of the company office, who lives in Arkadelphia, said several shafts and tunnels have been dug into Jack mountain at an elevation of about 500 feet. The Humphreys company is developing a large acreage. An 80-ton mill has been bought for installation at the mine, where several hundred tons of ore await refining. Mr. Walker said the ore assayed far above the average. Mercury (or quicksilver) now is selling for about \$200 a flask of 76 pounds, more than 100 per cent above prewar prices.

There are 90 men on the pay roll, 25 of whom are engaged in clearing for the new processing plant. A. E. and I. B. Humphreys are the owners. The mine and the plant will be operated with electric power furnished by an REA line. The company has head offices in Denver and in addition to operations in Colorado, dredges for gold in California it has other mining properties in Arizona.

## Price Ceiling On Mercury Established

Gazette 2-5-42

Washington, Feb. 4 (AP).—The Office of Price Administration fixed maximum prices today on mercury at levels lower than the prevailing market.

The ceiling, effective at once, sets maximum base prices for prime virgin mercury produced in California, Oregon, Washington, Idaho, Utah, Nevada and Arizona at \$191 a 76-pound flask at point of shipment, and \$193 for mercury produced in Texas and Arkansas.

The maximums approximate prices prevailing on mercury between October 1 and October 15, 1941.

## Machinery For Mercury Plant Arrives

Special to the Gazette, 2-8-42

Amity, Feb. 7.—The Humphrey Gold Corporation of Denver, engaged in quicksilver mining on lands five miles south of Amity, received two carloads of reduction plant machinery yesterday and will begin immediately installation of two recovery plants, each with a daily capacity of approximately 80 tons. Rich veins of cinnabar ore have been discovered which give

indications of being the best ever discovered in the cinnabar area.

There are three tunnels several hundred feet back in Chalybeate mountain from which the firm mining ore, storing it until recovery plants are installed.

Col. A. E. Humphreys of Denver, a veteran gold mine operator, is president; P. W. Racey of Oakland, Cal., vice president and general manager of Arkansas properties, and Oral M. Walker of Amity is resident manager. Approximately 100 men are employed. Mines are operating on 24-hour basis. Others will be added on completion of the two plants.

## Reduction Of Mercury Improved

Gazette 12-25-42

A method to produce much more mercury from cinnabar, and to do so cheaper than present methods has been developed by an engineer and geologist at Glenwood, Ark., a WPB official said here yesterday.

The official, who asked not to be quoted by name, said R. E. Vandruff had built a laboratory retort at Glenwood which would increase the ore yield of mercury from 75 through 90 per cent to 99 per cent and would reduce the cost of the process by half.

A larger test plant is now under construction there and will be inspected by WPB officials when completed soon, he said.

Steadman Williams, a mining engineer here, said Vandruff's method was "at least 50 years in advance of anything that has ever been attempted."

## Cinnabar Mine Activity Pushed

Democrat 4-15-43

Amity—Activities at the cinnabar mines in this area are still being pushed by several mining interests. The Ozark Quicksilver Corporation is continuing its underground explorations after cutting through several veins of good cinnabar ore. The reduction plant is being made ready and the reconstruction and enlargement of the bins at the plant and portals are being pushed to completion.

The Wall Mountain Mercury Corporation has completed its new road construction and in co-operation with Antimony, Ltd., is rebuilding the old which jointly serves both properties. Wall Mountain Mercury has completed the shops and other utility buildings and will start the erection of their 35-ton plant in a few days. Antimony, Ltd., is sinking shaft No. 1 after rebuilding the head frame and is erecting a test retort.

Arkansas Quicksilver Corp. is concentrating on their Parnell Hill property. The initial work as planned calls for a new 200-foot shaft and a 600 to 700-foot drift to pick up known ore bodies, and a small crew is working on Parker Hill in an effort to develop new ore bodies.

The United States Geological Survey, Mr. Waters and Mr. Nelson, surveyors, have about completed their survey of the Caddo Mine and have