Faze tract of land in Saline county was sold last week for 18 meters of 18 meters o



Democrat 11-21-37
Bauxite—Few of the present younger generation, outside of those living in this vicinity know that the bauxite (aluminum) mines here which made possible the town of Bauxite, first were brought to notice as a commercial enterprise by a veteran of the Confederacy, Col. John, G. Gibbons, regarded as the founder of Bauxite.

In the very early days of the cen.

The widow of Colonel Gibbons, now 88 years old, continues to live here and she was present at the presentation ceremonies and unveiled the portrait, which is framed in

J. W. Lewellen of the Republic Mining and Manufacturing Company presided at the presentation cere-

Special to the Gazette. 12-19-37

Benton, Dec. 18.—The C. W. Lewis Lumber Company here has completed a new dry kiln at a cost of about \$5,000. An aluminum foil, "Alfol," the trade-mark product of the Aluminum John G. Gibbons, the founder of Bauxite.

In the very early days of the century, Colonel Gibbons, who had had experience in mining aluminium ore, had the deposits here brought to his notice, and it was he who saw their possibilities and established the entarties.

\$5,000. An aluminum for, trade-mark product of the Aluminum to the company of America, was used as insulation in the kiln, under the direction of Eiton V. Smith of Hot Springs, heat-control engineer.

The use of this foil for controlling that the humidity and heat within the

The memory of Colonel Gibbons and his accomplishments is highly regarded here, as evidenced at the recent occasion when an oil protrait of Colonel Gibbons was presented to the town and the Bauxite school in ceremonies at the new school auditory.

The unique of Colonel Gibbons was presented is made came from mines located five miles from the mill. Benton is the trading center for the mining committee and Japan.

Sweden and Japan.

Production Figures Gazette Give Bauxite Big Value. 2-6-3 considerably interest has been manifested in Governor Bailey's proposal that the state contrive to have an extrading center for the mining committee and a considerable percentage. munity, and a considerable percentage of the lumber company's business has

of the important battles of northern Virginia and around Richmond. Richmond.

with 14 kilns and was then one of the largest bauxite plants in the world.

Colonel Gibbons had a leading part in establishing the town, equipped it with gas, lights and water, building a church and a school, a hospital and at the time of the World war, a Red Cross building and motion picture theater. He led in the building of roads for the community and the Bauxite & Northern railroad, connecting with the Missouri Pacific. Colonel Gibbons died in 1919.

Among the speakers and those paying fights and the succession of the kiln. We consider the portrait presentation were, Mrs. Gibbons, led to the platform by her son, J. Felton Gibbons, superintendent of the Norton Company here, and the succession of the Norton Company her

British Guiana were 18 and 27, respectively.

Of the eleven months exports in 1937, 76,539 tons were bauxite and other aluminum ores and 37,823 tons consisted of bauxite concentrates, alumina, etc. The respective tonnages for the corresponding period of 1936 were 50,247 and 27,134. In 1937 Canada took all the cruder materials and 28,175 tons of the bauxite concentrates, alumina, etc. The balance of the latter went to Norway, Sweden and Japan.

Give Bauxite Big Value. 2-6-3

Considerably interest has been manifested in Governor Bailey's proposal that the state contrive to have an exhibit at the New York World's Fair, with an all-aluminum building as a basis for the exhibit.

of the lumber company's business has its origin in mine pay rolls and activities.

H. W. Finkbeiner is president of the Lewis Lumber Company.

Unusual Case.

"This case of the foil is peculiar, however," Mr. Finkbeiner said, "in that a local product apparently, made cial co-operation.

cott bauxite mine operator, and the Confederate Home Board under terms Plant Here

Milum Says Bauxite Can Aid Veterans

Gazette 4-26-38

A proposal that the state sell or A proposal that the state sell or lease the Confederate Home property quiring whether the full amount of the

The Harrison senator will propose that veterans at the home be moved to the present Blind school buildings when the school occupies its new quar
of House Resolution 28 calling upon the reverse to explain the

Porocel Corp. Gazette 3-29-38 Will Operate

Gazette

drilled on the 54-acre Confederate Home grounds to determine the extent of bauxite ore deposits there.

The contract provides that the tests shall be made without cost to the state. If deposits sufficient to justify mining are discovered, Mr. Dulin will be allowed to offer the first bid for mining lowed to remain the extent of bauxite ore deposits there.

Construction of a new plant of the He attributed friendly relations between his company and business and political interests in this state to "a political interests in concessions. Should another operator started Monday on the corporation's about 40 years ago." He praised Mr. Normalia and the provides that

plant will be purchased from the Ameri-ican Cyanamid and Chemical Corpora-pany; Harry M. McDermott, a

Cyanamid, is engaged in the mining of

McCarroll Says Bauxite Tax 2.6 Per Cent. 2-15-39

for bauxite mining and that the money be used to provide additional pensions collected. Revenue Commissioner Z. M. for Arkansas Confederate veterans will McCarroll reported yesterday the levy be made to Governor Bailey today by state Senator Roy Milum.

is 2.6 per cent of the gross market value rather than 25 cents per ton as contended by Representative John P.

funding program and place workmen's compensation and venue-fixing acts in operation."

No Stranger, Says Mr. Cuff.
Explaining he was no stranger in
Arkansas, Mr. Cuff recalled he first
visited his company's bauxite holdings

'I've been coming here pretty regu larly ever since and I've grown to like Arkansas and its people very much,"

concessions. Should another operator out-bid him, the contract provides that he shall be allowed not more than \$1,000 by the successful bidder for his work.

Members of the board, Mr. Bailey said, are hopeful that sufficient ore will be found on the property to provide funds for building a modern Confederate Home, probably adjacent to the new Blind and Deaf schools.

Bernuit for Baxis

Drilling Is Awarded

P. A. Dulin of Prescott yesterday was given a contract by the Confederate Home Board and Governor Bailey to drill a series of holes on the 54-acre tract of the home to determine the extent of bauxite ore deposits on the property.

The company is a subsidiary of the American Cyanamid and Chemical Correction which has operated a chemical weeks' combination business and vacability of the American Cyanamid and Chemical Cyanamid Cyanamid and Chemical Cyanamid and Chemica

about March 1, 1939.

Porocel products are manufactured from bauxite and are used in the bleaching process in petroleum refining, Mr. Shaeffer explained. Ore for the tendent: J. A. Wagner, vice president tion's mines, increasing business of that corporation.

The Attapulgus Clay Company of Atapulgus, Ga., an associate company with Porocel Corporation and American Cyanamid, is engaged in the mining of

On Bauxite Ore Needed

1-27-40 Gazette

Realizing the supply of high grade bauxite ore was limited and that surface deposits were exhausted, bauxite interests in Arkansas have sought in recent years to perfect low-cost methods of bringing low grade ore up to marketable grade, Fred J. Venner of Little Rock told a Membership Committee luncheon of the Chamber of Commerce at the Hotel Marion yesterday.

Mr. Venner is secretary-treasurer

He said efforts to find a way of or occessing the low grade ore at a cost industry. sufficiently low to meet competition had been "fairly successful" thus far, out, continuation of the industry's development over a long period of years is dependent to a great extent on obtaining cheaper fuel and cheaper

Methods have been developed in the last five years to make possible the processing of low grade ore by elimination of impurities," he asserted, explaining magnetic machines and concentrating tables are being used to extract the iron from the bauxite ore and "washing" machines have been perfected to remove silica from the

Ore Not Exhausted.

Mr. Venner does not believe the sup-ply of bauxite ore in Arkansas will be exhausted for many years. He believes better production methods must be perfected, at lower costs, to enable companies operating in this state to compete with bauxite produced in France, Hungary and South

He said Arkansas produces approximately 95 per cent of all bauxite produced in the United States. This is only about 44 per cent of the total amount of bauxite used in this country, more than half of the country's bauxite ore being imported from for-eign countries.

eign countries.
Government statistics were quoted to show that about 500,000 tons of bauxite ore was produced in Arkansas in 1918. This compared with 82,000 tons produced in 1932—a depression year—and approximately 300,000 tons produced in 1938, when the influence of the depression still was preticable. of the depression still was noticeable. Bauxite has been mined extensively in

Plastic Plants Needed Here. Bauxite is used in the manufacture of aluminum, lightest and strongest metal known, Mr. Venner asserted. Explaining aluminum is used extensively in the manufacture of airplanes,

he said several airplane manufacturing companies are considering the use of plastics as a substitute for alumi-

Reminding members of the chamber's Membership Committee that Arkansas produces many products used in the manufacture of plastics, the industrialist said the state should en-courage development of one or more plastic industries here.

The annual membership roundup of the chamber will begin with a break-fast at Hotel Marion Tuesday, E. C. Lambert, chairman, announced. Walter C. Guy and Verne Guesewelle will be captains of the two teams, which will lead the drive.

Arkansas's Bauxite 95 Pct of Total

March 5, 1940

Washington, March 4 (A).—Arkansas produces about 95 per cent of the United States supply of bauxite, chief source of aluminum. D. F. Hewett, head of the Metals Section of the Interior Department's Geological Surwey Division, made this estimate for a House Appropriations Committee which submitted its report to Congress

Testifying in support of a \$145,000 ing. In recent years, production has appropriation to continue investiga- been running around 300,000 to 400,-tions looking to increasing the do- 000 tons."

Lower Costs Arkansas Chemist Tests Aluminum

March 10, By Edgar B. Chesnutt Gazette Photographs by Margaret Bourke-White

Since all of the bauxite mined in the state while living in Benton, where his aluminum comes from Arkansas, it is and manager of the Arkansas Bauxite only fitting that a native of this state should be playing an important part in the development of the aluminum

> He is Don Utley, son of Circuit Judge and Mrs. J. S. Utley of Little Rock, who is plant chemist for the Aluminum Company of America at its plant in Lafayette, Ind., where aluminum is produced in extruded shapes by forcing the molten metal through dies under heavy pressure.

With his mortar and pestle, test tubes and Bunsen burners, formulas and figures, he is playing a vital part in the development of an Arkansas resource that is now utilized in practically every branch of industry.

Mr. Utley, who was born in Conway while his father was a student in Hendrix College working on his Bachelor of Arts degree, first took an interest in the minerals and clays of his native

father practiced law.

From earliest childhood he liked to make things, and to take things apart to see what made them go. "Making gadgets," he says now, is one of his most favored hobbies.

Always willing to work hard to achieve an objective, Mr. Utley has found employment in many and varied businesses. While a youngster, he worked as assistant janitor at the Methodist church in Benton. He worked on an ice truck and in a butcher shop. In the summers of 1921 and 1922, while he was attending Benton High School, he worked in a pottery plant at Benton.

It was here that he found the first



opportunity to become closely ac- ing the old style radiants for gas

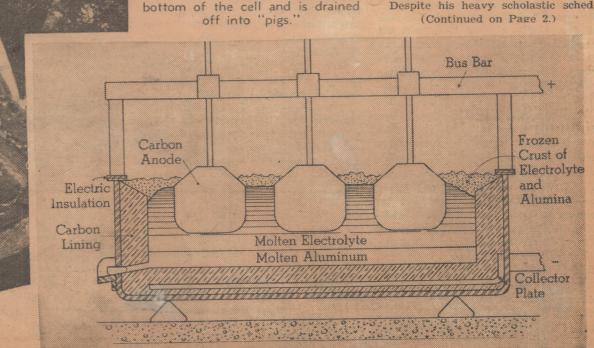
quainted with the soils of that terri- stoves. These radiants resembled bloattory. His job consisted largely of mak- ed doughnuts. They were made by roll-

At the lower left pure aluminum is being poured into "pigs" after it has been reduced through the electric cell process. Below is a sketch showing the electric cell used to reduce aluminum oxide to pure aluminum. The aluminum, freed from the oxide, settles at the

plant chemist for the Aluminum Company of America at Lafayette, Ind., son of Circuit Judge J. S. Utley and Mrs. Utley of Little Rock.

ing up a ball of fire clay, sticking a hole through it with a finger, and cooking it in an oven.

In the fall of 1923, he entered Hendrix College, where he concentrated his efforts on chemistry and affiliated studies. He had been valedictorian of his high school graduating class and in his first term at Hendrix won the chemistry prize. As a result, he was named laboratory assistant. The following year he was assistant manager of the college bookstore, and in his senior year was manager of the store. Despite his heavy scholastic sched-



mestic supply of strategic war mate- Hewett declared a review of the recrials, Hewett said the country is ord of domestic production of bauxite, "about 50 to 60 per cent self-sus- taken into consideration with our prestaining at this time" as concerns alum- ent knowledge of deposits, "indicates in the recreated appears the supply of strategic war mate- tion by drill crease our any extent. inum.

"Until about 10 years ago," he testion of this ore of aluminum, although tified. "with the annual production a recent review indicates large reat 500,000-odd tons of bauxite, we serves of low grade ore are known were almost completely self-sustain- to exist."

He said that as the result of a project undertaken by the Geological Sur-look is somewhat less encouraging with vey in Arkansas several years ago "It respect to high grade manganese and appears that a campaign of exploration antimony ores, and is pessimistic with tion by drilling will be necessary to increase our knowledge of reserves to nickel and tin ores."

The Bureau of Mines was slightly more optimistic about manganese and nickel It reported successful experiments in manufacture of manganese and nickel promode and nickel from domestic ores. Among to chorium, tungsten, and mercury," the state in which manganese will be said Dr. W. C. Mendenhall, director sought next year, the bureau said, of the Geological Survey. "The out-

ule, he found time to participate in his into a fine powder and stirred into a favorite sports, football and baseball, hot solution of caustic soda, a chemiand to take part in extra curricular activities, joining the Franklin Literary Society and the Chemists Club.

During his vacation in 1925 he obtained a position with the Republic tically no effect upon the impurities Mining and Manufacturing Company at Bauxite, which is near his home town of Benton. The late John T. Fuller, who was superintendent of the Bauxite plant, took a personal interest in the initiative of the young student and encouraged him in every way.

Following his graduation from Hendrix in 1927 with a Bachelor of Arts degree, he worked through the summer months as laboratory assistant at the Bauxite plant.

In the fall of 1927 he was employed by the School Board at Malvern, which is about 25 miles from Benton, as science teacher. After the expiration of his term he returned to Bauxite to work for the Republic Mining and Manufacturing Company, which is a subsidiary of the Aluminum Company of America.

While a student in Hendrix, Mr. Utley had met Miss Valerie Haney, who was attending State Teachers College in Conway. They were married in Plainview in May, 1928. When Mr. Utley moved to Bauxite, his wife was asked to teach in the public schools there. The Utleys have two children, a son, Robert Marshall Utley, nine, and a daughter, Nancy Jane, five.

Mr. Utley's career with the aluminum industry began as an underground mine timekeeper. Then he was promoted to plant laboratory assistant. assisting with the research on washing and calcination of bauxite. He also did some independent research on the pon the solvent action of molten cryooxides, hydrates and organic matter in * lite for alumina, and the fact that Arkansas bauxite.

He continued his education with postgraduate work in advanced quantitative analysis at the University of Arkansas, and took an extension course from the University of Pittsburgh.

In 1937, Mr. Utley was transferred to the aluminum research laboratories of the Aluminum Company of America at New Kensington, Pa., where he remained for two years before being transferred last year to the Lafayette plant as plant chemist.

Industrial and Engineering Chemistry, a national magazine, published in its January, 1938, issue an article, "Organic Matter in Arkansas Bauxite-Its Origin and Nature," written by Mr. Utley and considered an outstanding contribution along these lines.

Mr. Utley, who still likes fishing and hunting, two pastimes that have remained with him since boyhood, finds time to devote to archery,, photography, geology and woodworking.

The work in which Mr. Utley is engaged is of particular interest in Arkansas not only because this state produces all the domestic bauxite used in aluminum production today, but because of the many new and valuable uses to which aluminum in extruded shapes, made largely in the plant where he works, is being put.

Bauxite is a hydrated aluminum oxide containing as impurities the oxides of iron, silicon, titanium, and several other elements. It is found in many parts of the world, and in many parts of the United States, but only the Arkansas deposits are being worked now.

Two methods are employed in mining bauxite. If the ore is near the surface, it is mined by the open-pit method; but if it is deep in the ground, it is mined in somewhat the same manner as coal.

After the bauxite has been mined, the ore is crushed, washed, screened to remove clay, sand and other foreign matter, and then dried in large rotating kilns and shipped to an ore purification plant at either East St. Louis, Ill., or Mobile, Ala.

At the purification plant the impurities are removed by a wet chemical similar to lye. The caustic soda dissolves the aluminum out of the bauxite to form a sodium aluminate solution. The soda, however, has pracin the ore, which remain in solid form.

The clear sodium aluminate liquor is pumped into giant precipating or settling tanks, some of them as high as five-story buildings. In these tanks the aluminum hydroxide separates out of the solution as a solid.

nothing more than aluminum oxide chemically combined with water. This is removed from the tanks and washed to free it of caustic soda. The water is driven off by heating the aluminum hydroxide in large rotating kilns. The aluminum oxide that it left is ready then for shipment to one of the aluminum reduction plants, where it is converted into metallic aluminum.

To break the aluminum oxide, or alumina as it is called, into its component parts of aluminum and oxygen, an electrical process is used. To make a pound of aluminum approximately 12 kilowatt hours of electricity is required. This amount of energy would keep a 40-watt lamp burning continuously for a week and a half.

The furnace, or electrolytic cell, used in reducing alumina to aluminum is rectangular in shape and consists of a steel shell lined with a suitable refractory material. An inner lining of carbon serves as the cathode, while the current is let into the cell by carbon anodes suspended from overhead.

Operation of this process is based alumina when dissolved in the cryolite can be decomposed by the passage of an electric current without change in the solvent cryolite. Cryolite is found in only one commercial deposit-in Greenland. It is possible, however, to make a synthetic cryolite which serves the same purpose.

In the electric cell, the cryolite bath is first placed in the cell. When it has been fused by the electric current, the alumina is then added and the electric current passed through the cell. The alumina, which is dissolved by the cryolite, is broken down into its component parts of aluminum and oxygen. The oxygen liberated in the reaction combines with the carbon of the anode to form a gas which escapes through the crust at the top of the cell where the carbon monoxide burns.

The molten aluminum is deposited on the carbon bottom of the cell, from which it is tapped into large mixing ladles and cast into ingots. Since the cryolite bath material is not affected by the decomposition of the aluminum by the electric current, alumina is added from time to time and the process is continuous.

It requires four pounds of bauxite to make two pounds of alumina, and two pounds of alumina to make one pound of aluminum, hence it requires four pounds of bauxite to make one pound of aluminum. Between six-tenths and eight-tenths of a pound of carbon electrode is consumed in the producone pound of aluminum.

After being cast into ingots or "pigs" the aluminum is remelted to remove any traces of the bath material which may be present, and is remolded into ingots. These ingots vary in size from one pound to 30 pounds.

Ingot is the bulk form in which aluminum is sold. It is shipped from the reduction works to the Aluminum Company of America's own fabricating plants to be rolled, extruded, forged or cast into the common commercial forms. Some is sold also in ingot form to other fabricators to be made into the basic aluminum commodities.

The basis aluminum commodities incude those made by all the known cal process. The bauxite is first ground | metal-working processes: sheet, plate

and foil; bar, rod and wire; structural

Recent surveys show that bauxite from Arkansas goes into aluminum in practically all forms of industry. Its use, by percentages, by industries is as follows: Transportation (land, sea The aluminum hydroxide that set- and air), 29 per cent; cooking utensils, tles at the bottom of the tanks is 14 per cent; electrical conductors, 10 per cent; machinery and electrical appliances, 15 per cent; building construction eight per cent; chemical uses, five per cent; miscellaneous foundry and metal working, four per cent; iron and steel metallurgy, five per cent; food and beverage industry, six per cent; general miscellaneous, four per

Thus is a native of Arkansas aiding in the advance of an industry that affects to some extent the lives of virtually every resident of his state.

Aluminum Firms **Found Conspiring**

Washington (P)—The Justice Department announced today receipt of an opinion from Federal Judge Francis G. Caffey, presiding in the aluminum monopoly trial at New York, holding that the government had presented sufficient evidence to warrant a jury in finding the existence of a conspiracy among the principal defendants.

The action is a civil suit against

The action is a civil suit against the Aluminum Company of America, Aluminum Limited, a Canadian firm, Aluminum Limited, a Canadian firm, and 61 other defendants charging that these companies and the British, French, Swiss and German aluminum companies controlled production and price of the metal through a world cartel known as Alliance Aluminum Company

Aluminum Company.

The trial began June 1, 1938, and will be resumed November 8 after a three-month recess. The government completed its evidence June 1 and the defendants have introduced only a portion of their proof.

and foil; bar, rod and wire; structural shapes, both rolled and extruded; tubing and molding; screw-machine products, rivets and nails; sand, die and permanent molding castings; and powder for paint pigment. Applications for aluminum range from such widely diversified products as candy wrappers to shovel diggers. Recent surveys show that bauxite Bauxite Mine

It's the exceptional bauxite mine that looks like on oil well.

Such is the case, though, in the development of the Crouch Mining Company's property a short distance south of Bauxite. It is the outstanding example of a trend in deep-shaft mining of bauxite, currently the chief system because surface deposits have been worked out in the

The unusual location of a bauxite bed 300 feet below the surface—the mineral in south Pulaski county generally

ats own digging equipment. But a few feet down, complications developed. The diggers struck a soil strata like quicksand.

Experts were called in and the Layne Arkansas Company of Stuttgart began what proved to be its largest drilling job.

Applying the long-familiar principles of water-well drilling to the

Crouch task, the drillers completed the work in 90 days from last October 1. The mining corporation then had a 288-foot steel and concrete-reinforced shaft, put down directly to the south edge of the mineral bed.

A trip down the shaft is reminiscent of something from Jules Verne.
To swing through 300 feet in an ore bucket is a well-remembered ex-

is 100 feet down—resulted in the setting up of a derrick 75 feet high in the middle of a 40-acre tract.

The mine, on land first prospected by the Crouch Company two years ago, is the deepest bauxite mine in the state.

In the opinion of State Geologist George C. Branner, it is the deepest bauxite mine in the nation.

To tap the deep bed of ore, the company began sinking a shaft with

company began sinking a shaft with ment of this unique mine will place its own digging equipment. But a a rotary kiln, crushers and modern carloading equipment on the property, bringing the total investment to about \$50,000.

The corporation, which ships most of its ore to the General Abrasive Company of Niagara Falls, also operates on a lease of 45 acres at Berger, seven miles from Little Rock on the Arch street pike.



which ore buckets are run to the hoist. Beyond t bucket ready to be pulled up. The miners are carried in and out in the ore buckets which can accommodate three average-sized men.



This bauxite mine might easily be mistaken for an oil well. The 75-foot derrick supports hoisting gear by which ore on the Crouch Mining Company's property south of Bauxite is brought to the surface from the tunnel 300 feet below. The company plans additional development on the 40 acres which it owns and has worked for the first time since January 1. Below the derrick a 76-inch shaft

Bauxite Dug From Arkansas Earth Yields Aluminum Which Is Strung High in Air to Carry Electric Current

Takes Trainloads of Bauxite.

Figuring 25 tons of bauxite to the freight car, it is seen that about 250 cars of bauxite were required to manufacture the aluminum cable in the Arkansas Power and Light Company's system. Putting 50 cars to the train, it would require five long freight trains to haul all that bauxite.

The aluminum is remelted to remove any dross and electrolyte that it is seen to another plant, where the alumina is broken down into its component parts of aluminum and oxygen by an electrical process. From the electrolytic cell comes the under the aluminum used in the manufacture of cable.

The aluminum is remelted to remove any dross and electrolyte that it is seen to another plant, where the alumina is broken down into its component parts of aluminum and oxygen by an electrical process.

And then there is the aluminum wire used elsewhere in this broad land. It all adds up to a big outlet for bauxite ore, and creates a lot of employment

trical field has grown, side by side, with the expansion of transmission and distribution facilities throughout

Aluminum transmission cable consists of several high purity alumi-num wires stranded around a reinforcing core of high strength steel. In electrical language this conductor is commonly called A. C. S. R., meaning aluminum cable, steel reinforced.

Then it is sent to another plant,

mployment.

The place of aluminum in the electronical field has grown side by side.

A combination of hot and cold rolling forms the ingot into a coiled rod. The rolling is done first in a "breakdown" mill and the rod is then remills. It is drawn through die after die, each slightly smaller than the previous one, until it becomes a wire of the right size.

meaning aluminum cable, steel reinforced.

Nearly a million miles of this A. C. S. R. have been produced for wire. The wire, wound on these bobthen ready for the strand-

the built-up cable emerges at the end of the machine.

Another Type of Machine.

The other type of machine consists, primarily, of a long, revolving steel cylinder. Bobbins are mounted within the cylinder and remain stationary while the wires are fed through the guides in the side of the cylinder. The rotation of the cylinder does the stranding, and all the wires converge into a single die at the finishing end of the unit, and the steel and aluminum wires are stranded simulfaneously.

York, company engineer, who has been in Arkansas for several days.

Mr. Thatcher said the plants would need a large amount of powers and would use about 20 million gallons of water annually for the paper plant. He said analysis of water, submitted by cities and towns, would be presented to the company together with photographs of "all possible locations."

Mr. Thatcher said the plants would need a large amount of powers and would use about 20 million gallons of water annually for the paper plant. He said analysis of water, submitted by cities and towns, would be presented to the cylinder does the stranding, and all the wires converge into a single die at the finishing end of the unit, and the steel and aluminum wires are stranded simulfaneously.

As the stranded cable comes out of this machine, it is wound on large wooden reels, varying from 40 inches to 66 inches in diameter. The light weight of the aluminum cable permits the reel to carry long standard lengths without excessive weight. In addition, the reels serve as suitable shipping containers, and are design. ddition, the reels serve as suitable inping containers, and are designated with careful attention to the relimements of cable installation in Branner will leave Wednesday.

In the construction of transmission and distribution lines, these reels are swung above the ground on special mountings, and the cables strung out, reel after reel, into the long spans between the poles or towers.

one of the great advantages of aluminum cable is economy in transmission line construction. The cable, being light, can be strung with long spans, cutting down the expense of the additional poles and

metallic aluminum. State authorities said Arkansas bauxite is superior to the ore found in small quantities in

To Process

Bauxite 7-14-40

Hydro-electric projects proposed for Arkansas in connection with the federal program would furnish sufficient power, authorities believe, for bauxite

mined in Arkansas to be processed

source has been made. Engineers explained the Arkansas bauxite industry

needs more power than is now avail-

able, as well as cheap rates, to process the ore. Bauxite engineers are said to be familiar with White river plans.

The Nimrod dam on Fourche la Fave river in Perry county already under construction, also is de-

signed for power generation in the future. Its reservoir will extend back

TVA Expansion Authorized.

being processed elsewhere.

Arkansans know that bauxite minded in Saline and Pulaski counties, yields aluminum, which is used to make everything from pots and pans to suitcases and streamliners. But did you know that the electric current which lights homes, runs factories, pumps water, and performs countless other tasks, is transmitted over aluminum power lines. In the 56 counties served by the Arkansas Power and Light Company there are 3,091,800 pounds of aluminum wire. Some of this wire is so heavy it weighs 375 pounds per 100 feet. These transmission lines include those with three wires.

If all the aluminum wire in the Arkansas Power and Light Company system could be placed end to end, it would reach more than 3,000 miles.

Since it requires four pounds of aluminum, more than 12,455,000 pounds of bauxite, or about 6,227 tons were needed for this wire.

Takes Trainloads of Bauxite.

The strainloads of Bauxite.

Democrat 8-11-40

Two fundamental types of makine are used for stranding aluminum cable, steel reinforced. The nation's power lines operating at 220,000 voits or higher are of states of strands of the states. Today more than 75 per cent data power and 1 in the United States. Today more than 75 per cent data power transmission in the United States. Today more than 75 per cent of the nation's power lines operating at 220,000 voits or higher are of stands of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states. To day more than 75 per cent of the states of the states of the carried that the united States of the

the steel and aluminum wires are engineer-director of the state Plan

PowerNeeded Section of the Interior Department's Geological Survey Division, told a House committee early this year that the United States was "about 50 to 60 per cent self-sustaining" in alumi-

Aluminum Plant Here Discussed

electrolitically in the state, instead of Gazette 8-17-40

If a suggested White river project is Possibility of establishing an authorized, "we'd be interested," said a representative of the Republic Minaluminum plant in Arkansas to process bauxite mined in the state ing and Manufacturing Company of Bauxite who requested his name not be disclosed. State and army engineers identified the project as the Norfork dam in Baxter county, for which no authorization as a power which no authorization as a power which state has been discussed by state officials with a representative of the Reynolds Metal Company of Richmond, Va., it was learned yesterday. C. H. Poirier of New York. ing and Manufacturing Company of a representative of the company, refused to discuss the purpose of his visit. He has been in Arkansas

L. A. Henry, engineer-director of the state Planning Board, said Mr Poirier was investigating "the potentialities of all resources for aluminum." He said his office, in co-operation with state Geologist George C. Branner and H. K. Thatcher, executive director of the Agricultural and Industrial Com-

TVA Expansion Authorized.

At the request of the National Defense Commission, a House Appropriations Subcommittee approved a \$25,000,000 appropriation for the Tennessee Valley Authority this week, to speed up the production of aluminum for airplanes. Part of the aluminum processed in TVA territory comes from Arkansas bauxite, which accounts for 95 per cent of the nation's supply. If the \$25,000,000 appropriation finally is approved, the TVA would build one additional dam and install three additional electric generation units.

Bauxite mined in Arkansas is sent mission, was preparing data for the company's use.

Power Is Big Need.

A state official, who asked that his name be withheld, said lack of an adequate power probably would be the greatest obstacle to locating an aluminum plant in Arkansas. He said possibility of generating power with natural gas, which could be purchased at a rate ranging as low as five cents per 1,000 cubic feet, was being investigated. He said an abundant power supply, at rates almost as low as those in the Tennessee Valley area.

Bauxite mined in Arkansas is sent to East St. Louis, Ill., or Mobile, Ala., where chemical processing removes impurities and extracts the alumina, or oxide of aluminum. The electroeral million kilowatt hours and control of the company would use several million kilowatt hours and control of the company would use several million kilowatt hours and control of the company would use several million kilowatt hours and control of the company would use several million kilowatt hours and control of the company would use several million kilowatt hours are control of the company would use several might be available.

or oxide of aluminum. The electro-litical processing, such as has been nually.

Establishment of a plant to ex-

towers that heavier cable would re- is shipped out of the state to pro-

mully. Establishment of a plant to extract aluminum oxide from the ore was considered more probable than a plant to reduce the oxide to metallic aluminum, he said. Only two extraction plants exist in the United States, he said. The Reynolds Metal Company recently received a loan of \$15,000.000 from the Reconstruction Finance Company to construct a plant. The firm has inspected sites in three other states. All bauxite mined in Arkansas is shipped out of the state to processing plants. Aluminum Plant Sought For Arkansas Gazette 8-23-40 Washington, Aug. 22 (P).—Direc-

tor L. A. Henry of the Arkansas Planning Board said today he and other officials would seek to con- Comparison vince the Reynolds Metals Company, Richmond, Va., that its new aluminum manufacturing plant Favors TVA should be located in Arkansas.

Thomas Fitzhugh, chairman of the state Utilities Commission join-Gazette 8-27-40

spite the dependence on Arkansas struct the new plant.
for bauxite, none of this valuable defense material has ever been prodefense material has ever been pro-

Metals Plant

Democret 8-25-40
A site on the Saline river near
Benton, Saline county, is ideally
suited for location of an aluminum
and paper mill such as is proposed
by the Reynolds Metal Company,
according to a report prepared by
E. Smith Reed, industrial engineer of
the State Agricultural and Industrial the State Agricultural and Industrial Commission.

Commission.

The factual data was compiled and prepared by Mr. Reed at the request of J. H. Reynolds, president of the company, which manufactures packages for the R. J. Reynolds Tobacco Company. A conference with metal company officials, representatives of the state and local interests is to be held in Wash ton Tuesday, at which time information contained in Mr. Reed's report will be presented.

He confined his compilation of in-

He confined his compilation of information to the availability of a pulp wood supply, water supply and transportation. Facts on power, labor and bauxite ore will be offered by other sources.

According to the report, a circle with a 25-mile radius around Benton takes in parts of Saline, Pulaski, Garland, Hot Spring and Grant counties in which "there is an ample supply of intelligent labor * * * * on which the industry can depend."

Ample Transportation Facilities.

Two main lines of the Missouri
Pacific and Rock Island railroads and four branch lines radiate out of Benton, the report says, which, together with three modern concrete trunk highways and many all-weather gravel roads provide ample transportation facilities throughout the area.

portation facilities throughout the area.

There is an ample supply of pulp wood within trucking distance of Benton to supply a moderate sized pulpwood mill, the report claims, adding that due to the presence of two large kraft paper mills located in southeast Arkansas, at Crossett and Camden, "low freight rates on pulpwood have been established."

Dr. George C. Branner, state geologist, is quoted as having estimated the bauxite ore supply in the area, as of January 1, 1940, at 25,000,000 tons.

Detailed analysis of samples show-

Washington, Aug. 22 (P).—Direc-Power Rate

ed Henry today. State Geologist The lack of an adequate power George C. Branner and H. K. supply at rates comparable to those Thatcher, executive director of the in the Tennessee Valley area may Agricultural and Industrial Combe the deciding factor which will mission will arrive tomorrow for a prevent a proposed aluminum plant conference later in the day with of- and paper mill from locating in the ficials of the metal company, who have said tentative plans called for locating the plant in Alabama.

"We have more than 90 per cent of the bauxite reserves of the nation in Arkansas," Henry said, "as Reynolds, president of the Reynolds well as abundant limestone, coal and other needed materials. Despite the dependence on Arkansas struct the new plant.

would be used annually. If this could be obtained at rates of about four mills per kwh the company would "jump at the chance" to locate in Arkansas, he said. Power used in such quantity sells for two and one-half mills per kwh in the

"If the White river development program, which will make a large quantity of cheap power available, were completed, we would not have this worry," he said.

Corporation.
Mr. Reed said a site on the Saline Mr. Reed said a site on the Saline river near Benton, Saline county, would be suggested as an ideal location for the proposed plants. A report has been prepared on the availability of wood pulp and water supplies and transportation facilities.

Conference Scheduled Today.

Mr. Reed said he and F. S. Kelly, industrial engineer for the Arkansas Louisiana Gas Company, would

industrial engineer for the Arkan-sas Louisiana Gas Company, would confer in St. Louis today with offi-a powder-like substance known as

Plant Site Discussed

Gazette 8-28-40

Washington, Aug. 27 (P).—R. S. Reynolds Sr., president of Reynolds Metals Co.. of Richmond, Va., conferred today with Arkansas officials seeking to persuade him to build the company's proposed new aluminum manufacturing plant in their state. The company has announced tentative plans to build the plant in Alabama, but Reynolds said arguments of other states would be given consideration.

For Aluminum

Plant

Homer M. Adkins, Democratic gubernatorial nominee, announced yesterday he had been advised that

given consideration.

"It was a preliminary conference," said H. K. Thatcher, executive director of the Arkansas Agricultural and Industrial Commission. 'We left data for company officials to study.

L. A. Henry, engineer-director of the state Planning Board, and state Geologist George C. Branner at-tended the conference.

Branner will return to Arkansas this week but Henry and Thatcher will stay here to furnish company

officials with whatever additional information they mist cant. ALUMINUM JAL New York Surr 8-12-4 Secretary of RFC Called as Defense Witness.

George R. Cooksey, secretary of the Reconstruction Finance Corporation, testified in the Federal Court here today as a defense witness for the Aluminum Company of America, which is on trial before Judge Francis G. Caffey on monopoly charges. He testified that the purpose of a proposed loan of \$15,800,000 by the RFC to the Reynolds Metal Company of Richmond, Va., is to augment the national defense program.

The purpose of the defense in calling Mr. Cooksey was, it was assumed, to show that no obstacles are being placed in the way of active competition, for the Reynolds company plans to use nearly three-quarters of the loan for the production of virgin aluminum in the Ten-

nessee River Valley.
Walter L. Rice, Assistant United States Attorney, said that in his summation at the end of the trial he would charge that, because of the Aluminum Company's monopoly, not half enough aluminum is being produced to manufacture the 50,000 war planes asked for by 50,000 war planes asked for by President Roosevelt. He added that there is not sufficient aluminum being produced to supply the war planes needed for national defense. Mr. Cooksey testified that the Revnolds company had tentatively applied for the loan early in June and that on July 3 last, the board of directors of RFC made a commitment conditionally authorizing the loan. No formal application as been filed, he said.

New Alumina Extraction Means Found

Gazette 9-12-40

Knoxville, Tenn., Sept. 11 (A) .-John Henry Walthall, scientist in the Tennessee Valley Authority laboratory at Muscle Shoals. Ala., has perfected a process for extract-

this worry," he said.

The Reynolds Metal Company recently obtained a \$15,000,000 loan from the Reconstruction Finance Composition. quantities in the United States.

cials of a large corporation which alumina. The domestic supply of is planning to construct a large plant to utilize forest products. He said the plant would employ 5,000 men.

One of the "serious handicans" to Valley "

One of the "serious handicaps" to attracting the plant, he said, would be "high freight rates." Other locations being considered "have much better rates." he said.

Aluminum

in great quantities in the Tellifest used by the Aluminum Company comes from the British and Dutch Gulanas, the authority said, adding that the most extensive domestic bauxite deposits are in Arkansas and privately owned or controlled. The authority built an experi-

The authority built an experimental plant at the Muscle Shoals laboratory, and it has been producing alumina at the rate of one ton per day.

Still Chance

yesterday he had been advised that Arkansas may lose the first unit of an aluminum processing plant, planned by the Reynolds Metal

Company of Richmond, Va., but that a second and larger plant may be secured later.

Mr. Adkins said he received a telegram from Secretary W. C. McClure of the Camden Chamber

telegram from Secretary W. C. McClure of the Camden Chamber of Commerce, who was in Washington to confer with the Reynolds company officials, explaining that a lack of immediate cheap power in Arkansas probably would lose the first unit to Alabama.

The telegram said:
"Decided progress is being made. Officers of companies owning south Arkansas gas conferred here September 16. A group from New York joined the conference September 17.
"It is highly possible that they will get together and be able to offer industry ample power as cheap as TVA or elsewhere. It is unfortunate that such a coalition did not take place a week ago. Arkansas may lose to Alabama the first plant of the Reynolds interests. But we may get another, and possibly larger, unit providing a definite power rate and supply is submitted satisfactory to the Reynolds company."

State Loses Metal Plant; Goes to TVA

10-6-40

By B. N. TIMMONS. By B. N. TIMMONS.

(Democrat Washington Bureau.)
Washington—The Reynolds Metals
Company of Richmond, which had
been considering establishing an
aluminum plant in Arkansas, announced here Saturday that it has
decided to locate it at Sheffield, Ala.,
where it can get TVA power.
However, H. K. Thatcher, head of
the Arkansas Agricultural and Industrial Commission, said the company expects to build still another
plant and predicted it will be put
in Arkansas.

Arkansas

"We are sorry, indeed, that circumstances such as unfavorable Arkansas laws and high freight rates has caused the Reynolds Company to locate its aluminum reduction plant in Alabama and not in Arkansas," Thatcher said. The proposal was for the company to install its plant near the Southwest gas fields and use cheap sour gas for power. Thatcher said offers had been made to supply this gas at rates which would furnish generation of power at a rate one-third less than that of TVA.

He said M. M. Caskie, vice presi-

He said M. M. Caskie, vice presi-

He said M. M. Caskie, vice president of the Reynolds Company, made the statement Saturday that additional units "will undoubtedly be built in the near future" and that Arkansas "stands at the head of the list for future consideration."

The company said the situation in Arkansas is "especially interesting," but said that "due to the lower freight rates obtainable east of the Mississippi, proximity to other aluminum industries, better connections with foreign bauxite, etc., it was finally decided to put initial development, at least, at the location finally decided on."

Reynolds Will Spend Millions Of Dollars In The Shoals District

Hundreds Of Jobs To Be Made Available; Steady, Substantial, Orderly Growth Along All Lines Planned Here

105 Daily - Tuscombia-Shef-The Trialities of the location of the \$15,800,-With official announcement of the location of the \$15,800,-000 aluminum plant of the Reynolds Metal company at Muscle Shoals slated for Sunday, this newspaper, which has held up announcement of location of the plant here for the past 10

Practically all of the necessary work has been done preparatory to location of the plant here and with the official of Carbide & Carbon Corporation, appropriate that at the time the Electro Metallurgical company, subsidiary of Union Carbide & Carbon Corporation, appropriate the selection of Muscle the selection of the plant here and with the official of the selection of the selection of the selection of the plant here and with the official of the selection of the selection of the selection of the plant here and with the official of the selection of the trict will have taken another long step ahead in its promising development from an ining development from an ining development from an intrict, involving more major industrict, involving more

dustrial standpoint.

The plant, at which 1,250
men will be employed within six months after its completion, when capacity operations are scheduled, will be located ments planned here both by the government and private industry we near the Electro Metallurgical company's Muscle Shoals unit in Colbert county, and, it is understood, will use the same spur line railroad track leading to the main line of Southern Railway, of which R. S. Reynolds, head of Reynolds Metal company, is a director.

In ments planned here both by the government and private industry, we feel safe in still further predicting that "the end is not near in sight"; the better can be hoped for, and beyond that, expected at Muscle Shoals.

It now seems that we are definitely on the road to large-scale industrial expansion which, let us emphasize, we hope and expect will come in a natural and private industry.

The plant will have an outlet to Lake Wilson, as well as additional property on the lake, it is reported, description. which will provide the company with both rail and water transportation facilities; which, added to good highway facilities and its proximity to the TVA.Muscle Shoals City airport, served by Eastern Air Lines, will provide the company with ample modern transportation facilities of all kinds.

description.

What we want in the Muscle Shoals district is sound industrial development, accompanied by more payrolls, more homes, more business and more citizens, which will mean an orderly, substantial and steady expansion of our business and residential facilities and our schools and recreational facilities. all kinds.

Muscle Shoals was chosen as loca- ultimate progress and su tion for this plant by Mr. Reynolds all of our communities and the disand his associates, who already oper- trict as a whole. ate 17 metal plants of various kinds over the nation, after suggested sites at many points in several states were investigated, but were found to offer less industrial advantages than this section.

The plant will be located on a 640-

acre tract of land, a mile square, part of which is of a "swamp" napart of which is of a "swamp" nature and affords the company the dumping ground facilities it will require because of the large amount of refuse involved in extracting the aluminum from bauxite ore. The additional land on the lake bank, according to reports, could be utilized later on for location of a steam plant if such is ever found necessary to supplement the large amounts of to supplement the large amounts of secondary TVA power which will be \$15,800,000 R. F. C. loan. available at times for the company struction would begin at once. from the Authority.

days to enable interested persons to work out many details incident thereto, is at liberty today to divulge the information of the magnitude of this industrial project, thus making for an orderly, legitimete and conversion of the magnitude of the industrial project, thus making for an orderly, legitimete and conversion or making for an orderly. legitimate and convenient growth here in all respects.

It will be recalled by our readers announcement tomorrow, con-shoals as site of its newest developtaining accurate and official ment that this newspaper predicted details, the Muscle Shoals dis- that within a reasonable time other

recreational facilities.

all kinds.

Work on the multi-million dollar undertaking, being financed with a Reconstruction Finance Corporation loan, because of its importance in the national preparedness program, is expected to get under way at an early date; several hundred men to be employed during the construction period.

recreational facilities.

Now that all of this seems in sight this newspaper would like to commend the spirit of cooperation which prevailed between the Tri-Cities with regard to negotiations carried on for the aluminum plant—this spirit was never better and this newspaper hopes to see it continue to grow and, if such a spirit prevails, it will mean ultimate progress and success for

Aluminum Plant Goes To

Gazette 10-6-40

Washington, Oct. 5 (AP).-Sheffield, Ala., was chosen by the Reynolds Metals Company today as the site of an aluminum plant to cost between \$10,000,000 and \$15,-

A company statement said con-

Marion M. Caskie, vice president, said production would begin about March 1, and the full production of

March 1, and the full production of 60,000,000 pounds annually would be reached by July 1. The plant will employ 1,500 to 2,000 persons.

The statement said TVA power would be used, adding that to build its own power plant would delay full production. It was for this reason, it said, the Tennessee valley site was chosen. site was chosen.

Arkansas Proposal Impressive.
Sites in Sheffield, Mobile and
Tuscaloosa, Ala., Arkansas, Tennessee, Oregon and Washington
were considered. The company
said one controlling factor in the
decision was the necessity to increase substantially the originally
planned production of virgin aluminum to meet the needs of the defense program. The company,
headed by Richard S. Reynolds of
Richmond, Va., has 18 exising
plants. Arkansas Proposal Impressive.

The company said the Arkansas proposal was "especially interesting" because of the low price of "sour" gas from fields in the southwestern part of the state. It said Alabama was considered a better location because of lower freight rates east of the Mississippi, prox-imity to other aluminum interests, and beter connections with foreign

Aluminum Firm Thanks A P. L. For Offer of Assistance.

Special to the Gazette. 10-7-40
Pine Bluff, Oct. 6.—Appreciation for the co-operation given by the Arkansas Power and Light Company to the Reynolds Metals Company to the Reynolds Metals Company in its investigation of possible locations in this state for its new aluminum plant was expressed in a letter received from R. S. Reynolds, president, and made public today by W. E. Baker, executive vice president of the power company. The Reynolds company announced yesterday the selection of Sheffield, Ala., as the location for the plant.

the plant.

Mr. Reynolds' letter follows:

"Just a note of thanks for the wonderful manner in which you presented to us the advantages of the state of Arkansas with regard to the location of our new new new lengths." to the location of our new alumi-num plant. Also, I appreciate your having offered to supply a standby naving offered to supply a standby to our plant in Arkansas and supply us power until we could erect a steam plant of our own. I think this is wonderful co-operation and a fact which the citizens of Arkansas should know. The only reason we did not consider Arkansas at the moment is due to the fact that we have determined in this emerwe have determined in this emer-gency to rush completion of our plant for the production of a much larger quantity of aluminum than we had anticipated in our first unit."

In a prepared statement, the Arkansas Power and Light Company said: "The fact that Sheffield is east of the Mississippi river and nearer the market for aluminum and aluminum products; that it is in the center of the traditional aluminum manufacturing area, and that the metals company considered Alabama labor and tax laws favorable were factors in the final selection. The Arkansas Power and Light Company is glad to know it was of assistance to Mr. Reynolds."

Arkansas May **GetAluminum** Plant.

10-8-40

Special to the Gazette. El Dorado, Oct. 7. — "Arkansas stands at the head of the list" of aluminum reduction plant to be constructed by the Reynolds Metals Company within the next year, R. S. Reynolds, president of the company, has assured the Arkansas Oil and Gas Commission.

Word that the company is considering Arkansas favorably as a site for a plant similar to one to be erected soon by the same firm at Sheffield, Ala., was received here today from Washington where Oil and Gas Commission officials have conferred with Reynolds company representatives. Mr. Reynolds' statement to the commission follows:

Mr. Reynolds' Statement. "The aluminum situation is such that I feel another unit must be constructed within one year's time. Arkansas stands at the head of the list due to the fact that the Oua-chita river affords year around

o00,000 pounds in 1942 by means of new factories and power facilities.

"The Aluminum Company of America, at present the sole producer of ingot aluminum in this country, will add three new units to its Bonneville (Wash.) plant, which will increase production by 90,000,000 pounds per year, and will obtain approximately 100,000 kilowatts of additional power from the Bonneville authority to supply these plants," the commission said.

"A new unit at the company's Gazette 10-3

plants," the commission said.

"A new unit at the company's plant at Alcoa, Tenn., will begin operations early in 1941 and other units in the TVA districts will come units in the TVA districts will come that opposition during the early united States Bureau of Mines experiment station at Tuscaloosa, the same of the united States Bureau of Mines experiment station at Tuscaloosa, the same of the united States Bureau of Mines experiment station at Tuscaloosa, the same of the united States Bureau of Mines experiment station at Tuscaloosa, the same of the united States Bureau of Mines experiment station at Tuscaloosa, the same of the united States Bureau of Mines experiment station at Tuscaloosa, the same of the united States Bureau of Mines experiment station at Tuscaloosa, the same of the united States Bureau of Mines experiment station at Tuscaloosa, the same of the united States Bureau of Mines experiment station at Tuscaloosa, the same of the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the united States Bureau of Mines experiment station at Tuscaloosa, the un into production during the early Smith, geologist, attached to the part of 1942.

The Reynolds Metals Company periment station at Tuscaloosa, also is planning production of ingot Ala., began a study of bauxite min-

was under consideration in government circles as a means of avoiding possible delays in warplant production schedules. Authoritative sources reported this device was being studied as well as the more frequently mentioned one of production properties.

Rationing of aluminum products was under consideration in government circles as a means of twoiding possible delays in war-lant production schedules. Authoritative sources reported this device was being studied as well as the nore frequently mentioned one of roduction properties.

Struct.

Aluminum is of such vital importance in warplane making, of course, because it is strong, yet weighs only about a third as much as steel. A great deal of research work has been done on stainless yet that metal is used only in engine firewalls, instrument panels, the tubing of fabric-covered planes and the sections of wing spars just behind the engines.

In addition to the alloys, pure aluminum is used to cover wings and fuselages to prevent oxidation. The pure metal is so soft that it can be

Democrat 1-19-41

Bauxite Tax Proposal.

Also ready for introduction in the House is a bill by Rep. Talbot Feild jr., Hope, Hempstead County, to levy a severance tax of \$1.03 a ton on bauxite mined in Arkansas. Pointing out that Arkansas produces 97 per cent of the bauxite mined in the United States, and has a virtual monopoly on bauxite mining just as the Aluminum Company of America has on bauxite refining, Mr. Feild said: "However, while on the one hand the Aluminum Company of America makes brilliant use of

However, white on the one hand the Aluminum Company of America makes brilliant use of its monopoly in terms of dollars, the State of Arkansas has virtually sold its birthright for a mess of pottage."

He cited Texas and Louisiana which are sole domestic producers of sulphur and which assess a severance tax of \$1.03 a ton thereon, producing an annual income of \$2,091,553. "Arkansas," Mr. Feild said, "produces about 400,000 tons of bauxite, worth at the mine \$2.25 a ton, and on that production collects only about \$20,000 annually in taxes."

Based on past production, he

Based on past production, he estimated the proposed tax of \$1.03 a ton would produce approximately \$500,000 in tax reve-

His bill will provide that "complying with the policy of national defense, the money collected from this tax will go to match dollar for dollar, the federal grants to our state, and will be earmarked for construction of concrete highways for national defense."

Eventually, it was said, strong aluminum alloys in sheet, rod.

Gazette 1-12-41

ARKANSAS INDUSTRY

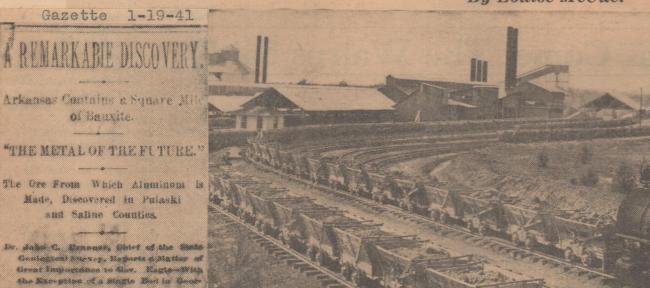


Underground mining of bauxite at Bauxite. Arkansas supplies approximately 90 per cent of the domestic bauxite and the mineral is one of its prime resources. The greater portion of Arkansas bauxite is used for non-metallic purposes.

50 Years of Arkansas Bauxite

National Need for Aluminum in Airplane Manufacture and Defense Works Recalls Discovery of Valuable Ore in This State a Half Century Ago.

By Louise McCue.



An interview with Dr. Branner. Will wonders never coase!

the United States. This Official Report.

thing of the Motal and its lises-

Banxite, the ore from which that remarkable metal, alaminum, is manufactured, has been discovered right here in wonderful Arkansas.

Dr. J. C. Branner yesterday filed with the Governor a communication that will prove of interest to all readers, and especially those who own the property containing the rich deposits of this rare metal. Followlog is the communication and other information bearing on the subject;

Geological Screen of Arkyssas. Larges Rook, Ask., January 7, 1801.

Fifty years have gone by since this optimistic headline greeted Arkansas Gazette readers on a Thursday morning in January, 1891, but nothing has happened during that eventful half cen-. tury to take the wind from the sails of this first prophetic outburst. Time has merely re-echoed the wisdom of the words. In fact, today, more than ever before, it is upon bauxite that Arkansas is basing its hope for increased industrialization and the prosperity that new industries bring.

Bauxite mining took root and grew in the mechanized Twentieth century, when an insatiable world was steadily demanding more and more aluminum and other products derived from bauxite. Now a mechanized war, laying hold of three continents and jolting the A steam shovel is shown above United States into heavy rearmament, loading mine cars with bauxite from presages fulfillment of Arkansas baux the Saline county open pit in the ite's half-century-old promise. To pro-right background. At the right is a tect itself this country must have air huge pit in Saline county from planes, engines, ships, truck and a hundred-and-one other defense items

which are made wholly or in part from ford to stock up on material that it aluminum and its alloys. Arkansas's isn't reasonably sure of being able to accepted role in this program is to help use. At the end of the year Northrop furnish the ore from which raw alumi-Aircraft, Inc., of Los Angeles, having num can be extracted. In addition it clamored in vain for more aluminum, is hoped that Arkansas may become cut its working day from 20 to 16 the site of reduction plants as well as hours with the announcement that "there simply isn't enough alum

which raw bauxite is taken.

Just now the future of Arkansas in available" to run full time. the bauxite-aluminum industry is tied Small processors, operating indeup in a siege of buck-passing among pendently of ALCOA, might be expectaluminum processors, aircraft makers ed to come to the rescue of the airplane and government defense chiefs on the industry, but the little fellows com- because home-mined ore is supple-factured, has been discovered right question: Is there an aluminum short-plain that they are unable to get start mented by imports from Dutch and here in Arkansas. age? An emphatic "No," comes from theed on a significant scale because the British Guiana the supply seems safe "Dr. John C. Branner yesterday filed Aluminum Company of America, only National Defense Commission has from exhaustion for a good many years with the governor a communication large United States producer, whichturned thumbs down on helping them to come. But scooping the crude ore that will prove of interest to all readsince last fall has been expanding its financially. The commission says there from the earth and reducing it to alum-ers, and especially those who own the equipment to take care of accelerated ample aluminum on hand and tends inum is only the beginning. The basic property containing the rich deposits orders. If airplane turn-out has bogged to concur with ALCOA that plane mak-metal next must be combined with an of this rare metal." down, says ALCOA, it's the fault ofers aren't getting drawings and forg- alloy, then shaped into tubing for air- Following these introductory parathe plane manufacturers themselvesings in on time.

foresight in planning their advancecerned are agreed that there is no castings and forgings before the manu- of Arkansas made by Dr. Branner,

The aircraft industry counters that aluminum. Arkansas at present fur- num products can begin their job. uary 7, 1891. army and navy leaders change planenishes between 90 and 95 per cent of Arkansas was surprised at its own "It is found that we have in Arkan-

Mill yard of the Republic Mining and felt that the extent and grade of Ar-Manufacturing Company at Bauxite, kansas bauxite had been well enough showing mine cars delivering baux- gauged to warrant a public statement, ite to be crushed and dried in the and it is thought to be the approxiplant in background.

was found within its bounds, but not too surprised to comprehend the new ing kicked around as road gravel bemineral's potential value.

the four-column story (on an inside governor says, "In some places bauxpage) in the Gazette of January 8, 1891. ite has been prospected upon with a markable metal, aluminum, is manu- others, so little has been thought of

-Photograph by courtesy of Arkansas Geological Survey.

plane wings, landing gear and rud-graphs, the Gazette publishes the ofbecause they haven't exercised enough Wherever the trouble lies, all conders and into countless other sheets, ficial report of the Geological Survey dearth of bauxite, nor even of raw facturers of airplanes and other alumi-state geologist, to Gov. J. P. Eagle, Jan-

designs so frequently that it can't af the bauxite mined in this country, and good luck 50 years ago when bauxite sas, in Saline and Pulaski counties, geoologists call the Cenozoic, or Age

Dr. Branner wrote, "a mineral that is used in the manufacture of aluminum, a metal of great and rapidly increasing importance, as well as for other use ful purposes. This is the mineral bauxite, bozite, sometimes called honeycombed rock' through the region in which it occurs in this state.

"Bauxite is not a common mineral in any part of the world, and as it has a spongy, earthy appearance, and is very light, there is nothing about it to attract the attention, and this is probably the reason it has been so long overlooked. In order that there may be no mistake about its identity, samples of the common varieties have been deposited with the commissioner of agriculture in the statehouse."

Apparently the Gazette reporter of the Gay Nineties wasn't concerned about the "human" side of a story, for the circumstances surrounding actual discovery of bauxite aren't mentioned at all. This might possibly be explained by the fact that the published account is more a summary of the culmination of discoveries and investigations than a "spot" news story. Although this is the first public announcement of the existence of bauxite in Arkansas, small deposits had been found as early as 1887 a mile south of Fourche bayou on the Little Rock-Pine Bluff highway. January 8, 1891, however, marks the date on which State Geologist Branner mate date on which bauxite was discovered in Saline county.

The story goes that bauxite was before its true identity became known, "Will wonders never cease!" begins and Dr. Branner in his report to the "Bauxite, the ore from which that re-view to using it as an iron ore; in it that it has been quarried and used for building roads.'

The estimates which Dr. Branner made in 1891 regarding the thickness of deposits stand even today. "* * * In general it (the depth of deposits) varies from a few feet to over 40 feet in thickness; it is thought safe to place its average thickness at about 15 feet."
"Like all bauxite," the official re-

port continues, "it varies considerably in composition, and, in a general way, its value depends upon its having a high percentage of alumina (element of bauxite from which aluminum is made) and low percentage of iron and silica. In order that some opinion may be formed of its value, I give briefly the most important uses to which bauxite is, or may be, put."

In this list, Dr. Branner includes manufacture of aluminum, "highest grades of refactory materials" and "highest grades of alum and aluminate of soda used in dying and calico printing." Twentieth century discovery and invention have added two uses to this group and enlarged upon the original three. Bauxite is now employed in the manufacture of artificial abrasives, such as so-called emery paper and polishing compounds, grinding wheels and whetstones, and in the making of aluminum cements. As a component of cement, bauxite again becomes a defense factor, for the quick-hardening property of aluminum cement makes it ideal for building fortifications and gun emplacements, enabling their use 24 hours after pouring.

Dr. Branner's study of Arkansas's bauxite deposits led him to make the following general conclusions:

"1. Bauxtie occurs in Arkansas only in tertiary areas (sections in the earth's crust formed during the period which of Mammals, marked especially by the spread of mammals) and in the neigh-ated are required." These same quali-borhood of eruptive rocks (granites). ties of strength combined with light.

"2. Inasmuch as sedimentary beds ness, plus a freedom from tarnish, the Consolidated Chemical Industries, where. This foreign bauxite comes

"2. Inasmuch as sedimentary beds ness, plus a freedom from tarnish, the Consolidated Chemical Industries, where. "2. Inasmuch as sedimentary beds ness, plus a freedom from tarnish, overlie or have overlain the bauxite, "adapt it to the building of ocean it is probable that there are deposits steamers, greatly increasing their buoyin the vicinity of our eruptive rocks ancy and carrying capacity." Greater ancy and carrying capacity. Greater buoyancy and carrying capacity was buoyancy and carrying capacity."

has thus far been found only at and of using a metal that is light but a production of 473,456 tons, valued at below the elevation of 300 feet above strong."

found in Tennessee, Alabama and New wealth." Mexico, but Arkansas still possesses To clear up any question that might

Baux, in France, near which first speci- used before low grades.

Dr. Branner's description of the lo-ter of some importance in this quescation of Arkansas's new mineral detion. Analyses made by the Geological posits is sprinkled liberally with ref-Survey of three ordinary clays such erences to local landmarks; one bed, as are used for making bricks showed for example, was found "on a hill east them to contain respectively 9, 10 and of Littlejohn's," another "about half 11 per cent of alumina; analysis of a mile north of where the Camden and three pottery clays from Benton, Sa-Little Rock road crosses Hurricane line county, show them to have respeccreek," and still another on "the edge tively 18, 23 and 24 per cent of alumina; of the field west of the Confederate analysis of three samples of Arkansas home." The bauxite areas are said to bauxite show them to contain 55, 57 lie in three principal regions: Little and 58 per cent of alumina. Of course, Rock, Mabelvale (both in Pulaski other matters than a high per cent of county) and Saline county. The results alumina in the raw material enter into of chemical tests of bauxite samples, the question of the production of showing the Arkansas ore to be high in aluminum, but other things being the necessary alumina content, are also equal, a high percentage of alumina included in Dr. Branner's report, and becomes very important." lend scientific weight to the Gazette's The Gazette's article must have set

Although the process by which alumi-into dollars. In 1895 Arkansas's first num can be economically produced was bauxite firm, the General Bauxite Cominvented only five years before Dr. pany, was incorporated. The first ship-Branner's report of discovery of baux-ment of Arkansas bauxite, amounting ite in Arkansas, the great flexibility to 40 tons, was made the following year and wide uses to which the metal can by General Bauxite. Other firms enbe put seem already to have been com-tered the field during the next three prehended in Arkansas. The Gazette years, and by 1899 shipments were bearticle enlarges upon the geologist's ing made by four companies, includaccount of bauxite with an exhaustive ing the Pittsburgh Reduction Comdiscussion entitled "Aluminum, Some-pany, predecessor of the present Rething of the Wonderful Metal and Its public Mining and Manufacturing Com-Uses." Experimenters had already fore pany. seen the boon of aluminum pots and The early 1900's witnessed construc-

"Its great strength and exceeding

seen also as a stimulant to inland 000 in new plants and improvements, Pulaski counties,

"4. In the Little Rock region it plified, if not solved, by the possibility from a scant 40-ton initial shipment to our

"5. The Arkansas bauxite beds are the 1891 Gazette proclaims, "It is more known to cover a total area of about than possible that aluminum may very the making to harness Arkansas's 640 acres in Saline and Pulaski counsoon compete with iron, and that a ties. (Deposits have since been found revolution, which must be far-reaching, similar to the Tennessee Valley Autor trade to extend over 13 or 14 times this area.) will ensue. It will effect every trade, thority, it is possible that soon there "6. All bauxites vary considerably every industry." It will bring to pass will be available from nearby sources in color, character, composition and "a mechanical revolution in a thouther wast reservoir of cheap electrical

tain a high percentage of iron, none of up the comprehensive article: "A Gahope for an Arkansas aluminum protection has any value as iron ore. Zette reporter," it reads, "called on Dr. duction industry, with its great potenduction duction industry, with its great potenduction." "8. With the exception of a single Branner yesterday to learn something tialities for local business stimulation, bed in Georgia, the Arkansas deposits further in regard to his great discovof bauxite are the only ones thus far ery which will startle the world, and may yet be realized. discovered in the United States; and no doubt attract more attention to Arsuch deposits are nowhere abundant, kansas than anything that has occurred so far as is now known." Since Dr. since it became known that the state Branner's report, bauxite has been contains such a variety of hidden

the largest deposits in this country. exist in the mnid of the public regard-The first United States discovery ing the superiority of bauxite over orwas made in 1883 in northwest Geor-dinary clays, many of which contain gia, but a mineral "practically devoid some alumina, for the production of of silica" had been recognized in France aluminum, Dr. Branner pointed out more than 60 years before. The word to his interviewer that as long as it bauxite is derived from the name Les lasts high quality ore will always be

mens were found. France has led the "'Iron,' he said, 'can be made from world in the production of bauxite, poor iron ores, but the poor ones are, and supplies, with Hungary, Italy and even after hundreds of years of iron Yugoslavia, the demand of all Europe. making, and of inventions and improve-Valuable deposits have also been un-ments of processes, still neglected. The covered in Russia, Spain, Greece and difference between the percentage of Roumania, but these are largely unde-alumina in common clay and that in bauxite must of a necessity be a mat-

pronouncement of "a remarkable dis-many an alert investor to thinking of ways and means to convert crude ore

pans to the housewife, and had even tion of new crushing and drying facilisensed aluminum's enormous military ties by the Pittsburgh Reduction Com-"It is as malleable as gold and near- pany. In 1905 the American Bauxite ly as tenacious as iron, while much more soft and ductile," the Gazette reporter wrote. "It melts at 1,300 degrees Fahrenheit and does not oxidize even in a moist atmosphere, and is not tarnished by gases and not affected and go. Business boomed during the even in a moist atmosphere, and is not tarnished by gases, and not affected by any of the acids, with one exception, and by very few of the alkalies. It is thus especially adapted to the manufacture of culinary and other utensils, where copper and iron are objectionable.

Saw humerous companies come and go. Business boomed during the World war, and five firms were shipping bauxite from Arkansas from 1917 through 1920. A half dozen new companies attempted operations during the Twenties, but they were scuttled by the rising tide of depression toward the end of the decade.

"Its great strength and exceeding lightness make it invaluable in the construction of articles for the use of troops in active service, for surveying and exploring parties, for optical instruments and a multitude of other changes the qualities enumer."

Improved business conditions and war needs of the latter Thirties and 1940 zoomed bauxite upward again. Five companies now operate in the state: the American Cyanamid and Chemical Corporation, which five purposes where the qualities enumer-months ago purchased the Arkansas

and were employing from 75 to 500

nearly \$3,000,000, in 1939, the Gazette's Unreservedly and with rare vision, story of 1891, ebullient as it must have alue.

"7. Although some varieties conAn interview with Dr. Branner winds bauxite. With this encouragement, the

Higher Tax On Bauxite Proposed

Gazette 1-19-47

A legislative bill to place a severance tax of \$1.03 a ton on bauxite mined in Arkansas was prepared yesterday by Representative Talbot Feild Jr. of Hope.

Based on current production, which Mr. Feild said was 97 per cent of all bauxite produced in the United States, the proposed tax would yield approximately \$500,000

The revenue collected under terms of the bill would be used to match federal funds for the construction of concrete highways in co-operation with the national defense program. The money would be deposited in the state treasury to the credit of a special national defense highway fund and could be used

for no other purpose.

Mr. Feild said the fund would be earmarked for paving graveled roads on strategic routes.

"For instance," he said, "the highway from Barksdale Field, La., is paved to the Arkansas line. It is graveled from there to Hope. In the event of an emergency, heavy tanks could not use such a road with its light bridges. That is the type of highway that would

"Arkansas has been blessed with great natural resources," Mr. Feild "But the people of Arkansas have allowed their generosity to have the better of their sense. This generosity may have been misplaced because it did not always redound to the welfare of the people, but rather to the enrichment of private corporations.

Bauxite Production Cited.

"The most glaring example is the case of our bauxite deposits. Everyone knows Arkansas produces 97 per cent of the bauxite mined in the United States. Arkansas has, therefore, a virtual monopoly on the deposits of bauxite, just as the Aluminum Company of America has a monopoly on the refining of

"While on the one hand the Aluminum Company of America makes brilliant use of its monopoly in terms of dollars and cents, the state of Arkansas has practically sold its birthrgiht for nothing. From bauxite, which is worth at the mines, \$2.25 a ton, the state collects only \$20,000 a year in severance taxes on an annual production of about 400,000 tons."

Tax of Six Cents Now. The state severance tax on bauxite is 2 1-2 per cent of the market price, or about six cents a ton.

Pointing to Louisiana and Texas as the sole domestic producers of sulphur, Mr. Feild said the state severance tax on that product in each state is \$1.03 a ton. He said 2,030,634 tons were produced in the two states in 1939, yielding a tax revenue of \$2.091,583.

No Monopoly on Bauxite.

Then it is proposed that the severance tax on Arkansas bauxite be given a steep hoist. That might be feasible if the state had an actual monopoly on the bauxite supply. But it hasn't.

For while Arkansas does produce

"3. It occurs in irregular deposits stream navigation.

whose thickness and extent are determinable only by direct methods of ner's prediction that "the question of examination.

are a second were employing from 75 to 500

But happily for Arkansas there is strong opposition in the state capitol to those who advocate stiffer levies. Tax economy is on the program of the administration now at grips with from a second 40 ton initial shipment to our problems.

INCREASED TAX IDEAS OPPOSED

Against Bills.

Gazette 1-31-41

After hearing warnings by representatives of the bauxite industry 5. that they would be forced out of business by Senator W. H. Abington's proposed \$10 per ton severance tax on bauxite, the Senate Committee on Revenue and Taxation voted last night to return the bill with an unfavorable recommendation

Proposed by Senator Abington to raise money for pensions to the aged, representatives of more than 90 per cent of the bauxite industry vigorously protested against the proposed tax provided in S. B. No. 6 at a public hearing at the Hotel Marion. The present tax is approximately 10 cents per ton.

The Loughborough and W. B.

F. Loughborough and W. tack. They cited Department of Commerce figures that Arkansas

CONTAIN MOST

'One or Two More' Likely.

Gazette 2-16-41

he said, "but most of my major ite mines. measures are already in."

Among the bills administration leaders believe should be passed Two education measures. One. by Representative Pat Robinson of Lafayette county, would set up county Boards of Education with supervisors succeeding county examiners in 1942. The other, by Representative Eli Leflar of Ben ton county, would provide for appointment of a fiscal agent to see that school district funds are spent wisely.

The gross receipts tax plan by which all retailers would be required to obtain state permits to do business. The plan would suc ceed the present sales tax system of collection.

A measure by Representative Talbot Feild of Hempstead county to provide about \$500,000 year for old age and blind as-sistance by increasing the severance tax on bauxite from six cents to \$1.03 a ton. Governor Adkins did not discuss the merits of a Senate joint resolution by Senator W. H. Abington, which proposed a constitutional amendment to permit the legislature to levy a one-mill tax for old age pensions. But he said the reso lution was not an administration

A bill by Senator George R. Steel of Nashville to revise the Unemployment Compensation Division statutes. This measure "ought to pass," the governor said, adding that its sole intent was to bring the state's standards even with federal require-

bill by Representative Jack Machen of Columbia county and others to set up county Delinquent Tax Boards. The proposal would permit the county judge, mayor of the county seat and chief county school officer to name the board members, who would be charged with the duty of collecting delinquent personal taxes. Governor Adkins said he had received "good response" to the measure from many coun-

R. new tax revenue for old age pen-Donham, lawyers for the Republic Sions and other purposes, but there Mining and Manufacturing Company, one of the largest individual would obviously be no use in levying producers in Arkansas, led the at- a tax that was not going to produce revenue.

It would be only practical common produces only 8.4 per cent of the bauxite used in the United States. sense to consider the proposed \$1.03 The remainder comes from foreign per ton severance tax on bauxite in Big and little operators estimated their profit at from 30 to 51 cents per ton. If the severance tax were raised to \$10 per ton, they said they could not continue in ordered its reduction to the general the light of the 25-cent tax levied by ordered its reduction to the general They told of keen competition severance tax rate equivalent to from foreign bauxite. They said lack of cheap and plentiful electricity and the distance between the mines to other materials which into the processing of bauxite 1924 special session, on recommendainto aluminum and certain chemicals made it impractical to establish a processing plant in Arkansas. the 25-cent tax. But the then attor-Before the committee went into ney general, J. S. Utley, stated that executive session, Senator Abington from their investigations in pre artold the audience:

"I knew when I came down here what you [representatives of the industry] would say and what this committee would do."

from their investigations in pre aring the case for trial, he and his first assistant, Judge W. T. Hammock, had become convinced that the 25 cent tax was in fact earlier. He charged witnesses opposing the 25-cent tax was in fact confisca-the bill had "dodged the issue," tory and would have been so held by the bill had "dodged the issue," and the person who furnished him with his information "must be the the Supreme Court.

The legislature is under a particular obligation not to mislead old age pensioners by passing an unproductive revenue bill. Before imposing a tax of \$1.03 on bauxite the legislature should seek to determine whether the result would be \$500,-ADKINS 'MUSTS' lawsuit. A small tax that actually works is better than a big one that 000 of pension revenue or another legislature is what tax will actually produce the most revenue.

Gazette 2-14-41

An administration-sanctioned bill to provide old age pension funds by increasing the severance tax on bauxite to \$1.03 a long ton was submitted by Senator Abington and Senator Pilkinton of Hope. The present tax on bauxite is 2.5 per Governor Adkins left last night at the point of severance, or, at for Washington with the announce- prevailing market rates, a little

ment that practically all administration "must" bills have been introduced in the legislature.

"There may be one of two more,"

"The bill is expected to meet serious opposition from the Aluminum Company of America, which in the legislature.

"There may be one of two more,"

"The mines of the state's baux-



Arkansas Processing Plant.

Washington, March 13 (P).—The government has been asked to consider the question of financing the processing of Arkansas bauxite for defense purposes, it was disclosed today when the House Appropriations Committee made public testimony of Secretary Knox on the new navy appropriations bill.

The published record disclosed Knox had testified there was no immediate shortage of light motted.

immediate shortage of light metals, including aluminum, for airplane construction, but that he was concerned about the future. Knox said the Justice Department had charged that a German-American group holding certain processing patents had agreed this govern-ment must pay a 3-to-2 ratio price for magnesium and alum-

Representative Scrugham (Dem., told Knox he had been informed by one group of interests that if they were permitted to make magnesium under the German patents controlled by the Aluminum Comuany of America, "they could furnish the metal made by those processes at a lower price than that now charged to the gov-

Knox said he understood there was an economical patent for proc-essing aluminum from bauxite ore. "In Arkansas there is quite a lot of bauxite ore with the right silica content from which they can

produce it," he testified.
"This is a new project, and they have no money and no organiza-tion with which to proceed, and the question presented us was whether we should put a lot of money into a concern which does not enter into a real sort of com-petition with the Aluminum Company. It would take two years to

start them in the manufacture."

Knox did not identify the interested group.

There are epproximately 14,000,-000 tons of unmined bauxite in Arkansas, which would produce about 10,000,000 tons of mined and dried bauxite, Dr. George C. Branner, state seologist, said last night.

In addition, Dr. Branner said, there are approximately 11,000,000 tons of the unmined product, which would produce about 8,000,000 tons of mined and died bauxite, of a lower grade which is not now commercially usable but which might be acceptable later.

National Defense Commission announced last fall that production of aluminum would be stepped up to 700,000,000 pounds in 1942. Figuring on a basis of 4.4 tons of bauxite to one ton of aluminum, it appears that Arkansas alone could supply the necessary amount of bauxite for six or seven

Gazette 3-17-41 Let's Orientate Ourselves as To Bauxite.

When Governor Adkins, who is urging the establishing of a bauxite processing plant in Arkansas, if necessary through federal financing, told the Southern Governors Conference at New Orleans that about 95 per cent of the bauxite in the United States is mined in Arkansas he meant 95 per cent of the bauxite produced in the United States.

As a matter of fact in 1939—the last year for which census figures are available-97 per cent of the crude bauxite mined in the United States was taken from nine mines in Arkansas

But there has been confusion in the public mind between the production and the consumption of bauxite in the United States. The fact that Arkansas accounts, year in, year out, for about 95 per cent of production has been taken by some to mean that the aluminum, chemical and abrasives industries of the country are dependent on Arkansas for 95 per cent of their raw material. In reality, less than half the bauxite consumed in the United States is mined in the United States, while more than half is imported foreign bauxite.

The three per cent of the 1939 domestic production that did not come from Arkansas was obtained from four mines in Alabama and one in four mines in Alabama and one in Georgia. The extent of the supply of well in the forefront. The finished bauxite in the United States as a metal, he said, sells at \$1 to \$2 a pound. whole is necessarily unknown. The possible production of Alabama and of the former remoteness of the ore

Federal Financing Sought For ests are making surveys and explora-

Connection With Trust Suit Outlined.

By B. N. TIMMONS.

(Democrat Washington Bureau.)
Washington—George C. Branner,
Arkansas state geologist, switched
over to assist and testify for the

brief on the case mentions the transaction and on that account, questions his ability as a witness. The lawhis ability as a witness. The law-yers apparently did not like his switch, but for the present, at least, they decline to discuss it and merely make the record of the trial avail-

Gazette 3-28-41

Fifty Years Ago.
(Arkansas Gazette, March 27, 1891.)
In discussing yesterday with a Gazette reporter the value of State Geological Parts of the Parts of State Geological Parts of the Parts of State Geological Parts of State Ge gist Branner's discovery of bauxite in Arkansas, Dr. R. A. F. Penrose, assist-ant geologist, said that the coming pe-riod will be known as the "Age of Alu-minum" with this state, where the only Georgia remains to be determined, bodies. This cost can be largely reand at this time the Reynolds interduced by use of Arkansas ores.

1888 Mr. Hall began applying his new process on a commercial scale at Pittsburgh, using German ore. In 1891, the year of the Gazette's re- equipment printed item, he moved his plant to New Kensington for the sake of greater economy in fuel and power. over to assist and testily for the Aluminum Company of America in defense of the suit brought against it by the Justice Department after he had been working with the Justice Department on it, records of the department in Washington showed today.

Greater economy in fuel and power. But it was not until 1894, when cheap hydro-electric power became available at Niagara Falls, that aluminum production by the Hall process was fully launched. fully launched.

The prophecy of Dr. Penrose, who vember of 1938, when he was hired by ALCOA at a rate of pay which amounted to \$6,815.73 plus expenses, for work which he did and for his testimony in the trial last summer. According to his own admission, ALCOA hired him for \$25 a day plus expenses for surveying aluminum deposits in Arkansas and other states and \$100 a day plus expenses for testifying in the trial of the suit in New York last summer.

was based on the belief that the process for recovery of aluminum would be cheapened, and that prophecy has been amply borne out by events. The price of the metal, which was selling at \$1 to \$2 a pound when he talked with a Gazette reporter here in Little Rock 50 years ago, is a free in Little Rock 50 years ago, is free in Little Rock 50 years ago, is a free in Little Rock 50 y was selling at \$1 to \$2 a pound when deposits and fields.

Wanted Impartial Survey.

Testimony at the trial developed that ALCOA wanted an impartial survey of bauxite in Arkansas and elsewhere in the United States which was not owned or controlled States. Its various other uses would by ALCOA.

Branner admitted he had conferred with the Justice Department
ferred with the Justice Department
the air, what might be called a "War the air, what might be called a "War and gave them assistance and statistics on bauxite for use in the trial.

"While I have made no specific record of the number (of conferences), I presume it would be something like eight or ten times," Bran-aircraft and other fighting equipment testified.

equipment.

For the pits are Arkansas' famed and now earth are determined that if there is a shortage vital bauxite mines which produce the ore from which aluminum is made. They have become vital because aluminum, which has been on the "strategic" list since 1936, now is restricted to prime defense uses, even though milady may be forced to find pots and pans made of less desirable material.

Correcting the School Books.

Lest this article leave the false impression of many of the state's textbooks, it should be added quickly, however, that Arkansas does not produce "more than 90 per cent of the world's supply of bauxite." Bauxite is a very common ore, Extensive as are our deposits, they are, some authorities say, less than one per cent of the world's known reserve. Last year about 66 per cent of the bauxite used in this country for making aluminum was imported, principally from Dutch and British Guiana and from the Dutch East Indies. On the other hand, it is true that Arkansas last year produced 96 per cent of the bauxite mined in the United States, or a little more than 30 per cent of the total amount used.

Furthermore, much of the imported ore is a higher grade—it contains more alumina—than the bauxite mined in Arkansas. And all facts considered, it can be delivered to processing plants about as cheaply as Arkansas bauxite.

The reason is that it we should become actively engaged in the war and imports of bauxite should be cut off by lack of ships, or some other reason, our bauxite would be the sole available supply. That in a nutshell is why our mines are now vital, why the government, fearing sabotage, has requested the bauxite miners to employ more watching and to adopt other protective measures. atchmen and to adopt other protective measures.

Estimates of the extent of our reserves vary considerably, but geologists agree that the deposits of Pulaski and Saline counties should be sufficient to supply all United States needs for from five to seven years in an emergency. By the end of that period, perhaps the TVA experiments in extracting alumina from clay will have resulted in a practical process. TVA Director David E. Lilienthal predicted this development the other day. The possibility of extracting alumina from

ner testified.

Acted As Consultant.

Questioned further about it at that time, he said, "Well, I acted as a consultant, you might say, in my official capacity."

However, he testified that while he had been consulting with Justice Department attorneys on the case, there was no specific agreement that he would be a government with the government's intent to employ me," he said. Asked if he had been requested to act as a government with uses, he said. Asked if he had been requested to act as a government with the government's attorneys decline to discuss Branner's action in switching over to ALCOA after he had been working along with them on the suit. The case is now pending in court, awaiting the final decision on it, so the government mend on not want to comment on him, for fear of prejudicing their case in court.

However, the government's final

Until recently, when the Reynolds Metals Company entered the field with government back-ing, Aluminum Company of America has been Company entered the field with government backing, Aluminum Company of America has been the only United States producer of aluminum, and during the last few years Alcoa has been involved in bitter and still-unsettled monopoly litigation with the federal government. But if Alcoa has managed to preserve its aluminum-producing monopoly, even though the processing patents in late years have been available to all, it has had no monopoly on Arkansas bauxite deposits. In Pulaski and Saline counties today there are at least eight companies engaged in bauxite mining—the Norton Company, Dixie Bauxite Company, American Cyanamid and Chemical Corporation, Consolidated Chemical Industries, Crouch Mining Company, the Bauxite Mining Corporation, and Dulin Mining Company. The monopoly idea probably has grown out of the fact that Republic Mining and Manufacturing Company is about the only one that produces bauxite for aluminum. Output of the other operators is used in the chemical industries—the alum in your baking powder probably came from bauxite—and the abrasive industries. And these uses right now are almost as important to the national defense as the use of bauxite for aluminum. bauxite for aluminum.

Bauxite Is Model Town.

Center of the bauxite mining is the town of Bauxite, founded by Republic. Unincorporated, it

ests are making surveys and explorations there. Arkansas may have large deposits as yet unlocated, but so on the other hand may some states where up to this time no bauxite mining has been done. Bauxite is one of the most widely distributed of metal-bearing substances.

U. S. Bares

Record In

ALCOA Case
Democrat 3-18-41
George C. Branner's

Connection With
Care
Arkansas Bauxite and a Fifty Year Old Phophecy.

There never has been a time more apt than now to recall that 50 years ago Dr. R. A. F. Penrose, already on his way to distinction as a geologist, said in discussing with a Gazette reporter Dr. John C. Branner's discovery of bauxite in Arkansas that the coming years would be the "Age of Aluminum."

ALCOA Case
Democrat 3-18-41
George C. Branner's

Connection With

Arkansas may have large deposits a yet unlocated, but so on the other hand may some states where up to this time no bauxite and a Fifty Year Old Phophecy.

Arkansas Bauxite and a Fifty Year Old Phophecy.

There never has been a time more apt than now to recall that 50 years ago Dr. R. A. F. Penrose, already on the parks, it boasts excellent schools, connected with aluminary. Laid out with many attractive means ago Dr. R. A. F. Penrose, already on the parks, it boasts excellent schools, connected with aluminary. Laid out with many attractive during the properties of the parks are a time of the parks agout might be properties. Though only 22 m

tical problems, they probably give these pits little thought.

Yet it is from them that the flyers get the proaching, and some have passed, pre-depression wings and fuselages that keep them in the air, peaks. Republic's output gained 18 per cent in the pistons of the powerful motors that pull them 1940, and is still rising. New drying kilhs are being forward, plus many other items of their military erected rapidly.



Republic's Chief Engineer C. Jessup examines a piece of bauxite. The ore is not easily described, simply looks like clay. Miners say they recognize it more by instinct than anything else.



Vertical shaft of the Crouch mine is 300 feet deep. Five negro miners—who receive 45 cents an hour-have just been hauled up the shaft in this bucket. Bucket moved far too fast for reporter and photographer.