

Pauls & Bernd

Archiv

.

FACTS ABOUT ARKANSAS

THE FACTS PRESENTED IN THIS BOOKLET
HAVE BEEN ASSEMBLED AND AUTHENTICATED

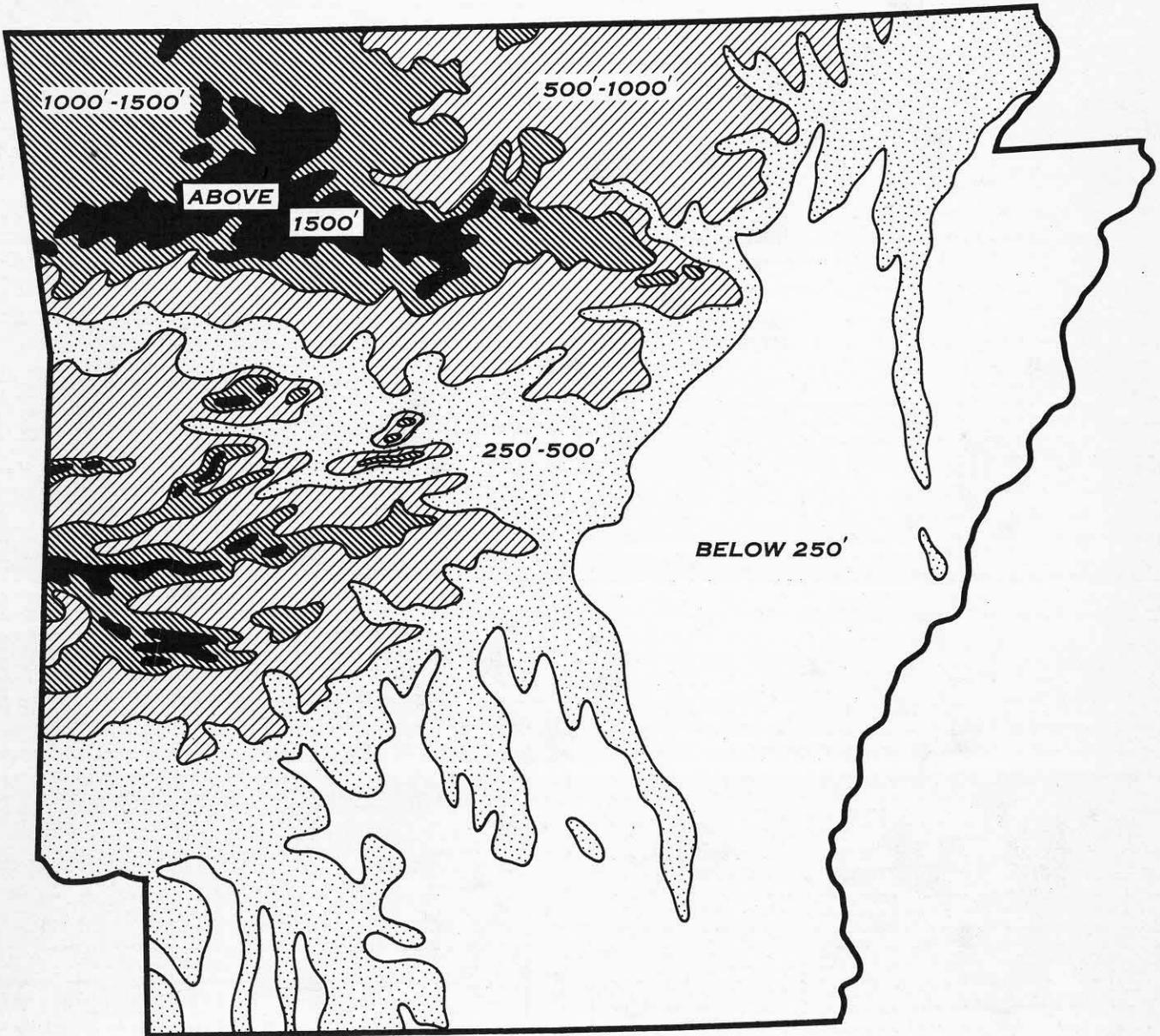
by the

DIVISION OF AGRICULTURE AND INDUSTRY

of the

ARKANSAS RESOURCES AND DEVELOPMENT
COMMISSION

REVISED 1952



TOPOGRAPHY

ARKANSAS RESOURCES AND DEVELOPMENT COMMISSION

104 State Capitol
Little Rock, Arkansas

Governor

SID McMATH

Commission Members

MARION L. CRIST, Little Rock, *Chairman*

W. S. FOX, Pine Bluff, *Vice Chairman*

C. F. BYRNS, Fort Smith, *Secretary*

L. L. BAXTER, Fayetteville

DR. T. W. HARDISON, Morrilton

K. A. ENGEL, Little Rock

HENRY KOEN, Harrison

GEORGE PECK, Hope

EARL A. HARRIS, Rogers

W. T. MURPHY, JR., Texarkana

LEROY CARTER, Leachville

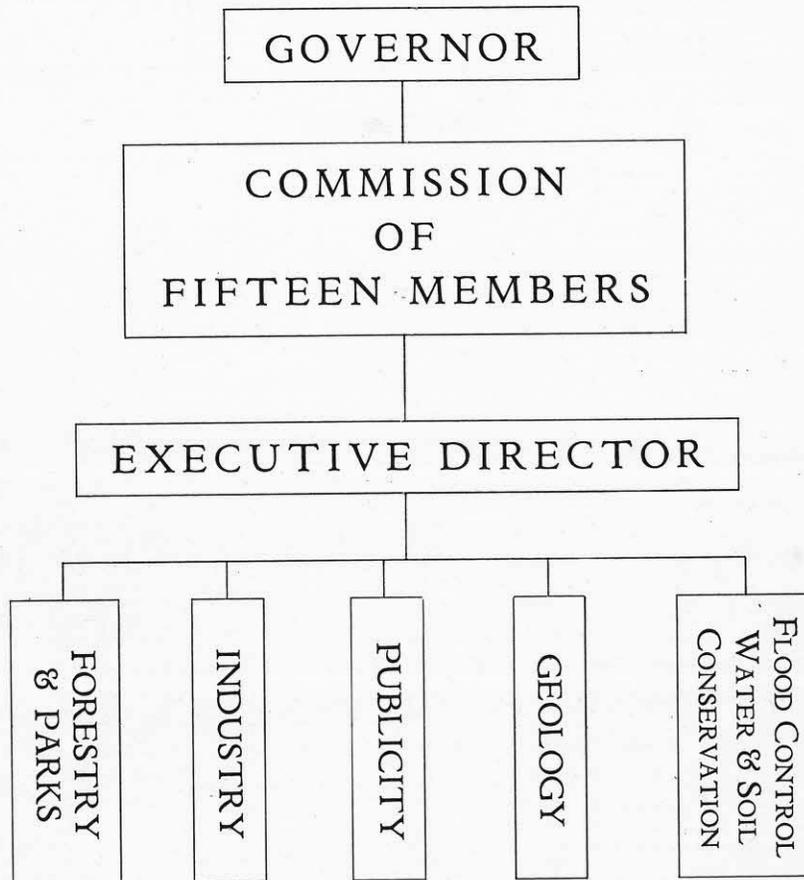
ROBERT L. BURTON, SR., Benton

L. R. BRANTING, Bauxite

L. V. RITTER, Marked Tree

CHARLES R. BOWERS, *Executive Director*, Little Rock

ARKANSAS RESOURCES
AND
DEVELOPMENT COMMISSION



Foreword

The rapid development of a balanced agricultural-industrial economy in Arkansas is assured by an abundance of natural resources and by the related factors of mild climate, adaptable labor, adequate power and water, excellent transportation facilities and the existence of present and potential markets.

The healthy expansion of industry now under way, as well as the potentialities for future development, are graphically portrayed by the facts set forth on the following pages. These facts and figures demand and are receiving the attention of enterprising capital both locally and throughout the nation.

The Arkansas Resources and Development Commission is staffed with personnel qualified to develop complete prospectus of your requirements. The services of professionally trained people, familiar with the natural and human potential of the state, are available from each of five divisions that operates under the Commission.

Acknowledgments

This Commission gratefully acknowledges assistance rendered by the following commercial and governmental organizations in the preparation of "*Facts About Arkansas*".

ARKANSAS ECONOMIC COUNCIL-STATE CHAMBER OF COMMERCE, Little Rock, Arkansas

C. Hamilton Moses, *President*

ARKANSAS OIL AND GAS COMMISSION, El Dorado, Arkansas

O. C. Bailey, *Chairman*

ARKANSAS STATE BOARD OF HEALTH, Little Rock, Arkansas

Dr. J. T. Herron, *State Health Officer*

ARKANSAS PUBLIC SERVICE COMMISSION, Little Rock, Arkansas

Scott Wood, *Chairman*

ATTORNEY GENERAL'S OFFICE, Little Rock, Arkansas

Ike Murry, *Attorney General*

STATE DEPARTMENT OF EDUCATION, Little Rock, Arkansas

A. B. Bonds, *Commissioner*

AGRICULTURAL EXTENSION SERVICE, Little Rock, Arkansas

C. A. Vines, *Associate Director*

INSTITUTE OF SCIENCE & TECHNOLOGY, University of Arkansas, Fayetteville, Arkansas

Dr. W. W. Gregorieff, *Director*

DIVISION OF AGRICULTURAL STATISTICS, UNITED STATES DEPARTMENT OF AGRICULTURE,
Little Rock, Arkansas

Miles McPeck, *Agricultural Statistician in Charge*

ARKANSAS EMPLOYMENT SECURITY DIVISION, Little Rock, Arkansas

Homer M. Adkins, *Administrator*

AREA DEVELOPMENT DIVISION

Department of Commerce, Washington, D. C.

Victor Roterus, *Chief*

U. S. ENGINEER OFFICE, Little Rock, Arkansas

Col. Hans W. Holmer, *District Engineer*

COTTON BRANCH, PRODUCTION AND MARKETING ADMINISTRATION, Little Rock, Arkansas

W. A. Black, Jr., *Officer in Charge*

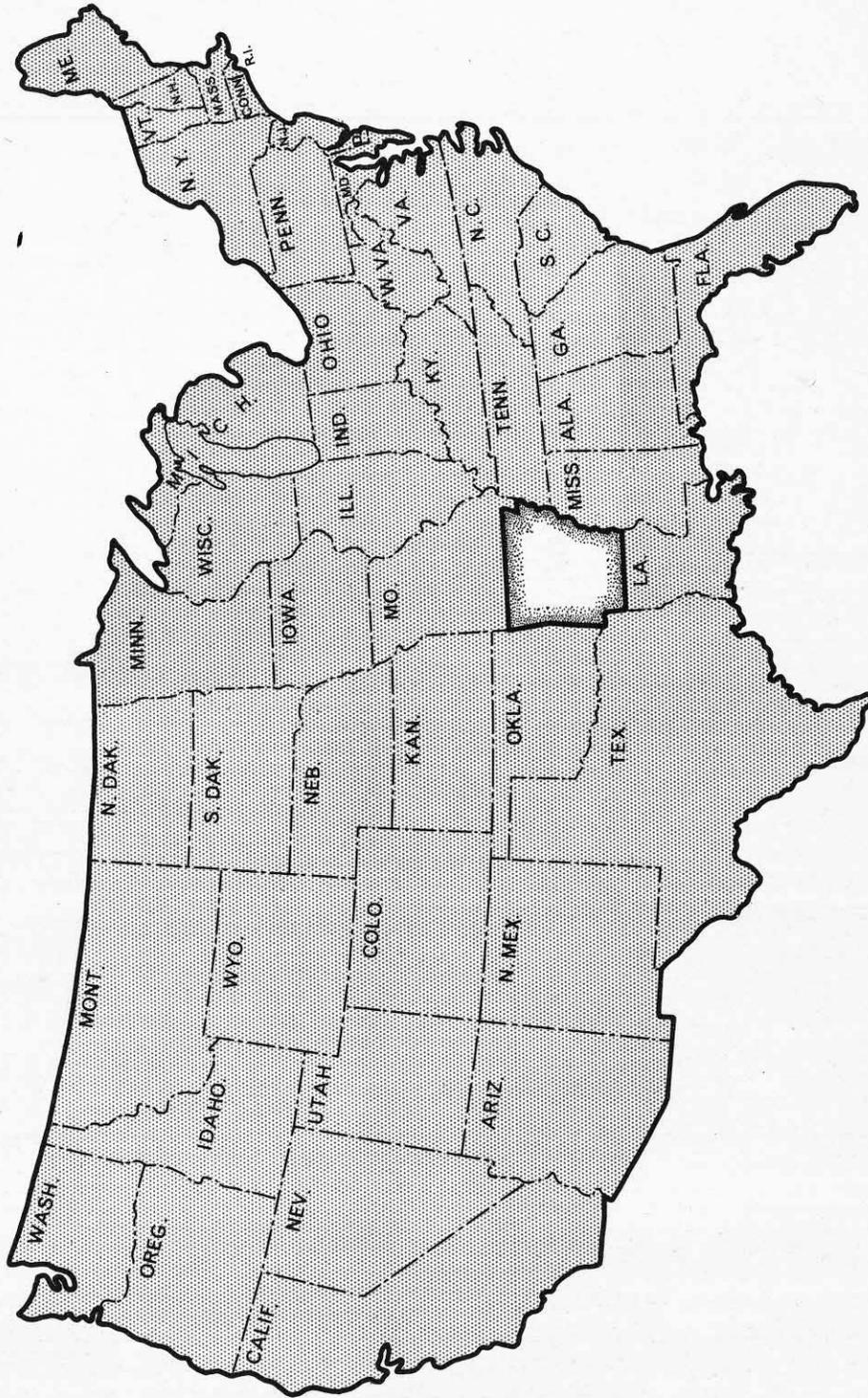
Contents

<i>Title</i>	<i>Page</i>
Location - - - - -	9
Areas - - - - -	9
Population - - - - -	9
Education - - - - -	11
Climate - - - - -	13
Health - - - - -	14
Recreation - - - - -	14
Labor Force - - - - -	15
Rural Electrification - - - - -	17
Water Supply - - - - -	17
Industrial Sites - - - - -	17
Preferred Markets for Arkansas Manufacturers - - - - -	17
Transportation - - - - -	19
Travel Time Schedule - - - - -	21
Present and Potential Power Supply - - - - -	23
Principal Taxation Laws Affecting Industry - - - - -	24
Soil Types - - - - -	25
Agriculture - - - - -	27
Livestock and Poultry Inventory - - - - -	28
Cotton Production - - - - -	29
Forests - - - - -	31
Mineral Resources - - - - -	33
Potential Economic Material - - - - -	36
Arkansas Mineral Production for 1951 - - - - -	37
Oil and Gas Resources - - - - -	38

MAPS & CHARTS

Topography of Arkansas - - - - -	2
Location - - - - -	4
Location of Cities and Towns over 2,500 Population - - - - -	10
Climatological Chart - - - - -	12
Surface and Ground Water Supplies - - - - -	16
Navigable Waterways - - - - -	18
Gas Transmission Facilities - - - - -	20
Railways - - - - -	21
Electric Transmission Facilities - - - - -	22
Soil Productivity - - - - -	26
Forests Types - - - - -	30
Mineral Resources - - - - -	32
Highways - - - - -	Inside back cover

ARKANSAS IS STRATEGICALLY LOCATED WITHIN THE NATION



Location

The State of Arkansas is geographically situated on the west bank of the Mississippi River in the south central part of the great Mississippi River Valley Drainage Basin.

The southern boundary of the state is approximately 240 miles north of the Gulf of Mexico. The northern boundary of the state is about 840 miles south of the Canadian border. To the east the Atlantic Ocean is 700 miles, and to the west the Pacific is 1,380 miles.

More than 66,162,800 people live within 500 miles of Arkansas' boundaries.

Where there are American people there is a market for American goods. Approximately one-third of the population of the United States can be reached from Arkansas with 48-hour freight service.

Areas

In area the state contains 53,102 square miles, and is 26th in size among the states of the Union. The state is about equally divided between lowlands and highlands. The Gulf Coastal Plain and the Mississippi River Delta, representing the lowlands, occupy 52 per cent of the state's area. The highland area, including the Ozark Mountain Plateau and the Ouachita Mountain Plateau, occupy 48 per cent of the state. The average elevation of the Mississippi River Delta is 150 feet. That of the West Gulf Coastal Plain is 300 feet. The average elevation of the highland areas is 1,440 feet above sea level.

Roughly, the land area of the state is divided as follows: 64 per cent in forests, 33 per cent in farms, 3 per cent in inland water, highways and cities.

Population

The 1950 census gave Arkansas a population of 1,909,511, a decline of approximately 40,000 from the 1940 census figure of 1,949,387. A substantial part of the loss is believed to be attributable to wartime and post-war shifts in population.

According to the 1950 census figures, 67.6 per cent of Arkansas' population live in rural areas, with the remaining 32.4 per cent living in towns of 2,500 or over. In 1940, these figures were 77.8 in rural areas and 22.2 per cent in urban centers. The gain in urban population brings to 63 the number of communities with 2,500 or more residents, as compared with 52 such population centers in 1940.

On the basis of 1950 census figures, the following cities have populations of 2,500 or over:

Cities with 10,000 or over:

City	County	1940 Census	1950 Census
Blytheville	Mississippi	10,652	16,234
Camden	Ouachita	8,975	11,372
El Dorado	Union	15,858	23,076
Fayetteville	Washington	8,212	17,071
Fort Smith	Sebastian	36,584	47,942
Helena-West Helena	Phillips	13,263	17,343
Hot Springs	Garland	21,370	29,307
Jonesboro	Craighead	11,729	16,310
Little Rock	Pulaski	88,039	102,213
North Little Rock	Pulaski	21,137	44,097
Pine Bluff	Jefferson	21,290	37,162
Texarkana (Arkansas)	Miller	11,821	15,875

Cities between 5,000 and 10,000 population:

City	County	1940 Census	1950 Census	City	County	1940 Census	1950 Census
Arkadelphia	Clark	5,078	6,819	Newport	Jackson	4,321	6,254
Batesville	Independence	5,267	6,414	Osceola	Mississippi	3,226	5,006
Benton	Saline	3,502	6,277	Paragould	Greene	7,079	9,668
Conway	Faulkner	5,782	8,610	Russellville	Pope	5,927	8,166
Forrest City	St. Francis	5,699	7,607	Searcy	White	3,670	6,024
Harrison	Boone	4,238	5,542	Springdale	Washington	3,319	5,835
Hope	Hempstead	7,475	8,605	Stuttgart	Arkansas	5,628	7,276
Magnolia	Columbia	4,326	6,918	Van Buren	Crawford	5,422	6,413
Malvern	Hot Spring	5,290	8,072	West Memphis	Crittenden	3,369	9,112
Morrilton	Conway	4,608	5,483				

Towns with populations between 2,500 and 5,000:

City	County	1940 Census	1950 Census	City	County	1940 Census	1950 Census
Ashdown	Little River	2,332	2,738	Marked Tree	Poinsett	2,685	2,878
Bentonville	Benton	2,359	2,942	Mena	Polk	3,510	4,445
Brinkley	Monroe	3,409	4,173	Monticello	Drew	3,650	4,501
Clarendon	Monroe	2,551	2,547	Nashville	Howard	2,782	3,548
Clarksville	Johnson	3,118	4,343	Paris	Logan	3,430	3,731
Crossett	Ashley	4,891	4,619	Piggott	Clay	2,034	2,558
Cullendale	Ouachita	821	3,225	Pocahontas	Randolph	3,028	3,840
DeQueen	Sevier	3,055	3,015	Prescott	Nevada	3,177	3,960
Dermott	Chicot	3,083	3,601	Rogers	Benton	3,550	4,962
DeWitt	Arkansas	2,498	2,843	Siloam Springs	Benton	2,764	3,270
Dumas	Desha	2,323	2,512	Stamps	Lafayette	2,405	2,552
Endora	Chicot	1,808	3,072	Trumann	Poinsett	3,381	3,744
Fordyce	Dallas	3,429	3,754	Walnut Ridge	Lawrence	2,013	3,106
Hamburg	Ashley	1,939	2,655	Warren	Bradley	2,516	2,615
McGehee	Desha	3,663	3,854	Wynne	Cross	3,633	4,142
Marianna	Lee	4,449	4,530				

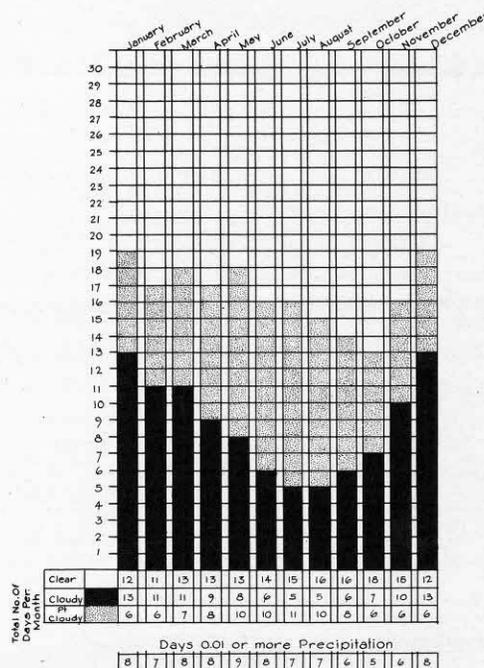
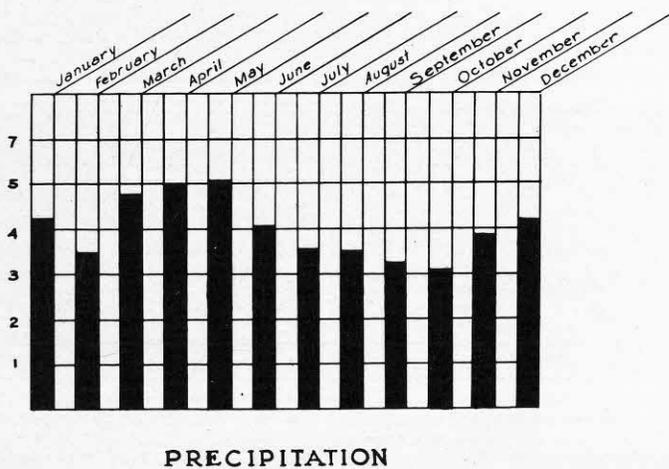
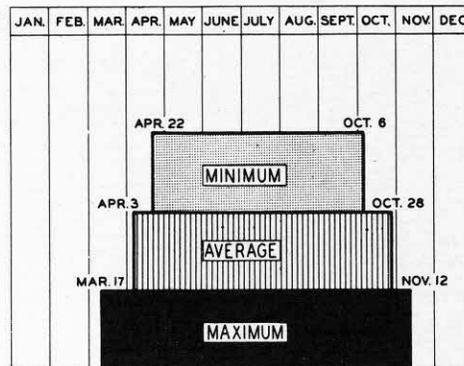
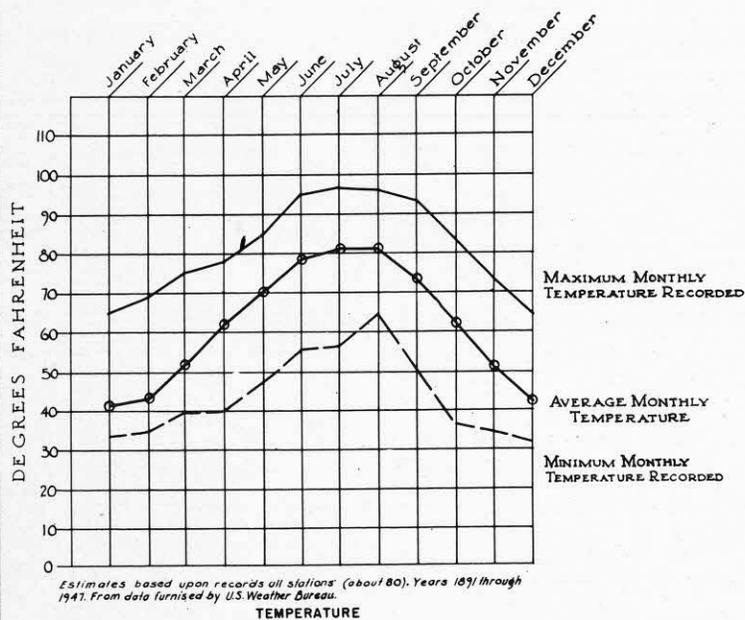
Education

Arkansas is served with a growing school system. The reorganization of the schools approved by the people provide for educational opportunities through high school for all children of the state. Transportation facilities are provided for children residing in rural areas through the use of modern school buses. It is significant that such facilities are furnished both white and negro children.

There are nine state-supported coeducational institutions of higher education. These are the University of Arkansas, at Fayetteville; the University of Arkansas School of Medicine, at Little Rock; Arkansas Agricultural, Mechanical, and Normal College for Negroes, at Pine Bluff; Arkansas State College, at Jonesboro; Arkansas Polytechnic College, at Russellville; Arkansas Agricultural and Mechanical College, at Monticello; Southern State College, at Magnolia; Arkansas State Teachers College, at Conway; and Henderson State Teachers College, at Arkadelphia. In addition there are three small agricultural schools: the Junior Agricultural College, at Beebe, and the State Vocational High Schools, at Huntsville and Clinton.

The state also maintains a State School for the Blind and a State School for the Deaf. These institutions are fully accredited and rank with the best in the nation.

In addition to the state-supported schools, there are a number of private and denominational schools. Four-year schools include Ouachita College (Baptist), at Arkadelphia; Harding College (Church of Christ), at Searcy; Hendrix College (Methodist), at Conway; Subiaco Academy (Cath-



NOTE: All data are based on reports of the U. S. Weather Bureau from all Arkansas stations.

AVERAGE NUMBER OF DAYS CLEAR, PARTLY CLOUDY, AND CLOUDY BY MONTHS FOR THE STATE OF ARKANSAS FROM 1891 TO 1947

ARKANSAS
RESOURCES & DEVELOPMENT
COMMISSION

CLIMATE

olic), at Subiaco; The College of the Ozarks (Presbyterian), at Clarksville; St. John's Seminary (Catholic), at Little Rock; John Brown University, at Siloam Springs; Arkansas College (Presbyterian), at Batesville; and Philander Smith College for Negroes (Methodist), at Little Rock.

The vocational program for high school students consisting of training in agriculture for farm youth, distributive education for high school boys and girls who desire to pursue retailing as a career, guidance service for all pupils, homemaking for high school girls, and industrial training in the skilled crafts. Approximately 1,000 specialists serve as instructors in these youth programs. The vocational training is an integral part of the total high school training program for the youth of the state.

Adult education on an organized, systematic basis is rapidly gaining favor with management and employees. Intensive, specialized courses both on the management level and for employees are sponsored by the State Department of Education with the cooperation of local school authorities.

About 25,000 veterans are enrolled in the service programs sponsored for the benefit of service men and women. These veterans are pursuing courses in agriculture, distributive occupations, industrial education and in the general education field. The veterans programs compare favorably with the best in other states.

Climate

Arkansas is situated between the parallels of 33° and 36° 30' North Latitude, and 89° 41' and 94° 42' West Longitude.

The growing season is especially good, ranging from 180 days on the high plateau in the northwest to 240 days in the southeastern part of the state.

The climate is temperate with an average January temperature of 38° F. and an average July temperature of 80° F.

Most of the precipitation is in the form of rain and varies from about 45 inches annually in the mountainous regions to from 50 to 55 inches in the delta areas.

Annual average snowfall ranges from 10.4 inches in the extreme northwest to 2.8 inches in the lowlands of the southeast. Even the extreme snowfalls seldom remain on the ground more than two weeks.

Humidity fluctuates from 45 to 60 per cent with the high point occurring in December and January and the low point in July and August.

Winds are gentle to moderate and the prevailing direction is from the southwest.

The average annual combined number of clear and partly cloudy days at Fort Smith is 261; at Little Rock it is 251.

The climate of Arkansas is very agreeable and is favorable to diversified industrial operations and agricultural pursuits.

Health

Arkansas is a remarkably healthy place to live and due to a well-planned, systematic state health program, conditions are improving each year. This fact is sustained by the following statistics of a few representative diseases:

<i>Disease</i>	<i>Death Rate Per 100,000 Population</i>	
	<i>1930</i>	<i>1950</i>
Tuberculosis, pulmonary	69.7	.31
Typhoid fever	19.0	.002
Diphtheria	5.6	.004
Malaria	37.4	.002
Pellagra	26.4	0

The above statistics result from health education, immunization, sanitation and the expansion of health services. Sanitation has generally been improved by the development of both rural and urban public water supplies and municipal sewerage systems.

Normally, the health departments throughout the state service 95 per cent of the state's population with well-planned programs in maternal and child health, tuberculosis control, venereal disease control, sanitation and sanitary engineering, public health education, laboratory facilities and related health functions.

Arkansas is served by the facilities of 145 hospitals, geographically well-distributed throughout the state, 30 of which are approved by the American College of Surgeons.

PRINCIPAL CAUSES OF DEATH DURING 1950

<i>Causes</i>	<i>Total Deaths</i>	<i>Rate Per 100,000 Population</i>
Heart	5,271	2.76
Cancer	1,898	.99
Intracranial lesions of vascular origin	1,692	.88
Accidents	1,086	.56
Nephritis	610	.31
Tuberculosis	598	.31
Pneumonia	575	.30
Prematurity	301	.15
Congenital Malformations	187	.09
Diabetes Mellitus	171	.08

Recreation

Mountain terrain, forest areas, streams and lakes within the state offer exceptional recreational opportunities to the people of Arkansas and neighboring states.

Hunting and fishing are major activities, with over one-half million residents and nonresidents participating annually in this outdoor recreation.

The Arkansas Game and Fish Commission operates 39 game refuges, containing over 500,000 acres. Forty-nine additional management areas are intensively managed for big game production. Arkansas, through its deer restocking and efficient deer management program, is becoming one of the outstanding deer-hunting states in the nation. The U. S. Fish and Wildlife Service supervises two large areas in eastern Arkansas, principally as waterfowl sanctuaries.

Stuttgart is nationally known as the center of duck hunting in the state and attracts thousands of visitors annually. Excellent duck hunting is also to be had in other portions of eastern Arkansas. The Game and Fish Commission is developing approximately 40,000 acres in the Bayou Meto bottoms, near Stuttgart, to be used as a public shooting ground for ducks and other game. Public-shooting areas for ducks and other game are also being developed on approximately 10,000 acres on Black River near Corning, 7,000 acres on Big Lake near Blytheville, and on 5,265 acres on Bayou DeView near Brinkley.

Hundreds of lakes and thousands of miles of rivers and streams offer some of the nation's best sport fishing. Lake Norfolk, Lake Nimrod, Lake Hamilton, Lake Catherine, Lake Conway, and Blue Mountain, Bull Shoals, Narrows and Blakely Mountain reservoirs are centers of recreational activity.

Arkansas now ranks seventh in the United States in the number of nonresident fishing licenses issued.

The state maintains three large fish hatcheries at Lonoke, Centerton and Lake Hamilton. Lonoke Hatchery is one of the largest warm water fish hatcheries in the nation. These hatcheries provide desirable varieties of fish for the continued restocking of streams and lakes within the state.

The Forestry and Parks Division of the Arkansas Resources and Development Commission has under development a system of parks which will serve all sections of the state. Those already well developed are Petit Jean State Park near Morrilton, Devil's Den near Fayetteville, Crowley's Ridge near Paragould, Buffalo River near Cotter, Lake Catherine near Hot Springs, and Arkansas Post near Gillett.

Hot Springs, oldest of America's national parks, is known throughout the world for its thermal baths and resort attractions.

Labor Force

Nonfarm employment of wage and salary workers (excluding domestics) topped all previous records in 1951. The high point of the year occurred at mid-September when employment totalled 316,800, up 7,800 from a year earlier and 4,800 more than the former peak of 312,000 in December of 1950. Factory payrolls averaged 80,000, an increase of 4,400 over the 1950 average. Construction reached a new record during 1951 and retail trade and government showed consistent gains.

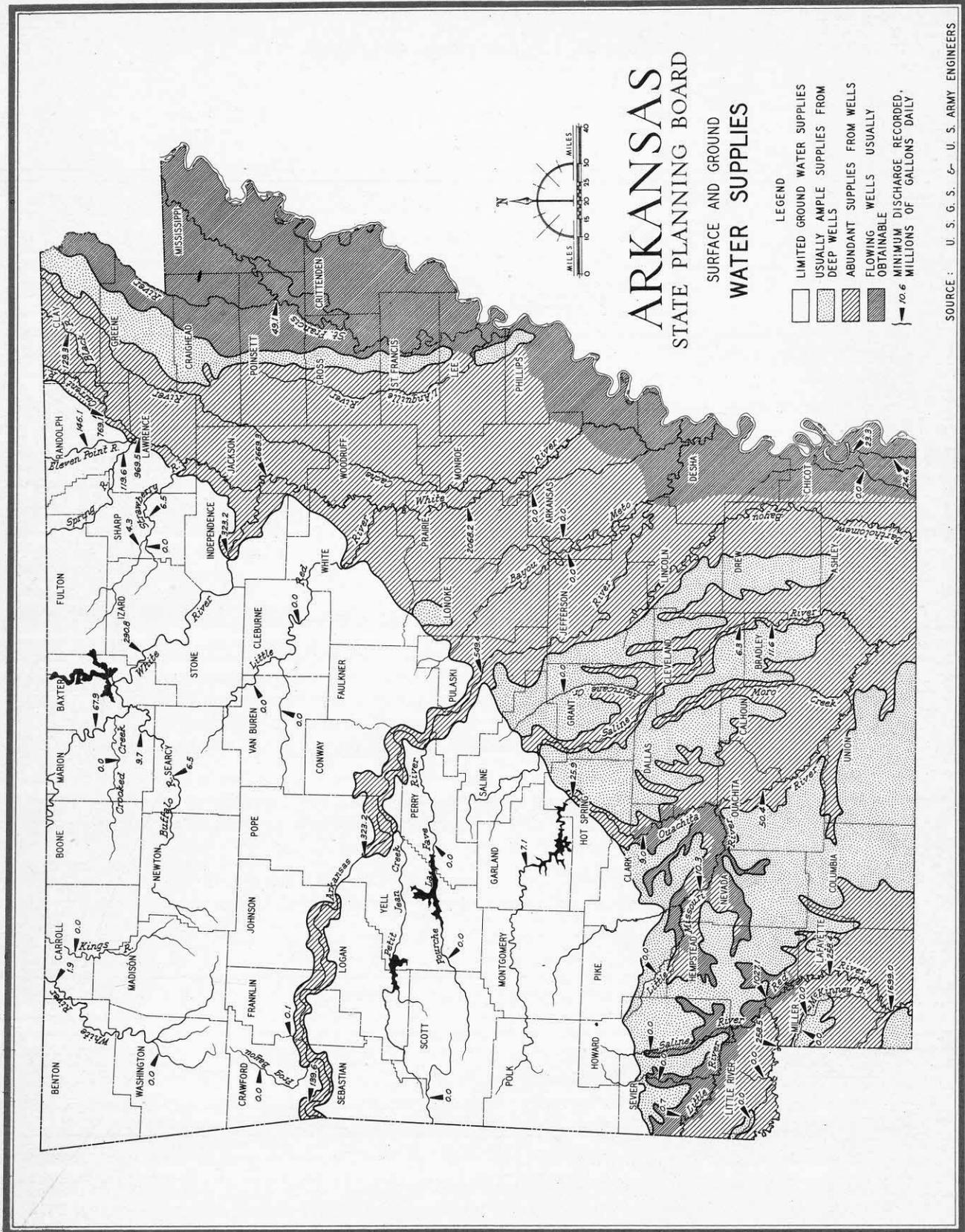
During 1951, the Arkansas Employment Security Division placed 127,172 workers in nonfarm jobs as compared with 95,713 the previous year. Unemployment insurance activities, reflecting the economic progress, were substantially lower during the year. Initial claims for benefits filed in all local offices dropped from 97,219 in 1950 to 87,782 in 1951. Benefit payments totaling \$4,596,472 were paid for 280,119 weeks of unemployment, a sharp drop from the \$7,370,196 paid for 466,190 weeks of unemployment during 1950.

The upward movement of nonfarm employment caused a gradual tightening of the labor supply during 1951. Although no critical shortage of labor developed in any labor market area, a growing scarcity of workers was evidenced in certain occupations, such as engineers of all kinds, draftsmen, skilled building craftsmen, qualified stenographers and other experienced office workers.

Unemployment was estimated at 22,700 at the end of December, 1951. Arkansas is expected to continue as a labor supply state throughout 1952, with the number of out-migrants approximately the same as the normal number of new entrants into the labor market. Since the greater number of out-migrants will be skilled workers, a moderate shortage of skilled workers and a moderate surplus of unskilled and semi-skilled workers may be anticipated. A nearly-balanced labor market is expected on an over-all basis.

No critical shortage of production workers is anticipated in any area. Upon demand, new entrants, especially women, may be expected to come into the labor market in sufficient numbers to meet any situation. In the areas where defense plants or industries critical to the defense effort are under way or expanding, demands for skilled workers in 1952 may be expected to point sharply upward from the 1951 experience.

Arkansas has a number of areas in which additional industries would be welcomed and in which adequate supplies of labor exist. This available labor would not be experienced or skilled but could be trained readily for most types of factory work. The western half and most of the northern part of the state would be particularly benefited by an expanding program of industrialization.



ARKANSAS

STATE PLANNING BOARD

SURFACE AND GROUND WATER SUPPLIES

- LEGEND
- LIMITED GROUND WATER SUPPLIES
 - ▨ USUALLY AMPLE SUPPLIES FROM DEEP WELLS
 - ▩ ABUNDANT SUPPLIES FROM WELLS
 - ▧ FLOWING WELLS USUALLY OBTAINABLE
 - ▦ MINIMUM DISCHARGE RECORDED, 10.6 MILLIONS OF GALLONS DAILY

SOURCE: U. S. G. S. & U. S. ARMY ENGINEERS

Rural Electrification

Progress of rural electrification in the state since 1945 has been remarkable. Approximately 46,399 miles of rural distribution lines have been constructed to serve approximately 219,650 rural customers. This construction program, while well past its peak, is still in progress and will, upon completion, make electric service available in practically every section of the state. Actually, today, there are but few sections (national forests and other inaccessible areas) where service is not available.

Water Supply

Arkansas is abundantly supplied with good quality water for domestic, commercial and industrial purposes.

The southern and eastern parts of the state lie in the Coastal Plain and Delta regions. In this area great quantities of surface water are available from the Red, Ouachita, Arkansas, White, St. Francis and Mississippi Rivers. Where surface water is not available, ground water is present in large quantities and may usually be obtained from wells drilled to a depth of from 100 feet to 1,200 feet. Water from these wells has a temperature ranging from 55° to 70° F. This ground water sometimes contains iron, but is usually of such quality that it requires no treatment for use for most industrial purposes.

The northern and western parts of the state are hilly and mountainous. Although ground water in this area is limited, the existence of numerous streams, a broken terrain and formations that lend themselves well to the construction of dams, renders the impounding of surface water comparatively simple and inexpensive.

Industrial Sites

Locating good industrial sites in Arkansas is no problem. Most of the towns and cities of the state have available surveys of sites that lie contiguous or in proximity to railroads, highways and utilities.

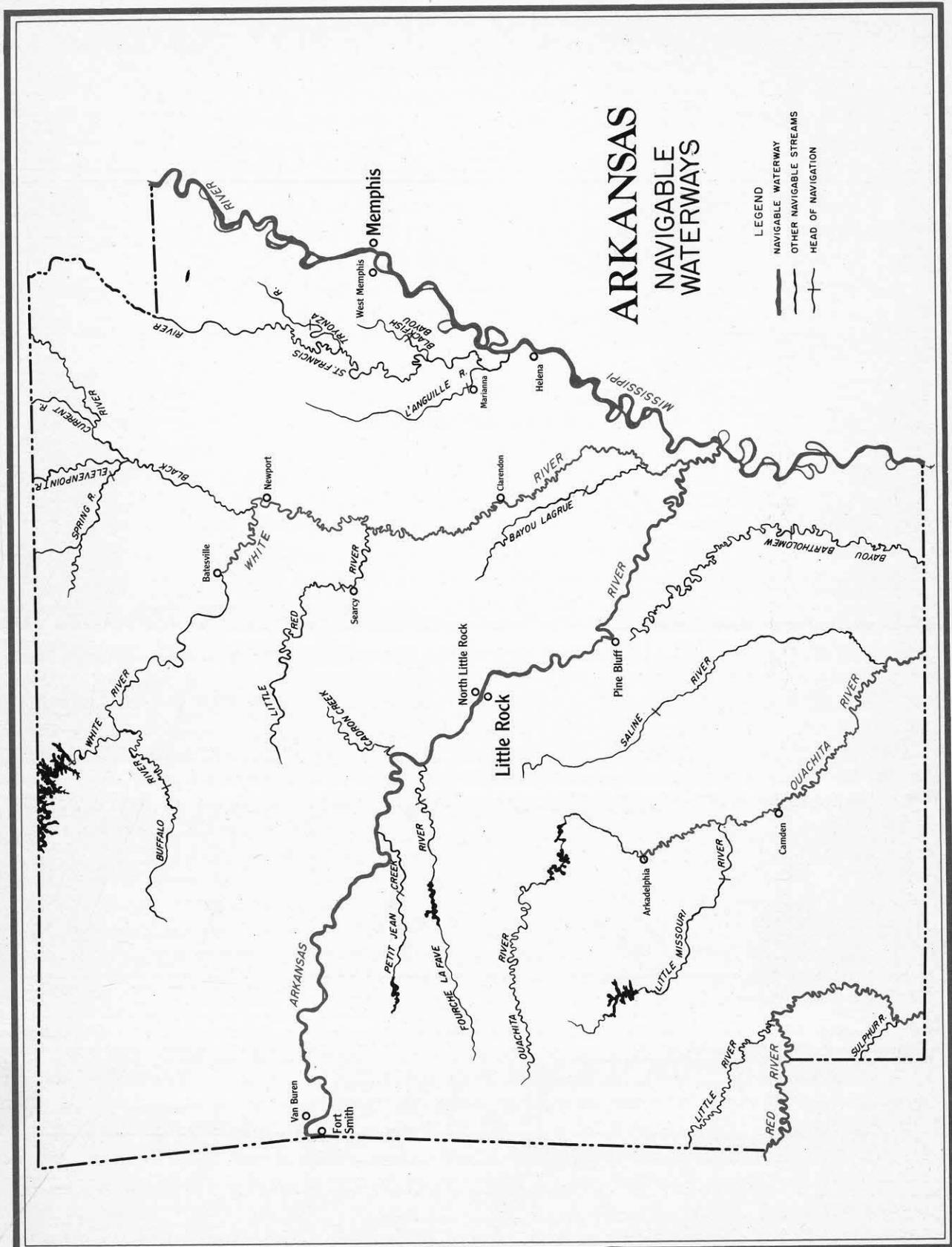
Large users of industrial water will find in many sections of the state available sites on the banks of rivers where any required quantity of water is available at only pumping costs.

Site costs are generally nominal since, usually, desirable sites are to be found in suburban sections or areas classified as predominantly rural.

Construction cost of industrial buildings will compare favorably with the lowest in the Nation. All building materials, except steel, are manufactured locally, and the services of competent architects, engineers and contractors are available within the state.

Preferred Markets for Arkansas Manufacturers

Markets, fundamentally, are people with purchasing power. The great Southwest, of which Arkansas is a part, offers excellent market possibilities. This southwest region possesses railroads, highways, airways, and waterways which reach all populated centers and operate to the advantage of both manufacturer and consumer and at costs which are attractive to shippers.



A study of present markets indicates that the regional trading area of Arkansas manufacturers is, in addition to the home market of the state, all of Louisiana, all of Texas north of Houston and San Antonio, practically all of Oklahoma, eastern Kansas, the greater part of Missouri, southern Illinois, southwestern Indiana, western Kentucky, Tennessee, and Alabama, and all of Mississippi. (See map on center spread for greater potential market area.)

Within this potential market area live approximately 70,000,000 people with an average per capita income of more than \$1,200 per year.

The market area described above is a fluid area and will vary somewhat according to the commodity offered for sale. Many manufactured articles now made in Arkansas find ready markets in every state in the Union and some go into export trade.

The trading area outlined for Arkansas manufacturers is generally considered to be the area which will exceed all others in the United States in expanding population and earning power during the next decade.

Transportation

The geographical location and the natural resources of Arkansas have brought to the state excellent transportation facilities providing swift, dependable and economical movement of raw materials from their sources, and manufactured products to consumers.

Railroad service in Arkansas includes five important rail lines: The Missouri Pacific; the Chicago, Rock Island and Pacific; the St. Louis Southwestern; the St. Louis-San Francisco, and the Kansas City Southern. The Yazoo and Mississippi Valley, owned and operated by the Illinois Central, serves eastern Arkansas by transfer boat across the Mississippi River at Helena. These roads give Arkansas transcontinental rail connection and provide excellent freight, mail and passenger service to all points in the United States. (See Railroad Map.)

The Mississippi River, which is the eastern boundary of Arkansas, provides all-year barge transportation. Also, the U. S. Army Engineers have approved a comprehensive plan for a nine-foot navigation channel for the Arkansas River from its mouth to Tulsa, Oklahoma, for all-year navigation. Similar projects are now being studied by the Army Engineers for navigation on the White River to Batesville, Ouachita River to Arkadelphia, and the Red River to Denison Dam. These navigation projects have had the support of private agencies and the Arkansas Resources and Development Commission.

Trans-national highways cross Arkansas from east to west and from north to south, providing automobile, passenger bus and freight truck traffic to all parts of the nation. An integrated system of state highways is here to serve intrastate traffic, and renders all sources of raw materials readily accessible by truck. Early in 1949, the people of Arkansas approved a road construction program calling for expenditure of \$80,000,000 over an ensuing four-year period.

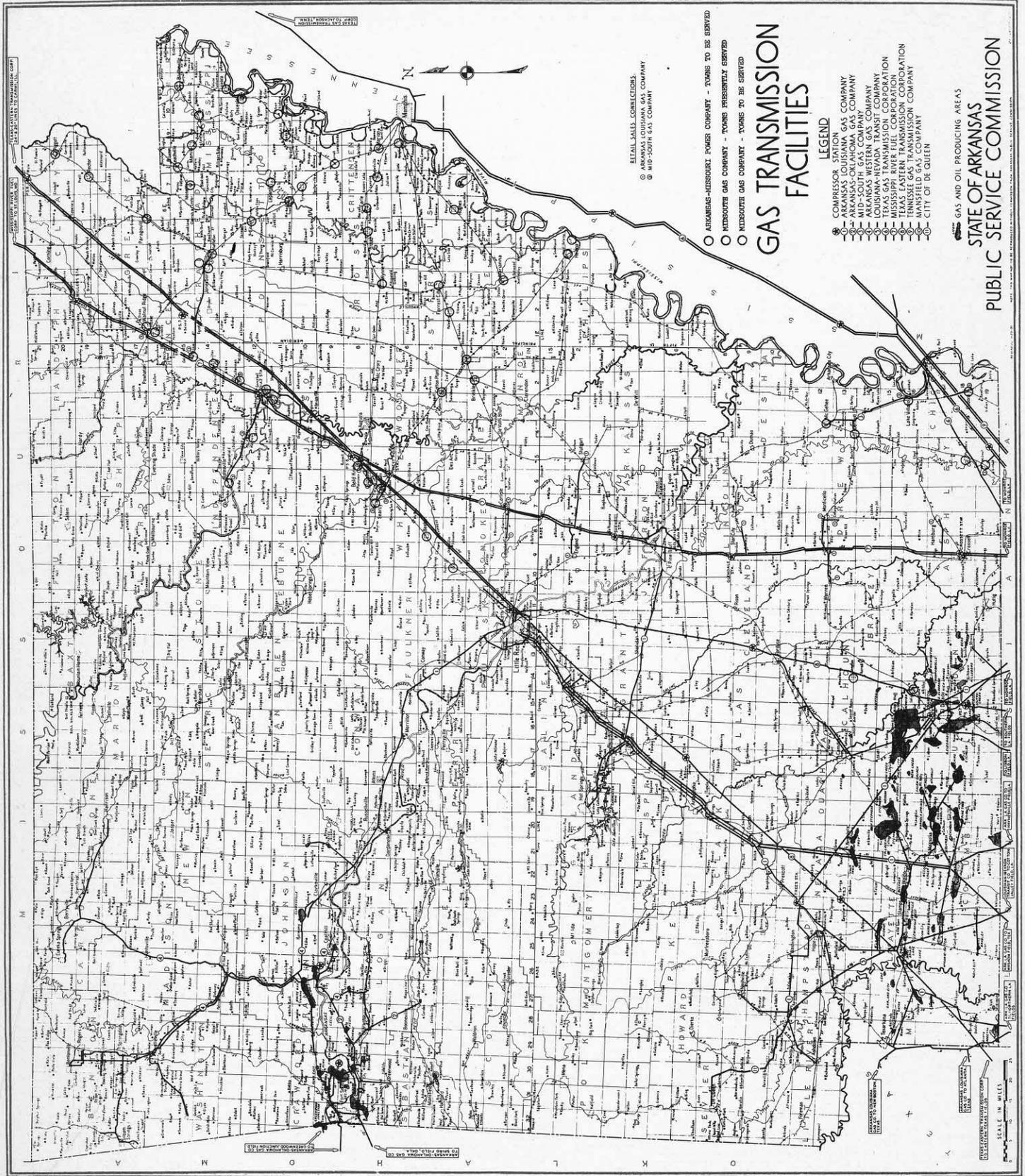
Because of the war, many airports were built in Arkansas and the result is that each of the larger towns now has a modern airport providing facilities for air mail, passenger and freight transportation. The geographical location of Arkansas has made it the crossroads of the airways.

Braniff International Airways now operates four daily flights in and out of Little Rock between Memphis to the east and all of the larger cities of Colorado, Oklahoma, Texas, west and southwest.

Little Rock is served by American Airlines with five flights daily between Boston and Los Angeles with connections provided with other airlines at all intermediate points.

Chicago and Southern Airlines connects Little Rock with all cities to the north and south with eight flights daily.

Schedule, to be found under map on next page, gives travel time by air and rail from Little Rock to principal cities throughout the United States (as of January, 1949):



- ARKANSAS-MISSOURI POWER COMPANY - TOWNS TO BE SERVED
 ○ MIDSTATE GAS COMPANY - TOWNS PRESENTLY SERVED
 ○ MIDSTATE GAS COMPANY - TOWNS TO BE SERVED
 ● RETAIL SALES COLLECTORS
 ○ ARKANSAS LOUISIANA GAS COMPANY
 ○ MID-SOUTH GAS COMPANY
 ○ ARKANSAS WESTERN GAS COMPANY
 ○ LOUISIANA-MEXICO-TEXAS COMPANY
 ○ LOUISIANA-MEXICO-TEXAS COMPANY
 ○ MISSISSIPPI RIVER FUEL CORPORATION
 ○ TEXAS EASTERN TRANSMISSION CORPORATION
 ○ TRANS-MISSISSIPPI GAS COMPANY
 ○ CITY OF DE QUEEN

GAS TRANSMISSION FACILITIES

LEGEND
 ● COMPRESSOR STATION
 ○ ARKANSAS LOUISIANA GAS COMPANY
 ○ ARKANSAS WESTERN GAS COMPANY
 ○ LOUISIANA-MEXICO-TEXAS COMPANY
 ○ LOUISIANA-MEXICO-TEXAS COMPANY
 ○ MISSISSIPPI RIVER FUEL CORPORATION
 ○ TEXAS EASTERN TRANSMISSION CORPORATION
 ○ TRANS-MISSISSIPPI GAS COMPANY
 ○ CITY OF DE QUEEN

GAS AND OIL PRODUCING AREAS
STATE OF ARKANSAS
PUBLIC SERVICE COMMISSION

TRAVEL TIME SCHEDULE

FROM LITTLE ROCK, ARKANSAS, TO:	PASSENGER & MAIL				FREIGHT	
	AIR		RAIL		RAIL	
	<i>Hrs.</i>	<i>Mins.</i>	<i>Hrs.</i>	<i>Mins.</i>	<i>Hrs.</i>	<i>Mins.</i>
Atlanta	3	34	18	40	68	00
Boston	8	53	34	45	160	00
Chicago	3	47	12	28	48	00
Dallas	1	35	6	50	15	00
Denver	6	12	30	20	42	00
Detroit	4	02	19	30	52	00
Houston	2	54	9	40	19	15
Kansas City	2	26	15	40	28	15
Los Angeles	6	50	41	50	120	00
Memphis	0	44	2	45	6	00
New Orleans	3	17	13	00	23	20
New York	6	29	16	45	160	00
Seattle	10	14	64	25	144	00
St. Louis	1	53	6	50	12	30
Washington	4	59	27	35	120	00

Present and Potential Power Supply

Arkansas is an oasis of electric power. Situated in the heart of the Southwest, America's No. 1 economic opportunity land, Arkansas is the concentric point in a virtually unlimited supply of low-cost power. Nine private power companies, eighteen rural electric cooperatives, and fifteen municipally owned plants serve practically all power requirements. In addition to industrial and urban customers, more than 220,000 rural customers are served with electricity at rates which are among the lowest in the nation.

The private companies are among 11 investor-owned utilities in eight states which operate a far-flung transmission system as an integrated network. Nearly 1,976,632,962 kilowatt-hours of electric power are shuttled over these power pathways. Nebraska, Kansas, southern Missouri, Oklahoma, Arkansas, east Texas, Louisiana and Mississippi are within this vast power pool.

Arkansas has never had a power shortage. Every customer is being adequately served at rates which compare favorably with the nation's lowest costs for electric service.

Abundant, cheap fuel is the primary source of energy. Steam plants, fired by natural gas, carry the base load. Hydro-electric facilities on the Ouachita and White rivers in Arkansas are used for peaking power.

Electric power output in Arkansas, during the period from 1947 through 1950, has increased 118.7 per cent, from 903,675,940 kilowatt-hours to 1,976,632,962 KWH.

At the present time there are a number of power plants under construction, or planned for completion within the next three years, which will increase the generating capacities 269,200 kilowatts in 1952; 192,000 kilowatts in 1953; and 164,000 kilowatts in 1954. The state will have available generating capacity of some 1,249,940 kilowatts by the end of 1954, in addition to approximately 255,000 kilowatts added by the Government to its various projects.

To produce 150,000 kilowatts, the Hamilton Moses Power Plant in northeast Arkansas is the latest of four gas-fired plants constructed to meet Arkansas' rapid industrialization. Others are Cecil S. Lynch, with 100,000 KW; Lake Catherine, 100,000 KW; and Harvey C. Couch, 35,000 KW. Hydro-electric facilities installed in multi-purpose dams contain the other generating capacity to be added since the beginning of World War II. Norfolk, on the White River in north Arkansas, has a 70,000 KW capacity; the Narrows, on the Little River in southwest Arkansas, has 17,000 KW.

Total capacity installed in Arkansas since the end of 1947 is 624,740 kilowatts, an increase of 142.7 per cent. Hydro-electric power from government projects is being carried by the existing systems.

A huge construction program is now under way to expand and improve Arkansas' electric system. To be completed in 1954, it is part of a continuing program to keep five years ahead of the state's power needs. Power companies are making arrangements with the government to absorb every kilowatt of installed hydro capacity for peaking purposes. Stream flow in rivers of the Southwest limits generation of hydro-electric power to about four hours daily. All of this hydro can be used by the companies for peaking power, thus repaying the government its full-power value and enabling the development of river basins.

Arkansas has an electric power cost which ranks among the nation's lowest. Rates for wholesale power sold to rural electric co-ops in Arkansas are among the lowest in the United States—a fact which has stimulated a phenomenal development in agricultural methods. One of the nation's largest metallurgic industries is operating at capacity in Arkansas because the power available for an electrolytic process is cheaper than at any other of the company's more than 50 huge plants.

Principal Taxation Laws Affecting Industry

Assessment of Property:

Assessments are based on 20 per cent of the true valuation of property, but in actual practice this law is liberally construed.

Corporation Franchise Tax:

\$1.10 per \$1,000 of capital stock employed in Arkansas, with a minimum of \$11.

Corporation Income Tax:

One per cent on the first \$3,000 of net income to 5 per cent on all over \$25,000. Credit is given on the gross income for income tax paid to other states on income from transactions in any state other than Arkansas. No deduction is allowed for federal income tax paid.

Estate Tax:

Taxes are imposed on all estates valued in excess of \$100,000 and the tax collectible is what is known as the "federal credit allowable," or 80 per cent of the federal basic tax as determined by the federal government.

Sales Tax:

Arkansas has a 2 per cent sales tax, collected on all commodities sold at retail. Exemptions are made on certain commodities such as gasoline, cigarettes, etc., already subject to special tax. Exemption of sales tax is also given to raw agricultural products and food products purchased by charitable institutions. No sales tax is collected on second-hand or used personal property when resold as trade-in on new property, on which the tax is paid. Unprocessed crude oil is also exempt.

Severance Tax Rates:

Timber: 10 cents per 1,000 feet of total stumpage severed or cut.

Barite, bauxite, titanium ore, manganese, manganiferous ores, zinc ores, cinnabar, lead ore:
10 cents per ton.

Coal, lignite, gypsum, chemical grade limestone, silica sand and dimension stone:
One cent per ton.

Crushed stone, granite, slate, limestone, sand, gravel, clay, chalk, shale: One-half cent per ton.

Diamonds, shells, ochre, sulphur, salt and whetstone novaculite: Four per cent of market value at point of severance.

Retail Gasoline Tax:

6½ cents per gallon.

Use Tax:

Arkansas has a use tax of 2 per cent on the purchase price of all tangible personal property brought into the state for consumption.

Exemptions: All such property brought into the state for consumption by manufacturing plants and processing plants; or by transportation and communication systems for use of the public.

Workmen's Compensation Law:

The Arkansas Workmen's Compensation Law provides compensation for disabilities not to exceed \$25 per week and not to be less than \$7 per week. In cases of total permanent disability or death, the payment to employee or beneficiaries is 65 per cent of average weekly wage subject to the above limitations but not to exceed a total of 450 weeks or the sum of \$8,000.

The insurance rates are fixed by a national rating board and are the same in each business for all workmen's compensation insurance companies.

Tax Exemptions:

Cotton or Fiber Mills: Such mills, newly erected, are not required to make or file with any assessor or taxing authority in the state any return, report or assessment of any kind as to or against any capital invested in a textile mill for the manufacture of cotton or other fiber goods for a period of 7 years.

Soil Types

The varied soils and climate of Arkansas give the state a wide range in commercial production of plants and animals. The state may be divided into five areas with respect to the major soil types. They are:

(1) The Northern Ozark Mountain Area, which includes mostly soils of limestone origin, although small areas of sandstone and shale are often present. The general agricultural production in this area is beef and dairy cattle, hogs, sheep and poultry, apples, grapes, berries, truck crops, hay and grain crops, and hardwood timbers.

(2) The Southern Ozark and Ouachita Mountain Area, in the central and western part of the state, includes soils derived from sandstone and shale. In this area are produced peaches, melons, berries, truck crops, cotton, soybeans, hay crops, livestock, and pine timber.

(3) The Coastal Plain Area, in the southern and southwestern part of the state. Here the soils had their origin under the shallow sea and are a sandy gravelly formation. The production is peaches, melons, berries, truck crops, cotton, soybeans, hay crops, livestock, and pine timber.

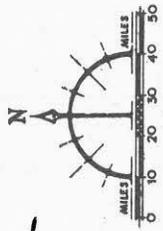
(4) Bottom lands, occurring chiefly along the Mississippi, Red and Arkansas Rivers and also along other streams in the state. These lands are very fertile and produce cotton, soybeans, rice, alfalfa, corn, truck crops, hay crops, livestock, and hardwood timbers.

(5) The wind-deposited or Loessial soils, in a long north and south narrow ridge, called Crowley's Ridge, in eastern Arkansas. On the Ridge grow peaches, berries, vegetables, cotton, soybeans, hay crops, livestock, and mixed timbers.

The Ozark and Ouachita regions have an average elevation of about 1,400 feet. Here the soils are less fertile and subject to a considerable degree of erosion.

The Coastal Plain areas have an average elevation of about 300 feet. Erosion is a problem, but these soils respond readily to corrective treatment.

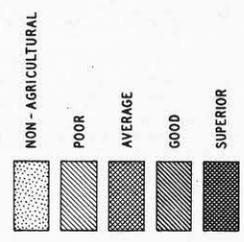
The Delta areas and river bottoms range in elevation from 150 feet at the extreme low point to about 250 feet. Here the soils are generally very fertile and produce all types of crops in abundance. (See map on page 26.)



ARKANSAS

SOIL PRODUCTIVITY

LEGEND



SOURCE: UNIVERSITY OF ARKANSAS
COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION



Agriculture

The State of Arkansas produces all the crops normally grown in the Temperate Zone and, with the exception of citrus fruits, grows practically every crop produced in the United States. The state has 6,747,000 acres in cultivation and, in comparison with the other states, ranks 19th in cultivated area.

The following tables show 1951 acreages and production and the 10-year average of 1940-49 in the principal money crops produced. The crops listed in the tables are ranked according to their value as marketed in descending order of their money value.

ARKANSAS CROPS AS ESTIMATED BY THE ARKANSAS CROP REPORTING SERVICE

<i>Product</i>	<i>Unit</i>	<i>10-year Average Production 1940-49 (units)</i>	<i>1951 Production (units)</i>	<i>1951 Harvested Acreage (acres)</i>	<i>Production Rank Among States, 1951</i>	<i>1951 Value Of Crops (dollars)</i>
Cotton	Bales	1,414,000	1,255,000	2,070,000	4	239,078,000
Cottonseed	Tons	579,000	504,000	2,070,000	4	34,776,000
Corn	Bu.	30,989,000	23,218,000	988,000	24	37,149,000
Rice	100 Lb.	6,525,000	9,011,000	445,000	4	45,055,000
Hay	Tons	1,613,000	1,294,000	1,137,000	25	31,056,000
Soybeans	Bu.	3,506,000	12,444,000	607,000	7	32,977,000
Oats	Bu.	7,684,000	3,050,000	122,000	31	3,202,000
Peaches	Bu.	2,206,000	1,296,000	-----	9	3,434,000
Potatoes	Bu.	3,100,000	1,106,000	14,000	35	1,770,000
Strawberries	24-qt. Crates	748,000	1,159,000	19,000	3	6,259,000
Sweet Potatoes	Bu.	1,669,000	518,000	7,000	13	1,476,000
Sorghum, forage	Tons	111,000	37,000	20,000	11	666,000
Tomatoes for market	Bu.	422,000	616,000	5,400	12	1,249,000
Apples, commercial	Bu.	618,000	*510,000	-----	27	847,000
Sorghum (syrup)	Gal.	839,000	232,000	4,000	7	452,000
Wheat	Bu.	389,000	279,000	18,000	38	586,000
Snapbeans, proc.	Tons	12,700	7,800	6,500	11	750,000
Cowpeas	Bu.	312,000	124,000	19,000	6	496,000
Lespedeza seed	Lbs.	5,850,000	13,800,000	50,000	4	1,863,000
Grapes	Tons	9,700	12,400	-----	6	1,079,000
Spinach, proc.	Tons	11,350	7,300	5,150	4	533,000
Tomatoes, proc.	Tons	36,800	29,200	10,800	15	1,244,000
Pecans	Lbs.	3,995,000	4,200,000	-----	8	762,000
Watermelons	Melons Ea.	1,041,000	1,564,000	5,300	13	594,000
Sorghum, grain	Bu.	173,000	315,000	15,000	12	460,000
Pears	Bu.	186,000	159,000	-----	16	254,000
Peanuts, picked	Lbs.	6,470,000	3,220,000	7,000	10	338,000
Snapbeans for market	Bu.	132,000	66,000	1,200	19	106,000
Cucumbers for market	Bu.	107,000	108,000	1,200	13	151,000
Barley	Bu.	149,000	72,000	4,000	39	83,000
Cantaloupes	Crates	99,000	70,000	1,400	18	108,000
Spinach for market	Bu.	173,000	234,000	1,200	11	187,000

*Includes 26,000 bushels unharvested due to economic abandonment.

Inventory of Livestock and Poultry on Arkansas Farms

JANUARY 1, 1952

<i>Class</i>	<i>10-Year Average 1941-50</i>	<i>1952</i>	<i>1952 Value</i>
Horses and colts	170,000	128,000	\$ 3,584,000
Mules and mule colts	209,000	115,000	4,715,000
Cattle, beef, all ages	442,000	686,000	} 179,530,000
Cattle, dairy, all ages	765,000	695,000	
Sheep and lambs	76,000	41,000	804,000
Hogs and pigs	1,107,000	681,000	14,165,000
Turkeys	43,000	43,000	249,000
Chickens on farms*	8,853,000	7,315,000	8,046,000

*Does not include commercial broilers.

The total value of the inventory of livestock and poultry on Arkansas farms as of January 1, 1952, was \$211,093,000.

The farm sales of livestock, dairy and poultry products in 1950 are given in the following table:

<i>Commodity</i>	<i>Value</i>
Cattle and calves	\$ 50,158,000
Hogs	30,888,000
Sheep	380,000
Butter, cream and milk	27,717,000
Chickens (excluding broilers)	6,634,000
Eggs	10,972,000
Broilers	36,904,000
Turkeys	1,587,000
Total	\$165,240,000

NOTE: Figures from Federal-State Crop Reporting Service.

FISHING

	<i>Value 1950-51</i>
Commercial fish	\$1,750,000
Shell fish	350,000
Total	\$2,100,000

Cotton Production

Arkansas ranks third among the states of the Nation in cotton production. The average production from 1940 to 1950 was 1,345,000 bales. While the staple lengths 13/16 inch to 1 1/4 inch and over are produced, over 80 per cent of the crop for the years 1948, 1949, and 1950 was in the staple range of 1 inch to 1 1/16 inch. During the same period, about 70 per cent of the production was Strict Low Middling and better in grade.

The following tables give a more detailed account of the quality and quantity of the state's cotton production:

GRADES OF COTTON GINNED IN ARKANSAS

<i>Crop Year</i>	<i>Ginnings</i>	<i>Strict Middling and Better</i>	<i>Middling</i>	<i>Strict Low Middling</i>	<i>Low Middling</i>	<i>Other</i>
1948-49	1,922,000	6.1%	38.8%	26.6%	6.0%	22.5%
1949-50	1,605,000	2.0%	30.2%	30.2%	12.9%	24.7%
1950-51	1,072,000	2.4%	24.7%	43.0%	9.6%	20.3%
3-Year Average	1,533,000	3.8%	32.5%	31.7%	9.2%	22.8%

STAPLES OF COTTON GINNED IN ARKANSAS

<i>Crop Year</i>	<i>Ginnings</i>	<i>13/16" & Less</i>	<i>3/32"</i>	<i>1"</i>	<i>1 1/32"</i>	<i>1 1/16"</i>	<i>1 3/32" & Over</i>
1948-49	1,922,000	5.1%	3.6%	16.2%	30.3%	34.9%	9.9%
1949-50	1,605,000	4.6%	3.7%	16.4%	29.9%	33.4%	12.0%
1950-51	1,072,000	1.5%	1.2%	11.5%	30.8%	42.9%	12.0%
3-Year Average	1,533,000	4.1%	3.1%	15.2%	30.3%	36.2%	11.1%

This range of classification and quantity of production is inviting to mills producing fabrics of the heaviest grades to the finest types of cotton goods.

There are approximately 35 towns in Arkansas with population sufficiently large (3,500 and over) to support one or more mills. Present power facilities interconnect all towns, making ample power available. Labor supply is adequate, and each town is well equipped with modern water supply, sewerage disposal and other social necessities.

To give a picture of the cotton marketing situation in the state, some of the principal cotton marketing centers having 3,000 population and over are grouped under the headings A, B, and C. Each letter designates the average staple length marketed in that town during the last two years.

A.
Conway
Batesville
Pocahontas
Searcy

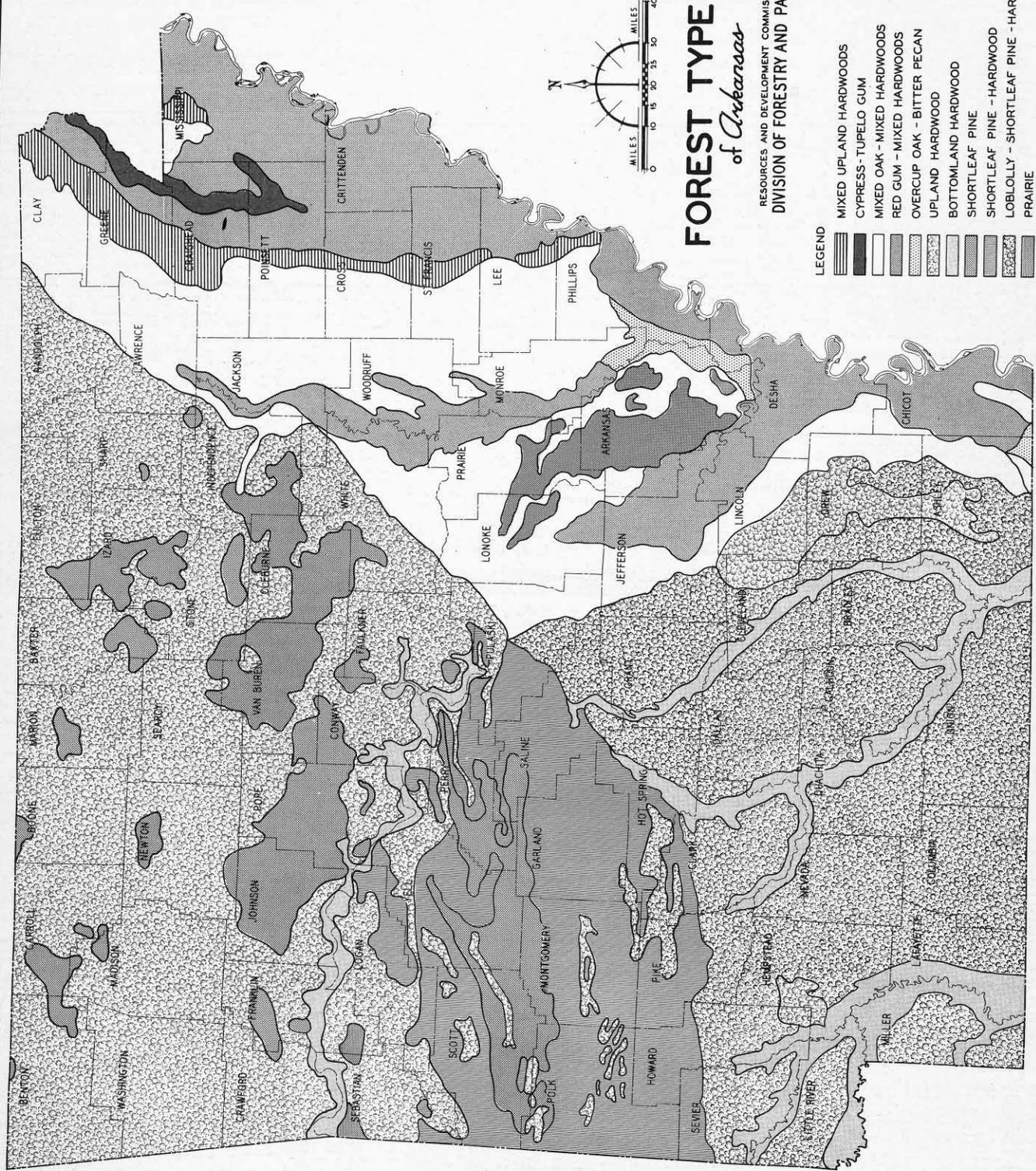
B.
Augusta
Arkadelphia
Hamburg
Piggott
Magnolia
Jonesboro
Monticello
Paragould
Hope
Newport
Lewisville
Star City
Lonoke
England
Texarkana
Marked Tree
Trumann
Little Rock
Walnut Ridge
Morrilton

C.
Lake Village
Eudora
Dermott
West Memphis
Blytheville
Osceola
Helena
Marianna
Pine Bluff
McGehee
Forrest City
Clarendon
Wynne

- A. Average Staple Length less than 1 inch
B. Average Staple Length 1 inch to 1 1/32 inch
C. Average Staple Length 1 1/16 inch and over

FOREST TYPE MAP of Arkansas

RESOURCES AND DEVELOPMENT COMMISSION
DIVISION OF FORESTRY AND PARKS



LEGEND

- MIXED UPLAND HARDWOODS
- CYPRESS-TUPELO GUM
- MIXED OAK - MIXED HARDWOODS
- RED GUM - MIXED HARDWOODS
- OVERCUP OAK - BITTER PECAN
- UPLAND HARDWOOD
- BOTTOMLAND HARDWOOD
- SHORTLEAF PINE
- SHORTLEAF PINE - HARDWOOD
- LOBLOLLY - SHORTLEAF PINE - HARDWOODS
- PRAIRIE

Forests

Nearly 60 per cent of Arkansas' total land area is forest land. On these 20 million acres of forest land stands approximately 38 billion board feet of commercial sawtimber and an additional 151 million cords of growing stock. Farmers own approximately 31 per cent of Arkansas' timber land; industry, 18 per cent; the public, 13 per cent; and non-farm, non-resident or non-woodusing industries, 38 per cent.

Over 2,000 woodusing plants in Arkansas use about 1.5 billion board feet of lumber each year in producing products valued at \$180,000,000.

Arkansas ranks fifth among the southern states and eighth in the Nation in the production of forest products. Among Arkansas' industries the lumber and timber products industry, with 65,000 people working in the woods and mills, ranks *first* in amount of income from payrolls and profits, *second* in value of active plants, and *second* in amount of sales or receipts. It further accounts for 32 per cent of the total industrial income from payrolls and profits in the State; has 21 per cent of the total industrial value of active plants; and receives 21 per cent of the State's total sales or receipts from manufactured products.

FOREST

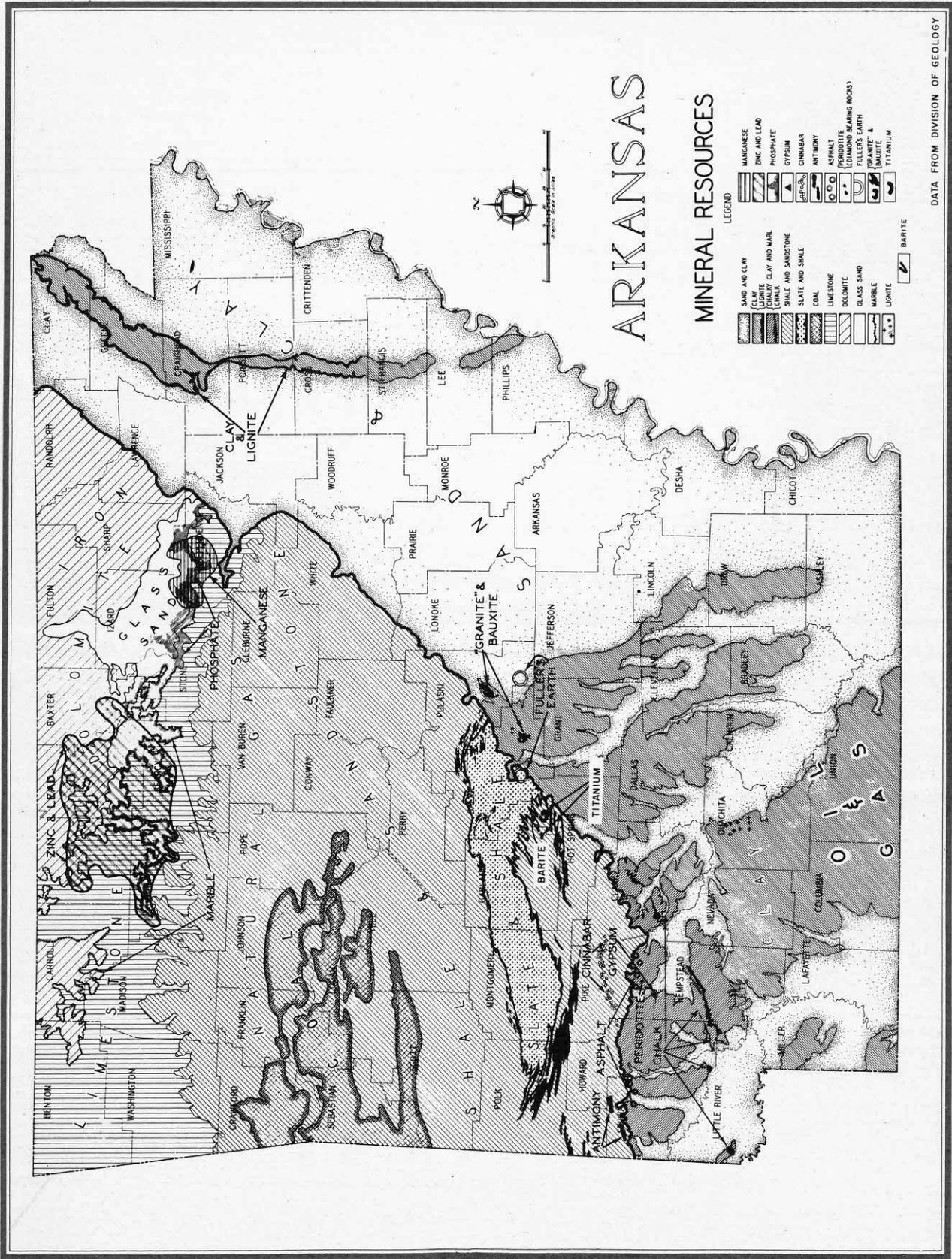
Composition

51% Pine—loblolly & shortleaf
22% Oaks—red & white
17% All other species

Distribution

10.0 million acres South Arkansas Pine & Hardwoods
3.6 million acres East Arkansas Hardwoods
6.4 million acres North Arkansas Hardwoods

Through forest fire protection, tree seedling production and better management and utilization practices, Arkansas' timber resource is increasing in quality and board foot volume. Each day a larger percentage of the landowners in Arkansas are becoming more aware of the returns to be gained in growing timber as a crop. Such an incentive is essential in order to meet the growing demands for quality lumber and wood products.



Mineral Resources

BARITE

Barite has shown a phenomenal rise in importance to the mineral industry of Arkansas. Initial production began in 1939 with 2,500 tons barite produced at a value of \$16,000 which increased by 1951 to 399,572 tons at a value of \$12,046,333. Arkansas now ranks first in the United States in production of this mineral with an output greater than the combined production of the other states. Arkansas barite is used entirely in the weighting of oil well drilling muds. Developed deposits are in Hot Spring County, one flotation plant being located at Malvern, the other at Magnet Cove. Crude mine-run barite averages 57 per cent BaSO_4 . The ore is run through a flotation mill with final product ground to pass 325 mesh, analyzing 97 per cent BaSO_4 , with a minimum specific gravity of 4.2. Ore reserves in the Malvern area are estimated at 16,000,000 tons containing 40 per cent BaSO_4 or better. Additional large deposits have been discovered in Montgomery County.

BAUXITE

Arkansas produces over 95 per cent of the bauxite or aluminum ore mined in North America. Production in 1939 was 361,690 tons and rose in 1943 to 6,080,000 tons—an increase of 1,500 per cent due to the war emergency. Production in 1951 was 2,251,000 short wet tons. According to the "available alumina" classification of bauxite (alumina less 1.1 times the silica), grades of ore mined range from available alumina of 48 per cent or higher (grade A) down to 32 per cent (grade C). Ore analyzing over 32 per cent available alumina is utilized in the modified Bayer process alumina plant at Hurricane Creek. Estimated reserves of 32 per cent or higher ore on January 1, 1950, are 40,000,000 long wet tons recoverable ore. Between 1898, when mining was begun, and the end of 1951, approximately 39,000,000 long tons of ore have been mined, about 50 per cent of the total known deposit. Most mining has been by open pit stripping, however, the percentage of underground mines will continue to increase as the shallow deposits are depleted. During the war, Defense Plant Corporation constructed the Hurricane Creek alumina plant near Bauxite, Arkansas, and Jones Mill aluminum plant near Hot Springs, Arkansas, representing an investment of \$78,000,000. The plants are now owned by Reynolds Metals Company. Two additional pot lines were put into production in July 1950, giving Jones Mill a rated capacity of 144 million pounds primary aluminum per year. The Aluminum Company of America will complete a new plant at Bauxite in mid-1952 which will double the state's bauxite processing capacity. The Reynolds Metals Company is building a new reduction plant at Arkadelphia which will be comparable in capacity to their present Jones Mill plant. Although the major production goes to the manufacture of metallic aluminum, non-metallic consumption has increased in the manufacture of industrial chemicals, aluminum oxide abrasives, activated bauxite for gasoline and the synthetic rubber industry and cement.

CLAY

Perhaps no other mineral operation in Arkansas has a greater supply of raw materials than that which lies at the disposal of the ceramic industry. There are six brick plants in the state manufacturing building brick, tile, and refractory brick; one plant manufacturing sewer pipe and drain tile; and three potteries. The chief source of clay used is from the Wilcox formation, which outcrops southwestward from Little Rock to the state line near Texarkana. The clay is high grade, burning gray to buff for face brick. Large deposits of high alumina kaolinitic clay associated with the bauxite should prove suitable for refractories.

COAL

Coal is one of the most important mineral resources of Arkansas. Production of bituminous and semi-anthracite coal totaled 992,671 tons during 1951, coming from about ninety mines in Sebastian, Logan, Franklin, Johnson and Pope Counties in the central western part of Arkansas. Mining is both by underground and stripping methods with stripping operations accounting for about 30 per cent of total production during 1951. In general the coal increases in hardness and

decreases in volatile matter from the western part of the field to the eastern. Johnson and Pope Counties produce a high grade semi-anthracite smokeless coal which finds a ready northern market, particularly in those cities having anti-smoke requirements. Coal in the middle and western districts ranks from high volatile bituminous to semi-bituminous and accounts for about 75 per cent of the total Arkansas production. Initial tests and reports from coal operators indicate that much of this western Arkansas bituminous coal is suitable for coking purposes. An ideal coke for steel furnaces is currently being made from a blend of 10 per cent to 25 per cent Arkansas coal with either Utah or southern Colorado coals.

CRUSHED STONE

Large deposits of stone suitable for crushing and use in construction are available throughout the northwestern half of the state. Dolomite, novaculite, limestone, sandstone, and syenite have been used for this purpose.

DIMENSION STONE

Limestone suitable for dimension stone is quarried in the vicinity of Batesville, Independence County. It is a uniform light gray in color and relatively hard. Crystalline limestones or marbles occur in the White River basin area of north Arkansas. Though the deposits contain gray, pink, and brown varieties, black marble is the only type recently produced.

GLASS SAND

Enormous reserves of almost pure silica sand occur in the St. Peter sandstone formation chiefly along the White and Buffalo Rivers of northern Arkansas. Good exposures range through 10 counties particularly along the river bluffs where the formation averages 40 feet in thickness. The sand from this region is equal in grade to that produced in Missouri, Illinois, and Minnesota from the same formation. The entire glass sand production of the state comes from Guion, Izard County. Arkansas has at present two glass plants at Fort Smith, one making bottle glass and the other producing plate glass. There is also a small bottle glass plant at Jonesboro specializing in glass novelties. The Calico Rock sandstones in Stone, Izard, Baxter and Fulton Counties, and the Kings River sandstone in Carroll and Madison Counties contain sand equal in grade to that of the St. Peter sandstone formation; however, they have not yet been developed commercially.

GYPSUM

Gypsum outcrops in Howard and Pike Counties in southwest Arkansas. The gypsum usually occurs in several beds of different thickness separated by thin clay layers. Individual gypsum beds are as much as $4\frac{1}{2}$ feet thick and are composed mainly of saccharoidal gypsum. Reserves of gypsum are unknown but believed to be large. Gypsum is now being quarried at two localities, one at Highland and a second at Corinth in Pike County, Arkansas. The entire production from these two quarries is being used as a retarder in Portland cement.

LIMESTONE

The limestones and dolomites of northern Arkansas form the basis for one of the major quarrying industries of the state. At present the larger portion of the production is agricultural and chemical grade limestone with lesser amounts being used for construction purposes. Reported production of limestone for all purposes during 1951 amounted to approximately 500,000 tons having a value of \$1,000,000. Numerous quarry sites for high grade limestone over 98 per cent CaCO_3 are still available.

MANGANESE

Manganese ores, chiefly the oxides psilomelane and hausmannite, are produced from the Batesville-Cushman area in Independence County. Although an appreciable amount of carbonate

ore has been produced, it is now largely exhausted. Mining is chiefly by underground operations. Production during the war was 37 per cent greater in quantity than in 1939, and during the war period two concentrating mills were constructed. In 1951, 4,592 tons valued at approximately \$93,494 were produced.

NEPHELINE SYENITE

Nepheline syenite is a gray granite-like rock that occurs principally in Pulaski and Saline Counties. The stone was used primarily for construction purposes until 1947 when the Minnesota Mining and Manufacturing Company completed a plant to utilize this material in the manufacture of artificially colored roofing granules. In the first year of operation this plant used 107,288 short tons of rock in the production of over \$1,500,000 worth of granules. During 1951, granules valued at more than \$3,000,000 were produced. The use of nepheline syenite in other ceramic wares has become commonplace but to date no suitable domestic supply has been developed. A recently completed study sponsored by the Division of Geology has shown that by the removal of most of the iron minerals in the rock it can be used for many of these other ceramic purposes.

NOVACULITE

Novaculite is a hard fine-grained sedimentary rock composed almost entirely of silica. The novaculite, 2 to 10 feet thick, outcrops from Pulaski County westward to Polk County. Finished novaculite is used in varied shapes as oilstones, whetstones, and abrasives. A large tonnage is also crushed and used as railroad ballast and as a raw material in the production of silica refractories and aluminum-silicon alloys. Arkansas ranks first among the states in production and reserves.

PETROLEUM, NATURAL GAS, AND ALLIED PRODUCTS

See report by Arkansas Oil and Gas Commission, pages 38 to 39.

SAND AND GRAVEL

Over six million tons of sand and gravel were taken from gravel pits and streams and river beds for construction purposes throughout the state during 1951. Reserves are known to be great, with especially extensive deposits in the coastal plain area in the eastern and southern portions of the state.

TITANIUM

The principal titanium deposits in the state are those of the Magnet Cove area in Hot Spring County where the titanium occurs in two distinct types of deposits, rutile and brookite. Rutile has been produced intermittently from open pit mines in the area since 1932. However, metallurgical problems hindered all operations and eventually forced the mines to close in 1944. There has been no production of rutile from the area since that time.

Early in 1946 the Geology Division initiated a long range program of geologic mapping and sampling of the known titanium deposits and prospects in the Magnet Cove area. Encouraged by the results of these geological studies, the Mining Branch of the U. S. Bureau of Mines, Rolla, Missouri, began in January, 1948, a titanium drilling program in the Magnet Cove area during which the Christy brookite deposit and the Magnet Cove rutile deposit were explored. The Geology Division has recently published a comprehensive report (Bulletin 16) on the geology of these deposits, which also includes the results of the Bureau of Mines drilling. The Metallurgical Branch of the Bureau of Mines has developed an economical method of extracting the rutile from the ores. It is believed that the results of the drilling and metallurgical test work will draw the attention of private industry to the Magnet Cove deposits, particularly because of the increasing interest being shown in the possibilities of titanium metal.

TRIPOLI

Tripoli, a very finely-divided form of relatively pure silica, occurs in several large deposits notably in Benton, Hot Spring, Garland and Montgomery Counties. Production at present is limited to the deposit in Garland County.

ZINC ORE

Zinc ore has been produced intermittently in the state from the deposits in the northern section. The deposits are widely distributed but individual deposits are small. Two smelters at Fort Smith, Arkansas, produce metallic zinc.

Potential Economic Material

BENTONITE

Small deposits of bentonitic clay in Saline and Hot Spring Counties and deposits of volcanic tuff in Howard County are being investigated by the Division of Geology for possible commercial applications.

CHALK

Large deposits of chalk suitable for agricultural limestone outcrop in the southwestern part of the state. Although it is being used in the manufacture of Portland cement, none of the deposits are being utilized for agricultural limestone. The chalk is uniform in composition averaging 87 per cent CaCO_3 . Best quarry sites are near White Cliffs and Foreman in Little River County.

DIAMONDS

Arkansas has the only known deposit of diamonds in place in North America. The diamonds occur in peridotite pipes near Murfreesboro in Pike County. Production figures are incomplete, but it is estimated that approximately 48,000 stones, with an average weight of one-fourth carat, have been produced since their discovery in 1906. Eight to 10 per cent of the stones are of gem quality. Between 1931 and 1948 there was no production reported. During 1948-49 a testing operation was carried out by the Diamond Corporation of America. Production of 840 stones weighing approximately 246 carats was reported.

LEAD

Lead has been produced intermittently in the past from the north Arkansas district where it is associated with the zinc deposits and from the west-central Arkansas mineral belt. The deposits in both regions are small and scattered, factors which have thus far hindered their development. Although there is no lead production at present, prospecting is being renewed as a result of the depletion of lead reserves in the Tri-State District during the war.

PHOSPHATE ROCK

Phosphate rock occurs as relatively flat-lying, lenticular beds in Stone, Izard, Independence, Searcy and Marion Counties in northern Arkansas. According to estimates of the U. S. Geological Survey, there are approximately 20 million tons of this rock averaging 40 per cent in B.P.L. content available in the area. There was some commercial production of phosphate rock in Arkansas during the period 1900-1907. There is no commercial production at the present time, however, because the grade of the rock is not high enough to be acceptable for the manufacture of superphosphate, the principal market for phosphate rock. A recent detailed study of a phosphate rock from a deposit near Hickory Valley in Independence County by the Division of Geology indicates that the best potential market for the Arkansas rock is in the direct application of the raw ground rock to the soil.

Arkansas Mineral Production for 1951

<i>Product</i>	<i>Quantity</i>	<i>Unit</i>	<i>Value</i>
Barite	399,572	Ton	\$ 6,956,549 ²
Bauxite	2,251,651	Ton	12,046,333 ²
Clay, Raw	397,748	Ton	974,483 ²
Coal	992,671	Ton	7,782,541 ²
Glass Sand	175,811	Ton	416,673 ¹
Gypsum	38,927	Ton	86,418 ¹
Lignite	149	Ton	284 ¹
Limestone, Chem.	474,119	Ton	829,708 ⁵
Lime, Burned	71,165	Ton	866,079 ³
Manganese	4,592	Ton	93,494 ¹
Natural Gas:			
Northwest Arkansas	8,182,707	MCF	1,178,310 ²
South Arkansas	59,068,688	MCF	8,505,891 ²
Marketed Production	39,041,949	MCF	5,622,041 ²
Natural Gasoline & Allied Products:			
Natural Gasoline	1,334,449	Barrel	3,362,812 ¹
Condensate	53,713	Barrel	146,637 ²
Butane & Propane	1,031,101	Barrel	2,814,906 ²
Novaculite (Abrasive)	5,926	Ton	1,422,240 ¹
Petroleum	29,877,108	Barrel	73,123,930 ⁴
Sand & Gravel	6,291,671	Ton	5,347,920 ²
Stone, Ballast & Construction:			
Limestone	570,231		
Novaculite	125,301	Ton	219,277
Sandstone & Syenite	1,631,270	Ton	2,854,723
Totals	2,326,802		4,071,905 ¹
Stone, Dimension:			
Limestone & Marble	1,859		28,257
Sandstone	17,020	Ton	351,634
Totals	18,879		379,891 ¹
Syenite, Roofing Granules	352,453	Ton	594,236 ¹
Talc	950	Ton	8,322 ¹
Tripoli	2,920	Ton	79,015 ¹
Zinc	35,167	Pound	4,783 ¹
GRAND TOTAL			\$136,714,401

¹ Computed from values taken from U. S. B. M. 1949 yearbook.

² Computed from 1950 estimated unit value data.

³ Computed from unit value est. by producer for 1950.

⁴ Computed from total amount severance tax paid.

⁵ Estimated.

Oil and Gas

The proven oil and gas resources of Arkansas are limited to two geographic sections. Southern Arkansas is productive of oil, condensate and gas. Northwest Arkansas produces dry gas only.

In addition to the petroleum products within the state, natural gas is piped into and through the state from Louisiana, Texas and Oklahoma. Arkansas Louisiana Gas Company, Louisiana Nevada Transit Company, Arkansas Western Gas Company, Arkansas-Oklahoma Gas Company and the Mississippi River Fuel Company have distribution systems which reach most of the principal cities and towns of the state and are capable of furnishing normal increases of natural gas for both domestic and commercial purposes. In addition the "Big Inch" and "Little Inch" lines, which were constructed as a part of the wartime emergency program, have been converted to gas transmission and traverse the state carrying gas to eastern markets.

The El Dorado-Helena crude oil products line carries finished petroleum products from El Dorado to the Helena river port on the Mississippi. Tri-State Pipe Line Company has completed a line, carrying finished petroleum products to the Arkansas City port on the Mississippi River.

Crude petroleum, condensate and gas production in Southern Arkansas comes from Ashley, Calhoun, Columbia, Lafayette, Miller, Nevada, Ouachita and Union Counties.

The Arkansas Oil and Gas Commission has estimated the recoverable oil and condensate of Southern Arkansas at 340 million barrels (January 1, 1952). The natural gas reserve of this same area is estimated to be 825 billion cubic feet. The oil and condensate produced in Southern Arkansas varies in gravity from 16° A.P.I. to 65° A.P.I., the preponderance of production being in the range of 40° A.P.I.

The daily production of oil and condensate is 81,855 barrels a day, 62 per cent of which is refined by refineries in Arkansas. The six refineries operating in the state process a total of 60,351 barrels daily of Arkansas and out-of-state oil and condensate. The daily rate of production is governed by the policies of the Arkansas Oil and Gas Commission, and these policies are based upon optimum rate of flow for the oil and gas pools of the state. This optimum rate of flow basis can be described as "only producing from an oil or gas reservoir that amount of oil or gas which can be produced through the most efficient utilization of natural reservoir energy."

Approximately 162 million cubic feet of 1,000 B.T.U. natural gas is being produced daily from the Southern Arkansas area. Ninety-four per cent of the natural gas produced from the fields of Southern Arkansas is utilized by industries, repressuring projects, etc. That gas utilized for repressuring is simply, for all practical purposes, stored for future use.

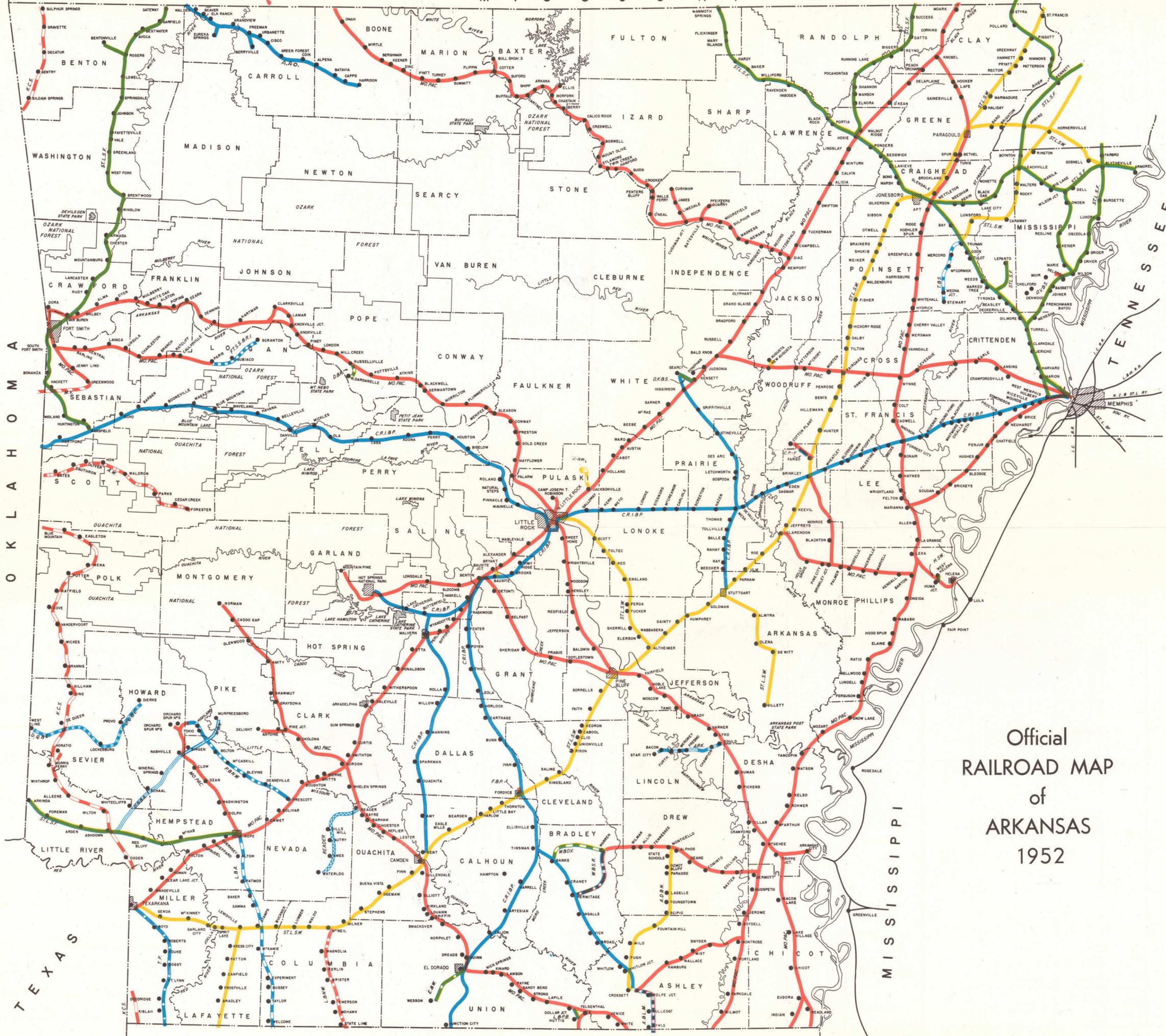
Approximately 75 per cent of the natural gas produced in Southern Arkansas contains hydrogen sulphide. This hydrogen sulphide is removed by the Girdler process at three large natural gasoline plants at present. From the extracted hydrogen sulphide there is now being manufactured over 150 tons of elemental sulphur daily. There are 10 gasoline plants in operation in South Arkansas processing 195 million cubic feet of natural gas per day. The principal products from these plants are 154,000 gallons of natural gasoline daily and 119,000 gallons of butane and propane.

Natural gas in Northwest Arkansas is found in Franklin, Crawford, Sebastian, Johnson, Scott and Pope Counties. The estimated reserve of natural gas is 135 billion cubic feet. There is no oil or condensate produced in Northwest Arkansas.

At the present time there is being produced approximately 22 million cubic feet of 1,000 B.T.U. natural gas daily in Northwest Arkansas, all of which is purchased by gas utility companies.

Both the royalty owners and operators of the state have been quick to accept the most modern developments in production practice. The Midway Field is cited as the first in the United States to install during the early life of the field a pressure maintenance program on a cooperative basis by which water is injected into the oil reservoir to maintain pressure and increase ultimate recovery. The Schuler Field is an outstanding example of pressure maintenance on a unitized basis. As a result of the obvious benefits obtained from these two operations other fields have been brought under pressure maintenance programs until more than 50 per cent of the daily production comes from fields with this type of operation. This is a record equalled by no other state in the Union. The pressure maintenance program has also resulted in making 120 million barrels, equivalent to four years' production, available which could never have been recovered under normal operation.

For detailed information on the oil and gas area of Arkansas, refer to "Petroleum Development and Technology for the Year 1950," published by the American Institute of Mining and Metallurgical Engineers.



ARKANSAS RAILROADS

- Arkansas R. R.
- Arkansas & Louisiana Missouri Ry.
- Arkansas & Ozarks Ry. Co.
- Arkansas Western (Kansas City Southern) Ry.
- On traffic from or to points on the Arkansas Western (K. C. S.) R. R. from or to other lines or railroads in Arkansas can only be handled interstate.
- Ashley Drew & Northern Ry.
- Augusta Railroad Co.
- Bauxite & Northern R. R.
- Chicago, Rock Island & Pacific Ry.
- Cotton Plant-Fargo Railway Co.
- Dardanelle & Russellville Ry.
- Delta Valley & Southern Ry. Co.
- DeQueen & Eastern Ry.
- Doniphan, Kensett & Searcy Ry.
- El Dorado & Wesson Ry.
- Fordyce & Princeton Ry.
- Fort Smith, Subiaco & Rock Island Ry.
- Graysonia, Nashville & Ashdown R. R.
- Helena Southwestern
- Jacksonville Northwestern Railway Co.
- Kansas City Southern Ry.
- Louisiana & Arkansas Ry.
- Louisiana & Northwest R. R.
- Louisiana & Pine Bluff Ry.
- Midland Valley Ry.
- Missouri Pacific R. R.
- Murfreesboro-Nashville Ry.
- Prescott & Northwestern Ry.
- Reader R. R.
- St. Louis, Southwestern Ry.
- St. Louis-San Francisco Ry.
- Texas & Pacific Ry.
- Truman & Southern Ry.
- Warren & Saline River R. R.
- Warren & Ouachita Valley

Official
RAILROAD MAP
of
ARKANSAS
1952

