

a great state  
**Arizona**

a great state  
**Arizona**

**Santa Fe**

-alfalfa  
cotton  
mines  
lumber  
fruit  
live stock

-alfalfa  
cotton  
mines  
lumber  
fruit  
live stock





LAKE MARY, SOUTH OF FLAGSTAFF

## ARIZONA

A land of romance and unexcelled climate which also offers opportunities for farmer, stockraiser, merchant, manufacturer, miner and professional man, is not found in many parts of this sphere terrestrial. Arizona, traversed by the Santa Fe Railway, answers the description given, and this folder is published for the purpose of presenting briefly some facts which may be of interest and value to homeseekers and other investors whose attention has been drawn to the state.

## AREA

Arizona is an area of plain and mountain, approximately 132,000 square miles, lying within the 109th and the 115th degrees of longitude, and the 31st and 37th degrees of latitude. It is bounded on the north by Utah; the east, by New Mexico; the south, by the Republic of Mexico, and the west, by California and Nevada. The state is 390 miles long by 340 miles wide.

This great area is divided by geologists into two distinct climatic regions, by an irregular diagonal line extending from about the 33d parallel to the intersection of the 115th meridian and the 36th parallel, where the Colorado River, which is the western boundary of the state, turns southward. The region north and east of this line includes comparatively level plateaus lying at altitudes of from 5,000 to 8,000 feet above the sea, and broken by isolated buttes and short mountain chains; and by deep canyons which carry the wash of mountain and plateau to the sea. The altitudes of the southwestern half of the state are not so great, and the plains, which it includes, are crossed, from northwest to southeast, by chains of low mountains; and by rivers and their wide valleys, broad and fertile mesas rising between. The greatest altitude is San Francisco Mountain, 12,794 feet high, in the north-central part; and the least, eighty-three feet, at low water in the bed of the Colorado River, on the Mexican border.

## IMPORTANT STREAMS

The Colorado River, which enters Arizona from Utah through the famous Grand Canyon of Arizona, midway between the 111th and 112th meridians, turning almost at a right angle on the Nevada border, thence flowing southward, finally pouring its waters into the Gulf of California beyond the Mexican border, carries off the greatest loss of moisture precipitated over the state. The most of this flows, by the Little Colorado from the northeastern and mideastern plateaus, into the Grand Canyon. The loss, however, is decreasing, yearly, by the greater use of water for irrigation, and by conservation for "dry-farming." The upper tributaries of the Little Colorado take their rise on the western slope of the Continental Divide in McKinley County, New Mexico.

The headwaters of the Gila, the greatest river in southern Arizona, likewise are in New Mexico, flowing off the Continental Divide in Grant County. Here the waters of the stream have been appropriated for local use, but below in Arizona the flow is augmented from many sources until it becomes useful for irrigation in its extreme western reaches. The Gila and its tributaries drain the southwestern, middle, and southeastern sections of the state. Here, excepting floods, the flow of the streams is taken for irrigation; and even the floods of one, impounded by the Government's great Roosevelt Dam in Tonto Basin, are saved for irrigation.

This is the Salt River, the greatest tributary of the Gila. The more important streams flowing into the Salt River are Black River, flowing out of the Apache National Forest; White River, flowing out of the White Mountains; Tonto Creek, whose waters are impounded in Tonto Basin; Verde River, rising in Yavapai County, whose flow is caught at Granite Reef, in Maricopa County, by a barrage of the Salt River Valley Reclamation Project, and diverted into canals; and the Agua Fria and the Hassayampa, which, flowing out of the Prescott National Forest in Yavapai County, empty into Gila River in Maricopa County. The Agua Fria and the Hassayampa are not included in the Salt River Valley Reclamation Project; but their waters have been conserved by other enterprises, and used for irrigation.

## RAILWAY TRANSPORTATION

The railways of Arizona are the Santa Fe and Southern Pacific. The Santa Fe operates 812 miles of track in the state. The northern part is traversed from east to west by the Company's Coast lines. A line, with branches, extends from Ash Fork, through Prescott, to Phoenix. Another line runs from Wickenburg, a mining center, to Parker, thence to Cadiz, California. Still another line is from Williams to the rim of the Grand Canyon.

The heavy rails, treated ties and rock ballasted roadbed in Arizona enable the Santa Fe to move its up-to-the minute steel passenger equipment and





ARIZONA STATE CAPITOL, PHOENIX

modern steel underframe freight cars over the lines with comparative freedom from the jolt and jar so nerve-racking to travelers and so destructive to shipments. A large part of the mileage of the Chicago-to-California line in northern Arizona is double tracked.

### RAINFALL

The annual precipitation of moisture over Arizona varies. At Yuma on the Colorado River in the southwest, altitude 141 feet, the precipitation is 3.13 inches; at Phoenix in the Salt River Valley, altitude 1,108 feet, 8.05; at Prescott in Yavapai County, altitude 5,320 feet, 17.40; at Flagstaff, county seat of Coconino County, altitude 6,907 feet, 23.87; at Holbrook, county seat of Navajo County, altitude 5,069 feet, 8.99; at Fort Defiance, Apache County, near the intersection of the 36th parallel and the 109th meridian, altitude 6,500 feet, 14.01; at Fort Mohave, Mohave County, where the Colorado River crosses the 35th parallel, altitude 604 feet, 5.07; at Bisbee, Cochise County, on the Mexican border in the southeast, altitude 5,500 feet, 17.46. In the Salt River Valley the winter rains exceed those of summer, thus favoring the winter growing annuals which are indigenous there.

### POPULATION

The population of the state was 204,354 by the census of 1910. In the year following, this increased about 25,000, mostly farmers; and since then the gains of new settlers have been in increasing ratio. In 1917 the state's population was estimated at 340,000. The mines are growing in importance and production,

but not so fast as agriculture, and wherever farms are possible, the greater gains of population are found. The mining districts are growing, as are the cities of the agricultural districts; in addition, the spread of agriculture in the valleys has made new towns, all prospering in trade, and growing in population, wealth and culture. For example, Phoenix, county seat of Maricopa County, and capital of the state, had a population of 11,134 by the enumeration of 1910; and within two years, it had grown to 18,000. In 1917 the population of Phoenix was 27,800.

### PROPERTY VALUES

Following is a summary of the assessed valuation of all property in Arizona, as reported by the State Board of Equalization, for 1917:

DESCRIPTION OF PROPERTY	VALUATION
Mines.....	\$336,573,044.90
Railroads.....	96,728,523.00
Smelters.....	56,848,441.70
Lands.....	48,059,389.17
City lots.....	38,306,117.20
Livestock.....	37,782,508.00
Improvements on city lots.....	33,901,744.06
Merchandise.....	15,669,997.65
Banks.....	7,482,217.01
City public utilities.....	6,824,862.66
Improvements on lands.....	5,105,623.83
Telegraph and telephone.....	2,886,277.41
Other property.....	16,248,536.09
Total value.....	\$702,417,282.68
Less exemptions.....	4,890,663.00
Total subject to taxation.....	\$697,526,619.68





SHEEP AND ALFALFA, NEAR PHOENIX

## MINES

Mining is Arizona's greatest industry. The 1917 production exceeded \$200,000,000, making a record. The state leads all others in copper production, the 1917 output being 700,000,000 pounds. The gold output that year was more than 2,000,000 ounces; lead, 26,000,000 pounds; zinc, 20,000,000 pounds. The copper mines are at Jerome, in Yavapai County, where there are large smelters. Mining is given further mention in this folder, in the section devoted to Yavapai County.

Besides ores now mined, there are coal areas within the Navajo and Hopi Indian reservations, which lie in the northeastern part of the state. The United States Geological Survey estimates that these areas contain eight billion tons of coal.

## AGRICULTURE

Next to mining, agriculture is the state's most important industry. As the subject is covered elsewhere in this folder, by counties, it will be dismissed here with a paragraph. Agricultural development has been steady, and farmers believe that in a short while it will overtake the mining industry.

## LIVESTOCK

The best information obtainable from the State Board of Equalization, the United States Department of Agriculture, and elsewhere, in 1917, showed the number of livestock in Arizona to be as follows:

Cattle—Range, 884,672; milch cows, 81,277; steers, 2 years and up, 27,088; bulls, 30,013; beef or feeders, 24,195; graded, 2,212; total, 1,049,457.

Sheep—1,650,000.

Goats—242,561.

Hogs—32,484.

Horses and mules—81,313.

Arizona livestock suffers few of the ills to which stock is heir in other states. This is attributed largely to the climate. Arizona is the natural livestock country.

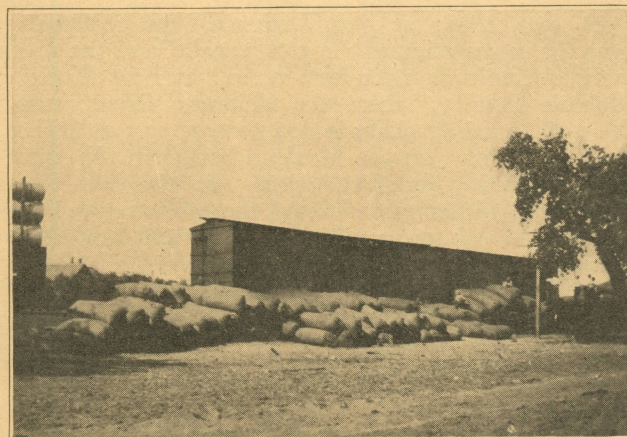
## SHEEP INDUSTRY

The first importation of domestic animals into what is now the state of Arizona, and quite possibly into any state, is believed by those who have studied the matter to have been some bands of sheep, stolen from the early Spanish settlers of Mexico by more or less enterprising Indians of the Arizona country. These "importations" were probably made between the time of the first Spanish conquests in Mexico and the landing of the Pilgrims, though the last named event has no purpose in this item except to fix the time.

Arizona sheep owners ship 6,000,000 pounds of wool annually. The 1917 production of wool had a value of \$3,000,000, owing to war prices. The sales of old sheep and lambs is not so easy to estimate, but may be safely figured at \$7,500,000, annually. More than half the sheep of the state are owned by sheep men of Coconino County.

In the Salt River Valley there is now a system of feeding sheep which is being followed by a few farmers very profitably. The plan is to cut and stack the alfalfa through the summer, buying sheep in the fall. Usually old ewes are purchased, as these may be had at a reasonable price. These sheep are pastured on the alfalfa in the winter and in addition are fed the alfalfa hay which was stacked through the summer. The early lambs—and whenever possible it is planned to have the lambs come in December and January—grow rapidly and fatten quickly. These lambs reach the Kansas City markets early and bring a price almost equal to the price paid for hothouse lambs. The old sheep are shorn and they also take on flesh easily and in the spring or early summer are shipped to Kansas City markets and find a ready sale at good prices. This branch of sheep husbandry is quite profitable, though it requires good management, judicious buying, careful watching to prevent loss of lambs, and keen judgment in feeding.

While the big sheep states of the northwest have been steadily losing in numbers of sheep, Arizona has for



PART OF HALF A MILE OF WOOL, AT HOLBROOK





A BUSINESS STREET IN PHOENIX

the most part been gaining. Owing to the peculiarities of the range and the advantages of the valleys for winter pasturing sheep and maturing early lambs, it is likely that in numbers of sheep there will be little change. In quality we may confidently expect that steady progress which characterizes all industries of the state.

### LUMBER FORESTS

There are within the state 14,811,145 acres forested areas, which the United States Government has reserved from sale, or homestead entry. These are greater in extent than the reserved areas of forest within any other state. The Forestry Service estimates that the trees available to be manufactured into lumber in Arizona would yield 6,263,800 thousand feet of lumber board measure, and 14,142,604 cords of firewood. The Flagstaff, Williams, and other mills of northern Arizona, cut 50,000,000 feet of lumber, worth \$750,000, annually. There also are small areas of pine and other timber in private ownership. A rich lumber region was opened in 1917 near Snowflake, south of Holbrook, on the Santa Fe.

Estimating an increase of one per cent of saw timber and one and one-third per cent of cordwood, the annual growth in Arizona is 62,638 thousand feet of saw timber, worth, at \$3.75 per M., \$203,573, and 188,520 cords of firewood, worth, at sixty-seven cents per cord \$126,308. This is \$329,881 of matured timber coming on annually. The matured trees are sold to the mills. The presence of these timber areas and mills in the state make lumber cheap for settlers.

### MARKETS

The markets for the farm products of Arizona could not be better. Excepting livestock, hides, wool, citrus and other orchard fruits, olives and olive oil, figs and cantaloupes, all staple products are consumed within the state. Besides local population in the irrigated valleys and uplands, where agriculture is practiced, the mining districts are great buyers of all farm products. Indeed, the mines buy more than all other customers. The surplus livestock and livestock products, fruits, and olive oil are in great demand from outside, and are cash f. o. b.

### BOARDS OF TRADE

The several cities and larger towns have boards of trade; as Phoenix, Glendale, and other cities of Maricopa County; Prescott and Jerome, of Yavapai; Parker, of Yuma; Kingman, of Mohave; Flagstaff and Williams, of Coconino; Winslow, Holbrook and Snowflake, of Navajo; and St. Johns, of Apache. These organizations are active. Their several secretaries reply to inquiries promptly.

### PENAL AND CHARITABLE INSTITUTIONS

The state maintains a penitentiary at Florence; a hospital for insane at Phoenix; an industrial school at Bisbee; and a home for pioneers at Prescott. The last named occupies a beautiful site of six and a half acres, overlooking the city. The main part of the home is 60 by 50 feet, with two wings, each 37½ by 40





CATTLE RANCH, NEAR KINGMAN

feet. It is designed to be a home for pioneer settlers of the Territory, who may desire to avail themselves of it. Its capacity is 130, and in 1917 sixty persons were sheltered beneath its roof; the eldest eighty-eight years, and the youngest sixty-one.

### STATE LANDS

Arizona has nearly 11,000,000 acres in National grants. Of this, 2,500,000 acres are ready for lease or sale. Purchasers have 38 years in which to pay for their land. The minimum price fixed for agricultural lands—defined by law as those under an established irrigation project—is \$25 per acre. The minimum price of grazing and dry-farming lands—defined as those not under an established irrigation project—is \$3 per acre. The lands are appraised, advertised, and sold to the highest bidder. These lands also may be leased—agricultural lands at a minimum of 2½ cents per annum of the appraised value, grazing and dry-farming lands at a minimum of three cents per acre per annum. Owners and lessees are not required to live on the lands. The term, “dry farming,” means farming with the least possible moisture—not farming without moisture.

### SCHOOLS

Arizona has not neglected educational matters in its stride forward as a great producing state. The State University at Tucson, the State Normal schools at Flagstaff and Tempe, an excellent system of High Schools and Grammar Schools, and the common school in every neighborhood afford ample educational facilities for all.

### MARICOPA COUNTY—THE SALT RIVER VALLEY

In its effort to direct the attention of homeseekers and other desirable investors to particular sections of Arizona, the Santa Fe Railway perhaps can do no better than to begin with the Salt River Valley, which

is in Maricopa County, the south-central part of the state. The valley is about forty miles long—east and west—and from fifteen to thirty miles wide. There are 219,000 acres of land included in what is known as the Salt River Irrigation Project, which obtains its water supply from the Roosevelt Reservoir, constructed by the United States Government. On pages 22, 23 of this folder will be found a description of the Reservoir and Dam, with illustrations.

The main things that readers who have become interested in the Salt River Valley want to know are what can be produced, how much can be produced, and what is the value of stuff after it is produced. The Santa Fe is fortunate in being able to give the latest and most reliable figures, found in the report of the United States Reclamation Service for the Valley, from October 1, 1916, to September 30, 1917. The values named in the report are based on 1917 selling prices prior to September 30. In many instances the values increased steadily after that date. Cotton, for example, advanced 40 per cent in a few months, owing to war time demands.

The Reclamation Service report for the Valley shows total acreage, average yields, and values per unit per acre as follows:

Alfalfa—67,864 acres; yield, 4.2 tons per acre; value, \$15 per ton, or \$63 per acre.

Cotton—23,444 acres; yield, 200 pounds per acre; value, 65 cents per pound, or \$130 per acre; cotton-seed, value per acre, \$11.25; making total value per acre, \$141.25.

Barley—9,309 acres; yield, 16.5 cwt per acre; value, \$2.75 per cwt., or \$45.37 per acre.

Indian corn—1,851 acres; yield, 18 cwt. per acre; value, \$2 per cwt., or \$36 per acre.

Corn fodder—1,031 acres; yield, 2.5 tons per acre; value, \$25 per ton, or \$62.50 per acre.

Sorghum—25,471 acres; yield, 1.1 tons per acre; value, \$45 per ton, or \$49.50 per acre.

Wheat—3,794 acres; yield, 14 cwt. per acre; value \$3 per cwt., or \$42 per acre.



THOROUGHbred HOLSTEIN CALVES, SALT RIVER VALLEY





TYPICAL ALFALFA RANCH IN SALT RIVER VALLEY

Oats—900 acres; yield, 17.5 cwt. per acre; value, \$2.50 per cwt. or \$43.75 per acre.

Cantaloupes—2,905 acres; yield, 150 crates per acre; value, \$1 per crate, or \$150 per acre.

Navel oranges—797 acres; yield, 101 crates per acre; value, \$3 per crate, or \$303 per acre.

Grape fruit—135 acres; yield 55.5 crates per acre; value, \$2.75 per crate, or \$152.63 per acre.

Olives—130 acres; yield, 3,506 pounds per acre; value, 3 cents per pound, or \$106.80 per acre.

Apricots—341 acres; yield, 6,000 pounds per acre; value, 2½ cents per pound, or \$150 per acre.

Peaches—595 acres; yield, 5,600 pounds per acre; value, 2 cents per pound, or \$112 per acre.

Irish potatoes—373 acres; yield, 60 cwt. per acre; value, \$2.25 per cwt., or \$135 per acre.

Sweet potatoes—68 acres; yield, 120 cwt per acre, value, \$2 per cwt., or \$240 per acre.

Lettuce—146 acres; yield, 200 crates per acre; value, 90 cents per crate, or \$180 per acre.

Beans—1,425 acres; yield, 15 cwt. per acre; value, \$9 per cwt., or \$135 per acre.

Small fruit—153 acres; yield, 500 crates per acre; value, \$1 per crate, or \$500 per acre.

The total acreage reported for the Valley was 193,697; value of total crop production, \$12,135,523; average value per acre, \$62.65.

The report showed the milk checks from the production of 21,460 cows to be \$173,375 per month, or \$2,080,500 for the year.

Hives of bees numbered 7,784; production, 60 pounds per hive; value, 20 cents per pound.

Poultry numbered 142,892; production, 8 dozen eggs per hen per year; value, 30 cents per dozen.

The value of horses, cattle, sheep, hogs, fowls and bees sold during the year was found to be \$7,365,938.

Recapitulation, total production in the Salt River Valley, year ending September 30, 1917:

Farm crops.....	\$12,135,523
Livestock, etc.....	7,365,938
Dairy.....	2,080,500
Eggs.....	343,156
Honey.....	46,704
Total.....	\$21,971,821

In the acreage reported there are 4,326 farms, 2,539 farmed by owners and 1,787 farmed by tenants.

## COTTON

A great many farmers in the Salt River Valley lately have gone in for raising long staple cotton, which does particularly well in this part of Arizona. Indians dabbled with cotton many years, and white settlers grew it in small quantities; but it remained for T. W. McDevitt to put the industry upon its feet, as it were. Mr. McDevitt saw the possibility of the variety of cotton with a fiber length of nearly two inches, and began to cast about for a concern with resources sufficient to make a real demonstration. He succeeded in interesting the Goodyear Tire and Rubber Company of Akron, Ohio, in the project. The result was that this firm bought and leased 25,000 acres of desert land and reclaimed it for cotton, planting half of it the first year.





COTTON FIELD, SALT RIVER VALLEY

This was in 1917. The activity of the big tire company was an inspiration to farmers generally, and 35,000 acres of Salt River Valley land went into cotton—nearly four times the acreage of any previous year. There was a good crop, from half a bale to a bale and a half per acre, depending upon the skill of the grower; and the price went to 81 cents a pound in November!

The soil and climate of the Salt River Valley are peculiarly adapted to cotton growing. As stated in a bulletin issued by the Phoenix Chamber of Commerce:

"The soil of the Salt River Valley is quite as fertile as that of the Nile in Egypt. The climate is equally favorable and the irrigating system is far better, insuring an abundance of water at all times. . . . The Department of Agriculture states its preference for the Salt River Valley as the locality best suited, both as to soil and climate, for the future source of the long staple cotton supply of the United States."

The Phoenix Chamber of Commerce also has published a statement showing the cost of growing an acre of cotton, and the returns, based on the pre-war price. The statement follows:

Rent of land.....\$15.00 to \$20.00

(Some landowners make terms of 20 per cent of the lint cotton in lieu of cash rent.)

Water.....\$ 1.25

Thorough preparation of the land, per acre 5.00

Planting, including seed..... 2.50

Hand hoeing and weeding..... 6.00

Man and team for nine months..... 30.00

Picking 1,800 pounds of seed cotton..... 54.00

Ginning..... 12.00

Cost of producing and marketing one acre of cotton.....\$125.75 to \$130.50

Returns from one acre cared for according to above schedule of expenses; one bale, 500 pounds of lint cotton at 60 cents.. 300.00

800 pounds of seed at \$2.25..... 20.00

PROFIT, per acre..... 189.50

The great success of the crop in the Valley has

created a demand for land, but there still remains a fair area at prices ranging from \$100 to \$225 an acre, according to location, improvements and other conditions. Very little land is now available for rent, but small tracts for cotton can be purchased on terms which give a chance to the man who wants to go in for cotton growing.

There is a boom in long staple cotton growing in several other parts of southern Arizona. In 1917 the acreage near Parker was 8,000; in the Yuma Valley, 12,500; in the Casa Grande Valley, 1,000. The acreage doubtless will increase.

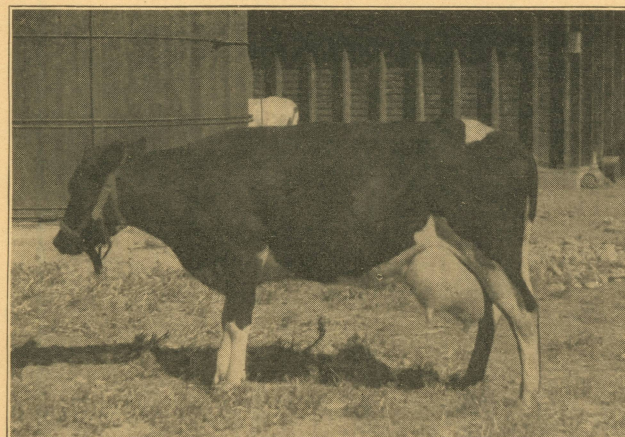
The demand for long staple cotton is heavy. The Goodyear Company—operating its cotton business under the name of the Southwest Cotton Company—buys all the production offered, and there are mills enough in the Valley to handle the cotton seed.

A farmer and his family can take care of from 20 to 40 acres of cotton, and not have to hire help until picking time. If he has a larger acreage, he will require additional assistance. There are 1,100 people employed on the big Goodyear farm.

## DAIRYING

The Armour Packing Company gave the dairy industry in the Salt River Valley a strong boost a few years ago when it built a milk condensery at Tempe, and in 1917 it gave the industry further impetus by building a duplicate plant at Glendale, on the Santa Fe. Each plant represents an investment of \$250,000, and has a capacity of 1,500 cases of condensed milk per day.

The construction of the two condenseries is a symbol of the faith the Armour Company has in the dairy industry of the locality described, and alfalfa is the magnet which drew the big packing corporation to the district. Alfalfa in the Salt River Valley yields five or six cuttings of hay; affords two or three months' pasturage, convertible into dairy products; endures well both extremes of temperatures and periods of drought, and, with all this, enriches the soil for other



INTRODUCING MABEL DE KOL NIKO, No. 87550, OF ALHAMBRA





ARIZONA IS FAMOUS FOR FINE DAIRY STOCK

crops, and therefore is perfectly adapted to the conditions and needs of the region. Most dairymen use no concentrated feed, confining the feed to alfalfa and grain pasture with hay supplementary, and silage, when they are fortunate enough to have silos. The by-products from the dairies and creameries furnish an ideal feed to combine with alfalfa for growing hogs, which are finished on barley and milo.

Professor Hugh G. Van Pelt, a well known authority on dairying, who attended the Arizona State Fair in 1917, made this statement:

"Although I was prepared to see great improvement in every department of the State Fair, I must admit that I was not prepared to see such remarkable improvement as has come about during the past two years. There are very few state fairs where so much interest is taken by the local exhibitors of Jerseys, Holsteins, Ayrshires, Guernseys, and Brown Swiss as here in the Salt River Valley. With the large number of excellent cattle already in the Valley and the large number being brought in each year, there can be no doubt that as the years go by, the Salt River Valley will be recognized the world over as one of the most productive and prosperous communities to be found."

There are 80,000 acres of alfalfa in the Valley, with record yields as high as ten tons per acre. The United States Reclamation Service, as stated elsewhere in this folder, found an *average* of 4.2 tons per acre on 67,864 acres. From 44,000 dairy cows in Arizona at the end of 1913, the number had increased to 81,000 at the beginning of 1917, an increase of nearly 100 per cent in three years. The valuation of dairy cattle

had considerably more than doubled in the time. No other state in the Union made gains which anywhere equaled the percentage of increase made by Arizona, and Arizona's dairy industry mainly is in the alfalfa region of the Salt River Valley, Maricopa County.

The Armour Company is running motor trucks through the Valley, collecting the milk daily, taking the market to the dairyman's door. Prices vary, but they have been satisfactory generally to the producers. There are creameries and other purchasers of dairy products, so that there always is a desirable market within reach.

A great feature in the Salt River Valley is the vigor and healthfulness of the dairy herd. Arizona has wise livestock laws, and no diseased stock enters the state. No barns are required; no storage of winter feed is necessary; no cold to reduce animal heat, and there is green grass all the year. These factors mean money in the purse, and account for the big profits made in dairying. The average revenue per cow for the Valley was found by the cow testing association to be \$92.05. A record breaking herd in the Valley showed an average of \$112.35 per cow for cream alone. The herd numbered forty-five, of which an average of thirty-seven were milked. The stock, Holstein-Friesian, were specially selected. No grain was fed, only alfalfa.

One Valley herd of sixteen cows and five two-year-old heifers yielded 13,870 gallons of milk. The sales from these were 4,550 gallons of milk, 1,105 quarts of cream, 438 gallons of buttermilk, 2,417 pounds of butter, besides 500 gallons of milk and 125 pounds of butter





SHIPPING CANTALOUPE FROM GLENDALE

used by the family. The cash receipts for milk, cream and buttermilk were \$2,914, and for calves sold \$480; total \$3,334. The feed cost less than \$1,000, leaving a net credit to the cows of \$2,334. Another year the same cows earned a net profit of \$2,635. The farm contains twenty-five acres. The entire care of the herd is the work of one man. If the product of a dairy farm be sold to a creamery, or condensery, the profits are less, but the labor is less as well. The figures given here represent normal conditions—not war conditions.

Thoroughbred stock is being imported continually. The aim is to have nothing but revenue-producers of the highest type. Under the ideal conditions for dairying the industry doubtless will become enormously important. There is room for much expansion of the dairy with its adjuncts, hogs and poultry.

### CANTALOUPE

The *Reclamation Record*, published by the United States Reclamation Service, says:

"The Salt River Valley is an ideal place for the production of cantaloupes due primarily to the dry climate and the excellent soil. A dry climate is very essential as the cantaloupes are very porous and absorb water like a sponge, with the result that the melons are rendered unfit for use if there is any considerable amount of rainfall during the ripening season. In this Valley a medium heavy soil which contains considerable humus seems to produce the best cantaloupes.

"The shipping season usually begins about July 1 and lasts until about the 25th. Nightly during this shipping season both the Santa Fe and Southern Pacific Railroads send out special trains of refrigerator cars loaded with cantaloupes. These trains go through on fast freight schedule and arrive in Chicago in 7 days, New York, 10 days, and Boston, 11 days."

### HOGS

Hogs are raised with less trouble and danger from disease than elsewhere. Here again the natural con-

ditions are found to be the farmer's best friends. The dry air, warm, sunshiny days are the best of disease destroyers. Thousands of hogs are in the Valley. On one farm alone there are over seven thousand hogs, of which over three thousand are brood sows.

### SHEEP

It has remained for the Salt River Valley to develop the perfect utility sheep. Here the animal is a worker as well as a food and clothing provider. Sheep are found very valuable in keeping ditch banks clean. They fatten quickly, and a market is at hand for wool and mutton. In addition, half a million sheep or more are brought into the Valley from the desert range for fattening and for lambing. Some farmers find good profit in fattening sheep on alfalfa or on mixed rations.

### HORSES

Horses develop early. There is much blooded stock on the ranches in the Valley. The breeding of mules is carried on extensively. Many fine draught animals are shipped every year, and the business is in a very promising way.

### POULTRY

It is just as easy to raise turkeys as to raise chickens, and both are easy tasks, and profitable. The Valley needs more poultry farms. Money is to be made in eggs. The turkeys forage in the fields. They are great rustlers, keeping fat on the insects. Good prices are obtained for all poultry products. Big shipments of turkeys are made out of the Valley, and several large turkey and chicken ranches are now being established by outside parties, who appreciate the choice quality of the birds grown here. The ideal poultry feeds grow plentifully and can be bought at reasonable prices. The feeds are in endless variety. Poultry associations are organized for co-operation and advice. Individual farmers are owners of many choice birds, and plan successful shows each year.



CORN GROWN UNDER IRRIGATION, SALT RIVER VALLEY





RESIDENCE STREET IN PHOENIX

### GARDEN TRUCK

Garden truck and vegetables grow to perfection. Especially famous is the lettuce which is raised here. It is shipped to important markets and commands good prices. Green peas, cabbage, cauliflower, in fact, most the vegetables mentioned in the Department of Agriculture list are being grown with profit.

### FRUITS

In the long list of crops maturing by months are to be noted many fruits. While apples are usually associated with colder climates, many fine quality apples are grown. It is, however, to peaches, apricots, pears, plums, figs, dates, olives, black cherries, strawberries, oranges and grape fruit that the Valley owes its fame as a fruit producing district. Arizona oranges have no superior, and they ripen early, which insures a demand at good prices.

### GRAINS

Grains are grown with success, and profits are not small. Grains are usually planted on new land. The variety is mostly barley, oats, or wheat which is used locally. Grain is often followed the same season with milo-maize or corn. The returns from two-crops-a-year farming run into handsome figures.

### SUDAN GRASS

A very important crop in the Salt River Valley is sudan grass. At the Valley Experiment Station it is found that seed sown in May produces about two tons the first crop and about four tons additional in the following three cuttings.

### IDEAL FARM HOME

The ideal farm home in the Valley (they are known as ranches, locally) is from 20 to 40 acres. The larger tract perhaps is the better, if the farmer has a family to help with the work. The Phoenix Chamber of Commerce suggests to newcomers that the forty-acre farm be divided, as follows:

Alfalfa.....	20 acres
Cotton.....	10 acres
Cantaloupes.....	5 acres
Corn.....	4 acres
Buildings and garden.....	1 acre

These tracts can be bought for \$150 to \$250 an acre, often fenced and with buildings sufficient for a start. Investigation shows that the farmers living in the Valley are satisfied with the measure of success they have achieved.

### PHOENIX

This is the capital of Arizona, and the state's largest and most important city. In 1917 it had a population of 27,800 and was growing steadily. It is thoroughly modern, having beautiful homes, superior schools, sixteen churches, substantial business blocks, paved streets connected with good country roads, adequate hotel accommodations, satisfactory transportation facilities, a fine system of parks, live newspapers, a strong Chamber of Commerce and an enterprising people.

Phoenix is in high favor as a winter resort. In fact, the climate is ideal nine months of the year. The weather is hot in mid-summer, but the heat is not the





THIS IS LONG STAPLE COTTON, RAISED IN SALT RIVER VALLEY, READY FOR SHIPMENT

kind which carries sunstroke. Tourists from all parts of the country go there.

The health of Phoenix and the community round about is excellent. Sick folks who go there get well, and well folks who live there seldom have anything the matter with them.

The Arizona State Fair is held each year in Phoenix in November. Palms, cottonwoods and purple hills surround the mile track which is fringed with green the year round. All conditions are ideal for the training of fast horses, and each winter there are many noted animals in training. The mile track is the fastest in the West.

### OTHER TOWNS IN VALLEY

Other towns in the Salt River Valley are Mesa, with a population of 4,000; Tempe, 2,000; Glendale, 1,500, and Chandler, 1,000. Glendale, on the Santa Fe Railway, where the Armour Packing Company has lately built a milk condensery, has a wide-awake Chamber of Commerce, as has each of the other towns named. The organizations invite correspondence. Peoria, on the Santa Fe, is the northern gateway of the Valley.

### THE ROOSEVELT DAM

The Roosevelt Dam, the main work of the ten million dollars Salt River Project, was built by the United States Reclamation Service, in a narrow canyon in the shadow of "Four Peaks," a mountain seventy-five miles away from Phoenix. The dam itself is of sandstone and cement. It rises 284 feet above its foundation,

which is sunk thirty feet into solid rock. At the base it is 168 feet through. It tapers to a thickness of twenty feet at the top, where, with two spillways, each 200 feet long, it has a total length of 1,080 feet.

The great artificial lake created by this dam will hold enough water to cover 1,327,000 acres one foot deep, and assures a permanent supply to the 219,000 acres included in the project. The lake is twenty-five square miles in area, and the drainage basin for the lake extends over 6,260 square miles. The altitude of the watershed varies from 1,950 to 11,500 feet above sea level. This insures a plentiful supply of rainfall and snow to keep the lake full at all times. The land irrigated has an elevation of from 1,000 to 1,300 feet, ideal for health and for growing crops.

The big dam checks and stores the waters of the Salt River and Tonto Creek, and in proper quantities allows it to return through the sluice gates to the bed of the river, where it flows on, taking up in its course the waters of the Verde River, and then heading for the diversion dam at Granite Reef. Here the flow of the three united streams is turned into great canals on the north and south banks of the river. The Granite Reef Dam is thirty-eight feet from base to crest, and 1,100 feet long.

The power possibilities of the project are great. A total of 27,000 horse power is generated by the system. The power from the project is used for lighting and traction purposes in and around Phoenix, and in the Valley; for power in mines and factories in the vicinity, and for lighting and power on farms.

In 1917 the Reclamation Service turned the control

of the Project over to the water users—just 50 years after the first irrigation ditch in the Phoenix district was dug.

The charges for building the irrigation works were fixed by the Reclamation Service at \$56 per acre, spread over a period of twenty years, payments as follows: Two per cent of the \$56 each year for four years, 4 per cent for two years and 6 per cent each year for fourteen years. The revenue from the power pays about \$1.00 per acre each year. The cost then on a twenty-acre ranch would be for water three acre-feet, \$44 payable \$1.00 per acre October 1st and the balance as used. For the first four years the revenue from the power will nearly, if not quite, meet the payments on the construction charges. The fifth and sixth years the cost will be from \$1.00 to \$1.25, or \$20 to \$25 on a twenty-acre tract, above the revenue from the power; for the last fourteen years the cost will be about \$2.25 per acre. After that the land owner will draw dividends from the revenue from the power.

### YAVAPAI COUNTY

Yav-a-pai was the name given by the Apache Indian to all of northern Arizona. It means, literally, the mountain country, being derived from "yava" (the hills) and "pais" (pronounced pie), a corruption of the Spanish name "pais" (land).

Yavapai County, situated nearly in the geographical center of the new state, has an area of about 8,150 square miles, or 5,216,000 acres. Within its boundaries are several of the richest mines in the world. Its broad, fertile valleys contain large areas of soils of

great depth, which produce the finest quality of grains, vegetables, deciduous, and small fruits in the Southwest.

Its citizenship is gathered largely from the southern and western states, but representing every state and province in the Union and in Canada. Prescott, the county seat, has a foreign-born population of but eight per cent, the lowest in the Southwest. In no country will be found men and women of higher culture; nowhere are educational facilities in a higher state of development.

Gold was the magnet which attracted and inspired the California Argonauts and gold seekers in the early 60's to penetrate and prospect the Colorado River and its tributaries for the precious metal. The first permanent American settlement was established in this part of the country in 1862, where Prescott now stands.

Yavapai County consists very largely of majestic mountains, lofty tablelands and beautiful fertile valleys, nestling at altitudes from 2,400 to 6,000 feet above sea level. The principal industries of this vast domain are mining, stock raising and farming and to a large extent, its climate is considered a valuable asset.

### MINING

Due to the heavy demand for copper and the condition of the metal market, during the years 1916 and 1917, Yavapai's principal industry showed a wonderful increase and brought prosperity to hundreds of her citizens as well as to successful investors throughout the United States. With the opening of that wonder mine, "The United Verde Extension," better known locally as the "Little Daisy," an impetus was given





AT HEAD OF THE ARIZONA CANAL

the mining industry which has awakened the world to the fact that here is located one of the richest, if not the richest, mining districts in America. Here may be found gold, silver, copper, lead, zinc, tungsten, antimony, molybdenum, onyx, marble, tufa, granite, red sandstone, limestone, clays and fire-clay. Every inducement is offered by her citizens for the carrying on of legitimate mining and with excellent railroad and smelter facilities and the market for supplies, Yavapai County to-day offers one of the best fields for mining to be found anywhere. To capital seeking investment and to the prospector alike, she holds out promise of rich rewards. The mines in Arizona are assessed on a basis of the profits they earn as well as the investment they represent. With this in mind, the following figures, showing the assessed valuation of the four large producing mines during the past three years, will make it clear why the population has increased and why the entire section is prosperous:

United Verde Extension Mining Company, no assessed value in 1915; value in 1916, \$5,360,280; value in 1917, \$27,551,329.

Commercial Mining Company, assessed value in 1915, \$37,250; value in 1916, \$167,935; value in 1917 \$348,255.

Consolidated Arizona Smelting Company, assessed value in 1915, \$74,509; value in 1916, \$251,535; value in 1917, \$2,296,746.

United Verde Copper Company, assessed value in 1915, \$15,319,160; value in 1916, \$20,687,010; value in 1917, \$31,536,944.

Total value of the four companies, 1915, \$15,430,919; in 1916, \$26,466,760; in 1917, \$61,733,274.

These four mines alone were assessed for 1917 for more than the entire assessment of the county for 1916.

The total valuation of the county for 1916 was \$58,277,781.41.

The total valuation of the county for 1917 was \$98,716,072.38.

## STOCK RAISING

Stock raising forms the second industry in importance in Yavapai County. Sheep raising is perhaps the most important branch of the livestock industry. Many large bands graze on the mountains during the spring and summer months and gradually make their way to the lower valleys in fall and winter. The oak brush, which is an evergreen, and the grasses of the mountain sides supply forage for the summer months, and the brush and catsclaw also supply excellent browsing. Cattle in this locality are free from disease. The average increase is estimated at 85 per cent. Considerable attention has been given to the raising of goats during the past few years. These hardy animals thrive among the hills. Following are the number of cattle, sheep, and goats in the county in 1917, with the assessed value:

Range Cattle, 117,867; value, \$3,418,143.

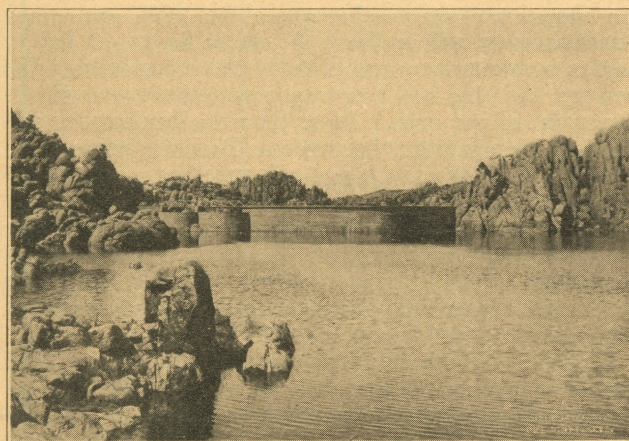
Sheep, 112,110; value, \$673,260.

Sheep bucks, 2,556; value, \$25,560.

Goats, 44,080; value, \$132,240.

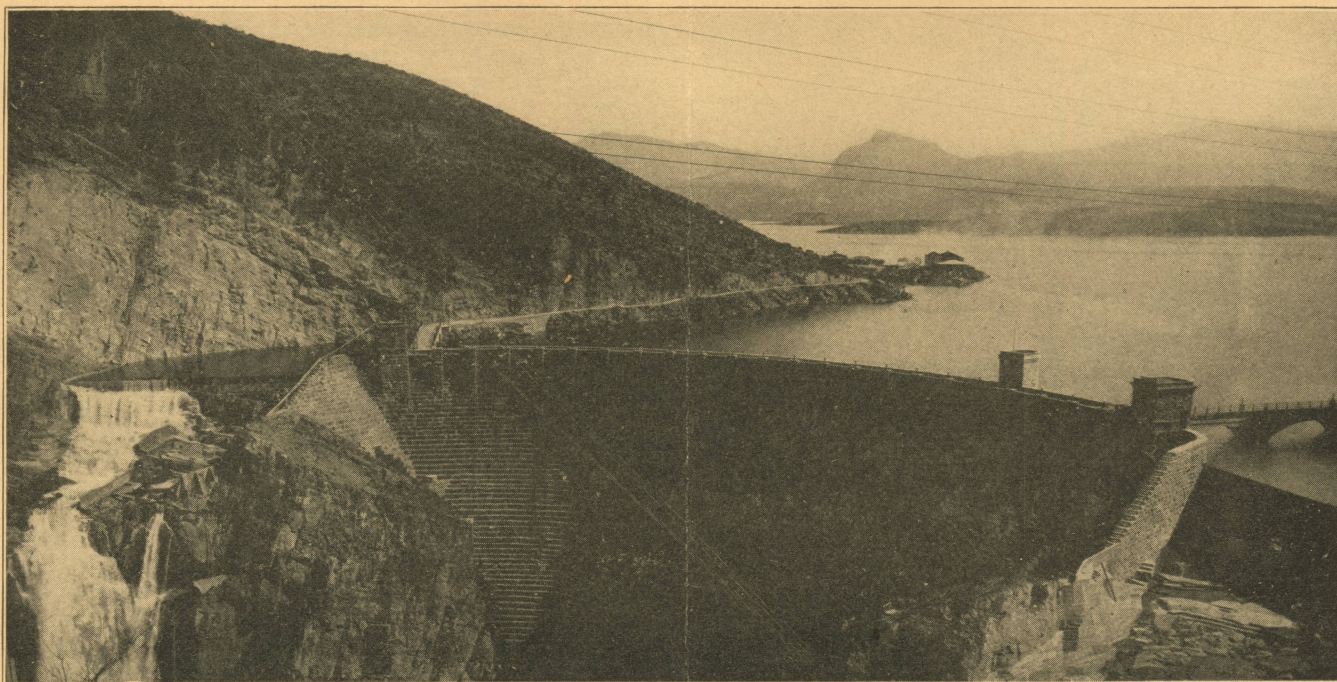
## AGRICULTURE

Farming occupies the third position in importance with respect to Yavapai's industries. The principal valleys are Big Chino, Little Chino, Ferguson, Lonesome, Peoples, Santa Maria, Skull, Thompson, Williamson, and Verde. Large areas in these mountain-girt valleys, only a portion of which are under cultivation contain fertile, arable soils, in depth from two to fifty feet, at altitudes averaging 4,000 feet. The soil is deep and unusually productive. It is derived mainly from the disintegrated materials washed down during the ages from the several spurs of the Rocky Mountain Range, which separate the valleys. Yavapai County bids fair to equal any other deciduous fruit district in the United States for the quality, flavor, size, and texture of her apples, plums, pears, peaches, apricots, and small fruits. At the St. Louis Exposition, the silver medal for apples was awarded Yavapai County,



STORAGE DAM, YAVAPAI COUNTY, FOR CHINO VALLEY PROJECT





THE GREAT DAM AT ROOSEVELT

competing against the world. At the International Farming Congress held at Colorado Springs, Colorado; Tulsa, Oklahoma; Wichita, Kansas; and Lethbridge, Canada, Yavapai's fruits and vegetables received gold medals and blue ribbons. At present there are 7,735.68 acres under irrigation in Yavapai County, the assessed valuation of which is \$868,529.27. This represents an increase during the past year in assessed valuation of \$145,958.70. Subject to dry farming and grazing there are 307,970.22 acres, assessed at \$868,529.27, showing an increase over 1916 in assessed valuation of \$181,315.39. That the quality and diversity of the products of Yavapai County may be given their proper place, it should be borne in mind that for the past several years, at the Arizona State Fair, the "Mother of Arizona Counties," has captured the first cash prize and grand county cup, for the best, largest and most comprehensive exhibit in the agricultural and horticultural department, competing against the other thirteen counties of Arizona.

### RAILWAYS

The main line of the Santa Fe Railway runs through the northern part of Yavapai County for a distance of sixty-three miles. Ash Fork is the junction point for the branch line to Prescott and other centers southward. The Prescott and Eastern, and the Bradshaw mountain railroads, also branches of the Santa Fe, penetrate the rich Crown King and other famous mining districts. Prescott, Jerome, Cottonwood, Humboldt, Mayer, Congress, Jerome Junction, Clarkdale and Seligman, with an aggregate population of

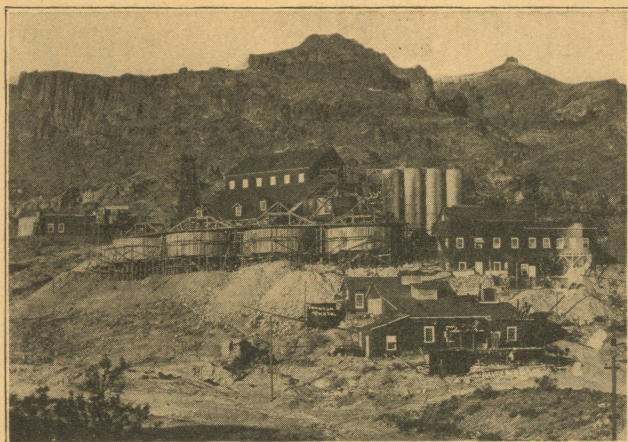
approximately 18,000 are the principal markets of the county. The present population of the entire county is 20,746.

Mention already has been made of the quality and hospitality of Yavapai County citizenship. Its educational facilities are equally worthy of comment. Here are to be found schools, churches, clubs and benevolent societies, which in membership, equipment, and excellence would do great credit to the most advanced and densely populated sections of the eastern states.

Yavapai County holds within its confines, mile for mile, as much of interest to the sightseer as any other section of the world. The archæologist and the mineralogist have scarcely scratched the surface of this treasure vault. Fame awaits the artist who can faithfully depict upon his canvas its crags and canyons, its pine-clad mountains and its rolling mesas. Nature has wrought in close companionship all of that charm that attracts in the Garden of the Gods and other meccas of world-interest, and has added many noble monuments singular to Arizona. Its cliff and cave-dwellings and hieroglyphic records are held by experts to be as old as the pyramids of Egypt and of equal interest to those who delve in the lore of unknown people.

The climate of Yavapai County is one of its chief lures. Throughout its broad domain there are more absolutely clear days during the year than in any geographical sub-division of like altitude in the world. In a word, Yavapai County is a distinctly separate entity, climatically, differing radically from the lower





TOM REED GOLD MINE

or desert region of the state. Here is found especially a desirable all-the-year-round climate, everywhere cool in summer and varying from mild to cold in winter, according to the elevation.

In the mileage and excellence of construction and upkeep of her state highways and county roads, Yavapai County has made great progress, and the mining centers, the agriculture and livestock regions and the scenic wonders are thus made easily accessible. On the State highway between Prescott and Ash Fork is Cathedral Cave, 700 feet long and 100 feet wide. Here myriad stalactites and stalagmites in thousands of weird, fantastic shapes, may be seen. Granite Dells, with beautiful lake and majestic granite formations, and Iron Springs, a resort at an altitude of 6,000 feet, are within half an hour of Prescott. The Verde Valley, the cliff dwellings known as Montezuma Castle, Montezuma Well, and Finnie Soda Springs are attractions which everybody who goes to Prescott wants to see.

A day full of charm and interest can be put in on the trip to Jerome and Clarkdale, where are located, respectively, the great copper mine and mammoth smelter of the United Verde Copper Company. This trip can also be made over the "crookedest railroad in the world," which connects this prosperous mining community with the Santa Fe. Twenty-six miles in length, this little narrow-gauge road, winding among the mountains in full view of the snow-capped San Francisco Peaks, negotiates 186 curves. From Clarkdale, which is connected with Jerome by good automobile bus service, trips can be made along the beautiful reaches of the Verde River, the shores of which are dotted with some of the most alluring agricultural and horticultural areas in the country. Clarkdale is the terminus of a recently constructed branch of the Santa Fe, connecting at Cedar Glade with the Santa Fe, Prescott and Phoenix. This branch line is thirty-nine miles long, opening a country rich in examples of prehistoric cliff dwellings and other remnants of bygone ages.

When it is taken into consideration that Yavapai

County's assessed valuation in 1917 was \$98,716,-072.38, showing an increase over 1916, of \$40,438,-290.97, it may readily be seen that she is but in the infancy of her growth. The Board of Supervisors, through its Immigration Commissioner, and the Yavapai County Chamber of Commerce, have done much to bring about the prosperity which is paramount in Yavapai to-day, and those desiring to acquaint themselves more particularly with respect to her industries, resources, etc., are invited and requested to address the Commissioner of Immigration, Prescott, Arizona, for further information.

## COCONINO COUNTY

Coconino County, traversed by the main line of the Santa Fe Railway, is the second county in area in the United States, being larger than Vermont, Massachusetts and Rhode Island combined. Its population is approximately 12,000. The Old Trails National Highway, with 115 miles of good roads, crosses it.

This county first became famous because it held within its borders the Grand Canyon of Arizona, which is reached from Williams over the Santa Fe, a trip of 65 miles. John L. Stoddard, the noted lecturer, described the Grand Canyon as, "nature wounded unto death, and lying stiff and ghastly with a gash 200 miles in length and a mile in depth in her bare breast, from which is flowing fast a stream of live blood called the Colorado river."

People from all over the world who travel through Coconino County to behold the Grand Canyon see a country full of mystery and fascination. To quote Stoddard again: "It is a land where rivers frequently run underground, or cut their way through gorges of such depth that the bewildered tourist, peering over their precipitous cliffs can hardly gain a glimpse of the streams flowing half a mile below; a land of colored landscapes such as elsewhere would be deemed impossible, with painted deserts, red and yellow rocks, petrified forests, brown grass and purple grazing grounds; a land where from a sea of tawny sand, one



DEL RIO RANCH, YAVAPAI COUNTY





**BEEF CATTLE FATTENING FOR EASTERN MARKETS**

gazes upon mountains glistening with snow; and where at times the intervals are so brief between aridity and flood, that one might choose, like Alaric, a river bed for his sepulchre, yet see a host like that of Pharaoh drowned in it before dawn."

### **COCONINO POTATOES**

Now the humble potato has added to Coconino County's fame. Word painters may not be able to thrill their audiences on the subject, but judges of good potatoes all over the country have given the Coconino variety a favorable verdict. Heavy showers fall frequently in the potato country; in the summer, almost daily. These rains, besides nourishing the soil for growing crops, keep the pastures green for livestock. The potato growers are organized for the purpose of securing efficient grading and sorting—United States standards—which is assurance that the product will bring a satisfactory price. Flagstaff is the county seat of Coconino County, and also the "capital" of the potato district.

Oats, wheat, hay, and market truck are grown in the vicinity of Flagstaff and Williams more extensively every year, as the population steadily increases. Open land is fertile and abundant, and sells at reasonable prices.

### **LIVESTOCK**

The county is recognized as one of the leading livestock districts of the Southwest, cattle and sheep on ranch and range being valued at \$9,000,000. All kinds of stock do well in this locality. There always is plenty of nourishing feed; also good water.

More than half the sheep in the state are owned by the sheep men of Coconino County—about 900,000. The others are about equally divided between Yavapai, Apache, Navajo, and Mohave counties. From the ranges of these northern counties, in October and early November, the annual drive of the sheep from the pine clad pastures of Coconino, the rocky slopes of the hills and mountains of Yavapai and the verdant valleys of Apache and Navajo is made. Over a trail the borders of which are prescribed by the Government, the sheep are slowly driven. Probably close to one-third of all the sheep in the state are finally driven to the lower elevations in and surrounding the Salt River Valley.

### **LUMBER INDUSTRY**

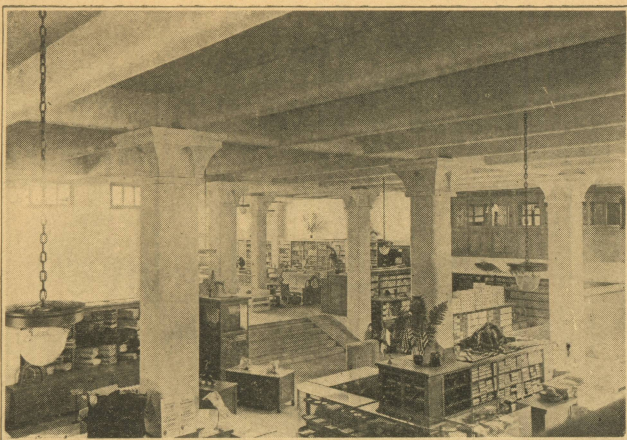
There is a heavy output of yellow pine lumber from the mills in the heart of the Coconino forest, north of Flagstaff. Many of the giant pine trees in the forest are 500 years old. The average age is 350 years. A large force of lumbermen have employment the year around.

### **WATER**

The melting snows of the mountains filter through the immense cinder beds on the slopes of the San Francisco range, to reappear in springs, and be piped into two great reservoirs. The water system cost \$165,000. It furnishes ample supply for Flagstaff, the lumber mills, and the Santa Fe, which hauls water from this point in trainloads.

Flagstaff is a model little city of 3,000, with a \$60,000 sewer system, paved streets, electric lights, good schools, including the Northern Arizona Normal,





INTERIOR OF MERCANTILE ESTABLISHMENT AT KINGMAN

and adequate church facilities. Here is the Lowell Observatory, founded by Professor Percival Lowell.

North of Flagstaff the San Francisco Peaks rise to a majestic height of nearly 14,000 feet. Sunset Mountain, which is an extinct volcano, and the noted Ice Caves, are in this vicinity. Walnut Canyon, with its prehistoric Cliff dwellings, is ten miles south of town. The Navajo and Moqui Indian reservations are reached from here. There is good fishing and camping on Oak Creek, not far away, with hotel accommodations at Lolomai Lodge. Tourists never are at a loss for interesting trips from Flagstaff.

Williams is the second city of Coconino County, population 2,000. Here is the home of the Saginaw and Manistee Lumber Company, which has one of the largest mills in the Southwest. The city is thoroughly up-to-date. Southwest of town is Bill Williams mountain, 9,000 feet high. A Fred Harvey hotel—the Fray Marcos—is at Williams, and another at the Grand Canyon—El Tovar.

### APACHE COUNTY

Apache County, in common with much of Arizona is made up of irregular streaks of fat between broad plains of lean. The fat streaks are the cotton lands and creek plains, while the lean are the vast areas of upland. The county occupies the northeastern portion of the state. It is approximately fifty miles wide, east and west, and two hundred miles long, an area of 10,733 square miles. In elevation the range is from 5,300 feet at the lower elevations to nearly 12,000 feet at the tops of the White Mountains. There is a white population of 12,000 people and a goodly number of Indians on the Navajo Reservation, which is in the northern part of the county. This sparse population is in itself an invitation to new settlers when the natural facilities, advantages, and climate are known.

### RAILROADS AND ROADS

The Santa Fe Railway crosses the county, east and west, about on center, following the Rio Puerco and

traversing lengthwise the attendant fertile valley. The Apache Railroad now in course of construction from Holbrook will traverse the richest agricultural district in Navajo County and enter Apache County in the southwestern part, thus opening a new agricultural district, and the vast yellow pine timber resources of the southern part of the county, where a big saw mill is to be constructed.

The Continental Highway is a graded road surfaced with good wearing material. It traverses the county between the Petrified Forest and the Arizona-New Mexico line, about a hundred miles, connecting up the more important towns and settlements on the Little Colorado River. Other graded roads amounting to about sixty-five miles lead out from the Highway to outlying settlements, and the Ocean to Ocean Highway leads from the Continental Highway at Springerville, and crosses the far famed White Mountains, making easy access to various camping, fishing, and hunting localities in these wooded mountains.

### TOWNS AND SETTLEMENTS

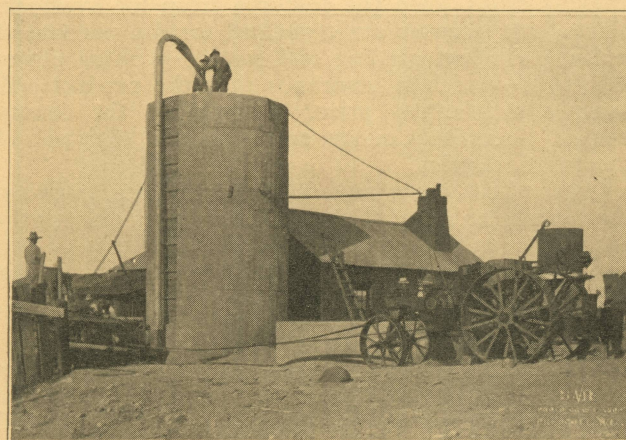
The chief towns are St. Johns, the county seat; Springerville, and Eagar, all located on the Little Colorado. These are the commercial centers and the merchants carry large, complete stocks. At Springerville and St. Johns are full equipped garages. Smaller towns and settlements are located at favorable localities on the numerous streams that feed the Little Colorado.

Good hotels are maintained in the larger towns, while the auto stage takes care of passengers.

Up-to-date schools under state and county supervision are conducted in every district, while at St. Johns there is a denominational High School offering four-year courses in high school branches. Good churches and social conditions obtain. Telegraph and telephone lines make communication an easy matter.

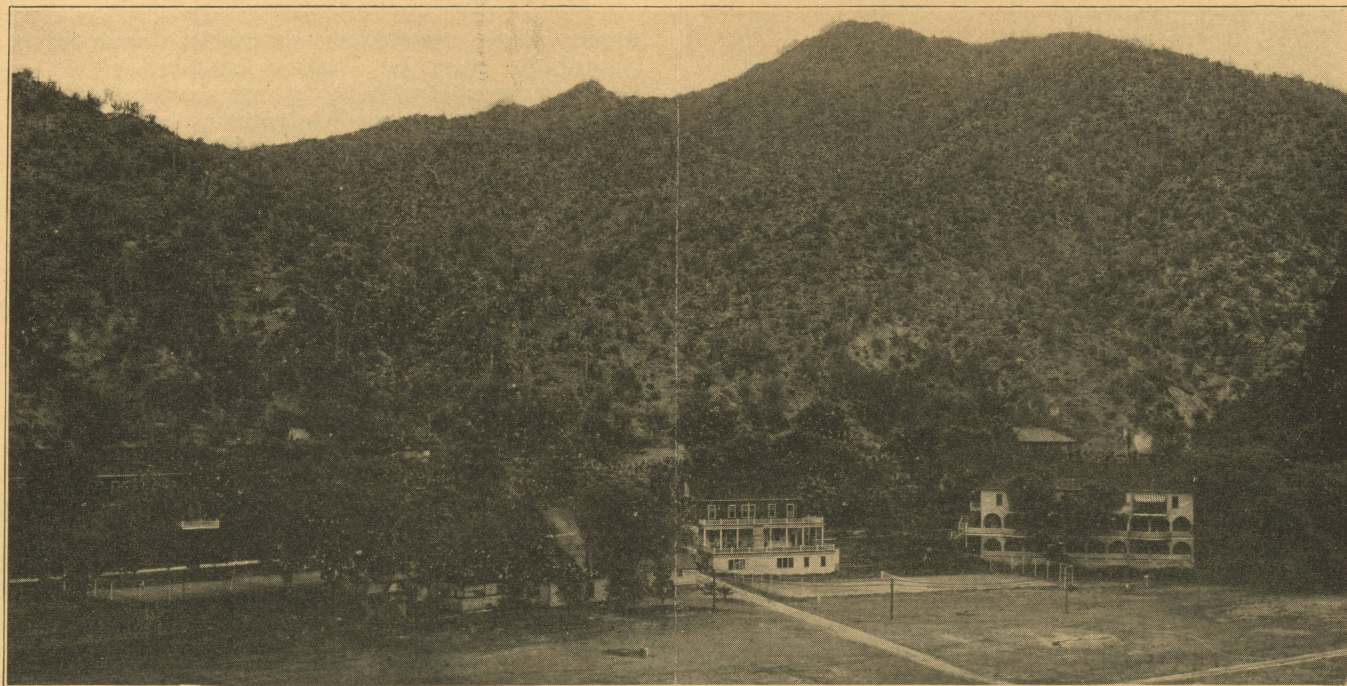
### SOIL AND PRODUCTS

The country north of and to a considerable distance south of the Santa Fe is largely an upland plain of



LOADING SILO AT PRESCOTT EXPERIMENT STATION





CASTLE HOT SPRINGS, IN BRADSHAW MOUNTAINS

sandy to sandy loam soil, covered with grama and bunch grass, with an occasional clay flat carrying sacaton grass and certain species of grease-wood which make excellent winter forage. Throughout this section there are areas of woodland consisting mostly of cedar, which may serve for fence posts and fuel. Favorable localities that are suitable for homesteads are found on these plains. The whole region is well adapted to cattle and sheep grazing.

Along the river and stream courses the soil is a rich alluvial clay which under irrigation annually yields splendid crops of alfalfa, small grain, corn, fruit, and garden products.

The retaining dam of the Lyman Reservoir, twelve miles south of St. Johns, which was destroyed by floods in 1915, is being rebuilt by local and Denver capital. The project will be completed early in 1918, and when finished will impound 45,000 acre-feet of water to be used on about 15,000 acres of fertile soil near St. Johns. In purchasing the land a sufficient permanent water right is also secured. The soil is sandy loam to clay loam in texture and will produce in abundance all of the crops common to similar soil and climatic conditions.

Dry farm methods are being employed successfully in the forest and wood-land belts, which are on the north slope of the White Mountains. The favorite crops are oats, wheat, corn, and potatoes.

### APACHE NATIONAL FOREST

The Apache National Forest occupies the southern portion of the county comprising more than a million

and a quarter acres, as follows: Timber, 60,000 acres; woodland, 419,000 acres; brush land, 25,000 acres; open grass and meadow, 209,000 acres. Several species of grass and wild peas grow in the timber and woodland making excellent range for livestock. Numerous bands of sheep and herds of cattle range in the forest during the summer and fall. Grazing and lumbering are under federal control. Local saw mills prepare materials for building and construction purposes.

### PETRIFIED FORESTS

The Petrified Forests are one of the wonders of the West. There are two in Apache County, covering 21,000 acres. One lies near the Santa Fe, south of Adamana station, and the other is east of St. Johns. These forests consist of pine and cedar trees that in past ages were turned to solid stone by the action of mineral laden water.

The volcanic gardens may be seen en route between St. Johns and Springerville a few miles north of the latter town on the Continental Highway. Here are gigantic mounds of volcanic cinder, volcanic craters, and acres of picturesque forms shaped in the molten rock ages ago.

### NAVAJO COUNTY

Navajo County, where for many years livestock has been, and still is, the industry of greatest importance and profit, is coming into crop cultivation by irrigation from the streams. The county contains an area of 9,826 square miles, and over its mountains and plains





STREET SCENE IN ST. JOHNS

many thousand cattle and sheep are pastured. Annually, 15,000 head of cattle, 35,000 to 60,000 head of sheep, and 1,500,000 pounds of wool are shipped from the county. From the Santa Fe Railway, which follows the Little Colorado through the county, travelers see many stock farms, with their windmills and water tanks, herds feeding on the range. Approximately 20,000 acres are irrigated in the county. At St. Johns, Concho, Snowflake, Taylor, and Showlow on the lower mountain slopes, and at Holbrook, Woodruff, St. Joseph, and Winslow on the Little Colorado, areas of from 1,000 to 3,000 acres are under the ditch. Elsewhere in the county, are isolated ranches where Mexicans make gardens and grow alfalfa in small patches. During the summer, much of the land is short of water, but the settlers are enterprising and the several communities are building reservoirs, in which flood water will be stored. It is contemplated, also, to use pumps, especially where there are no reservoir sites. This water is the underflow, and lies at from ten to thirty feet beneath the surface.

Below the junction of the Rio Puerco of the West and the Little Colorado, beginning immediately above Holbrook, lies a valley of from one to five miles wide. Below Winslow, this valley spreads to a width of eight miles. Within this valley, lie, approximately, 175,000 acres of arable land, which may be subjected to irrigation from the river. There are irrigable lands, and some irrigation, also, in the valleys of the tributaries of the Rio Puerco and Little Colorado, as Le Roux Wash, Silver Creek, Cottonwood Wash, Showlow Creek, Clear Creek, and Chevelon Fork. These never become dry. They are fed by springs, winter snows, and spring, summer, and autumn rains. The annual snowfall is from four to six feet.

The principal crop is alfalfa. It is cut three times, annually, and the yield is from three to four tons per acre. By the storage of water in reservoirs, the production of this hay is increasing. Since livestock is a great industry here, alfalfa hay is in great demand, and commands good prices. Other products of the

soil here are oats, sorghum, barley, wheat, indian corn, apples, plums, cantaloupes, watermelons, and berries. Sugar-beets grown at Winslow contain eighteen to twenty per cent saccharine, but are not planted extensively. On the mountain slopes, especially around Snowflake and above, great crops of irish potatoes are grown. Potatoes grown in the Heber district have taken first prize at the Arizona State Fair.

Holbrook, the county seat, is an ambitious settlement of 800 population, with good schools, churches, two banks, wholesale and retail stores, a newspaper, four hotels, a commercial club, the usual fraternal lodges, and other accessories of civilization. The irrigable land lies west of Holbrook, but large shipments of field products are made from this station, and the banking and trading is done here.

St. Joseph, a settlement of 400 population on the Santa Fe, sits in the midst of good farms which cover 1,500 acres. Two dams here divert water into fifteen miles of canals.

Winslow has a population of 4,000, and is the end of a passenger division on the Santa Fe, and the headquarters of a freight division. A Harvey hotel is located here. The town has excellent water for municipal and domestic use furnished by the railway company under contract. The source of this water is Clear Creek, a mountain stream. The city has a high school and grammar schools, churches, fraternal societies, two banks, two newspapers, volunteer fire department, wholesale and retail stores, comfortable homes, electric light, sewers, and all the other comforts of civilization.

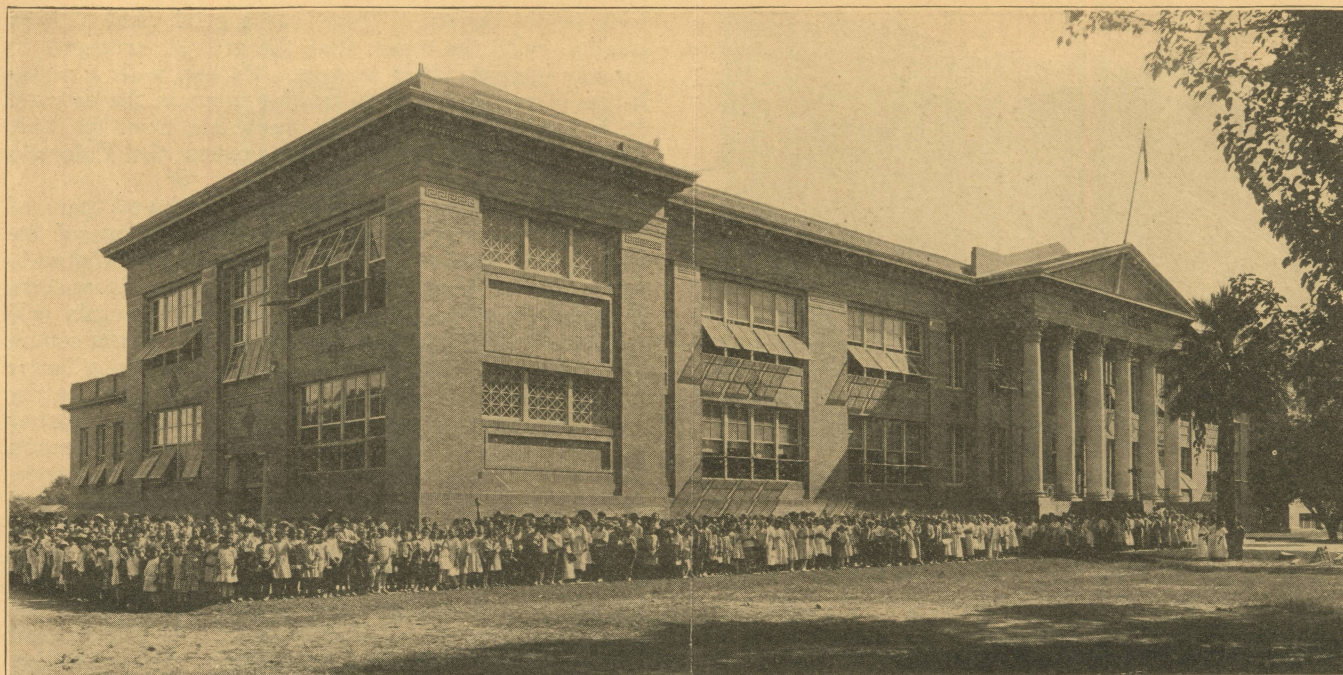
Woodruff, twelve miles south of Holbrook, possesses a dam which has stood against the floods of the Little Colorado since 1890; irrigating hundreds of acres of farms and gardens. The community has good schools, churches, stores, and comfortable homes.

Snowflake, thirty miles south of Holbrook, has a population of 600, and is the third town of importance in the county. The townsite is washed by Clear Creek, from which water is obtained for irrigation. It is a prosperous community, and the local demand takes



DIGGING POTATOES, NEAR FLAGSTAFF





MONROE PUBLIC SCHOOL, PHOENIX

the products of the surrounding farms. It is on the new lumber railroad from Holbrook. The community has a good public school, housed in a handsome edifice. The chief pride of the community is Snowflake Academy, where the higher branches of education and trades are taught. This institution, lately, has added a gymnasium, and amusement hall. The homes are of brick, mostly; the streets are lined with trees, and, altogether, it is a very pretty place. The town has a strong bank, stores, churches, and all the comforts of life. The headquarters of the Sitgreaves Forest Reserve are here.

Other good towns on Clear Creek are Taylor and Shumway, where irrigation has made prosperity. At Shumway, is a flour mill driven by water power. The wheat for this mill is grown in Clear Creek Valley. The apple is an important product of these settlements.

Showlow, on a creek of that name, sits in the midst of a pine forest at an altitude of 6,000 feet.

Lakewide, Pinetop, Woodland, and Heber, are prosperous communities made by "dry-farming." About 3,000 acres are cultivated, and the annual precipitation of rain and snow is sufficient. Many sheep and cattle ranches are near here.

There are in round numbers 2,000 children of school age in the county, instructed by fifty teachers. The annual expense of the schools is about \$25,000. The school property of the county is valued at \$35,000.

## MOHAVE COUNTY

Mohave County, which is rich in minerals, has been exploited less than any other mineralized zone. With

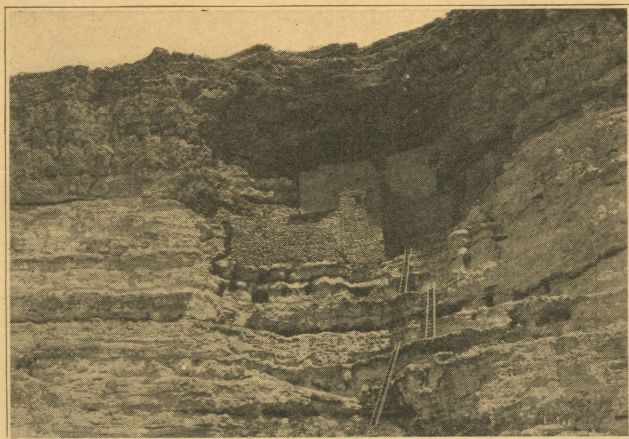
its immensely valuable deposits of the precious, as well as the baser metals, are found some of the rarest mineral substances known. Yet it is a fact that with all the millions that have been taken from the ground within its borders, mining here is still in its infancy. Its area is so great, 13,000 square miles, and the mineral content so diversified, that there still remains a field for the prospector, as well as the investor. The turquoise quarries of this county have produced over \$300,000 worth of gems, and still have large quantities in sight. One mine alone has blocked out about \$2,000,000 worth of molybdenite, and some of the best deposits of tungsten known are found here, as well as gold, silver, copper, zinc, lead, etc., in large and paying quantities.

Large fortunes have been made, and still are being made, in the cattle and sheep raising industries of Mohave County. Only recently a ranch, with its live stock, was sold here at a price netting the seller \$100,000 in cash, all the result of a few years work.

Along the Big Sandy River, and in the northwestern part of the county are good ranches, yielding bountiful crops and supplying a livelihood for a large number of happy and contented people—a people, no longer satisfied with the old methods of travel, who step into their automobiles when they "go to town" to trade, attend a social event, or make their bank deposits.

The varied scenery of the county, including some of the most beautiful parts of the Grand Canyon, should satisfy the most exacting. Here we have the wild, rugged mountains, and the flat plain, the desert and the garden spot. The drive, first over the plain





MONTEZUMA CASTLE, GROUP OF PREHISTORIC CLIFF DWELLINGS

and then over the scenic, winding mountain road from Kingman to Oatman, the famous gold camp, presents to the traveler a series of delightful and wonderfully pleasing sensations.

Of all the locations in Mohave County, that of Kingman is most ideal. A town of nearly two thousand inhabitants, in the center of the mining and agricultural districts, and the cattle and sheep raising. On the trans-continental line of the Santa Fe Railway and the Old Trails National Highway, it is the county seat and the distributing point for the greater part of the county.

With a high, dry climate, where the sun shines practically every day in the year, it is a fine place for the healthseeker as well as the investor. The town is laid out with broad streets, many of them curbed, and with cement sidewalks.

The \$65,000 County Court House, with its furnishings, rivals any such building in the state. A new \$60,000 High School building, fully equipped with the latest appliances and conveniences, is a community pride, while the religious population is well provided for by the Catholic, Methodist, Episcopal and Christian Scientist organizations, the first two having commodious church buildings. The Methodist Episcopal church cost \$20,000. Many fraternal orders are represented. The Elks and Odd Fellows have buildings of their own.

Among the many business houses, Kingman boasts one of the best equipped department stores in Arizona. Two up-to-the-minute banking houses, each in its own building, afford adequate financial facilities. Electric light and power, the telephone, a new water system, and two newspapers give the inhabitants satisfactory public service.

## YUMA COUNTY

Cotton is a new crop in the Parker district of Yuma County. After making satisfactory experiments, the Connecticut Mills in 1917 planted 800 acres in the

long staple variety. There was a good yield of high quality, with the result that the growers arranged to greatly increase their acreage. Parker, with a population of 700, is the main trading point in the district. It is where the Santa Fe's short line from the Salt River Valley to Los Angeles crosses the Colorado River.

Yuma County constitutes the southwest part of Arizona, and it gives promise of becoming one of the big cotton sections of the country. The Colorado River is the county's as well as the state's western border. Southwest of Parker, on the California side of the river, in the Blythe district, 10,000 acres of cotton yielded an abundant crop in 1917, and even a larger acreage gave a good yield in the Yuma Valley, in the southwest corner of the county. Yuma County growers, judging from the first year's crop, have reason for the belief that their territory soon will be an important factor in the cotton industry.

South of Parker lies the agricultural land of the Colorado Indian Reservation, and below this, a large area in private ownership. The Reservation lies mainly on the Arizona side of the stream, and the other mainly on the California side. The Reservation contains, approximately, 180,000 acres, and the other, approximately, 120,000 acres. On the California side, crops have been grown by irrigation from the river for many years. On the Arizona side, the Government has tried to make farmers of three generations of Indians. About two years ago (1915) it was decided to allot land in the northern end of the Reservation, giving the Indian farmers a powerful pump and canals and ditches. For this purpose Congress made an appropriation of \$50,000. The soil, proved by results on the California side, produces the same crops as are grown in the Salt River Valley, and in equal abundance. Since there is more land in the Reservation than the Indians can use, the Government's next step, perhaps, will be the sale of the surplus to white settlers.



SORGHUM FIELD, YAVAPAI COUNTY







## Industrial Department

The Industrial Department of this railway has been organized and is maintained for the sole purpose of supplying information relative to opportunities in the great Southwest.

No charge is made for this service.

We invite correspondence from all who may be seeking a new location in the Southwest.

*For the benefit of those desiring an agricultural location, this department employs a corps of competent men trained in the practice and theory of the business of farming, who will advise with the settlers and assist those who wish it, to adopt the newest and most approved method of tillage. These men keep in touch with the farmers in their territories by frequent personal visits and by correspondence.*

C. L. SEAGRAVES, Industrial Commissioner,  
1115 Railway Exchange Building, CHICAGO.

## Freight Department

Emigrant Movables are given special attention. This term applies to property of an intending settler and does not include machinery driven by other than hand or foot power.

One man will be passed free one way with one or more cars of Emigrant Movables, provided car contains horses, mules, cattle, hogs, or sheep, and is covered by live stock contract.

Prospective settlers and others can get full information by addressing

F. B. HOUGHTON, Freight Traffic Manager,  
A. T. & S. F. Ry., Railway Exchange, Chicago, or  
J. R. KOONTZ, General Freight Agent,  
A. T. & S. F. Ry., Topeka, Kansas, or  
C. C. DANA, Gen'l Frt. Agt., Panhandle & Santa Fe Ry., Amarillo, Texas.

## Passenger Department

The Santa Fe operates daily trains to Arizona, including the California Limited, which is exclusively for first-class travel.

The other trains carry both standard and tourist sleepers; also free reclining chair cars.

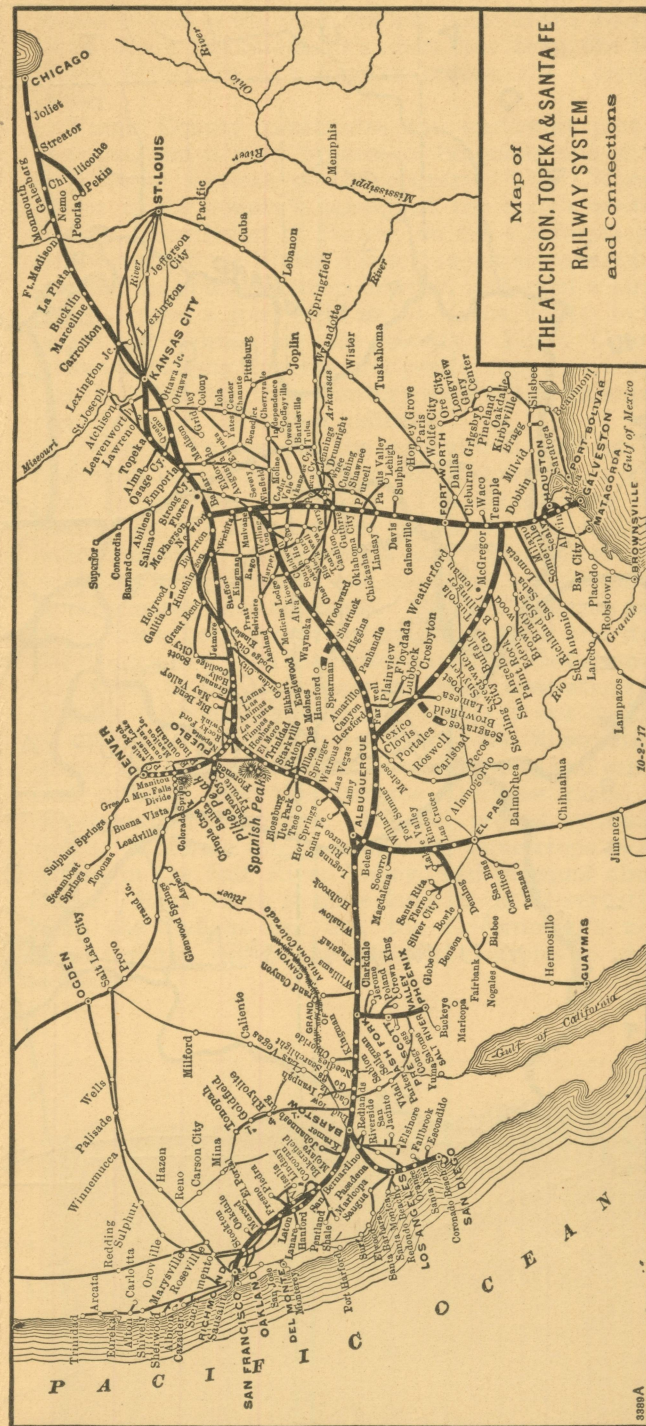
The roadbed is rock-ballasted, oil sprinkled and safeguarded by block signals.

Meals may be had at Fred Harvey Station dining-rooms or lunch counters.

You may stop off and see Petrified Forest and the Grand Canyon enroute.

Our travel booklets tell in detail.

W. J. BLACK, Pass. Traffic Mgr.  
A. T. & S. F. Ry., Railway Exchange, Chicago, Ill.



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