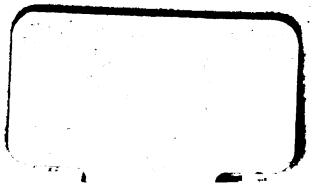

SANTA FE COUNTY

The Heart of New Mexico
Rich in History and Resources

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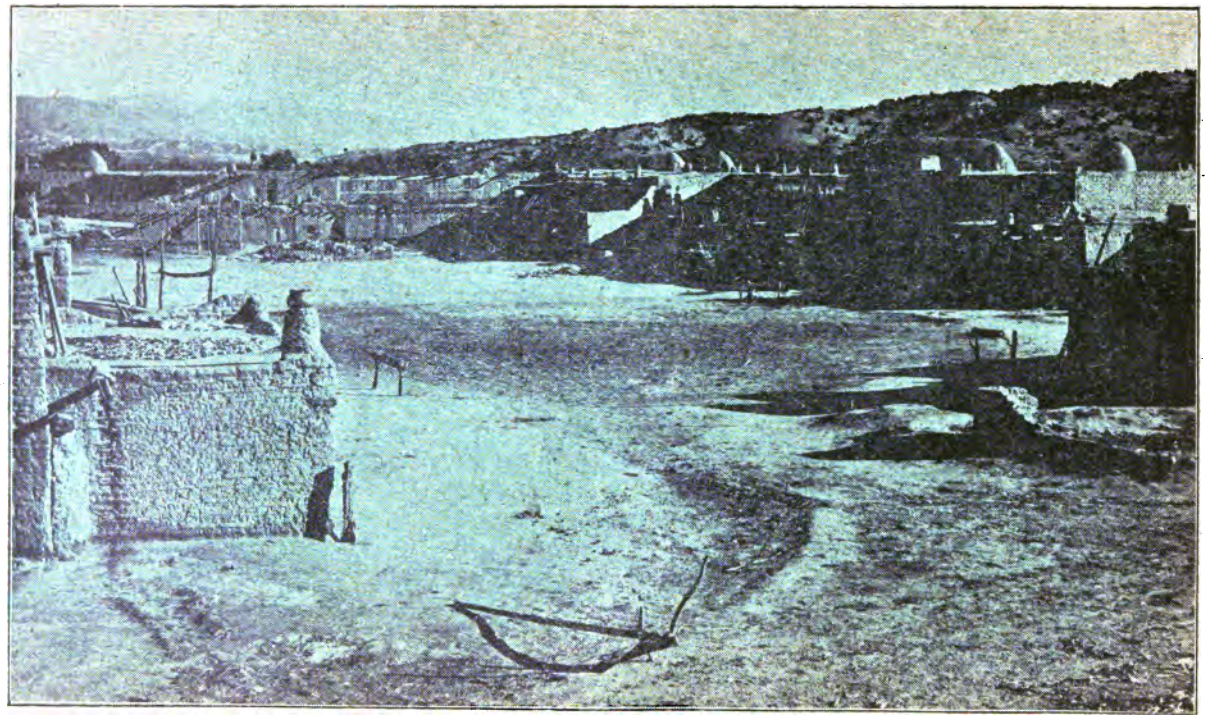

PUEBLO OF TESUQUE.

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THE CAPITOL OF NEW MEXICO AT SANTA FE.

SANTA FE COUNTY.

Santa Fe County is the heart of New Mexico, geographically, geologically, ethnologically, climatologically, politically, ecclesiastically and historically. It is an epitome of the Territory, and within its confines are exemplified the climatological conditions, the industrial possibilities, the growth and the development of the entire Southwest. It is an oblong table land, almost seventy miles long from north to south, and thirty miles wide from east to west, at no point less than a mile above the level of the sea and reaching an elevation of almost two and a half miles in Mount Baldy. This tableland slopes from the northeast to the west and southwest. In its northeastern corner is massed the terminus of the Sangre de Cristo Range, the "Alps" of the Southwest. In its southwestern corner rise the Ortiz, the San Pedro and the South Mountains, less massive and less lofty, but very important geologically and mineralogically. This tableland is furrowed by a dozen rivers and scores of periodical streams and arroyos, all tributary to the Rio Grande system, although a massive backbone in the eastern portion sends some of the waters into the Pecos, which does not join the Rio Grande until after a course of nine hundred miles. Along these streams are fertile valleys, which attracted the Pueblos, and after them, the white settlers, hundreds of years ago. One-third of the area of the county consists of mountains and valleys, the other two-thirds are broad mesas, which furnish excellent range for stock. The settlements are found in the valleys which have been formed by the folds of the mountains or by the rivers eating into the mesas and forming canons, most of them quite narrow.

From the summit of Mount Baldy the surface of the county presents a panorama of mountains, mesas and valleys, with streams of water rushing down high mountain shoulders, over precipices and boulders into deep and narrow gorges and widening valleys, flashing in the sunlight like ribbons of silver in their race to the Rio Grande on the west, and with the mountain peaks of southern and northern New Mexico, swimming in the blue air of the dreamy distance. The main range of the Rockies, or the Sangre de Cristo system on the west shelters this favored locality from violent winds and renders the climate remarkably mild and equable considering

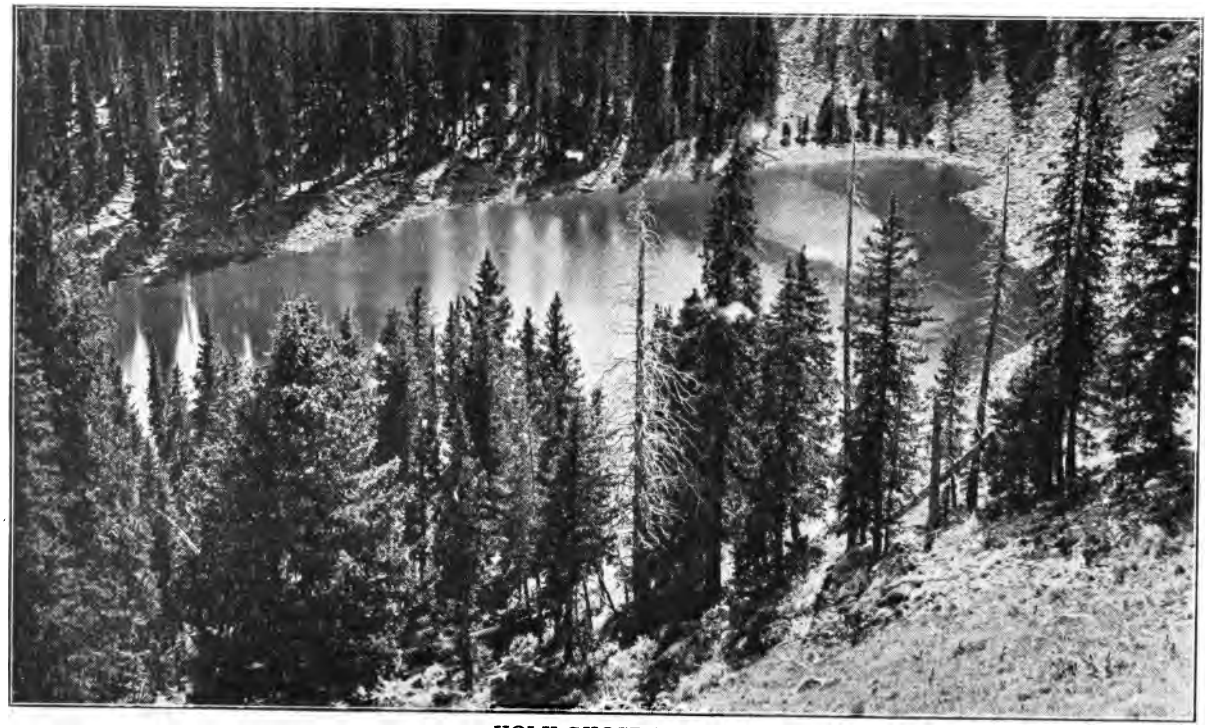
VIEW TOWARD NORTHEAST FROM THE CAPITOL AT SANTA FE.

that the altitude of the valley varies from 5,500 to 7,500 and more feet above sea level. This circumstance, together with the fertility of the soil, excellence of the water, plentitude of timber, and the many marked manifestations of rich veins and deposits of gold and silver-bearing mineral, prompted the intrepid Spanish explorers to locate a permanent colony and mission at Santa Fe, or the "City of the Holy Faith of St. Francis" as early as 1605.

The wisdom of this selection has been demonstrated during four centuries which have since melted into the past. With the exception of the twelve years following the bloody and transiently successful revolt of the Pueblo Indians in 1680, Santa Fe has been ever recognized as one of the important outposts of civilization and commerce in the southwestern country, being continuously the political, ecclesiastical and military capital of this region, under both Spanish and Mexican rule, and, though it has seen the frontier line of the United States carried thousands of miles out into the Pacific Ocean, it still maintains its supremacy as the capital city of New Mexico, the county seat of Santa Fe County, and the most delightful residence city in the Rocky Mountains. Bathed in sunshine winter and summer, swept by fragrant breezes from the pine-clad hills, colored with the hues of the sunset, hallowed by the romance of the Cliff Dwellers, the Pueblos, the Conquistadores and the Franciscans, amply watered by the "Nile" of New Mexico—the Rio Grande—and a score of its mountain tributaries, endowed with untold mineral wealth, Santa Fe County is an empire within itself, self-sustaining and self-sufficient, so far as mineral wealth and resources are concerned. Nowhere else in the world is there found a more perfect climate, and but few sections can boast of a climate as good. It is not only a lovely day now and then, not only a fine summer or a pleasant winter, but a perfect all-the-year-round climate which is making this section the sanitarium of the world, the refuge of those stricken by one or the other of the many forms of lung, throat and nervous troubles, and of invalids from other causes. It is this fact which must be borne constantly in mind when reading of Santa Fe County's resources, developed and undeveloped wealth, and its industries.

THE MOUNTAINS.

The great bulwark of the Sangre de Cristo Range in the northeast is visible from every part of the county. The capital city of Santa Fe lies in its lap, for directly northeast of the town rises Santa Fe Baldy to an altitude of 12,623 feet; beyond looms its twin peak—Pecos Baldy—to 12,400 feet, while nearer to the city is Lake



HOLY GHOST LAKE.

Peak, 12,380 feet high, in whose finely formed crater nestles the Holy Ghost Lake, the source of the Santa Fe River. Nearer the city and directly east of it is Thompson's Peak, 10,546 feet high, and the Dalton Divide, over 10,000 feet high. Still nearer the town, in the same direction, is Talaya Mountain, almost 9,000 feet high. To the southeast are Penacho Peak, about 9,000 feet high, and the Glorieta Mountains. Still farther to the southeast is Escobas Peak, over 8,000 feet high. Far to the north, on the Taos County line, rises Cobra Negra, over 10,000 feet high, at the foot of which nestles Chimayo. Just across the county line and with foothills extending into Santa Fe County, are the Truchas Peaks, the highest in New Mexico, rising to elevations of 13,275, 13,140 and 13,060 feet respectively, and adjoining them is Jicarilla Peak, 12,944 feet high, while surrounding is a circle of peaks from 10,000 to 12,500 feet in altitude.

The Ortiz Mountains in the south, rise to 8,928 and 8,360 feet respectively, while a spur, standing like a sentinel toward the east and known as Lone Mountain, has an elevation of 7,310 feet. Just south of the Ortiz Mountains and separated from them by a narrow and picturesque valley are the San Pedro Mountains, rising in two peaks to 8,376 and 8,325 feet respectively, and at the foot of which lie the mining camps of Golden and San Pedro. South of the San Pedro Mountains stands South Mountain, over 8,000 feet high, from the foot of which stretches the beautiful Estancia Valley of 5,000 square miles. These mountains on their southern exposure are mottled like a snake.

Directly west of Santa Fe, but across the county lines of Sandoval and Rio Arriba, rise the Valles, the Cochiti and the Jemez Mountains, over 10,000 feet high, from the eastern base of which extend the broad mesas and flat-topped buttes of the Pajarito Cliff Dwellers' Park to the Rio Grande.

Inside of the county line, near the Rio Grande River, is an isolated extinct volcano, known as Tetilla, almost 7,000 feet high, while nearer the city of Santa Fe is an extinct volcano with a bottomless crater. The Rio Grande has eroded a deep canon in the northwestern part, known as White Rock Canon, whose walls at points are 1,500 or more feet high. Just north of Cerrillos are the Cerrillos Mountains, rising in three peaks to an elevation of 7,036, 6,980 and 6,500 feet respectively. Southwest of Galisteo is the Cerro Pelon, which juts into the Galisteo Plain and Divide like a bold promontory, although its height is only 6,874 feet. In the far southeastern corner of the county the Mesa de la Mula at-

WHITE ROCK CANON.

tains an elevation of 7,424 feet, and on the southern boundary El Cuervo Butte is 6,968 feet high.

These mountains, besides protecting the greater part of Santa Fe County from blizzards and sand storms, give an extensive drainage area. Most of them are wooded, therefore serving as water conservators, assuring to the county a perpetual water supply which will ultimately multiply the area under irrigation at least five times.

THE RIVERS.

The principal and only river system of the county is that of the Rio Grande, cutting across the northwestern part from Santa Clara, where the Espanola Valley begins to narrow, to the middle of White Rock Canon, opposite the Pajarito Canon, the lower half of the flow in the county being useless for irrigation purposes on account of the steep declivities of the White Rock Canon, making it, however, a good reservoir site owing to the river's strong and steady flow, which would prove invaluable for water power. The Santa Clara is the only important tributary of the Rio Grande in the county from the west. Its waters are utilized by the Indians of Santa Clara pueblo, the river being entirely confined to the Santa Clara Indian Reservation.

The most important, also the most northern tributary of the Rio Grande from the east in Santa Fe County, is the Santa Cruz, which drains the steep declivities of the Truchas and surrounding peaks It is formed by the junction of the Chimayo, the Rio Medio, the Panchuella and the Rio Chiquito. It flows in a general northeasterly direction to the point where it leaves the mountains at Potrero, thence westward to its junction with the Rio Grande. Irrigation along this stream is confined to that portion lying between Potrero, where the valley widens, and the Rio Grande. The irrigated lands occupy the valley proper and extend almost continuously on both sides of the river between the limits mentioned. The total acreage under ditch and served by the stream is 2,500, of which 900 acres are wholly within the upper portion of the Santa Cruz Valley. The remaining 1,600 acres, although drawing their water supply from the Santa Cruz, are really a portion of the Espanola Valley. The flow of the stream during the fall, winter and spring is large and is more than sufficient for all demands upon it. With storage, the area under irrigation could be greatly increased. There are several fine reservoir sites on the river. Several of these could be utilized at small expense.

To the south of the Santa Cruz is the Las Truchas, a stream

NAMBE FALLS.

with a very small flow, emptying into the Rio Grande near Santa Clara. Less than 200 acres are irrigated by the stream.

Next to the Santa Cruz, in volume of flow, is the Pojoaque, formed by the junction of the Tesuque and the Nambe Rivers. On the Pojoaque the irrigated lands are confined to the rich bottoms on either side of the stream from a point half a mile above El Salto del Agua to the mouth of the river near San Ildefonso. At San Ildefonso the Indians have re-enforced their supply by bringing water from the Rio Grande through the Hobart Ditch. The total acreage under ditch is 1,200 acres, all of which is in cultivation. During the fall, winter and spring there is a large surplus of water which might be stored above El Salto del Agua at a small cost and would increase the irrigable area by at least 2,500 acres. In the Nambe are fine falls, which can be used for power purposes. It rises on and drains the slopes of the two Mounts Baldy, upon which snow is found the year round.

The Tesuque is formed by several forks draining the Lake Peak, the most important of which are Bishop's Creek, the large Box Canon and the small Box Canon. Several hundred acres are under cultivation along its course, and there is at least one excellent storage site along the stream. One of its tributaries is the Chupadero, along which, however, only small patches are under cultivation.

South of the Tesuque is the Santa Fe River. It rises in Lake Espiritu Santo, under the crest of Lake Peak, and, after flowing ten miles in a southwesterly direction through deep canons and over high precipices, veers to the west, and flowing nine miles further between canon walls, which widen at intervals, enters the Santa Fe Valley. Twenty-five miles from Santa Fe it empties into the Rio Grande, just north of Pena Blanca, its flow reaching the Rio Grande, however, only at flood times. Its waters have been in use for irrigation from the first settlement of the city by the Spaniards, indeed, even prior to that time by the Indians of the ancient pueblo which then did and had previously occupied the site of the present city. The irrigated lands are in two sections, the first extending from Perry's Ranch, nine miles above Santa Fe, to Agua Fria, nearly six miles below, while the second extends from Cieneguilla to La Bajada, on the lower stretch of the river. On the upper section, in the canon above the reservoir of the Santa Fe Water and Light Company, irrigation is confined to small patches of land, the total area under ditch and in cultivation amounting to about 100 acres From this point, to two miles below the city, the acreage under ditch is 2,400 acres, all of which

UPPER PECOS.

is in cultivation. About Agua Fria the area is 800 acres, making a total of 3,300 acres on the upper portions of the stream. From Cieneguilla to La Bajada, including La Golondrina Springs and Alamo, or Bonanza, the land does not depend upon the Rio Santa Fe for water, but upon springs, the flow of which is constant. The cultivation along the Rio Santa Fe is as intense and the duty of water higher, perhaps, than in any other section of the Territory. Many additional reservoir sites, however, are to be found in the Santa Fe Canon and tributary arroyos, and the amount of flood water annually running to waste is immense. In 1892-3 a dam was constructed across the river, north of Santa Fe, at the mouth of Santa Fe Canon with an impounding capacity of 500 acre-feet. Nevertheless, the annual surplus flow averages 2,500 feet, enough to supply five such reservoirs with water. The Rio Santa Fe has one important tributary, the Arroyo Hondo, along the headwaters of which irrigation is practiced to a limited extent, only about 200 acres being under cultivation. There are several excellent reservoir sites on this stream, one of which has been surveyed. If constructed, it will have sufficient storage capacity to irrigate 8,000 acres of land. Its cost would be $15,000.

South of the Santa Fe is the Galisteo, which, in flood seasons, has a tremendous flow. Irrigation is at present confined to the upper portions of the stream and to small valleys opening into it, the greater area being in the vicinity of the settlement of Galisteo. From the head of the stream in the Glorieta Mountains to Cerrillos there are 1,200 acres under ditch, while on the San Cristobal, a tributary, 400 acres are cultivated.

There are several lesser streams, such as the Manzanares and the Canoncito, while along the San Miguel County boundary flows the Holy Ghost Creek, carrying a large volume of water. On this watershed also rise the Macho, the Dalton, the Indian Creek and other tributaries of the Pecos.

In this connection must be mentioned the underflow in all the river valleys and the ease with which water can be pumped from a small depth in many parts of the county, but especially in the valleys of the streams and arroyos. There can be no doubt that with the storing of flood waters and development of underflow and subterranean water courses, the area under irrigation in the county could be increased with profit to 250,000 acres, equal to the entire area now under irrigation in the Territory.

SCENIC HIGHWAY.

AREA, RESERVES AND GRANTS.

The area of Santa Fe County is 1,980 square miles, and, excepting Bernalillo County, it is the smallest of New Mexico's counties; yet it is almost twice as large as the State of Rhode Island and as large as the State of Delaware. Of this area, 470,000 acres are subject to entry under the public land laws, 18,000 acres being still unsurveyed. Of the Pecos Forest Reserve, 200,000 acres are in the county. There are two Indian reservations, that of Santa Clara having an area of 33,000 acres, and that of Nambe with an area of 7,680 acres. In addition, there are six Pueblo Indian Grants—Pecos, partly in San Miguel County, 18,763 acres, now abandoned by the Indians and claimed by white settlers; Santa Clara, greater part in Rio Arriba County, 17,369 acres; Tesuque, 17,471 acres; San Ildefonso, 17,293 acres; Pojoaque, 13,520 acres, and Nambe, 13,586 acres.

Of the area appropriated to private uses, several hundred thousand acres are in so-called private land grants, several of them being already partitioned among many claimants, others sold or leased, while the remainder are on the market for sale or leasing. These grants, confirmed either by Congress or by the Court of Private Land Claims, are as follows, in acreage: San Cristobal, 81,032; Ortiz Mine Grant, 69,458; Mesita de Juana Lopez, 42,022; Caja del Rio, 41,848; City of Santa Fe Grant, 23,040; Majada, 22,000; Lady of Light, 16,546; Pedro Sanchez, 15,502; Sebastian de Vargas, 13,434; Juana de Gabaldon, 8,149; San Pedro, 7,680; Town of Jacona, 6,952; Cieneguilla, 3,202; Santa Cruz, 3,067; Santo Domingo de Cundiyo, 2,037; San Marcos Pueblo, 1,895; Sitio de Juana Lopez, 1,085; Cuyamungue, 604; Pacheco, 581; Sitio de los Cerrillos, 512; Canon del Agua, 341; Talaya Hill, 319; Alamitos, 297; Santiago Ramirez, 272; Town of Galisteo, 260; Salvador Gonzales, 200; Vicente Duran de Armijo, 57. Title to these grants is perfect. The price of land ranges from $1 to $400 and $500 an acre, according to the nature of the soil, the water supply, improvements on land, proximity to settlements, and other factors that generally determine land values.

CLIMATE.

Its climate is Santa Fe County's special boast and pride. There are other portions of the Southwest which are blessed with climate far superior to the best climate found in the humid portions of the United States, but at and around Santa Fe the climatic conditions of the Southwest come nearer to perfection than anywhere else in the Rocky Mountain or Pacific Coast regions. An abso-

CAVE DWELLINGS WEST OF SANTA FE.

lutely perfect climate is unknown; there is not a country on the face of the earth that does not have either occasional sultry days or bitter cold nights; that does not at times have wind or dust storms or snow or rain, but Santa Fe suffers least from extremes, or storms, and a sultry day is practically unknown. Of course, its location in the arid West primarily determines the aridity and sunshine percentage; its altitude accounts for the lightness of the air; the many square miles of growing pinion, cedar, pine and spruce covering the landscape account for the fragrance and balsam of the atmosphere, and the city's sheltered location accounts for the small range in daily temperature so that even during the coldest days of winter the minimum temperature is milder than at points two or three hundred miles to the south and from 1,500 to 3,000 feet lower, and that at the same time in summer the maximum is less than at Denver or at Colorado Springs, 400 miles to the north. In fact, the protection to the City of Santa Fe by the surrounding hills and mountains is so complete that during both summer and winter Santa Fe is acknowledged to be the best climatic resort in the Southwest.

Charles E. Linney, section director for New Mexico of the United States Weather Bureau, speaks as follows concerning Santa Fe's climate:

"It is easy to say that the climate of this or that place is the finest in the world; it is less easy to show reliable facts and figures to bear out the statement, and it is least easy to convince the self-satisfied public that some other spot can be, or is, the more favored; facts, however, if they are facts, should be given credence.

"It is with these barriers in view that a few facts and simple figures regarding the climate of central and northern New Mexico are presented, this vast empire being, in many respects, nicely typified by Santa Fe, local contour, latitude and altitude being considered. Discarding fractional finesse, the annual mean temperature of Santa Fe, obtained from thirty-three years of carefully compiled records by the United States Weather Bureau, is 49 degrees, a degree higher than that of Chicago, the same as that of Boston, a degree lower than Denver, 6 degrees cooler than Asheville, North Carolina, which has the same latitude, 7 degrees cooler than St. Louis, and 20 degrees cooler than Jacksonville. This comfortable average, too, is the result of balancing 29 degrees, the coldest month (January) with 69 degrees, the warmest month (July). In thirty-two years the temperature has never risen to 100 degrees, the highest record being 97, in the month of August, 1878, and since the following year, it has not touched 95 degrees;

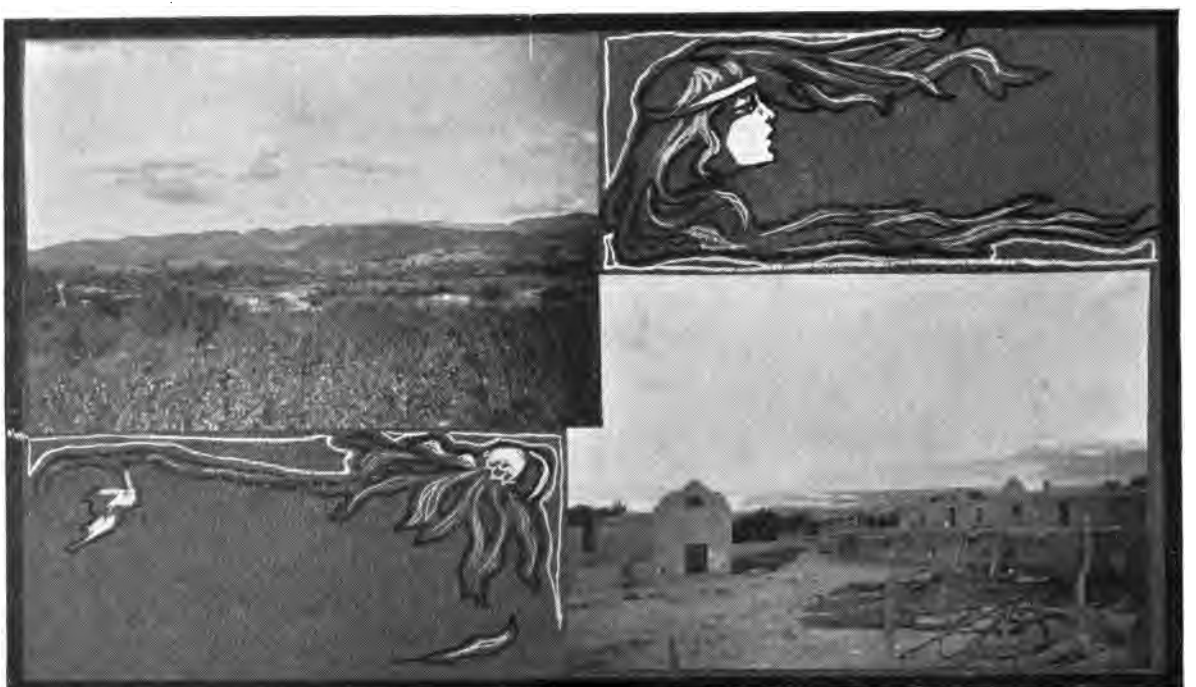
PUEBLO OF SAN JUAN.

the average number of days each year with 90 degrees or higher is but two. The average daily maximum temperature, afternoon reading, of the warmest month, July, is but 81 degrees, while the average night temperature of this month is but 57 degrees, a summer temperature far more comfortable than that of St. Louis, Washington, New York, Boston, Chicago, Denver or St. Paul, zero temperature being rarely recorded. Many winters pass without a record of zero temperature.

"The annual precipitation, including rain, snow, sleet and hail, is 14.3 inches; Denver, the same; Chicago, 34.8; St. Louis, 41.1; Asheville, 42.5; Washington, 44.8; Boston, 45, and Jacksonville, 54.1 inches. While the rainfall is low, it should be borne in mind that 62 per cent of the amount occurs in the spring and summer months, leaving the fall and winter months dry and invigorating. July is the wettest month, averaging 2.8 inches, while but .70 of an inch, or less, are measured in November, December, January, February and March. The average number of days with .01 of an inch or more of precipitation is 81, against 111 at St. Louis, 120 at Chicago, 121 at Boston, 122 at Washington, and 127 at Jacksonville. These figures for Santa Fe, however, do not represent days with continuous rain, but rather days with showers of short duration, for a day with continuous rain is practically unknown.

"The sunshine of Santa Fe is proverbial; there is annually recorded 77 per cent of the possible amount, against 69 per cent at Denver, 65 per cent at St. Louis, 59 per cent at Washington, 54 per cent at Boston, and 53 per cent at Chicago. With all of these cities, excepting Denver, Colorado, the greatest amount of sunshine occurs in summer, while here the highest percentage is in the fall, spring and winter, in the order named. Expressed differently, this means that there is a partial veiling of the sun's rays during the heat of the summer, but a full and free bestowal of its glorious rays during the remaining nine months of the year. Occasionally, the amount of sunshine reaches the marvelous total of 98 per cent of the possible 100 per cent (December, 1903), and 96 per cent in October, and also in November, 1903, and it has never fallen below 48 per cent (February, 1905). In actual hours of sunshine, the record averages 3,352 hours in a year, 9.2 hours for each day.

"The average relative humidity is slightly below 46 per cent; it is highest, slightly below 55 per cent, in January, and lowest, 33 per cent, in June. The annual relative humidity at Denver is 50 per cent; at St. Louis, 70 per cent; at Boston, 72 per cent; at Washington, 73 per cent; at Chicago, 77 per cent, and at Jackson-



TESUQUE VALLEY.

ville, 80 per cent. For the warmest months of the year (June, July, August and September) the average at St. Louis is 66 per cent; Chicago and Boston, 75 per cent; Washington, 75 per cent and Jacksonville, 82 per cent; in other words, the humidity during the heat of the summer in the eastern cities is considerably greater than the annual average, while just the opposite condition prevails in Santa Fe, where it is a dry heat, thus always free from enervating effects.

"The average hourly wind movement is low, 6.9 miles per hour, and it is rare indeed that a storm velocity, 40 miles an hour or higher, is attained, there being but thirty-seven such records in twenty-one years. There is no record of the wind ever having attained a velocity of 60 miles an hour at Santa Fe.

"Summarized, the climate may be described as one that is mild and equable, much given to sunshine, free from great heat, high winds, humidity, and debilitating effects so noticeable in the central and eastern cities, free also from the cold, snow and storms of other northern cities, a climate of clear skies, small rainfall, few storms and those of short duration, one which is usually warm in the sun in winter and cool in the shade in summer."

At Santa Fe in winter, on sunny days, and nearly every day has sunshine, the temperature in the sun runs up from 50 to 80 degrees. Even a temperature of 97 degrees, the highest ever recorded at Santa Fe, on account of the great dryness of the atmosphere and the invariably cool summer nights, is not so oppressive as a maximum temperature of 83 degrees at Chicago or New York.

The year 1904 was by no means a favorable one so far as climate goes, yet the official record of the United States Weather Bureau at Santa Fe shows that there were only sixteen cloudy days during the entire year. The sunshine averaged 80 per cent of the total possible amount, or a total of 3,554 hours, almost ten hours of sunshine every day—spring, summer, fall and winter. In the month of December, when most needed, the sunshine percentage reached its maximum, 98 per cent. In October and November, other cool months, it was 96 per cent. August, when cloudiness is grateful, had the minimum record, 69 per cent. The following average is the monthly sunshine record for the past fifteen years: January, 76 per cent; February, 71; March, 73; April, 78; May, 75; June, 79; July, 69; August, 72; September, 77; October, 81; November, 80; December, 79; average for the fifteen years, 77 per cent.

These are official statistics of the United States Weather Bureau and not manufactured to bolster up claims to superiority of cli-

LORETTO ACADEMY, SANTA FE.

mate, which facts will not sustain. These same records show that the precipitation during 1904 was 14.10 inches, nearly 12 inches having fallen during the months from June to October, inclusive, while during the other seven months it did not amount to three inches. The wind movement during the year averaged less than seven and one-half miles an hour, while the maximum velocity recorded was forty-six miles an hour, and there was but one other record of a velocity greater than forty miles an hour. The relative humidity, an important factor of salubriousness, reached only 42 per cent. The highest monthly average was 61 per cent, caused by unusually heavy rains on a few days in October. In April of 1904 the remarkably low average of 28 per cent was recorded. Not a single fog was observed at Santa Fe during the year. The coldest month was January, with an average of 27.4 degrees, but an average in the sun of 54 degrees. The warmest month was July, with an average of 69 degrees. The highest temperature recorded was 86 degrees, on July 10th. The lowest was zero, on December 27th. The mean daily range in temperature was merely 22.1 degrees, while the greatest daily range recorded was only 35 degrees. This equability in temperature is a great factor in the comforts of health-seekers and of well persons, and helps to make Santa Fe the greatest climatic summer and winter resort on the western continent.

It has been stated by medical writers that tuberculosis can be treated successfully in any climate. All experience is against such a conclusion. It has been demonstrated beyond question that certain sections of the United States, of which Santa Fe is the type, possess climatic characteristics which are peculiarly adapted to the successful management of the disease. The vast and salubrious stretch of country, which is so many times alluded to as a "land of sand, sagebrush and cacti," possesses in an almost unlimited degree those very elements which observation has proved to be of the utmost value in the treatment of tuberculosis.

Where medicines have failed, the elements are succeeding. A pure atmosphere, containing an abundance of oxygen and electricity, in conjunction with a large amount of sunshine, is today fulfilling in an eminently satisfactory manner the mission heretofore mapped out for such agents as cod liver oil, creosote and the various remedies known as serums.

The importance of climate as a factor in the treatment of pulmonary tuberculosis is daily manifesting more and more its value, whether taken separately or coupled with the various specific plans of therapy now advocated and employed in this important branch of practice. Physicians are informing themselves more widely

RESIDENCES AT SANTA FE.

upon this vital question, and the experiences gained by the practitioner living amidst such ideal climatic conditions as exist in New Mexico are being looked upon with more interest and kindly consideration than heretofore has been accorded them.

The consensus of opinion, as expressed by the leading authorities on tuberculosis at the International Congress held at Moscow, Russia, a few years ago, and later at London, England; Madrid, Spain; Atlanta, Georgia, and at Paris, France, was unanimously in favor of the climatic treatment of pulmonary tuberculosis over all other methods considered.

The southwestern section of the United States has thousands of residents who came as tuberculosis patients, some of them as long as twenty-five years ago. They are today, and have been for many years, in good health; have married and reared children who are to all appearances absolutely free from tubercular disease.

Animals, as well as the human race, are likewise remarkably free from tuberculosis in this region, as has been shown by the researches of Herrera and Lopez of Mexico, where the climatic conditions are practically similar to those existing in Santa Fe. These investigators report that they have found but forty-five cases of tuberculosis in cattle out of 73,000 killed and examined at the government abattoir in the City of Mexico.

It may be stated in a general way that all specific plans of therapeutic treatment thus far suggested for the cure of tuberculosis, and especially of the pulmonary form, have failed, so that one must look to nature rather than to the laboratory for the weapons to combat this enemy of the race.

The early diagnosis of pulmonary tuberculosis is of the utmost importance, for it is in the beginning of the disease that the greatest benefit is derived in the largest proportion of cases from the climate or the out-of-door plan of treatment.

New Mexico is essentially a "land of sunshine and blue skies." Here there is a dry and bracing climate, with no extreme heat nor cold, a climate which, for the most part admits of an existence out-of-doors almost all the year round. It is these qualities of air and sky that have caused this favored region to be known today over the entire civilized world as the "Land of Sunshine." The peculiar adaptability of such a climate to the successful management of consumption and other diseases of the lungs and respiratory tracts is causing invalids to flock here in great numbers, experience and observation having demonstrated beyond further question the fact that the sea coast resorts have proved dismal failures

BATTLEFIELD OF GLORIETA.

in exercising either a corrective or retarding influence upon the disease mentioned above.

In the past few years the medical profession, as well as the laity, has been made aware, through various channels, of the vastly superior climatic conditions existing throughout the Territory of New Mexico, and patients are seeking relief here by the hundreds where formerly they came only by the score.

The famous Dr. Osler, recently much in the public eye, says: "The requirements of a suitable climate are a pure atmosphere, and a maximum amount of sunshine." The purity of the atmosphere is the first consideration, and it is this requirement that is met so well at and around Santa Fe.

The problem of the prevention of the further spread of tuberculosis and its ultimate and complete eradication from the human race will be solved when physicians realize the importance of at once placing the patient suffering from or threatened with this disease in a suitable climate. Children inheriting this peculiar condition of the cellular structures and cell elements known as a tubercular tendency will develop, in a favorable climate, a cell antagonism to the disease which can never be acquired in a climate where tubercular diseases are more common and one which favors the causes that lead to tubercular disease.

It is generally conceded by writers upon bacteriology that climatic conditions play a most conspicuous part in both development and retardation of microbic life. Epidemic diseases which have for their vehicles certain conditions of the atmosphere, such as heat and moisture, constantly demonstrate their power of spreading contagion, the moisture contained in the air being the chief factor in preserving the vitality of the germ.

To anyone familiar with the extreme climatic difference between the Atlantic Coast States and the Southwest, the great role played by the climate in each locality named will at once become strikingly apparent to the most indifferent observer. Epidemics, such as la grippe, so fatal and destructive in their train of sequelae, are unknown in New Mexico. The climatic conditions, more especially the rarity and purity of the atmosphere, together with the almost constant direct rays of the sun, are the most powerful bactericides known to science today. A climate where discarded animal and vegetable substances undergo prompt and rapid desiccation after brief exposure to the atmosphere, with but little manifestation of decomposition, argues most strongly against bacterial development. The tuberculosis bacilli lose their infective power in a very short

FIELD OF WILD COSMOS AT AN ELEVATION OF 10,000 FEET.

time after exposure to the sun's rays in the arid atmosphere. This clearly explains the curative effect of climate upon pulmonary tuberculosis. Constant inhalation of what may be properly termed an aseptic atmosphere, in time, brings about in the pulmonary tissues, inflamed by tuberculosis deposits, that very desiccation effected upon animal and vegetable substances exposed directly to the air.

Although there are many invalids, principally persons with tuberculosis, there is not a case of tuberculosis on record in New Mexico that was communicated from the diseased to the healthy through the medium of the atmosphere. That the native people of this section experience such wonderful immunity from tuberculosis, especially of the respiratory tracts, must have its explanation in the very favorable climatic conditions.

In order to derive all possible benefit from such a climate as that of New Mexico, the health seeker should live out-of-doors. If he has the strength to get about at all, the best he can do is to go into the forests and hills surrounding Santa Fe and camp out. The life of the tent dweller is the best treatment for incipient pulmonary tuberculosis. A year's out-of-door life in the dry, bracing air will arrest most cases of pulmonary tuberculosis, if the sufferer has the necessary strength and vitality to begin such a course of treatment and takes ordinary precautions against undue exposure and over-exertion.

Recognizing the superior climatic advantages of New Mexico for the treatment of diseases of the respiratory system, the United States government has established, and now has in successful operation, two large sanitariums, one at Fort Bayard, operated under the auspices of the War Department, and the other at Fort Stanton, under the United States Marine Hospital Service, where climatic and other conditions are almost as favorable to health seekers as at Santa Fe. Hundreds of soldiers and sailors afflicted with tuberculosis have been cured by the climatic and tent treatment, which is the chief feature at both of these establishments. Fresh air in abundance, both night and day, is the first and most important factor in this treatment. Coupled with this are sunshine, healthful and abundant diet, moderate exercise, and amusements and recreations of a suitable character to banish homesickness. These constitute the plan followed at both places, and they are proving each day the immense advantages they possess over the old methods of treatment.

Another triumph for New Mexico climate as a factor in the cure of consumption was achieved when, in the early summer of 1905,

CLIFF DWELLINGS OF PAJARITO PARK.

the representatives of the Associated Fraternities of the United States, after a searching and personal investigation of the climatic features of the Southwest, selected for the site of the Fraternal Sanitarium for the cure of consumption, Las Vegas Hot Springs, forty miles east of Santa Fe, with climatic conditions almost similar, except that the minimum temperature in winter is considerably lower, the maximum temperature in summer several degrees higher, and the per centage of humidity a trifle greater at Las Vegas Hot Springs than at Santa Fe, according to the official Weather Bureau records. Almost a million dollars' worth of land and buildings has been acquired for that purpose, and the results that will be achieved would have been deemed impossible a few years ago.

Care of Health Seekers.

Naturally, the first question asked by the health seeker, after deciding upon a point at which to locate and try the climate cure, is the character of the accommodations and their cost. Fortunately, Santa Fe is capable of taking care of an almost unlimited number of health seekers in the best possible manner. Sunmount, the pioneer tent city in New Mexico, has been in operation sufficiently long to demonstrate its success and permanency. Its accommodations are elastic, for it undertakes to care for every comer, tent and furnishings being supplied on short notice, even if every one of the sixty or more commodious tents is occupied. It is ideally located on a tableland overlooking Santa Fe, yet sheltered on every side except the south, from which direction it receives the grateful rays of the sun during the day. Although isolated, it is still within fifteen minutes' walk of the business portion of the city. The pinion, cedar and spruce forests encroach upon and partly surround it, while the shelter of the magnificent mountain ranges to the west, north and east protect it from winds and cold. Here the patient receives full benefit of the pure and exhilarating mountain air and the copious sunshine, which tend to up-build quickly his general health. Immediately upon taking up residence one notices an infrequency of night-sweats, an absence of fever, and almost invariably a gain in weight, which is apparent from the very start. These facts, together with the endorsements and recommendations of many leading physicians of the country, are a positive assurance that tent life at Sunmount means restoration to health for those suffering from tubercular or bronchial diseases. Tours into the mountains and various other places of interest near Santa Fe are features of frequent occurrence and

SUNMOUNT.

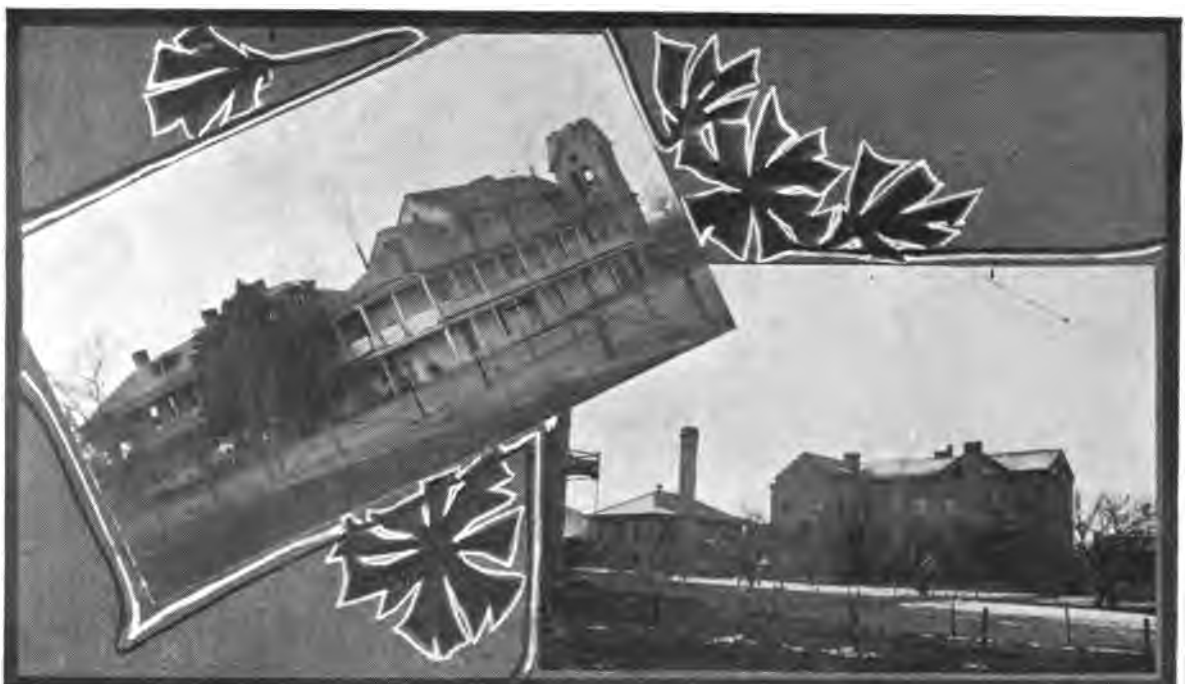
promote the health and strength, of the patients. The latest sanitary tents are in use and they are furnished for light house-keeping at the Tent City, whose cuisine is especially adapted to the requirements of consumptives. Physicians visit Sunmount daily, and the telephone connection with the city assures prompt attendance in case of necessity. A casino, with piano and dance floor, lawn tennis and croquet grounds, are provided, all being free to the residents of Sunmount. The tents have ample space around them to assure privacy without destroying that pleasant sociability that makes life so agreeable to the stranger in a strange land, and is the most potent foe to homesickness. The rent for furnished tents is from $10 a month upward, according to size, location and furnishings. Meals at the restaurant are from $6 a week upward. The private water supply is secured from pure mountain springs, and so great has been the caution in piping the water to this model village that it is absolutely uncontaminated.

A tent sanitarium with a resident physician and for a select class of patients has been established in the southern portion of the city. The cottages are of the latest design and the place is known as the Glorieta Sanitarium.

It is proposed to establish a tent city in the Tesuque Valley, seven miles north of Santa Fe, and also on the Pecos Forest Reserve, twenty miles east of Santa Fe. In and around the town, in fact, throughout the entire county, can be seen tents here and there occupied by health seekers or their families, and by owning their own tents and providing their own meals, health seekers can live at an expense of only $4 a week, without stinting themselves of the essentials for recovery.

The Sisters of Charity maintain a sanitarium in Santa Fe, which gives excellent service to health seekers from $10 a week upward. This includes personal care by the good Sisters and a cuisine that is especially adapted to the needs of invalids. The accommodations at this sanitarium are limited to a hundred persons, but plans are maturing for enlarging it. Being situated in the center of the city, fronted by a beautiful park, it is patronized not only by health seekers, but by persons who have chosen Santa Fe as their permanent home, even though not in the city for health reasons.

Hotel accommodations at Santa Fe are ample. Although the patronage of health seekers is not especially sought, yet they offer pleasant homes for a temporary period until accommodations can be secured elsewhere. There are a number of private boarding houses where rooms and board can be secured from $6 a week up-



ST. VINCENT'S SANITARIUM AND ORPHANS' HOME.

ward. Furnished rooms rent at $8 a month upward, according to location and furnishings. Hotel and private accommodations can be found, in addition to those at Santa Fe, at Cerrillos and Espanola, as well as in the smaller settlements. The stranger may be certain of accommodations and a welcome in many private homes, for hospitality is still a recognized virtue throughout the Southwest.

INDUSTRIES—Agriculture.

Tilling of the soil is the principal industry of Santa Fe County, although only one out of every fifty acres is under cultivation at the present time. Ten times that area could be reclaimed at moderate cost, either by the construction of irrigation works or dry farming methods. The principal agricultural valleys are those of the Rio Grande, from White Rock Canon to Santa Cruz; the Santa Cruz Valley, with the settlements of Santa Cruz and Chimayo; the Pojoaque Valley, with the settlements of Pojoaque and San Ildefonso; the Nambe Valley, with the settlement of Nambe; the Tesuque Valley, with the settlements of Tesuque, Tesuque Pueblo, Cuymungue, Jacona and Rio Medio; the Santa Fe Valley, with the city of Santa Fe and the settlements of Agua Fria, Cienega, Cieneguilla; the Canoncito Valley, with Canoncito and several other small settlements, and the Galisteo Valley, with the village of Galisteo and a number of patches under cultivation along its upper course. Some farming is also done along the Arroyo Hondo and lesser streams, while in the mountains dry farming is successful. Although about 20,000 acres are under irrigation and under cultivation, and the area cultivated without irrigation varies from 5,000 to 15,000 acres, no real test of scientific dry farming has been made thus far. The crop production in the county is valued at from $1,000,000 to $1,500,000 a year. Along all the streams and in the hills are many fine reservoir sites, and several irrigation projects, especially in the vicinity of Santa Fe, have been surveyed and found to be practical at comparatively small cost.

Irrigation.

Crops are raised in the mountain valleys much the same as in the more humid east. On large areas, especially in draws, sinks and former river and lake bottoms, the Campbell method of soil culture will enable the energetic husbandman to do well without irrigation, or with scant irrigation, but as a rule, irrigation is necessary to the successful pursuit of agriculture, and it is really

HOTELS AT SANTA FE.

the ideal condition under which to raise crops, as has been proved by five thousand years of history in the fertile valleys of Egypt, Mesopotamia, Hindostan, China, north Africa and northern Italy. No excessive moisture, no drouth, worries the husbandman who possesses an irrigation right in a perennial stream, who has fortified himself with a reservoir, who has struck artesian water, or who has wells from which he can pump the underflow. Irrigation means intensive farming, it means that the land will be fertilized at the same time it is watered, it means certain crops and a maximum production per acre. In its perfection, agriculture by irrigation is as distinct an advance over the methods of agriculture in the more humid states as manufacturing with machinery is over manual labor.

There are in the county a few medium sized irrigation canals and many small community ditches held by the small farmers and the Pueblo Indians. The origin of these ditches is lost, even in local tradition, and it is probable that some of them were in use before the advent of the Spaniards. Under the community system, each ditch is held and controlled by the owners of the land it irrigates, who usually live together in a village or pueblo. In the fall of each year a mayordomo is elected, who has control of the ditch for the following season. He assesses the land for the labor necessary to clean the ditch and keep it in repair during the irrigation season, apportions the water to each consumer according to the local conditions, and in general supervises all matters pertaining to irrigation. While the apportionment of labor varies, it is generally such that a farmer holding a tract of six acres is required to furnish the labor of one man in cleaning and repairing the entire ditch in the spring, while he who holds twelve acres furnishes a man's labor when necessary during the whole season. The ditches have no regular gates or sluices, and flooding is the only means of irrigation. Consequently the use of water is extremely wasteful. The average cost of constructing a ditch is $1,738 per mile and $6.40 per acre of land under ditch. The irrigated farms make greater use of the public domain for grazing purposes than do those which are unirrigated, and an income is thus secured in addition to that obtained directly from the land owned or leased.

Sufficient irrigation has been done to demonstrate what might, and eventually will, be accomplished. The use of the underflow in such valleys as the Santa Fe is also available, and the water can be raised at slight cost by wind mills or power pumps, in some instances at a cost less than that of maintaining headgates and irrigation ditches. The underflow is practically inexhaustible.

IRRIGATION CANAL AT HOBART.

Dry Farming.

It has been demonstrated, however, that the real difficulty in the arid region is not a lack of rainfall, but the loss of too much water by evaporation, and this can be properly controlled by cultivation, especially by the Campbell method of soil culture, which consists in cultivating the soil frequently and deeply and covering the surface with a dust mulch, thereby preventing the evaporation of moisture stored in the ground. It has been proved by careful laboratory and field work that twelve inches of rainfall is sufficient to grow good crops, providing the water is all utilized. The average rainfall for Santa Fe is fourteen inches, and in the mountains is considerably more, most of it occurring during the growing season.

A description of such a dry culture farm gives an idea of the practicability of raising crops without irrigation in the arid region. One writer says: "It is the cleanest, neatest ranch conceivable. The weeds lining every irrigation ditch and in every irrigated field are conspicuous by their absence. The intense dark green foliage of the trees strikes one's attention upon approach, and the evidence of thrift and health in every growing thing is so convincing that one is utterly confounded. All the preconceived notions as to the absolute necessity for abundant water to raise a crop in New Mexico are swept away at a glance. One who has seen thousands of dollars expended to bring a small stream of water for a few miles to develop a little ranch is dumbfounded to see the desert bloom as the rose under simply the magic touch of labor in common with methods of good farming. It is only four years since the first work was done on this desert farm. Several acres of land were cleared of sage brush, and after cropping to corn or small grain, fruit trees were planted. Many of these are bearing this year. It will pay one to visit this ranch to see what can be done without irrigation. One will find there a thriving crop of barley, and corn six feet tall, all kinds of garden truck, and trees of many varieties. There are large cottonwoods, and fruit trees loaded with blossoms and fruit. Apricots, pears, peaches, plums, walnuts, apples, grapes, blackberries and rhubarb are all doing well by the simplest method of cultivating throughout the summer.

"There is more than one way to bottle up water, and the best is to use the soil itself as a bottle. If the soil is deep it will hold all that falls upon it without leaking out below. If the farmer plows it deep, subsoils it in the fall and lets it lie rough through the winter and spring, he opens the bottle ready to catch all the water. If he keeps it blanketed with a few inches of very loose

MOUNTAIN FARM ON UPPER PECOS.

dry soil by cultivation when the soil is in a condition to crumble nicely, and then cultivates frequently thereafter through the summer, he effectively corks up the bottle so tnat but a relatively small part of it gets out into the air. He then also keeps all weeds down and prevents the enormous leakage through the roots, stems and leaves of the plants which would otherwise take place." The Campbell dry soil culture involves processes that are just as beneficial to irrigated ground as to dry farming.

The up-to-date New Mexico farmer is the aristocrat of his craft. With twenty or thirty acres of fertile land and ample irrigation rights he is independent. If his ranch is well located, he fears neither excessive moisture nor drouth, neither hard times nor panics. There is always a good market in which his products command top prices, and as to crop failure, it is out of the question if he knows his business.

There are many thousands of acres in Santa Fe County aside from those already in use which can be utilized for agricultural and horticultural purposes. The portions which are best suited for cultivation are the river bottoms or valleys and the smaller valleys along the mountain streams. There are also large areas, commonly known as the mesas or uplands, which have the finest soil, and parts of which will produce good crops by intensive cultivation and the Campbell dry culture method. The soil varies from a sandy loam to a heavy clay, and is ordinarily fertile enough to produce good crops if water is obtainable for irrigation, or under the Campbell method of soil culture. Its fertility is demonstrated by the rapid growth in it of trees and plants.

In order to bring into play the favorable soil, water and climatic conditions to the best advantage, the adaptability of varieties of trees and plants should be considered. It is not infrequently found that some varieties, although they may be among the leading ones in other states, are partially or entirely worthless in New Mexico; particularly is this the case with the stone fruits. On the other hand, some varieties less valuable in other sections succeed admirably in Santa Fe County. In other words, the proper selection of varieties is an important factor in the success of agricultural and horticultural operations, and this is being realized more and more. Considerable success is also attending the introduction and propagation of crops especially adapted to the arid regions, such as durum wheat, kaffir corn and bronco grass.

The prices of agricultural lands under irrigation systems, public or private, and with permanent water rights, are from $10 to $200 per acre, according to location, nearness to railroads and towns,

RESERVOIR AT SANTA FE.

crops, fruit trees, water rights, ditch systems and general conditions. The soil of the valleys is superior in productive capabilities to the alluvial soil of the prairie states. The secret of its producing power probably lies in the large amount of sediment contained in the irrigation waters. The Nile Valley, with its waters loaded with sediment, is considered one of the most fertile in the world, and in Santa Fe County there are a number of Nile Valleys in miniature.

The crops are not seriously troubled by fungus diseases. Insect pests, formerly unknown, have made their appearance in late years, but not to such an extent as in the humid regions. Much sunshine and dry air prevent the growth of fungi, and, therefore, these are not likely to become troublesome. The insect pests that have found their way here can generally be controlled by proper treatment.

Public Lands.

Santa Fe County has 470,000 acres that are subject to entry under the public land laws. Of this area, 18,000 acres are unsurveyed. About 200,000 acres of the public land can be reclaimed by the construction of irrigation works, by pumping the underflow or by dry farming methods. This means free homes for five thousand families and the possibility of increasing the annual crop values of the county from one million to ten million dollars. This land can be taken up under the homestead or desert land acts.

All men and single women over 21 years old, widows, deserted wives and persons under the age of 21 years who are the heads of families and do not own more than 160 acres of land and are citizens or have declared their intention to become citizens of the United States are qualified to make a homestead entry of 160 acres. The right to a tract of public land as a homestead can be secured by settlement, which will hold it for ninety days, when or during which time entry must be made. After fourteen months from the date of settlement, the homestead claimant, if he has resided upon, improved and cultivated his claim during the last eight months, can make commutation proof and pay for the land at $1.25 per acre.

Land unfit for cultivation or grazing purposes, or only valuable for its timber or stone, is not subject to homestead entry. Otherwise, as a rule, all public land, not mineral, may be so entered. The settler is required by law to make improvements upon the homestead and to cultivate part of the same during the period of residence. He must also make the tract his actual and bona fide

RUINS OF GRAN QUIVIRA, SOUTH OF SANTA FE..

residence and home. If the law has been fully complied with for five years on a homestead, it is possible to make final proof at any time before the cancellation of the entry. Before final proof can be made on a homestead or desert land entry, application must be made in the land office and a notice secured, which must be published in a newspaper to be designated by the Register.

This application and notice must give the names and postoffice address of four persons, two of whom will be witnesses in making proof. Thereafter and upon due publication, final proof can be made at the land office or before a United States Court Commissioner or a Probate Clerk or Probate Judge at the county seat. The land office fees are as follows:

	Acres.	Land.
Homestead land	...	$ 1.25
Payable when application is made	40	6.50
	80	8.00
	120	14.50
	160	16.00
Payable when final proof is made	40	1.50
	80	3.00
	120	4.50
	160	6.00

Every qualified person, a resident of New Mexico, may enter 320 acres, or less, of desert land that can be reclaimed by irrigation. Desert land is held to be land without a growth of natural timber, on which ordinary crops will not grow and mature without irrigation.

Before the expiration of one year, after the date of the entry, the entryman must file in the land office a corroborated sworn statement showing how that $1 per acre has been expended for reclamation purposes. Within four years from date of his entry, the claimant must prove its reclamation and pay a further government fee of $1 per acre. Desert land entries can be assigned to any qualified person who has never made or held an entry, and assignee can comply with the law and make the final proof.

The entry of agricultural land is restricted to 320 acres by any one person, under any or all of the agricultural land laws. For instance: If a 320-acre desert entry is made, a settler is not entitled to a homestead, or if a homestead entry of 160 acres is made, a settler can then only enter 160 acres more for a desert entry.

Under the act of March 3, 1891, any person, company or corporation may locate a reservoir or reservoir site and ditches on

PERRY'S HOMESTEAD IN SANTA FE CANON.

public land for the purpose of irrigation, and can obtain a right to the same and fifty feet each side thereof that cannot be disturbed by any person or persons who may afterward obtain title to the land on which such reservoir and ditches are located.

Sections 16 and 36 in each township are school sections and belong to the Territory; these are leased by sections and are under the supervision of the Territorial Land Commissioner.

When an entry of any kind is to be made, evidence of citizenship will be required. If the applicant is native born, his own affidavit of that fact will be sufficient. But if he was not born in the United States, in addition to his own affidavit, he must furnish a copy of his declaration of intention to become a citizen, or of his certificate as a citizen.

Persons desiring to settle upon the public domain, either as homesteaders or upon desert entries, must "rustle" for themselves in order to find suitable quarter-sections for such location.

The choicest lands along the water courses, great or small, permanent or transitory, are now about all in private ownership, title having been derived from confirmed Spanish or Mexican land grants or under the public land laws of the United States. Still, by careful search, even in the oldest settled sections, good locations for homesteads may yet be had.

There are no maps showing public lands open for entry. Township plats can be examined at the land office at Santa Fe, and the lands open for entry in the different townships can be found thereon. The settler should select the locality in which he wishes to locate, and then get a township plat or plats showing the vacant land, which will enable him to examine such tracts as may seem desirable. The plat of the particular township in which his location may be situated can be procured by application to the Register of the United States Land Office at Santa Fe, and will have to be paid for at the rate of from $1 to $4 per plat, according to the amount of work necessary thereon, by the intending settler.

Alfalfa.

Alfalfa is grown in all the irrigated sections up to an altitude of 8,000 feet and does well in almost every class of soil. The chemical constituents of the soil seem to have little to do with the growth of the crop, provided the surface is level and the proper amount of water is given. It grows well on light, sandy loam, as well as on the heaviest adobe. It is said by an able writer that alfalfa will not stand "wet feet." That is true if he means that it would not grow in a water-logged soil. Where the soil is well

PUEBLO INDIAN DANCES.

drained it will extend its roots to the water table and grow luxuriantly, even if the water table is only a few feet below the surface of the ground.

The average annual yield is about three tons per acre. The cost of production, including taxes, water rent, growing, harvesting, baling and placing on board the car, does not exceed $4.00 per ton. There are some alfalfa farmers who are able to place alfalfa on the car at a much less figure because they have perfected their system of irrigation and handle the hay with improved machinery. The net profit in growing alfalfa under irrigation is considerably larger than the average net profits realized on wheat and corn in the older agricultural sections. It is a crop that requires little labor, if the field has been made level and the soil well prepared before seeding, after which the operations are simple, resolving themselves into irrigation and harvesting. On many soils, one irrigation will produce one crop, which may vary from one-half to two tons per acre. The price of alfalfa varies, depending upon the demand, and at harvest time the price of alfalfa is comparatively low, usually not exceeding $8 per ton, but the forehanded farmer who holds his product until winter usually gets from $10 to $14 per ton. As to the feeding value of alfalfa, it is conceded throughout the country that it leads all other forage crops in its total digestible food constituents and nitrogen contents.

Forage Crops.

While alfalfa is the main forage crop, it is not the only one. There are some twenty to thirty varieties of grasses that grow wild upon the range and which are harvested for hay, the chief and probably the most nutritious being gramma grass, which, during wet years yields as high as two tons per acre. Large quantities of it are harvested on the public range and sold during the winter or fed to stock. Attempts to cultivate brome grass, a drouth and cold resisting forage crop of great value to stockmen, yielding three to four heavy crops per year, have proven successful, especially on the Sparks Ranch east of Santa Fe. Clover does well, as do nearly all the other forage plants of the temperate zone. Of late, the value of wild peas for the feeding of stock has been recognized, and as the yield per acre in nutritive value is equal to that of an acre of alfalfa, there should be a future for those who will go into the feeding of lambs and beeves in Santa Fe County, as the wild pea and lupine require very little attention. Oats do very well in the mountain valleys as well as on the plains farm, and the yield per acre is quite profitable. In fact, oats have become a staple crop in the mountains, even where

ON THE UPPER PECOS.

the raising of other crops is not attempted. The cultivation of the spineless cactus also opens vast possibilities to the stockman, for cacti are as native as are the sagebrush and the pinion.

Wheat.

Wheat is a sure and good crop if sown early. The yield of wheat per acre is equal to the yield in the leading wheat-growing states. New Mexico wheat received first premium at the World's Fair at Chicago and at other expositions. Rye, barley, millet and the other cereal crops do equally well, and there is a good home market for all that can be produced.

Corn.

Corn stands next to alfalfa in acreage. Where water for irrigation purposes is plentiful the yield of corn compares favorably with the yield of this crop in the corn belt.

Sorghum yields good crops and in several localities is grown for its sugar contents.

Potatoes.

By many, the potato has been considered an impossible crop, yet it can be and is grown successfully in the mountains east of Santa Fe. The difficulties in growing potatoes seem to be those of varieties and management under irrigation. Colorado failed in its first attempts to grow potatoes, but now this crop forms an important source of wealth in the Centennial State. Sweet potatoes are grown without difficulty. The best success with potatoes has been achieved in the higher mountain valleys. On the Viveash Ranch, on the upper Pecos, for instance, at an elevation of 10,000 feet, as well as on the Sparks Ranch, the yield of potatoes, both in quality and quantity per acre, surpasses that of the potato fields of Greeley in Colorado.

Vegetables.

Wherever water for irrigation can be had, vegetables thrive. While truck gardening is not carried on very extensively, it is nevertheless increasing every year. Celery can be grown to perfection where some care in growing it is exercised. Santa Fe County is among the best celery-growing sections and its product is superior to the product from California, Michigan and Louisiana. Cantaloupes and melons are raised successfully. The tomato can be grown and ripened if given some protection against frosts.

Santa Fe County is famed for the superior onions which it pro-

RESERVOIR ON SUNSHINE ORCHARD IN ESPANOLA VALLEY.

duces: It is not infrequent to see specimens weighing one and one-half pounds. The yield per acre is large. The results of experiments at the Agricultural Experiment Station at Mesilla Park show that such varieties as the Red Victoria will produce in New Mexico 32,000 pounds per acre, and at the United States Indian Industrial School at Santa Fe 16,000 pounds of the best onions were raised on one acre.

Beans are a staple crop. Peas do equally as well, and the production of chili or peppers is a distinctive feature of native husbandry. Cabbage and beets attain an extraordinary size and the average yield per acre would be considered phenomenal in the east. The garden vegetables all flourish and the openings for energetic truck farmers are especially inviting. Okra, peanuts, spinach, rhubarb, squash, melons, pumpkins, all do well, especially in the river valleys.

Sugar Beets.

The Santa Fe, Tesuque, Santa Cruz and Rio Grande Valleys rank first among localities best suited to the growth of high-grade sugar beets. Here may also be found fuel, limestone and water of good quality, as well as cheap labor. In the face of these facts, it seems that Santa Fe should soon have a sugar factory, especially since beet sugar factories are exempt from taxation the first six years.

Dr. H. W. Wiley, who is undoubtedly the principal authority on sugar beets today, has the following to say:

"It is evident that there are many localities in New Mexico where conditions of temperature are most favorable to the growth of beets. There are also large areas of comparatively level lands which are capable of irrigation. Wherever the temperature of these regions is sufficiently low to permit the proper development of the beet, and where sufficient water for irrigation can be secured, there is good reason to believe that the industry may be established and will prove profitable. Beets grown in Santa Fe County show a higher percentage of sugar than those of any other state which has sugar factories in operation, the average being almost 18 per cent, while the purity of the juice exceeds 82 per cent.

It is estimated that the people of New Mexico consumed 16,000,000 pounds of sugar last year. Not one pound of this sugar was manufactured in the Territory, notwithstanding the fact that natural conditions are better suited to sugar beet growth and beet sugar factories than in almost any other place in the United States, and possibly in the world.

ORCHARD SCENES AT SANTA FE.

Tobacco.

Wild tobacco, called "puncha," grows along the foothills of the mountains. Many farmers continue to grow tobacco of seeds from the original plant, preferring it to Havana or any other variety. The cultivated plant is very similar to the native. The native farmers do not sow the seed in beds and transplant, but drill in rows. The plants are from five to five and a half feet high and have about forty leaves. They are small and resemble Turkish more than any other variety in growth and shape of leaf. Tobacco of all varieties will grow well and has an unusually fine flavor and aroma if sown early and protected well.

Canaigre and Rubber Plant.

Both of these plants grow wild. The first named is valuable on account of its high contents of tannic acid, a necessity in tanning leather. Recent experiments have shown that the rubber plant will yield a good quality of crude rubber, and that its cultivation for manufacturing purposes can be made profitable. A company has been organized at Santa Fe to utilize the wild rubber plant for that purpose.

Horticulture.

Of all the fruits, the apple is the most extensive and the most profitable crop, and it has been placed in competition with the world at the great expositions. In 1901 at Buffalo the apples from New Mexico were conspicuous and received a first prize, while in 1900 the New Mexico apples were carried across the continent and the Atlantic Ocean to the Paris Exposition. There New Mexico was counted with the best apple growing sections in the Union, as specimen apples received second premium. Similar were the results of the exhibit of New Mexico apples at the Chicago and St. Louis Expositions. This may give an idea as to the kind of fruit that can be grown. Not only is the fruit of superior quality, but the crops produced are enormous; as a rule the trees tend to overbear. The apple orchards vary from small family places to very large commercial orchards. The Dockweiler, Miller, Wise, Hickox, Buena Vista, Harroun, Boyle, Hobart, Andrews, Jones and other orchards are particularly noted for their fine fruit. The most profitable varieties of apple grown are the winter apples, such as Ben Davis, Gano, Missouri Pippin, Winesap and Mammoth Black Twig. In a lesser degree, the early varieties are also prolific. Among the leading kinds may be men-

SUNSHINE ORCHARD IN ESPANOLA VALLEY.

tioned the Early Harvest, Red June, Yellow Transparent and the Maiden's Blush.

Other pomacious fruits, like the pear and quince, thrive as well as the apple, but these are not so important, nor are they planted in such large areas. The pear has a marked adaptability, the trees usually bear early, are among the best drouth resisters, and are long-lived and hardy. The fruit, especially of the larger varieties, like the Bartlett, Idaho, Beurre, Easter and Clapp's Favorite, grows very large and is of fine quality. There is a bright future for the extensive planting of this fruit.

Peaches are grown in all the fruit growing sections and find their way into the Colorado and Kansas City markets. The early-ripening varieties, such as the Alexander, Sneed, Waterloo, Arkansas Traveler and Hyne's Surprise, are among the successful and sure bearers. This is due to the fact that, as a rule, the early varieties are the late bloomers, blossoming late enough to escape the late spring frosts. The peach trees usually begin to bear at three years from the time of planting. The tendency of the trees is to overbear, and it becomes necessary to thin them in order that the fruit may not be too crowded. In size and quality, Santa Fe County peaches are not exceeded by peaches from the best peach growing states. It is the common opinion of those who have tasted both California and Santa Fe County peaches that the latter are the better in quality. The fruit is, as a rule, highly colored, due, perhaps, to the more continuous sunshine during the ripening period. Probably, the profitable period of the peach tree here is from ten to twelve years. By replanting an orchard at intervals of five to eight years, a profitable orchard can be maintained almost indefinitely.

The apricot has given evidence of greater longevity than that of any orchard tree, with the possible exception of the pear. It is not uncommon to see very old seedling apricot trees growing in the native home places, and at Santa Fe seedling apricot trees are known to be about 200 years old. The fruit from the improved kinds is as large and as good in quality as the California apricots. The Blenheim, Moorpark, Royal, St. Ambroise and Luizet are desirable for home planting.

Cherries are grown on a lesser scale. The trees of both the sour and sweet groups grow well. Varieties of the sour cherries are the best bearers, but the fruit is not so large as that from the sweet varieties. The latter attain a size and flavor that are unknown to the product of eastern orchards. The sour varieties predominate, as they have proved to be more regular and surer bearers.

RESERVOIR IN SANTA FE ORCHARD.

The Early Richmond, English Morello, Ostheim, Napoleon, Tartarian and the Montgomery are among the leaders.

The plum is making a place for itself. There is a growing demand for it. The tree is perfectly hardy, although there is some variation as to the fruitfulness among the trees of different types. The three types are, first, the European plum, which is the plum that gives rise to the old varieties, such as the Green Gage, Yellow Egg, Damson, and the various prunes; second, the Japanese plums, which are entirely different from the former; and, third, the native type, such as the Wild Goose. As already stated, it is a well established fact that the selection of varieties is an important consideration, and this is particularly true in regard to plums. The European plums do admirably. The trees are thrifty, heavy and sure bearers. These plums are well adapted in every respect to Santa Fe County conditions, and large and excellent quality fruit can be produced. A few of the leading kinds of this group which have been tested are the Clayman, Jefferson, Imperial and Transparent Gage, Yellow Egg, Pond's Seedling, Washington, and the French and German prunes. The native plums, such as the Wild Goose, Golden Beauty, and Pool's Pride, are sure bearers.

Nectarines and mulberries do especially well. The rapid growth of the latter, as well as the dry climate, should eventually lead to the introduction of silk worm growing in the Southwest. In fact, experiments made at Santa Fe on a small scale in this industry have been very successful.

At Santa Fe excellent results have been obtained with the Diamond, Concord, Catawba and other native varieties of grapes on account of being drouth resisting and immune to the phylloxera.

Hot Houses and Floriculture.

Only a beginning has been made in Santa Fe County in floriculture and in raising early vegetables and flowers in hot houses. Roses and a large variety of flowers do well in gardens, and carnations, chrysanthemums and many other flowers cultivated in the temperate zone, present no difficulties in cultivation. Early vegetables, strawberries and other fruits are imported from other commonwealths and bring prices sufficiently high to make it worth while to raise them in hot beds or in hot houses.

Apiaries.

With mild winters and abundant bee pasture, in the form of alfalfa, tornillo, etc., the apiarian products are of considerable importance. Bee culture and the production of honey are very

ORCHARDS AT SANTA FE.

profitable, and a pursuit especially adapted to those who are able to do only light out-door work.

Poultry and Poultry Products.

Annually thousands of dollars are poured into the pockets of Kansas and Nebraska farmers in payment for poultry and eggs consumed in Santa Fe County and yet the county is well adapted to the raising of poultry. It has most of the advantages with but few of the disadvantages of other sections. Insect pests are no worse, while disease is rare. Prices are high, being governed by the price of the foreign product plus the transportation charges, therefore the home product has the best of it. Eggs bring from 25 to 45 cents a dozen, and chickens from 12 to 22 cents a pound.

Dairying.

Dairying has kept pace with the demand in the vicinity of cities and towns where the products are sold in the form of milk and cream. There is not enough butter and cheese manufactured, however, to supply the needs. Outside of three dairies at Santa Fe, the dairying industry has been but slightly developed, although the profitable opportunities for modern dairy methods are very promising. The markets for farm and dairy products are nearby and pay good prices, and thousands of dollars are sent annually to Kansas, Colorado and other states for agricultural products that can be raised at home. There is not a single creamery in the County.

Fruit Preservation.

Santa Fe has an evaporator, but it has been idle the past few years, not for want of fruit or lack of market, but because no enterprising man, skilled in the business, could be found to operate it. On the Round Mountain Farm at Hobart is a small evaporator and several other orchards contemplate installing such evaporators.

Flouring Mills.

There are two modern flour mills, one at Hobart and the other at Santa Cruz. There are in addition two or three old-fashioned grist mills.

STOCK.

Next to agriculture, stock raising is the principal industry of Santa Fe County, its valleys and mesas being covered with nutritious grasses. The fine climate and good water are also factors that materially contribute to make stock raising profitable. There

SHEEP IN CORRAL.

are about 60,000 sheep on the range, 10,000 head of cattle and 15,000 head of goats. The broken hill country and mountains are ideal grazing ground for goats.

Cattle.

Santa Fe County has 400,000 acres of public range and 400,000 acres more of private range. For large herds of cattle it is important to have ample water, for water controls the range. But it is not difficult nor costly to secure home ranches with water rights that are adjacent and control a large extent of range. On the Pecos Forest Reserve grazing permits can be secured at slight expense and a nominal charge per head and, since the range is protected, it is the best in the Territory. It is found advisable to make more or less provision for winter feeding to guard against unexpected losses. But with feeding during winter storms, with a good home ranch and water, the cattle business proves very profitable. The business of feeding beeves for market, while practically untried, should prove very remunerative on account of the mild climate and the abundance of forage plants.

Sheep.

The mild winters, the grassy mesas and watered valleys, the sheltered canons, help to make sheep raising very profitable. The wool produced annually is between 300,000 and 500,000 pounds, and as railroad facilities are ample, there is no difficulty in getting the wool clip to market. A moderate capital invested in sheep, a home ranch and ample range will bring success to the sheep raiser if he possesses good business tact and experience. In 1905, for instance, most sheep owners doubled their herds by natural increase or were paid as much for their lambs as their ewes were worth during the year 1904, receiving for the unscoured wool as high as 25 cents, and for the scoured wool, 65 cents per pound.

Goats.

Equally as profitable and as free from difficulties is the raising of goats. Especially in the foothills and on the mountain mesas, goats do better than sheep. There are many thousand acres of such pasture in Santa Fe County. Incidental to the profit from the hair of the Angora goats, their skin and their meat, they will clear land from brush and thus make it available for cultivation. The goat is very hardy, can subsist upon a range that would starve any other animal, and is free from diseases which often play havoc with other stock.

CATTLE RANGE ON PECOS RIVER AT ELEVATION OF 10,000 FEET.

MINING.

Santa Fe County can truthfully claim to be the section in the United States where mining was first prosecuted by the white man. The fame of the county's turquoise and gold mines had probably more to do in bringing the Spaniards up the Rio Grande and Santa Fe Valleys before even the landing of the Pilgrim Fathers at Plymouth Rock than any other cause. Two hundred years before gold was discovered in California, gold nuggets were picked up by white men in southern Santa Fe County. In the winter of 1542 Coronado and his Conquistadores, so the old chroniclers say, secured turquoise and gold in this part of New Mexico. The Mina del Tierra and the turquoise mines near Cerrillos were the first lode mines systematically worked in the Southwest and the only mines in New Mexico of which there exists any evidence of their existence before the year 1800, excepting, perhaps, the turquoise mines in the Burro Mountains in Grant County. But it was the placer mines in southern Santa Fe County that produced most of the gold of the period of the Spanish occupation. The Pueblo Indians, prior to the advent of the Spaniards, took gold from the superficial gravel beds south of the Ortiz Mountains. However, it is only since 1828, that the extensive areas of auriferous sands and gravels which surround the basal slope of the Ortiz Mountains have been worked continuously, and it was eleven years later that the New Placers at Golden were rediscovered by white men.

The following account of Santa Fe County's mines is principally from the pen of Professor F. A. Jones of the United States Geological Survey, and is, therefore, authentic and accurate:

The New Placers.

The new placers or Silver Butte District lies to the south of Cerrillos, a town on the Atchison, Topeka & Santa Fe Railway and near the west line thereof. Most mining districts in New Mexico are very indefinite in regard to their extent or area; generally embracing a whole cluster or range of mountains or continuous mineralized belts, regardless of size or shape. Thus it is with the New Placers; they are supposed to include everything to the plains each way, from the north slope of the Ortiz Mountains south, to the plains south of South Mountain. This embraces the Ortiz Mountains, the Old Placers, Dolores, Golden, New Placers, San Pedro and South Mountain. As a gold mining district this is the oldest in New Mexico; it is also noted for its recent production of copper. Nuggets of gold were no doubt picked

CAMPING ON UPPER PECOS.

up occasionally in this area by the Pueblo Indians, though no real mining was ever conducted in this field by those people, so far as any evidence can be obtained. It was in the year 1828 when gold was first discovered in this district. The point of discovery is what is known as the "Old Placers" and was made by a herder from Sonora. It is said that some of his herd strayed into the Ortiz Mountains, whither he went in search of it. Seeing a stone which he thought resembled some of the gold-bearing rocks of Sonora, he examined it and the rock proved to be rich in gold. News of the discovery soon spread and the excitement was intense. The most crude appliances imaginable were used; notwithstanding, considerable gold was taken out. Winter seemed to be the most favored time for mining. By melting the snow with hot rocks the miners were able to work until the dry season of the year. The ore was washed or panned out in a "batea," a sort of round wooden bowl about the same diameter of the modern gold pan. The mode of operation was first to fill the "batea" with the auriferous sands and gravels and then immersing the whole in water, and by constant stirring and agitation of the sands and gravels, the gold remained in the wooden vessel; this mass of black sands and gold was then reduced in a clay retort to obtain existing values, after the largest nuggets and particles of gold were first removed. According to Prince's History of New Mexico, between $60,000 and $80,000 in gold was taken out annually between the years 1832 and 1835. The poorest years about this period yielded from $30,000 to $40,000. About this time an order was given prohibiting any person from working the mines excepting the natives. Foreign capital and energy were thus excluded, which greatly hampered and handicapped development. Under this new regime, each Mexican miner held one claim, the size of which was ten paces in all directions from the main discovery pit. Any claim not kept alive by labor after a certain length of time was subject to relocation. The gold was mainly in nuggets and dust; one nugget claimed to have been found was worth $3,400, which netted the finder only $1,400. If true, this was the largest nugget ever discovered in New Mexico. The fineness of this gold is about 918. It would be hard to estimate the exact amount of gold taken from the "Old Placers," but it must have been considerable. Thomas A. Edison, the celebrated American inventor, erected in 1900 an experimental plant at Dolores to operate on these rich gravels. After making several trial runs the plant was closed down indefinitely. The process was held a secret, but proved a failure. Much rich ground yet exists in this section; but owing to the Ortiz grant having passed into the

PUEBLO OF SAN ILDEFONSO.

hands of a syndicate, which holds it under a 99-year lease, little or no work has been done of late. This land grant covers all of the Ortiz Mountain and the best part of the placer grounds of the district; it embraces an area of ten square miles, having the Old Ortiz mine as the center of the grant. In 1833 a vein of gold-bearing quartz was discovered on the Ortiz property, which was on the famous Sierra del Oro, and now known as the Ortiz mine. The claim made by some that the Ortiz mine is the oldest lode mine in America is a mistake; Mina del Tierra, in the Cerrillos District, exceeds it by 100 years, at least. In fact, the Santa Rita mine, Grant County, is a century and a quarter old. Juan Cano, the discoverer of the Ortiz mine, came to Mexico from Spain in the early part of the Nineteenth Century. The owner of the property, named Ortiz, took into partnership a Spaniard by the name of Lopez, a person well skilled in mining of that day. Through the management of Lopez, their mining operations were successful and a considerable sum of money was realized. Wishing to retain the full production of the mine, Ortiz sought a channel to rid himself of his Spanish colleague. The plan was carried out under the pretense of an obsolete decree which forbade any Castilian from residing or operating in New Mexico. Accordingly, Lopez was forced to leave the country.

Ortiz then formed a co-partnership with several of the officials who were connected with the expulsion of Lopez, and proceeded to work the mine. The new management not being familiar with mining operations was wholly unsuccessful; history tells us that they did not obtain "one grain of gold." This famous mine has been worked at intervals ever since its discovery, recent years excepted. The vein apparently is enclosed in syenite-porphyry; its strike is north 13 degrees east, and its dip is 75 degrees toward the northwest. The vein outcropping is an oxidized iron-stained quartz; below the depth of 85 feet the ore becomes base, carrying sulphurets of both iron and copper. The top portion of the vein was first worked out on account of its free milling qualities. The New Mexico Mining Company, which acquired the Ortiz grant in 1864, was first organized in 1853 and incorporated in 1858. In 1865 this company began the erection of a 20-stamp mill, which was completed in the early part of the year following. This stamp mill was the first erected in New Mexico. A certain degree of success crowned the efforts of this company; and in 1869 it added an additional 20-stamps to its plant. The ore was conveyed from the mine to the mill by means of a tramway. After a few intermittent mill runs, the mine was closed. Some years

PUEBLO OF NAMBE.

later another company erected a large amalgamating and concentrating plant at the mine, which was never operated successfully. The Cunningham mine, in Cunningham Gulch, near Dolores, is also well and favorably known. This is among the earliest locations of the district; belonging now to the Sandia Gold Mining and Milling Company. The outcropping is immense; the width of the vein is about 600 feet and can be traced for a long distance. So bold is the outcropping that it can scarcely be classed as a vein, but more properly what miners term a "blowout." The whole of this mineralized dike consists of quartz and feldspar with rich seams or streaks passing through it in various directions. The quartz is more or less stained with oxide of iron at and near the surface; with depth the ore becomes refractory. The hanging wall is a syenite-porphyry and the foot wall a quartz-porphyry. The dip and strike of this lode conform with the Ortiz vein. Among other and familiar lodes may be mentioned the Candelaria, belonging to the Glorieta Company; the Brehm lode originally worked under the management of the New Mexico Mining Company, which owned the Ortiz mine; the Hutchason lode, discovered and located by J. S. Hutchason (Old Hutch), the discoverer of the Magdalena District, who was in the Old Placer District as early as 1884, and at one time owned the Candelaria mine; the Brown lode, and the Humboldt 100th; the latter lode named in honor of Humboldt's centennial. The Shoshone is also a prominent lode which has been more recently located. All of the above lodes lie near Dolores and the gold from the Old Placers evidently came from these veins, due to the action of erosion.

The New Placers, from which the district takes its name, are situated some four or five miles to the south of the Old Placers, in the Tuerto (San Pedro) Mountains. This new field was discovered in 1839, eleven years later than the Old Placers. Much gold has been taken from the gulches at this place. The San Lazarus Gulch is quite a steady producer at the present time. In the vicinity of Golden, which is the newest part of the placer district, much activity is manifested and considerable success attends the efforts of modern mining. The gravels in this section average from twenty-five cents to one dollar per yard of material handled. Scarcity of water, as at the Old Placers, is a serious obstacle in working this ground. The fineness of the gold is about 920. Concerning the geology of the New Placer District, it seems that the trio—South Mountain, Tuertos (San Pedro) and Ortiz Mountains—are most intimately connected in their origin and had their birth in one common disturbance. The orographic line of weakness was

BRIDGE AT SANTA FE.

north and south; on this line the three pustules of syenite-porphyry broke through the horizontal sedimentary capping of the overlying carboniferous and cretaceous series. Generally speaking, the topography of these groups is identical. South Mountain is not so familiar to the general public as the other two groups, inasmuch as this section appears to be less mineralized than the Tuerto and Ortiz localities. In the Tuertos (San Pedro), which are about three miles north of South Mountain, the sedimentary series have been partly elevated and dip about 15 degrees toward the east. The Oroquai Mountain, which is the eastern member of the Tuertos, is entirely stripped of any former sedimentary covering, exposing the rugged character of the syenite-porphyry, having its counterpart in the Ortiz Peaks, some four miles to the north. The now deserted village of Dolores stands to the northeast from the Ortiz Mountains, near their base. Gold, silver, lead, copper, iron and zinc are found in this district. In the classification of the mode of occurrence of the ores, three divisions would seem proper: (1) Deposition due to erosion, placer gravels. (2) Deposition due to descending and ascending waters and the filling in of fractured zones and true fissures, which carry gold. (3) Deposition due to contact metamorphism, from which the copper, lead, silver and zinc ores are intimately associated. In the first of these divisions the placer gold has its origin in the universally accepted manner ascribed to such deposits; that is, through disintegration of the rock-complex of the second classification, as above given.

Since there appear to be two distinct features which characterize the occurrence of the gold under the second division, the veins are divided into fractured zones and true fissures. The first of these has no banded structure and the walls are undefined, greatly crushed and shattered. In the second case a true banded appearance is recognized while the walls are definite and intact. It would appear from a close inspection of the two classes of veins that the first was filled by a leaching process of descending waters; some of the seams and pockets have proven immensely rich in gold. But, in following this shattered zone down, the values grow less as the crevices grow smaller. Sulphides usually appear from seventy-five to one hundred feet below the surface. Eventually, the fracture becomes so small at increased depth, as to disappear apparently and the vein is completely lost or said to have "pinched out." These crushed and shattered mineralized zones are by far the most numerous of any types of deposit in the district. The relative position of their planes approaches perpendicularity and their general strike is nearly east and west.

MINING NORTH OF SANTA FE.

Under the true fissure of veins only one or two of any consequence have been noted. The most prominent of this class is found in the famous Ortiz mine. This vein is completely encased in syenite-porphyry and has a banded appearance. Descending water or lateral secretion is responsible for the mineralization of this and similar lodes of the district. Some very fine specimens of leaf and wire gold have been taken from the various properties. Beautiful specimens enclosed in calcite have been found in the Gold Standard mine. Deposits under the third and last division are the most important in the district when viewed from a commercial standpoint. Here may be seen plainly the effect of pneumatolytic action, induced by the porphyritic magma, which was forced upward against the carboniferous limestones. The effects wrought in the overlying sedimentaries by this intrusive eruptive is very noticeable at the mines of the Santa Fe Gold and Copper Company. This property is by far the best developed of any in the district, the workings are quite extensive, embracing several miles of development. The ore is principally of a low grade chalcopyrite, and intimately associated with garnet, lime and shales. A large smelter has been erected, but both mines and smelter are idle at present.

Massive limestones in some places have been converted into garnet, exceeding one hundred feet in thickness, in some instances. The superficial limestones and shales at the copper mines are frequently penetrated by andesite dikes. It was observed that the best ore bodies were found at or just above the main porphyrite contact and along the contact planes of the andesite dikes. From the foregoing, it would appear that the segregation of ores along or near these planes of contact is largely, if not wholly, due to the action of aqueous, acid and gaseous vapors in their effort to escape from their magnetic prison; under released pressure their metallic burden was thus necessarily dropped. At the Lincoln Lucky mine the deposition of ore, no doubt, was similarly induced by the porphyrite intrusive beneath. Since the ore occurs in limestone along a shattered zone and not in direct contact with the porphyry, this view, at first, does not seem well taken. Upon closer investigation it will be found that cavities in the limestone have been mineralized, only where communication with the igneous member existed. On the eastern and northeastern slopes of the Tuertos are some iron properties which have been not yet fully exploited. The Perry group is prominent. A company known as the Oro Quay Company has been organized to develop and exploit this group, which, in addition to extensive iron deposits, is rich in gold ore.

ESTANCIA SALT LAKE SOUTH OF SANTA FE.

Some of the principal lode claims are the San Lazarus, Gold Standard, McKinley, Lincoln Lucky, Anaconda group, Stockton group, Alto group, San Miguel, Gold King group, Hazelton group, Shamrock group (San Lazarus gulch), and the Old Reliable (on the Ortiz grant). The San Miguel is having its ore treated at the Lucas stamp mill at Golden.

The more prominent of the placer properties and operators may be enumerated as the Monte Cristo Mining Company, Baird Mining Company, Ltd., Morning Glory, Gold Dust, Red Bank, Santa Secivel, and Viola. On the Gold Bullion, $50,000 worth of machinery was installed in 1906, including a large traction dredge. The Racine Mining Company is also installing machinery and will do extensive work on the placers.

The Cerrillos District.

From a historical standpoint no section in the United States is possessed of so much interest as the Cerrillos or Galisteo District. The ancient workings at Mount Chalchuitl, due to the existence of turquoise in that locality, seem almost incredible considering that the work was accomplished with the crude appliances of the stone age, and yet such was the case. Fragments of coiled pottery, stone hammers, lichen covered rocks and trees over a century old, growing on the old dumps and in the working pits, when first brought to the notice of American explorers over fifty years ago, were then hoary with age, and prove beyond the shadow of doubt the great antiquity of mining in this region. This celebrated district lies on the north side of the Atchison, Topeka & Santa Fe Railway at the little village of Los Cerrillos, near the center of Santa Fe County. The first description of the region was given by Prof. W. P. Blake, who visited the old turquoise workings in 1858. Professor Blake's article was published during the same year in the American Journal of Science. Other distinguished scientists and writers paid visits to that section prior to the modern discovery of metallic ores. It was in the year 1879 when the modern prospector drifted into the region after the great excitement at Leadville, Colorado. The discovery of sulphide ores, zinc, lead and silver was heralded abroad and the boom started. Two town sites, Bonanza City and Carbonateville, were staked out in the early '80s and a tidal wave or mining craze swept over the district. These once thriving villages are now scarcely more than piles of rubbish and fallen walls. It was in the old hotel at Carbonateville—some of the walls are yet standing—where General Lew Wallace, when seeking recreation in the mining camp, read some of the proof sheets of "Ben Hur."

SMELTER AT CERRILLOS.

Turquoise.

Mount Chalchuitl, which lies to the north of the Cerrillos railway station some three miles, is where the most extensive prehistoric and Spanish work was done. In the elaborate ancient ramifications of the old workings at Mount Chalchuitl, which were extensively prospected a few years ago, many stone hammers, whole vessels of ancient pottery and various crude mining implements were found. It is said that some twenty Indians were killed about 1680 by the caving of a large portion of the works. This was claimed to be one of the chief causes which led to the general uprising of the Pueblos who shortly afterward drove the Spaniards from the country. Immense excavations and old dumps, with which are associated relics of the stone age, practically verify the antiquity of those workings. Coiled pottery, the oldest known type, is in evidence, fragments of which are found in the old dumps both at Los Cerrillos and in the Burro Mountains. It is said that a stone hammer weighing some twenty pounds, with a portion of the handle still intact about the groove, was taken from these same excavations a few years ago. These stone hammers are made from a hornblende andesite, common to the Cerrillos hills. The desiccated condition of the drift in which this latter relic was found would account for the preservation of the wooden handle.

Apparently the aborigines and early Spaniards exhausted this particular place of marketable turquoise, as considerable development was done a few years ago without success. This hill or mountain is of a white or yellowish appearance and is different from the surrounding hills; decomposition by kaolinization seems well advanced. Whether this alteration has been hastened by escaping heat vapors or is due solely to surface and atmospheric agencies it is somewhat difficult to conjecture; the former action seems most probable. The numerous intrusive dikes which traverse the district have, no doubt, played an active part in the general metamorphism of the associated rocks. Bluish-green stains and streaks traverse this kaolinized rock in various irregular courses; it is along such lines of fracture that the marketable turquoise is likely to be encountered. Small seamlets and concretionary nodules, encased by the white or yellowish decomposed matrix are likely to contain valuable gems, although several tons of rock may frequently be broken and yet no valuable stones be found.

Three miles to the northeast of Mount Chalchuitl will be found the old Castilian mine, formerly worked by the Spaniards. About the year 1885 the property was exploited and located by a man bearing the name of Palmerly. The Muniz claim, one of

PREHISTORIC STONE HAMMERS FOUND IN TURQUOISE MINE NEAR SANTA FE.

the most important locations in the district, was made in the year 1889 by F. Muniz. In 1891, C. J. Storey located the Sky Blue, Morning Star and Gem claims. These latter five claims were bought by the American Turquoise Company of New Jersey about 1892 and are at Turquesa. Also, near and adjoining the properties of the American Turquoise Company, J. P. McNulty has three locations which were made since 1892. Mr. McNulty has been the mine manager for the Tiffany people for a number of years. There are a number of other properties in the district which have produced beautiful gems, among which may be mentioned the Blue Bell and Consul Mahoney. Only lately Romolo Valles and others have made new locations in this section, from which they are taking large quantities of fine turquoise.

Other Precious Stones.

Other precious stones besides the turquoise are found in Santa Fe County, the most plentiful gem being the peridot. Many beautiful garnets are found, these gems occurring in the gravels, and are more or less associated with the peridot. A wide range in the variation of color is displayed in the garnets, which vary from a light rose to a bright red. This gem is frequently termed "ruby-garnet." A few valuable emeralds or beryls have been picked up from the gravels near Santa Fe and are highly prized for their great beauty. On a few occasions small sapphires and even diamonds have been accidentally found in gravel beds in Santa Fe County. Their occurrence, however, is very rare. Agates, amethysts, tourmaline, quartz crystals, carnelian, moonstone, chalcedony and other gems are more or less common in the mountains. While definite figures are not at hand, yet it is known that the annual turquoise output of Santa Fe County has reached the value of $100,000.

Mina del Tierra.

Besides the ancient turquoise mines in the Cerrillos District, there exists a metal mine which was worked for its silver and lead and that is almost as old as the Chalchuitl working. It is known as the Mina del Tierra. In this mine exists the only real evidence of ancient lode mining in the Southwest; it antedates the first work done in the Ortiz and Santa Rita mines by at least a century. The old workings consist of an incline shaft of 150 feet which connects with a somewhat vertical shaft of about 100 feet in depth. Extensive drifts of 300 feet connect with various chambers or stopes; these chambers were formed by stoping or mining out the richer ore bodies. The full extent of the old workings

INTERIOR OF A SANTA FE HOME.

has been never definitely determined, since the lower depths are covered with water, which would have to be pumped out to explore the mine fully. As late as 1870 the remains of an old canoe were still in evidence, which was used for crossing the water in the mine or as a carrier for conveying the waste and ore to the main shaft; from this latter point it was carried by Indians to the surface in raw-hide buckets, or "tanates." The shaft had step-platforms or landings every twelve or fourteen feet, which were gained by climbing a notched pole (chicken ladder), similar to what some of the Pueblo Indians use at the present day. Many crude and curious relics, such as stone hammers and sledges, fragments of pottery, etc., have been taken from both the mine and the dump. It is thought that the Jesuits had this work performed by Indian slaves prior to 1680. The labor involved, when we take into consideration the crude manner of doing the work, is something tremendous. Throughout this district are a number of smaller pits and openings which are thought to have been made at that time from the association of similar crude implements found about the works. The ore from this mine is a sulphide of lead and zinc, carrying rather high values in silver. Silver was, no doubt, the principal metal sought and utilized.

The Lode Mines.

A smelting plant of two stacks, one for lead and the other for copper, of 50-tons each, was erected in 1902 at Los Cerrillos, on the railroad, but was never operated steadily. The ores of the district, without first making a separation of the lead from the zinc, cannot be successfully smelted at a profit. The Cash Entry, Grand Central and Tom Paine mines have been more extensively developed than most of the other properties and are credited with some production.

The Golden Eagle, M. & L., J. B. Weaver, Galena Chief, Fairview, Sucker Boy, Evelyn group, Astor group, Empire State, Beta, Little Joe, Sunnyside, Whalen group and Ingersoll constitute the principal claims. There were fully one thousand locations made during the primary impulse of the excitement. The principal work is being done at present on the Keystone group.

The ores of the district are heavy sulphides of zinc and lead, carrying some silver and a little copper and gold. The region is thoroughly mineralized and on the west is traversed by numerous andesite and basalt dikes. The central core of the district about Grand Central Mountain is an augite-andesite porphyry; and in the region of the turquoise mines, at both Chalchuitl and Turquesa, it is much altered by kaolinization. Immediately east of

SALT LAKE SOUTH OF SANTA FE

the augite-andesite area, embracing the Arroyo of San Marcos, the porphyry is recognized as a hornblende-andesite. Since the andesite formation embraces all of the metal mines in the district, it is attributed as being the chief carrier of the metalliferous values. This mineralized area is traversed by innumerable veins and veinlets more or less irregular, but all having a general strike of about north 30 degrees east. It would seem that the numerous systems of veins and veinlets that abound in the district are due to the cooling of the andesitic magma, which resulted in extensive checking and fracturing in adjusting itself to the changed condition. Escaping gases and aqueous vapors in their effort to escape along the lines of least resistance, deposited their metallic burden under released pressure. In addition to this phenomenon, circulating waters at a later period must have also given aid in the segregation of the metallic sulphides along these fractured zones.

A valuable contribution to the scientific literature on the Cerrillos District is "The Geology of the Cerrillos Hills," by Prof. D. W. Johnson, formerly of the University of New Mexico, which appeared as a reprint from the Columbia School of Mines Quarterly during 1903.

Near Glorieta and north toward the Rio Pecos, R. A. Bradley, the hermit miner, has done extensive development on several properties of gold, silver, copper and lead. The Kennedy iron mines at Glorieta have been developed considerably, and the ore at one time was extensively mined and shipped. The nature of this deposit is somewhat different from the other deposits, although its genesis is virtually the same.

Within three miles of Santa Fe are found mineral indications that will doubtless receive attention some time. This latter region abounds in copper, gold, silver, coal and iron. The Sunset group of claims lies about three miles northwest of Santa Fe and is being developed. Near Monument Rock, about nine miles east of Santa Fe, large ledges of low grade gold ore exist; considerable development has been done there on the Montezuma mine. In the Santa Fe Canon, six miles from Santa Fe, are the Owen molybdenum claims and a number of other properties. In the Little Box Canon of the Tesuque, four miles northeast of Santa Fe, extensive development has been done on the Ingersoll and other groups which has uncovered large veins of copper, zinc, silver and gold. In this vicinity rich float has been picked up that assayed more than $600 gold to the ton. On Indian Creek is the Annie Jones group, which is very favorably located and seems to have

MONUMENT ROCK.

a future. Along the "Scenic Highway" leading from Santa Fe to Las Vegas a number of lode claims are being developed, especially in Dalton Canon.

The whole of the country lying to the northeast of Santa Fe, covered by the Pecos Forest Reserve, is known to be mineralized, and very promising finds are reported from time to time.

Mica.

The first mention of mica in New Mexico was made by Lieutenant Pike in his Report of 1807. He says: "Near Santa Fe, in some mountains, is a stratum of talc, which is so large and flexible as to render it capable of being subdivided into thin flakes, of which the greater portion of the houses in Santa Fe and all the villages to the north, have their window lights made." This mica evidently came from Nambe, northern Santa Fe County. Down to a period of time as late as the American Occupation in 1846 there were no glass windows in Santa Fe, excepting in the Old Palace. These mines at Nambe have been developed, but are not being worked at the present time.

Ocher.

In the vicinity of San Pedro are large deposits of ocher which partake of most every tint imaginable.

Brick, Clay and Lime.

The only paving brick made at present in New Mexico is by convict labor at the Territorial Penitentiary, Santa Fe. Much of this material is being laid in walks. This vitrified brick is of superior quality and finish; the clay comes from deposits just northeast of the City of Santa Fe, which are practically inexhaustible. From it, also, the Territorial Penitentiary makes the finest pressed building brick. Near by and all around are mountains of lime that is burned in crude ovens. Lime is also burned at Lamy and other points, for, with gypsum, it is the mineral that is most plentiful in Santa Fe County.

Coal.

The second coal mine to be opened in the Southwest was at Madrid, in the Cerrillos field, in 1869. Work was done here in two localities by the New Mexico Mining Company. At the first of these places the development consisted of two openings, from which 280 tons were mined, which the company used for steam purposes in its stamp mill at the Old Placers near by. The other point of work was a short distance to the southwest from

BRICK MAKING PLANT AT NEW MEXICO PENITENTIARY.

the first openings; 100 tons were piled on the dump ready for use. In both localities the work was done on one of the anthracite veins. These observations were made by R. W. Raymond in 1870; and both were on the anthracite vein. Some of this anthracite coal was tested at Santa Fe by M. Brucker in his assaying furnace at that time. He states that he was able to obtain a white heat in a very short time and that its lasting qualities were about three times as long as that produced by an equal weight of charcoal. Coal was known to exist in 1870 at several other places—at a point about ten miles south of the anthracite deposits at Madrid, and near Galisteo Creek, as well as on the Pecos River.

The extraordinary condition found at the Madrid field is scarcely paralleled in any other region on the globe. Here are four distinct workable veins of anthracite which are the nearest to the surface; below these are several workable veins of bituminous coal. It seems that these conditions were effected by intrusive dikes or laccoliths in proximity to the coal. Since anthracite is nothing more than metamorphosed lignite or bituminous coal, it is always expected to find associated intrusives in the immediate vicinity of such deposits of coking coal.

A section of the Madrid field shows, besides the four anthracite veins, twelve others which may be eventually worked. The Madrid coal mines have produced as high as 100,000 tons of coal a year, but owing to a mine fire have been closed and the camp of Madrid with its hundred and more of company houses, store, public school and church has been temporarily abandoned.

Analysis of Cerrillos anthracite: (Analysis furnished by Colorado Fuel and Iron Company at Madrid: (W. D. Church, analyst, December 2, 1903).

Water, per cent	2.00
Volatile matter, per cent	39.00
Fixed carbon, per cent	53.76
Mineral ash, per cent	5.24
Total, per cent	100.00
Coke, per cent	59.00

Character of coke, strong and tough; color of ash, light yellowish-gray; character of ash, soft and light.

Sulphur (as sulphide)	.010
Sulphur (as sulphate)	.022
Phosphorus	.006
Specific gravity	1.410
1 cubic foot weighs, in pounds	22.135

COAL MINE AT HAGAN, 50 MILES SOUTH OF SANTA FE.

Analysis of mineral ash:

Silica, per cent	26.93
Alumina, per cent	32.41
Oxide of iron, per cent	3.96
Calcium oxide, per cent	24.68
Magnesium oxide, per cent	10.32
Calcium sulphate, per cent	.21
Alkalies and loss, per cent	1.49
Total, per cent	100.00

Analysis of Cerrillos anthracite: (Analysis furnished by the Colorado Fuel and Iron Company).

Volatile combustible matter, per cent	3.18
Fixed carbon, per cent	88.91
Water, per cent	2.70
Ash, per cent	5.21

South of the Madrid coal mines is the Block coal mine, also idle. It is owned by the Santa Fe Gold and Copper Company. Other veins or continuations of the same coal veins have been partially developed in that section and have proved to be part of the Hagan and Coyote coal fields in Sandoval County. In the immediate vicinity of Santa Fe, openings have been driven into coal veins which produce a good quality of bituminous coal, but which, owing to lack of capital and other causes, are idle. In the Dalton Canon coal seams crop out at several points, and in other parts of the county there is visible evidence showing that a large area is underlaid with coal.

Building Stone.

The county is not destitute, by any means, of good quality building stones. The beautiful cream-colored sandstone used in the Capitol building came from a quarry on the hilltop at Lamy. Marble and good types of granite are found in the vicinity of Santa Fe. Quarries of fine red sandstone and blue limestone are being worked by contractors in the immediate vicinity of Santa Fe.

Lumber.

It is characteristic of Santa Fe County's mountains that they are well timbered. At one time saw mills at Glorieta furnished nearly all the timber needed by the Santa Fe Railway for its construction through New Mexico, including ties and bridge timbers. The establishment of the Pecos Forest Reserve in the eastern part of

TERRITORIAL PENITENTIARY AT SANTA FE.

the county has restricted lumbering operations somewhat, although, with permission of the government, considerable timber is cut on the Reserve. The Yellow Pine Lumber Company has established a camp six miles northeast of Santa Fe and is running a steam saw mill. Six miles southeast of Santa Fe a portable saw mill is cutting building timber. Until lately, the most extensive saw mill operations were carried on at Buckman's, and though the camp has been abandoned, yet the timber belt which supplied it is by no means exhausted. In the mountains directly east of Santa Fe railroad ties continue to be cut. Most of the timber is white and yellow pine and spruce. The mesas are covered with pinion and cedar, which furnish an abundance of firewood, besides giving the landscape for miles and miles a park-like appearance. At Santa Fe there is a planing mill.

Manufacturing.

Only a beginning has been made in manufacturing enterprises; in fact, scarcely a beginning, although Santa Fe County offers every advantage to large manufacturing enterprises. There is the coal and the wood, the water power, the railroad transportation and competition, the markets, the cheap land, the supply of labor, the raw material, including wool, hides, lumber, ores, clay, lime, sugar beets and fruit.

By legislation, various lines of manufacturing enterprises are exempt from taxation for the first five years, and Santa Fe's Board of Trade is ready at any and all times to procure for bona fide industrial enterprises free building sites and other advantages.

Lime ovens are operated near Santa Fe, at Lamy, at San Pedro and other points; charcoal is burned at Lamy; Cerrillos and San Pedro have smelters; Golden has ore mills; Lamy and Santa Fe have roundhouses; Santa Fe has brick ovens and brick machinery; a planing mill, electric light works, a fruit evaporator, and is a center for the manufacture of filigree jewelry. It has the largest printing plant in the Territory. At Hobart and Santa Cruz are modern flour mills, and at Santa Fe is a grist mill. Near Santa Fe are two saw mills. But the number of people employed in manufacturing establishments in the entire county at present does not exceed two hundred. The opening is especially promising for woolen mills, tanneries, shoe and glove factories, furniture factories, paper mills, beet sugar mills, cement mills, glass works, canneries, distilleries, furnaces, iron and steel mills, brick yards and such other industries for which the raw material can be obtained in the immediate vicinity.

RESIDENCES AT SANTA FE.

RAILROADS.

It was in 1880 that the first railroad, the Atchison, Topeka & Santa Fe entered Santa Fe County. But even prior to that, Santa Fe was an important, in fact, the most important commercial center of the Southwest, merchandise and wealth pouring in over the historic Santa Fe Trail to be distributed from Santa Fe as far south as Mexico, and as far west as the Colorado River. The Texas, Santa Fe Northern Railroad, now a part of the Denver & Rio Grande, a narrow gauge line, was the second to build into the county, and in 1903 came the Santa Fe Central. These three railroads form a junction at the City of Santa Fe, the only city in New Mexico and Arizona, excepting Deming, with three independent railroad lines. Santa Fe County has 140 miles of railroad, of which 60 miles belong to the Santa Fe System; 50 miles to the Santa Fe Central Railway, and 30 miles to the Denver & Rio Grande. The Santa Fe enters the county four miles east of Glorieta and leaves the county seven miles west of Cerrillos, the entire distance being 39 miles. From Lamy, a branch line eighteen miles long runs to Santa Fe. From Waldo, a three-mile line taps the coal camp of Madrid. The Denver & Rio Grande Railroad enters the county from the north at Santa Clara and has its terminus at Santa Fe. The Santa Fe Central starts at Santa Fe, where it has its main offices, and leaves the county two miles north of Moriarty. The county is thus bisected from north to south and from east to west by railroads, and is thus placed in a very advantageous position as a commercial and tourist point. The Santa Fe System gives every through passenger on its main line, who desires it, a free side-trip to Santa Fe from Lamy.

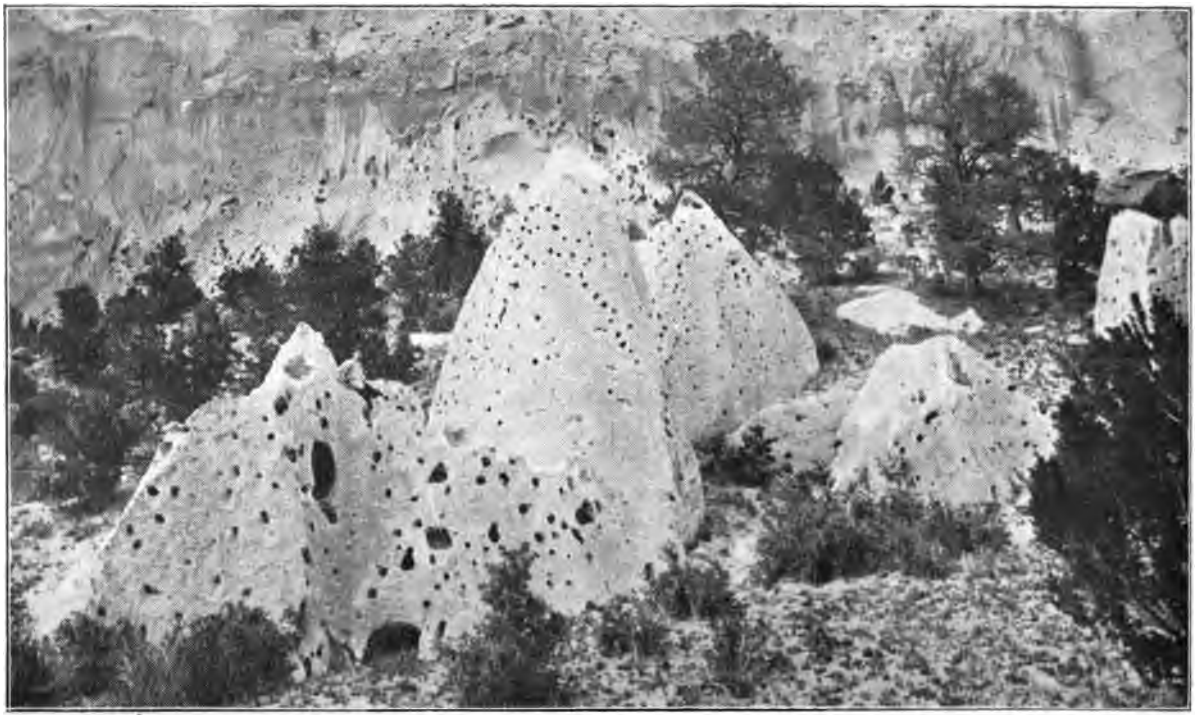
ATTRACTIONS FOR THE TOURIST.

There is probably no other part of the United States which, within so small an area, has so many scenic, prehistoric and historic attractions as Santa Fe County. The most accessible Cliff Dwellers' region is the Pajarito Park, but one day's overland trip from Santa Fe, in which 20,000 cliff dwellings and caves are situated within a comparatively small area. The scenery of this natural park is superb; "wonderful" is the only adjective that will do justice to the caves in the cliffs, high and inaccessible almost as eagles' nests, but showing many other signs of occupation besides the peculiar picture writings in the soft volcanic tufa, of which the cliffs are composed. In addition to the cliffs, there are remains of communal buildings of later occupation, some of them containing as many as 1,200 rooms. There are also burial mounds with remains of ancient pottery. Along the eastern foot of this steep

COMMUNAL DWELLINGS IN PAJARITO PARK.

plateau flows the Rio Grande and are the villages of San Ildefonso, Santa Clara and San Juan, while to the west rise the stupendous mountain masses of the Valles, the Cochiti and the Jemez Ranges, with their deep forests and canons, their famous hot springs, their Indian villages and their mines.

The federal government is about to set apart this beautiful region as a national park, which, besides its cave, cliff and communal buildings, contains the mysterious Stone Lions of Cochiti. the Painted Cave and other archaeological wonders that have puzzled scientists. Where else on earth is there so much of the beautiful in scenery, of romance, of historic monuments, of prehistoric remains, of the ancient, the unique, the picturesque, the sublime, to be found as within a radius of fifty miles of Santa Fe? One day's trip will take the wanderer from the historic Old Palace and San Miguel Church in the City of the Holy Faith, over the foothills of the Sangre de Cristo Range, from which rise in full view mountain peaks almost 13,000 feet high, into the picturesque Tesuque Valley and by the ancient Indian pueblo of Tesuque. The road winds over sand hills that the air and the rain have cut into grotesque shapes, huge as Titans and weird as the rock formations in the Garden of the Gods. Then come once more fertile fields and the village of Cuyamungue, formerly an Indian pueblo, now a native settlement. Along the Nambe River, with its grand falls, close by the Indian pueblo of Nambe to the pueblo of San Ildefonso on the Rio Grande; then along that river through the laughing Espanola Valley, past the Black Mesa, a famous Indian battleground, into the large Indian pueblo of Santa Clara and its mission church to Santa Cruz, also with a quaint and ancient church building, threads the wagon road across the river into Espanola. From there the road ascends the wildly beautiful Santa Clara Canon, along a rippling trout stream up to the steep cliffs of the Puye and the Shufinne, with their hundreds and thousands of prehistoric caves and communal buildings. And all that in one day's journey overland! If the trip be prolonged another day or two, the remarkable hot springs at Ojo Caliente and the hot springs in the deep chasm of the Rio Grande at Wamsley's, the Indian pueblos of Picuris and Taos, the finest trout streams and best haunts of wild game, or the Jicarilla Indian Reservation, the Jemez Forest Reserve, as well as busy lumber and mining camps, can be visited. And that is only in one direction from Santa Fe! Going south, one day's trip will pass through the quaint settlements of Agua Fria, Cienega and Cieneguilla, by the Tiffany turquoise mines, the old mining camp of Bonanza, the smelter at Cerrillos, the Ortiz gold placers, worked three hundred years before gold was



CLIFF DWELLINGS IN PAJARITO PARK.

discovered in California and still yielding gold dust and nuggets, the coal mines at Madrid, where bituminous and anthracite coal have been mined from the same hillside, the placer and gold mines of Golden and San Pedro, not to speak of sheep and cattle ranches and the beautiful scenery of the Cerrillos, Ortiz, San Pedro and Sandia Mountains.

Another trip of one day from Santa Fe will take the traveler by the pueblo ruins of Arroyo Hondo, over Apache Hill, the battleground of Apache Springs, the interesting native settlement of Canoncito, over Glorieta Pass and the battlefield of Glorieta, to the upper Pecos River, by the ancient and historic Pecos Church ruins, the village of Pecos and through the most beautiful summer resort country in the world, where trout streams babble in every canon and where from one summit can be surveyed the hoary heads of eleven of the twelve highest peaks in New Mexico.

Another day's trip out of Santa Fe will take the visitor up the rugged Santa Fe Canon, by the large reservoir and the Aztec mineral springs to the Scenic Highway, which crosses the Santa Fe Range into the upper Pecos Valley and unfolds at every step new mountain views and panoramas magnificent beyond description. Nor do these trips exhaust the interesting points in and about Santa Fe, for there is the ascent of the Lake Peak and Mount Baldy, comparatively easy and yet taking the tourist to an elevation of almost 13,000 feet. Near the summit of the first named is the crystal Espiritu Santo or Holy Ghost Lake, reflecting the crags that form the rim of an ancient crater. Then there is a trip to a bottomless crater, to ancient Indian pueblos, to canons and gulches, to forests and mountains, to sparkling trout streams and waterfalls, or to the lairs of mountain lion and bear.

Foremost in interest and value in historic archaeology are the old mission churches of the Franciscans. In every occupied Indian pueblo and upon the site of every abandoned pueblo, there is one of the monuments of those pioneers of Christianity and civilization, the Franciscan Fathers. Many of these are in a good state of preservation, while others are in ruins, but every one is an object of historic interest.

Mission Churches.

The old mission church of San Diego, which is the oldest of the California missions, was founded in 1769. It is almost a total ruin; only the front remains in a good state of preservation. The side walls are still standing, but no portions of the roof or interior remain. This is the most venerable and venerated historic monument in the State of California, and is annually visited by thou-

RUINS OF MISSION CHURCH AT PECOS.

sands of tourists. It has stood for 164 years. It marks the beginning of civilization and Christianity in California. And yet, in New Mexico, on the upper Pecos, twenty miles east of Santa Fe, at the site of the abandoned pueblo of Cicuice are the ruins of the old Pecos Church. The church is 300 years old. It was nearly 150 years old when the San Diego mission was founded. It was projected before the Spanish Armada was destroyed and antedates the coming of the Mayflower and the settlement of Jamestown.

The churches at Santa Cruz, San Ildefonso and Santa Clara are in a complete state of preservation. They are nine years older than the oldest of the California ruins. The old San Miguel mission in Santa Fe has been rebuilt. Its walls date from 1650, the roof from 1694, or possibly a few years later. It has a bell dating from the Fourteenth Century. From the old church at Algodones was taken a bell cast in Spain in 1356, and at the Cathedral at Santa Fe and other churches are ancient relics and art treasures of old Spanish and Italian masters. Every one of the pueblos is worthy of a visit, both for historic and present-day interest.

The Old Palace.

Nor is there any other building in this country to compare in historic interest with the Old Palace at Santa Fe, which has been more to New Mexico than Faneuil Hall to Massachusetts, or Liberty Hall to Pennsylvania.

To quote from the words of a history of New Mexico by ex-Governor L. Bradford Prince:

"Without disparaging the importance of any of the cherished historical localities of the east, it may be truthfully said that this ancient palace surpasses in historic interest and value any other place or object in the United States. It antedates the settlement of Jamestown by nine years, and that of Plymouth by twenty-two years, and has stood during the 308 years since its creation, not as a cold rock or monument, with no claim upon the interest of humanity except the bare fact of its continued existence, but as the living center of everything of historic importance in the Southwest. Through all that long period, whether under Spanish, Pueblo, Mexican or American control, it has been the seat of power and authority, whether the ruler was called viceroy, captain-general, political chief, department commander, or governor, and whether he presided over a kingdom, a province, a department, or a territory, that has been his official residence.

"From here Onate started in 1599 on his adventurous expedition to the eastern plains; here, seven years later, 800 Indians came from far-off Quivaro to ask aid in their war with the Axtaos;

THE OLD PALACE.

from here, in 1618, Vicente de Salivar set forth to the Moqui country, only to be turned back by rumors of the giants to be encountered; and from here Penalosa and his brilliant troop started on the 6th of March, 1662, on their marvelous expedition to the Missouri; in one of the strong rooms the commissary general of the inquisition was imprisoned a few years later by the same Penalosa; within its walls, fortified as if for a siege, the bravest of the Spaniards were massed in the revolution of 1680; here, on the 19th day of August of that year, was given the order to execute forty-eight Pueblo prisoners in the plaza which faces the building; here, but a day later, was the sad war council held which determined on the evacuation of the city; here was the scene of the triumph of the Pueblo chieftains as they ordered the destruction of the Spanish archives and the church ornaments in one grand conflagration; here De Vargas, on September 14, 1692, after the eleven hours' combat of the preceding day, gave thanks to the Virgin Mary, to whose aid he attributed his triumphant capture of the city; here, more than a century later, on March 3, 1807, Lieutenant Pike was brought before Governor Alencaster as an invader of Spanish soil; here, in 1822, the Mexican standard, with its eagle and cactus, was raised in token that New Mexico was no longer a dependency of Spain; from here, on the 6th day of August, 1837, Governor Perez started to subdue the insurrection in the north, only to return two days later and to meet his death, on the 9th, near Agua Fria; here, on the succeeding day, Jose Gonzales, a Pueblo Indian of Taos, was installed as governor of New Mexico, soon after to be executed by order of Armijo; here, in the principal reception room, on August 12, 1846, Captain Cooke, the American envoy, was received by Governor Armijo and sent back with a message of defiance; and here, six days later, General Kearny took formal possession of the city, and slept, after his long, weary march, on the carpeted earthen floor of the palace. Coming down to more modern times, it may be added that here General Lew Wallace wrote 'Ben Hur,' while governor of the Territory in 1879 and 1880."

Scenic Attractions.

In addition to its manifold sights of prehistoric, historic and archaeological interest, Santa Fe County possesses many scenic attractions. Its mountains equal the Alps in ruggedness and height; its valleys, lakes, streams and waterfalls have a picturesqueness of their own: its forests, such as are included in the Pecos Forest Reserve, offer sylvan retreats of rare beauty; its mesas and plains are very attractive, and a visit to its old settlements, as

IN PAJARITO PARK.

well as to the Indian pueblos, is worth many miles of travel, even from the scenic standpoint alone. The Scenic Highway that is being built between Santa Fe and Las Vegas, through the Pecos Forest Reserve, and over the highest and steepest divides of the Sangre de Cristo Range, opens to the traveling public as beautiful scenery as any in the world. It is being built by convict labor up the Santa Fe Canon, over the Dalton Divide into the upper Pecos Valley, and thence to Las Vegas. It ascends the rugged backbone of the Sangre de Cristo Range by a dozen switchbacks on a grade not exceeding three per cent, and is hewn out of rock or blasted out of mountain sides, a marvel in modern road building, ascending from an altitude of 7,000 to 10,000 feet, and then descending to 6,400 feet.

The immediate surroundings of the Capital City are beautiful, picturesque, romantic and interesting. The Santa Fe Canon, the Tesuque Valley, Nagel's Sunny Pine Grove Ranch, the Indian pueblos, the cliff dwellings, the Cochiti gold mines, the turquoise mines, the Bishop's Ranch, Box Canon, the Divide, the mountains towering to 13,000 feet in height, the lava fields, the crater, and many other grand and mysterious sights of Nature's handiwork are within an hour's to a day's journey by foot, burro, horse or carriage.

The mountain and summer resorts combine many advantages and attractions difficult to find anywhere else. Santa Fe has an atmosphere and color of its own. Here the civilization of centuries ago and of today meet; here are found prehistoric ruins and historic monuments, the history of yesterday and of today have left their impress side by side; the civilization of the Indian, the Spaniard, the Mexican and the Yankee commingle. Still, Santa Fe is strictly up-to-date in its hotels, railroad accommodations, its colleges, its public schools, its sanitariums, its charitable institutions, in its progress and in its prosperity. Churches, newspapers, together with fine stores, banking institutions, and every safety, comfort and luxury that the centers of civilization of the east afford, are to be found at Santa Fe.

Mineral Springs.

About four miles east of Santa Fe is a spring, the waters of which are favorably known and have been used to a considerable extent by the people of Santa Fe and elsewhere. This spring is known as the Aztec (Ojo Gigante), since, like other watering places, it was frequented by the aborigines. While the solid matter contained in the water is not so great as that found in many

ST. VINCENT'S HOSPITAL AT SANTA FE.

other springs in New Mexico, nevertheless the water has beneficial effects in stomach and liver troubles.

F. W. Clark of the United States Geological Survey gives the following analysis of the Aztec Spring, which was made at the request of an army surgeon who had been drinking the water when stationed at Fort Marcy, and who first recognized its beneficial effects on himself and troops:

Calcium carbonate	.1538
Magnesium carbonate	.0605
Sodium sulphate	.0225
Calcium sulphate	.0050
Sodium chloride	.0193
Silica	.0220
Parts in 1,000. Total	.2831

(In a foot note the chemist adds: "The water contains enough carbonic acid to retain the carbonates of calcium and magnesium in solution as bi-carbonates.)

West of Santa Fe is another mineral spring containing iron. The county has no hot springs, but is the gateway to the famous hot mineral springs at Ojo Caliente, Jemez, Wamsley's and other springs in Sandoval and Taos Counties, if not as well known, yet as efficacious.

Among the hot springs which ought to rank among the most remarkable in the United States are those at Ojo Caliente, Taos County, north of Santa Fe, and 6,290 feet above the sea level. There are four of these springs in a small area, each peculiarly adapted for the cure of particular diseases. The dissolving power of their waters is very great and they are especially recommended by physicians for rheumatism, gravel and other calcareous affections, gout and other kidney, stomach and blood disorders. The temperature of the springs varies from 90 to 122 degrees Fahrenheit, and the largest is classed as a chalybeate spring, as it carries a large amount of iron carbonate. Its waters contain 1,686.84 grains of alkaline salts to the gallon, and no organic matter. The fourth spring of the group pours forth lithia water. The combined flow of these springs is 300,000 gallons in twenty-four hours. Ojo Caliente is reached by a short stage ride from Barranca on the Santa Fe-Antonito branch of the Denver & Rio Grande Railroad, and has hotel accommodations.

There is a good sulphur spring at Rio Pajarito, in Taos County, with a temperature of 68 degrees. The water contains carbonic acid, hydrogen sulphide, sodium carbonate, sodium chloride, cal-

OJO CALIENTE HOT SPRINGS NORTH OF SANTA FE.

cium and magnesium carbonates. At Ojo Sarco, on the Rio Grande, north of Santa Barbara, Taos County, is a fine group of mineral springs. In the same county, three miles north of Ojo Caliente, are soda springs. Five miles south of Taos, as well as between Penasco and Mora, on the Rio Pueblo, are sulphur springs of rare medicinal virtue. Among the best thermal springs in the Territory are those known as Wamsley's Hot Springs. They are located in a deep gorge of the Rio Grande on the road from the station of Tres Piedras, on the Denver & Rio Grande Railroad to Taos. The water is lukewarm and in that respect similar to another group of mineral springs situated at Glenwoody, eighteen miles south. Hotel accommodations are provided.

There are two groups of fine medicinal springs less than fifty miles directly west of the City of Santa Fe, in the Valles Mountains, and they are counted among the most efficacious mineral waters to be found in the Rocky Mountains. They are situated in the picturesque San Diego Canon in Sandoval County, and are known as the Jemez and the Sulphurs, or the upper and lower Jemez Springs. The lower group embraces ten springs varying in temperature from 94 to 168 degrees Fahrenheit. The temperature of the hottest of these is the highest of any spring in the Territory. Their altitude is 6,620 feet. The waters of the hottest and largest spring run about fifty gallons per minute, with escaping carbonic acid gas and depositing white carbonate of lime. One spring, with waters of 103 degrees, carries free carbonic acid gas, and its deposits are reddish brown. A third spring, of 119 degrees, is impregnated with sulphuretted hydrogen and iron. The other springs of the lower group are impregnated with sodium, lime and magnesia. Their solid constituents are about .24 per one hundred parts of water.

The upper springs, or Sulphurs, are situated two miles above the lower group, at an altitude of 6,740 feet, and their temperature varies from 70 to 105 degrees. They flow from caves of lime, forming a ridge 30 feet high and 200 feet long, and varying in size from a few inches to twenty feet in height. The waters are strongly impregnated with sulphur and resemble those of Marienbad. The springs are both mud and vapor, and their principal constituents are chloride of sodium, sulphate and carbonates of soda, lime and magnesia. They are especially potent in rheumatic and syphilitic disorders. Their solid constituents are .3726 to every one hundred parts of water. Hotel accommodations have been provided at both groups.

In the same section of country is the San Ysidro mineral spring, near Jemez, whose waters are carbonated and carry .5632 parts of

WAMSLEYS' HOT SPRINGS NORTH OF SANTA FE.

solids in every one hundred parts of water, mostly sodium chloride, sodium sulphate, calcium carbonate, magnesium carbonate, iron carbonate with traces of silica, potassa and lithia to every one hundred parts of water.

Four to six miles west of the Sulphurs are the San Antonio Springs, which resemble the Jemez Springs and are equally efficacious in kidney and stomach disorders.

Historical.

Up to the time of the occupation of Santa Fe by United States troops, almost sixty years ago, the history of Santa Fe was practically the history of New Mexico. Tradition speaks of two prosperous Indian pueblos upon the site of the City of Santa Fe, prior to the coming of the Spanish Conquistadores, over 350 years ago, and it was within the confines of Santa Fe County that the first permanent white settlements in the United States were made. A house occupied to this day is still pointed out as a survival of the Indian pueblos on the site of the City of Santa Fe and, therefore, has a just claim to be called the oldest occupied house within the boundaries of this nation. The romance of the early expeditions of the Spaniards into the Southwest, the story of the incessant warfare with Indians and with the elements, the accounts of the Christianization of the Pueblos and the martyrdom of many disciples of the cross, all form an intensely interesting narrative. In 1680 the Pueblo Indians drove the Spaniards out of New Mexico, and it was not until 1692 that De Vargas reoccupied the City of Santa Fe after a sanguinary battle on the outskirts of the city. The revolutions and counter-revolutions that followed the establishment of the Republic of Mexico found their echo in New Mexico and less than three generations ago Governor Perez met a tragic death at the hands of rebels near Agua Fria, in the suburban part of Santa Fe. It is quite natural, therefore, that so many buildings and spots in the county are hallowed by historic associations, and that, aside from every other attraction, this alone makes a visit to Santa Fe worth the while.

Inhabitants.

Santa Fe County has about 17,000 inhabitants, of whom one-half live in and about the City of Santa Fe. Fully three-fourths of these inhabitants speak the Spanish language, but many of these can speak, or at least understand, English. They are peaceable, conservative and hospitable, and, to a certain degree, independent, nearly every head of a family owning his own home and patch of ground, which he cultivates. There are 310 Pueblo Indians within

RESIDENCES AT SANTA FE.

the county, occupying the villages of San Ildefonso, Tesuque, Nambe and Pojoaque. The pueblo of Santa Clara, formerly in the county entirely, is now in greater part within the county of Rio Arriba. These Pueblo Indians are peace-loving and industrious.

Each precinct has a public school and every settlement a church. The county is well supplied with roads that connect the different villages and towns, all of them leading to the Capital City. Generally speaking, these roads are good, having solid bottoms and, owing to the dryness of the climate, very seldom muddy and never impassable. The "good roads" movement has reached the Capital City, and a model roadway has been constructed from the city to the Tesuque Valley, a distance of six miles, while other roads are contemplated. The Scenic Highway has been referred to, and is being built by the Territory with county aid. It will eventually extend from the northern boundary to the southern boundary of New Mexico, with branch roads in every direction. At present, work is being prosecuted on the section between Santa Fe and Las Vegas, which is nearing completion. Convict labor is employed, and the road opens to tourists the most magnificent scenery in the Southwest.

CITY OF SANTA FE.

The Villa Real de Santa Fe de San Francisco, to give its original and full name, is the historic seat of the government of the Territory of New Mexico, as well as the county seat of Santa Fe County and the see of an archbishop of the Roman Catholic Church. It enjoys the distinction of being one of the oldest towns and the oldest capital in the United States. Its permanent settlement by Europeans antedates the founding of Jamestown and also the landing of the Pilgrim Fathers at Plymouth more than twenty years. The thrilling and romantic incidents composing its history—the protracted and bloody struggles with hordes of savage Indians, the capture and pillage by hostile Pueblos in 1680, the general massacre of missionaries and explorers and flight of the governor and a few followers in the night to El Paso, the reserving of some of the handsomest Spanish maidens for wives of favored warriors, the desecration and destruction of some of the Roman Catholic Churches, and the restoration of the worship of stone idols, the reconquest by Diego de Vargas twelve years later, the terrible punishment visited upon the rebellious Pueblos, the change from Spanish rule to the rule of the triumphant Republic of Mexico, the capture by the United States forces under General Kearny and the building of Fort Marcy, the stirring scenes accompanying the distribution of the immense traffic of the Santa Fe Trail, the wild

ST. CATHARINE'S INDIAN SCHOOL AT SANTA FE.

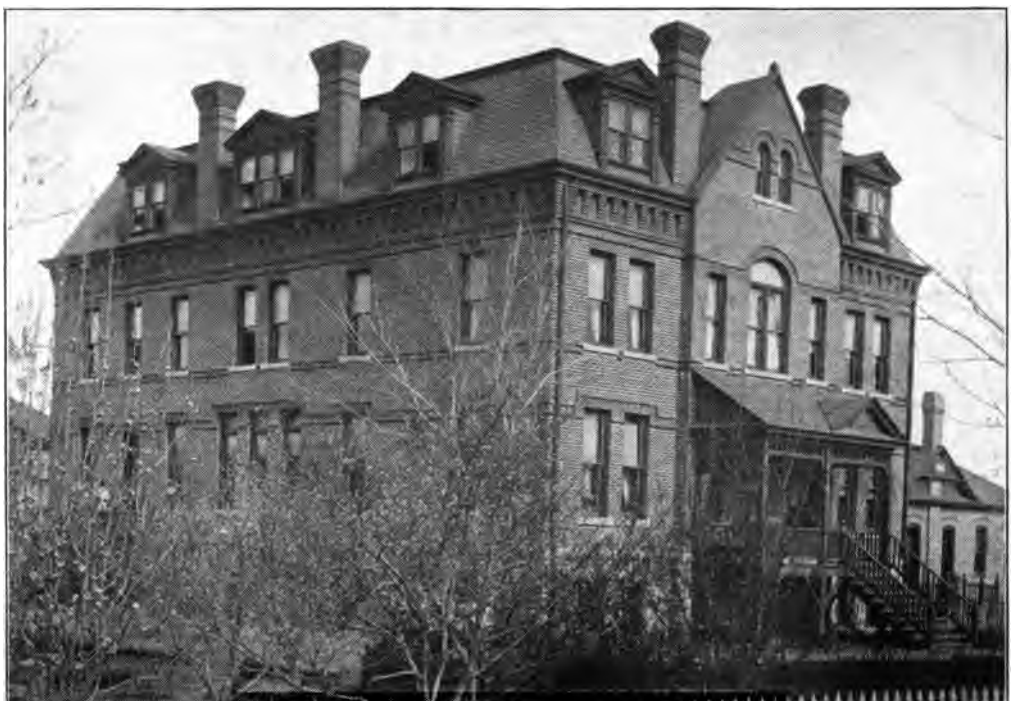
deeds of desperadoes and the fabulous hazards at cards in the days before the advent of the railroad—afford the material for an epic poem of deep interest. However, from the strenuous life and turbulent times of the past, the City of the Holy Faith has become as modern and peaceful as a New England city, looking back with pride upon the part it has played in history, and forward hopefully to its future.

Railroads.

Santa Fe enjoys the advantage of three railroad systems. It is on the Atchison, Topeka & Santa Fe Railroad, the Denver & Rio Grande Railroad, and the Santa Fe Central Railway, giving it connection with the outside world and great railroad systems in every direction. It is the only city in the Southwest that receives nine railway mails a day and dispatches as many. It has a free delivery mail service, electric street lighting, the purest drinking water to be found in New Mexico, a local and long distance telephone system, and many other advantages of a thoroughly up-to-date community.

Environed by protecting hills and thus exempt from strong winds and sand storms; surrounded by enchanting natural scenery; beautified by orchards and gardens of flowers; blessed with a climate that is free from extremes of heat and cold, and air that is pure and tonic; supplied with an abundance of pure water for domestic, manufacturing and irrigation purposes from the extensive storage reservoirs in the mouth of the Santa Fe Canon; furnished with competing rail, express and telegraph communication with all outside points; the headquarters of the federal and Territorial officials, the meeting place of the Legislature, the Supreme Court, the United States and Territorial District Courts, and the various Territorial Boards; the see of the Archbishop of Santa Fe; the headquarters of the New Mexico Historical Society, the New Mexico Horticultural Society, the New Mexico Pioneers' Society; of the District Attorney for Santa Fe and Taos Counties; a city having started a modern sewerage system; possessing a public school system with a good high school and four ward schools, and endowed by the national government for public school purposes with the Fort Marcy Reservation of almost seventeen acres in the heart of the city; having eight churches, as well as colleges and private schools, many fraternal societies and social organizations, Santa Fe is naturally forging to the front as a popular residence town.

Santa Fe is first of all a health resort, a tourist center, but it



PRESBYTERIAN MISSION SCHOOL AT SANTA FE.

does not depend alone upon tourists, health seekers and officials for its existence. Good crops are raised in the Santa Fe and adjacent valleys; the orchards of Santa Fe are revenue producers; dainty filigree jewelry is made here; an excellent quality of brick is manufactured; in the surrounding Indian pueblos baskets and blankets are woven, pottery produced, and beadwork is made that finds a ready sale all over the United States. Santa Fe has the largest printing establishment in New Mexico and Arizona, employing twenty to forty men. Santa Fe is a thriving railroad and mercantile center, supplying a vast region, and there are manifold natural resources that are just being developed. Not only historic memories and landmarks make Santa Fe a spot well worth a visit, but the beauty of its location, like a jewel in the lap of the mountains, its perfect climate and its many present-day interests, make it the most interesting spot between New York and San Francisco. Santa Fe with its suburbs has a population of 8,700. Its altitude at its lowest point is 6,920 and at its highest 7,240 feet.

Resources.

Draw a circle of fifty miles radius with Santa Fe as the center. It will take in the heart of New Mexico. Within it will be found a score of producing mining districts. Not only gold mines, but mines of silver, copper, zinc, lead, iron, coal, turquoise, quarries of marble, building stone, limestone, beds of clay, deposits of gypsum, veins of mica, and prospects of other minerals in abundance. In that circle are found some of the best agricultural lands in the Southwest. There are raised the best fruit, the best sugar beets, the best grain in the world. Take a peep at the Espanola, the Tesuque, the Chama, the Taos, and other valleys. Within that circle there is room and chance for profitable irrigation enterprises. In that circle flow the waters of the Rio Grande, the Pecos, the Chama, the Santa Fe, the Tesuque, the Nambe, the Rio Pueblo, the Truchas, the Pojoaque, the Santa Clara, the Galisteo, the Rio Medio, the Chupadero, Bishop's Creek, the Arroyo Hondo, the Manzanares, the Canoncito, the Dalton, Indian Creek, Holy Ghost Creek, the Mora, Willow Creek and other streams, all perennial rivers with a never failing water supply in their upper courses. In that circle are found the water power, the fuel, the raw material for a hundred great industries. The circle is the most densely populated area in New Mexico or Arizona, and offers cheap and plentiful labor for industrial enterprises and at the same time a good market. Mexico, Central America and the Orient are nearer

ST. MICHAEL'S COLLEGE AT SANTA FE.

with their markets to it than they are to the eastern and northern manufacturing centers. In that circle are very superior sheep, cattle and goat ranges, and extensive virgin forests.

New Mexico has the finest climate in the world, and in that circle is the best climate in New Mexico. Within the circle are the great Pecos River and Jemez Forest Reserves, which insure forever a bounteous supply of water, a summer retreat for tourists, health seekers, pleasure seekers, sportsmen, or the tired man and woman who seek rest in communion with nature in its most sublime or gentlest moods.

In that circle are located the world famous cliff dwellings, the pyramids of America, ten Indian pueblos, the oldest buildings in the United States, the Scenic Highway, the Santa Fe Trail, a hundred spots which awaken memories of the romance of the great stretch of time between the coming of the Conquistadores and the supplanting of the Santa Fe Trail by the steam railroads.

It is a circle invaded by three great railroads and their important branches and connections, a circle near whose circumference are located the cities of Albuquerque and Las Vegas, which, with Santa Fe, form the three largest and most important towns in New Mexico. The center of the circle is the most advertised spot in the United States, a town whose name is one to conjure with, a name given to one of the great transcontinental railway systems, a town whose very name is an invitation to the health seeker, to the tourist; the capital of the coming Sunshine State, the county seat of one of the most densely populated and richest counties of the Territory, an archbishop's see, the location of many Federal, Territorial, Catholic and Protestant church institutions, a town most charmingly situated, with a peerless climate all the year around, and a better summer climate than possessed by any summer resort in the world, free from excessive heat and protected from the icy blasts of winter with the sun shining almost every day in the year. These and many more are the advantages, resources and attractions, the hub of which is the City of Santa Fe. The city and suburbs contain about 8,700 people, and this population is steadily on the increase.

Nor must it be forgotten that the vicinity of the city offers good hunting of bear, mountain lion, coyotes and smaller game; that the Pecos, the Santa Clara, the Santa Fe, and other streams are splendid fishing grounds; and that the peculiar fauna and flora of this arid mountain region offer much that is interesting and worthy of note. The intending home seeker should also remember that in Santa Fe and surroundings agriculture is carried

PROTESTANT CHURCHES AT SANTA FE.

on with the aid of irrigation, which means that the farmer is always certain of his crops, for he can apply moisture to them when they need it and withhold it when moisture is not needed.

Antiquities.

Here, so carefully preserved that the marks of its three hundred years of age are not perceptible, is located the noted Adobe Palace, which was the official residence of the Spanish and Mexican governors, and since the Mexican war has been the headquarters of all the Territorial governors or secretaries appointed by the different Presidents of the United States. The men who lived and conducted the affairs of state in this building include some of the foremost, not only of the Territory, but of the nation. Here the postoffice, the Republican Territorial headquarters, the Territorial headquarters of the Daughters of the American Revolution and the museum of the New Mexico Historical Society are located. The latter is open to the public every day and its collection contains historical articles of priceless value.

San Miguel Church, the oldest Christian Church building in the United States, is situated in the oldest part of the city, called by the Spaniards "Analco," adjoining St. Michael's College. It is about seventy-four feet in length, by thirty in width, and thirty-five feet high. The walls are massively built of adobe, and the roof, like those of all the old churches, was constructed of strong *vigas,* supported by carved timbers at each end, the whole being covered originally with straight branches of poplar or willow, surmounted by a layer of earth. In modern days, boards take the place of the branches. This church dates from the earliest occupation and has long been held in special veneration. In the Pueblo revolution of 1680 it was, to a great extent, destroyed, though the walls remained standing. Immediately after the reconquest by De Vargas the church was repaired and the entire building was completed in 1710, as appears from the inscription still plainly visible on the great square vigas near the door, which reads:

> "El Senor Marques de la Penuela hizo esta fabrica. El Alferes Real Don Agustin Flores Vergara su criado ano de 1710."

The translation is:

> "The Marquis de la Penuela erected this building. The Royal Ensign Don Agustin Flores Vergara his servant. The year 1710."

Among other paintings in this church are the ones of St. Michael and the Dragon and of the Annunciation. In the church is an old

OLDEST HOUSE IN THE UNITED STATES.

bell cast in Spain in the Fourteenth Century. The edifice is still used as the chapel of Saint Michael's College and of a part of the Roman Catholic parish, and perhaps no scene will impress itself so vividly upon the mind of the visitor as that of "Vespers" on a Sunday evening, attended by the Christian Brothers and pupils of the College.

The oldest house in the city, which is reputed to date back before the time of the Spanish conquest, and thus is the "Oldest House in the United States," is situated just northeast of the Church of San Miguel. This building until recently was two stories in height, the second story being very low and the floor between the upper and lower rooms being of adobe. Some years ago the upper story of the eastern portion fell, and quite recently the spirit of iconoclasm, which is fast ruining many interesting historical landmarks, caused the second story of the remainder to be removed. The first story, however, remains as it has been for centuries, and there seems no reason to doubt that it is the most ancient building, continuously inhabited, in the entire United States.

The Cathedral of San Francisco de Assisi is a modern building, not yet completed in accordance with its design, but has been used for worship during the past twenty-five years. It was built over the former adobe Parish Church under the auspices of the venerated Archbishop Lamy. There are many fine paintings and beautiful stained glass windows in the structure; behind the altar is a richly carved and painted reredos, erected by Governor del Valle and his wife in 1761. Back of the altar of this Cathedral are preserved many fine old paintings and rich vestments. There are buried the remains of two Franciscan Friars, who were murdered by Indians, as attested by the inscription upon a beam set into the massive wall.

Old Fort Marcy is situated on a high hill northeast of the Plaza, and the view from the summit is admired by every visitor. Historically, it is a place of great interest. A moment's notice will show its commanding military position, and that the army in possession of the hill controlled this city. In the old wars this was a scene of many a warlike encampment. When General Kearny came, in 1846, one of the first matters undertaken after the occupation of Santa Fe, on August 18, was the erection of a fortress to command the city. The site was naturally chosen. It was built by details of volunteers, who complained grievously of having to do this laborious work when they had simply entered the army to fight. The fort was large enough to contain a thousand troops and mount many cannon. In shape the fort was an irregular tri-

CATHEDRAL AT SANTA FE.

decagon. Behind the fort was a block house. The height of the fort above the Plaza was 229 feet.

On the east side of the main road entering the city from the south stand the ruins of the Garita, the only Spanish fortifications of which any remains now exist in New Mexico. It was built with two bastions and occupies a commanding position on a hill. Under the Mexican government it was used as a custom house station, and all wagons coming from the north were stopped here until the exceedingly high duties of those days were paid. On the west side of the Garita, close to the wall, the four leaders in the revolution of 1837, Desiderio Montoya, Antonio Abad Montoya, General Chopon and Alcalde Esquibel, were executed by command of General Armijo in January, 1837.

The oldest cemetery in the Southwest, except the graveyard immediately surrounding San Miguel Church, was very near the Garita, and the high adobe wall surrounding it is still in quite good repair. On one side of it was a small mortuary chapel where funeral services were conducted. Many celebrated historical characters are buried here, but, unfortunately, no monumental stones distinguish their last resting places.

Guadalupe Church is situated just south of the river, at the western edge of the city, near the Santa Fe Railway depot. Owing to the modern appearance of a shingle roof and wooden steeple, it often escapes attention, but is really of much historic interest. The walls are very massive, and the carved supports of the vigas are the best specimens of their class in the Territory. Prior to 1883 the church was only opened once a year, on Guadalupe Day, December 12, but in that year it was renovated, many windows cut in its walls, and it has since been used by the English-speaking Roman Catholics for regular services. The altar-piece is a large group of pictures about 14 feet high by 10 feet wide. The large central painting is of the Virgin of Guadalupe, copied from the celebrated "Imagen" in Mexico, and it is surrounded by four scenes in the well known legend, representing the appearances of the Virgin to Juan Diego, and the visits of the latter to the Bishop; the whole surmounted by a representation of the Trinity. The church and sacristy contain many interesting paintings, the most curious and valuable being one painted on a plate of copper, 28 x 18 inches in size, by Sebastian Salcedo, in 1779. This also represents the Virgin of Guadalupe, a small portrait of Pope Benedict XIV being introduced. The statuette of the Virgin standing in the crescent of the new moon, is a beautiful specimen of antique wood carving.

The place of the assassination of Governor Perez is about two

SAN MIGUEL'S CHURCH AT SANTA FE.

miles southwest of the Plaza on the Agua Fria Road. It is now very appropriately marked by a neat stone monument erected by the Daughters of the American Revolution in 1901. It was here that the Governor, in the Revolution of 1837, while retreating from the Capital, was killed by an arrow shot by a Pueblo Indian from Santo Domingo. His assailants then forced Santiago Prada, by threats of death, to cut off his head, which was carried to the insurgent encampment, near the Rosario Chapel, and treated with great indignity.

The Plaza, in the center of the city, is of historic interest. Here Onate camped and set up the banner of Spain, and here General Kearny first floated the Stars and Stripes, in 1846, when he proclaimed American government in New Mexico, a spot marked with an appropriate stone by the Daughters of the American Revolution. In this Plaza the Indians burned the archives and sacred vessels of the church during the Revolution of 1680; and here De Vargas entered in triumph twelve years later. The Territory has erected a handsome monument in the center of the Plaza in memory of the soldiers who fell on New Mexico soil in the various Indian wars, and the war of the Rebellion, and the Woman's Board of Trade has there placed a handsome bronze drinking fountain in memory of Archbishop Lamy, who was beloved by all. The Woman's Board of Trade has been in charge of the Plaza for the past five years, by direction of the city government, and to this organization of energetic ladies is due the present beauty of the place. A stone, suitably inscribed, marks the spot where General Kearny first floated the Stars and Stripes.

Rosario Chapel, in Rosario Cemetery, commemorates the victory of De Vargas over the Pueblo Indians in 1692, and is the terminus of the annual historic De Vargas procession, which, with the two annual Corpus Christi processions and the custom of celebrating Guadalupe Day, Christmas Eve and other holidays by the lighting of numerous bonfires, is an echo of "ye olden" days that gives Santa Fe a charm peculiarly its own.

Cemeteries.

The National Cemetery is a beautiful burial ground where repose the bodies of over a thousand soldiers who fell in the war of the Rebellion, the Indian wars, or died at Santa Fe and vicinity in more peaceful days. It is the only National Cemetery in New Mexico or Arizona since the abandonment recently of the cemetery at Fort Sumner and the reinterment at Santa Fe of the bodies in the National Cemetery. Other burial grounds at Santa Fe are

NATIONAL CEMETERY AT SANTA FE.

San Miguel's Cemetery, the ancient cemetery surrounding Guadalupe Church; the Odd Fellows' Cemetery and Fairview Cemetery, the two last named being under the care of the Woman's Board of Trade.

The Capitol.

The Capitol is a stately building of modern construction, and a view from its dome is one of the sights that no tourist should miss. It is surrounded by a fine park. In addition to the beautiful Hall of Representatives, the Council Chamber and the Supreme Court Room, it contains the offices of the Governor, the Secretary, the Superintendent of Public Instruction, the Treasurer, the Auditor, the Traveling Auditor, the Game Warden, the Supreme Court Clerk, the United States Judge of the First Judicial District, the Land Commissioner, the Insurance Commissioner, the Territorial Law Library and rooms and offices for the various Territorial Boards and Commissions, and assistants or clerks of the Territorial officials enumerated. The Capitol was partly constructed with the aid of convict labor and material manufactured by convicts. Considering its size, its cost was less than that of any other Capitol in the United States.

Federal Building

The Federal building is a fine stone structure of classic design and is surrounded by oval grounds, partly in lawn. In front of the building is the Kit Carson monument, Kit Carson having made his headquarters at Santa Fe for many years. In this building are the offices of the Register and Receiver of the Santa Fe Land District, with their clerks; the headquarters for the Special Agent of the United States Land Office for the Southwest, of the Internal Revenue Collector and his clerks for the Territories of New Mexico and Arizona, the United States Surveyor General for New Mexico and his large force of clerks, of the Supervisor of the Pecos and Jemez Forest Reserves, the United States Attorney for the Pueblo Indians, and from time to time of other officials of the United States.

Court House.

The Court House is a brick building of attractive design and is the headquarters for the First Judicial District, which, besides the County of Santa Fe, includes the Counties of Rio Arriba, Taos and San Juan; of the District Clerk, of the Probate Clerk, Assessor, Treasurer, District Attorney, Board of County Commis-

COURT HOUSE AT SANTA FE.

sioners, Surveyor and other county officials. On the second floor is the court room, also much used as an auditorium for entertainments of a public nature.

Educational and Other Institutions.

Saint Michael's College, conducted by the Christian Brothers, is the oldest college for boys west of the Missouri River and recently celebrated its semi-centennial. Its main building is a large structure of French architecture. A modern brick building with classrooms and gymnasium adjoins it. The athletic grounds are the best in the Southwest. The course is mainly commercial, and many of the leading men of New Mexico, Arizona and of the northern States of Mexico are proud to call Saint Michael's College their alma mater. The attendance is between 200 and 300 students, coming from all parts of the Southwest. The faculty is an especially capable one.

The Sisters of Loretto conduct the oldest school for young women west of the Missouri River and recently celebrated their semi-centennial. The Academy is of unique design. The Chapel adjoining is one of the finest Gothic structures in the West. The large convent, a brick building of unostentatious design, adjoins the Chapel, while in the rear is a brick auditorium that will seat almost a thousand people. The grounds of the College are beautiful.

The Archbishop's residence is a brick structure which, together with the homes of the Bishop of the Diocese, the Vicar General and other priests, is contiguous to the Cathedral and borders on the famous "Bishop's Garden," with springs, lakelets and a fine orchard that offers sylvan retreats of rare beauty.

St. Vincent's Hospital, St. Vincent's Orphans' Home and St. Vincent's Sanitarium, all modern structures, are grouped together northeast of the Cathedral. The Sanitarium fronts on a beautiful park.

The United States Indian School is just south of the city limits and is a community in itself of about a dozen fine brick structures. It ranks with the Indian School at Carlisle, Pennsylvania, and has an attendance of over 300 Indians, representing a score of Western tribes, the pupils ranging in age from six to twenty years; has a school farm and is surrounded by a beautiful park.

St. Catherine's Indian Industrial School is situated just west of the city's boundary line. It is attended by almost 200 pupils and is in charge of the Sisters of the Blessed Sacrament. A beautiful garden surrounds the school, which consists of several massive buildings.

U. S. INDIAN INDUSTRIAL SCHOOL AT SANTA FE.

The Territorial Penitentiary is located just south of the city line and consists of a number of stone and brick buildings surrounded by a high wall. Large gardens are cultivated by the convicts, who number almost 250. The institution is a model in many respects and is well worthy a visit.

The Territorial Deaf and Dumb Institute consists of two modern brick buildings and can accommodate one hundred pupils. It is located in the southern part of the city.

The Presbyterian Mission School is beautifully located near the heart of the city and consists of a fine three-story brick building and a brick annex in a well-kept garden. It is attended by about one hundred girls of Spanish-American birth, who come from all parts of the Territory. It is proposed to erect a similar school for boys in the same part of the city.

Public Library.

The Woman's Board of Trade has just let a contract for the erection of a handsome Public Library building wherein its library will be situated. The structure will be built of brick and stone, commodious and of Moorish architecture. It will be erected on a lot donated to the Woman's Board of Trade by the Territory of New Mexico, just north of the "Old Palace" and fronting on Washington Avenue.

Hotel Facilities.

The hotel facilities of Santa Fe are good. The Palace Hotel is famed for its cuisine. It is three stories high and can accommodate 150 guests. The Claire Hotel is a modern brick structure, steam heated, and can accommodate over 100 guests. The Normandie is a modern, low-priced hotel. The Coronado and others conduct rooming houses together with restaurants. In addition to the accommodations offered by Sunmount Tent City, the Glorieta Sanitarium, Saint Vincent's Sanitarium and the Pinecroft Ranch, there are a number of private boarding houses in the city and ranches in the vicinity that take boarders.

Newspapers.

Santa Fe has one daily newspaper, The Santa Fe Daily New Mexican, issued every evening, except Sunday. It has four weekly newspapers, The New Mexican Review, The Eagle, El Nuevo Mexicano and El Boletin Popular.

The Daily New Mexican and the New Mexican Review are the oldest papers in what is now New Mexico, Arizona, Southern

INSTITUTE FOR THE DEAF AND DUMB AT SANTA FE.

California, Western Texas and Colorado south of Denver. The Daily New Mexican was started in 1862.

Churches.

In addition to the three Catholic Churches enumerated, the Cathedral, Guadalupe Church and San Miguel Church, Santa Fe has five Protestant Churches. The First Presbyterian Church is a brick structure with a pipe organ and a brick parsonage. The congregation is self-sustaining. The Church of the Holy Faith is a stone edifice belonging to the Protestant Episcopal denomination. It has a pipe organ and a brick rectory. The St. John's Methodist Episcopal Church is a new brick structure in mission style. The Presbyterians and the Methodists each have churches for Spanish-speaking members.

Fraternal Organizations.

The Fraternal Associations are well represented in Santa Fe. The Masons own their temple, a two-story brick business block facing the Plaza. The Masonic bodies of the city are Montezuma Lodge No. 1, A. F. & A. Masons, the oldest Masonic Lodge west of the Missouri, excepting a Lodge at Salem, Oregon; Santa Fe Chapter No. 1, R. A. Masons; Santa Fe Commandery No. 1, Knights Templar, and Santa Fe Lodge of Perfection, No. 1, A. & A. S. R. In the Masonic Temple are interesting relics of the early days of the American occupation, and among its members were many of the early pioneers who blazed the way for the thousands who came after them. The Odd Fellows, who organized a Lodge at Santa Fe over fifty years ago, are represented by Santa Fe Lodge No. 2; the Knights of Pythias by Santa Fe Lodge No. 2, and the Fraternal Union by Santa Fe Lodge No. 259. Numerically, Santa Fe Lodge No. 460, B. P. O. Elks, is the strongest fraternal organization. It will build a $25,000 Opera House and Lodge Hall. The Order of United Workmen and other fraternal orders have Lodges in the city. There are several social organizations, including the Capital City Club. There is a Board of Trade and a Woman's Board of Trade, the latter a unique organization that dispenses not only charity, but maintains the Plaza in the center of the city; a Public Library, for which it is about to erect a fine building, and looks after other movements for civic improvement. The city has two brass bands, two orchestras, several Spanish and a number of church societies.

Banks.

The First National Bank is the oldest and best known bank in the Southwest. It was organized in 1870 and was the first bank

GUADALUPE CHURCH AT SANTA FE.

in a great stretch of country, namely, western Texas, New Mexico, Arizona and southern California. Its capital stock is $150,000 and it has a handsome surplus and undivided profits. It is considered one of the safest banks in the entire country. It is located in a handsome brick structure on San Francisco Street, the principal business thoroughfare of the city.

The United States Bank and Trust Company has just been organized and will be ready for business by the first of July. It will work under the Territorial statutes, having a charter from the Territory. The capital stock is $50,000. It is believed that there is a good field for this new bank.

Building Associations and Business.

The city has a flourishing Building and Loan Association. All lines of business are fully represented, wholesale and retail. The stocks are large and everybody can be suited to such an extent as he wants in every line of trade. The stores are modern, carry large and well selected stocks and the merchants are enterprising and energetic.

Among the more pretentious business blocks are the Catron, Laughlin, Salmon, First National Bank, Masonic and Kahn.

Public Schools.

The Central High School Building is a modern, three-story building, just completed, and is the finest school house in New Mexico. The grounds surrounding it are extensive and will be beautified with ornamental trees and shrubs. The city has in addition four ward school buildings, one of which is about to be replaced with a modern brick structure. The graded public school system is modern in every respect.

A Home City.

Santa Fe has many beautiful homes and gardens and a number of modern brick residences have been recently constructed or are in the process of erection. In a city as old as the Capital City, naturally, there are many ancient and quaint buildings, but these are being gradually replaced with up-to-date business blocks and homes. Socially, Santa Fe, as the Capital, and owing to its antiquity, enjoys pre-eminence throughout the Southwest.

Orchards.

Santa Fe takes great pride in its orchards. There are scores of these within and around the city, and the fruit that is raised, as

HIGH SCHOOL BUILDING AT SANTA FE.

stated elsewhere, has no superior. Among the larger orchards in the city are Buena Vista, the orchards of Arthur Boyle, E. S. Andrews, J. P. Victory, the Manderfield and Quintana orchards, the Bishop's Garden, and many others.

Water and Light.

The Santa Fe Water and Light Company has two power houses for generating electric current, one with steam power plant of 150 horse-power, and the other a water-power plant. The company has four reservoirs, all deriving their water supply from the Santa Fe River, which has its source on the Lake Peak at an altitude of 12,400 feet. Above the reservoir that supplies Santa Fe with drinking water there is not a single residence or home, and almost the entire watershed is within the Pecos Forest Reserve. The supply is, therefore, absolutely uncontaminated. The water is free from alkali or other deleterious mineral ingredients and has been declared by experts to be the purest and best drinking water furnished any city in the Southwest. Under the city flows an undercurrent, which, in many instances, is pumped for domestic and irrigation purposes by windmills.

The Denver & Rio Grande and the Santa Fe Central Railroads have a modern brick Union Depot at Santa Fe. The depot of the Santa Fe System is within one hundred yards of the Union Depot.

A start has been made in paving the sidewalks in the city limits, which, owing to the continual dry weather and hard-packed soil, is not so urgent a necessity as elsewhere, but now that a city ordinance provides for paving, several miles of sidewalks have been and are being constructed.

From climatic, scenic, health, historic and social standpoints, Santa Fe is undoubtedly the most desirable residence city in the Rocky Mountains.

OTHER TOWNS AND SETTLEMENTS.

Lamy is the junction point of the Santa Fe branch with the main line of the Santa Fe System. It has a roundhouse, a depot-hotel, a postoffice, store, a church and a public school. It has a sandstone quarry, charcoal and lime ovens. It is also the headquarters of the Onderdonk Livestock Ranch, at present under lease.

Galisteo is a settlement of farmers and stockmen in the southern part of the county, with church, school house, postoffice and stores. It is on the Galisteo River and two and a half miles from Kennedy at the junction of the Santa Fe and the Santa Fe Central Railways. It is the headquarters for the Eaton Land Grant.

TELEPHONE EXCHANGE AND ORCHARD AT SANTA FE.

Cowsprings is a settlement on Galisteo Creek, with postoffice and store.

Kennedy, at the junction of the Santa Fe and Santa Fe Central Railways, is a supply point for a large area, with a postoffice and store.

Golden is a mining camp on the northern slope of the San Pedro Mountains. It has a church, school house, postoffice and stores. Round about it are gold placer fields and gold mines with mills.

A few miles south of Golden is the mining camp of San Pedro, where the mines and works of the Santa Fe Gold and Copper Company are located. It has a large smelter and in the vicinity are a number of important mining properties. A public school, church, postoffice and stores indicate that San Pedro is a trading center.

Madrid is an abandoned coal camp with several score of frame company houses, school house and church. It is the terminus of the Santa Fe branch line from Waldo.

Cerrillos is the principal settlement of southern Santa Fe County. It has a smelter, at present idle, stone quarries, a fine public school building, church, business houses, and in its vicinity are a number of mining properties.

Glorieta is on the Santa Fe System and is beautifully located on Glorieta Pass at an altitude of 7,600 feet. Near by a sanguinary battle was fought in the Civil war. Upon the site of the battlefield still stand the ruins of an old road-house of considerable importance in the days of the Santa Fe Trail. Here is also a well sunk by the government through the solid rock at an expense of $4,000. Near Glorieta are iron, copper and other mines and coal deposits. It was formerly an important shipping point for timber, and today is the most convenient point from which to reach the upper Pecos country and the Pecos Forest Reserve.

The other settlements of Santa Fe County are all north of the Santa Fe Railway line. Near Santa Fe are the agricultural settlements of Agua Fria, Cieneguilla, Cienega and Tesuque, all with orchards, churches, school houses and stores. Near Tesuque is the Indian pueblo of Tesuque, of much interest to tourists and antiquarians. In the Tesuque Valley are the rural settlements of Cuyamungue and Jacona.

Santa Cruz is the most important place of northern Santa Fe County. It has a quaint old church that antedates the mission churches of California, a flour mill, a public school house, a postoffice and a number of stores, and is surrounded by some of the finest orchards and agricultural lands in Santa Fe County, deriving their water supply both from the Rio Grande and the Santa

GLORIETA.

Cruz Rivers. It is two miles from the Denver & Rio Grande Railroad at Espanola.

Chimayo is another pretty settlement in the Santa Cruz Valley at the foot of the Cobra Negra Peak. It has beautiful orchards, a church, a school house, a postoffice and stores

Hobart is an agricultural settlement in the Rio Grande Valley and on the Denver & Rio Grande Railroad. Here are the Round Top Mountain Fruit and Truck Farm and the Black Mesa, an Indian battleground of some fame. Here is also the head of the ditch built by the government to carry the waters of the Rio Grande to the Pueblo village of San Ildefonso. Hobart has a flour mill, a postoffice and a store.

San Ildefonso is the largest Indian pueblo in Santa Fe County and, although it is situated in the Pojoaque Valley near the confluence of the Pojoaque with the Rio Grande, yet its water for irrigation purposes is, to a great extent, derived from the Rio Grande. San Ildefonso has an interesting mission church, a school, stores and a postoffice. Many nice fruit farms are situated in the vicinity. It is in the southern extremity of the fertile Espanola Valley.

Nambe and Pojoaque are small but pretty and quaint Pueblo Indian settlements, although the latter has been practically abandoned by the Indians, most of whom have intermarried with surrounding settlers. Near Nambe are the most beautiful falls in the county, which are about to be utilized to furnish power for an electric plant to be erected by Santa Fe capital.

CONCLUSION.

It is not only what Santa Fe County has been or what it is, but what it promises to be in the future that should attract the attention of home seekers and of capital. The superb climate in itself means eventually the establishment of many sanitaria for health seekers, the founding of summer resorts and the building of hotels and homes for people who seek an ideal summer and winter climate. Its large area of grazing lands must sooner or later bring cattle to cover its thousand hills, and sheep and goats by the hundred thousands to browse upon its mesas; its perennial water supply, which is increased largely at a certain season of the year, must lead to the building of irrigation systems that will make the county rich in farms and orchards, not to speak of the dry farming possibilities; its undeveloped mineral wealth must in time make it one of the richest mining districts in the west, giving employment to thousands of miners, and last, but not least, its industrial possibilities are such as destine it to be a manufac-

POJOAQUE.

turing center. Its great beds of fuel that can be mined cheaply; its possibilities for the development of water power; its comparatively dense population, which would furnish labor; its climate, so conducive to continued activity; its nearness to the Oriental, Mexican and South American markets; its great supplies of raw material, such as wool, hides, lumber, mica, ores; its transportation facilities, which will be added to from year to year, should make Santa Fe County an industrial beehive with a population ten and twenty fold its present number. Woolen mills, beet sugar factories, canneries, brickyards, tanneries, smelters, furnaces, steel mills, potteries, glove, shoe and furniture factories are a few of the manufacturing possibilities of this section, which is richly endowed by nature and evidently designed by Providence to be a center of industrial activity.

New Mexico, and Santa Fe County especially, have within them the great natural resources which are bound to make them prominent in the industrial world, and the wise man, who invests his capital in such enterprises at present, before the grind of competition is felt, ought to reap a rich reward.

For information concerning New Mexico in general and Santa Fe County in particular, address Max. Frost, Secretary, and the members of the Bureau of Immigration, Santa Fe, New Mexico.

THE SCENIC HIGHWAY

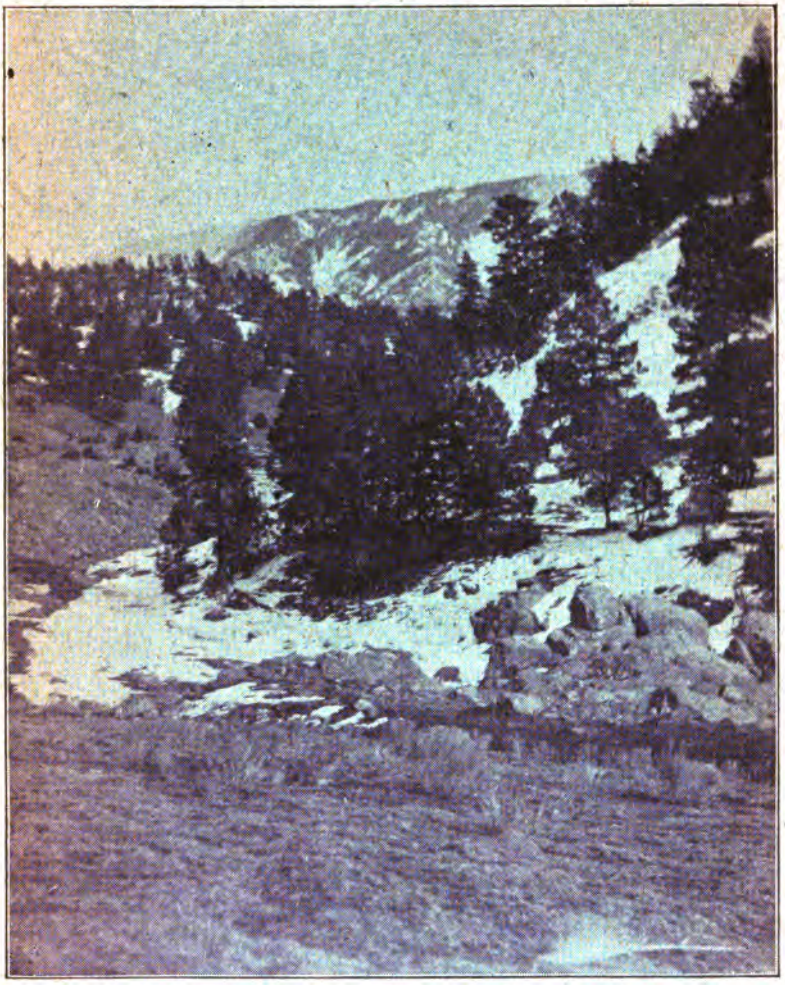
RESIDENCES AT SANTA FE.

Officers and Members of the New Mexico Bureau of Immigration.

GRANVILLE PENDLETON, President ..... Aztec
W. B. BUNKER, Vice President..... Las Vegas
J. W. BIBLE, Treasurer..... Hanover
ALFRED GRUNSFELD..... Albuquerque
W. E. LINDSEY..... Portales
RAMON ARMIJO..... Socorro

MAX. FROST, Secretary..... Santa Fe

AMONG THE ASPENS ON THE SCENIC HIGHWAY.



THE DALTON DIVIDE ON THE SCENIC HIGHWAY.

THE PLAZA AT SANTA FE.