THE CONSTRUCTION OF THE SOUTHERN PACIFIC RAILROAD

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INTRODUCTION.

With the addition of California to the territory of the United States in 1848, the question of a Pacific railroad came to be one of practical concern. The three probable routes were the northern, from the Great Lakes to the Columbia, supported by the North and East, the central, from Memphis or St. Louis to San Francisco, supported in the Central and Southern States, and the route through Texas via the Gila valley, advocated in the South. The economic rivalry between the North and South, increased by the slavery agitation and the repeal of the Missouri Compromise, made the choice of one or another of the routes a difficult one. Numerous bills for a transcontinental road appeared in Congress during the fifties, but the securing of government aid was a hard proposition due to the opposing interests of the various sections, which were manifest as soon as any one line was urged. In 1853 a bill for compromise, leaving the route to the President, was brought in, but no action was taken on it. In his message of this year, President Pierce said that the power and propriety of the government in building a railroad through a territory was doubtful, and that action by the general government should be incidental rather than primary. He discouraged a "reckless or indiscriminate extension" of the principle of grants to aid in railroad construction.[1] The problem of route, how-

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1. James D. Richardson, Messages and Papers of the Presidents (10 vols., Washington, 1897) V. p. 217.

ever, was in reality a much more important one than the matter of constitutionality. Jefferson Davis claimed to be the first to have advocated a southern route to California, as he had published articles in 1847 in favor of a road from the Mississippi to San Diego. In 1853 in his report attached to the President's message, Davis, then Secretary of War, urged that surveys be made to decide on the most feasible route, and expressed the hope that public opinion would be guided by the results of the surveys.

In 1855 a bill for roads on all three routes was passed in the Senate but came to nothing in the House;[2] another bill authorizing roads on the central and southern routes passed the House, in 1861, but the Senate amended it to include one on the northern route also, and there was not time for the House to act on the bill as amended. While these efforts were being made to secure a government-aided road, some private enterprises were being launched with varying degrees of success.

A congress of various railroad interests was held in New York in 1853 and a union formed to extend a trunk line through Texas on the thirty-first or thirty-second parallel to the Rio Grande.[3] It was agreed that the Southern States greatly needed a railroad and would need one much more if the North and South should separate. In that event a transcontinental line would be the only means by which the South could retain a foothold on the Pacific coast. It was further argued that a Pacific road on the southern route would make separation a great loss to the North and would thereby tend to maintain the union.

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2. Congressional Globe, 33d Cong., 2d Sess., p. 814.
3. Hubert H. Bancroft, Chronicles of the Builders of the Commonwealth (7 vols., San Francisco, 1886-90) VI, pp. 265-68.

In this same year the state of Texas granted sixteen sections of land per mile from the Sabine to the Rio Grande to any company which would construct a road between these boundaries. The Texas Western Railroad Company was organized to build from Shreveport, Texas, to San Diego. The company was reorganized in April, 1857, and the name changed to the Southern Pacific. Twelve miles were constructed and five more graded, but due to the commercial crisis of October, 1857, the company was unable to pay its liabilities or go ahead. Loans had been secured to build fifty miles when the Civil War broke out and the iron so far laid was taken up and put to confederate government uses. This was the end of the Southern Pacific of Texas for a while.

The California legislature granted a right of way through California to the eastern states in 1852 for a railroad across the continent.[4] In 1854 the San Diego and Gila Southern Pacific and Atlantic Railroad Company was organized with a capital of $5,000,000. A preliminary survey for a practicable pass between San Diego and the desert was carried over the lowest summits of the mountains to connect with the surveys of Lieutenants Williamson and Parke. The route was considered feasible though it had unusually high grades, the heaviest grade being 107 feet to the mile in Oakwood canyon, and the highest point 3,629 feet at San Felipe Valley. Both San Diego and Los Angeles advocated the Gila route, but San Francisco was in favor of a road farther north. A convention in San Francisco in September, 1859 passed a resolution that there should be two termini, one in Oregon and one at San Francisco.

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4. Bancroft, Chronicles, VI, p. 114.

The San Diego delegates retired, and active hostility began between the advocates of a northern and southern route. When a central route was finally chosen and the Central Pacific and Union Pacific were chartered, the San Diego and Gila Company suspended operations.

At the close of the Civil War the project for a Southern railroad was revived and advocated as an aid to the South to recuperate. A new enterprise, the Memphis and El Paso, was begun under General Frémont and was going well, until Frémont, trying to enlist the aid of foreign capital, was arrested on a charge of fraud in Paris. The scheme was at an end apparently; but Thomas Scott of the Pennsylvania Railroad became interested in it, and the land grants made by Texas to the Memphis and El Paso were transferred to his Texas Pacific road. The citizens of San Diego made large and valuable donations of land and property for the Texas Pacific terminal facilities, and the assistance of Congress was secured in 1871. The rest of the story of the Texas Pacific will be told in another chapter.

Before the history of the actual construction of the Pacific roads is considered the results of the early surveys will be discussed, in order to indicate the nature of the work and the difficulties to be overcome.

CHAPTER I.

EARLY SURVEYS.

One of the earliest surveys for a railroad was in connection with the boundary survey by the United States and Mexican boundary commission established in accordance with the treaty of peace between the United States and Mexico, dated at Guadalupe Hidalgo February 2, 1848.[1] By the sixth article of the treaty, information was to be collected relative to the construction of a "road, canal or railway which shall in whole or in part, run upon the river Gila, or upon its right or left bank within the space of a marine league from either margin of the river." John R. Bartlett was appointed on the commission in June, 1850 and began at once to organize his party. His survey was completed to within sixty miles of the Colorado by December, 1851, and then suspended for lack of supplies. The explorers made their way to San Diego, and the following May Bartlett set out with Lieutenant A. W. Whipple to finish the survey. At the conclusion of his Personal Narrative, which is an account of the country traversed, its resources and its inhabitants, Bartlett discusses briefly the adaptation of the country for a railway.[2] The great plateau of Texas, known as the Llano Estacado, was destitute of forests except for narrow belts along the streams, not

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1. John R. Bartlett, Personal Narrative of Explorations in Texas, New Mexico, California, Sonora, and Chihuahua (2 vols., New York, 1854) I, p. 3.
2. Ibid., II, p. 565.

extending more than one hundred yards from the water. West of the Rio Grande and south of the river Gila the country was most barren, with little vegetation but short grass and the small mesquite. As for the construction of a railway through Texas, the country was generally open and level. Beyond the Pecos river south of the Guadalupe range, there were isolated mountains but no connected chains. Between El Paso and the Colorado the only considerable obstacle is the San Pedro mountains. Bartlett states that these were passed by wagons but he did not know with what facility. The California desert, about one hundred miles across, and increasing in width towards the north, is destitute of wood, water and grass, but has a hard, level surface "almost graded by nature for a railway." Regarding materials for construction, forests were found from the Mississippi through Eastern Texas, and in the Guadalupe and Sacramento ranges pine and oak were plentiful. West of the Rio Grande timber would have to be secured from the Rockies, and beyond the mountains, small oaks and cottonwoods grew along the streams. In the Santa Cruz valley were considerable forests of mesquite, which is the best material for rail-ties. As to water, it was believed that even in the most desert regions, a sufficient supply could be obtained by boring.

The advantages of a southern route were summed up as follows: an open and very level country from the Mississippi to the Sierra Nevada of California, with a summit level a thousand feet less than those of other routes, freedom from snows, and convenience in obtaining supplies. The disadvantages were a deficiency of timber, water, and food for animals, and lack of tillable lands for farms.

Another expedition of the same year was headed by Captain L. Sitgreaves of the United States Topographical Engineers, assisted by Lieutenant John G. Parke. This expedition was organized at Santa Fe and went with another expedition against the Navajos as far as the Zuni. Reaching Albuquerque on the first of September, 1852, they got an escort of thirty men from the second artillery, and proceeded down the Zuni river to within ten miles of its mouth; then across the ridge and down the Colorado Chiquito to the northern end of the San Francisco mountains, west to the Great Colorado, down to Fort Yuma, and finally across the Colorado desert by Warner's Pass to the San Diego. Here the party disbanded.[3]

An appropriation of $150,000 was made by Congress in 1853 for six surveys for a road across the continent. R. S. Williamson was commissioned by the War Department to make a survey west from the Colorado to the Pacific, connecting the surveys of the thirty-fifth and thirty-second parallels to the ocean.[4] He formed a depot camp at Pass Creek in Kern county to make a thorough examination. Above the canyon of the Kern river a narrow creek was discovered, and at the head of this, Walker Pass. Williamson reported the country east of the pass for three degrees of longitude to be a mountainous desert, devoid of water, wood and grass; and any road west would have to descend the Kern valley, which was so narrow and winding as to make a railroad out of the ques-

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3. Captain L. Sitgreaves, Report of an Expedition down the Zuni and Colorado Rivers, in 32d Cong., 2d Sess., Sen. Ex. Doc., No. 59, pp. 4-21.
4. See Bancroft, Chronicles, VI, p. 12.
33d Cong., 1st Sess., House Ex. Doc. No. 129.

tion. The next pass to the south had an altitude of about 5,300 feet, about the same as that of Walker's Pass, but this second opening was steeper. The third pass investigated was Tehachapi Pass with a summit elevation of 4,020 feet. Tehachapi creek enters Tulare valley with a descent of 157 feet a mile for fifteen miles; but the side slopes, according to Williamson, would allow for decreasing the grade, and timber in this section was plentiful. The survey of Tejon pass still further south took two weeks, but it was decided that the grades here were too heavy even with a mile tunnel. The next pass, the Canada de las Uvas, and Tehachapi were reported the best, and the latter the better of the two.

The crossing of the desert, Williamson said, was the least difficult part of a route to California, as the desert was composed of hard blue clay, and not loose shifting sand. The bridging of the Colorado would be more difficult than crossing the passes. The bottom lands are wide, with elevated sand plains on each side, too far apart to be spanned, but not far enough to allow of a gradual grade, and the valley moreover is subject to overflow. The best bridge site would be 300 yards below the point where the Gila and Colorado unite, the gorge here being only 300 feet across, whereas it is from 800 to 1000 feet wide, above and below. At this junction a 400 foot span with an elevation of 40 or 50 feet above low water would suffice.

Late in the year 1853, Lieutenant John G. Parke was directed to survey for a railroad route from the Prina village, in Arizona, to the Rio Grande at El Paso.[5] Setting out from San Diego on January twenty-

5. 33d Cong., 1st Sess., House Ex. Doc., No. 129. Pacific Railroad Reports, II. Cited in Bancroft, Chronicles, VI,

fourth of the next year, he followed the immigrant road across the Colorado desert to Fort Yuma, then proceeded to the Pima village and southeast to Tuscon. After he had examined the route between Fort Fillmore and Cooke Spring, the company disbanded at El Paso. This exploration was the most nearly on the thirty-second parallel of any so far.

A deficiency appropriation of $40,000 was made by Congress for Pacific railroad surveys May 31, 1854, and in August an additional $150,000 was appropriated. The war office directed Parke to continue his surveys to see whether a road from San Francisco to Los Angeles was practicable; whether the Mojave valley joined that of the Colorado; and to make additional explorations between the Pima villages and El Paso to complete his former report. The second survey confirmed the value of the first and the results may be briefly summarized as follows. The surface except in the mountain passes was so smooth as to require little preparation for a road-bed. Easy grades could be secured by winding around the mountains; and on the re-survey it was found that the two most difficult passes could be avoided. As to the water supply, Parke's survey was made in the dryest season of the year and he found no place between the Rio Grande and the Gila more than forty miles from a permanent stream. There were springs located between these points of permanent supply, and though water for the working parties would necessitate much hauling, wells would be practicable.

From the Gila seven miles above the Pima villages to its junction with the Colorado, the valley of the river was highly favorable to the construction of a railroad, as embankments against freshets would

not be required; and even where the hills closed in on the river, there was plenty of space for the road without heavy cutting. Logs could be obtained from the Moyogan mountains and floated down the Gila, or from the pine forests on the San Francisco river and the mountains on the Salinas. Lumber could be delivered at San Pedro or San Diego from Oregon; and in California there was an abundance of timber on the San Bernardino and other mountains near the line of the road. The comparatively light grades would make for rapid construction; so Parke estimated that the road could be built in about eight years.

The civil engineer of Parke's party, Albert H. Campbell, who had also been with Captain Whipple on his survey of the thirty-fifth parallel route, declared the route of the thirty-second parallel to be the shortest, cheapest, and most practicable. The country compared favorably in agricultural and pastoral resources, and in mineral wealth with that along other routes, and was the only route which could be successfully worked during the entire year. Campbell stated that construction on the thirty-fifth parallel would involve an enormous outlay for preparation of the road-bed, exceeding the cost of a road on the more southern line by twenty-five per cent.

Lieutenant J. C. Ives, the topographical engineer who assisted Captain Whipple, also went over the lower route giving it the most decided preference.[6]

The line from the Red river to the Rio Grande was surveyed

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6. Sylvester Mowry, Arizona and Sonora (New York, 1864), p. 217.

by John Pope, brevet-captain of the topographical engineers, beginning February 12, 1854. The advantages of the thirty-second parallel in this section as set forth by him are found in the Pacific Railroad Commission reports.[7] Among those enumerated are: easy grades along the whole route, a reasonable cost of construction, and a mild and genial climate, little subject to change of seasons.

Timber and building material were available on the ground for over half the distance and would not have to be transported at any point. The Red river valley was four-fifths covered with timber, - chiefly oak, pecan, hickory, and elm. There were good agricultural and mineral resources. He relates that the mules in the expedition traveled from Dona Ana on the Rio Grande to Preston on the Red river, a distance of 650 miles, at the most unfavorable season of the year for grass, and none of them died. "This simple fact . . .," he says, "speaks more strongly than volumes of opinions, in establishing the remarkable advantages of the country for live stock." Several points on the line were not far from the heads of the navigable streams of Texas, and with better communication with markets, local trade furnished good prospects for business. The railroad would eliminate the greatest obstacle to the overland traffic. The value of trade had already been enormously increased since the purchase of the country by the United States and the protection offered to traders; but the valuable agricultural features of the region would not be developed till a railroad was provided. There

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7. 33d Cong., 1st Sess., House Ex. Doc., No. 129. Pacific Railroad Reports, I.

were great possibilities for cotton growing and the black soil of great fertility was already attracting planters from the cotton-growing states along the Mississippi.

At the time the survey was made, Captain Pope asserted that the only obstacles to a permanent water supply could be easily removed; but when he set out to see whether artesian wells could be constructed on the plains of Mexico and Texas, he met with little success. The water was at so great a depth that the tubing gave out, or else the water failed to reach the surface.[8]

At the conclusion of his report Pope stated that the route had "every combination of advantages and facilities both for a rail-road and wagon-road, for military purposes or for emigration, that can reasonably be expected west of the valley of the Mississippi."

In addition to these surveys directed by the federal government, various railroad companies authorized surveys in this early period for trans-continental roads. General Dodge, who was formerly chief engineer of the Union Pacific Railway Company, reported on the line from Sherman and Fort Worth, Texas to San Diego, for the Texas Pacific Railway Company. To quote briefly from his report, "The divide of the continents is crossed at an elevation of 4,893 feet on very light grades, not exceeding 66 feet to the mile, while on the entire line the total length of grade from 80 to 105 feet will not exceed 45 miles, and from

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8. Bancroft, Chronicles, VII, p. 24.

66 to 80 feet, 72 miles."[9] Careful location would materially reduce these figures, and the maximum grade at other points was 66 feet to the mile, "while from the Pima villages to the Colorado and over other long stretches of country, the line follows the natural contour of the surface."[10]

In July 1867 the Union Pacific Railway company sent out two parties of surveyors from Fort Wallace, Kansas, to ascertain the best general route for the extension of the company's road from its terminal near Fort Wallace through New Mexico and Arizona to the Pacific. The results of their work are reported by General William J. Palmer, manager of Surveys, to the president of the Union Pacific,[11] and that part of the report which pertains to the line of the Southern Pacific will be presented. The survey of the Gila route was in charge of John Runk, Jr. and Leonard H. Eicholtz, division engineers. Eicholtz went to San Pedro in Arizona and via Fort Yuma to SanDiego; Runk went by way of San Gorgonio Pass to Los Angeles valley, then by San Fernando Pass and Soledad canon, recrossing Sierra Bernardino, to the Great Basin, and along the east slope of the Sierra to Tehachapi Pass. Here he entersected the line of the thirty-fifth parallel.

As to the topography of the country, the route was reported excellent from the valley of the Rio Grande to the west side of the California Cordilleras in the Los Angeles valley, with grades uniformly lower than those of the thirty-fifth parallel, from Isletta, near

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10. Report of General Dodge, quoted in Wright, p. 56.
11. General William Palmer, Surveys Across the Continent (Philadelphia, 1869).

Albuquerque, to the foot of San Gorgonia pass. Between these two points the maximum grade was ninety feet, and comparatively little excavation and embankment would be required. The greatest difficulties were between Los Angeles and San Francisco. The coast route was so difficult that the Cordilleras must be recrossed to the east at San Fernando Pass and crossed a third time to the west at Tehachapi pass into the valley dividing the Sierra Nevada from the Coast range. Between the Colorado river and the Pacific, the chief difficulty appeared to be the descent of the west slope of the Sierra Nevada at Tehachapi pass, this descent requiring high embankments, deep cuts, one 1600 foot tunnel, 3100 feet of trestling and several small culverts. The line wound around the foothills closing the mouth of the pass, requiring alternate cuts and fills with much rock excavation. From Tehachapi to San Francisco via San Benito pass was reported by Colonel Greenwood to be an easy route throughout, except for a long tunnel at the summit of the coast range.

The distance from Fort Yuma to the east foot of Tehachapi pass could be reduced fifty miles if the line were carried through the great desert; but as this region was lacking both in timber and water, the Los Angeles valley route, though longer, was preferable. The chief hindrances to construction were due to the unsettled state of the country, and the consequent danger of Indian attacks, the lack of supplies, and the high cost of labor. As the desert region west of the Colorado was becoming better known, however, the rugged mountains and sandy basins appeared less formidable. A real obstacle was met in the great scarcity of water, and timber was excessively scarce for nine hundred miles from Albuquerque to the summit of the Cordilleras. There was enough cotton-

wood and mesquite on the banks of the Rio Grande, the SanPedro, and the Gila to tie about twenty miles of track, but the rest would have to be transported over the road, and the supply of timber for repairs would constitute a permanent tax. Between the Rio Grande and the San Pedro, Runk reported such a lack of wood that there was not enough for original construction. In the valley of the San Pedro there was enough cottonwood for the first temporary construction, and mesquite and ironwood that would do for fuel for a few years. The cottonwood in the Gila valley was only good enough for temporary use, so that for trestling and bridging it would have to be floated down from central Arizona. The desert from Fort Yuma to the Cordilleras had no construction timber, and this deficiency was a drawback not only to railroad construction but to settlement.

The comparative advantages of the routes of the thirty-fifth and thirty-second parallels were presented by C. C. Parry, the geologist of the survey.[12] Both appeared practicable as to grade and alignment; both were prospectively rich in minerals; on both there was fine grazing on the higher mountain slopes, and both had a moderate winter climate. A certain amount of desert and uninhabitable land was encountered on both, and from the Colorado to the Sierra Nevada timber was very scarce on either route. The timber supply on the thirty-fifth parallel, however, from the Rio Grande to the Colorado, would prove valuable not only for construction but as an extensive source of traffic to the road. Between these rivers were five hundred miles of wooded land, chiefly large

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12. Report of Dr. C. C. Parry in Palmer, Surveys, pp. 211, 212.

pine, spruce, cedar, and juniper, and on the Sierra Nevada and the Coast range, large forests of cedar, pine and redwood. The upper route had the advantage also in respect to arable land. What fertile soil there was from the Rio Grande to the California mountains on the lower line lay along the Gila where the climate was too hot; whereas on the thirty-fifth parallel much inhabitable country lay west of Albuquerque, the climate was good, and there was a larger amount of moisture. The fact that the Zuni Indians of New Mexico cultivated corn and pumpkins without irrigation for forty miles out from the base of the Sierra Nevada indicated the possibilities of the country for agriculture. The grazing lands and extensive forests of the Mogoyan range were more accessible from the more northern line, and the greater elevation made for a better summer climate favoring permanent settlement.

CHAPTER II.

THE ATLANTIC AND PACIFIC.

In order to follow clearly the history of the Southern Pacific railroad, it will be necessary to outline briefly the history of two other roads before discussing the Southern Pacific itself. The Atlantic and Pacific was the first company chartered and aided by Congress to construct a Pacific railroad over the southern route,- a bill was introduced in the Senate, December 11, 1865, granting lands to aid in the construction of a railroad and telegraph line from Missouri and Arkansas to the Pacific,[1] and was signed by Johnson, July 27, 1866. The route designated was from Springfield, Missouri, to the Canadian river, then along the thirty-fifth parallel through Albuquerque to the Colorado river and the Pacific. The land grant included a two hundred foot right of way, the right to take materials from the adjacent public lands, and twenty odd-numbered sections per mile on each side of the line in the territories, with half as much in the states. The land was to be received by twenty-five mile sections as these sections were reported completed by the examining commission.[2] The road was to be of uniform gauge, and the rails of the best quality of American iron. If the route coincided with a second route receiving government aid, the previ-

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1. Cong. Globe, 1865-66, 39th Cong., 1st Sess., p. 17.
2. U. S. General Land Office, Land Grants to Railroads (Washington, 1908).

ous grant would be deducted. Not less than fifty miles a year was to be built after the second year from the beginning and the whole road was to be completed by July 4, 1875. If any of these provisions were violated, the government was to be allowed to complete the road.

Another clause of the same bill provided that the Southern Pacific of California might connect with the Atlantic and Pacific at any point near the eastern boundary of California to form a line to San Francisco. The Southern Pacific was to have its gauge and rates uniform with those of the Missouri corporation, and was to receive the same grants, subject to the same obligations.[3]

The question of Indian titles came up because the line of the Atlantic and Pacific company ran through Indian Territory, and the Cherokees and Chickasaws objected to the clause "that the United States shall extinguish Indian titles as rapidly as consistent with public policy and the welfare of the Indians."[4] The Chickasaws were willing to make a grant to aid the road, but insisted that they should offer the aid instead of having the United States do it. The bill as passed was therefore amended to read that the extinguishment of Indian titles should be only by voluntary cession of the Indians.[5]

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3. U. S. Statutes at Large, 1865-67, XIV, p. 299.
4. Cong. Globe, 1865-66, 39th Cong., 1st Sess., p. 1102.
5. Cong. Globe, 1865-66, 39th Cong., 1st Sess., p. 1102.

Due to financial troubles none of the line was constructed until 1871, and in that year the road ran from Springfield, Missouri, to Vinita, Indian territory, a distance of thirty-three miles. In 1872 the company leased the Pacific railroad of Missouri (later the Missouri Pacific) and operated it till 1875. In November of the latter year the road went into the hands of the receiver as the panic of 1873 had forced it to default; and on September 8, 1876, the property of the Atlantic and Pacific was sold to William F. Buckley under foreclosure of its mortgages. The St. Louis and SanFrancisco Railway was organized as its successor, the whole line extending from Pacific Junction, Missouri, to Vinita.

When the Atlantic and Pacific came out as the St. Louis and San Francisco, its land grant was still unused; the Atchison, Topeka and Santa Fe had exhausted its grant by the time it reached Albuquerque; so the new road concluded negotiations with the Santa Fe, whereby both were to construct and own the Atlantic and Pacific from the Rio Grande to the Pacific. The Atlantic and Pacific never built further than Vinita on its original line, but made a connection there with the Missouri, Kansas and Texas Railroad.

Construction was begun west from Albuquerque in 1880 and by the first of February, 1883, the line had reached the Colorado, opening up a new route to California and the Pacific by connecting with Mohave branch in California.

CHAPTER III.

THE TEXAS AND PACIFIC.

The Texas Pacific Company was chartered March 3, 1871, to construct a railroad from Marshall, near the eastern boundary of Texas, via El Paso to San Diego, following the route of the thirty-second parallel.[1] The land grant was the same as for the Atlantic and Pacific, i.e., twenty alternate sections per mile in the territories and ten in the states. Any lands not disposed of in three years would be subject to entry and settlement. The capital stock was limited to $50,000,000 and the corporation authorized to begin work when 20,000 shares were subscribed and ten per cent of their par value paid in. The company could purchase the stock and property of any roads along its route, but could not consolidate with any competing through line to the Pacific.

An amendment of May 2, 1872 changed the name of the company to the Texas and Pacific to indicate that the road was not confined to Texas. One hundred miles from Marshall were to be completed within two years; ten miles were to be done east from San Diego before the end of the second year, and twenty-five miles annually thereafter. This latter requirement was to insure San Diego as the western terminus.

The Texas and Pacific purchased the line of the Southern Pacific Company of Texas, a consolidation of the Southern Pacific which

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1. U. S. Statutes at Large, 1869-71, XVI, p. 573.

built from the state line to Marshall in 1862, and the Vicksburg, Shreveport and Texas, which built the line in Louisiana.[2] The consolidated company built from Marshall to Longview in 1872; but like the Atlantic and Pacific, the Texas road was affected by the panic of the next year, and the California and Texas construction company, which had undertaken to build the road through to SanDiego, was obliged to cancel its contract. The Texas and Pacific had graded ten miles out of San Diego and sent iron and ties for that section when it was forced to ask Congress for a subsidy in addition to the land grant.

Thomas A. Scott, president of the Texas road, and Mr. A. Pierce, Jr., of the Atlantic and Pacific, presented a memorial to congress, December 8, 1874, asking the right to consolidate the two roads from the fortieth meridian or a point east of that to the Pacific. The government was asked to guarantee the interest on five per cent gold bonds of the company. It was to have a first mortgage on the railroad, and to have restored to it about thirty million acres granted to these lines.[3] All attempts of the Texas and Pacific to get additional aid were consistently opposed in Congress by C. P. Huntington of the Central and Southern Pacific railroads. The contest between Huntington and Scott will be treated more at length in the following chapter. The first bill for consolidation never came out of the committee, and a second similar bill was introduced in the House but not passed. Huntington's whole aim was to prevent the construction of a competing line to the Pacific, but he op-

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2. John Poor, Manual of Railroads of the United States (New York, pub. annually), 1877-78, p. 345.
3. Memorial of the Texas Pacific and Atlantic and Pacific Railroad Companies, in 43d Cong., 2d Sess., House Misc. Doc. No. 6.

posed the bill on the ground of subsidies. He further worked up opposition in the South to the proposal, inasmuch as the gauge of the new line was to be that of the northern roads for the most part, and not that of the southern lines, with which it was supposed to connect.[4]

Failing to get aid, Colonel Scott and his friends put up $1,500,000 and contracted to go ahead from Fort Worth.[5] From 1876 to 1880 little progress was made because of the hard times. In 1877 a new bill provided for construction from Fort Worth to San Diego, authorizing the Texas and Pacific to run to El Paso and into New Mexico till it formed a junction with the Southern Pacific. The latter was also authorized at the same time to build east from San Diego and Fort Yuma, along the thirty-second parallel to the line of the Texas and Pacific. This bill also failed because the Southern Pacific offered to build as far as El Paso without aid.

In 1880 a contract for construction west from Fort Worth to El Paso was let to the Pacific Railway Improvement Company, organized under a charter of the Connecticut legislature for the special purpose of completing the Texas and Pacific road.[6] The Texas and Pacific consolidated with the New Orleans and Pacific Railway, running from Shreveport to New Orleans, so that by the close of the year there were 611 miles in operation.[7] In April, 1881, Jay Gould bought all the rights of Thomas A.

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4. Memorials from numerous commercial bureaus throughout the Southern States had been presented to Congress in 1874 urging that the required aid be given; but after Huntington's activities, articles appeared in the New Orleans Times, the Richmond Whig, the Petersburg Index Appeal and other southern papers, condemning the project as a northern road in disguise.
5. Railway Review (Chicago, pub. weekly) June 4, 1876.
6. Ibid., January 10, 1880.
7. Poor's Manual for 1880, p. 841.

Scott in his road and Gould became the president of the Texas and Pacific. In December the Southern Pacific and Texas and Pacific met at Sierra Blanca, ninety-one miles east of El Paso, making a through line from New Orleans to San Francisco.

An interesting sequel to the struggle between the California and Texas companies was the attempt of the Southern Pacific to take over the land granted its rival, after the two companies had formed an agreement whereby only one continuous line was to be built. The attempt failed and in 1889 the lands granted under the act of March 3, 1871 were declared forfeited and restored to the public domain, on the ground that the Texas and Pacific had failed to comply with the terms of its charter.[8]

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8. Statutes at Large, 1883-85, XXIII, p. 337.

CHAPTER IV.

THE SOUTHERN PACIFIC.

The history of the Southern Pacific and of its constituent companies is a long and complicated story, and it was thought best to present in the two previous chapters some facts about two of the roads largely concerned in the development of the Southern Pacific, in order that the relations between these three might be better understood.

The first step on the Pacific end of the line toward a southern railroad was the enactment of the California legislature on May 20, 1861, declaring that any ten or more persons, subscribers to the stock of a contemplated railway in California or the territory contiguous, could become a corporation to own and operate that railway by complying with certain requirements.[1] These were in part as follows: Sec. 2. "The articles of association . . . shall set forth the place from and to which the proposed road is to be constructed, and the counties into and through which it is intended to pass, and its length as near as may be." Sec. 17, Part 7. "The company may change the line of its road in whole or in part whenever a majority of the directors shall so determine, . . . but no such change shall vary the general route of such road as contemplated in the articles of association of such company." Sec. 18. "Nothing in this act shall be so construed as to confer any powers on such corpora-

1. House Journal, 44th Cong., 1st Sess., 1875-76, p. 555.

tion to so change their road as to avoid any point named in their articles of association, except as provided in Sec. 17, Part 7, of this act."[2]

In the next three years about fifty miles of line was built. On December 2, 1865, the Southern Pacific Railroad Company of California filed articles of incorporation under the laws of that state, declaring that the company was formed to construct a road " from some point on the bay of San Francisco in the state of California, and to pass through the counties of Santa Clara, Monterey, San Luis Obespo, Tulare, and Los Angeles, to San Diego. . . . Thence eastward through the said county of San Diego to the eastern line of the state of California, there to connect with a contemplated railroad from said eastern line of the state of California to the Mississippi river."[3] The following April, the corporation was authorized by the legislature to receive aid from any of the counties south of Santa Clara.

On July 27, a land grant was made by Congress for a line from San Francisco to a point on the Colorado river near the Needles, by the same act granting land to the Atlantic and Pacific.[4] About 7,500,000 acres in California was accordingly withdrawn from market by the commissioner of the land-office; but on complaint of Franklin Steele, a citizen of the state, the lands were restored to the public domain. The ground for objection was that a map had been filed with the Secretary of the Interior, showing the route to be not through the coast counties, but through Pacheco Pass, east of Gilroy, into and through the interior coun-

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2. House Journal, 1875-76, pp. 555 ff.
3. Ibid., pp. 555-56.
4. U. S. Land Office, Land Grants, p. 19.

ties of Fresno, Tulare, Kern, and San Bernardino to the Colorado river near Fort Mojave, avoiding the town of San Diego. The dispute went on for some time as to the right of Congress to grant lands, the route having been changed. In July 1868, an act extending the time for construction provided that thirty miles should be done by the first of July, 1870, and twenty miles each year thereafter.[5] The California legislature passed an act in April, 1870, granting the company the right to change its route and to file new and amendatory articles of association. In July, Congress passed a joint resolution to the effect that the Southern Pacific might construct a railroad and telegraph line "as near as may be on the route indicated by the maps filed in 1867,"[6] which was the route running through the interior counties.

About $4,000,000 was asked for from the southern counties to insure the building of the road to Los Angeles; but aid was hard to get, the newspapers, except those of San Francisco, objecting to further subsidies. The San Francisco Bulletin urged that a moderate amount of local assistance be given, stating as late as February 10, 1869, that the route would probably lie through the coast counties to Los Angeles, and thence to the Colorado river. Favorable legislation was equally difficult to secure. Supervisors of any county were forbidden to issue bonds till five miles of any aided road was done, and then the issue was to be only in proportion to the distance constructed.

Up to 1870 little was accomplished except to construct eighty

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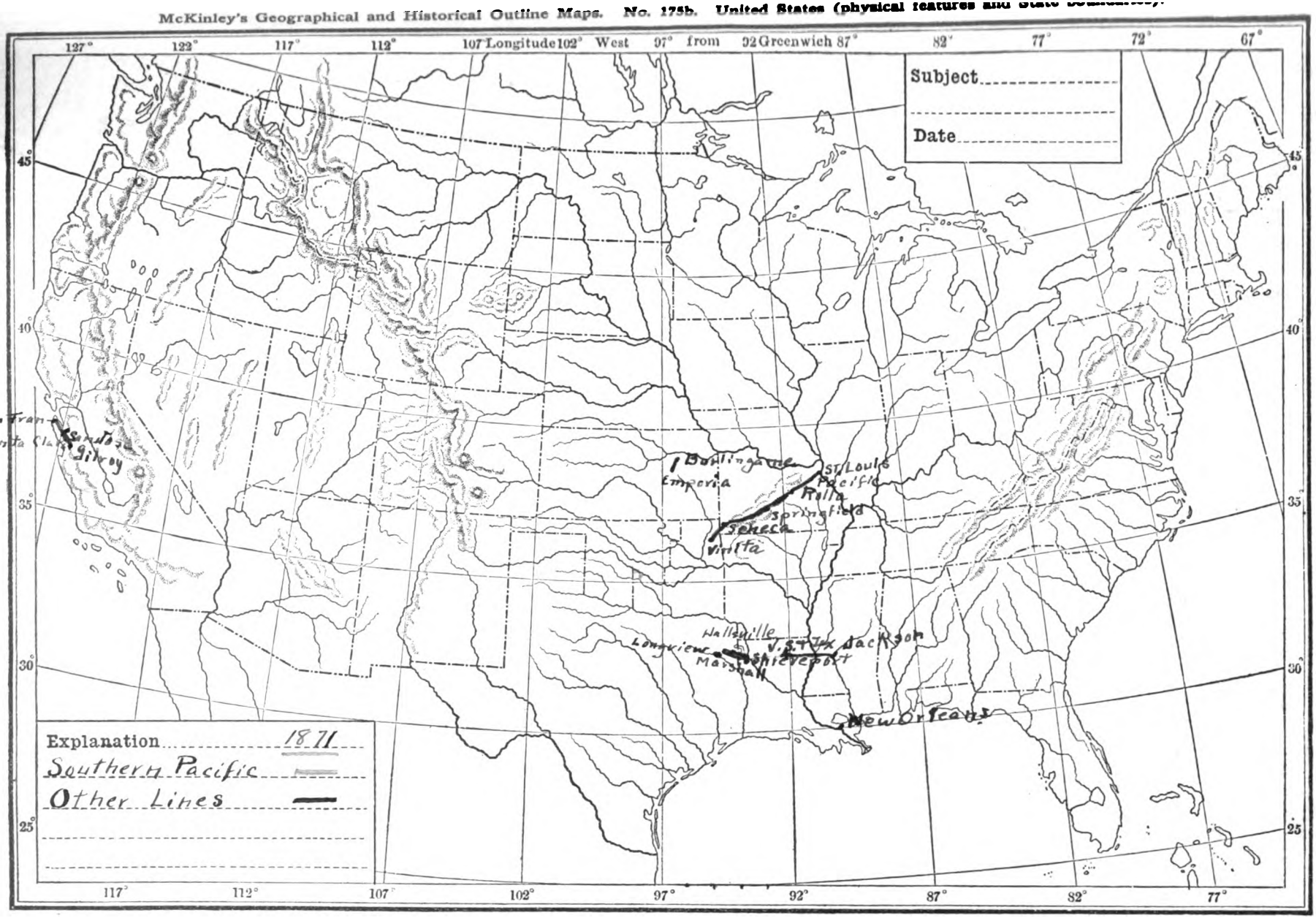
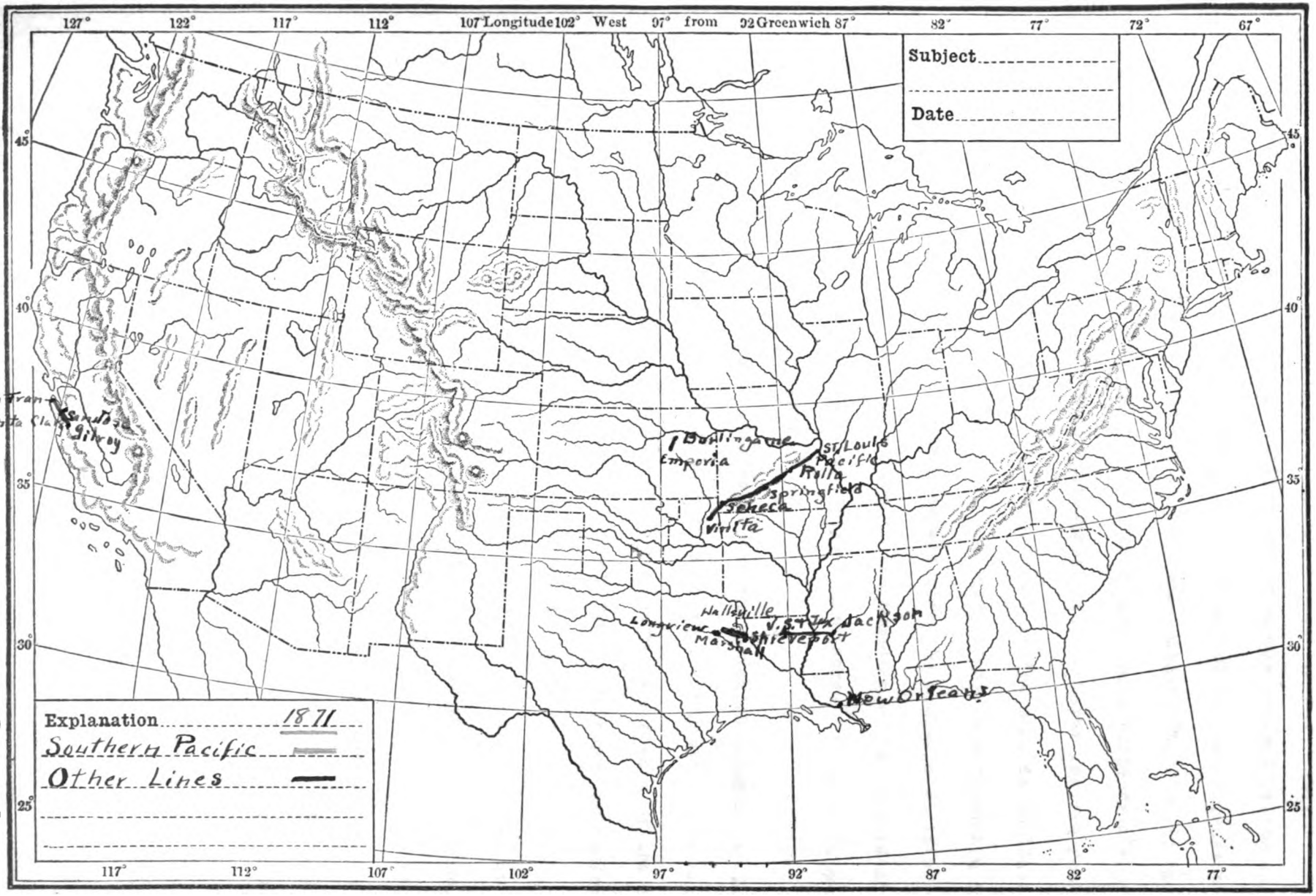
5. Statutes at Large, XI, p. 187.
6. Ibid., XVI, p. 382.



McKinley's Geographical and Historical Outline Maps. No. 175b. United States (physical features and State boundaries).



miles from San Francisco to Gilroy and to secure control of the line from San Francisco to San Jose. The charter of the Texas Pacific of March3, 1871 included a provision that the Southern Pacific, in order to connect the Texas Pacific with San Francisco, could build from a point near Tehachapi Pass by way of Los Angeles to the Texas Pacific road, at or near the Colorado river.[7] The grants were the same as in 1866. The rights of the Atlantic and Pacific and other roads were to remain intact. The Contract and Finance Company agreed with the Southern Pacific Company to build its road from Gilroy to the boundary of California at the rate of twenty miles a year, or forty if necessary.[8] The first section was to be done by July, 1871.

The original line ran along the coast to Soledad in Monterey county and to Tres Pinos in San Benito county, but construction ceased on this line in 1874. The San Francisco terminus was west of the bay separating San Francisco from the Central Pacific terminus in Oakland. From there the line ran southeast between the Coast range and the Pacific, past the bay twenty miles from the sea to Carnadero, then turned at right angles to the coast on the Bay of Monterey. An extension ran from Carnadero to Tres Pinos, and from the Bay of Monterey southeast to Soledad. The Visalia branch of the Central Pacific extended up the San Joaquin valley from Lathrop to Goshen, so the Southern Pacific began at Goshen and continued southeast. The Overland or Western Pacific was used from the coast terminus to Lathrop.[9]

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7. U. S. Land Office, Land Grants, p. 18.
8. Poor's Manual, 1875, p. 756.
9. Railway Review, Aug. 6, 1876.

By May, 1875, track was laid on the San Joaquin line to Caliente, and by January, 1876, the Los Angeles Division reached north six miles above San Fernando and east to the White river, within 136 miles of Yuma. On the northern division the first part of the line was almost mathematically straight, and the grade easy; but from there on lay the most difficult part of the route in California. A description of this section is given in the San Francisco Bulletin. "A few miles farther up the pass and we are in a region almost as wild as the Sierra, but infinitely more desolate. The engineering difficulties suddenly become formidable. . . . So narrow and tortuous is the gorge in places that the road crosses the Caliente creek no less than eleven times in one and a half miles. A diagram of the road, presents a bewildering maze of curves, angles, sweeps, detours, convolutions, and sinuousities. . . . Colonel Gray, the chief engineer, and his indefatigable assistants have spent a vast amount of hard work in exploring the Pass, and a practicable line has been found at last."[10] Beyond Tehachapi Pass the grade is again comparatively easy, the path of the road unobstructed by any formidable mountain range between that point and the Colorado. In the summer of 1875 the greatest obstacle to rapid progress on the section east of Los Angeles proved to be the intense heat. The Railroad Gazette stated that it was a common thing for the thermometer to mark 120° in the shade, if there was any; and as a number of Chinese laborers employed on grading in the Cabezon valley near the Colorado desert had died of the

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10. San Francisco Bulletin, quoted in the Railroad Gazette (New York and Chicago, pub. weekly) May 15, 1875.

heat, work had to be suspended.[11]

When work was resumed in the fall, an increased force of four thousand men and three hundred animals made it go forward rapidly. In January it was reported that three shafts had been sunk in the San Fernando Tunnel, and eight facings were being worked night and day by eight hour shifts. Grading from there to Tehachapi was far enough along so that track-laying could begin at once when the tunnel and the heavy work in the passes was done. On the fifteenth of July daylight was let through the San Fernando tunnel, which was the second longest tunnel on the continent.[12] There were in all seventeen tunnels within a distance of nineteen miles in ascending Tehachapi canyon. The aggregate length was 7,683 feet, the San Fernando being by far the longest, with a length of 6,966 feet. The work of construction was remarkably rapid in view of the many difficulties encountered. Unusually long-continued rains had greatly hindered the work; the San Fernando tunnel was approached at each end by a heavy up grade, with a stream of water always running out of the south end; and as this was the petroleum region of Los Angeles, there were fears that the workmen would come upon reservoirs of petroleum or other noxious fluids and gases. The character of the rock and the enormous pressure on the timbers used as supports presented further difficulties. The tunnel had to be arched throughout as the rock was soft, with many seams and a great many springs of water. The tunnels were fourteen feet wide at the bottom, twenty-two feet high, and eighteen feet, four inches,

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11. Railroad Gazette, Sept. 4, 1875, quoted from the San Francisco Bulletin.
12. Railway Review, July 22, 1876.

at the shoulders. Nearly all were heavily timbered with redwood beams.

Tunnel nine is the famous loop of Tehachapi Pass, completely encircling a mound and thereby gaining a difference in elevation of seventy-seven feet. Emerging from the tunnel, the train winds around the mound and passes directly over the tunnel at right angles. The length of the loop is 3,794 feet, and its construction was considered a novel and original achievement in engineering.[13] The barrier at Tehachapi is formed by the junction of the Coast Range with the Sierra Nevada, which runs parallel to the San Joaquin valley until almost due east of the town of Bakersfield. There the range makes a sudden divergence to the southwest while the Coast Range diverges to the southeast, both uniting across the head of the valley in the form of a horseshoe. The only natural passes here are Tehachapi, at about the middle of the bend, and Tejon pass several miles further west.

After crossing the Sierra Nevada, the road runs on to the Mojave desert, which is hemmed in on the south by the range sprouting from the union of the Coast Range and the Sierra Nevada. The difficulties were consequently not all overcome when the summit of the Sierra Nevada was passed. The formation of the Sierra Madre, however, at the point where this range was pierced, was favorable for tunneling, consisting chiefly of sandstone.

The connecting link of the road between San Francisco and Los Angeles was laid September 5, 1876. The event witnessed "by a large number of prominent men of San Francisco, who took advantage of the com-

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13. Railroad Gazette, September 22, 1876.

pany's invitation to take a ride on the first train which should run between the metropolis and the southern city."[14] The Railroad Gazette recounts the ceremonies on that occasion in picturesque fashion. The last rails were laid at Lang's station, shortly north of Los Angeles. "At the culminating point . . . the Los Angeles delegation, including the mayor and leading officials and citizens, were in waiting when we arrived. A thousand workmen were drawn up in line with picks and shovels on either side of the track, the track layers on either end of the unfinished portion standing ready for the signal. 1050 feet of track was to be laid, an equal portion being allotted to each set of track layers. All was eagerness and enthusiasm, greetings being interchanged between the delegations from the two cities. Frank Frales, a well-known Central Pacific workman, had charge of the southern gang of workmen, and when his men won the race laying the road by five minutes, the cheers were loud and prolonged. . . . Even the Asiatics joined in the shouts of rejoicing."[15] The last spike was of gold beautifully engraved, and the hammer used to drive it was silver, with a handle of Los Angeles orange wood. Both were presented by L. W. Thatcher, formerly a conductor on the Central Pacific. Speeches by Charles Crocker, the president of the road, and by the mayors of Los Angeles and San Francisco followed the driving of the spike, and a grand banquet at Los Angeles concluded the celebration.

On the completion of the Tulare and Los Angeles divisions, these lines were leased to the Central Pacific, as it was thought they could be more economically operated by this company, which was operating

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15. Railroad Gazette, September 22, 1876.

a connecting line at Goshen.[16] The arrangement was to hold until a connection was made by the Southern Pacific between the Tulare and Northern Divisions. A branch was being extended from Goshen directly west, north of Tulare Lake for forty-nine miles to a place called Los Gatos, which was only ninety miles south of Tres Pinos. The completion of this branch to Tres Pinos would connect San Jose directly with Los Angeles.

Active operations were resumed on the Colorado division in January. The forces which were employed on the branch from Goshen were now concentrated at Indian wells to push construction east to Yuma as rapidly as possible. Engineers were surveying in the vicinity of Fort Yuma to determine the location of the Colorado river bridge.

In May the road was opened to Fort Yuma and the following article appeared in the Railway Review, describing the newly completed section. "The Southern Pacific railway, which has been built without subsidy or aid of any kind except some grants of rights of way, was opened Monday (May 5) to passenger travel through to the Colorado river . . . . Building through the long stretch of desert was no small achievement. The land did not even yield enough wood for cooking purposes, and water had to be carried some of the time 120 miles. . . . Arizona is now reached by a railroad for the first time, and is only a day and a half distant from San Francisco."[17] The desert is an unbroken sandy stretch from Colton, near San Bernardino, almost to the Colorado. Death valley,

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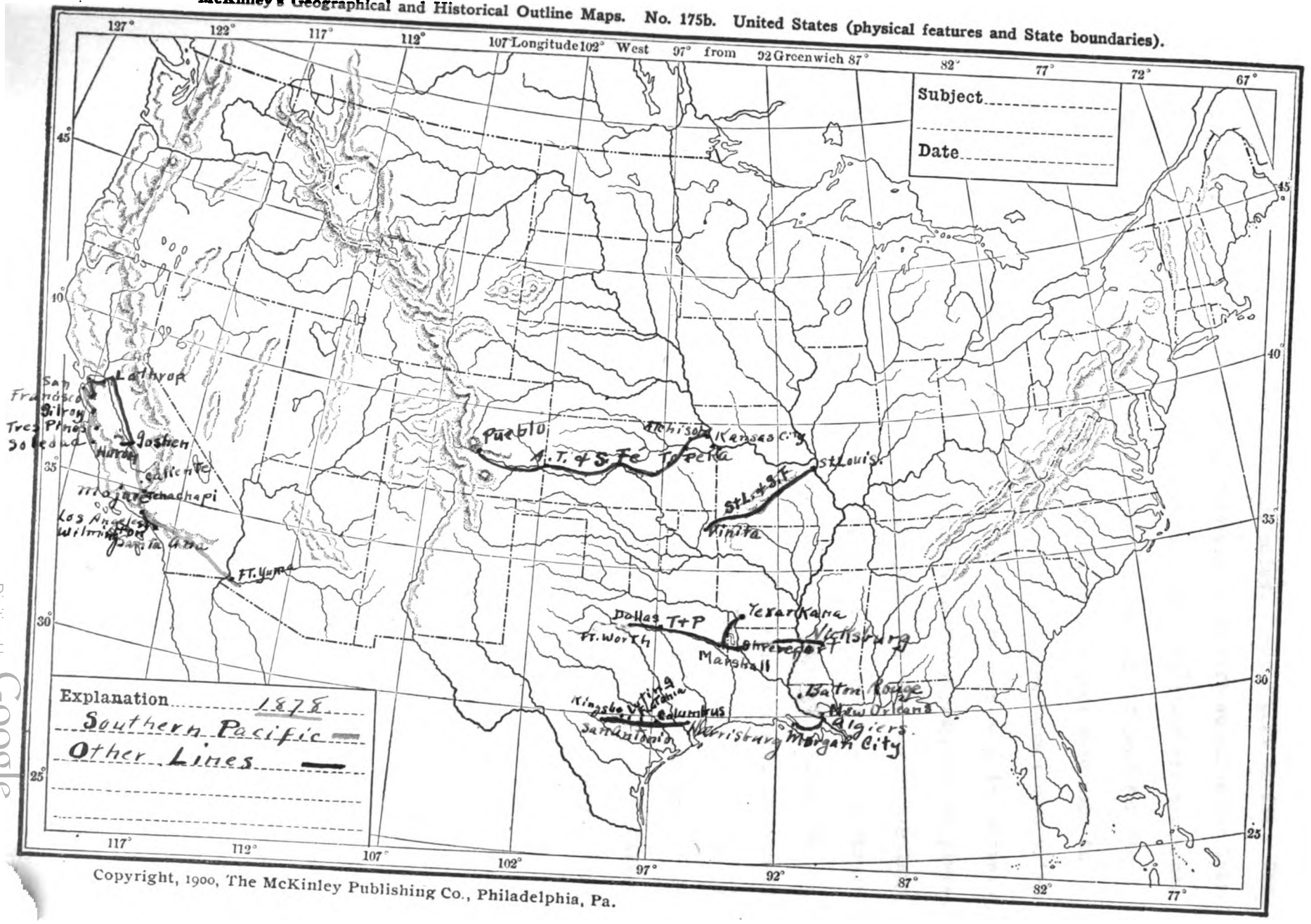
16. Southern Pacific Company of California, Annual Report of the Directors, 1876-77.
17. Railway Review, May 12, 1877.



which is below sea-level for sixty-one miles, forms a part of it. Station houses had to be established at intervals of fifteen miles for laborers who went over the track with hand-cars daily to clear off the sand. The bridge at Yuma was 480 feet long with a draw of 187 feet for the passage of steamers. Over 100,000 pounds of iron rods were used in bracing it together. Piles of cedar fourteen inches square were driven in to a depth of from twenty-six to thirty-two feet to make the structure strong enough to support trains carrying stone for riprapping the piers.[18]

Some time before the events just described, began the long controversy, lasting over a period of about seven years, between Huntington and Scott, briefly referred to in the last chapter. After the Atlantic and Pacific failed in an attempt to secure funds in San Francisco, and was evidently not going to be able to continue its proposed line, the Southern Pacific abandoned the route to Fort Mojave, and turned its efforts toward reaching Yuma, so as to prevent the entrance of the Texas and Pacific into California. Scott maintained that more than one corporation should have an entrance into San Francisco, inasmuch as the Southern Pacific was so combined with the Central Pacific as to eliminate the benefits of competition. Back in 1870 rumors had been heard of the consolidation of the Central and Southern Pacific; but these had been officially denied. When the question of a subsidy for the Texas corporation came up the opposition to Huntington was a good ground of complaint for the Southern states as he was not only president of the Southern Pacific but vice-president in the Central Pacific and a large share-holder in both.

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18. Railway Review, October 20, 1877.

In order to allay the suspicions, two devices were employed. D. D. Colton was allowed to purchase $4,000,000 worth of stock in the Central Pacific for $1,000,000, for ostensibly taking over the management of the Southern Pacific. In addition, the Contract and Finance company was dissolved, as it was well known to be a creation of the Central Pacific; and was succeeded by the Western Development Company, which contracted with the Southern Pacific for the construction of 405 miles of road, including the portion from Spadra to Yuma, and Sumner to San Fernando. "Thus equipped with a new name, a new man, and a new construction company, the Central Pacific set out to meet and defeat the Texas and Pacific."[19] On the matter of the Southern as a branch of the Central Pacific, Huntington, now agent and attorney for the Southern Pacific wrote a letter to the Railroad Gazette, December 15, 1875. He made the statement that the lines of the two connected at two points, - at San Jose, where a short branch of the Central intersects the main line of the Southern Pacific, and at Goshen, where the Tulare branch of the Southern connects with a branch of the Central Pacific extending up San Joaquin valley. The line from Goshen to Caliente, about one hundred miles, was operated by the Central Pacific under temporary lease for some months, because of convenience in using the same equipment for both lines, until the other had finished the through connection with Los Angeles. Some of the important shareholders of the former were also shareholders in the newer company, which was glad to make use of the ability of some experienced railroad builders. The

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19. Bancroft, Chronicles, VI, p. 306.

Central Pacific was by no means opposed to a second transcontinental road, which would increase the population of the coast; for sixty per cent of the traffic was local, and the increase in local traffic would more than make up for any lessening of through traffic. The Southern Pacific had expected, Huntington said, to be met at an early date either by the Atlantic or Texas Pacific. "Their disappointment," he added "at the non-fulfillment of the stipulated conditions, besides being a positive loss, is increased by the hardihood of fresh demands of these corporations . . . in asking for moneyed aid from the government to build a railroad which must for a long distance run parallel to and be designed to compete with, that built at the Pacific end, out of private capital, by parties untainted by default of any kind. They are unwilling to believe that the United States . . . will do such an act of injustice as to punish the honorable dealings of another association, by granting a prodigious bounty of many millions in money or credit for the construction of a long stretch of railroad between the Colorado and San Diego, which if not positively useless to all but the few recipients of the subsidy, must be built alongside the Southern Pacific to its manifest injury."[20]

On behalf of the company, Huntington offered to build through Arizona and New Mexico without aid, if Congress wanted to promote the great work without making an appropriation; and if a terminus at San

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20. Railroad Gazette, December 18, 1875.

Diego should be desired, a branch line would be built there. The House voted 218 to 33 against subsidies, ending government aid to the Texas road for the year 1875; and following this, an editorial in the Railroad Gazette voiced the opinion that it was hard to see what valid objection could be urged against giving another company the privilege of constructing without pay a line which many thought well worth paying for.

Some quotations from the letters of Huntington, to Mr. Colton, the nominal head of the Southern Pacific, will show the work of that road in defeating the attempting of the Texas and Pacific to secure a subsidy. The first is dated November 28, 1874 and runs as follows:

"Friend Colton: . . .. I have sent out some copies of Tom Scott's bill as amended by me. . . . It would be well for you at once to write some letters for the influential men of San Francisco to sign to send to all our M. C. and Senators, to go for the bill as we want it; and if you do not think it right as it is, fix it and send it back, but if we could get it as it is, I would be satisfied. Storr says it will make Scott very mad . . . but if Scott kicks at it, I propose to say to Congress, 'We will build east of the Colorado to meet the Texas Pacific without aid,' and then see how many members will dare to give him aid to do what we offered to do without. My only fear then would be the cry that the Central Pacific and the Southern Pacific was all one and would be a vast monopoly, etc., and that is what we must guard against, and that is one reason why you should be in Washington . . . .

Yours truly,

C. P. Huntington."[21]

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21. Report from Mr. Payson from Committee on Public Lands on Forfeiture of the Texas Pacific Land Grant, in 48th Cong., 1st Sess., House Rep., No. 62.

Two letters of November 1875 indicate the progress Huntington was making in the South.

"New York, November 23, 1875.

Friend Colton:

. . . I was told a few days ago that Scott said he would make us let go of his Texas and Pacific. The South are getting very much in earnest in their opposition to Scott's project. I get papers from the South almost every day pitching into him . . . .

Yours truly,

C. P. Huntington."[22]

In a letter of November 24, he says, "I am getting the South well worked up on Scott's Southern-Northern project." On March 22, 1876 he writes again to Colton.

"Friend Colton: . . . I am having a very lively fight in Washington, but things do not look bad. Scott is making a very dirty fight and I shall try very hard to pay him off, and if I do not live to see the grass growing over him I shall be mistaken. I am doing all I can to demoralize Scott in Texas. He has got to have legislation in that State to extend time on his land grant or else it is lost to him. . . .

Yours truly,

C. P. Huntington."[23]

The open struggle began in April, 1877, when Huntington's

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22. Report from Mr. Payson from Committee on Public Lands on Forfeiture of the Texas Pacific Land Grant, in 48th Cong., 1st Sess., House of Rep., No. 62.
23. Ibid.

road had reached Yuma and obtained permission to lay its track through the corner of the military reservation there.[24] The California and Arizona division of the Texas and Pacific was granted permission by the military authorities of California to break ground on the Fort Yuma reservation for the crossing over the Colorado. This was in October, 1876; and in November, the permission was revoked by General McDowell, commanding the Military Division of the Pacific, until the decision of the war department should be received. In April, 1877, the Southern Pacific was granted permission by the Secretary of War to carry its road provisionally across a corner of the reservation, a map of the final location having been filed, and their application having received the favorable recommendation of the military authroities. Scott protested against this grant as being injurious to his interests in view of the revocation of a similar permission given him. As a result of the protest, the Secretary of War decided that neither company should enjoy the right to cross the Fort Yuma reservation till Congress determined the controversy.

A modification of this last order was secured, September 6, 1877, "to permit the Southern Pacific Railroad Company to continue work within the limits of the Fort Yuma reservation, only to the extent of staying waste or injury to their property, and opening the way to the passage of steamboats."[25] The company proceeded to lay track across

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24. Letter from the Secretary of War concerning the location of the Southern Pacific and Texas Pacific Railways through the Ft. Yuma reservation, and other correspondence relating thereto, in 45th Cong., 2d Sess., House Ex. Doc. No. 33.
25. Ibid.

the bridge and to run passenger trains, in spite of the fact that the commanding officer at Fort Yuma ordered them to cease work when the bridge was secure from injury, pending the Congressional Session. Huntington wrote to McCrary, Secretary of War, to disclaim any intent on the part of his company to disregard orders. The work had been continued because the only available site for a bridge was within the limits of the reservation. The concentration of traffic and travel to and from Arizona and Sonora, opposite this point, made it the logical terminus at the time. The river's current was swift, requiring mattresses for the piers, covered by rock, which was brought in cars from the quarry. Since the structure had to be strong enough for the construction trains, it was afterwards used to carry passengers and mail-trains, to save Arizona people the expense and delay of a ferry. Nothing had been done in any way to interfere with the interests of the Texas road, which was equally free to build a bridge, according to Huntington. He maintained that it was extraordinary to put the Southern Pacific on the "same footing of inactivity, as the Texas and Pacific, and tie their hands from further construction,"[26] as long as Scott's road was 1,250 miles away and confessed its inability to go farther, unless aided by the credit of the United States.

When the war department ordered the running of trains to be stopped, numerous complaints from the citizens of California and Arizona came to Congress because of the delay in mail service and general derange-

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26. Letter from the Secretary of War concerning the location of the Southern Pacific and Texas Pacific Railways through the Ft. Yuma reservation, and other correspondence relating thereto, in 45th Cong., 2d Sess., House Ex. Doc. No. 33.

ment of business. The Mayor of Yuma, A. J. Finlay, sent this telegram to the Speaker of the House, October 5, 1877.

"Whereas the trains of the Southern Pacific Railroad Company, carrying United States mails, passengers, citizens, and government freight, have been running into this town for several days, and whereas any impediment thrown in the way of this commerce is a positive detriment to our people on this western line of the Territory, who are absolutely without personal interest in any road that may reach our border; and whereas the condition involves great uncertainty, loss of life, and other evils, for which in the changing character of business would be oppressive if continued;

"Resolved, That the mayor and Council of the village of Yuma, Arizona, view with surprise and regret the action of the War Department in further restraining the operation of cars into this town . . . and do respectfully solicit that department to review its order and rescind the same, so far as to permit of the resumption of business by rail across the Colorado."[27] In view of this and similar protests the President ordered that traffic over the bridge be reopened the ninth of October.

Charles Crocker had been elected president of the Southern Pacific at an annual meeting of the directors in August.[28] At this meeting it was decided to extend the road into Arizona. A bill was introduced into the House, December 12, 1877, asking for the right for the

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27. Letter from the Secretary of War concerning the location of the Southern Pacific and Texas Pacific Railways through the Ft. Yuma reservation, and other correspondence relating thereto, in 45th Cong., 2d Sess., House Ex. Doc., No. 33.
28. Railway Review, August 4, 1877.

Southern Pacific to build east to El Paso; and until it should meet the Texas and Pacific, to have the rights and privileges originally granted to that road.[29] It was promised that one hundred miles would be done in two years, and the whole road to El Paso in six; and if by that time no other road had reached El Paso, the Southern Pacific wanted to continue east till a junction was reached. No bonds nor guarantee of interest was asked for, but only the transfer of the land grant.

A similar bill was introduced by Alexander Stephens a few days earlier asking aid for the Texas and Pacific.[30] It authorized the construction of a main line from Fort Worth to San Diego; - one hundred miles west, to be finished in two years, and fifty miles east from San Diego, in the same length of time, with two hundred miles every two years thereafter. The whole was to be done in six years. The bill allowed $25,000 in bonds per mile, with $35,000 in the mountainous sections. Both of these bills were referred to the committee on Pacific railroads, and never came out of committee.

Since the Southern Pacific was unable to obtain the consent of Congress to continue its line, a new company was organized with Charles F. Crocker as president. The Southern Pacific of Arizona was chartered October 8, 1878 to continue the road from Yuma to the eastern boundary of Arizona.[31]

The Gila river, thirty-one miles from Yuma, was reached in thirty-seven working days. After the heavy cuts and fills of the Gila

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29. Cong. Record, 45th Cong., 2d Sess., p. 68.
30. Ibid, p. 159.
31. Poor's Manual, 1879, p. 949.

canyon were passed there was little difficulty over the next stretch of country, and by the time Maricopa Wells was reached track was being laid at the rate of a mile a day. At that point the general passenger agent, T. H. Goodman, organized a grand excursion to San Francisco and back, a total of 1,752 miles, and tickets were sold for forty dollars.[32] In May an interview with C. P. Huntington was published in the Galveston News. He had been asked when he expected to reach El Paso, and he replied, "I will be at El Paso in two years, and I want to meet somebody there. I don't care much what line it is."[33] The country between San Antonio and the Pecos was most favorable for railroad construction, and he would be glad, he said, to have Scott build from the east to meet him.

A celebration similar to the one at Los Angeles was held at Tuscon on March 20, 1880. To quote from an editorial in the Railway Age, "Tuscon, Arizona, was mad with delight on the twentieth of March when the people of that ancient city, founded nearly two hundred years before the steam railway came into being, assembled to celebrate the completion of the Southern Pacific road into their midst. The Arizona Daily Star of the twenty-first is devoted almost wholly to a report of the banquet and speeches in honor of the event, the most momentous in all the centuries of the cities existence, - the inauguration of a new era, in which the community leaps from the sleep of conservatism to join in the modern race of progress. Well may the inhabitants of Tuscon and of all other places rejoice at the coming of the first locomotive, the herald of growth and

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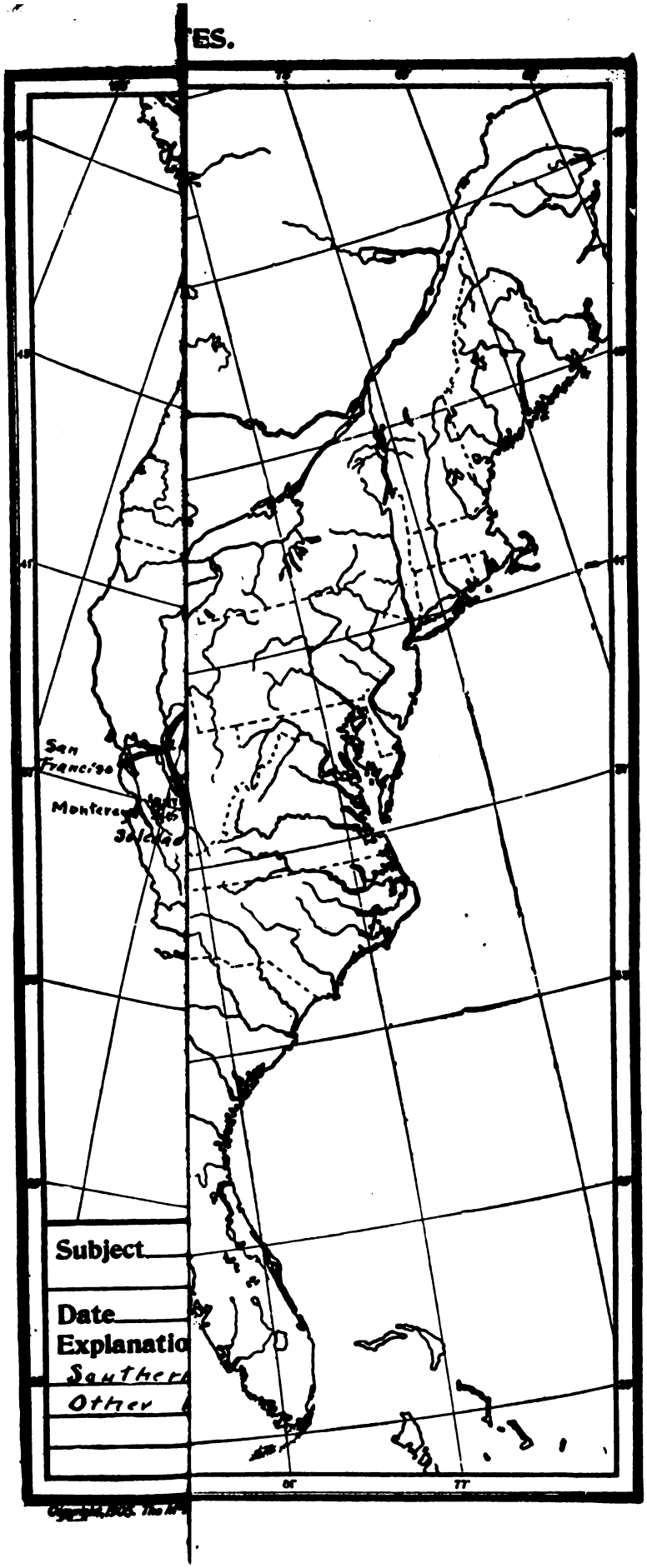
32. Railway Age, (Chicago, pub. weekly), March 27, 1879.
33. Ibid., May 22, 1879. Quoted from Galveston News.



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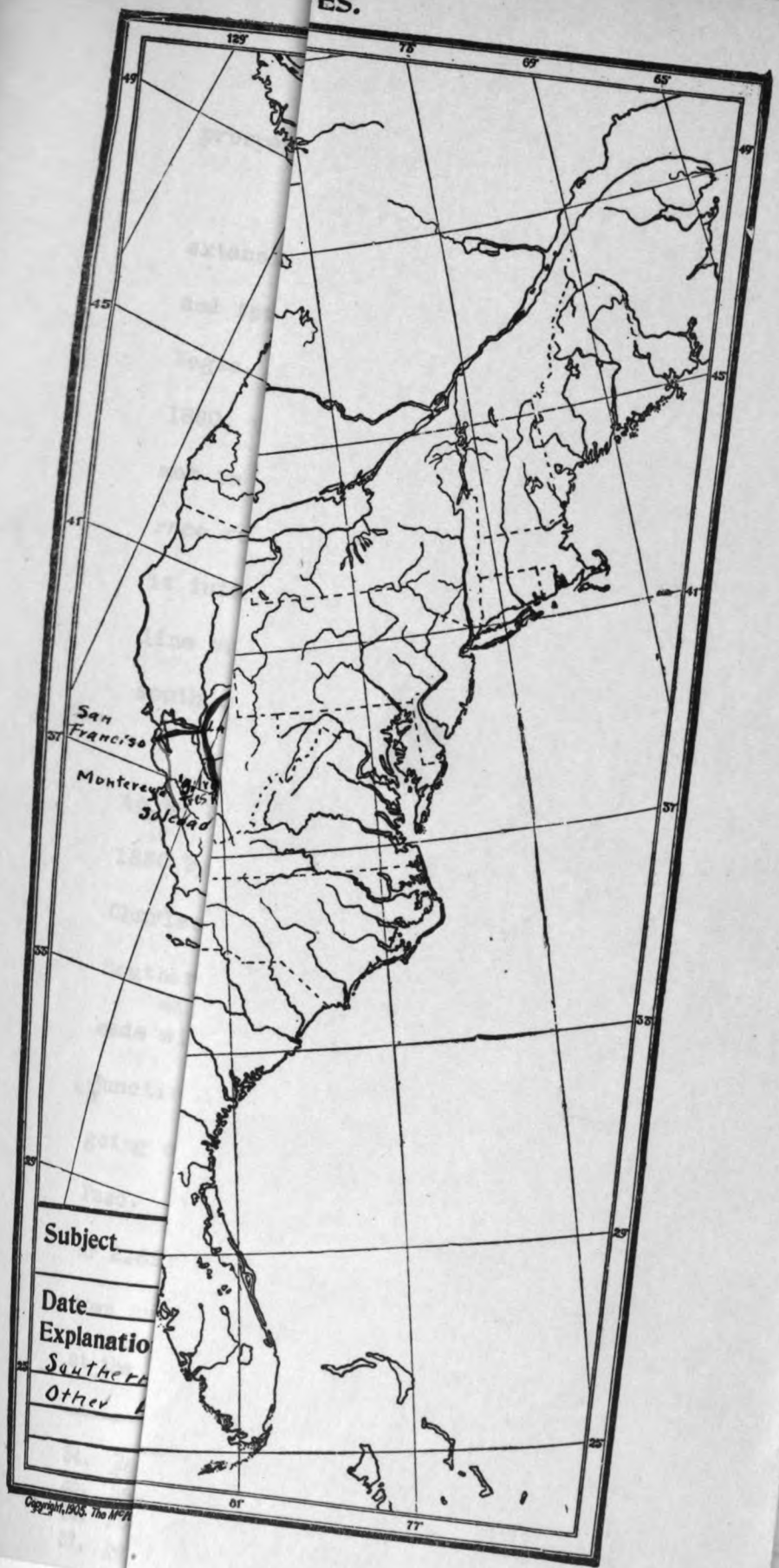

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prosperity wherever it advances."[34]

The Atchison, Topeka and Santa Fe was pushing its New Mexico extension south at the rate of a mile and a half a day to reach El Paso and form a junction with the Southern Pacific. It had reached Las Vegas, three hundred miles north of El Paso, in July, 1879. By August, 1880, the Southern Pacific had "successfully surmounted all the obstacles met in the Dragoon Mountains and on the twenty-fourth commenced a lively race for El Paso, over two hundred miles from the end of the track, which it intended to reach in one hundred working days."[35] The New Mexican line was reached on September 16, when the Santa Fe was one hundred miles south of Albuquerque. The roads were now about two hundred miles apart.

From the west boundary of New Mexico to El Paso the line was to be built by the Southern Pacific of New Mexico, chartered April 14, 1880 by the territorial legislature of New Mexico, and opened October 18. Charles Crocker was to be president and Charles F. Crocker, president of the Southern Pacific of Arizona, to be vice-president.[36] A connection was made with the Santa Fe at Deming, New Mexico in March 1881, but this junction was of little consequence. Some remarkable track-laying was going on in the race to see which road would be the first to reach El Paso. The Southern Pacific had laid 13,800 feet one day and 14,200 feet or 2.69 miles the next. When the Santa Fe was within six miles of the town and its rival twenty miles away, the latter was said to be building at the fastest rate ever known in railroad construction.[37] A mistake

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34. Railway Age, April 8, 1880.
35. San Francisco Bulletin, September 1, 1880.
36. Poor's Manual, 1880, p. 925.
37. Belton (Texas) Journal, February 17, 1881

as to the dispatch of some rails from Omaha delayed the progress of the Santa Fe, so the two roads did not meet until May, although the Southern Pacific had arrived at El Paso in April.

On the completion of the New Mexican portion the most suitable Gulf terminus had to be decided upon. New Orleans, already a large railroad center, the depot of an extensive inland river navigation, and an important seat of commerce, seemed the only accessible port for the purpose.

Three Texas roads were purchased, in 1881, - the Galveston, Harrisburg, and San Antonio, the Texas and New Orleans, running from Houston to Orange, and the Louisiana Western, from Orange to Vermillionville. Two offers were made to the Morgan Company for the line from Vermillionville to New Orleans and for their other Texas property, including the Houston and Texas Central, but the company was at this time unwilling to negotiate.[38] The Texas and Pacific had come only as far as Sierra Blanca, and the gap between this terminus and El Paso, ninety-three miles, was built by the Galveston, Harrisburg, and San Antonio, half of the maintenance expenses being paid by each. The first through train from San Francisco to New Orleans over the Southern Pacific, Texas Pacific and New Orleans Pacific, left San Francisco December 30, 1881.

The struggle between Huntington and the Texas Pacific was finally ended in November, 1881, by a contract between Huntington and Jay Gould, who had succeeded Tom Scott as head of the Texas Pacific. The

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38. Railroad Gazette, July 22, 1881.

agreement provided for a union of interests of the Southern and the Central Pacific, and of all the Gould lines from St. Louis southwest. The Texas and Pacific was not to be built west of El Paso; the track from there on was to be used by both companies. The Galveston, Harrisburg, and San Antonio was to have free use of the Gould lines to Galveston, Texarkana and St. Louis, and the Southern Pacific lines east to use as much of the New Orleans Pacific track as they might require. The tracks of the Gould and Huntington systems were to join ninety miles east of El Paso, and on completion of the Huntington road through Texas, the seaboard or Gulf business was to be equally divided. Through business was to be done on a pro rata basis to San Diego, Los Angeles, and San Francisco. The Texas and Pacific relinquished to the Southern Pacific its claims to land grants, right of way and franchises west of El Paso. Future disputes were to be settled by arbitration.[39]

The committee on Public Lands denied the right of the Southern Pacific to take over the lands relinquished by the Texas Pacific, holding that the former was not a "successor and assign of the Texas Pacific, and has not entirely complied with the Texas Pacific grant in not making San Diego the terminal."[40] The committee referred to Huntington's letter of November 8, 1879, and remarked, "We plead guilty to a curiosity to see how many members of the House will dare to vote to give this grant to him now, for doing what he then proposed to do, and did without aid or promise of any."[41] According to the committee, the

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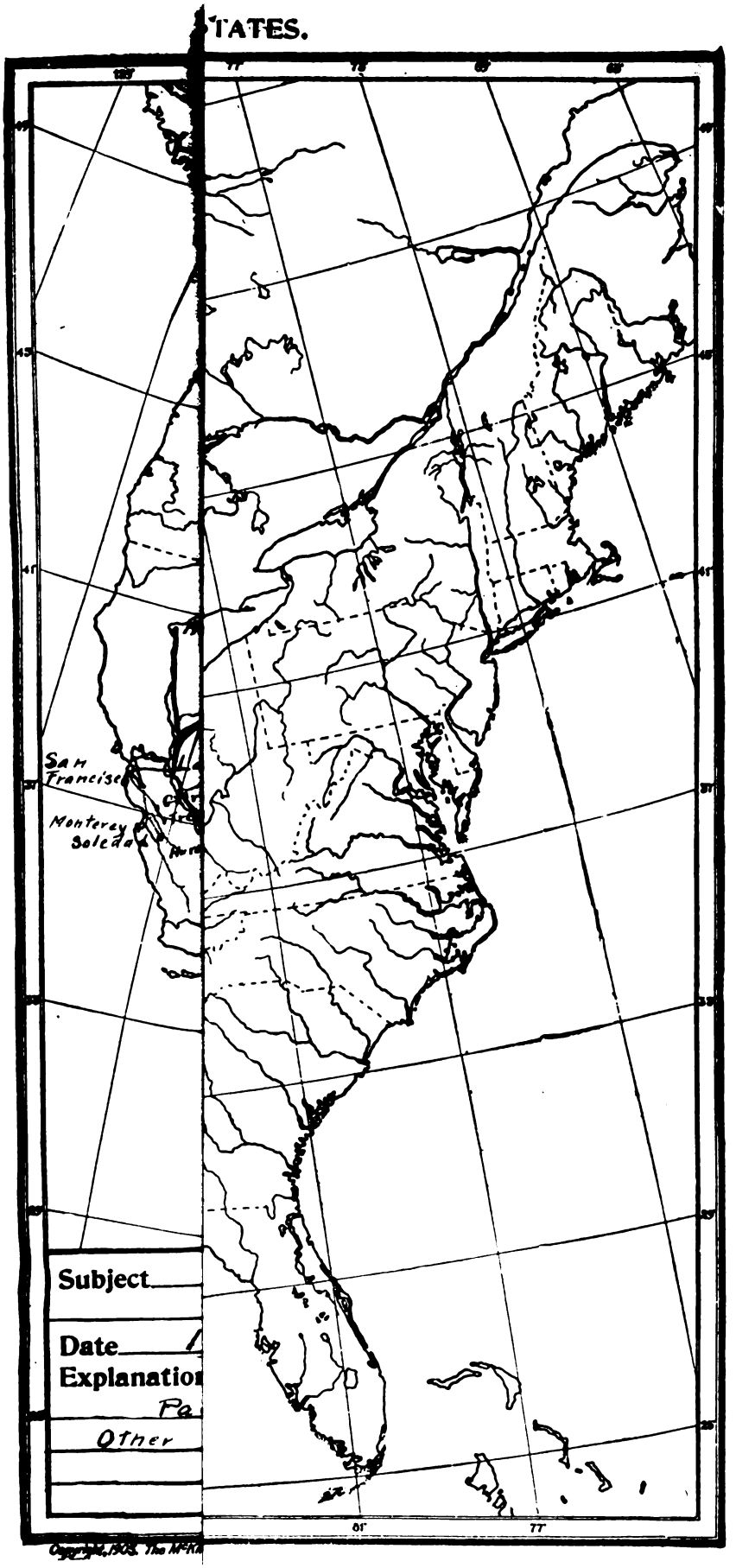
39. 48th Cong., 1st Sess., House Rep., No. 62.
40. Ibid.
41. Ibid.



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Southern Pacific had neither legal nor equitable claim to any part of the grant. A bill for forfeiture of all the lands granted the Texas road under the act approved March 3, 1871 was introduced by the Public Lands Committee, and the lands declared restored to the public domain.[42]

Several smaller roads in California were bought by the Southern system during the time it was building across the continent. One of these was the Southern Pacific Branch, incorporated to build from Salinas, in Monterey county, to intersect the San Joaquin valley division of the Central Pacific south of Tulare lake. The Los Angeles and San Pedro was acquired in 1874 and the Monterey and Salinas Valley Railroad, from Monterey to Castroville, in 1880. When the through connection with New Orleans was made, Huntington turned his attention again to a junction with the Atlantic and Pacific, which began building west from Albuquerque in 1880. The Pacific Improvement Company, which had succeeded the Western Development Company, agreed to build the Mojave division, a 242 mile section from Fort Mojave to the Needles. The Mojave desert, like the Colorado, is a forlorn, sandy waste enlivened only by scant patches of grease wood or creosote bush. The stations were protected by a double roof against the intense heat of the summer sun. Beyond the Mojave valley the road ascended by a series of steep grades to an upland basin and around the southern end of the Providence mountains. Over this stretch, water had to be carried by rail a hundred miles or more, but in spite of the dryness, substantial pile bridges had to be built over every wash, as the country was subject to occasional cloud bursts. In some

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42. Statutes at Large, XXIII, p. 337.

sharp curves sixteen bridges could be seen at one time, spanning dry ravines.

The two roads reached each side of the Needles in June, 1883, and the Southern Pacific asked inspection of the completed section, the following March. Morgan's Louisiana and Texas road was finally secured in 1883, giving access to New Orleans via the Galveston, Harrisburg, and San Antonio. Morgan's road connected at Brazos de Santiago with a railroad to Brownsville, the distributing point for most of the southwestern states and a large area in Mexico, and at Galveston and Houston with roads going into the interior of Texas. It afforded the only regular transportation from New Orleans to most points in Texas.

A brief summary of the Railroad Commission's report for 1883 will indicate the condition of the road in that year.[43] In the state of California, 956 miles were owned, 795 of which were leased to the Central Pacific. The Southern Pacific of Arizona and of New Mexico were also leased to the Central Pacific. On the main line, there were 379.19 miles of steel rail and 148.8 of iron. The Colorado division, from Mojave to the Needles was built with all steel rails. Little of the track was ballasted with gravel, and none with stone, the material of which the road was built generally making good ballast. Cinder ballast was used in the yards at the terminal stations. The terminal facilities at San Francisco were improved by a new passenger depot built by the Central Pacific. The pier was built out from Oakland into the bay, and filled in with rock and earth for two and a quarter miles. Five

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43. Report of the Commissioner of Railroads to the Secretary of the Interior for 1883 (Washington, pub. annually).

ferries were making fifty-eight trips daily. Side tracks at Los Angeles were being extended so as to double the capacity of the freight yards. The Wilmington division was extended to San Pedro, and wharves were constructed to deep water in the Wilmington harbor, considerably reducing the expense of transfer between cars and vessels. A new terminal yard had been finished at the Needles, with an engine house of fifteen stalls, wrought-iron turn-table, blacksmith and boiler shops, transfer shed, stock-corral, ice-house, and combination freight and passenger depot. Over fifty miles of iron rail were renewed with steel and 50,000 cross-ties distributed.

Shade trees and fruit trees had been planted around the stations, - 12,000 eucalyptus, locust, acacia, catalpa and poplar trees, and 400 fruit trees along the line in California. The water supply was improved by the addition of sixteen tanks of 18,000 gallons capacity, and twenty-six 50,000 gallon tanks. The equipment for passenger service was reported first class.

The Southern Pacific of Arizona and of New Mexico were also inspected and the roads found well built with ample equipment. The track was ballasted with sand and in excellent condition and the buildings, bridges, and trestles in good repair. The Galveston, Harrisburg and San Antonio was rapidly being improved, narrow embankments and cuts widened, cross-ties renewed, and worn iron rails replaced by steel ones. Water was a serious item of expense on this line. At Haskell Station no water had been reached after boring to a depth of 1,052 feet; at Dryden, a well 740 feet deep furnished very little water; and at Marfa the well was 1,180 feet deep. A similar situation obtained on the section from Deming

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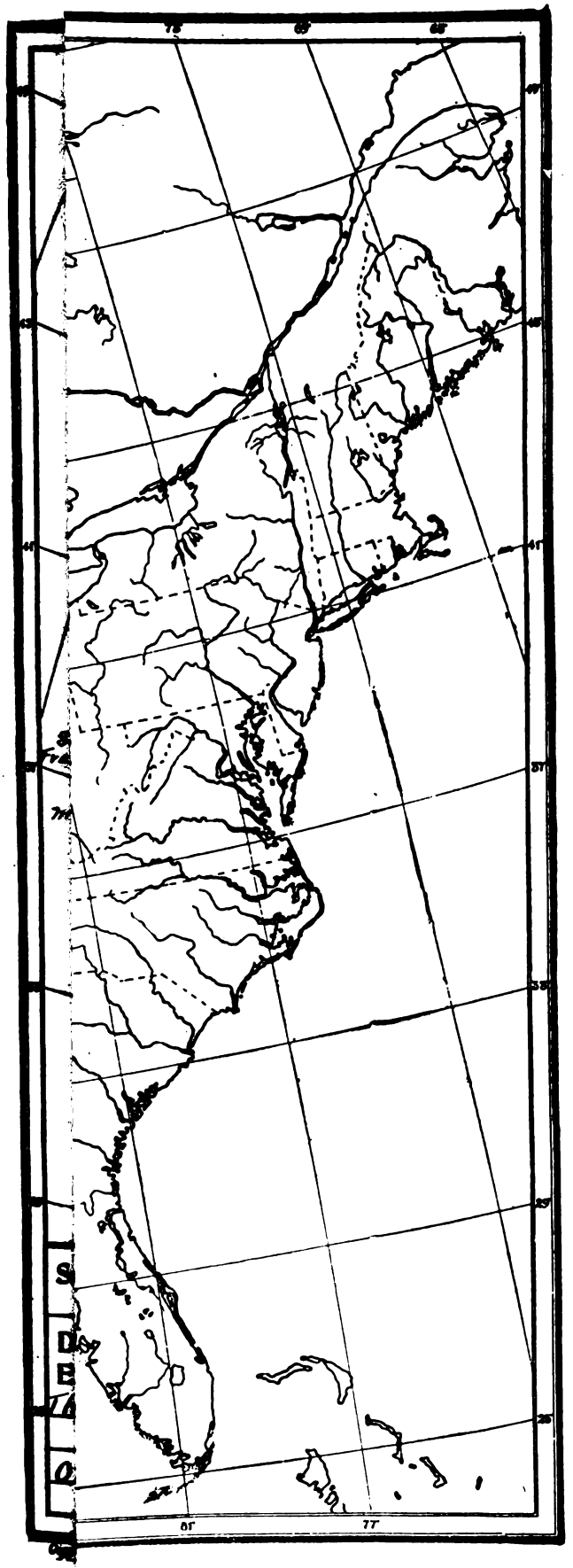

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to San Francisco. Artesian wells were sunk hundreds of feet in many places with no satisfactory results. From San Simon to Tuscon, water was carried one hundred twenty-five miles on flat cars.

The report of the president of the road for this year announced that the relations between the Pacific roads were very harmonious.[44] A great deal of new business was to be built up with the development of markets in the South for the fruits and wines of California. He expressed the fear, however, that the country was to suffer from too many railroads, as there was not enough through business for all the lines that would be opened to California. A considerably increased local traffic would be required.

No increase in mileage was possible in 1884 because the road was badly damaged by the winter floods and much time and effort had to be spent in repairs. Heavy rains between Soledad Summit and Los Angeles washed away all bridges and culverts over the Santa Clara, which was crossed by the line of the road nineteen times. In rebuilding, the road was moved to the sides of the canyon to a less exposed situation. The bridges were originally piled trestling of sixteen foot spans; fifteen of the new bridges were constructed of iron trusses in spans of eighty to one hundred twenty feet, on concrete abutments and piers, the other four were of wood with sixty-four foot spans on piled piers.[45]

An unusual rise in the Gila the last of March, seven feet, four inches, above the high water mark, weakened the bridge at Yuma. The

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44. Railroad Gazette, February 2, 1883.
45. Annual Report of Directors of Southern Pacific Company of California, 1884.

rise continued till it was thirteen feet above high water in June, and the first of July, two piers were washed out, carrying four spans with them. All through July the river was so high that repairs were impossible. The transfer of freight was carried on by the Colorado Steam Navigation Company barges, with temporary tracks and platforms on each side of the river. Temporary repairs were made and traffic resumed the thirteenth of August. The company planned to use larger spans in rebuilding, as the large amount of driftwood brought down in flood time made the use of short spans dangerous.

The rainfall in Southern California from October, 1883, to June 30, 1884 was estimated at three to four times the ordinary amount of previous years. It was the heaviest fall since 1867.[46]

The story of the construction of the Southern Pacific has now been followed from the time of the original charter of the California company, to the completion of a through line from New Orleans to San Francisco by the acquisition of the Morgan lines in 1883. The next chapter will deal with the organization of all the roads along this route into a single system controlled by one management.

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46. Railroad Commissioner's Report for 1884.

CHAPTER V.

ORGANIZATION OF THE SOUTHERN PACIFIC SYSTEM.

In the early part of 1885 an agreement was made whereby the stock and control of the entire aggregation of railroads in the South and the Southwest was acquired by the Southern Pacific. The directors met and after long consideration concluded "that the interests of the holders of the securities of this company would be best served by a comprehensive arrangement, under which all the lines forming such a system should be leased to the Southern Pacific Company for a term of ninety-nine years, the lessee undertaking to operate them at its own expense, and pay all charges including interest on bonds."[1] The company was to receive in addition as rental twenty-six and one half per cent of the net earnings of all the combined lines between San Francisco and New Orleans, this being its relative proportion of the whole mileage. The aim of the consolidation, as set forth by the directors, was the concentration of the operating, mechanical, and accounting departments in order to reduce the expense of commissions, advertising, and the work in the machine and car shops. Uniform patterns in the wearing parts of rolling stock and other equipment of the road would also be secured by the combination.

A holding company was incorporated by the State Legislature

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1. Annual Report of Directors of Southern Pacific Railroad Company of California for 1885, pp. 8, 9.

of Kentucky, March 17, 1884 with an authorized capital of $1,000,000. The company could begin business when $50,000 was subscribed and ten per cent of this paid in. The clerk and an assistant were to reside in Kentucky but the stockholders could meet anywhere.[2] The "guiding spirits" were Leland Stanford and Collis P. Huntington,who were the chief share holders, and had monopolized the railroad business in California since the early days of the Central Pacific.

The agreement between the presidents of the Southern and Central Pacific was signed February 17, 1885.[3] From the point of view of the Central Pacific the consolidation was desirable because much of its business from Ogden to the coast had been diverted by the Atchison, Topeka, and Santa Fe, the Northern Pacific, and the Atlantic and Pacific. The Union Pacific had secured the Oregon Short Line, thereby acquiring an outlet other than over Stanford's road, and putting itself into opposition to the interests of the Southern Pacific. Both the Central and Southern roads were doing a large local business and it was essential that they operate in harmony. Accordingly, by a lease to go into operation April 1, 1885, the Central Pacific gave over the control of its rolling stock, telegraph lines, steamboats, wharves, piers, depots, and all other property, for which the annual rental of $1,200,000 was to be paid.

The whole system now included under the name of the Southern Pacific, counting both railroad and steamship lines totalled almost

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2. Act of Incorporation of the Southern Pacific Company, in House Ex. Doc., 49th Cong., 1st Sess., No. 60, pt. 2.
3. Ibid.

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9,000 miles. These lines were operated in two sections, - the Pacific system, comprising those west of El Paso, and the Atlantic system, those east of that point. The roads included were as follows:[4]

Pacific System

	Miles
Central Pacific	1,254.24
Northern Railway of California	153.63
San Pablo and Tulare	46.51
Berkeley Branch	3.84
California Pacific	115.44
Stockton and Copperopolis	49.00
Amador Branch	27.20
Los Angeles and San Diego	27.60
Los Angeles and Independence	16.85
Southern Pacific of California	755.35
Southern Pacific of Arizona	384.25
Southern Pacific of New Mexico	167.30
Total Pacific System	3,001.19

Atlantic System

Galveston, Harrisburg and San Antonio	976.74
Mexican International	171.00
Texas and New Orleans	105.10

4. Poor's Manual, 1885, p. 901.

Louisiana Western	112.00
Morgan's Louisiana and Texas	281.00
Sabine and East Texas	104.00
Total Atlantic System	1,709.84
Steamship lines	4,205.00

Recapitulation

Atlantic System	1,709.84
Pacific System	3,001.19
Steamship lines	4,205.00
Grand Total	8,916.03

The officers of the company, as elected, April 8, 1885, were: President, Leland Stanford; Vice-President, C. P. Huntington, Second Vice-President, Charles Crocker; and Third Vice-President, Charles F. Crocker. The success of these men in creating this vast system was due in large part to the enterprise, ambition, and energy of the most active of the leaders, Collis P. Huntington. His personal effort was a large influence in Congress when the Central and Union Pacific roads were authorized and granted subsidies. He saw the danger of too great competition with a road on the southern route, if built by another company; and when the owners offered their property to the builders of the Central Pacific, after little had been done except to build from San Francisco to Gilroy, and to get control of the line from San Francisco to San Jose, Huntington and his associates bought it. He had been interested in the

idea of a Pacific railroad when he was a boy. When the gold rush came in 1848, the firm by which he and his brother were employed in Oconta, New York, sent a shipment of goods to California and Huntington with them across Panama.[5] About eight thousand Americans had reached the isthmus but many became sick and sold their outfits to Huntington. He resold at enough of a profit so that he left Panama with $4000 in addition to the $1200 with which he started. He arrived at San Francisco with $5000 and all expenses paid, while most of his companions were "dead broke".

In California he was not interested in becoming a miner, but studied the commercial possibilities of the country and was always successful in investing, as his investments were based on trade rather than mining ventures. At the time of his death in 1900 he was one of the largest land holders in the country with a fortune estimated at $35,000,000. He was then president of the managing board of the Southern Pacific, comprising twenty-six corporations with over 9,000 miles of track and 5,000 miles of steamship line. After the formation of the consolidated company in 1885, a foothold had been secured in the Eastern and Southern States, and by lease and construction, the company controlled over a thousand miles between Newport News and Memphis.

An article in the Review of Reviews at the time of his death remarked that the fact that a man should have lived so long under such pressure, working as hard at seventy-nine as at twenty-nine, was

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5. Bancroft, Chronicles, V, pp. 23 ff.

little short of marvelous. "Collis P. Huntington . . . probably did greater things and more of them in the strenuous work of exploiting the material resources of America than any other man,"[6] and the completion of the Southern Pacific was his largest achievement.

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6. Review of Reviews, XXII, p. 325.

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