

HRL

30

C59

FIRST ANNUAL REPORT

TO THE

BOARD OF DIRECTORS

OF THE

Southern Pacific Railroad Company

CHARTERED BY

THE STATE OF TEXAS.

NEW YORK:
AMERICAN RAILROAD JOURNAL OFFICE,
9 SPRUCE STREET.
1856.

HE2791
S728A2

HE 2791
S728A2

FIRST ANNUAL REPORT

TO THE

BOARD OF DIRECTORS

OF THE

Southern Pacific Railroad Company

CHARTERED BY

THE STATE OF TEXAS.

LIBRARY
LELAND STANFORD JUNIOR
UNIVERSITY

NEW YORK:
AMERICAN RAILROAD JOURNAL OFFICE,
9 SPRUCE STREET.
1856.

Central Pacific Railroad Photographic History Museum
Property of CPRR.org © 2006 - Use by permission only.
Use constitutes acceptance of the CPRR.org User Agreement.
Modified from content made available courtesy
Google Book Search <<http://books.google.com>>

OFFICE OF THE SOUTHERN PACIFIC RAILROAD COMPANY, }
NEW YORK, *November 24th*, 1856. }

At a meeting of the Executive Committee of the Board of Directors, held this day, Mr. T. BUTLER KING, from the Special Committee appointed at the meeting of the Board of Directors, on the 8th of October, presented the following Report, which was read; and, upon motion, it was

Resolved, That the said Report be approved and adopted, and that five thousand copies be printed for distribution.

Extract from the minutes.

S. JAUDON,
Secretary.

REPORT to the BOARD OF DIRECTORS of the SOUTHERN PACIFIC RAILROAD COMPANY, stating the principal provisions of the Charter, the amendments thereto, and the Laws of Texas aiding the construction of the Railroads in that State, and such calculations of profits of the work, and its general advantages, as are clearly deducible from authentic information.

BEFORE proceeding to consider the work in which this Company is engaged, as a source of profit on the capital invested in it, or presenting its local and national advantages, it will be proper to give a brief synopsis of the charters and laws which are the source and ground-work of all its powers, rights, and privileges.

The Charter of this Company had passed the Legislature and was approved by the Governor of Texas, the 16th February, 1852 (see Appendix B.) It created a Corporation under the name and style of the "Texas Western Rail Road Company," which was changed by an amendatory Act, at the last session of the Legislature, to "The Southern Pacific Rail Road Company." The Company is authorized, by the 2d Section of the charter, to commence a Railroad "at a suitable point on the eastern boundary line" of the State, "and thence running, by such course as said Company shall decree and determine to be most suitable, to El Paso, on the Rio Grande." The 3d Section gives the Commissioners named in the first Section, the powers of Directors, until their successors are chosen.

The 4th Section makes the capital stock of the Company to consist

"of all its property, real and personal, franchises and rights of property, to be divided into shares of \$100 each," each share entitling the owner thereof to one vote, by himself or proxy.

The 6th Section provides that "The shares may be disposed of, and books opened for subscription thereto, in such manner, and on such terms, as said Commissioners shall determine will be for the best interests of the Company." (This power now belongs to the Board of Directors.)

The 7th Section gives the power to the Company to enter upon and purchase, or otherwise take and hold, any land necessary for the purpose of establishing and constructing said Railroad, with all necessary depots and other buildings, in the manner provided by the 8th section.

The 11th Section gives authority to acquire real and personal estate.

The 13th Section fixes the rates and prices for the transportation of passengers and freight—not to exceed five cents per mile for the former, or ten cents per ton per mile for the latter.

Section 14 provides for the punishment of persons who may obstruct or injure the road.

The 15th Section grants eight sections of land, of 640 acres each, for every mile of railway completed, to which they become entitled whenever a section of five miles or more shall be completed and ready for use. (This grant has been increased to sixteen sections by the Act of 30th January, 1854,—Appendix D,—the first section of which reads as follows: "That any Railroad Company chartered by the legislature of this State, heretofore, or hereafter, constructing within the limits of Texas a section of twenty-five miles or more of railroad, shall be entitled to receive from the State a grant of sixteen sections of land for every mile of road so constructed, and put in running order.")

The proviso at the close of the 16th Section has been so changed by the amendatory act of the late session, as only to require the first section of ten miles to be graded and furnished with cross-ties by the 16th of February, 1857.

The 19th Section requires that twenty miles of the railroad be completed by the 16th of February, 1858.

The 20th Section grants two hundred feet wide of the public land for the roadway, and as much more as may be necessary for depots, stations, or other works of the Company.

This section also provides, that when the "Railroad, or any branch thereof, shall pass through any public lands, all such lands, to the distance of three miles from the extension line of the track on each side thereof, shall be reserved for the State, *from and after the time such track shall be fixed or designated by survey, recognition, or otherwise ; and the said lands, as the road is constructed, shall be divided into sections fronting one mile on the road, plainly marked ; and to these reserved lands the Company shall have the right, by virtue of any of the certificates issued in accordance with the provisions of this act, to cause to be located, surveyed, and patented for their use, each alternate section ; such section in each instance embracing a tract of land fronting one mile on the road, pursuing an equal width ; and the remaining sections shall continue the property of the State until disposed of by the legislature.*

On the 25th August, 1856, an act amending the Charter, was passed by the legislature of Texas (see Appendix C.), by which the name of the Company was changed, and it was relieved from the proviso of the 16th section of the Charter.

By the act of the legislature of Texas of the 13th August, 1856, (Appendix E.) railroad companies, by complying with its provisions become entitled to a loan of six thousand dollars per mile for every mile of road constructed. This Company, by reason of its connection with a railroad coming from an adjoining State, will become entitled to the loan when ten miles of its road shall have been finished and ten miles more graded. Any company whose road does not connect with a road from an adjoining State, cannot obtain the loan until they shall have constructed and finished twenty-five miles of railroad, and graded twenty-five miles more.

The loan is for ten years, at six per cent. interest, payable annually,

secured by a lien on the railroad and its equipments. This loan is taken from the Permanent School Fund; and as the policy which dictated it is to unite the interests of education with those of railroad improvements there cannot be a doubt that the term for which the loan is made will be almost indefinitely extended, if the interest shall be paid punctually. By a supplementary act of the 26th August, 1856 (Appendix F.), this loan is limited to railroad companies previously chartered.

A careful examination of these charters and laws will convince any unprejudiced mind that the inducements offered by Texas for the construction of this great central work through her territory, very far exceed the advantages heretofore presented by any railroad enterprise in this or any other country.

On the completion of every section of five miles the Company become entitled to eight sections of land of 640 acres each, or 5,120 acres per mile, and for the section 25,600 acres, which at \$5 00 per acre, will be worth \$128,000. When ten miles shall have been finished, and ten more graded, the Company will have a right to claim the loan of \$60,000 from the State, and the same amount for every section of ten miles of road thereafter finished; and when twenty-five miles of their railroad shall have been completed, the Company will be entitled to sixteen sections of land, or 10,240 acres per mile, and for the 25 miles 256,000 acres, which, at the estimated value of five dollars per acre, will be worth \$1,280,000. The Company will also be entitled to the loan of \$6,000 per mile, or \$150,000 on the twenty-five miles.

It will also be perceived that to secure the land grant, it is only necessary for the Company to grade, and furnish with cross-ties ten miles of their road, by the 16th February, 1857; and to preserve the Charter, to finish twenty miles by the 16th February, 1858. By reference to the correspondence at the close of this Report, between E. A. Blanch, Chief Engineer of the Company, and Messrs. Hill & Jennings, it will be seen that under the general law of Texas, this Charter did not go into effect until sixty days after its approval by the

governor; and consequently the Company has until the 18th of April, of the two years above mentioned, to comply with its requirements. A large portion of the grading on the first ten miles has been done, and it is the intention of the Company to finish it and put on the cross-ties by the 1st of February.

It will be gratifying to the stock-holders, and to all friends of this undertaking to be informed, that the means have been already provided to construct and finish the first twenty-five miles of road, to be paid on the estimates of the Engineer as fast as they may be required for a vigorous prosecution of the work. Therefore, there is no danger of a non-compliance with the requirements of the charter; and those from whom assessments on stock are due, or may become due, may be assured that their rights will be preserved.

It may be proper to allude, briefly, to the causes which have induced Texas to make such liberal offers to railroad companies for the purpose of inducing them to a vigorous prosecution of their works. The entire State may be said to be an inclined plain stretching from the Rocky Mountains to the Gulf of Mexico, with sufficient declivity to give a rapid current to the large rivers; all of which, springing from the vicinity of that elevated chain, or in the northern section of the State, descend to the Gulf in lines sufficiently direct to cause their currents to flow, when full, with great rapidity, and to remain in a navigable state but for a short time and at uncertain periods. Their banks being alluvial and subject to change, render permanent improvement of the navigation almost impracticable. The soil is a dark, rich mould, resting on a limestone foundation, and of so clayey a nature as to be almost impassable for loaded teams in wet weather. Therefore, the transportation of the produce of the country to market is so expensive as materially to prevent, and in the most fertile districts of the interior almost to cut off, immigration and production. The extraordinary natural advantages and resources of the State have attracted to it a population of the most enterprising and energetic character. Men of great intelligence

and comprehensive statesmanship, who perfectly understand all the elements of their position, have control of public affairs. They perceive clearly the difference between a State teeming with a vigorous, wealthy, tax-paying population, and one of vast extent almost without inhabitants. They do not require to be informed that the strength and power of a State lies in the people, and not in an uncultivated public domain, no matter how extensive it may be. They, therefore, desire to afford every possible inducement to the construction of railroads, not only as the cheapest available means of transporting the products of the country to market, but of encouraging immigration. They also take a correct view of the vast advantages which must accrue to the State from the completion of this great national work through her territory. Nor do they fail to perceive the commanding commercial position which its connection with the railways extending from the Gulf coast will give to Texas. They have, therefore, come forward with all these considerations in full view, and, with a forecast and liberality commensurate with the vastness of the enterprise, resolved to secure its location, against all rivalry and competition, on the route which nature herself has so plainly designated, through the territory of their State.

When we take into consideration the mildness of the climate of that portion of the continent through which this road will pass, the vast extent of fertile soil, the great variety and value of its products, and the inexhaustible mineral wealth which nature has deposited almost on the surface of the earth, and distributed in the greatest profusion at various points along the line of the proposed work, not only in Texas but west of the Rio Grande, in New Mexico, and the Northern States of Mexico, we shall be drawn irresistibly to the conclusion that the enterprise in which this Company is engaged, is to open new and vastly extensive regions of untold value to agriculture and commerce with all their concomitant advantages and blessings.

As the chartered privileges and legal rights of this Company are at

present limited to the State of Texas, it is proper first to present such views, considerations, and calculations as properly belong to it as a State work, with its connections with the national web of railroads west and east of the Mississippi river. By reference to any railroad map it will be seen, that the railroad system of the United States is approaching by converging lines, the eastern border of Texas. It appears that without concert or agreement, but impelled as it were by a common instinct, and almost a prophetic perception, the principal railroad companies in the Western and Southern States have given such direction to their works as to constitute them feeders to this, contemplated, national thoroughfare through Texas.

The Illinois Central Railroad is a striking proof of the truth of this remark. Located perpendicularly to the lines of railway connecting the Eastern and Western States, and consequently of the course of traffic and travel, it had no connections to make it a part of a national line. The Cairo and Fulton Railroad in Missouri and Arkansas, will be a continuation of it to the eastern boundary of Texas. There it will be met by the Mexican Gulf and Henderson Railroad, which, commencing at one of the best ports on the coast of Texas, will extend to and intersect the road of this Company at the city of Marshall, and thence to Fulton, thus uniting the Southern Pacific Railroad with the railroads and commercial cities of the Northwest, and the system of railroads leading to the Atlantic cities in the Northeastern States. This Mexican Gulf and Henderson Railroad will also give to the work of this Company a most important connection with the commerce of the Atlantic at a port where the iron and all material destined for the Pacific road may be removed from on shipboard immediately to the cars and transported, at the least expense, to its place of destination. In fact this road, from its location and Gulf connection, seems destined to become virtually the great commercial feeder and Gulf terminus of the Southern Pacific Railroad. The Memphis and Little Rock Railroad will join the Cairo and Fulton road at Little Rock, and give a connection with our road from Kentucky, Tennessee, and all the States east of them. The Mississippi,

Ouachita and Red River Railroad commences on the Mississippi river near the southern border of Arkansas, and will connect with this road at Fulton, where it will meet our northern connection at Red River. The Vicksburg and Shreveport Railroad connects with the Southern Pacific Railroad at the Texas line, about midway between Shreveport and Marshall. This road also connects eastwardly with the railroad in course of construction through Mississippi and Alabama to Montgomery, whence there is already a railroad communication with Savannah, Charleston, and the railways leading to the Northeastern cities. The New Orleans and Opelousas Railroad is in progress towards the eastern terminus of the Southern Pacific road.

The aggregate length of the five railroads above mentioned west of the Mississippi, is about twelve hundred miles. The means to complete them, it is believed, has been already provided or will be readily obtained. They all commence at important points on the Mississippi river and extend in converging lines towards, and are designed to connect the entire railroad system of the Union, through our great national channel of communication, with the Pacific.

The climate and soil of central Texas, through which the works of this Company are to be constructed, have been so frequently and glowingly described, it would seem unnecessary to repeat what has been so often said. It is simple justice to that beautiful region, however, to state that all persons who have seen it unite in praise of the perfect salubrity of its climate and the unsurpassed fertility of its soil. They are both so peculiarly constituted as to permit with perfect success the safe application of labor, and to yield the most abundant and valuable products. As a grazing country it is vastly superior to the Northwestern States. The grasses of Texas are more luxuriant and nutritious than those of Illinois, Iowa, or Wisconsin, and the agricultural crops are more numerous and valuable. That portion of Texas lying between the 31st and 34th parallels of north latitude, produces wheat, rye, oats, barley, Indian corn, Irish potatoes, sweet potatoes, turnips, and all garden vegetables, in greater perfection and larger quantities per acre

than they are produced in the Northwestern States. In addition to these, it is the most valuable cotton-growing part of the whole continent. Sugar may also be produced there with great facility for family use.

The mildness of the climate obviates the necessity of preparing, at great expense and labor, the food for animals through the winter. They subsist, without care, on the native grasses of the country. Thirty bushels of wheat and fifty bushels of corn per acre are not regarded as more than average crops. The country is abundantly watered by the springs and head branches, which feed the large streams that flow into Red River and the Gulf of Mexico. The line of this work extending across these dividing waters, leave us no large rivers to cross until we reach the Brasos. Such are the inducements held out to immigration in the great advantages of this beautiful and fertile country, that notwithstanding the time and expense required to convey families to it through the present tardy channels of communication, the population has increased four hundred per cent. in the last ten years. The opening of all, or any one of the railroads above mentioned, from the Mississippi River to the Southern Pacific road, will cause such a flood of population to spread over the fertile lands of Texas as never before swelled the power and wealth of any State of this Union, east of the Rocky Mountains.

If, however, we suppose the increase of population will only be kept up to the ratio of the last ten years, with all these facilities for emigration to Texas, and for the transportation of her produce to market, and that the population now amounts to but six hundred thousand, she will have, at the end of the next ten years, three millions of people. This immigration will come in on the railroads now in rapid progress to completion from the Mississippi River, and spread itself over that part of the State which will supply business for the railroad of this Company.

A glance at the map of Texas will show very clearly the section

of country which will thus speedily be crowded with an agricultural population, the products of whose industry will supply a large amount of railroad transportation. The striking contrast of the facilities afforded by the climate and soil of Texas for rapid settlement and production, as compared with the Northwestern States, must not be lost sight of. The planter who settles on her rich prairies considers he has not been successful unless he produces at least half a crop for market the first year, and a full crop the second.

The main work of this Company is designed to extend from the eastern to the western boundary of the State, not far from the 32d parallel of north latitude, with a branch from some suitable point, to the town of Fulton in Arkansas. It will readily be perceived, that railroads so located will command all the traffic *north* of this east and west line. That portion of Texas which will be more immediately benefited by these works lies *north* of the 31st parallel of north latitude, and south of the 34th; extending from the eastern boundary of the State to the 103d degree of longitude west, and thence dropping down to the 29th degree of north latitude to El Paso, a distance, according to Col. Gray's survey, of 783 miles. This belt of country contains about 140,000 square miles, and will unquestionably receive almost the entire immigration into Texas for many years to come. There will also spring up a very considerable amount of traffic connected with that portion of Texas north of the 34th parallel of north latitude, which, together with the adjoining Indian Territory, north of Red River, and west of the 94th degree of west longitude, and south of Kansas, contains more than 86,000 square miles. This extensive tract of country must be tributary to our Railroad for an outlet to market. If we suppose 140,000 square miles contained in the belt north of 31° and south of 34°, will receive three fourths of the estimated immigration of the next ten years (1,800,000), and add to it the present population of that section of the State (300,000), we have an aggregate at the end of the decade of 2,100,000. This almost equals the population of Georgia, Alabama, and Mississippi in 1850. In the census of that year, the

population, square miles of territory, and cotton crop of those States are stated as follows :

	Population.	Sq. miles.	No. bales of Cotton.
Georgia,	906,185	58,000	499,091
Alabama,	771,623	50,722	564,619
Mississippi,	606,526	47,151	484,292
	<hr/> 2,284,334	<hr/> 155,873	<hr/> 1,548,002

The estimated increase of the population of Texas, aided by railroad transportation, will not appear extravagant when the fact, that immigration has *exceeded* one hundred thousand per annum the last two years, without such facility of movement, is taken into consideration. Nor will it be regarded as unreasonable to suppose that 2,100,000 people on the fertile soil of Texas will produce as many bales of cotton, or their equivalent in other exportable products, as were produced in 1850 in the three States above mentioned.

For the purpose of simplifying the following estimates of revenue of the Railroad, derivable from freights on produce, the price charged on Southern Railroads for the transportation of cotton, per bale, has been adopted as the surest guide to reasonable results; because that article pays *less* freight in proportion to its value, than any other staple product of the South. A bale of cotton weighing four hundred pounds, (worth \$40) pays but one dollar freight for one hundred miles transportation, or one fourth of a cent a pound per hundred miles. Thirty-two bushels of Texas wheat, worth \$1 00 per bushel, and weighing 65 lbs. per bushel, weighs 2,080 pounds, which, at one fourth of a cent per pound per hundred miles, would cost \$5 20, or more than five times the price charged for cotton; therefore, as a very large portion of the traffic through central and northern Texas will be wheat and other cereal grains, if we found our estimates on the charge for the transportation of cotton, we shall be far within the limits of prudent calculation. And also with respect to package goods.—The charter authorizes the Com-

pany to charge half a cent per mile for every hundred pounds. If we estimate every four hundred pounds of merchandise to be worth \$40, the supposed average value of a bale of cotton, and calculate the charge of transportation at one fourth of a cent per mile for every hundred pounds, we shall not be deemed extravagant. If we suppose that immigration will only amount to two thirds of the above estimate; and that, on the rich belt of country under consideration, they will be able to produce only two-thirds as many bales of cotton as were produced in 1850 by the people of Georgia, Alabama, and Mississippi, namely, 1,082,001 bales; and that the average distance which this freight will be carried on the Railroad through Texas will not exceed an average of two hundred miles; and that consequently this cotton will pay but two dollars per bale freight,—the road will derive from this source a yearly income of \$2,064,002. Political economists usually estimate the consumption of merchandise by an agricultural people in a new country, without manufactures, to be equal in value to their exportable products; but, for the purpose of keeping within the strictest limits of prudent calculation, we will estimate the consumption at only one-half the value of the production, and that the freight on the merchandise will be but one-fourth the amount estimated on the produce, viz., \$516,000. When we consider that the new settlers in this country will be compelled to import every article of necessity and luxury, and that the abundant yield of a soil of unsurpassed fertility will enable them to indulge their tastes as well as supply their wants, this calculation must be regarded as reasonable.

The immigration into Texas for the next ten years, taking the ratio of increase for the last four years, has been estimated at 2,400,000. This would be at the rate of 240,000 per annum. If we assume, as the basis of a calculation, that the immigration will amount to two thirds of that number, or 160,000, and that three fourths, or 120,000, will pass on average a distance of two hundred miles on our railroad in their progress to various parts of the State, at the charge of five cents per mile, the fare allowed in the Charter, the

revenue from this source will be \$1,200,000. This is exclusive of their animals of every description, farming utensils, and household furniture, of which we make no estimate.

During the last five years the population of the State of Illinois has increased at the rate of 90,000 per annum, notwithstanding her position among the Northwestern States, all of which present similar advantages of soil and climate to precisely the same description of labor. The emigration to Texas will be composed of a totally different class of people. A vast number of planters in the Southern States are only waiting for the opening of railroad communication with Texas, to leave their exhausted soils and seek a more profitable employment for their labor on her fertile prairies. That State now presents, for settlement and cultivation, the only remaining great body of unoccupied cotton land within the limits of the United States; therefore as soon as it shall become easily accessible, it must receive almost the entire emigration from the fifteen slave-holding States; whereas Illinois receives only her share of the emigration which flows westward from the non-slaveholding States. Consequently it will be perceived that the estimated emigration of 160,000 per annum to Texas is not as large, in proportion to the entire movement westward from all the Southern States, as the actual immigration into Illinois. In connection with this branch of the subject, it is proper to call particular attention to the *important* fact that the United States have disposed of all the valuable cotton lands that, not many years ago, formed a large portion of the public domain at the Southwest, and that those lands, from constant tillage in a warm climate, where neither fertilizing grasses or cereal grains flourish, have become, to a great extent, very much exhausted. Therefore the United States have no lands to offer for sale and settlement that can, by any possibility, come into competition with the lands of Texas. Consequently, the idea that the large quantities of public lands granted by Congress for military services, and to aid the construction of railroads, may have a tendency to depreciate their value, is not applicable to the lands of

Texas, nor will the emigration to the Northwest interfere with or diminish the movement from the slaveholding States to the Southwest.

The commerce of New Mexico has been estimated at five millions of dollars, which is now conducted through Missouri. When the Southern Pacific Railroad shall be completed to El Paso, it will become the channel of this trade, which will doubtless be vastly increased by the facilities which it will afford of obtaining supplies and transporting products to market. If we reduce this five millions of commerce to the rule laid down for ascertaining the probable revenue derivable from it, and estimate it as so much value in cotton, we have, at \$40 per bale, the result of one hundred and twenty-five thousand bales, as the representative of the freight to which we may look for revenue to the Railroad from this source.

This number of bales of cotton, at one dollar per bale for every hundred miles, would pay on the 783 miles from El Paso to the eastern boundary of the State, \$7 83 per bale, and the freight on the whole amount would be \$978,750. If we assume one half of this sum as the probable revenue derivable from not only the freight to and from New Mexico, but the travel also, which must become very considerable on account of the richness of the mines of copper and silver, the estimate must be regarded as moderate at \$489,375.

When the Railroad shall be completed to El Paso, the travel to and from California will pass upon it. This will readily be perceived from the following facts, showing the time and expense of this route, as compared with that via the Isthmus of Panama. The *average* time required to make the passage by the Isthmus route, may be stated at about twenty-five days, from New York to San Francisco, and the expense at two hundred dollars. Many of these passengers come from the West and Southwest, who could travel to the eastern border of Texas at an expense not greater than is required to come to New York; but if we add twenty-five dollars, to defray the *average* expense to the eastern terminus of the Southern Pacific Railroad, it will be quite sufficient

to place them there instead of at New York. The *average* time from all parts of the Union, to arrive at the eastern terminus of the Southern Pacific Railroad, may be estimated at five days, on the completion of the Vicksburg and Shreveport Railroad. The distance through Texas, 783 miles, may be performed at the rate of twenty-five miles per hour, including delays, or about thirty-three hours to El Paso. Thence to the Island of Tiburon, on the Gulf of California, a distance of about four hundred miles, in stages, may be performed at the rate of five miles per hour, or in about eighty hours. Thence to the head of the Gulf, a distance of some two hundred miles, may easily be performed in a steamer in thirteen hours. The distance from the head of the Gulf, across the peninsula of Lower California, to All Saints Bay, about sixty miles, may be performed in stages in twelve hours. Thence to San Francisco, steamers may run in two days with perfect ease. The time required to make the journey from the Atlantic States to San Francisco, when the Southern Pacific Railroad shall be completed to El Paso, may be thus stated:—

Average time to the eastern terminus of the	TIME.	EXPENSE.
Southern Pacific Railroad, . . .	5 ds.	\$25 00
Passage on the Railroad to El Paso, . . .	1 " 8 hrs.	40 00
From El Paso, by stage, to Tiburon, on the Gulf		
of California, 400 miles, at 10 cts. per mile,	3 " 8 "	40 00
From Tiburon to head of the Gulf, . . .	0 " 13 "	4 00
Across Lower California, 60 miles, . . .	0 " 12 "	6 00
To San Francisco,	2 " 0 "	10 00
	12 " 17 "	\$125 00

Thus it will be perceived, that when the Southern Pacific Railroad shall be completed to El Paso, the journey may be performed from New York to San Francisco in about twelve days and an half, and at an expense not exceeding \$125. From all the Middle and Western States, the time and expense will be less.

This reduction of time and expense, as compared with the route via the Isthmus of Panama, must command not only the travel but the transportation of the mail. The perfect healthfulness of the climate would secure to it the entire passenger traffic, were the time and expense the same; but when we take into consideration the great saving in both, there cannot be a doubt of the result on the mind of any unprejudiced, disinterested person. These facts show that the passengers and mails to and from California, will pass over the Southern Pacific Railroad whenever it shall be completed to El Paso. The least estimate of the number of persons who pass to and from California, is fifty thousand each way per annum.

This number, at five cents per mile, would pay to	
the Railroad a revenue per annum of	\$3,915,000 00
The transportation of the mails, at \$300 per mile,	
will give	234,900 00

When this Railroad reaches El Paso it strikes Chihuahua, one of the richest States of Mexico, with a population of more than 150,000, and whose mineral wealth is almost incalculable (see Appendix A). It is quite impossible to imagine or state the probable increase of travel and transportation on the Railroad, which may be caused by opening this, at present, inaccessible region of untold and incalculable riches, by railroad communication with the commercial world.

When the mineral and metallic resources of this State are considered, it will not be regarded as an extravagant calculation to estimate its commerce and passenger traffic to be quadruple that of New Mexico, or \$1,957,500.

In these estimates of the traffic on the Southern Pacific Railroad, nothing has been said of the coal-trade, which may at no distant day equal that of Pennsylvania. That mineral abounds on the line of the work in great quantity and perfection, and is as easy of access as it can be found anywhere on the face of the earth. It is found in conjunction with iron ore of the best quality and inexhaustible quantity, limestone

and water power. These minerals are contiguous to water, which is the most available and cheapest power to bring into profitable use these vast mineral treasures.

Capt. Pope has discovered beds of the richest marl in boring for water on the Llaño Estacado, and also gypsum. These minerals will undoubtedly form the bases of an extensive traffic on the Railroad. A very large item of profit to the Railroad might with perfect propriety, be added as derivable from passengers to and from Sonora, which from the most reliable accounts is richer in the vast deposits of the precious metals, *especially silver*, than any other spot on the globe. (See Appendix A, Sonora.)

But as we are now considering this work as only extending to El Paso, under its present charter, and as Sonora cannot be said to be fairly open to American enterprise until it shall be completed to the Colorado or the Gulf of California, no estimate of traffic to that State is presented. The engineer of this Company, Major E. A. Blauch, estimates the cost of this Railroad through Texas, when equipped for business, at \$18,686 per mile, and the whole cost at \$14,631,138.

The traffic on the road as estimated in the foregoing pages may be said to be of two classes or descriptions, namely, the yearly accruing revenue, and the aggregate sum which may be expected per annum, when the work shall be completed to El Paso. The aggregate amount of traffic which may be looked to as a source of revenue on the completion of the road to El Paso, is made up of the following items:—

RECAPITULATION.

Freight on 1,032,001 bales of cotton estimated to be transported one hundred miles at \$2 per bale	\$2,064,002
Estimated freight on merchandise for the supply and consumption of the country, including all kinds of implements for agricultural purposes, considered as one-third the freight on produce	688,000
Estimated revenue from immigrants per annum, after two hundred miles of railroad shall have been completed .	1,200,000

Estimated revenue from traffic with New Mexico	489,375
Estimated revenue from 50,000 passengers to and from California, at 5 cents per mile	3,915,000
Transportation of mails at \$300 per mile on 783 miles	334,000
Estimated traffic with Chihuahua, including passengers	1,957,500

All these items make up an aggregate sum of \$9,113,877 as the probable income of the Railroad when completed to El Paso, on an estimated expenditure of \$14,631,138. If we deduct one half this gross income for superintendence and repairs, we have \$4,556,938.50 as the net earnings of the road per annum, or a revenue of more than thirty-three per cent. If we estimate the land grant of 8,017,600 for 783 miles of railroad, at \$5 00 per acre, it will produce a gross sum of \$40,089,600, and a surplus, after paying for the road, of \$25,458,462.

It will be perceived that the revenue arising from the transportation of produce, merchandise, immigration, and the mails, will commence with the completion of the first section of twenty miles, and will, beyond doubt, pay a large interest on the capital employed. For example, it may be useful to give the estimated cost and probable income of that section of the road between the Texas boundary and the city of Marshall, a distance of twenty-two miles. According to the estimate of the Engineer, at \$18,686 per mile, this section will cost \$411,092.

The quantity of produce which will be carried over it, the first year after its completion, is estimated by intelligent men to be equal to at least 60,000 bales of cotton, which, at 50 cents per bale, will give	\$30,000
Merchandise,	30,000
50,000 immigrants, at \$1 10 each,	55,000
U. S. mails, at \$300 per mile,	6,600
Gross revenue,	\$121,600
Deduct, for repairs and superintendence,	21,600
	<hr/>
	\$100,000

Net revenue of about 25 per cent. interest on the capital employed. This estimate of revenue is undoubtedly too low; but it is given to show the unquestionable intrinsic value of the undertaking, exclusive of the land grants. As the work progresses westward, the receipts will increase. The land-grant for this section will be 256,000 acres, which, at \$5 per acre, will give \$1,280,000.

In this Report, thus far, the enterprise in which the Company is engaged, has been treated and considered as a self-sustaining undertaking, to which alone the capitalist is to look for a reasonable remunerating interest on his investment; but we have now arrived at a point where the whole truth must be stated, in clear, distinct, and concise terms. Under the charter and the laws of Texas, this Company will be entitled to 10,240 acres of land to the mile, for every mile of Railroad "completed and put in running order." There does not remain a doubt on the mind of any intelligent man, who has informed himself of the value of these lands, that they will be worth an average of \$5 00 per acre, by the time the Railroad shall be completed to El Paso; or \$51,200 for every mile of road completed; which is \$32,514 more than the estimated cost of the work per mile.

If we were left to conjecture respecting the effect which such a work as this will have on the value of lands appropriated to aid in its construction, there might be excuse for hesitation and doubt; but, fortunately, in the progress of our rapidly advancing country, in improvements of this nature, we have, in the rise, progress, and perfect success of the Illinois Central Railroad Company, an illustration of the wisdom and statesmanship of the policy of granting land to railroad companies for the purpose of aiding the construction of their works, and promoting the general prosperity of the country. The history of that undertaking is so perfectly well known, it is not necessary to repeat it here; but as the *results* which have been obtained by the perfect success of the work, are illustrative of what may be accomplished by this Company, it is deemed proper to refer, briefly, to them.

R. B. Mason, Esq., General Superintendent, says, in his report dated

Chicago, January 1st, 1856, "The line of this road, at the time of its location, passed through the most sparsely settled portion of the State. At several points it was nearly a day's journey, across unbroken prairie, from one habitation to another. Few additional improvements were made previous to the opening of the road; the prairies are now dotted with substantial farm houses, and are assuming in many places the appearance of a settled country. The early settlements were made near the streams, or in the vicinity of timber. Experience has proved that the open prairies afford a more healthful residence, and on them a few years will produce a thrifty growth of fruit and shade trees."

The following extract is from the report of John Wilson, Esq., Land Commissioner of the Illinois Central Railroad Company, describing the condition of the country, and stating the value of the land previous to the construction of the road :—

"These lands, with all their productiveness, quarries, and mineral wealth, had remained comparatively unsettled and uncultivated till this Road was constructed, and would have continued so in all probability for many years to come, but for the facilities of travel and transportation furnished by it. For about a third of a century most of them had been in the market, subject to private entry, and yet in very few instances were purchasers found for them; and if in process of time they had been sold by government, it would have been at the nominal price of 12½ cents per acre, to which they had been reduced by the operations of the Graduation Act of 4th August, 1854. Remote from markets, without facilities for transportation, and with roads almost impassable, the cost of hauling the products of the lands to market, and the time employed therein, amounted almost to as much as the value of the load. *Then*, corn brought from 5 to 8 cents per bushel, and hence, except for home consumption, the farmer had no encouragement to till his lands. Stock was equally unprofitable, for the markets were so remote that it could not be driven to advantage, and to haul it would have cost nearly as much as it was worth. *Now*, produce of every kind and stock command ready sales with choice of markets, and bring nearly New York prices, less the cost of transportation; and consequently the farmers are growing rich."

In striking contrast to the foregoing picture of the country, and of

the value of the lands previous to the construction of the Road, may very properly be placed the prices at which the Company's lands sold last spring and summer.

In March, the average price at which the lands were

sold was	\$12 00 per acre,
In April,	16 00 " "
" May,	15 00 " "
" June,	15 00 " "

The aggregate amount of money received during those four months from these sales at those prices was \$1,046,607 83. The large amount received is sufficient evidence of the general average value of the land.

The condition of Texas with respect to facilities for transportation is more unfavorable than was that portion of Illinois along the line of her Central Railroad previous to the construction of that work. Yet such is the superior quality of the soil along the proposed line of the Southern Pacific Railroad, the value of its products, and the great advantages of a mild climate, where agricultural labor can be comfortably pursued in winter as well as summer, and the exemption from all those expenses of labor and money necessary in a climate like that of Illinois, to sustain men and animals through long and dreary winters—that uncultivated lands, two or three hundred miles from navigation, and from twenty to an hundred miles from the line of the proposed work, have sold as high as \$5 per acre, and cultivated lands from \$10 to \$15.

These facts prove more conclusively than all the glowing descriptions that could be written, the vast superiority of the soil and climate of Texas over those of Illinois, and consequently the superior advantages and the great value of the Southern Pacific Railroad undertaking as compared with the Illinois Central Railroad. If, therefore, the two works stood on the same footing with respect to grants of land, the Texas enterprise would, on the strictest scrutiny, hold out the

greatest inducements to capitalists and the largest profits on investments. But when we consider the facts connected with both these railroads, the contrast will be vastly increased in favor of the Southern Pacific. The Illinois Central received a grant of 3,840 acres of land to the mile. The Southern Pacific receives a grant of 10,240 acres per mile. The Illinois Central is required to pay to the State a tax of 7 per cent. on the gross earnings of the road, which is nearly equal to 14 per cent. on its net earnings, which is a large income for any railroad to make.

The Southern Pacific pays no tax on its income to the State of Texas, but it receives from the State a loan of \$6,000 per mile, at six per cent. interest for ten years, for every mile of railroad finished and put in running order, as fast as sections of ten miles shall be thus completed.

The total amount of land to which the Illinois Central Railroad became entitled, was 2,595,000 acres for 704 miles of road. The Southern Pacific Railroad will be entitled, supposing the line to be but 783 miles in length, as surveyed—to 8,017,920 acres.

The Report of the Illinois Central Railroad Company, dated March 19th, 1856, page 8, states that \$20,374,446 41, had then been expended on 704 miles of their road, which shows an average cost of \$28,940 97 per mile. The estimated cost of the Southern Pacific Railroad for 783 miles is but \$14,631,138. Showing a difference in favor of the latter of \$5,743,308.

The next step would be to estimate the value of the 10,240 acres per mile of Texas land granted to the Southern Pacific Railroad Company, as compared with the 3,840 acres of Illinois land granted to the Illinois Central Railroad Company. There cannot be a doubt on the mind of any man who is well informed, that were the grants equal in quantity, the Texas grant would be much the most valuable per acre. It is estimated that the Illinois Company will pay for the entire construction of their work with funds received from the sale of their lands, and have a large surplus. If they can do this, with their comparatively

small grant, what may not the Southern Pacific Railroad Company expect to accomplish?

Up to this point we have been considering the Southern Pacific Railroad as simply a Texas work, in connection with the grant of land and loan of money offered by her for its construction. We must now extend our views across the continent, and contemplate the vast results which are to flow from the construction of a work which is destined to unite the Atlantic and the Pacific, join with bands of iron our Atlantic and the Pacific States, to establish one solid column of American people from ocean to ocean, throughout our territorial limits, and to bring into value those vast regions filled with mineral and metallic wealth, which are now roamed over by the savage, who cannot appreciate, and the Mexican, who is too imbecile to claim and hold them.

By the Gadsden Treaty, concluded with Mexico in 1854, the northern part of Chihuahua and Sonora, embracing a district of some 29,000 square miles, extending from El Paso on the Rio Grande to the Colorado, a distance of about 550 miles, was ceded to the United States.

The surveyed route of the Southern Pacific Railroad passes nearly through the center of this territory, and approaches the richest silver-mines in the world; as the following extract from the work of the Hon. Robert A. Wilson, late Judge of the Sacramento District, California, published early in the present year, by Harper & Brothers, will prove. The statements of Mr. Wilson are corroborated by those of H. G. Ward, Esq., Chargé of Great Britain in Mexico, in his work published in London A.D. 1828, entitled, "Mexico in 1827," an "authority," as Mr. Wilson justly says, "that cannot be disputed," because he acted and wrote under orders and by authority of his government. As will be perceived, Mr. Wilson had resided and held a high position in California. He was therefore well acquainted with mining-countries, and not likely to be led into error or attempt to mislead others. His accounts of Chihuahua and Sonora are clear, full, and conclusive,

establishing beyond doubt or controversy the inestimable value of those mineral and metallic regions which have remained for so many years in possession of the roving tribes of savages, whose incursions have depopulated the northern states of Mexico and left them a second California, to be taken possession of and made to pour out their vast treasures into the lap of the commercial world, by a race whose energy and enterprise are equal to the task. At page 383, Mr. Wilson says:—

“Chihuahua and Sonora are the states or departments to be affected by our Pacific Railroad. Sonora is the most valuable of the two, not only on account of its inexhaustible supply of silver, but also on account of its delightful climate and agricultural resources. It is like the land of the Blessed in Oriental story. California does not surpass it in fertility or in climate. With industry and thrift, it could sustain a population equal to that of all Mexico. The table-lands and the valleys are so near together, that the products of all climates flourish almost side by side. Food for man and beast was so easily procured, that the descendants of the early settlers sunk into effeminacy long before the breaking out of the great Apache war of the last century. Drought, however, makes the formation of artificial lakes and reservoirs necessary to the full development of its agricultural wealth.

“But it is the remarkable abundance of silver which distinguishes it above all other countries, except Chihuahua. I have described, in a former chapter, the long and laborious process by which silver is produced from the ore in the southern mines, and also the great depths from which it is raised. In Sonora, silver is most commonly extracted from the ore by the simple process of fusion. But in the district of Batopilos, it is, or rather was, found pure. If we should adopt the theory that veins of ore extend through the entire length of Mexico, then I should say that they ‘crop out’ in Sonora, or rather, that the silver *lodes*, which are here above the surface, dip toward the city of Mexico, and also northward toward California. The mountain chain which traverses California under the name of the *Sierra Nevada*, appears to be only a continuation or re-appearance of the mountain chain here called *Sierra Madre* (Mother Range), which forms the boundary between the departments of Sonora and Chihuahua. On the western declivity of this mountain range, the most remarkable illustration of this fact of cropping out is found at Batopilos, already mentioned. This town is in

a deep ravine. The climate is like that of the California Gulches—intensely hot, but remarkably healthy. Here the *lodes* of silver ore are almost innumerable,* with crests elevated above the ground.

"The mine of *El Carmen*, in times of the Vice-Kings, produced so immensely, that its proprietor was ennobled, with the title of Marquis of Bustamente. This was the beginning of the family of Bustamente. A piece of pure silver was found here weighing four hundred and twenty-five pounds.

"I should like to continue in detail to enumerate the rich surface mines in the southern portions of these two States; but lest I should weary my reader, I must omit them, and refer those who wish to learn more, to the translations, from the last official reports of the *Mineria*, entitled *Chihuahua and Sonora*, which are embodied in the Appendix: 'The "Good Success" Mine (*Bueno Sucesso*) was discovered by an Indian, who swam across the river after a great flood. On arriving on the other side, he found the crest of an immense *lode* laid bare by the force of the water. The greater part of this was pure, massive silver, sparkling in the rays of the sun. The whole town of Batopilos went to gaze at the extraordinary sight, as soon as the river was fordable. This Indian extracted great wealth from his mine; but, on coming to the depth of three Spanish yards (*varas*), the abundance of water obliged him to abandon it, and no attempts have since been made to resume the working. When the silver is not found in solid masses, which require to be cut with the chisel, it is generally finely sprinkled through the *lode*, and often serves to nail together the particles of stone through which it is disseminated.' 'The ores of the *Pastiano* mine, near the *Carmen*, were so rich that the *lode* was worked by bars, with a point at one end and a chisel at the other, for cutting out the silver. The owner of the *Pastiano* used to bring the ores from the mine with flags flying, and the mules adorned with cloths of all colors. The same man received a reproof from the Bishop of Durango when he visited Batopilos, for placing bars of silver from the door of his house to the great hall (*sala*), for the Bishop to walk upon.†

* "I would not like to make such extravagant statements on my own authority, however satisfactory the testimony might be to myself; for the abundance of silver in Sonora is beyond the belief of most men. But, fortunately, I have, in Ward's '*Mexico*,' an authority that cannot be disputed. The work is accessible to all my readers. The author was charged by the British government with an examination of the mines of Mexico."

† Ward—*Ibid*.

"The next mine of interest in our progress northward is the *Morelos*, 'which was discovered in 1826 by two brothers named Aranco. These two Indian *peons* were so poor that, the night before their great discovery, the keeper of the store had refused to credit one of them for a little corn for his *tortillas*. They extracted from their claim \$270,000; yet, in December, 1826, they were still living in a wretched hovel, close to the source of their wealth, bare-headed and bare-legged, with upward of \$200,000 in silver locked up in their hut. But never was the utter worthlessness of the metal, as such, so clearly demonstrated as in the case of the Arancos, whose only pleasure consisted in contemplating their hoards, and occasionally throwing away a portion of the richest ore to be scrambled for by their former companions—the workmen.'

"Near the Morelos is the *Jesus Maria*. Though on the western or Sonora slope of the mountain, it is only eight leagues from Chihuahua. This, like Morelos, is a modern discovery, and, of course, was not included in the number of those Sonora mines, which produced such an intense excitement about one hundred years ago in Mexico, and even in Spain.

"Here, within the circuit of three leagues, two hundred metallic *lodes* were registered in one year. The story of the mine of El Refugio, discovered by a fellow of the name of Pacheco, gave occasion for anecdotes like those of the Arancos, which we have just recited. A dealer had an old cloak which took the fancy of Pacheco, and to purchase this thing he gave ore from which the dealer realized \$8,000. Three twenty-fourths (three bars) of the product of this mine netted between the years 1811 and 1814, \$337,000. On the Sonora side of the mountain is *Santa Eulalia*. The ores of this *real* (district) are found in loose earth, filling immense caverns, or what are called 'rotten ores' in California, and are easily separated by smelting. One shilling a mark was laid aside from the silver which one of these caverns produced, which shilling contribution constituted the fund out of which the magnificent cathedral of Chihuahua was built. Proceeding northward, we came to a spot the most famous in the world for its product of silver, the mine of *Arazuma*. For near a century the accounts of the wealth of this mine were considered fabulous; but their literal truth is confirmed by the testimony of the English ambassador. After examining the old records which I have quoted, I have no doubt that the facts surpassed the astonishing report; for in Mexico the propensity has ever been to

conceal rather than overestimate the quantity of silver, on account of the king's fifth; yet it is the king's fifth, *actually paid*, on which all the estimates of the production of Sonora silver mines are based.

"Arazuma (which, in the report of the Minería that I have translated for this volume, appears to be set down as Arizpa) was, an hundred years ago, the world's wonder, and so continued until the breaking out of the great Apache war a few years afterward.

"Men seemed to run mad at the sight of such immense masses of virgin silver, and for a time it seemed as if silver was about to lose its value. In the midst of the excitement a royal ordinance appeared, declaring Arazuma a 'creation of silver' (*creador de plata*), and appropriating it to the king's use. This put a stop to private enterprise; and, after the Indian war set in, Arazuma became almost a forgotten locality; and in a generation or two afterwards, the accounts of its mineral riches began to be discredited.

"We have the following record in evidence of the masses of silver extracted at Arazuma. Don Domingo Asmendi paid duties on a piece of virgin silver which weighed 275 pounds. The king's attorney (*fiscal*) brought suit for the duties on several other pieces, which together weighed 4,033 lbs. Also for the recovery, as a curiosity, and therefore the property of the king, of a certain piece of silver of the weight of 2,700 lbs. This is probably the largest piece of pure silver ever found in the world, and yet it was discovered only a few miles distant from the contemplated track of our Pacific Railroad.

"I might continue enumerating the instances of mineral wealth brought to light in these two States, Sonora and Chihuahua, if I supposed it would be interesting to my readers; but as they have heard enough of silver, I may add that rich deposits of gold were found at Molato in 1806, and a still greater discovery of gold was made a few years ago. In this latter discovery, the poor diggers suffered so much from thirst that a dollar was readily paid for a single bucket of water, and at length, by reason of the drought, this richer *placer* had to be abandoned.

"Such is Sonora, a region of country which combines the rare attractions of the richest silver mines in the world, lying in the midst of the finest agricultural districts, and where the climate is as attractive as its mineral riches. But its richest mineral district is near its northern frontier, and is almost inaccessible, and can never be advantageously worked without an abundant supply of mineral coal for smelting; nor can any

of its mines or estates be successfully worked without greater security for life and property than at present exists. The capitalists of Mexico will not invest their means in developing the resources of Sonora; and in consequence the finest country in the world is fast receding to a state of nature. I found in the palace at Mexico a copy of the last report of the Governor of Sonora upon the state of his department, in which he mentions, among many other causes of its decadence during the last few years, the extensive emigration of its laboring population to California. Extravagant as are these statements of the mineral riches of Sonora, they do not, probably, come up to the reality, as the largest of them are founded on the sums reported for taxation at the distant city of Mexico, when it was notorious, as already stated, that a large portion of the silver was fraudulently concealed in order to avoid the taxes. Such concealment could be successfully carried on in a region so distant and inaccessible as Sonora was in the time of Philip V.; for it was in the reign of that idiot king, before the liberal mining ordinances of Carlos III., that the Sonora mining fever broke out.

"An hundred years have passed since the once formidable Apaches swept over Northern Sonora like a deluge, blotting out forever the hopes which the Spanish court had conceived of retrieving the fallen finances of their empire from this *El Dorado*. But Providence had ordered it otherwise. The Spaniards had done enough to demonstrate its inexhaustible wealth; and they were driven away from this 'creation of silver,' and the whole deposit held for an hundred years, in reserve for the uses of another race, who were destined to overrun the continent."

Were it not for the well-understood nature of the Spanish rule in Mexico, and the circumstances which have attended it, the foregoing description would appear almost incredible. But these statements of Mr. Ward, made officially in 1828, and corroborated by Mr. Wilson in 1856, are confirmed by the history of all Mexico. The opening of the Southern Pacific Railroad to El Paso will afford facilities, which must give a very great impulse to mining and all other pursuits in New Mexico and Chihuahua. Its extension to Sonora will undoubtedly produce an effect on all the industrial pursuits of the people of the United States, and on the commerce of the World, quite equal to that which followed the discovery of gold in California. The vast

quantity of silver in Sonora seems destined to restore that equilibrium in the relative quantities of the precious metals, which the product of gold in California and Australia has a tendency to destroy.

With the facilities of railroad communication, affording safe, cheap, and rapid transit to immigrants, and supplies of all descriptions to that region, and of the treasure acquired to our commercial marts, there cannot be a doubt that Sonora and Chihuahua will produce a quantity of silver equal in value to the gold of California. The amount and value of business which will thus be furnished to the Railroad, can more readily be imagined than estimated. It cannot be less than that which sprung up between the Atlantic States and California on the discovery of gold. When we compare the long, tedious, dangerous, and expensive journey across the plains, or via the Isthmus, with a travel of four to six days on a railroad; and when we consider that there are hundreds of thousands of laborers in the Atlantic States who do not earn as much in twelve months as they could acquire in Sonora in one, it is quite impossible to estimate, with any probable degree of accuracy, the extent of the movement which will take place.

The discovery and large product of gold in Australia has caused much anxious inquiry in England, respecting increased facilities of communication with that distant and most valuable of her colonies. The communication from Liverpool to Sidney, in connection with the overland route, via the Mediterranean, Red Sea, and Point de Gal in Ceylon, requires about eighty-five days. Much of the treasure has been sent home in trading ships around the Cape of Good Hope, which is a still more tardy channel of transit. A movement is now being made in London to establish a line of screw steamers to the Isthmus of Panama, and thence to Sidney in Australia.

The estimated time required to accomplish the voyage is 55 days. Among the changes which will be effected in the commercial world by the completion of the Southern Pacific Railroad, will be the substitution of the route through the United States between England and Australia for all others now in use, or that can be brought into use, for

the transportation of passengers, the mails, treasure, and many articles of value in small packages. This will be perceived by a simple statement of the time required via New York and San Diego, as compared with that by screw steamers via the Isthmus of Panama. The time required on the latter, as estimated by "The Royal British Mail Screw Packet Company," is fifty-five days. The time required on the former will be

Liverpool to New York, 3,100 miles,	10 days
New York to San Diego, by railroad, 2,913 miles,	5 "
San Diego to Sidney in Australia, being less than twice the distance from Liverpool to New York, and over a calm ocean, in a mild climate, can certainly be accomplished in twice the time.	20 "
<hr/>	
Total time required,	35 days

on the route through the United States, between Liverpool and Sidney, showing a saving of 20 days, as compared with the route via Panama. Any one acquainted with commercial transactions, will perceive at a glance, that this saving of time will command the travel, the transportation of the mails, treasure, and light packages of valuable freight. It may therefore be affirmed, without fear of successful contradiction, that the entire intercourse between Great Britain and her Australian possessions, except heavy freights, which are doomed to the tardy movements of trading ships around the Cape of Good Hope, must be conducted over the route via New York and San Diego. This will secure to the Southern Pacific Railroad an amount of traffic almost equal to that with California, and make it the channel of intercourse between all Western Europe, the Atlantic States of the Union, and the islands of the Atlantic south of the United States, with the great silver and gold fields of the world—Sonora, Chihuahua, California, and Australia. This work will place the United States commercially, where nature

has placed them geographically, between Europe and Asia, and become the channel of communication between them.

While this Railroad will confer untold benefits on the whole Union, there is no particular place the interests of which will be so largely promoted, as the great commercial emporium of this continent—the city of New York. It is destined to make her the depository of such a vast amount of treasure, that she must ultimately become the financial centre and settling house of the world.

The distance from San Francisco to Shanghai is 5,300 miles, and may be performed in an ordinary steamer in 21 days, and in a fast steamer in 17 days. Assuming 21 days as the average time, the voyage from Liverpool may be performed thus :

To New York	10 days
Thence to San Francisco when the railroad is finished, 3,300 miles,	6 “
Thence to Shanghai,	21 “
	<hr/>
	37

The usual time from Liverpool to Hong Kong by the Overland route is 65 days. From New York to Shanghai it will be 27 days—difference in favor of New York 38 days.

We will now proceed to consider the probable traffic which will contribute to the revenue of the Southern Pacific Railroad on its extension through Sonora, and its final completion to the Pacific.

The States and Territories, American and Mexican, which will be immediately dependent on this line of communication beyond or west of Texas, are

	Population.
Chihuahua,	150,000
Sonora and Sinaloa,	270,000
Utah,	70,000
California,	300,000
Oregon,	40,000
Washington,	20,000
	<hr/>
	850,000

California has produced annually, since 1849, more than \$60,000,000, and has actually exported about \$50,000,000 in value of gold dust, and, it is believed, the imports have equaled the exports. The value of the exports of the three above-mentioned States of Mexico, is stated to be about \$11,000,000. The exports of Oregon and Washington in coal, gold dust, and agricultural products may safely be stated at \$3,000,000. Making an aggregate of \$64,000,000. This is about equal to the exports of the United States in 1796; and the tonnage employed in the trade of our Pacific coast is nearly equal to the registered tonnage of the United States in 1823, or about 600,000 tons.

It is a matter of the utmost importance to our strength and security as a nation, that a channel should be opened through our own territories for this important branch of commerce, to render it secure from foreign interference or interruption, and to avoid the present tardy and expensive lines of communication. This Railroad through Texas, connected as it will be with branch roads leading to her gulf ports, presents great commercial advantages which cannot be claimed for either of the northern routes.

The voyage to the coast of Texas, while it is nearly as direct as the course of any of the lines of railway converging towards the proposed route on the 32° north latitude, accomplishes more than one half the distance to the Pacific, and leaves not more than 1600 miles to be overcome by railway, so that while the passengers, mails, and packages by express, would be accommodated with the facilities of railroad conveyance from all parts of the Union, the cargoes of package goods made up in the Atlantic cities, of foreign importations and domestic manufactures, destined for the Pacific and intermediate markets, would undoubtedly be sent by sea to our Southern and Gulf ports, and thence by railway. The cost of freight from New York to San Francisco, by way of the Isthmus of Panama, is now about \$125 per ton. If the railroad was completed from the coast of Texas, the expense would not exceed one half that sum, or about \$60 per ton. It is believed that this reduced cost, and the saving of time, would throw the entire transportation of package goods to the Pacific coast upon

this line. The expense of conveyance by the express lines, by way of the Isthmus of Panama to California, for all packages weighing over eighteen pounds to the square foot, is at the rate of \$700 per ton, and more for packages of less weight to the square foot; and yet I am informed that there have been times when the steamers on the other side of the Isthmus could not convey the merchandise as fast as it was delivered at Panama. The usual freights from New York around Cape Horn are from twelve to twenty-five dollars per ton to San Francisco. This contrast in the price of freights is a strong illustration of the great importance of saving time in commercial transactions, and of the laws of trade, which compel all merchants engaged in the same line of business, to do that which as a general rule any one may accomplish, with certainty, celerity, and profit. It is this competition which throws such vast quantities of freight, almost without regard to expense, into the steamers from Europe. No merchant can afford to wait, if he can avoid it, twenty or thirty days longer than his neighbor for the receipt of supplies of seasonable goods; therefore, the same necessity of competition which is now forcing such large quantities of merchandise through the expensive transportation in steamers, and across the Isthmus to California, will force the trade to our Pacific coast across the continent on the railway, whenever it shall be completed. This course of trade would be facilitated and rendered more certain by the return freights, which steamers and sailing vessels bound to Southern and Gulf ports with package goods and passengers would be sure to receive.

We have taken the estimate of Maj. E. A. Blanch of the cost of the first division of the road, from the eastern line of Texas to El Paso, 783 miles, \$14,631,183 00

We will now add the estimate of the second division,

from El Paso to the Colorado, 578 miles, at

\$25,000 per mile, 14,450,000 00

And for the third division, from the Colorado to San

Diego, 260 miles, at \$25,000 per mile, . . . 6,500,000 00

\$35,581,183 00

The extension of the road to San Francisco will

probably require an additional expenditure of some 8,000,000 00

Making the entire cost of the work, . . . \$43,581,183 00

These estimates are merely thrown out as the probable proximate cost of the work, and not as the results of actual, instrumental engineering.

When we take into consideration the favorable nature of the country through which this railroad is to be constructed, the estimate of its cost will be believed to be ample. The Report of the Secretary of War of 27th February, 1855, says,—

“From the eastern edge of the Llano Estacado to the pass of San Gorgonio, 1,052 miles, the route crosses three rivers, the Pecos, the Rio Grande, and the Great Colorado of the West. The peculiar features of the arid region, over which the route lies, from the eastern edge of the Llano Estacado, prove, when closely examined, to be most favorable to the construction of a railroad, since they obviate in a great degree the necessity of the most costly item of railroad construction—the preparation of the road-bed for the superstructure; this preparation, with few and limited exceptions, throughout the distance of about 1000 miles, having been already made by nature. This item amounts to from one half to three fourths of the whole cost of a railroad. Draining and ballasting are also dispensed with at the same time. Over the remaining portions of this route the ground is generally favorable to the construction of the road-bed. The mountain passes are, of their kind, highly favorable, those west of the Rio Grande requiring no difficult engineering for location through them, and but little rock excavation or expensive embankment and side cutting.”

This statement, coming from the highest authority, is entitled to perfect confidence. It shows that for two thirds the distance from the eastern boundary of Texas to San Diego, little more is required to make a railroad than to place the cross-ties on the ground and lay down the iron.

The last explorations and surveys made by government engineers, prove this tract of country to be much better suited to agriculture than

it had been believed to be. The Secretary of War, in his last Report, dated 3d of December, 1855, says:

"Another feature of interest developed in the course of the further examination of the work on the route of the 32d parallel is, that the Colorado desert, which is traversed by the route for a distance of 133 miles, and which, in the report referred to, was noted as consisting of a soil that needed only water to render it highly productive, is, in fact, the delta of the Colorado River, and according to barometric levels, is so much lower than that stream as to be easily irrigated from it. Thus, there is every reason to believe 4,500 square miles (2,880,000 acres) of soil of great fertility, of which nearly one half is in our territory, may be brought into cultivation in one unbroken tract along the route.

"Under the appropriation made at the last session, for the continuation of these surveys and other purposes, three parties have been in the field during the past season. One of these was directed to make examinations connected with the routes of the 32d and 35th parallels. This survey has greatly improved the aspect of the former route, by changing the line for nearly half the distance between the Rio Grande and the Pimos villages on the Gila river, from barren ground to cultivable valleys, and entirely avoiding a *jorrada* of eighty miles, which occurs in that section; also, by the discovery of an eminently practicable route through cultivable country, from the plains of Los Angeles, along the coast, and through the Salinas valley, to San Francisco. The connection originally proposed between these points was by way of the valley of San Joaquin and the Great Basin.

"The attention of this party was also directed to an examination into the practicability of procuring water along certain parts of the route where it is now deficient. The report shows that it may be obtained by common wells at *distances of about twenty miles*. From the result of this exploration, moreover, it appears practicable to obtain, at a small expense, a good wagon road, supplied with water by common wells, from the Rio Grande down the San Pedro and Gila, and across the Colorado desert. Such a road would be of great advantage in military

operations, would facilitate the transportation of the mails across that country, and relieve emigrants pursuing that route from much of the difficulty and suffering which they now encounter.

"A second party was charged with the duty of testing the practicability of procuring water by Artesian wells on the Llano Estacado—an arid plain, which has heretofore been described as a desert. The experiment has so far demonstrated its practicability as to leave little doubt of its final success; it will be continued, however, until the problem shall have been fully solved.

"The examinations into the feasibility of causing subterranean streams to flow upon the surface from Artesian wells, though undertaken in connection with the practicability of a railroad, if they should prove entirely successful, will have a value beyond their connection with that object, in the reclamation of a region which is now a waste, and its adaptation to the pastoral, and perhaps agricultural uses of man."

The foregoing sketch and extracts show very clearly that the country along the route adopted for the Southern Pacific Railroad is not "a howling wilderness," or a "barren, sandy desert," as it has been frequently represented to be, but a country of great productiveness, from one end of the line to the other; and it may be as well, in this connection, to dispel a prevailing mistake, respecting the want of an accessible market for the products of the central portions of the continent. The vast mineral and metallic wealth of those regions will attract to them a population sufficiently numerous to create a market. But if this were not the case, there is no part of the line which is not much nearer to ocean navigation and a market than the city of Chicago.

The Secretary of War draws the following forcible and striking parallel between the routes surveyed by the Government for a railroad to the Pacific. He says, "A comparison of the results stated above, and of those in the tables referred to, conclusively shows that the route of the 32° parallel is, of those surveyed, the most practicable and commercial route for a railroad from the Mississippi river to the Pacific Ocean.

"This is the shortest route; and not only is its estimated cost less by a third than that of any other of the lines, but the character of the work required is such, that it could be executed in a vastly shorter period. It is obvious, that a road on any of these routes, with the exception, perhaps, of the 47° parallel, must be built continuously from the two extremities, and an obstacle that arrests its progress at any point, defers the commencement of all the work in advance. The tunnels, and much of the other work on the more northerly routes, in the most desolate regions, are such as could not be commenced until a road was constructed up to those points, and then would require a long period for their completion.

"On the southernmost route, on the contrary, the progress of the work will be regulated chiefly by the speed with which cross-ties and rails can be delivered and laid, the nature of the country being such that, throughout the whole line, the road-bed can be easily prepared in advance of the superstructure. The few difficult points, such as the pass of the Gaudalupe and Huco Mountains, and the passes between the Rio Grande and Gila, would delay the work but an inconsiderable period.

"This peculiarity of the ground presents another advantage, in the fact that temporary tracks could be laid upon the natural surface of the earth, to almost any extent, to serve for the transportation of materials and supplies.

"The climate on this route is such as to cause less interruption to the work than on any other route.

"Not only is this the shortest and least costly route to the Pacific, but it is the shortest and cheapest route to San Francisco, the greatest commercial city on our western coast; while the aggregate length of railroad lines connecting it at its eastern terminus with the Atlantic and Gulf ports, is less than the aggregate connection with any other route."

The error which was so strongly impressed on the public mind respecting the adaptation of the soil and climate of California to agricultural pursuits, previous to, and for nearly two years after, the

discovery of gold, prevails in relation to the soil and climate of the elevated table-land of Western Texas, called the Llano Estacado, to the Gadsden purchase, Chihuahua and Sonora. When the American emigrants entered California, in the summer and autumn of 1849, the whole face of the country presented the most forbidding appearance. The surface of the earth was parched by an unremitting drought, the herbs and grasses were as dry as the heat of an intense fire could have made them. Most of the valleys and hill-sides, being without forest growth, presented an appearance of sterility that was perfectly appalling to an American or a European, who had been accustomed to the luxuriant and joyous growth and abundant product of all vegetable nature in the spring and summer months of their native climes. With the exception of a few limited districts of damp alluvial soil, and narrow margins of streams, either sufficiently moist or susceptible of irrigation, the country was condemned as a barren waste, unsuited to the purposes of agriculture for the supply of its own wants. On more particular observation, however, it was perceived that the flocks and herds were in excellent condition in the midst of this apparent famine. An examination of the grasses solved the mystery. It was ascertained that they had attained maturity, and that their seeds were full, abundant, and perfect. A very natural train of thought discovered the cause, and traced it to the result. The climate of California is divided into *two* seasons—the dry and the wet; each continuing about six months. The quantity of water to the square inch being about equal to that which falls in Philadelphia during the same period. The rains commence near the middle of October and cease in April. From that time to their recommencement, it is very seldom that a drop of rain falls. The winters are mild and balmy, without sufficient frost, except on the mountains, to arrest the growth of grass or garden vegetables. The result is, that those products flourish uninterruptedly through the winter, and mature in the early part of the dry season. The grasses become *hay*, cured on the field, by the simple operation of nature, and without the agency of human labor. This process pointed out and expressed, as plainly as nature could indi-

cate, the course which the cultivator of the soil should pursue. It was to sow the seed of his crops when nature sowed hers, and that both, beginning to grow at the commencement of the wet, would mature early in the dry season. The American farmers of California had the sagacity to adapt their system of cultivation to the exigency of their position, and to profit by the natural advantages of the climate. They sowed their cereal grains in October, before the commencement of the rains, and reaped an abundant harvest in June. The seed-time of the native population was March and April, which rendered irrigation absolutely necessary to the production of a perfect crop. What has been done in California and Western Texas, may be done in Chihuahua and Sonora. Their soil and climates are similar. A change of seed-time in the latter, will produce the same results that have been realized in the former. They only require railroad communication, American intelligence and enterprise, to make *them* what California now *is*—the greatest precious-metal producing and the most productive grain-growing country in the world.

It is a well authenticated fact that the northern portions of Chihuahua and Sonora were once inhabited by a wealthy, pastoral and mining people, and that they have been destroyed or driven south by hordes of savages who have laid waste the whole country. This was easily accomplished, because of the perfectly defenceless condition of the people,—neither the Spanish or Mexican rule permitting them to carry arms; and, in the absence of protection from either, they fell a prey to savage ferocity.

The traces of their wealth and civilization, however, are still to be seen in the ruins of cathedrals, churches, and haciendas, scattered in many places, throughout the country. This elevated region possesses, beyond doubt or question, the most salubrious climate on the continent; and the fact that it produces an abundant supply of the most nutritious grasses is conclusive evidence that it is well suited to the production of the cereal grains without irrigation. It may therefore become, with railroad communication through it, not only the most valuable mining region in

the world, but capable of sustaining a wealthy agricultural and pastoral population. Mr. Wilson asserts that *Sonora* can sustain a population equal to that of all Mexico, or 8,000,000 of inhabitants. If we consider her vast metallic, mineral, and agricultural resources, the question may well be asked: If you give her railroad communication to the Atlantic and Pacific, how long will it be before she will be relieved from her present condition of poverty?

In estimating the traffic on the Southern Pacific Railroad, the vast amount of coal which will be required in New Mexico, Chihuahua, and Sonora for the purpose of *smelting* the precious metals, must not be forgotten. This coal abounds in the vicinity of Fort Graham on the Brazos, on the Colorado, and various other places, and most unquestionably will supply a very large amount of traffic to the mineral and metallic regions of New Mexico, Chihuahua, and Sonora, and will also be sent, in large quantities to eastern and southern Texas. The extensive plains of the central regions of the continent will, as soon as the Railroad shall be finished, supply, not only to the mining districts in their vicinity the necessary supplies for subsistence, but will also produce a very large amount of traffic in the form of wheat, flour, beef, pork, cattle, horses, sheep, hogs, hides, tallow, bacon, and the almost innumerable products of a fertile soil and industrious people, situated midway between two oceans and perfectly accessible to both at a shorter distance, from the center, than it is from Chicago to New York.

The State of Texas has chartered several railroad companies whose works commence at various points on her Gulf coast, and will extend in various directions to the interior. Two of those works it is believed will, at an early day, connect with the Southern Pacific Road. They are the Houston and Red River Railroad and the Mexican Gulf and Henderson Railroad. The former, as its name implies, is intended to extend from the city of Houston on Buffalo Bayou to Red River, in a line almost due north. The latter to commence either at Bolivar Point, near the city of Galveston, or at Sabine Pass, and extend via Henderson to the town of Fulton, on Red River, and opening a communication

with the Northwest through the Cairo and Fulton Railroad. The latter company, it is understood, is composed of large capitalists, who are resolved to push their work to an early connection with the Southern Pacific Railroad.

There is also a railroad in progress from a point on the main land opposite to the city of Galveston, which is designed to extend to the interior. It will therefore be seen that the Gulf, or commercial, connections of the work of this Company are amply provided for, and likely to be finished at an early day.

Respectfully submitted,

T. BUTLER KING,

Sub. Committee.

CORRESPONDENCE

OFFICE OF THE TEXAS WESTERN RAILROAD COMPANY. }
MARSHALL, TEXAS, August 16th, 1856. }

GENTLEMEN,

It seems to have been assumed by many persons that the Charter of the Texas Western Railroad Company requires ten miles of their Road to be "completed and finished," by the 16th day of February, 1857. As I do not so understand the provisions of the Charter, and as the condition of Red River may render it important whether ten miles are required to be completed by the day above mentioned, or *by the sixtieth day thereafter*, I have thought proper to submit the question to your investigation and solicit your legal opinions.

Very Respectfully,

E. A. BLANCH,
Chief Engineer, T. W. RR. Company.

WM. P. HILL.

D. S. JENNINGS,

Attorneys.

MARSHALL, TEXAS, August 19th, 1856.

MY DEAR SIR,

In answer to your letter of the 16th inst., asking our opinions as to the time within which "the Charter of the Texas Western Railroad Company" requires *ten miles* of said Road to be completed, we have to say, that we have examined the Charter carefully and applied to the provisions of it which raise the question you wish answered, the usual and well-settled rules of construction; and have decidedly come to

the conclusion, that the time for the completion of the "*ten miles*" does not expire until the sixtieth day after the 16th February, 1857.

Unless otherwise *specially* provided, *all laws commence* to be in force with the sixtieth day after the day of the adjournment of the session of the legislature at which they are passed. The act creating the Charter referred to, was passed 16th February, 1852, on which day the legislature adjourned; and no provision is made in it to give it effect *sooner* than the sixtieth day thereafter. It is very clear, that the *five years* within which the "*ten miles*" must be completed, must be *computed* from the day the law *commenced to be in force*.

Very Respectfully,

WM. P. HILL,

D. S. JENNINGS.

MAJ. E. A. BLANCH,

Chief Engineer of the Texas, Western Railroad Company.

A P P E N D I X .

A.

[*Extracts from Wilson's Mexico.*]

OFFICIAL REPORT ON THE MINERAL RICHES OF SONORA.

Among the five-and-twenty states and territories that compose the Mexican confederation, there is no other which contains in its respective territory the like wonderful mineral riches which abound in the State of which we treat. This would appear almost fabulous; but there is proof enough from the testimony of many residents of that State, and from the assertion of travellers, from the evidences which the archives of the various missions exhibit, and from the royal registry of mines (*reales de minas*), and, lastly, from the indubitable fact of the production of great quantities of gold and silver from the mines and *placers* of this State, considering the small amount of forces, and its isolation from all the principal settlements of the republic, by reason of the distance which separates it from them.

In fact, many metals of universal estimation, such as gold, silver, mercury, copper, and iron, in a pure state, in grains, in masses, or in dust, as well as mixed with other metals, superficially or in veins, are found in the extensive territory of Sonora. Lead, or combinations of lead, for aiding in extracting metals by fire, and for the construction of munitions of war; amianthus, or incombustible crystal; divers ores of copperas, exquisite marble, alabaster, and jasper of various colors, as well as quarries of stone, of *chispa* and magnetic stones, muriate and carbonate of soda, saltpetre, or nitrate of potassa, are, in enumeration, the mineral productions which are found in abundance in the territory of the State of Sonora, which comprehends the region from the river of Fort Monte Clarasal at the south, to the Gila at the north, and from the Sierra Madre at the east, to the Colorado at the northwest.

To the disgrace of the nation, these authentic and exact notices of the marvellous riches of this remote State, have availed nothing in determining speculators (*empresarios*) to resort to those places in pursuit of a fortune so certain, or at least to have avoided, by means of colonization, the loss which is feared of this inestimable jewel.

The territory of the State of Sonora lacks nothing but security (from incursions of Indians), in order that the hand of man may be profusely recompensed for his labor. Virgin soils, where the agricultural fruits of all climates not only flourish, but many of these improve in quality; navigable rivers, which contribute in part to the easy transportation of the products to the ports of the Pacific for exportation and consumption; mines and *placers* of precious metals, in many of which there is no necessity of capital to explore and collect them. Are not these stimulants enough to attract there a population thrifty and civilized? In order to ascertain the mineral riches which the nation may lose in a short time, we call attention to the mineral statistics which follow, although they are imperfect and diminutive.

As already we have said, the whole of Sonora is mineral; but as among us we only give this name to those places in which there have been discovered and worked a conjunction of veins, it results that the places in this State to which, for this cause, has been given the name of mineral, are thirty-four. Some of the mines are *amparadas*, (viz. worked sufficient to confer a legal title to the occupant), and are imperfectly in a state of operation. The names of all these two classes, which are sixteen in all, are Hermosillo, San Javier, Subiate, Vayoreca, Alamas, Babicanara, Batuco, La Alameda, Rio Chico, El Aguaja, Aigame, El Luaque, Saguaripa, La Trinidad, San Antonio, and El Zoni.

The remaining eighteen are found abandoned, some for the want of water, and others for the want of laborers or capital, and by the fear which the barbarous Indians inspire. The names of these last minerals are San Juan de Sonora, that of the Sierra at the northwest of Guaymas, Arizuma, Bachauci, Antunea, San José de García, El Gavilau, San Ildefonso de la Cieneguilla, San Francisco el Calou, Santa Rosa, San Antonio de la Huerta, Vadosoco Sobia, Mulatos, Basura, Alamo-Muerto, and San Perfecto.

In the same state have been discovered twenty-one *placers*; of these, one is of virgin silver, in grains and plates (*planchas*), and twenty of pure gold, in grains and dust; but as nearly all these are situated in the mineral districts (*minerales*) already mentioned, the names of those which are not given are the following: Agua Caliente, Quitovac, Las Palomas, La Canaca, and Totahiqui. With the exception of three, to which gold-hunters from time to time resort to relieve their necessities, all the others remain abandoned.

There was only one mineral district actually in work at the close of the last century and the beginning of the present. Those now actually in process of being worked are fourteen, and their names are La Grande, La Quintera, El Subiate, Bulbaucda Europita, Vayoreca, La Cotera, Santo Domingo, Noercheran, La Sibertao, Minas Nuevas, El Tajo, Minas Prietas, and another near La Grande.

From the mineral districts (*minerales*) abandoned, there ought to be inferred an increased number of mines which are in the same condition, but we do not know their names, and we have only notices of the twenty following: Pimas, La Tarasca, Ubalama, Ojito de San Roman, Yaquis, La Guerita, Noaguila, Las Animas, Afuerenos, Piedras-verdes Navares, La Celera, Caugrejos, Guillardmens, San Atilano, San Teodora, and El Gavilau. In those in Pimas, and in one of those of

the mineral of San José de Garcia, have been found considerable amounts of pure silver deposited in their veins, and mineral taken from San Teodoro has produced one half silver. In extracting the silver from the ore in this place, we ought to mention, that the greater part of these mines are susceptible of great *bonanzas*, from not having been worked extensively, as their proprietors abandoned them when the metals failed to appear upon the surface, and when the exploration was a little more costly.

There are eleven haciendas in the State of Sonora for purifying the metals which the mines and *placers* produce, without taking into the account many little establishments, with from two to five horse-mills, with one bad furnace for the fusion of metals. Three of these are situated in Alamas, five in Aduana, one in Promontorio, another in Tatagiosa, and the last in Minos Nuevas (New Mines). There are many abandoned mines, as the rubbish and ruins indicate, which we have noticed in all the abandoned mineral districts.

The methods which they have observed in extracting the metals from the ore, are the *patio* (by application of quicksilver in an open yard), and that of fusion, with the aid of some metals that assist the fusion. But, from the fact that the quicksilver augments considerably the price, the few that there carry on the business, have preferred the process of fusion to that of the *patio*, from being less costly, and because the docility of the metals afford facilities to this process.

No machines of new invention have been introduced into that State, either for the drainage of the mines, or for facilitating the extracting of the metals. This ought not to surprise us, in places so desert and distant from the metropolis, unaccustomed to the vivifying movements of commerce, and to the necessities which civilization has engendered in the more important populations in the central parts of the republic. That which is rare, and ought to call attention, is the exception of some mines, where *malacatos* (water-sacks of bull-hides, drawn up by a windlass) are used for discharging water. In almost all those which have thus been worked, they have not had an opportunity to exhibit their riches, as the abundance of water in many of them was the principal cause of their abandonment.

The greatest difficulty in the way of giving an exact idea of the products of the mines and *placers* of Sonora, is the scandalous contraband exportations of gold and silver which are made from the ports of the Sea of Cortéz (Gulf of California) on the one hand, and, on the other, the difficulties that have presented themselves to his Excellency, the Governor of that State, for giving the statistical notices which have been sought on repeated occasions by the Junta of the Minería—both of which causes have made difficult the account which we furnish. But by those which they themselves furnished of the production of those minerals before and since the independence of the nation, and by the exhibits of various witnesses, presented in the remission of bars which from thence they made to the capital of the republic, when the ports of the Pacific were sealed to foreign commerce, the production of precious metals having yielded, in divers epochs, not far from 4500 pounds of silver, without considering the gold (abundant enough in *placers* and in rivers), and from what is known, the quantities of this

metal extracted have been considerable, and in more abundance than in the mineral districts of the other states of the republic.

Attention having been much called to the ley and weight of the grains of pure gold found on the surface in Quitovac, Cieneguilla, and San Francisco, as well as those masses of virgin silver found in Arizuma, which wonderful riches stimulated the colonial government to despoil the proprietors of it, and afterward the King of Spain, in declaring that it pertained to his royal patrimony.

All those places in Sonora which are actually abandoned, as well as all the lands of that state, are susceptible of producing great riches. The reasons on which these assertions are founded, are those which M. Saint Clair Duport mentions in speaking of the probable variation there will be in value of gold and silver in time, by reason of the great extractions hereafter of these metals, particularly in California (this was before the annexation of California) and Sonora, where, as in the Ural Mountains, and the Altai Mountains of Central Asia, gold is extremely abundant, and because, in the *placers* mentioned, explorers have recognised gold in dust, which they have not washed for want of water in some, and from the difficulty that exists in others in order to work them, such as those of Arizuma and La Papagueria.

Nothing could be said in relation to the number of operatives who are employed in working the mines of this state, nor the day-laborers; nor in respect to articles consumed there, as well in the digging of the metals as in extracting them from the ores, because, as has already been said, his Excellency the Governor has not been able to give the notices which have been sought, and there are no better authorities through whom information can be procured. For in this state there are no mining courts,* but the ordinary judges of first instance are the authorities which take cognizance of matters which occur in the department of the Minera.

There are no companies for the exploration of the mines in that remote state. Some inhabitants, in distant periods, have procured the formation of numerous caravans with the character of companies, and with the object of collecting precious metals, which they encountered in the *placers* of Arizuma and of Papagueria; but until now they have not been able to hold with effect undertakings so laudable.

Various are the causes on account of which the riches, which lie buried through all parts of the immense territory of the State of Sonora, have not been explored. Some of these reasons have already been referred to, but, for greater clearness, we take this opportunity to recapitulate them all. The first, which are much noted, are the following:

- 1st. The absolute want of personal security.
- 2d. The scarcity of population, and of the means of subsistence for the few hands that they were able to have devoted to working mines in the immediate vicinity of hostile Indians.

* The title to all mines in Mexico rests solely upon discovery and improvement, without any regard to the proprietorship to the land on which the mines are located; but the proof of discovery and improvement must be made and recorded in the mineral courts, except in Sonora, where the ordinary courts have jurisdiction.

3d. The irregularity and the want of experience and capital in those who have undertaken the exploration and the extraction of metals, which has occasioned the abandonment of this class of speculations whenever they presented any difficulties, or commenced to be more costly by failing to produce metals upon the surface of the earth. Some certain speculations which have been directed with regard to the rules which regulate mineral industry, and have been prosecuted with capital, have well compensated the labors and efforts of the proprietors.

Gold and silver, as above said, are not the only mineral productions of Sonora. In the part of Muchachos, situated in the Sierra Madre, between Tucson and Tubac, and in Mogollon, a place situated in the mountains of Apuchuria, in those of Papagueria, and near the Colorado, are found great masses of virgin iron, and abundant veins of the same metal. Cinnabar was discovered in 1802, in the hill of Santa Teresa, situated in the *mineral* of Rio Chico; and in the hills which are at the north of the Colorado, it has been found in the past age. Copper is also found in Antunes, Tonuco, Bacauchi, Poso de Crisante, Sierra de Guadalupe, Sierra de la Papagueria, and particularly in the Couanea, from whence have been extracted great quantities of this metal, with a great ley of gold. Metals of lead (*metales plomosos*) abound in Agua Caliente, Alamo-Muerto, La Papagueria, Arispe, and La Cieneguilla. From these two last points have been taken considerable quantities of them, for supplying all other mines of the state [to aid in fusion], and for munitions of war. Copperas, or sulphate of iron, is abundant in San Javier, San Antonio de la Huerta, and Agua Caliente. In the first of these places a vein runs from south to north, from pieces of which, dissolved in water, there results a tint which, by evaporation, forms into grains, and produces the same effect as the tint of China. In Cucurpe is *amianto*, or incombustible crystal, which the ancients so much valued. Marbles of various classes and colors, as well as alabasters and jaspers, are found in Opasura, Hermosillo, Uores, La Campana, and other points; but we do not know as yet the place from which the Aztecs obtained the beautiful reddish marble which they used in the construction of their divinity of Chapultepec, which is preserved in the National Museum, and which, according to all conjectures and probabilities, proceeded from the quarries of marble of that state. There are quarries of the stone of chrispa, and even the magnet in Alamas, Hermosillo, in sierras of the frontier, and in the cañada of Barbitas, ten leagues distant from Hermosillo, near the route of La Cieneguilla. Muriate and carbonate of soda, saltpetre, or nitrate of potassa, are found in the margin of the rivers which empty into the Gulf of Cortéz [of California], and particularly in the mouths of the Colorado.

REPORT ON THE MINERAL RICHES OF CHIHUAHUA.

THE statistical notices which have until to-day been received, embrace five cantons or departments of that state, which show that there exist in it sixteen *minerals* [districts containing mines], of which twelve are in working, and four abandoned in consequence of the incessant incursions of barbarous Indians. Their

names are Hidalgo del Parral, Minas Nuevas, San Francisco del Oro, Santa Barbara, Zopago, Chinipas, Guazapores, Batozegache, Guadalupe y Calvo, Cuacogornichie, Galeana, Cosihuiriachic, Santa Eulalia, Barranco, and two more, without names, in the Canton Caleana.

Twenty-one mines are found in operation in the twelve *minerals* in action. The number of those abandoned is increasing, and is not permanent; and the only cause referred to is that many of them are abandoned for want of capital, and others from the hostility of the barbarians. The products of those that were worked in the year 1849 amount to 146,818 marks of silver, of a ley of eleven *dineros*, and 7 marks, 7 oz., and 4 eighths of gold to the twenty-two quintals. The number of haciendas and furnaces for extracting the metal from the ore was twenty, and the processes which they use in that state are the *patio* and the furnace; the last is the most general. Finally, there has been put in practice a third system, by the house of Manning and M'Intosh, for the purpose of separating the silver by means of the precipitate of copper. The consumptions of the last year, 1849, amount to \$544,194, notwithstanding which the notices omit the returns of various mines, haciendas, furnaces, and water-mills. The items are quicksilver at \$140 a hundred, gunpowder, lime, wood, sulphate of copper, salt, iron, steel, metals of aid [metals thrown into the compound to aid the process of extracting], tallow, grease, hides, leather, corn, straw, grain, flesh, beans, and bars of iron. The number of operatives is not known with exactness, because the reports only refer to certain mines and haciendas, but in these they amount to 1833, besides day-laborers at five *reals* ($\frac{1}{8}$ ths of a dollar) a day for half the time. The most important improvements that have been introduced into some of these mines consist in the establishment of pumps for facilitating draining, and in the introduction of German ovens for fusing a greater quantity of mineral at a less cost and with greater perfection, being so much the more interesting as the condition of the metals presents itself more easily to this kind of benefiting.

Four companies have been established for prosecuting the labor of the mines, Preseña, Rosario, Tajo, and Prieta. The first takes its name from Señor Delille, the second is composed of Mexicans, and the last two are composed of Mexicans, English, and naturalized Spaniards. Nothing is known in relation to their capitals. Besides the precious metals, we find lead in Naica and Babisas, of the canton of Matamoras; copper, from which only *magistral* is taken, is found in the canton of Mina, and sulphur and saltpetre in the canton of Iturbide. The reports mention nothing in respect to the authorities that take cognizance of the affairs of the Minería; but it is presumed that, as in the rest of the nation, the judges of first instance take knowledge of controversies, and the courts of mines, if by chance they are established, take cognizance of the economy and government of the mines.

The mint of Guadalupe and Calvo coined in 1848, \$720,765, and in 1849, \$665,225, of which two sums \$1,027,130 were of silver, and \$355,859 in gold, the whole being the proceeds of 116,015 marks, 1 oz., and 4 eighths of silver, of the ley of eleven *dineros*, and of 2351 marks, 5 oz., 2 eighths of gold, with ley of twenty-two carats. This appears from the reports of the mint of the capital of that state.

B.**THE TEXAS WESTERN RAILROAD CHARTER.**

AN ACT*Passed February 16th, 1852.*

SECTION 1. *Be it enacted, by the Legislature of the State of Texas, That Rufus Doane, Lucius C. Clopton, James C. Hill, William T. Scott, Willis Stewart, Sam. Bogart, E. E. Lott, L. B. Camp, James W. Throckmorton, J. D. Todd, their associates and successors, be and are hereby created and established a body corporate and politic, under the name and title of the TEXAS WESTERN RAILROAD COMPANY, with the capacity, in said corporate name, to make contracts, to have succession and a common seal; to make by-laws for its government and the regulation of its affairs; to sue and be sued; to plead and be impleaded; to grant and receive, and generally to do and perform all such acts and things as may be necessary or proper for or incident to the fulfilment of its obligations, or the maintenance of its rights, under this act, and consistent with the Constitution of the State.*

Sec. 2. *Said company is hereby invested with the right to locate, construct, own, and maintain a railroad, commencing at a suitable point on the eastern boundary line, and thence running, by such course as said company shall decree and determine to be most suitable, to El Paso, on the Rio Grande River, with the right of making, owning and maintaining such branches of said railway as they may deem expedient.*

Sec. 3. *The parties named in this act are hereby appointed commissioners, and invested with the right of forming and organizing said company, and generally of exercising the powers of directors, until directors are chosen or appointed by such persons as may subscribe to the stock of said company, when the powers of said commissioners shall cease.*

Sec. 4. *The capital stock of said company—to consist of all its property, real and personal, franchises, and rights to property—shall be divided into shares of \$100 each, each share entitling the owner thereof to one vote, by himself or proxy, at all meetings of said company; said shares shall be deemed personal estate, and shall be transferable by any conveyance in writing, recorded by the treasurer in books kept by him at his office, or in such manner as the by-laws of said company shall provide.*

Sec. 5. *The immediate government and direction of the affairs of said company shall be vested in a board of not less than six directors, who shall elect one of their own number as president of said company; no person shall be eligible to the office of director, unless an owner or subscriber of at least five shares of the stock of said company. The directors shall have power to fill any vacancy*

that may occur in said board from non-election, death, or otherwise, and may appoint a Secretary, Treasurer, and such other officers and agents as they may consider necessary, and prescribe and require bonds for the faithful performance of their duties; they may, if not otherwise provided for by the by-laws, determine the manner of conducting all meetings, the number of members that shall constitute a quorum to do business, and to do, or cause to be done, all other lawful matters and things which they may deem necessary and proper in conducting the affairs of the company; they shall keep, or cause to be kept, accurate records of all meetings of the directors and company, and accurate books of accounts of the receipts and expenditures of the company, and all other books necessary and proper to be kept by such company, which shall be open to the inspection of the stockholders. A majority of the board of directors shall have the authority of a full board; and all conveyances and contracts, in writing, executed by the President and countersigned by the Secretary, or any other officer or person authorized by the directors, under the seal of the company, and in pursuance of a vote of said directors, shall be valid and binding.

SEC. 6. The shares may be disposed of, and books opened for subscriptions thereto, in such manner and on such terms as said commissioners shall determine will be for the best interests of said company; and any agreement in writing, by which any person shall become a subscriber to the capital stock of said company, may be enforced against him according to its terms; and if any subscriber shall fail to pay any amount due upon shares subscribed by him, according to the terms of his subscription, the directors may sell at auction and transfer to the purchaser the shares of such delinquent; and if the proceeds of sale shall not be sufficient to pay the amount due on said subscription, with interest and charges, such delinquent shall be held liable to the company for the deficiency; and if the proceeds shall exceed the amount so due, with interest and charges, said delinquent shall be entitled to the surplus.

SEC. 7. It shall be lawful for the company to enter upon and purchase, or otherwise take and hold, any land necessary for the purpose of establishing and constructing said railway, with all necessary depots and other buildings; and if they shall not be able to obtain said land by agreement with the owner thereof, they shall pay therefor such compensation as shall be determined in the manner provided by the following section; *provided*, that the land so taken for the road-bed shall not exceed two hundred feet in width; and for depots and other buildings, only such further width as shall be needed for such purposes.

SEC. 8. Any person, when land has been taken, as aforesaid, without agreement or satisfactory compensation, may apply to the District Court of the county in which said land is situated, for the appointment of, and said court shall thereupon appoint, three disinterested freeholders of the county, who shall appoint a time and place to hear the applicant and the company; to whom shall be given, by said freeholders, reasonable notice of said time and place; and said freeholders shall, after being sworn, and after due hearing of the parties, determine the amount of compensation, if any, to which the applicant may be entitled, and make return of their award to the next succeeding term of the said court; and said award, if not rejected by said court for sufficient cause then shown, shall be

entered up as a judgment of said court. In determining the question of compensation, said freeholders shall be governed by the actual value of the land at the time it was taken, taking into consideration the benefit or injury done to other lands and property of the owner, by the establishment of said railway: and if the amount of compensation awarded by said freeholders shall not exceed the amount offered by said company to the owner, prior to said application to the court, the applicant shall pay the costs of the proceedings; otherwise the company shall pay the same.

SEC. 9. It shall be the duty of the company, whenever any State or county road, now by law established, shall be crossed by the track of said railway, to make and keep in repair good and sufficient causeways at such crossings; and in all cases where any person shall hold lands on both sides of said railway, and there shall be no other convenient access from one part to the other, such owner shall have the right of passage, free of costs, at all reasonable times, across the track of said railway.

SEC. 10. This company is hereby required, at all reasonable compensation, to draw over the road the passengers, merchandise and cars of any other railroad corporation, which has been or may hereafter be authorized by the Legislature to enter with their railroad and connect with the railroad of this company; and if the respective companies shall be unable to agree upon the compensation aforesaid, it shall be the duty of the President of each company to select each one man as a commissioner; and the two commissioners, so selected, shall choose a third, in case of disagreement, neither of whom shall be a stockholder in either road, or interested therein; and they shall fix the rates, which shall not be changed for one year from the time of going into effect. The said commissioners shall also fix the stated periods at which said cars shall be drawn as aforesaid, having reference to the convenience and interests of said corporations and public who shall be accommodated thereby. The right and power is especially conferred on said company to connect and contract with any railroad transport; and in case of disagreement between said companies, the same shall be referred and settled as aforesaid, and be binding for one year as aforesaid.

SEC. 11. Said company may acquire real estate by gift or purchase, and that such commissioners herein-before mentioned, shall have full authority to solicit and receive subscriptions and conveyances of land to said company until the time fixed for the first meeting of said commissioners, which authority may then be extended by said meeting; which said land so obtained shall be alienated by said company in the following manner: one-fourth in six years, the one-fourth in eight years, the one-fourth in ten years, and the one-fourth in twelve years from the time the same was acquired.

SEC. 12. If the track of this railway shall cross any navigable stream, it shall do it in such a way as not to obstruct its navigation.

SEC. 13. Said company shall have the right to demand and receive such rates and prices for the transportation of passengers and freight as they may think proper to establish, not to exceed five cents per mile for passengers, and fifty cents per hundred pounds for freight for every hundred miles the same may be carried.

SEC. 14. If any person shall wilfully injure or obstruct said railway or its property, such person may be punished, when prosecuted by indictment for said offence, in due course of law, and also liable to action by said company, or any person whatever, who may suffer in person or property from said wilful obstructions for the amount of damages occasioned thereby.

SEC. 15. There shall be granted to said company eight sections of land, of six hundred and forty acres each, for every mile of railway actually completed by them and ready for use; and upon the application of the president of the company, or any duly authorized agent thereof, stating that any section of five miles or more of said railway has been completed and is ready for use, it shall be the duty of the Comptroller of public accounts to require the State engineer, or a commissioner to be appointed by the Governor, to examine said railway; and upon his certificate that said section of said railway has been completed in a good and substantial manner, and is ready for use, the Comptroller shall give information of that fact to the commissioner of the General Land Office, whose duty it shall be to issue to said company land certificates to the amount of eight sections of land, of six hundred and forty acres each, for each and every mile of railway thus completed and ready for use: such certificates shall be for six hundred and forty acres each, and shall be located upon any unappropriated public domain of the State of Texas, within twelve months from the issuing thereof, which date shall appear upon the face of each certificate; and upon the return of the field notes of any survey made by virtue of any certificate thus issued, it shall be the duty of the commissioner of the General Land Office to issue patents to said company in their corporate name—one-fourth of which said lands thus patented shall be alienated by the company in six years, one-fourth in ten years, and the other fourth in twelve years; so that the whole of the lands thus granted shall pass from the hands of the company within twelve years of the date of the patents thus issued.

SEC. 16. Said company shall be required to have a good and sufficient brake upon the hindmost car in all trains transporting passengers or merchandise, and also permanently stationed there a trusty and skillful brakeman, under a penalty not exceeding the sum of one hundred dollars for each offence, to be recovered in any court of competent jurisdiction, for the benefit of the State; and said company shall cause to be placed on each locomotive engine passing on their road, a bell of the weight of at least thirty-five pounds, or a steam whistle, and the said bell shall be rung, or the whistle blown, at the distance of at least eighty rods from the place of crossing any highway or turnpike, and kept ringing or blowing until the engine has passed or stopped; said company shall be required to construct their railroad with good T or U iron rails; *provided*, that no land shall be donated unless the company shall actually commence their road within four years, and actually complete and finish at least ten miles within five years.

SEC. 17. The first meeting of the commissioners or directors appointed by this act shall be held at Marshall, in Harrison county, on the first Monday in July next, in which, and all subsequent meetings, which may be held at such times and places as the directors may think best, said directors may act in person or by proxy.

Sec. 18. Nothing in this act shall be so construed as to confer banking privileges or powers, of any kind whatever.

Sec. 19. That if said railway shall not be commenced within five years from the passage of this act, and at least twenty miles thereof are not completed within six years, then this charter shall be null and void; and it is hereby provided and declared, that it shall be lawful for any other railway hereafter to be constructed to cross the said railway, or any branch thereof, or to connect at any point therewith.

Sec. 20. The said company shall have the right to take and hold so much of the public land not exceeding two hundred feet wide, as the said railway, or any of its branches may pass through, for the track thereof, and such additional width as may be absolutely necessary for any depot or other work for the purpose of said railroad, that the company may deem proper to establish; and in all cases when such railroad or any branch thereof, shall pass through any public lands, all such lands, to the depth of three miles from the extension line of the track on each side thereof, shall be reserved for the State, from and after the time such track shall be fixed or designated by survey, recognition, or otherwise, and the said lands, as the road is constructed, shall be divided into sections fronting one mile each on the road; plainly marked; and of these reserved lands the company shall have the right by virtue of any of the certificates issued in accordance with the provisions of this act, to cause to be located, surveyed and patented for their use, each alternate section, such section in each instance embracing a tract of land fronting one mile, pursuing an equal width; and the remaining sections shall continue the property of the State until disposed of by the Legislature.

Approved, February 16th, 1852.

C.

A N A C T

To amend the Caption and the First and Sixteenth Sections, of an Act to incorporate the Texas Western Railroad Company, approved February 16th, 1852.

SECTION 1. Be it enacted by the Legislature of the State of Texas: That the title or caption of an Act to incorporate the Vicksburg and El Paso Railroad Company, or Texas Western Railroad Company, approved February 16th, A. D. 1852, be so amended as hereafter to read as follows: An Act to incorporate the Southern Pacific Railroad Company. And the first section of the above recited Act shall hereafter read as follows: That Rufus Doane, James C. Hill, William T. Scott, Willis Stewart, Sam Bogart, E. E. Lott, L. B. Camp, James W. Throckmorton, J. D. Todd, Joseph McDougal, Thomas H. Rogers, Adam Sullivan, Joshua Starr, C. B. Holbert, Mason Moseley, and Jacob Fisher, their associates and successors, be and are hereby created and established a body corporate and politic, under the name and title of the Southern Pacific Railroad Company, with the capacity, in said corporate name, to make contracts, to have succession, and a common seal; to make by-laws for its government and the regulation of its affairs; to sue and be sued; plead and be impleaded; to grant and receive, and generally to do and perform all such acts and things as may be necessary or proper for, or incident to, the fulfilment of its obligations, or the maintenance of its rights under this Act, and consistent with the Constitution of this State. And all the acts done by said Texas Western Railroad Company, or Vicksburg and El Paso Railroad Company, under the Act incorporating the same, or any Act amendatory thereto shall be, and are hereby declared to be, as legal and binding on all the parties connected therewith, and on said Company, under the name and title of the Southern Pacific Railroad Company, as if made with said Company under said name.

SEC. 2. That the sixteenth Section of the Act to which this is an amendment, shall hereafter read as follows: said Company shall be required to have a good and sufficient break upon the hindmost car in all trains transporting passengers or merchandise; and also, permanently stationed there, a trusty and skillful break-man, under a penalty not exceeding one hundred dollars for each offence, to be recovered in any court of competent jurisdiction, for the benefit of the State. And said Company shall cause to be placed on each locomotive engine passing on their road, a bell, of the weight of at least thirty-five pounds, or a steam whistle; and the said bell shall be rung, or the whistle blown, at the distance of at least eighty rods from the place of crossing any highway or turnpike, and kept ringing or blowing until the engine has passed or stopped. Said Com-

pany shall be required to construct their Railroad with good T or U iron rails: Provided, that no land shall be donated unless the Company shall actually commence their road within four years, and actually finish grading and furnishing cross-ties for at least ten miles within five years: and that this Act shall not be construed as an extension of the time of commencement of said road, as required in the original Act. Provided, this road shall not, under any circumstances, have more than sixteen sections of land to the mile, under the provisions of what is known as the sixteen section law, and all branching privileges to be cut off, and none allowed; to be subject to all the provisions of the general Railroad law of this State; and the files heretofore made in the General Land Office shall not secure any rights to said Company; and that this Act shall take effect from its passage.

Passed August 16, 1856.

DEPARTMENT OF STATE, }
AUSTIN, TEXAS, August 20, 1856. }

I, the undersigned, Secretary of State of the State of Texas, hereby certify, that the above and foregoing is a correct copy of the original enrolled Act, now on file in this Department.

Witness my hand and the Seal of the Department, the day and year

L. S above written.

EDWARD CLARK,
Secretary of State.

D.

AN ACT

To Encourage the Construction of Railroads in Texas, by Donations of Lands.

SECTION 1. *Be it enacted by the Legislature of the State of Texas, That any Railroad Company chartered by the Legislature of this State, heretofore or hereafter, constructing within the limits of Texas a section of twenty-five miles or more of railroad, shall be entitled to receive from the State a grant of sixteen sections of land for every mile of road so constructed and put in running order.*

SEC. 2. That any railroad company having actually put under contract as much as twenty-five miles of its road, or its entire road when the length may not exceed twenty-five miles, upon filing a certified copy of such contract with the Commissioner of the General Land Office, and upon depositing with the Treasurer of the State a bond with two or more good sureties to be approved by him, in favor of the Governor of the State, in the sum of ten thousand dollars, conditional as hereinafter required, may file an application with any District Surveyor of any land district in this State, a copy of which application shall in all cases be forwarded to the Commissioner of the General Land Office by the District Surveyor, to survey any quantity of the public domain lying and being in such district, and subject to location and entry, not to exceed eight hundred sections; and said application shall specially describe the lands applied for and intended to be surveyed; and if said company shall produce and file with the District Surveyor a certificate of the Commissioners of the General Land Office, that a copy of its contract has been filed in said Office for the construction of twenty-five miles or more of said road, and also a certificate from the Treasurer, that a bond as required by this act has been deposited in his office, said application shall exempt the land so designated from any future location, entry, or pre-emption privilege, until otherwise directed as hereinafter provided; Provided, that no application for a survey of land under the provisions of this act, shall be made for more than six months before the completion of such section; and if said section be not completed and notice thereof given as herein provided, within six months from the time of the application, then such land applied for shall become subject to location and entry as if no such application had been made.

SEC. 3. That it shall be the duty of said company to cause to be surveyed the land so designated, into sections of six hundred and forty acres each, and in square blocks of not less than six miles, unless prevented by previous surveys or a navigable stream, which survey shall be delineated upon a map or maps, the even and odd sections being differently colored and regularly numbered from one upwards to the full number contained in the block; and the field

notes of said surveys and map or maps, shall be by said company deposited with the Commissioner of the General Land Office.

SEC. 4. That the condition of the bond mentioned in the second section of this act shall be, that said company will cause to be surveyed, the land designated and applied for, within the time limited for the construction of said section of twenty-five miles by the contract, and in the manner required by the third section of this act; and shall actually construct the said section of twenty-five miles of said road, within the time mentioned in said contract; in default of which said land shall become forfeit to the use of the State, which forfeiture shall be declared by the District Court of Travis county, at the first term thereafter, without other formality than as hereinafter provided.

SEC. 5. That if at the time stipulated in said contract for the completion of said section of twenty-five miles, the field notes and map or maps of the land applied for, be not deposited in the General Land Office as herein required, it shall be the duty of the Commissioner to forward immediately to the Treasurer of the State and the District Surveyor of the land district where the land applied for is situate, a certificate of the fact; whereupon the land so applied for shall become subject to location and entry by any one, as if no such application had been made; and it shall be the duty of the Treasurer, ten days before the session of the District Court of Travis county, to cause notice of such forfeiture to be advertised in one of the newspapers published at Austin, for two successive weeks; and at said session of the District Court, it shall be the duty of the Attorney-General, or, in case he be not present, of the District Attorney, to file a motion for the forfeiture of said bond, whereupon said court shall proceed, without other citation or notice, to declare said bond absolutely forfeited, and to render judgment against said company and sureties for the amount of said bond, upon which judgment execution shall issue as in ordinary cases; provided, that it shall be necessary for the Attorney-General or District Attorney to file with said motion a certified copy of said bond under the hand and seal of the Treasurer, and also a copy of the contract deposited in the General Land Office, and a certificate of the Commissioner that said surveys and map or maps of the lands applied for have not been returned.

SEC. 6. That any railroad company having completed and put in running order a section of twenty-five miles or more of its road, may give notice of the same to the Governor, whose duty it shall be to appoint some skillful engineer, if there be no State engineer, to examine said section of road; and if upon report of said engineer, under oath, it shall appear that said road has been constructed in accordance with the provisions of its charter and of the general laws of the State, in force at the time, regulating railroads, thereupon it shall be the duty of the Commissioner of the General Land Office, to issue to said company patents for the odd sections surveyed in pursuance of the second and third sections of this act; but in case said lands or any part thereof shall not have been surveyed at the time said section is completed, then it shall be the duty of said Commissioner to issue to said company certificates of 640 acres each, equal to sixteen sections per mile of road so completed; whereupon said company may apply to the District Surveyor of any land district in this State, to survey any quantity of vacant land subject to location and entry in such district, not to ex-

ceed twice the quantity of certificates so issued; which surveys shall be made, numbered, and colored as directed in the third section of this act; and upon the return of the field notes and map or maps of such surveys to the General Land Office, and the certificates so issued, it shall be the duty of the Commissioner to issue to said company patents for the odd sections of said surveys; provided, that in case the surveys are not applied for before the completion of any section of road, it shall not be necessary to deposit with the Treasurer a bond as required in the second section of this act.

SEC. 7. That fractional sections containing more than 320 acres, shall be regarded as whole sections; and two fractional sections, each containing less than 320 acres, shall be taken as a whole section under the provisions of this act; and all the alternate or even sections shall be reserved to the use of the State until appropriated by law.

SEC. 8. That surveys under the provisions of this act may be made by persons employed by the company, and the field notes may be deposited with the Commissioner of the General Land Office without being recorded in the office of District Surveyor; provided that the State in no case shall be liable for surveying any part of said lands, nor shall any company pay for the fees of patenting the odd sections as herein provided.

SEC. 9. That any railroad company in the State acquiring lands or other real estate by virtue of the provisions of this act, or by virtue of the provisions of any other act, or charter, enacted by the Legislature of the State of Texas, by purchase, donation, or otherwise, shall proceed to alienate the same, except so far as may be necessary to the maintenance and running of said road, in six, eight, ten, and twelve years; that is, one-fourth shall be alienated in six years, one-fourth in eight years, one-fourth in ten years, from the time of acquiring such lands or real estate, in such manner that the whole of such lands or real estate shall pass out of the hands of such company within twelve years from date of its acquisition; provided, moreover, that said lands and real estate shall in no instance be alienated to any other corporation, except so far as may be necessary for the proper uses and the conduction of the business of such corporation.

SEC. 10. That if any company should neglect or fail to alienate its lands or real estate, as herein directed, evidences of which alienations said company shall cause to be filed with the Secretary of State, it shall be the duty of that officer to notify the Comptroller of Public Accounts and Commissioner of the General Land Office of such failure to alienate; whereupon the Commissioner shall furnish the Comptroller with a list of the lands acquired by said company, under this or any other act of the Legislature of the State, and the dates at which such lands were acquired; and the Secretary of State shall also furnish the Comptroller with a schedule of the lands owned and alienated by said company, as the same appears from the last annual returns made to his office by said company, in pursuance of the General law of the State regulating railroad companies; and it shall be the duty of the Comptroller of Public Accounts, immediately upon receiving said returns, to cause to be advertised in the newspapers in the city of Austin, for sale sixty days after such advertisement, the lands herein directed to be alienated, proceeding in the order in which said lands and

real estate were granted or deeded to said company; and after deducting all necessary expenses of the sale, the balance shall be deposited with the Treasurer to the credit of said company.

SEC. 11. That all the alternate or even sections of land, surveyed in pursuance of the provisions of this act, or of any other act of the Legislature of this State, donating lands to any railroad company, shall be reserved to the use of the State, and not liable to location, entries, or pre-emption privileges, until otherwise provided by law.

SEC. 12. That the provisions of this act shall not extend to any company receiving from the State a grant of more than sixteen sections of land, nor to any company for more than a single track road, with the necessary turnouts; and any company now entitled by law to receive any grant of eight sections of land per mile for the construction of any railroad, accepting the provisions of this act, shall not be entitled to receive any grant of land for any branch road; provided, this act shall not be so construed as to give to any company now entitled by law to receive eight sections of land, more than eight additional sections; provided, that no person or company shall receive any donation or benefit under the provisions of this act unless they shall construct and complete at least twenty-five miles of the road contemplated by their charter, within two years after the passage of this act; and such donation shall be discontinued in every case where the company or companies shall not construct and complete at least twenty-five miles of the road contemplated by their charter, each year after the construction of the said, first-mentioned twenty-five miles of road; and further provided, that the proviso herein contained shall not extend to any railroad the terminus of which is not fixed on the Gulf coast, the bays thereof, or on Buffalo Bayou, and that nothing in this section shall be so construed as to extend the duration of any existing charter; and further provided, that the certificates for land issued under the provisions of this act, shall not be located upon any land surveyed or titled previous to the passage of this act; and further provided, that this act shall continue in force for the term of ten years from the time it shall take effect, and no longer.

SEC. 13. That no railroad hereafter to be built shall be entitled to receive the additional sections of land herein granted, unless the railings of such road shall weigh at least fifty-four pounds to the yard.

January 30th, 1854.

I, ED. CLARK, Secretary of State of the State of Texas, hereby certify that the printed copy of "An Act to Encourage the Construction of Railroads in Texas, by donations of lands," heretofore attached, is a correct copy of the original act, now on file in the State department.

Given under my hand and seal of the Department of State, at Austin,
this, the 3d day of February, A. D. 1854.

ED. CLARK,
Secretary of State.

E.**A N A C T**

To provide for the investment of the Special School Fund, in the bonds of Railroad Companies, incorporated by the State.

SECTION 1. Be it enacted by the Legislature of the State of Texas: That the Governor, Comptroller and Attorney General, shall ex-officio constitute a board of School Commissioners, whose duty it shall be, to draw from the Treasury the Special School Fund, created by the Act of January 31st, 1854, entitled an Act to establish a system of Schools, and such other amount as may hereafter be added to said fund, and invest the same as provided in this Act. And said Board shall annually report to the Governor its acts and proceedings relative to the said School Fund, which shall be laid before the Legislature at each and every session thereof.

SEC. 2. That the five per cent. indemnity bonds belonging to said Special School Fund, may, and shall be loaned to legally incorporated Railroad Companies in this State, at their current value, including premium; provided said value shall not be less than par, otherwise at par, for the term of ten years, from the date of said loans, at an interest of six per cent. per annum, payable annually upon the terms and conditions specified in this Act, provided that one half of said fund shall be loaned to companies whose works lie east of Trinity River, and the residue to companies whose works lie west of said river.

SEC. 3. Said board of Commissioners is hereby authorized to invest said funds by loaning to any such Company which has been chartered for the purpose of building a Railroad in this State, the sum of six thousand dollars per mile for each and every mile of railroad constructed as hereinafter provided; said loans to be secured by the bonds of such Company, for said principal and interest, made and executed to the State of Texas in the corporate name of such Company, signed by the President, and countersigned by the Secretary or Treasurer, under the Seal of such Company: which bonds shall constitute a lien upon the road and charter rights of such Company, including the road-bed, right-of-way, grading, bridges, iron rails, equipments and masonry; and upon all the stock subscribed for in said Companies; all the depots and depot stations, and all the property owned by said Company, as necessary for its business. And the State of Texas, upon the execution of said bonds, and by virtue of the same, shall be invested with said lien or mortgage for the payment of said bonds, and the interest thereon, as the same becomes due, without the necessity of any deed, special contract, or act of registration.

SEC. 4. Said Board of Commissioners shall loan said sum of six thousand dollars for every mile of road completed, to any such Company as shall have complet-

ed, in a good and substantial manner, and furnished ready for actual use, a continuous section of twenty-five miles of the road of the said Company, and graded an additional consecutive section of twenty-five miles, ready for the cross ties and other superstructure; and the same amount per mile for every additional consecutive section of ten miles, which shall be so completed and graded, ready for the ties and other superstructure. And the same amount per mile for every section of ten miles which shall be so completed and furnished ready for use, upon any railroad which shall be a continuation of, or connection with, any other railroad running from any adjoining State or Territory in the State of Texas: Provided, said road shall, together with such continuation or connection, be completed at least twenty-five miles in length; and provided, that before said loan is drawn upon any completed section of ten miles, an additional consecutive section of ten miles shall be graded, ready for the ties, and other superstructure.

SEC. 5. That, upon the application of any such Railroad Company to said Board of Commissioners for said loan, and its representations that section fourth of this Act has been complied with, said Board of Commissioners shall appoint some competent Engineer, who shall, at the expense of the Company, examine the road of said Company, and make a full report upon the condition of the same under oath; and shall report all matters pertaining to the business of said Company which he may deem useful to said Commissioners in ascertaining the true condition of said road and Company. And, upon being fully satisfied that any section or sections of said road have been constructed and completed as provided in the fourth section of this Act, and that said section or sections are not subject to any lien whatever, other than such as may be created by this Act in favor of the State, said Board shall draw a warrant on the Treasury of the State, in the name of said Company, against said Special School Fund for such amount of said bonds as it may be entitled to under the provisions of this Act, which warrant shall state on account of what work it is drawn, shall be signed by said Board of Commissioners, and countersigned by the Governor, and delivered to the President, or the duly authorized agent of said Company.

SEC. 6. That, upon the presentation of such warrant or warrants to the Treasury of this State, the amount of said indemnity bonds called for in the same, shall be delivered and transferred according to law, to the President or authorized agent of said Company, his receipt taken therefor, and the same charged to the Special School Fund.

SEC. 7. That before said board shall deliver to said Company, said warrant or warrants upon the Treasury, it shall require said Company to execute and deliver into the Treasury the bonds of said Company for said loan or loans in sums of not more than one hundred and fifty thousand dollars, and not less than fifty thousand dollars, each payable to the State of Texas ten years after date, together with coupon bonds for the six per cent. interest thereon, payable annually as above stated; which bonds shall be executed in the mode prescribed in the third section of this Act, and shall be made payable at the Office of the Treasurer of the State, and which shall be a lien in favor of the State as specified in the third section of the Act, and shall have a priority over all other claims against said Company. That in addition to the annual interest of six per

cent. every Company accepting any loan under the provisions of this Act, shall pay annually at the expiration of each year from the date of the loan the further sum of two per cent. upon the amount of the loan, into the Treasury of the State for the purpose of establishing a sinking fund to be applied towards the payment of the loan at its maturity, and the amount so paid for the purpose of such sinking fund with their accumulations shall be credited to such Railroad.

Sec. 8. And after the execution of said bonds upon said first section, or any subsequent constructed section, it shall not be lawful for said Company to give, create, or convey to any person or persons, or body corporate whatever, any lien, incumbrance, or mortgage of any kind which shall have priority over or come in conflict with the lien herein secured, and any such lien, incumbrance, or mortgage shall be null and void as against said lien or mortgage in favor of the State.

Sec. 9. That it shall be the duty of any such Company, as the interest becomes due upon said bonds, executed as aforesaid, to deposit the same in the Treasury of the State, which amount shall be credited to the special school fund, and shall be subject to the immediate appropriation for school purposes, as provided by law. And all Railroad Companies shall pay said interest so due by them annually on the first day of March, out of the first receipts arising from said road independent of any expenses or other liabilities of said roads; and the coupon bonds of such Companies so satisfied shall be cancelled and delivered up.

Sec. 10. Whenever any of the bonds of said Company for the principal loaned thereon, shall become due, said Company shall deposit said sums so due, in the Treasury of the State, and said bonds, when so paid shall be cancelled and delivered up, and said principal sums so returned into the Treasury shall be credited to the special school fund, and subject to re-investment by said boards, as provided in this Act.

Sec. 11. That if any such Company shall fail or refuse to pay said principal or interest bonds from time to time, as the same shall become due, the road of said Company, together with all the rights and property of said Company, specified in section third of this Act, shall be sold or caused to be sold by the Governor of the State, for the satisfaction of said bonds so due, as well as the bonds of said Company which may have been given under this Act to the State; and the whole of said bonds shall be deemed due if said sale takes place; and the proceeds of such sales shall be deposited in the Treasury and credited to the special school fund.

Sec. 12. That upon the failure of any such Company to pay said principal or interest bonds as required in this Act, it shall be the duty of the Governor after the expiration of thirty days, to cause notice of the sale of such road to be advertised in some newspaper, published at the seat of Government, for the term of three months. And after due notice has been given, shall cause the entire road, together with all the rights and property of said company specified in the third section of this Act, to be sold by public auction to the highest bidder for cash, at the door of the capitol of the State, and at the time specified in said advertisement; provided, that if the principal or interest bonds which may have become due before the giving of said notice, and all costs attending said

proceedings, shall be paid before the day of sale, then said proceedings for sale shall be stopped.

SEC. 13. In the event of any sale of any Railroad under the provisions of this Act, it shall be the duty of the Governor, either in person or by agent, to attend such sale and protect the interest of the Special School Fund, and shall, if necessary to protect said interest, buy in said road, with all the rights and property belonging to said company, in the name of the Board of School Commissioners: Provided, he shall not bid more than the amount of the bonds of said company with the interest due thereon, and the cost and expenses attending said sale, and in the event of any such purchase in the name of the board of School Commissioners, the Governor shall appoint a receiver who shall be required to enter into such bonds as may be required by the Governor, and whose duty it shall be to take immediate possession of and to control and manage said road under directions of the Governor until otherwise disposed of by law. The said board of School Commissioners shall retain in the Treasury of the State charged to the credit of the School Funds, five per cent. of the United States bonds of all sums loaned as provided in this Act, as a sinking fund to be used for the "pro rata" appropriation annually due to the several counties for school purposes, in the event of the interest due to the School Fund after the sale of any Railroad shall not be paid by said road.

SEC. 14. The State of Texas expressly reserves the right to enact hereafter all such laws as may be deemed necessary to protect the interest of the Special School Fund, in securing the payment of said bonds, and in enforcing the lien reserved thereon.

SEC. 15. That the provisions of this Act shall not extend to any Railroad Company which may be entitled to receive from the State a larger grant of land than sixteen sections of six hundred and forty acres to the mile for the construction of such road, nor to any road for more than a single trunk with the necessary turnouts, nor to any branch road, nor to any road which shall not be commenced and prosecuted as required by the provisions of its charter: Provided, that no company shall be entitled to a loan under this Act for any section of road between the cities of Galveston and Houston, or Galveston and the crossing of Buffalo Bayou, near the city of Houston.

SEC. 16. That no Railroad which is less than fifty miles in length according to the terms of its charter, shall be entitled to the benefits of this Act, except on the following terms. The Brownsville and Rio Grande Railroad shall be entitled to the benefits of this Act on its entire length as soon as it is completed from Point Isabel to Brownsville: and any other Railroad which is less than fifty miles in length according to the terms of its charter, whenever one half of its entire length has been completed and put in running order, and the other half has been graded ready for ties and other superstructure, shall be entitled to said loan on said completed section, which shall be expended for the completion of the entire road; and in no event shall said Roads be entitled to said loan on more than one-half of its entire length.

SEC. 17. If any person making an affidavit as herein required, shall know

ingly swear falsely, he, upon conviction thereof before any court of competent jurisdiction, shall suffer all the pains and penalties of perjury.

Sec. 18. That it shall be the duty of any Railroad Company receiving the benefits of this Act, to make through its proper officers an annual report under oath to the Governor, containing a full and complete statement of the affairs of said company, together with the receipts, expenditures and liabilities of said company, and with such other facts as may be necessary under the general laws regulating Railroads and said Railroad Companies.

Sec. 19. That every Railroad Company before it shall be entitled to the privileges of this Act, shall establish upon the line of its road an office where books shall be kept showing the state of the stock and general accounts; and where the company may be legally served with all notices and processes. And the superintendent or principal manager of the transportation business of the road shall reside in this State. And whenever a majority of the shares in the capital stock of the company shall be owned in this State, a majority of the Directors, including the President, shall be residents thereof. And that this Act take effect and be in force from and after its passage.

Passed, August 18th, 1856.

DEPARTMENT OF THE STATE,

AUSTIN, TEXAS, AUGUST 20, 1856.

I, the undersigned Secretary of State of the State of Texas, hereby certify that the writing contained on the foregoing eleven pages hereto attached, is a correct copy of the original enrolled Act now on file in this Department.

L. S.

Given under my hand and the seal of the Department, at the city of Austin, this the 20th day of August, A. D. 1856; and of the Independence of Texas the Twenty-first year.

EDWARD CLARK,

SECRETARY OF STATE.

F.**AN ACT**

To amend the third Section of an Act, entitled, an Act for the investment of the special school fund in the bonds of Railroad Companies incorporated by the State.

SEC. 1. Be it enacted by the Legislature of the State of Texas: That Section 3d of the above entitled Act, shall be so amended, as to read as follows: said Board of Commissioners is hereby authorised, to invest said funds by loaning to any such Company which has been heretofore chartered for the purpose of building a Railroad in the State the sum of six thousand dollars per mile, for each and every mile of Railroad constructed as hereinafter provided; said loans to be secured by the bonds of such Company for said principal and interest made and executed to the State of Texas, in the corporate name of such Company, signed by the President, and countersigned by the Secretary or Treasurer under the seal of such Company, which bonds shall constitute a lien upon the road and chartered rights of such Company, including the roadbeds, right of way, grading, bridges, iron rails, equipments and masonry, and upon all the stock subscribed for in said Companies, all the depots and depot stations, and all the property owned by such Company as necessary for its business; and the State of Texas upon the execution of said bonds, and by virtue of the same, shall be invested with said lien or mortgage for the payment of said bonds, and the interest thereon as the same becomes due, without the necessity of any deed, special contract, or act of registration.

SEC. 2. That this Act take effect, and be in force, from and after its passage,
Passed August 26th., 1856.

DEPARTMENT OF STATE.)
AUSTIN, TEXAS, August 26th, 1856. }

I, Edward Clark, Secretary of State of the State of Texas, hereby certify the above to be a correct copy of the original enrolled Act, now on file in this Department.

L. S.

Given under my hand and the seal of the Department, at the city of Austin, this the 26th day of August A.D. 1856, and of the Independence of Texas the 21st year.

EDWARD CLARK,
Secretary of State.