

LAND GRANTS TO RAILROADS.

LETTER

FROM

THE AUDITOR OF RAILROAD ACCOUNTS,

(TO HON. ROBERT M. McLANE, OF THE HOUSE OF REPRESENTATIVES),

RELATIVE TO

*Land grants made by the United States to aid in the construction of the
Pacific Railroads.*

FEBRUARY 7, 1881.—Ordered to be printed.

DEPARTMENT OF THE INTERIOR,
OFFICE OF AUDITOR OF RAILROAD ACCOUNTS,
Washington, D. C, February 3, 1881.

SIR: I have the honor to transmit herewith a report prepared in this office, in compliance with your request of June 18, 1880, indorsed on a draft of a resolution which the Committee on Pacific Railroads authorized you to report to the House at its last session, but which, in the press of other business, was not reached before adjournment.

As the design of the resolution proposed was to ascertain, as accurately as possible, all facts connected with the land grants made by the United States to aid in the construction of the Pacific Railroads, special inquiry has been made in order to obtain the fullest information.

The report has been shaped so as to take up separately each one of the four great transcontinental routes or railroads located on the forty-fifth, fortieth, thirty-fifth, and thirty-second parallels of north latitude, giving details as to each main and branch line, with a general recapitulation showing the whole result.

Very respectfully,

THEO'S FRENCH,
Auditor.

HON. ROBERT M. McLANE,
*Chairman Committee on Pacific Railroads,
House of Representatives.*

REPORT ON THE QUANTITY AND VALUE OF PUBLIC LANDS GRANTED BY CONGRESS TO AID IN THE CONSTRUCTION OF THE PACIFIC RAILROADS.

DEPARTMENT OF THE INTERIOR,
OFFICE OF AUDITOR OF RAILROAD ACCOUNTS,
Washington, D. C., January 26, 1881.

The proposed resolution in regard to the matters embraced in this report is as follows:

Resolved, &c., That the Committee on the Pacific Railroads, by subcommittee, be authorized to sit during the recess for the purpose of ascertaining the quantity and value of the public lands heretofore granted by Congress to aid in the construction of the Pacific Railroads which have not vested in said roads by the terms of the several laws granting such lands, and the quantity and value of the said lands which have vested in said roads, how the same have been disposed of, at what price, and also how the proceeds of the same have been disposed of; also, the cost, in detail, of the construction of completed road and the estimated cost, in detail, of the construction of road necessary to be built in order to complete the said railroads in accordance with the requirements of law; also, to ascertain the cost, or estimated cost, of construction of any and all railroads built or proposed to be built parallel or adjacent to the said railroads whether or not the same are located on the line or lands reserved by any of the said granting acts of Congress; with authority to employ a clerk during that time to obtain the assistance of the Auditor of Railroad Accounts, and to send for persons and papers or examine the same at the principal offices of said railroads; and all expenses necessarily incurred in the execution of this resolution shall be paid out of the contingent fund of the House.

For the purpose of this report the Pacific railroads have been classified as follows, viz:

1. Northern, or route on forty-seventh parallel of latitude.
2. Union Central, or route on fortieth parallel of latitude.
3. New Mexico Southern, or route on thirty-fifth parallel of latitude.
4. Texas Southern, or route on thirty-second parallel of latitude.

The first or northern line is known as Northern Pacific, and extends from the Montreal River in Wisconsin to Puget's Sound, Washington Territory. Branch roads are intended to be built to Portland, Oreg., and to other points as may be deemed advisable. The main line and the branch to Portland only have land grants.

The second or Union Central line embraces the roads heretofore known as Union Pacific, Central Pacific, Kansas Pacific, Central Branch Union Pacific, and Sioux City and Pacific, all of which are subsidized with bonds as well as lands. It also embraces in its system the Denver Pacific, and the Burlington and Missouri River Railroad in Nebraska, which are subsidized with lands only.

The third or New Mexico Southern line extends from Missouri and Arkansas through the Indian Territory to California and the Pacific Ocean, and has a subsidy of lands only.

The fourth or Texas Southern line extends from Louisiana through Texas to connect with the Southern Pacific at Yuma on the Colorado River, thus obtaining a through line to San Francisco, Cal. This line has a subsidy of lands only.

NORTHERN, OR ROUTE ON FORTY-SEVENTH PARALLEL.

The Northern Pacific Railroad Company.—This company was chartered by an act of Congress approved July 2, 1864, entitled "An act granting lands to aid in the construction of a railroad and telegraph line from Lake Superior to Puget's Sound, on the Pacific coast, by the northern route" (13 Stat., 365). (Report of Auditor of Railroad Accounts, 1880, p. 152.)

Section 1 designates the route as follows, viz: "Beginning at a point on Lake Superior, in the State of Minnesota or Wisconsin; thence westerly by the most eligible railroad route, as shall be determined by said company, within the territory of the United States, on a line north of the forty-fifth degree of latitude to some point on Puget's Sound, with a branch, via the valley of the Columbia River, to a point at or near Portland, in the State of Oregon, leaving the main trunk line at the most suitable place not more than three hundred miles from its western terminus."

Section 2 grants to the company the right of way through the public lands to the extent of "two hundred feet in width on each side of said railroad, including all necessary ground for station buildings, workshops, depots, machine-shops, switches, side tracks, turn-tables, and water-stations."

Section 3 grants to the company "every alternate section of public land, not mineral, designated by odd numbers, to the amount of twenty alternate sections per mile on each side of said railroad line, as said company may adopt, through the Territories of the United States, and ten alternate sections of land per mile on each side of said railroad whenever it passes through any State, and whenever on the line thereof the United States have full title, not reserved, sold, granted or otherwise appropriated, and free from pre-emption, or other claims or rights, at the time the line of said railroad is definitely fixed, and a plat thereof filed in the office of the Commissioner of the General Land Office."

Section 6 enacts "that the President of the United States shall cause the lands to be surveyed for forty miles in width on both sides of the entire line of said road, after the general route shall be fixed, and as fast as may be required by the construction of said railroad; and the odd sections of land hereby granted shall not be liable to sale, or entry or pre-emption before or after they are surveyed, except by said company, as provided in this act; but the provisions of the act of September, eighteen hundred and forty-one, granting pre-emption rights, and the acts amendatory thereof, and of the act entitled 'An act to secure homesteads to actual settlers on the public domain,' approved May twenty, eighteen hundred and sixty-two, shall be, and the same are hereby, extended to all other lands on the line of said road, when surveyed, excepting those hereby granted to said company. And the reserved alternate section shall not be sold by the government at a price less than two dollars and fifty cents per acre, when offered for sale."

Sections 8 and 9 give the conditions attached to the grant as follows, viz: "That each and every grant, right, and privilege herein are so made and given to, and accepted by, said Northern Pacific Railroad Company upon and subject to the following conditions, namely: That the said company shall commence the work on said road within two years from the approval of this act by the President, and shall complete not less than fifty miles per year after the second year, and shall construct, equip, furnish, and complete the whole road by the fourth day of July, anno Domini eighteen hundred and seventy-six"; and "That the United States make the several conditioned grants herein, and that the said Northern Pacific Railroad company accept the same, upon the further condition that if the said company make any breach of the conditions hereof, and allow the same to continue for upwards of one year, then, in such case, at any time hereafter, the United States, by its Congress, may do any and all acts and things which may be needful and necessary to insure a speedy completion of the said road."

Section 10 enacts that "no mortgage or construction bonds shall ever

be issued by said company on said road, or mortgage, or lien made in any way, except by the consent of the Congress of the United States."

Section 20 enacts, "That the better to accomplish the object of this act, namely, to promote the public interest and welfare by the construction of said railroad and telegraph line, and keeping the same in working order, and to secure to the government at all times (but particularly in time of war) the use and benefits of the same for postal, military, and other purposes, Congress may at any time, having due regard for the rights of said Northern Pacific Railroad Company, add to, alter, amend, or repeal this act."

The joint resolution approved May 7, 1866 (14 Stat., 355), extended the time for commencing and completing the railroad for the term of two years. (See Report of Auditor of Railroad Accounts for 1880, page 159.)

The joint resolution approved July 1, 1868 (15 Stat., 255), amended section 8 of the original act so as to read as follows: "That each and every grant, right, and privilege herein are so made and given to and accepted by said Northern Pacific Railroad Company upon and subject to the following conditions, namely: That the said company shall commence the work on said road within two years from and after the second day of July, eighteen hundred and sixty-eight, and shall complete not less than one hundred miles per year after the second year thereafter, and shall construct, equip, furnish, and complete the whole road by the fourth day of July, anno Domini eighteen hundred and seventy-seven." (Auditor's Report for 1880, page 159.)

By the joint resolution approved March 1, 1869 (15 Stat., 346), Congress gave its consent for the company "to issue its bonds and to secure the same by mortgage upon its railroad and its telegraph line, for the purpose of raising funds with which to construct said railroad and telegraph line between Lake Superior and Puget Sound, and also upon its branch to a point at or near Portland, Oregon." (Auditor's Report for 1880, page 160.)

The joint resolution of April 10, 1869 (16 Stat., 57), authorized the construction of a branch from a point near Portland to Puget Sound (the line from Kalama to Tacoma, constructed and in operation).

By resolution of May 31, 1870 (16 Stat., 378), Congress authorized the company "to issue its bonds to aid in the construction and equipment of its road, and to secure the same by mortgage on its property and rights of property of all kinds and descriptions, real, personal, and mixed, including its franchise as a corporation"; also, to construct its main line via the valley of the Columbia River, with a branch across the Cascade Mountains to Puget Sound; and increased the indemnity limits to sixty miles on each side of the road.

Section 2 of this resolution provides "that Congress may at any time alter or amend this joint resolution, having due regard to the rights of said company, and any other parties." (Auditor's Report for 1880, page 161.)

Under the authority of this resolution the company, on July 1, 1870, issued its thirty-year bonds bearing interest at the rate of 7.3 per cent. per annum, and secured the same by a mortgage, in accordance with the resolution, of an amount of about \$30,000,000. On the 16th of April, 1875, the company having previously defaulted upon its interest, in proceedings of foreclosure, the United States circuit court for the southern district of New York appointed a receiver. By a decree of that court the property and franchises were sold at auction, August 12, 1875, and were purchased by a committee of bondholders, the sale being confirmed

by the court August 25, 1875. The company was reorganized September 30, 1875, upon a plan by which the holders of the bonds of the company were reimbursed for the principal and interest up to and including July 1, 1878, in preferred stock at par, which it was proposed to issue to the amount of \$51,000,000. This preferred stock is entitled to 8 per cent. dividends before any dividends are paid on the common stock, and is receivable at par for lands belonging to the company east of the Missouri River. Common stock was issued to the holders of the stock of the old company, share for share, and \$49,000,000 of the common stock have been issued, the plan of reorganization being given in the annual report of the company for 1876 (page 43).

In 1879 the company placed first mortgages upon the Missouri and Pend d' Oreille divisions of its road, and to June 30, 1880, had issued nearly \$4,000,000 of the bonds secured thereby. On January 1, 1881, the company executed a general first mortgage on all its railroads, lands, property, and franchises to secure an issue of bonds to the amount of \$25,000 per mile of the main and branch lines, payable in forty years, and bearing interest at the rate of 6 per cent. per annum. This last mortgage provides for taking up, retiring, and cancelling the bonds issued on the Missouri and Pend d' Oreille divisions; it is also provided in the mortgage that all moneys derived from the sales of lands are applicable to the payment of the interest and principal of the bonds; a sinking fund is also created, beginning July 1, 1886, by which 1 per cent. per annum is required to be paid to the trustee in equal semi-annual installments.

From the reports of the General Land Office the rights of the Northern Pacific Railroad Company attached to their grant as follows, viz: By map of general route through Minnesota and part of Washington Territory, August 13, 1870; through Dakota, Montana, Idaho, and a part of Washington Territory, February 21, 1872; of a branch line in Washington Territory, August 15, 1873; from Thomson to Moorhead, Minn., November 21, 1871; from Moorhead, Minn., to Bismarck, Dak., May 26, 1873; from Kalama to Tenino, Wash., September 13, 1873; from Tenino to Tacoma, Wash., May 14, 1874.

The construction of the Northern Pacific Railroad was begun July 1, 1870, and between that date and March 1, 1874, a period of three years and nine months, 530 miles of subsidized road had been completed and put in operation. To November 1, 1880, 680 miles have been completed and put in operation, in addition to 220 miles of other road in operation, and about 100 miles of new road not quite finished; in all, 1,000 miles. The following table shows the acceptance of the several sections of subsidized railroad of this company:

| No. of section. | From— | To— | Miles. | Opened for business. | Examined by commissioners. | Accepted by the President. |
|-----------------|--------------------------|--|--------|----------------------|----------------------------|----------------------------|
| 1 | Thomson, Minn. | Red River | 228 | Oct. 1, 1872 | Dec. 10, 1872 | Jan. 6, 1873 |
| 2 | Kalama | Tenino, Wash. | 65 | July 15, 1873 | Aug. 16, 1873 | Sept. 10, 1873 |
| 3 | Fargo | Bismarck, Dak. | 196.4 | Oct. 1, 1873 | Nov. 24, 1873 | Dec. 1, 1873 |
| 4 | Tenino | Tacoma, Wash. | 40.1 | Mar. 1, 1874 | Mar. 5, 1874 | May 12, 1874 |
| 5 | Missouri River | One hundredth mile-post. | 100 | July 1, 1880 | July 26, 1880 | Aug. 16, 1880 |
| 6 | One hundredth mile-post. | One hundred and fiftieth mile-post west. | 50 | Nov. 1, 1880 | Nov. 20, 1880 | Dec. 20, 1880 |
| | Total | | 679.5 | | | |

The length of road and extent of land-grant for the whole line included in the charter act and amendments may be stated approximately as follows, viz :

| State or Territory. | Miles of road. | Acres per mile of road. | Total acres granted. |
|---------------------|----------------|-------------------------|----------------------|
| Wisconsin..... | 110 | 12,800 | 1,408,000 |
| Minnesota..... | 265 | 12,800 | 3,392,000 |
| Dakota..... | 450 | 25,600 | 11,520,000 |
| Montana..... | 800 | 25,600 | 20,480,000 |
| Idaho..... | 75 | 25,600 | 1,920,000 |
| Washington..... | 750 | 25,600 | 19,200,000 |
| Totals..... | 2,450 | *23,640 | 57,920,000 |

*Average.

The latest estimate of lands which the company may obtain is as follows, viz :

| | Miles. | Acres. |
|--|--------|------------|
| Minnesota and Dakota divisions..... | 426 | 5,500,000 |
| Missouri division..... | 217 | 4,600,000 |
| Yellowstone division..... | 340 | 7,400,000 |
| Rocky Mountain division..... | 198 | 4,000,000 |
| Clark's Fork division..... | 282 | 5,800,000 |
| Pend d'Oreille division..... | 209 | 3,600,000 |
| Main line to Tacoma across Cascade Mountains..... | 250 | 4,800,000 |
| Branch from Pend d'Oreille division to Kalama..... | 250 | 4,000,000 |
| Pacific division..... | 145 | 2,300,000 |
| Totals..... | 2,317 | 42,000,000 |
| Estimated for Wisconsin division..... | 112 | 500,000 |

To June 30, 1880, there had been patented to the company 746,509 acres. The company has earned by construction about 15,000,000 acres of land to November 1, 1880, and sold to June 30, 1880, 2,600,000 acres for \$9,000,000. The price of the company's agricultural lands is \$2.50 per acre; coal and timber lands being reserved from sale until the country is occupied. The lands not yet earned by the company are about 27,000,000 acres, situated chiefly in Montana, Idaho, and Washington Territories.

The value of the company's lands, vested and unvested, may be reasonably estimated at \$2.50 per acre, so that the lands unsold are worth say (39,900,000 acres at \$2.50) \$99,750,000. For a description of some of these lands reference is made to page 82 of the last Annual Report of the Auditor of Railroad Accounts.

In 1874 the company in its report to this department gave the cost of the road and fixtures to June 30, 1874, as \$21,353,416.11, and to that time had constructed 530 miles of railroad, being an average cost of \$40,289 per mile. The expenditure by items is as follows :

| | |
|--|----------------|
| Surveys..... | \$1,108,278 52 |
| Construction, including docks and wharves..... | 14,446,356 54 |
| Auxiliary and connecting rail and water lines..... | 2,728,980 09 |
| Equipment..... | 2,434,346 25 |
| General and incidental expenses during construction..... | 635,454 71 |
| Total..... | 21,353,416 11 |

In addition to these 530 miles, the company has constructed a branch line in Washington Territory, from Takoma to Wilkeson, 32 miles in length.

The road yet to be constructed and accepted may be stated as follows, with the estimated cost of the same, viz:

| | |
|--|-------------|
| Wisconsin division—Montreal River to Thomson Junction—122 miles, at \$20,000 per mile | \$2,440,000 |
| Missouri division—Missouri River to Yellowstone River—217 miles, at \$12,000 per mile, including an iron bridge over the Missouri River, at Bismarck, the cost of which is estimated at nearly \$100,000, or about. | 3,500,000 |
| Yellowstone, Rocky Mountain, and Clark's Fork divisions—Yellowstone River to Lake Pend d'Oreille—320 miles, at \$30,000 per mile | 24,600,000 |
| Pend d'Oreille division—Lake Pend d'Oreille to Columbia River—209 miles, at \$21,500 per mile | 4,500,000 |
| Columbia River division—junction of Columbia and Snake Rivers to Portland—238 miles, at \$31,500 per mile | 7,500,000 |
| Cascade Mountain division—junction of Columbia and Snake Rivers to Puget Sound—219 miles, at \$30,000 per mile | 6,570,000 |
| Pacific division—Portland to Kalama—40 miles, at \$25,000 per mile | 1,000,000 |
| Total road to be constructed, 1,865 miles, at an estimated average cost of \$26,868 per mile, amounting to | 50,110,000 |

The entire road, when completed—2,700 miles—will have cost about \$75,000,000, or at the rate of \$28,000 per mile.

The conditions as to all government service on this road are found in section 11 of the charter act, among which one is that the road is "subject to such regulations as Congress may impose, restricting the charges for such government transportation."

THE UNION-CENTRAL LINE OR ROUTE.

This line, being composed of a main and branch lines having different owners, will be treated separately, and in the following order: (1) Union Pacific Railroad Company, (2) Kansas Pacific Railway Company, and (3) Denver Pacific Railway and Telegraph Company, composing the (4) Union Pacific Railway Company (consolidated); (5) Central Pacific Railroad Company, (6) Western Pacific Railroad Company, and (7) California and Oregon Railroad Company, composing the (8) Central Pacific Railroad Company; (9) Central Branch Union Pacific Railroad Company; (10) Sioux City and Pacific Railroad Company; (11) Burlington and Missouri River Railroad Company in Nebraska.

The Union Pacific Railroad Company.—This company, chartered by acts of Congress approved July 1, 1862 (12 Stat., 489), and July 2, 1864 (13 Stat., 356), received from the United States a grant of public lands, to aid in the construction of its railroad and telegraph line, amounting to 20 sections, or 12,800 acres, per mile of road.

The length of road subsidized is 1,038.68 miles, extending from the Missouri River, near Omaha, Nebr., to a point 5 miles west of the crossing of the Utah Central Railroad in Ogden, Utah. If none of the land had been previously disposed of by the United States, the total grant would have been 13,295,104 acres. The quantity which the company will obtain is estimated by the General Land Office to be about 12,000,000 acres; but the estimate of the land commissioner of the company places it at 11,200,000 acres.

The location of the lands may be generally stated as follows, namely: 4,800,000 acres in Nebraska, 4,600,000 acres in Wyoming, 700,000 acres in Colorado, and 1,100,000 acres in Utah; of which it may be said that

3,500,000 acres are agricultural lands, 4,000,000 acres are grazing lands, and 3,700,000 acres desert or waste.

About 2,000,000 acres of the agricultural lands remained unsold December 31, 1879, worth, at an average price of \$3.50 per acre, \$7,000,000, and about 4,000,000 acres of the grazing lands, worth, at \$1.25 per acre, \$5,000,000; in all, worth \$12,000,000; without estimating anything for the 3,700,000 acres of desert lands. To June 30, 1880, 1,859,475 acres of land had been patented to the company. To December 31, 1879, the company had sold nearly 2,000,000 acres, as follows:

| Year. | Acres. | Average price per acre. | Amount. |
|-----------------------|--------------|-------------------------|--------------|
| 1869 | 128,825.28 | \$4.555 | \$586,808 29 |
| 1870 | 164,058.62 | 4.385 | 719,758 14 |
| 1871 | 206,605.97 | 3.855 | 795,557 53 |
| 1872 | 172,108.67 | 4.39 | 755,430 94 |
| 1873 | 177,083.50 | 5.55 | 983,030 33 |
| 1874 | 235,749.14 | 4.66 | 1,099,467 21 |
| 1875 | 111,965.55 | 3.66 | 409,916 10 |
| 1876 | 128,696.21 | 3.02 | 389,773 46 |
| 1877 | 69,015.87 | 4.98 | 343,768 02 |
| 1878 | 318,903.47 | 4.88 | 1,557,082 32 |
| 1879 | 243,337.31 | 4.141 | 1,007,855 63 |
| Total, 11 years | 1,956,349.59 | 4.42 | 8,648,447 97 |

From these sales forfeited and canceled contracts must be deducted, which leaves the net sales to the same date 1,568,438 acres, amounting to the sum of \$6,916,811.58, being an average price of \$4.41 per acre.

The lands are sold in small tracts, averaging about 100 acres to each purchaser, so that there have been 15,000 to 16,000 purchasers. Some sales are made for cash, but the large majority of the sales have been on time, deferred payments drawing interest at the rate of 6 per cent. per annum.

The gross proceeds of sales, interest, forfeitures, &c., to December 31, 1879, have been \$8,173,846.83, of which amount \$4,412,033.88 has been received in cash, and the remainder, \$3,761,812.95, in notes or land contracts yet to be paid. These gross proceeds are applied to the redemption of land-grant mortgage bonds, of which \$10,400,000 have been issued and \$4,101,000 redeemed.

The expenses of the land department, taxes on land, &c., amounting to \$1,889,877.68, to December 31, 1879, have been paid by the company out of its ordinary income.

The cost of the railroad and its equipment to December 31, 1879, amounted to \$118,682,223.96, or at the rate of \$114,262.54 per mile. The details are as follows, viz:

| | | |
|---------------------------------------|-----------------|--|
| Payments to contractors: | | |
| "Oakes Ames" contract | \$57,140,102 94 | |
| "Davis" contract | 23,129,671 01 | |
| "Hoxie" contract | 11,966,799 63 | |
| Total contracts | 92,236,573 58 | |
| Expended by the company for— | | |
| Right of way | \$165,675 66 | |
| Fencing and crossings | 250,700 68 | |
| Roadbed and track | 100,375 78 | |
| Coal sheds | 13,912 33 | |
| Bridging, piling, and trestling | 158,542 51 | |
| Snow-sheds and snow-fences | 393,978 14 | |
| Passenger and freight buildings | 1,059,904 27 | |

| | |
|--|-------------------------|
| Machine-shops, car-shops, machinery, engine-houses, and turn-tables. | \$436, 012 21 |
| Water-tanks, wells, pumping-houses, &c..... | 124, 591 48 |
| Hotels, tenements, &c..... | 226, 790 77 |
| Rolling-mills, scrap-furnaces, rail-mills, &c | 228, 968 09 |
| Equipment other than furnished by contractors | 2, 193, 998 69 |
| Express outfit..... | 12, 503 71 |
| Government commissioners and government directors during period of construction | 188, 630 13 |
| Omaha bridge and approaches | 2, 255, 089 30 |
| Engineering, agencies, &c..... | 1, 891, 510 57 |
| Total cost of construction | 101, 937, 757 90 |
| Less sale of constructed road | \$2, 840, 000 00 |
| Sale of constructed telegraph line..... | 104, 432 54 |
| Total amount sold | 2, 944, 432 54 |
| Net cost of property..... | 98, 993, 325 36 |
| Interest and discount expenses during construction : | |
| Interest, discount, and commissions..... | \$2, 750, 284 63 |
| Losses on securities..... | 12, 215, 868 39 |
| Interest paid on bonds outstanding | 4, 000, 000 00 |
| Discount on Omaha bridge bonds | 440, 000 00 |
| Interest on Omaha bridge bonds..... | 162, 329 94 |
| Premium on Omaha bridge bonds | 8, 032 25 |
| Expenses paying drawn bonds, &c..... | 4, 446 02 |
| Total amount, interest, &c | 19, 530, 961 23 |
| Unexplained difference between cost as stated on ledger and items as above..... | 107, 937 37 |
| Total cost of road and equipment | 118, 632, 223 96 |

The cost of building and equipping a railroad like the Union Pacific main line from Council Bluffs to Ogden, with similar grades and on the same route, the whole of it laid with steel rails, at the present time may be stated approximately at \$32,000,000; say 500 miles Council Bluffs to Cheyenne, at \$20,000 per mile, and 540 miles Cheyenne to Ogden, at \$40,000 per mile.

The Kansas Pacific Railway Company.—This company, originally known as “the Leavenworth, Pawnee and Western Railroad Company,” and afterwards as “the Union Pacific Railway Company, Eastern Division,” was chartered by the State of Kansas February 1, 1855, and received from the United States, under the Pacific Railroad acts before referred to, a grant of public lands to aid in the construction of its railroad and telegraph line. The grant was twenty sections, or 12,800 acres per mile of road.

The length of road subsidized is 638.6 miles, extending from the eastern boundary line of the State of Kansas, in Kansas City, to Denver, Colo. The quantity of land granted would have amounted to 8,174,000 acres, if none of the lands had been otherwise or previously disposed of by the government. The General Land Office has estimated that the company will receive about 6,000,000 acres, but the land commissioner of the company estimates about 200,000 acres more.

The location of this company's lands is as follows: 2,600,000 acres in Colorado, 3,600,000 acres in Kansas. Of these, probably one-third, say 2,000,000 acres, are “grazing” lands, and the remainder, say 4,000,000 acres, are “agricultural.” The lands which were unsold December 31, 1879, lie chiefly in Western Kansas—about 2,000,000 acres between Manhattan, Riley County, and Grinnell, Gove County, worth on an average nearly \$3 per acre, and the remainder, 2,800,000 acres, between Grinnell and Denver, worth probably \$2 an acre; in all, worth about \$11,000,000.

To June 30, 1880, 828,830.44 acres had been patented to the company. To December 31, 1879, the company had sold 1,521,111.53 acres, as follows, viz:

| Year. | Acres. | Average price per acre. | Amount. |
|-------|--------------|-------------------------|--------------|
| 1868 | 111,271.29 | \$2 96 | \$329,812 67 |
| 1869 | 382,885.20 | 2 91 | 1,114,578 57 |
| 1870 | 124,168.59 | 3 19 | 396,196 06 |
| 1871 | 123,935.82 | 3 50 | 434,235 52 |
| 1872 | 68,851.29 | 2 92 | 199,841 71 |
| 1873 | 25,423.43 | 3 67 | 93,175 10 |
| 1874 | 35,393.96 | 3 29 | 117,708 61 |
| 1875 | 61,366.58 | 3 57 | 218,808 60 |
| 1876 | 74,554.09 | 4 23 | 315,420 62 |
| 1877 | 135,994.45 | 3 31 | 449,234 44 |
| 1878 | 207,938.03 | 3 38 | 795,997 83 |
| 1879 | 169,328.80 | 4 09 | 592,930 53 |
| Total | 1,521,111.53 | 3 39 | 5,157,940 26 |

Forfeited and canceled contracts for 229,657.16 acres, amounting to \$737,979.77, being deducted, leaves the net sales 1,291,454.37 acres, and the amount for which sold \$4,419,960.49, or an average of \$3.42 per acre.

The lands have been sold principally on time, at one-fifth cash and balance in four annual installments, with interest at the rate of 6 per cent. per annum.

The gross proceeds of sales, interest, forfeitures, &c., to December 31, 1879, have been \$4,404,232.52, of which \$3,016,022.60 has been received in cash, and the remainder—\$1,388,209.92—is held as land notes or contracts. By the terms of the land-grant mortgages, the gross proceeds of sales of land are to be applied to the redemption of the bonds issued thereon. The expenses, commissions, taxes, &c., paid to December 31, 1879, have amounted to \$694,997.90.

To December 31, 1879, the cost of this railroad and its equipment—670.5 miles—is reported by the company as \$34,359,540.66, which is at the rate of \$51,244.65 per mile.

A railroad like the Kansas Pacific, 670 miles, most of it through a rolling prairie country, could be built with steel rails at this time for \$15,000 per mile, and fully equipped for \$5,000 per mile; in all \$20,000 per mile, or \$13,500,000.

Denver Pacific Railway and Telegraph Company.—This company was incorporated November 19, 1867, under the general laws of the territory of Colorado relating to corporations, and was organized December 14, 1867, with a board of trustees. The first annual meeting of stockholders was held on December 14, 1868, when permanent officers were elected.

By the act of Congress approved March 3, 1869, the Union Pacific Railway Company, Eastern Division, was authorized to transfer to the Denver Pacific Railway and Telegraph Company all the rights and privileges, subject to all the obligations pertaining to that part of its line of railroad and telegraph between Denver City and Cheyenne. Under this law the company obtained its land-grant of twenty sections, or 12,800 acres per mile.

The length of road constructed is 105.89 miles, which entitles the company to 1,355,292 acres of land; but the General Land Office estimates the grant which the company will eventually receive as 1,100,000 acres,

while the estimate of the company is only 971,771 acres, 800,000 acres of which are covered by a first mortgage given to secure an issue of \$2,500,000 bonds. The company's officers in 1870 estimated the value of the 800,000 acres included in the mortgage at \$3,000,000.

All of the company's lands are in Colorado, and are among the most fertile and valuable portion of the agricultural lands of that State, and some of the lands have valuable coal deposits.

By the terms of the contract for building the railroad, all of the company's lands granted by Congress over and above the 800,000 acres covered by the mortgage referred to were to revert to the contractors. These lands being left out of the question, the company had remaining December 31, 1879, 639,269 acres unsold, the average value of which may be estimated at \$2.50 per acre, amounting to \$1,598,170. To June 30, 1880, only 49,811.59 acres had been patented to the company; December 31, 1879, the company had sold lands as follows:

| Year. | Acres. | Average price per acre. | Amount. |
|--------------|--------------|-------------------------|---------------|
| 1870 | 32, 613. 00 | \$4 17 | \$136, 076 43 |
| 1871 | 41, 543. 55 | 3 94 | 163, 858 71 |
| 1872 | 19, 959. 09 | 4 07 | 81, 195 91 |
| 1873 | 17, 951. 95 | 4 61 | 82, 676 96 |
| 1874 | 10, 918. 54 | 5 21 | 56, 877 83 |
| 1875 | 3, 676. 52 | 6 12 | 22, 488 02 |
| 1876 | 4, 364. 37 | 14 32 | 62, 497 50 |
| 1877 | 26, 101. 56 | 5 25 | 136, 963 89 |
| 1878 | 34, 523. 47 | 3 79 | 130, 902 50 |
| 1879 | 7, 554. 58 | 5 81 | 43, 893 84 |
| Totals | 199, 206. 63 | 4 60 | 917, 431 59 |

Deducting canceled sales, the net quantity sold during this period was 160,731.89 acres for \$713,881.13, or at an average price of \$4.44 per acre.

The cost of the road, 105.89 miles, as reported to this office, is \$6,495,350, but no details of the expenditures have been obtained. It was accepted by the President May 2, 1872. A parallel road like this could be built to-day for \$15,000 per mile—say for \$1,600,000.

The Union Pacific Railway Company.—This company is the successor, by consolidation, to the Union, Kansas, and Denver Pacific Companies.

Summarizing the statements heretofore given as to the three companies named, the following facts are shown, viz:

| | |
|--|--------------------|
| Estimated quantity of land granted, acres | 22, 824, 396 |
| Estimated quantity of land vested under the grant, acres | 19, 100, 000 |
| Quantity sold to December 31, 1879, acres | 3, 020, 625 |
| Gross amount realized from sales | \$12, 050, 653 00 |
| Railroad subsidized with lands, miles | 1, 783 |
| Cost of road and equipment, 1,815 miles | \$154, 485, 642 29 |
| Cost per mile, road and equipment | \$85, 116 00 |
| Estimated value of unsold lands, 16,000,000 acres, at \$1.50 per acre .. | \$24, 000, 000 00 |
| Estimated present cost of similar road, 1,815 miles, at \$30,000 per mile, on an average | \$54, 450, 000 00 |

The Central Pacific Railroad Company.—This company is the successor, by consolidation, June 23, 1870, of the Central Pacific Railroad Company of California, organized June 28, 1861, and the Western Pacific Railroad Company, organized December 13, 1862, both deriving their charter powers from the State of California, although the State, by act of April 4, 1864, virtually dissolved the company as a State corporation. Subsequently, on August 22, 1870, the Central Pacific was consolidated with

the California and Oregon, the San Francisco, Oakland and Alameda, and the San Joaquin Valley Railroad Companies.

So far as relates to the subjects of this report, the three roads, Central Pacific, Western Pacific, and California and Oregon, will be treated separately.

The Central Pacific Railroad extends from Sacramento to a point five miles west of the crossing of the Utah Central Railroad in Ogden, Utah, 738.45 miles, of which but 737.50 miles have been subsidized with bonds and lands.

The land grant is under the same acts of Congress as that of the Union Pacific, and amounts to twenty sections, or 12,800 acres, per mile, equal to 9,440,000 acres for the entire road, from which, however, deducting lands previously granted, sold, or reserved by the United States, estimated by the General Land Office at 1,440,000 acres, leaves about 8,000,000 acres vested in the company.

Of these 8,000,000 acres, 708,862 had been patented to the company to June 30, 1880, and the company had sold, to December 31, 1879, 295,886.79 acres for \$1,114,999.66, being an average price of \$3.77 per acre. The lands have been sold in small tracts, some for cash, but most of them on time, 20 per cent. of the principal being paid at time of purchase. This company, unlike some others, sells no lands before it has received patents therefor. The proceeds of sales of land are applied to the purchase of land-grant bonds.

The lands remaining unsold December 31, 1879, say 7,700,000 acres, lying most of them in the desert country between Salt Lake and the Sierra Nevada Mountains, are largely unavailable, and many years must elapse before anything can be realized from them. The real value of these lands is not over 50 cents per acre, or \$3,850,000, although the company includes them in the general estimate of all their lands at \$2.50 per acre, which is the minimum price placed upon adjoining lands belonging to the government.

The cost of this portion of the Central Pacific Railroad has not been ascertained in detail. In a report published in 1870 the cost of the property on December 31, 1869, was itemized as follows:

| | |
|-----------------------------------|----------------|
| Construction accounts..... | \$84, 129, 002 |
| Buildings..... | 2, 159, 718 |
| Engines..... | 1, 846, 500 |
| Cars..... | 1, 988, 125 |
| Total..... | 90, 123, 345 |
| Represented by capital stock..... | 40, 097, 290 |
| First mortgage bonds..... | 25, 517, 000 |
| United States bonds..... | 25, 517, 000 |
| Other debt..... | 7, 871, 777 |
| Total liabilities..... | 99, 003, 067 |

A road similar to that of the Central Pacific, from Ogden to Sacramento, 740 miles, could probably be built to-day for an average price of \$30,000 per mile, or \$22,200,000.

The Western Pacific Railroad Company.—This company was organized December 13, 1862, under the laws of the State of California, and was consolidated with the Central Pacific June 23, 1870.

Under the Pacific Railroad acts the company was authorized to construct a railroad from the American River east of Sacramento to San

José, Cal., a distance of 123.16 miles, and received a subsidy in bonds and lands similar to that granted to the other Pacific Railroad Companies.

The quantity of lands included in the grant has been estimated by the General Land Office as 1,100,000 acres. To June 30, 1880, 424,727.58 acres had been patented to the company.

The Western Pacific Railroad Company had disposed of its lands prior to consolidation with the Central Pacific Railroad Company.

In a report published in 1870 the cost of this road was stated as \$12,347,332; offset by an indebtedness of \$2,808,290, and a share capital paid in, \$7,900,000.

A portion of the road is of an expensive character, but it could probably be built to-day for \$35,000 per mile, or \$4,300,000 for the whole road.

CALIFORNIA AND OREGON RAILROAD COMPANY.

This company was organized under the laws of California June 30, 1865, and was consolidated with the Central Pacific August 22, 1870.

By an act of Congress approved July 25, 1866 (14 Stat., 239), the company received a grant of twenty sections (12,800 acres) per mile for a railroad from the Central Pacific Railroad to the northern line of the State. The estimated distance is 291 miles, which would make the grant 3,724,800 acres.

A condition of the grant is that the whole road shall be completed on or before July 1, 1880 (15 Stat., 80).

The road completed extends from Roseville to Redding, Cal., 151.81 miles; road uncompleted, 139.19 miles. The lands which have not vested by reason of non-completion of road amount to 1,781,632 acres, leaving 1,943,168 acres vested in the company, or so much thereof as was not previously disposed of by the United States.

To June 30, 1880, there had been patented of these lands 1,338,039.27 acres. To December 31, 1879, the company had sold 366,622 acres for \$2,970,365, or an average price of \$8.65 per acre. The lands remaining unsold at that time were 1,576,546 acres, worth, at a reasonable estimate, say, \$4.50 per acre—over \$7,000,000.

The 152 miles of road were constructed between 1867 and 1872, the whole road being opened for business September 1, 1872. The cost in detail of this road has not been ascertained. In 1870, when some 80 miles of the road had been completed, a report was published in which the cost of the road was stated as \$2,750,000, or about \$35,000 per mile. The road could be built to-day for \$25,000 per mile, or \$3,800,000.

From the above statements in regard to these three roads, namely, the Central Pacific, the Western Pacific, and the California and Oregon, the following condensed statement is made:

| | |
|---|------------------|
| Estimated quantity of land granted, acres..... | 14,264,800 |
| Estimated quantity of land vested under the grants, acres..... | 10,367,895 |
| Quantity disposed of by Western Pacific before consolidation, acres.. | 424,727 |
| Patented to Central Pacific Company to June 30, 1880, acres..... | 2,047,021 |
| Quantity sold to December 31, 1879, acres..... | 662,669 |
| Amount for which 662,669 acres were sold..... | \$4,085,354 00 |
| Average price per acre..... | \$6 16 |
| Miles of railroad subsidized with lands..... | 1,012 55 |
| Cost of roads, &c., owned (1,202 miles)..... | \$136,536,295 59 |
| Cost of equipment, machinery, furniture, &c..... | \$9,812,040 66 |
| Cost per mile—road and equipments, &c..... | \$121,754 00 |
| Estimated value of unsold vested lands (9,280,499 acres at \$1 per acre)..... | \$9,280,499 00 |
| Estimated value of unvested lands (1,781,632 acres, at \$2.50 per acre)..... | \$4,454,080 00 |

Central Branch Union Pacific Railroad Company.—The legislature of the Territory of Kansas, by an act approved February 11, 1859, granted a charter to the Atchison and Pike's Peak Railroad Company.

On November 20, 1866, by vote of persons owning a majority of the stock, and in compliance with the laws of the State of Kansas, the name was changed to "Central Branch Union Pacific Railroad Company," to take effect on and after January 1, 1867.

By the thirteenth section of the act of Congress approved July 1, 1862, which chartered the Union Pacific Railroad Company, the Hannibal and Saint Joseph Railroad Company was authorized to build a railroad from Saint Joseph via Atchison to connect with the road through Kansas. By regular proceedings, beginning June 9, 1863, and ratified by votes of the stockholders, the Hannibal and Saint Joseph Railroad Company assigned to the Atchison and Pike's Peak Railroad Company all their right, title, and interest in the grant to them by the Pacific Railroad act of July 1, 1862, which assignment was formally accepted by the Atchison and Pike's Peak Railroad Company on May 26, 1865.

The land grant to this company is twenty sections, or 12,800 acres, per mile for 100 miles, extending from the Missouri River at Atchison, westwardly, through Kansas.

The majority of the public lands through which this road runs having been disposed of prior to the grant, the company will obtain only some 250,000 acres, 187,608 of which had been patented to them to June 30, 1880.

To June 30, 1880, about 170,000 acres had been sold by the company at an average price of say \$5 per acre, amounting to \$850,000, and 80,000 acres remained unsold, worth about the same price per acre—\$5—amounting to \$400,000.

The proceeds of the sales of land have been applied to the payment of interest on the first mortgage bonds and to the general purposes of the company, from time to time.

Construction was commenced on this road from Atchison to Waterville, 100 miles, in July, 1865, and the first section of 20 miles was accepted by the President of the United States on July 12, 1866, and the whole road was completed by January 20, 1868.

The cost of the road—construction and equipment—as reported to this office December 31, 1879, is \$3,913,408.64, or at the rate of \$39,134.04 per mile. A road similar to this could be built and equipped to-day for from \$15,000 to \$18,000 per mile, or say \$1,650,000.

The Sioux City and Pacific Railroad Company.—This company was organized August 4, 1864, under the laws of the State of Iowa.

By section 13 of the act of Congress approved July 1, 1862, which chartered the Union Pacific Railroad Company, it was enacted that "whenever there shall be a line of railroad completed through Minnesota or Iowa to Sioux City, then the said Pacific Railroad Company is hereby authorized and required to construct a railroad and telegraph from said Sioux City, upon the most direct and practicable route, to a point on, and so as to connect with, the branch railroad and telegraph in this section hereinbefore mentioned."

Section 17, of the act of July 2, 1864, so amends section 13, above quoted, as to release the Union Pacific Railroad Company from the construction of said branch, and entitles the company so constructing it to receive in bonds an amount not larger than the said Union Pacific Railroad Company would be entitled to receive if it had constructed the branch road, and to receive alternate sections of land for 10 miles in width on each side of the same along the whole length of said branch.

The President of the United States on December 24, 1864, designated "the Sioux City and Pacific Railroad Company" as the company approved by him to construct the branch line named in section 17 of the act of Congress approved July 2, 1864.

This company, after careful examination and surveys to ascertain "the most direct and practicable route," filed its map of definite location in Nebraska November 9, 1866, and in Iowa between November 20 and December 7, 1866, from which dates its rights attached to the lands granted.

The original idea of the Pacific Railroad act was, that a branch from Sioux City, Iowa, to some point on the Union Pacific Railroad, not further west than the one hundredth meridian, should be constructed. This being impracticable, owing to the character of the country—the streams and valleys all running from northwest to southeast, which would require immense fills and cuts, the act of July 2, 1864, modified the route so as to permit any company constructing the road to select the point of junction.

The quantity of lands patented under the provisions of the foregoing acts has been reported by the General Land Office as 41,318.23 acres. All lands, lots, and land assets of this road were sold April 15, 1875, to the Missouri Valley Land Company for \$200,000.

The construction of this road was begun in the fall of 1866; the first section of the railroad and telegraph was accepted March 27, 1868, and the last one was accepted March 2, 1869. The road was opened for traffic February 11, 1869. The length of subsidized road is 101.77 miles.

This road is subject to all the conditions and requirements applicable to it as a branch of the Pacific Railroad, the Supreme Court of the United States, in revising and affirming the judgment of the circuit court of the United States for the district of Iowa (99 Supreme Court Reports, 491), having decided that this road is a branch of the Pacific Railroad, and subject to the same conditions as regards the payment of "five per centum of its net earnings" towards the reimbursement of the United States on account of bonds and interest.

The company in its report to this department for the year ending June 30, 1880, gives the cost of the road and fixtures to that date as \$5,355,551.28, having constructed 107.42 miles of railroad; being an average cost of \$49,865 per mile.

A road has been constructed west of the Missouri River from Sioux City to Omaha during the past year, but it is much longer and more expensive to operate. A road like the Sioux City and Pacific could probably be built to-day for \$15,000 per mile—\$1,621,300.

The Burlington and Missouri River Railroad Company, in Nebraska.—By section 18 of the act of Congress approved July 2, 1864, the Burlington and Missouri River Railroad Company, organized under the laws of the State of Iowa, was "authorized to extend its road through the Territory of Nebraska from the point where it strikes the Missouri River, south of the mouth of the Platte River, to some point not further west than the one hundredth meridian of west longitude, so as to connect, by the most practicable route, with the main trunk of the Union Pacific Railroad, or that part of it which runs from Omaha to the said one hundredth meridian of west longitude." The right of way is also granted by this section "to the extent of two hundred feet where it may pass over the public lands, including all necessary grounds for stations, buildings, workshops, depots, machine-shops, switches, side-tracks, turn-tables, and water-tanks."

Section 19, for the purpose of aiding in the construction of said road, grants to the said Burlington and Missouri River Railroad Company every alternate odd numbered section of public lands (except mineral lands) to the amount of ten alternate sections, or 6,400 acres per mile, on each side of the road. Section 20 provides that when 20 consecutive miles of road shall have been completed the "President of the United States shall appoint three commissioners to examine and report to him in relation thereto, and if it shall appear to him that 20 miles of said road have been completed as required by this act, then, upon certificate of said commissioners to that effect, patents shall issue conveying the right and title to said lands to said company on each side of said road, as far as the same is completed, to the amount aforesaid; and such examination, report, and conveyance by patent shall continue from time to time in like manner until said road shall have been completed." It also provides "that no government bonds shall be issued to the said Burlington and Missouri River Railroad Company to aid in the construction of said extension of its road; and provided further, that said extension shall be completed within the period of ten years from the passage of this act."

The line constructed and owned by this company extends from Platts-mouth to Fort Kearney, Nebr., a distance of 190.5 miles. The first section of 80 miles was accepted by the President of the United States October 9, 1871, and the last section November 4, 1872. The road was opened for through traffic September 2, 1872.

The estimated quantity of lands granted by this act is 2,441,600 acres. The quantity patented to June 30, 1880, amounted to 2,374,090.77 acres. The following statement of the business of the land department of this company is taken from Poor's Manual for 1880:

General account, land department, December 31, 1879.

| | | | |
|--------------------------------|----------------|-----------------------------|----------------|
| Landssold(1,574'392acres)..... | \$8,556,782 42 | Taxes, commissions, &c. ... | \$2,090,904 19 |
| Interest on contracts..... | 2,495,788 50 | Discounts and premiums .. | 456,131 09 |
| Imputed payment..... | 495,817 58 | Principal on sales, due.... | 5,816,528 13 |
| Special deposits | 96,201 52 | Interest and other assets.. | 1,315,258 10 |
| Extra interest, rents, &c. . | 65,614 53 | Paid amount, treasurer ... | 2,040,383 04 |
| Total | 11,710,204 55 | Total | 11,710,204 55 |

The cost of construction and equipment of this road is not given separately, the total cost being stated at \$8,294,955, or an average of \$43,306 per mile.

A road like the Burlington and Missouri River in Nebraska could probably be built to-day for \$16,000 per mile—\$3,048,000.

Summarizing the statements heretofore given, the following condensed facts are shown, embracing all the roads of the "Union Central line or route," as enumerated on page 11, of this report:

Estimated quantity of lands granted and vested.

| | Acres granted. | Acres vested. |
|-------------------------------------|----------------|---------------|
| Union Pacific..... | 22,824,396 | 19,100,000.00 |
| Central Pacific | 14,264,800 | 10,367,895.00 |
| Central Branch Union Pacific | 1,280,000 | 250,000.00 |
| Sioux City and Pacific..... | 651,228 | 41,318.23 |
| Burlington and Missouri River | 2,438,924 | 2,441,600.00 |
| Total..... | 41,458,924 | 32,200,813.23 |

LAND GRANTS TO RAILROADS.

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Quantity patented to June 30, 1880.

| | Acres. |
|---|--------------|
| Union Pacific | 3,738,117.00 |
| Central Pacific | 2,047,021.00 |
| Central Branch Union Pacific | 187,608.00 |
| Sioux City and Pacific | 41,318.23 |
| Burlington and Missouri River in Nebraska | 2,374,090.77 |
| Total | 8,388,155.00 |

Quantity sold to December 31, 1879.

| | Acres. |
|---|--------------|
| Union Pacific | 3,020,625.00 |
| Central Pacific | 662,669.00 |
| Central Branch Union Pacific | 170,000.00 |
| Sioux City and Pacific | 41,318.23 |
| Burlington and Missouri River in Nebraska | 1,574,392.00 |
| Total | 5,469,004.23 |

Amount realized from sales to December 31, 1879.

| | |
|---|-----------------|
| Union Pacific | \$12,050,653 00 |
| Central Pacific | 4,085,354 00 |
| Central Branch Union Pacific | 850,000 00 |
| Sioux City and Pacific | 200,000 00 |
| Burlington and Missouri River in Nebraska | 8,556,782 00 |
| Total | 25,742,789 00 |

Average price per acre of all sales to December 31, 1879.

| | |
|---|--------|
| Union Pacific | \$3 99 |
| Central Pacific | 6 16 |
| Central Branch Union Pacific | 5 00 |
| Sioux City and Pacific | 4 84 |
| Burlington and Missouri River in Nebraska | 5 43 |
| Total average. | 4,71 |

Miles of road subsidized with lands.

| | Miles. |
|---|----------|
| Union Pacific | 1,783.00 |
| Central Pacific | 1,012.55 |
| Central Branch Union Pacific | 100.00 |
| Sioux City and Pacific | 101.77 |
| Burlington and Missouri River in Nebraska | 190.50 |
| Total | 3,187.82 |

Cost of roads, &c., owned, as shown by books, &c.

| | Miles. | |
|-------------------------------------|----------|------------------|
| Union Pacific | 1,815.00 | \$154,485,642 29 |
| Central Pacific | 1,202.00 | 146,348,336 25 |
| Central Branch Union Pacific | 100.00 | 3,913,403 64 |
| Sioux City and Pacific | 107.42 | 5,355,551 28 |
| Burlington and Missouri River | 190.50 | 8,249,955 00 |
| Total miles and cost | 3,414.92 | 318,352,888 46 |

Cost per mile, road, and equipment.

| | |
|---|-------------|
| Union Pacific | \$85,116 00 |
| Central Pacific | 121,754 00 |
| Central Branch Union Pacific | 39,134 00 |
| Sioux City and Pacific | 43,306 00 |
| Burlington and Missouri River in Nebraska | 46,232 00 |

Average cost per mile (3,414.92 miles, \$318,352,888.46)..... 93,224 00

Estimated value of unsold vested lands.

| | |
|---|----------------------|
| Union Pacific, 14,800,000 acres, at \$1.624 per acre | \$24,000,000 00 |
| Central Pacific, 9,280,499 acres, at \$1 per acre | 9,280,499 00 |
| Central Branch Union Pacific, 80,000 acres, at \$5 per acre | 400,000 00 |
| Sioux City and Pacific | None. |
| Burlington and Missouri River in Nebraska, 800,000 acres, at \$7 per acre | 5,600,000 00 |
| Total | 39,280,499 00 |

Estimated value of unvested lands.

| | |
|--|----------------|
| Central Pacific, California, and Oregon lands, 1,781,632 acres, at \$2.50 per acre | \$4,454,080 00 |
|--|----------------|

THE NEW MEXICO SOUTHERN, OR ROUTE ON THIRTY-FIFTH PARALLEL.

The Atlantic and Pacific Railroad Company.—This company was chartered by an act of Congress approved July 27, 1866, entitled "An act granting lands to aid in the construction of a railroad and telegraph line from the States of Missouri and Arkansas to the Pacific coast." (14 Stat., 292, Auditor's Report for 1880, page 163.) By this act the corporation was authorized and empowered to construct and enjoy "a continuous railroad and telegraph line" from Springfield, Mo., to the Pacific Ocean, across the Indian Territory, Texas, New Mexico, Arizona, and California as a main line, and from Van Buren, Ark., to the point where the main line strikes the Canadian River in the Indian Territory as a branch line, more particularly described in section 1 of the act.

The grants made to the company by the act consist of the right of way through the public lands to the extent of one hundred feet on each side of the railroad, the right to use materials from adjacent lands belonging to the United States, the right to take all grounds or lands, in addition to the one hundred feet on each side of the road, that may be necessary for station, shop, turn-table, switching, or other purposes, exemption of the right of way from taxation in the Territories, and for every mile of said railroad constructed in the Territories forty sections (25,600 acres) of the public lands, and for every mile in the States twenty sections (12,800 acres) of the same. (See sections 2 and 3 of the act.)

The conditions attached to these grants are given in section 8 of the act as follows, namely: Work on the road was to be commenced within two years from the date of approval of the act, July 27, 1866, that is, before July 27, 1868; after the second year not less than fifty miles of road per year was to be completed; and the main line was to be completed by July 4, 1878; and, if the company suffered any breach of these conditions to continue over one year, section 9 of the act provides that the United States may, at any time thereafter, "do any and all acts and things which may be needful and necessary to insure a speedy completion of the said road."

Maps of the general route having been filed, public lands embraced within the limits of the grant were withdrawn from sale and the right of the company attached thereto, as follows, viz:

| On line from— | To— | Date. |
|--|--|---------------|
| Springfield, Mo | West line of Missouri | Dec. 17, 1866 |
| West line of Missouri | Mouth of Kingfisher Creek, Ind. Ter | Dec. 2, 1871 |
| Mouth of Kingfisher Creek, Ind. Ter | East line of New Mexico | Feb. 7, 1872 |
| East line of New Mexico | East line of California | Mar. 12, 1872 |
| San Francisco, Cal. | San Miguel, California | Mar. 12, 1872 |
| San Miguel, Cal. | Los Angeles County, west line California | Aug. 15, 1872 |
| Los Angeles County, west line California | A point in township 7 north, range 7 east, San Bernardino Mission, San Bernardino County, California | Mar. 12, 1872 |
| A point in township 7 north, range 7 east, S. B. M., San Bernardino County, Cal. | Colorado River | Aug. 15, 1872 |

The construction of this railroad was commenced July 4, 1868; and the sections of road below named have been examined by commissioners and reported on by them to the President of the United States, who has from time to time authorized patents for lands so earned to be issued to the company:

| No. of section. | From— | To | Miles. | Opened for business. | Examined by commissioners. | Accepted by the President. |
|-------------------|---|--|--------|-------------------------------|----------------------------|----------------------------|
| 1 } 3 } 2 } | Springfield, Mo. | Pierce City, Mo. | 25 | June 14, 1870 | Sept. 22, 1870 | Oct. 11, 1870 |
| | Pierce City, Mo. | Seventy-fifth mile-post. | 25 | Dec. 8, 1870 | Jan. 19, 1871 | Jan. 31, 1871 |
| 4 } 5 } | Seventy-fifth mile-post. | 1.54 miles west of crossing of Missouri, Kansas & Texas Railway in Indian Territory. | 25 | June 22, 1871 Oct. 6, 1871 | Nov. 16, 1871 | Dec. 6, 1871 |
| 6 } 7 } | Junction of New Mexico and Southern Pacific Railroad near Isleta, N. Mex. | Fiftieth mile-post west therefrom. | 50 | Nov. 1, 1880 | Nov. 1, 1880 | Dec. 17, 1880 |

The Atlantic and Pacific Railroad Company having suffered a default in the payment of interest on their outstanding bonds, the mortgage given to secure the same was foreclosed by a decree of the circuit court of the United States for the eastern district of Missouri, and the entire property, including the land-grant, in Missouri, was sold, by virtue of said decree, on September 7, 1876, to William F. Buckley, and by him conveyed, November 2, 1876, to the Saint Louis and San Francisco Railway Company, which company became, and is now, the owner of the property and franchises in Missouri, which had belonged to the South Pacific and Atlantic and Pacific Railroad Companies, and also of about 655,000 acres of South Pacific lands and 306,000 acres of Atlantic and Pacific lands.

West of the western boundary of the State of Missouri, the road and appurtenances in the Indian Territory and in New Mexico are still owned by the Atlantic and Pacific Railroad Company. The road from Albuquerque, N. Mex., west, is known as the "Western Division."

For the purpose of obtaining means to build and equip the "Western Division," the company has resolved to issue and negotiate bonds, to an amount not exceeding \$25,000 per mile, secured by a first mortgage on the franchises, railroad, lands, land-grants, and other property pertaining to said "Western Division." The act of Congress approved April 20, 1871 (17 Stat., 19), authorized the company to "mortgage its road, equipment, lands, franchises, privileges, and other rights and property, subject to such terms, conditions, and limitations as its directors may prescribe." (Auditor's Report for 1880, page 170.)

The company is now examining the route from Vinita, Indian Territory, westward to Albuquerque, N. Mex., with a view to the construction of this part of the road at an early day. The length of this division will be about 750 miles, for 400 miles of which the land-grant is contingent upon the extinguishment of Indian titles thereto or such other arrangement, to be approved by the President, as any Indian tribe or nation may determine upon.

The length of road and extent of land-grant for the whole line included in the charter act may be stated approximately as follows, viz:

| State or Territory. | From— | To— | Miles. | Acres per mile. | Acres of land granted. |
|---------------------|------------------|---------------------|--------|-----------------|------------------------|
| Missouri..... | Springfield..... | West line..... | 90 | 12, 800 | 1, 152, 000 |
| Indian..... | East line..... | do..... | 400 | 25, 600 | 10, 240, 000 |
| Do..... | do..... | Canadian River..... | 300 | 25, 600 | 7, 680, 000 |
| Texas..... | do..... | West line..... | 200 | 12, 800 | 2, 560, 000 |
| New Mexico..... | do..... | do..... | 450 | 25, 600 | 11, 520, 000 |
| Arizona..... | do..... | do..... | 400 | 25, 600 | 10, 240, 000 |
| California..... | do..... | San Francisco..... | 655 | 12, 800 | 8, 384, 000 |
| Arkansas..... | West line..... | Van Buren..... | 5 | 12, 800 | 64, 000 |
| Total..... | | | 2, 500 | | 51, 840, 000 |

The company's estimate of the above is 2,472.98 miles of road and 49,244,803 acres of land. The estimate of the General Land Office is 2,544.65 miles of road and 50,067,600 acres of land.

The United States having no public lands in the State of Texas, and the lands in the Indian Territory having been "otherwise appropriated" at the date of the grant, there must be deducted from the above total 20,480,000 acres, which leaves 31,360,000 acres actually granted, from which is likewise to be deducted the following, namely:

| | Acres. |
|---|--------------|
| 1. Lands in Missouri previously disposed of..... | 645, 184 |
| 2. Lands in New Mexico, "mineral" and otherwise, disposed of, estimated at one-half of the grant..... | 5, 760, 000 |
| 3. Lands in Arizona, "mineral" and otherwise, disposed of, estimated at one-half of the grant..... | 5, 120, 000 |
| 4. Lands in California of the same character, estimated at one-third of the grant..... | 2, 794, 666 |
| 5. Lands in Arkansas otherwise disposed of..... | 32, 000 |
| Total deductions, additional..... | 14, 351, 850 |

After all of these deductions are made, the quantity of land remaining for the use of the railroad company would be but 17,008,150 acres, and of this quantity the Saint Louis and San Francisco Railway Company received in 1876 about 300,000 acres, and there had been disposed of by the Atlantic and Pacific Railroad Company, prior to 1876, about 200,000 acres, the proceeds of which were applied to the construction of the road in Missouri; so that, in round numbers, about 16,500,000 acres of land are only available for the Atlantic and Pacific Railroad Company, to aid in the construction of its railroad of more than 2,000 miles from Seneca, Mo., through the Indian Territory, Texas, New Mexico, Arizona, and California, to the Pacific Ocean or San Francisco.

These lands are worth, probably, on an average, not more than \$2 per acre when brought into market by reason of the railroad being built, or \$33,000,000; but that is merely a nominal value, sales being slow and difficult until settlers are assured of protection from Indians and outlaws in that section of the country. From a recent report of the superintendent of the western division of the railroad, the following facts in regard to the country on the line of the road between Albuquerque and the Colorado River, a distance of 620 miles, have been gathered.

Between Albuquerque and the San Francisco Mountains the country is chiefly occupied by large herders and stock-raisers, some of the land being cultivated. Many of these herders are Indians. There is considerable timbered land within easy reach of the road, and some saw-mills

are now being erected. In the immediate neighborhood of the mountains the country is described as capable of being made the first summer and winter resort in the country. Between the San Francisco Mountains and the Great Colorado River, some 300 miles, the country is known to be rich in minerals, as well as affording fine grazing and agricultural prospects.

As to the location of the line, it is described as being "marvelous in its alignment, its grades and general characteristics. To cross the continental divide, the Rocky Mountains of the United States, with only maximum grade of fifty feet per mile, and this only going west (the east bound approach being only thirty feet per mile), in a valley a mile wide, with no tunnels, are certainly advantages enjoyed by no other line." This is the language of Superintendent Smith, who is on the ground.

The superintendent's estimate of the annual business that may be done on this 620 miles is about 50,000 tons. If this tonnage is carried to Albuquerque it would make on an average about 12,000,000 tons carried one mile per annum, which, at an average rate of five cents per ton per mile, would give a gross earning from freight carried amounting to \$600,000.

Of the 306,111 acres of land acquired by the Saint Louis and San Francisco Railway Company in 1876, to December 31, 1879, 15,000 acres had been sold at an average price of \$3.25 per acre, amounting to \$48,750. Prior to November 6, 1876, the Atlantic and Pacific Railroad Company had disposed of 200,000 acres of the Missouri lands at an average price of \$2.87½ per acre, amounting to \$575,000.

No detail of construction has yet been obtained such as to enable a statement to be made showing the cost of the subsidized line; on December 31, 1879, the company reported the cost of "franchises and property" as \$28,841,974.50, being 292½ miles of railroad, &c., in Missouri, extending from Pacific to the western State line near Seneca, making an average cost of nearly \$100,000 per mile. The road runs through a country where many heavy grades and sharp curves are required, and is of quite an expensive character to build. The property is now in good condition, better than the average of western roads.

Under the authority of the act of Congress approved April 20, 1871, the company on July 1, 1880, issued its thirty-year bonds to the amount of \$25,000 per mile, bearing interest at the rate of six per cent. per annum, payable semi-annually in January and July, and secured the same by a mortgage on the franchises, right of way, railroad, telegraph, lands, land-grants, and other property pertaining to the western division of the road, extending from Albuquerque, N. Mex., to the Pacific Ocean.

The payment of the coupons is also guaranteed by the Saint Louis and San Francisco Railway Company, and the Atchison, Topeka and Santa Fé Railroad Company, not exceeding 25 per cent. of the gross amount of their earnings respectively during the six months preceding the due date of such coupons. The mortgage provides that the net proceeds of the land-grant shall be used solely for the payment of interest on the first and second mortgage bonds; for the principal and interest of any advances made by the Atchison, Topeka and Santa Fé and the Saint Louis and San Francisco Railroad Companies, and for the purchase and cancellation of the first mortgage bonds.

The Atchison, Topeka and Santa Fé Railroad Company and the Saint Louis and San Francisco Railway Company each own one-half of the capital stock of the Atlantic and Pacific Railroad Company.

Fifty miles of the western division of this road have just been re-

ported ready for examination by commissioners, making one hundred miles in all completed west of Albuquerque to date.

The Southern Pacific Railroad Company.—The Southern Pacific Railroad Company was incorporated under the laws of the State of California December 2, 1865.

On October 12, 1870, articles of consolidation were entered into with the following-named roads: San Francisco and San José, chartered August 18, 1860; Santa Clara and Pajaro Valley, chartered January 8, 1868; and California Southern, chartered January 22, 1870. The Southern Pacific Branch Railroad Company, chartered December 23, 1872, was consolidated with this road August 19, 1873; and the Los Angeles and San Pedro Railroad Company, chartered February 18, 1868, on December 14, 1874. By virtue of the consolidation the new company succeeds to all the rights, privileges, and franchises of the companies named above.

Section 18 of the act of Congress approved July 27, 1866, which chartered the Atlantic and Pacific Railroad Company, authorized this company to connect with the road of that company at such point on the boundary line of the State of California as they shall deem most suitable for a railroad line to San Francisco and to aid in its construction; similar grants of land were made to the Southern Pacific Railroad Company, subject to all the conditions and limitations prescribed for said Atlantic and Pacific Railroad.

The sections of the main line were accepted by the President of the United States as follows:

| Number of section. | Miles. | Date. |
|--|--------|---------------|
| 1st section, San José to Gilroy | 30.26 | Jan. 19, 1871 |
| 2d section, Gilroy to Tres Pinos | 20.00 | Oct. 23, 1871 |
| 3d section, from Goshen south | 20.00 | Oct. 1, 1872 |
| 4th section, commencing at twentieth mile | 20.00 | Aug. 6, 1873 |
| 5th section, commencing at fortieth mile | 20.00 | Oct. 23, 1874 |
| 6th section, commencing at sixtieth mile | 20.00 | Aug. 28, 1875 |
| 7th section, commencing at eightieth mile, near Bealeville | 20.00 | June 16, 1876 |
| 8th section, from Goshen west, near Lamoore | 20.00 | Jan. 25, 1877 |
| 9th section, from Lamoore to Huron | 20.00 | Feb. 21, 1877 |
| 10th section, from near Bealville to Mojave | 41.66 | Feb. 3, 1878 |
| Total | 231.92 | |

From Mojave to the eastern boundary of the State and from Tres Pinos to Huron, the former about 200 miles in length, and the latter varying according to route from 100 to 160 miles, remain unbuilt, and the lands granted remain unvested in the company. The total land-grant under the act of 1866 was, say, for 588 miles at 12,800 acres per mile, 7,526,400 acres. Of this grant 2,768,576 acres have vested in the company by virtue of the construction of the 231.92 miles of road referred to, and 4,757,824 remain unearned by construction and unvested. No part of the line aided by a land-grant is now under construction, nor is it believed that the company has any intention to construct their road from Mojave eastward. For a statement of the sales of land, cost of construction, and other matters connected with the Southern Pacific, reference is made to that part of the report embracing the Texas Southern route immediately succeeding this.

THE TEXAS SOUTHERN, OR ROUTE ON THIRTY-SECOND PARALLEL OF LATITUDE.

The Texas and Pacific Railway Company.—This company was chartered by the act of Congress approved March 3, 1871, entitled "An act to in-

corporate the Texas Pacific Railroad Company, and to aid in the construction of its road, and for other purposes." (16 Stat., 573). See Auditor's Report for 1880, page 170.)

Section 1 designates the route, which may be stated as follows, viz, from a point at or near Marshall, Tex.; thence to a point at or near El Paso; thence through New Mexico and Arizona to a point on the Rio Colorado, at or near the southwestern boundary of California; thence to San Diego, pursuing in the location thereof, as near as may be, the thirty-second parallel of north latitude.

The company was vested with all the powers, privileges, and immunities necessary to carry into effect the purposes of the act.

Section 8 grants a right of way through the public lands to the extent of two hundred feet in width on each side of the railway, and grounds for stations, buildings, workshops, &c., not exceeding forty acres of land at any one point.

To aid in the construction of said road, section 9 grants every alternate odd-numbered section of public lands, not mineral, to the amount of forty sections, or 25,600 acres, per mile in the Territories, and twenty sections, or 12,800 acres, per mile in California.

Section 17 provides that the company shall commence construction simultaneously at San Diego, Cal., and at Marshall, Tex., and that at least 50 consecutive miles from each of said points shall be completed and in running order within two years after the passage of the act, and to so continue to construct each year thereafter a sufficient number of miles to secure the completion of the whole line within ten years; that is, by March 3, 1881. The act of May 2, 1872, extended the time to May 2, 1882.

Section 18 of the original act provides for the appointment of a commissioner by the President of the United States to examine the various sections of 20 miles of road as completed, and upon the acceptance by the President of the United States of said sections, patents shall be issued to said company for the lands so earned.

By the act of Congress approved May 2, 1872, the name, style, and title was changed to "the Texas and Pacific Railway Company," and section 17 of the act of March 3, 1871, amended so as to require that at least 100 consecutive miles of railroad should be completed and in running order within two years after the passage of the act, that is, by May 1, 1874 (300 miles of road were in operation before that time); it also provides that the company shall commence construction from San Diego eastward within one year, that is, by May 1, 1873, and construct not less than 10 miles before the expiration of the second year, and thereafter not less than 25 miles per annum in continuous line between San Diego and the Colorado River until the junction is formed with the line from the east. Little or none of the line from San Diego eastward has been constructed. From the Colorado River, at Yuma, Ariz., a line of railroad has been constructed by another company—known as the Southern Pacific Railroad Company of Arizona—under the supposition that the general law of 1875 gave them a right of way over the public lands of the United States, although section 5 of that act excepted any lands specially reserved from sale.

In March, 1872, the Texas and Pacific Railway Company acquired, by purchase and consolidation, all of the franchises and property of the Southern Pacific Railroad Company, a corporation organized under the laws of Texas, and operating 66 miles of road between Shreveport and Longview, with a right to extend its line to El Paso. It subsequently acquired, in like manner, the charter privileges and property of the South-

ern Transcontinental Railway Company, organized under the laws of Texas, with right to construct a road from the northeast boundary of the State to El Paso, and the property and franchises of the Memphis, El Paso and Pacific Railroad Company, another Texas corporation.

On May 31, 1880, the number of miles of road operated was as follows, viz :

| | Miles. |
|--|--------|
| From Shreveport, La., to Fort Worth, Tex | 219.69 |
| From Texarkana to Sherman | 155.12 |
| From Marshall to Texarkana Junction | 69.05 |
| Total..... | 443.86 |

The first section, extending from Marshall to Dallas, a distance of 147 miles, was accepted by the President of the United States April 7, 1874; the second section, extending from Marshall to boundary line between Louisiana and Texas (22.12 miles), from Marshall to Texarkana (74.23 miles), and from Shreveport to Brookston (56.18 miles) was accepted August 9, 1875; the last section, extending from Texarkana Junction to Brookston and from Dallas to Fort Worth, a distance of 127 miles, was accepted March 8, 1877.

The company has already entered into a contract for the completion of the road from Fort Worth to El Paso, a distance of 600 miles; the work was commenced March 5, 1880, and the whole line is to be completed by January 1, 1883.

The quantity of land granted to the Texas and Pacific Railway Company is estimated at 18,000,000 acres, lying in New Mexico, Arizona, and California. No lands have been earned by construction of railroad in California or the Territories, and consequently none have yet vested in the company; but the right of way and the land-grant are subject, under the provisions of section 17 of the charter act and section 5 of the supplemental act of May 2, 1872, to such action as Congress may deem necessary to secure a speedy completion of the road.

The cost of construction and equipment on May 31, 1880, is reported at \$27,418,107.94, which includes expenditures for surveys and location of entire line of 1,457 miles west of Fort Worth. The average cost per mile is \$61,771.

The Southern Pacific Railroad Company.—The act of Congress approved March 3, 1871, which incorporated the Texas Pacific, provides, in section 23, that for the purpose of connecting the Texas Pacific Railroad with the city of San Francisco the Southern Pacific Railroad Company of California is authorized to construct a line of railroad from a point at or near Tehachapa Pass, by way of Los Angeles, to the Texas Pacific Railroad at or near the Colorado River, with the same rights, grants, and privileges, and subject to the same limitations, restrictions, and conditions, as were granted by the act of July 27, 1866, before referred to.

The grant of land under this act being 12,800 acres per mile of road from the Colorado River, at or near Fort Yuma, to Mojave (346.96 miles) amounts to 4,441,088 acres, supposing none of the land to have been otherwise disposed of. The road having been constructed was accepted by the President of the United States as follows, viz :

| | Miles. |
|-----------------------------------|--------|
| Section 1, May 9, 1874 | 50.00 |
| Section 2, November 11, 1875..... | 50.00 |
| Section 3, January 21, 1876 | 50.00 |
| Section 4, March 2, 1877 | 78.59 |
| Section 5, January 23, 1878 | 118.37 |
| Total..... | 346.96 |

On December 31, 1879, the total length of road completed and in operation was as follows:

| NORTHERN DIVISION. | | Miles. |
|--|--|--------|
| From San Francisco to Tres Pinos | | 100.49 |
| From Carnadero to Soledad | | 60.40 |
| Total | | 160.89 |

| SOUTHERN DIVISION. | | Miles |
|---|--|--------|
| From Huron, via Goshen and Los Angeles, to west bank of Colorado River... | | 528.56 |
| From Los Angeles to Wilmington | | 22.06 |
| Total | | 550.62 |

Total miles of railroad owned, 711.51, of which 578.88 have been subsidized with a land-grant from the United States.

The southern division is leased to and operated by the Central Pacific Railroad Company; lease terminable in five years from January 1, 1880, or when eastern connections are made.

The quantity of land covered by the grants to this company is estimated by the General Land Office at 9,520,000 acres.

The quantity patented to the company to June 30, 1880, was 1,048,090.65 acres, of which the sales to the same date have been 279,623.40 acres, at an average price of \$3.64 per acre, amounting to \$1,017,255.89. Sales are made for cash, or part cash, and the balance in five years' time, with interest at seven per cent. per annum, payable in advance. Of the above sales 120,000 acres have been sold for cash at about \$2 per acre, and the remainder, 160,000 acres, on credit at nearly \$5 per acre.

The proceeds of land sales are applied exclusively to the redemption of the company's bonds.

The quantity of land vested and unsold June 30, 1880, may be estimated at 5,407,553 acres, worth, at a fair average value, \$1.25 per acre. The company's estimate of the value of the grants from the United States, as stated in their last annual report to their stockholders, is upwards of \$40,000,000.

The company's estimates, on account of both grants, are as follows:

| | Acres. |
|---|---------------|
| Main line, San Jose to Needles..... | 7,523,072.00 |
| Branch line, Mojave to Yuma | 4,441,088.00 |
| Estimated total number of acres granted..... | 11,964,160.00 |
| Less total number of acres sold to June 30, 1880 | 279,623.40 |
| Estimated number of acres unsold to June 30, 1880 | 11,684,536.60 |
| Estimated quantity earned by construction of road | 7,413,760.00 |
| Estimated quantity capable of being earned | 4,550,400.00 |
| Total | 11,964,160 |

The land agent of the company says: "It is difficult to estimate the quantity of land that will eventually inure to the company from these land-grants, as there are included within the limits large areas of Spanish grants and lands otherwise excepted. It is not at all probable that there will be sufficient available lands belonging to the United States within the indemnity limits to make good these deficiencies." He also says: "At the time this grant was made the value of the lands was rated as trifling, as the best land in Southern California had long been held and occupied by Spanish-speaking residents and their descendants, and was devoted almost wholly to grazing purposes, several acres in

the average being required per head of stock. So broken, dry, and forbidding in aspect was the remainder still under the disposition of the government that no one, at that day, imagined it could be of the slightest assistance toward the building of the road, and the greater part of it so remains to this day. It resembles, and is commonly known as 'desert land,' totally incapable of being made useful for the support of vegetation or animal life. However, where there is running water sufficiently near, portions of it may be used for pasturage. The Southern Pacific Railroad Company would be glad to co-operate with the government in any plan whereby its alternate sections could be leased or sold in large unbroken tracts for grazing; and there are millions of acres which it would be willing to sell for such purposes outright at 20 cents an acre." On the other hand the company, in its printed annual report to the stockholders, speaks in the highest terms of its lands. The following extracts are taken from the report of the land commissioner: "I cannot forbear, in this connection, alluding once more to the immense increase in agricultural productions, and to the surprising effect of irrigation upon land in Southern California." "Lands previously of no value but as cattle ranges are now becoming the homesteads of thrifty, industrious families." "By the use of water the valuable lucern known as alfalfa has been introduced, and makes it possible to sustain a greater number of cattle." "This wonderful clover can be cut three or four times in a season, realizing to the acre ten or twelve tons of hay per annum." "But all that part of the State in which this company's lands are situated is especially adapted by climate, soil, and situation to the raising of semi-tropical fruits." "Even where water, through canals, cannot be procured, the lands sell, the purchaser being able, by boring a well and the assistance of a 'wind-mill,' to cultivate acres enough to support a family. Waste or 'desert lands' are thus made available or useful."

In regard to the "mussel slough" lands, about which there has been some trouble between the company and the settlers, the land agent says: "Had it not been for the discovery that portions of the land in the San Joaquin and Tulare Valleys are susceptible to irrigation by diverting the streams from the mountains upon them by means of extensive canals and systems of irrigating ditches, the best lands of the company would have been unsalable to this day, and, like the other portions referred to, would have been regarded as desert lands. So soon as this was made obvious, a number of that improvident and speculating class to be found in all communities, rushed in upon the lands within the limits of the grant, and in defiance of the law and the officers of the courts, sought to set up claims as pre-emptors or technical "settlers." Their very presence, their threats as well as their open resistance to the company, with the aid of demagogues who sought to profit by their trespass, made it difficult or impossible for the company to dispose of the lands in the vicinity. In this lawless way the wishes of the railroad company and the purposes of Congress in making the grant were defeated. But for this untoward interruption of the course of law, which has only very slowly been condemned by the executive and judicial officers, the company would have been enabled, to transfer into the hands of solid and respectable persons many thousands of acres, and with the traffic derived from their cultivation, it would have been able to prosecute the work on the remaining gap in its lines of road.

To June 30, 1880, the cost of construction of the 711.51 miles of railroad owned by this company was \$62,919,109.72, and of equipment, \$1,848,533.81. Total cost, \$64,767,643.23, or at an average rate of \$91,082 per mile.

General recapitulation.

| | Items. | Northern Pa- cific. | Union Central route. | Atlantic and Pacific. | Southern Pa- cific. | Texas Pacific. | Total. |
|----|--|------------------------|-------------------------|--------------------------|------------------------|----------------|---------------|
| 1 | Acres land granted, if all received | 57,920,000 | 41,458,924 | 51,840,000 | 11,967,488 | 18,000,000 | 181,186,412 |
| 2 | Acres estimated to be obtained..... | 42,500,000 | 32,200,813 | 17,008,150 | 10,445,000 | 12,000,000 | 114,153,963 |
| 3 | Acres earned by construction, and vested | 15,000,000 | 30,419,181 | 1,140,000 | 5,687,176 | None | 52,246,357 |
| 4 | Acres patented by companies..... | 746,509 | 8,388,155 | 504,536 | 1,048,090 | None | 10,687,290 |
| 5 | Acres sold by companies | 2,600,000 | 5,469,004 | 215,000 | 279,623 | None | 8,563,627 |
| 6 | Amount realized from sales | \$9,000,000 | \$25,742,789 | \$623,750 | \$1,017,256 | None | \$36,383,795 |
| 7 | Average price per acre..... | \$3.46 | \$4.71 | \$2.90 | \$3.64 | None | \$4.25 |
| 8 | Acres vested, unsold | 12,400,000 | 24,950,177 | 925,000 | 5,407,553 | None | 43,682,730 |
| 9 | Estimated value..... | \$31,000,000 | \$39,280,499 | \$1,850,000 | \$8,759,441 | None | \$78,889,940 |
| 10 | Acres unvested by reason of non-construction | 27,500,000 | 1,781,632 | 15,868,150 | 4,757,824 | 12,000,000 | 61,907,606 |
| 11 | Estimated value..... | \$68,750,000 | \$4,454,080 | \$31,736,300 | \$5,947,280 | \$24,000,000 | \$134,887,660 |
| 12 | Miles subsidized with lands | 2,450 | \$3,187.82 | 2,500 | 929 | *1,061 840 | 10,967.82 |
| 13 | Miles constructed or owned | 680 | 3,414.92 | 175 | *132 579 | *444 | 5,4' 4.92 |
| 14 | Cost of same | \$24,353,416 | \$318,352,888 | †\$30,691,974 | \$64,767,643 | \$27,418,108 | \$465,584,029 |
| 15 | Cost per mile of same | \$35,813 | \$93,224 | \$80,768 | \$91,082 | \$61,771 | \$82,698 |
| 16 | Miles to be constructed..... | 1,865 | 139.19 | 2,325 | 350 | *617 840 | 6,136.19 |
| 17 | Estimated cost of same | \$50,110,000 | \$5,600,000 | \$58,125,000 | \$10,500,000 | \$43,710,000 | \$168,045,000 |
| 18 | Cost per mile of same | \$26,868 | \$40,000 | \$25,000 | \$30,000 | \$30,000 | \$27,385 |
| 19 | Total miles of route or system | 2,700 | 3,554 | 2,500 | 920 | 1,901 | 11,584 |
| 20 | Total cost of same | \$75,000,000 | \$323,952,888 | \$88,816,974 | \$75,267,643 | \$71,128,108 | \$634,165,613 |
| 21 | Total cost per mile of same | \$28,000 | \$91,151 | \$35,526 | \$81,020 | \$37,416 | \$54,745 |
| 22 | Estimated present cost of similar railroad..... | \$75,000,000 | \$91,069,300 | \$50,000,000 | \$23,225,000 | \$47,525,000 | \$286,819,300 |
| 23 | Estimated cost of same per mile | \$28,000 | \$25,624 | \$20,000 | \$25,000 | \$20,000 | \$24,760 |

* Unsubsidized.

† 380 miles.

From this recapitulation it will be seen that there remain "unvested," by reason of non-construction of the respective railroads for which grants were made, the following lands:

| | Acres. |
|-----------------------------|------------|
| Northern Pacific | 27,500,000 |
| California and Oregon | 1,781,632 |
| Atlantic and Pacific | 15,868,150 |
| Southern Pacific | 4,757,824 |
| Texas and Pacific | 12,000,000 |

Of these railroads the Northern Pacific, the Atlantic and Pacific, and the Texas and Pacific are vigorously pushing forward the work of construction; and it may be reasonably calculated that these railroads will be completed within the next three years. The California and Oregon uncompleted road extends from Redding to the northern line of the State of California, a distance of about 150 miles, and the country there is of such a mountainous character as to require heavy work and great expense; so much so that it is very doubtful if the road will be ever built.

The Southern Pacific uncompleted road extends from Tres Pinos to Huron, across the coast range—a difficult and costly line—and from Mojave to the eastern line of the State of California, at or near a point called "The Needles," over a desert country. Neither of these parts of the Southern Pacific are under construction, and, as in the California and Oregon case, it is very doubtful when they will be built, if ever.

As to the forfeiture of any of these grants, the opinion of the Attorney-General of the United States in the case of the Atlantic and Pacific Railroad Company is given on page 111 of my last annual report.

The Northern Pacific act is similar to that which granted lands to the Atlantic and Pacific in respect to the provisions for any action by Congress looking to a completion of the road.

The Texas and Pacific act contains no provision of the kind referred to, and has no section or clause providing for any repeal of the charter or grants.

The Southern Pacific obtained its grant under the Atlantic and Pacific charter, and is subject to the same conditions as that company.

The California and Oregon act, page 178 of Auditor's Report for 1880, in section 8, provides that "all the lands not conveyed by patent to said company or companies, as the case may be, at the date of any such failure shall revert to the United States."

THEOS. FRENCH,
Auditor of Railroad Accounts.