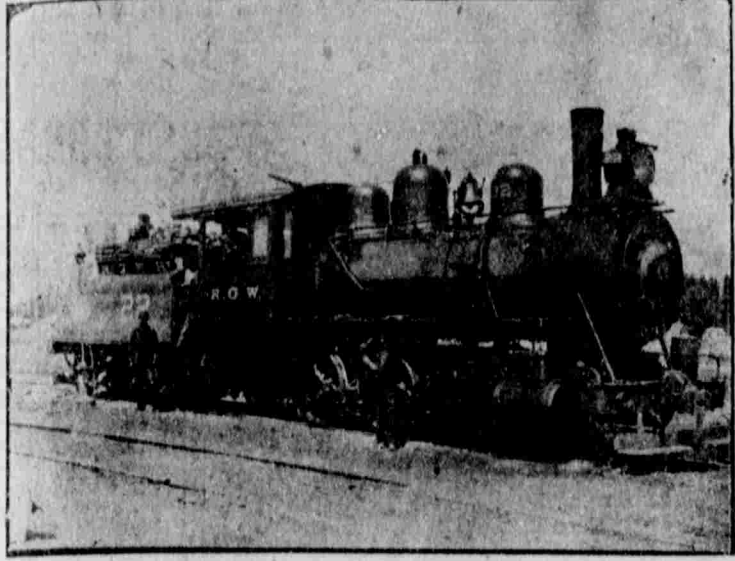


# YEAR OF BIG THINGS WITH THE UTAH RAILROADS.



**RIO GRANDE WESTERN RAILWAY.**  
Switch Engine and Crew, Salt Lake City.

**T**HE YEAR now drawing to a close has been one that will long be remembered in the history of railroading in Utah. Following the successful floating of securities in the east of the two years' previous plans were outlined for the ex-

penditure of the way of railroad improvement and general construction. The two most important deals as far as this state is concerned have been the transfer of the Oregon Short Line holdings south of Sandy and west of Beuna Vista to Senator W. A. Clark and associates, who are now building the San Pedro, Los Angeles & Salt Lake through to the coast, and the consolidation of the Harriman lines even more closely than heretofore. With the latter move came the work on the Ogden-Lucien cut-off, which is essentially one of the most stupendous undertakings on an engineering standpoint in the country. This work was practically completed on Thanksgiving day when Mr. Harriman and one of the most distinguished and representative parties of railroad men that has ever visited Utah rode over the line across the Great Salt Lake and inspected the work. While there is still a great amount of fill construction to be done the track is to all intents and purposes open and trains run across the cut-off daily.

On the San Pedro, Los Angeles & Salt Lake, or as it is called, the Salt Lake

Route, construction is being pushed across the desert lands of southern Nevada with a vim that promises a speedy closing up of the gap between Callen and Daggett, Cal.

## THIS YEAR'S WORK.

Briefly summed up the work done this year in the direction of railroad construction is as subjoined:

**Union Pacific.**—General rectification of the main line from Ogden east to Wyoming state line.  
**Oregon Short Line.**—The completion of the Leanington cut-off, American Falls and Huntington steel bridges, the putting in of longer side tracks, the laying of heavier steel, general ballasting operations, erection of handsome depots at Nampa and other points.  
**Rio Grande Western.**—The completion of work on the Jordan Narrows cut; the commencement of work on the Salina cut-off; the commencement of work on the Layton cut-off and the putting in of longer sidings between Salt Lake and Ogden; the completion of a double track from Salt Lake to Bingham Junction; the putting down of 80-pound steel at points between Price and Grand Junction, and a number of track improvements in the form of steel bridges and concrete culverts.  
**The San Pedro, Los Angeles & Salt Lake.**—The commencement of work at construction below Callen; the building of siding spurs and completion of the erection of depots and other structures along the route of the Leanington cut-off. This company also commenced construction from Daggett, Cal., and finished the erection of the famous concrete viaduct across the St. Ana river, which is claimed to be the largest bridge constructed solely of cement and



**SCENE ON THE OGDEN-LUCIEN CUT-OFF.**

The above picture is a snapshot of the railroad officials and newspapermen who visited the Ogden-Lucien cut-off the day of the Harriman party inspection. The figure on the extreme right, No. 1, is Mr. Harriman; No. 2 is Horace G. Burt, president and general manager of the Union Pacific; No. 3 is General Manager Kruttschnitt of the Southern Pacific, and No. 4 is General Passenger Agent Lomax of the Union Pacific.

gravel in America.

**Salt Lake & Ogden.**—Surveys beyond Farmington with the idea of ultimately extending to Ogden, and the laying of heavy steel for the distance of seven miles.

## HEAVY TRAFFIC.

The freight tonnage also has beaten previous records up to the commencement of last month. The output from the mines has been excessively heavy; the tonnage of sugar beets to the factories also has surpassed anything previously recorded; stockmen have for a couple of months been clamoring for cars and at one stage of the game none of the railroads could get enough cars to take care of the shipments. Everywhere has prosperity been in evidence and extra trains were the rule rather than the exception. In the face of all the heavy traffic the railroad record of Utah has been exceptionally free from disastrous wrecks, a circumstance which is a feather in the cap of the operating departments.

## RETRENCHMENTS.

At the beginning of November, how-

ever, a change was noted. A policy of retrenchment was inaugurated. Wherever possible trains were pulled off and a general curtailing of expenses went into effect on lines. Hill crews were taken off, helper engines retired to the round house and track hands and other employees given their time. This move started at the first intimation that Utah was to be invaded by labor agitators who were bent on getting the men, especially the coal diggers, out in a sympathetic strike with the Wyoming and Colorado miners.

Shortly afterwards the strike became an accomplished fact in the coal camps operated by the Utah Fuel company in Carbon county. The falling off of coal tonnage at once became very marked. Where the Southern Pacific received a day from the Utah coal fields it did not receive a pound of shipments to the smelters also were curtailed so that all along the line the effects were felt. Still more men were laid off, including operators and trackmen. But for this regrettable turn in affairs the year now drawing to a close would have been a banner one in the history of railroading in the Beehive state.

## \$2,000,000 FOR SALT LAKE.

Just how this will effect promised improvements in the state in general and Salt Lake in particular cannot at this time be estimated. At the end of August Salt Lake was wearing a broad smile of satisfaction. Both George J. Gould and E. J. Harriman had promised in return for certain concessions to spend in the neighborhood of \$2,000,000 right in Salt Lake. Among the things promised were two depots, each to cost approximately \$225,000; two modern shops, which would necessitate the permanent location here of 1,000 additional bread winners in the employ of the two big corporations; better yard facilities, coal trestles and other structures on the west side.

In order to accomplish this and by way of a preliminary the Oregon Short Line bought realty on the west side to the value of about \$100,000, a proceeding which was hailed with joy by the real estate men as most of those residents who parted with their holdings turned right round and bought other places in which to reside.

## FRANCHISES PASSED.

In exchange for the promises made the city council in August passed franchises permitting the Oregon Short Line and the Rio Grande Western to lay additional tracks and to close certain streets running east and west on the west side of the city. Following the granting of the franchise announcements were made by the railroad officials that preliminary work on the improvements outlined would be commenced within 30 days. The two proposed big depots are to be union stations. While no official announcement has been forthcoming it is asserted that the big depot to be erected across the foot of west Third South street will be used by the Rio Grande Western, the Moffat road and the Western Pacific; that on west South Temple street by the Oregon Short Line and the San Pedro, Los Angeles & Salt Lake Railroad company.

**THE MOFFAT ROAD.**  
With the promise of these big improvements for Salt Lake is coupled the assurance of additional railroads coming into this city. Both the Moffat road and the Western Pacific have long been talked of. This year, however, has seen actual construction on these two trans-continental propositions. On the Denver, Northwestern & Pacific, commonly called the Moffat road, several contracts have been let and considerable work done in Colorado. The fact, however, that this company has not yet secured definite terming is either in Denver or Salt Lake, has had the effect of making some people somewhat skeptical as to this road being built straight through from the capital of the Continental state to Salt Lake. Nevertheless this company has had a party of surveyors at work in Utah throughout the entire summer months.

## WESTERN PACIFIC.

The Western Pacific proposition, which railroad men who profess to know credit to George Gould and associates, has acquired considerable property along the proposed route between San Francisco and Salt Lake, and at this time has a party of surveyors at work at a point southwest of the lake. Surveys across the lake along the lines of those run for the Lucien cut-off were made this summer and now the corps of engineers has returned to the desert once more to run the final survey.

## HEAVY EXPENDITURES.

It is many years since the railroads that operate in and through Utah spent as much money as they are doing right now. Three millions have been spent in new equipment and rolling stock alone this year. Fully that amount has been expended in construction, preliminary surveys, physical betterment and general improvements in Utah, but as before stated the greatest piece of work undertaken and completed this year is that of the Ogden-Lucien cut-off.

## THE LUCIEN CUT-OFF.

The exact figures regarding this undertaking were not correctly known until less than a month ago. All kinds of statements have been forthcoming and printed throughout the country in this connection, but none were correct. The following given out by the engi-

neering department of the Southern Pacific on Nov. 26, are authentic:

Original road ..... 146.68 miles  
New road ..... 102.91 miles  
New road saves 43.77 miles; 3,919 degrees curvature, 1,515 feet vertical of grade.

Sharpest curve of new road, one and one-half degree, versus 10 degree on old road.

Steepest grade of new road, 21 feet per mile, versus 90 feet per mile on the old road.

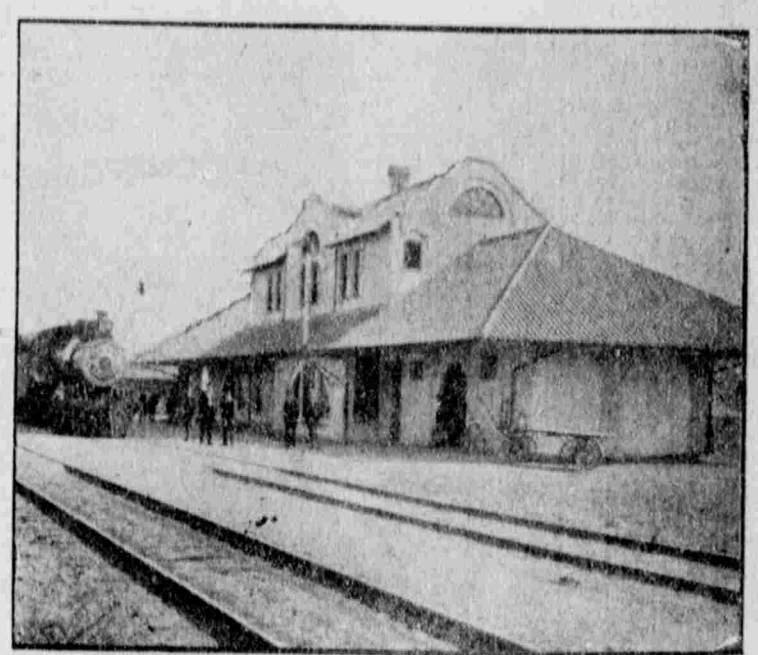
## IN GREAT SALT LAKE.

11.10 miles permanent trestle built.  
11.94 miles temporary trestle built.  
22.94 total miles trestle built, of which the temporary trestle, 11.94 miles, is being replaced by embankment, which is approaching completion—this temporary trestle having been built for the purpose of facilitating the construction of the embankment.

## TRESTLE WORK.

The construction of this trestle necessitated the use of seven tugboats and numerous small boats, and a stern wheel steamer, the Promontory, which was built on the lake as soon as the track laid west from Ogden reached enough depth of water.

The rate of progress constructing the trestle depended chiefly on the supply of material, the very great amount of which made its transportation by rail



**SAN PEDRO, LOS ANGELES & SALT LAKE.**

A standard depot on the system. As soon as the main line is completed the stations on the main line in Utah will be upon the same architectural lines. The above picture is that of the depot at Pomona, Calif.

a difficult and burdensome matter, in addition to the very great amount of commercial freight requiring transportation in the ordinary course of business.

The trestle force was organized and equipped to build one and one-quarter miles of trestle per week, and the greatest amount of trestle built in any one week of six working days, working by daylight only, was one mile and seven one-thousandths, working a little more than five days of the week.

The temporary trestle is in water from a shallow depth to a depth of 27 feet. The permanent trestle is nearly all in water from 30 to 34 feet deep at the present level of the lake, which present level is about one foot below the zero point of the Garfield Beach gauge.

## FILLING MATERIAL.

The filling material for making the embankment replacing the temporary trestle is obtained in part from near the east shore of the lake at Little Mountain, and in part from Promontory for about four and one-half miles, and in part from the Hogap mountains, about 10 miles west of the lake.

The rock for protection of the embankments from wave wash is obtained in the Lakeside mountains on the west shore of the lake.

The trestle is on an embankment and on trestle in Great Salt Lake.

almost wholly cutting off the portion of the lake to the north from the main lake, and the water of the Bear river emptying into this portion of the lake, has raised the water to a freshen enough so that in the winter of 1902-1903 ice formed over the entire area north of the railroad embankment to a thickness of about one foot.

## LOSS OF LIFE.

The work has been attended by less loss of life than usual on an equal mile. Age of ordinary railroad construction.

There has been no loss whatever of any engines or cars, and less injury to rolling stock from derailments and other wrecks than would ordinarily be attendant on the construction of an equal mileage of ordinary railroad construction.

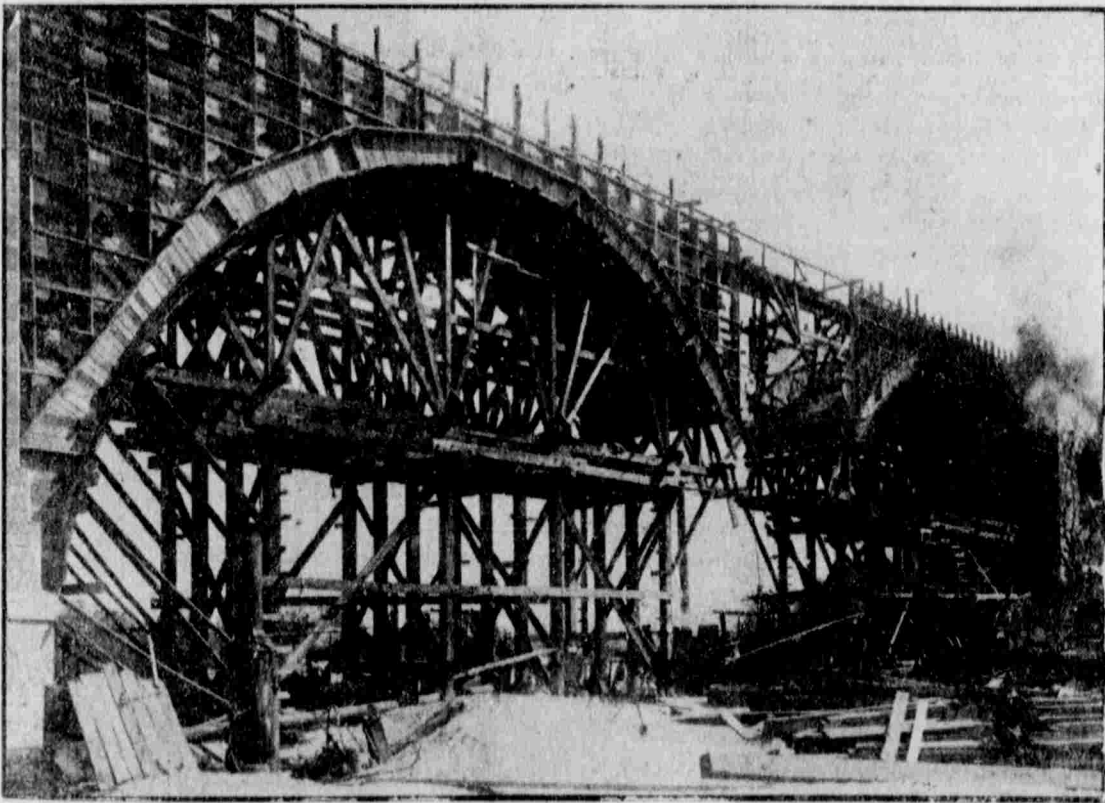
## LAKE BOTTOM SOFT.

There are a few places where the lake bottom is soft and the bank settles and displaces the material of the lake bottom until by suitably continued filling of rock and gravel a firm bank is obtained. There has been much less of this encountered than was reasonably to be expected. Work of this character, but of greater difficulty, is common in the vicinity of San Francisco bay and similar localities.

The track was laid from Ogden to the east shore of the lake June 16, 1902, and continuing westward, met the track laid eastward from Lucien Nov. 15, 1903, near the middle of the lake.

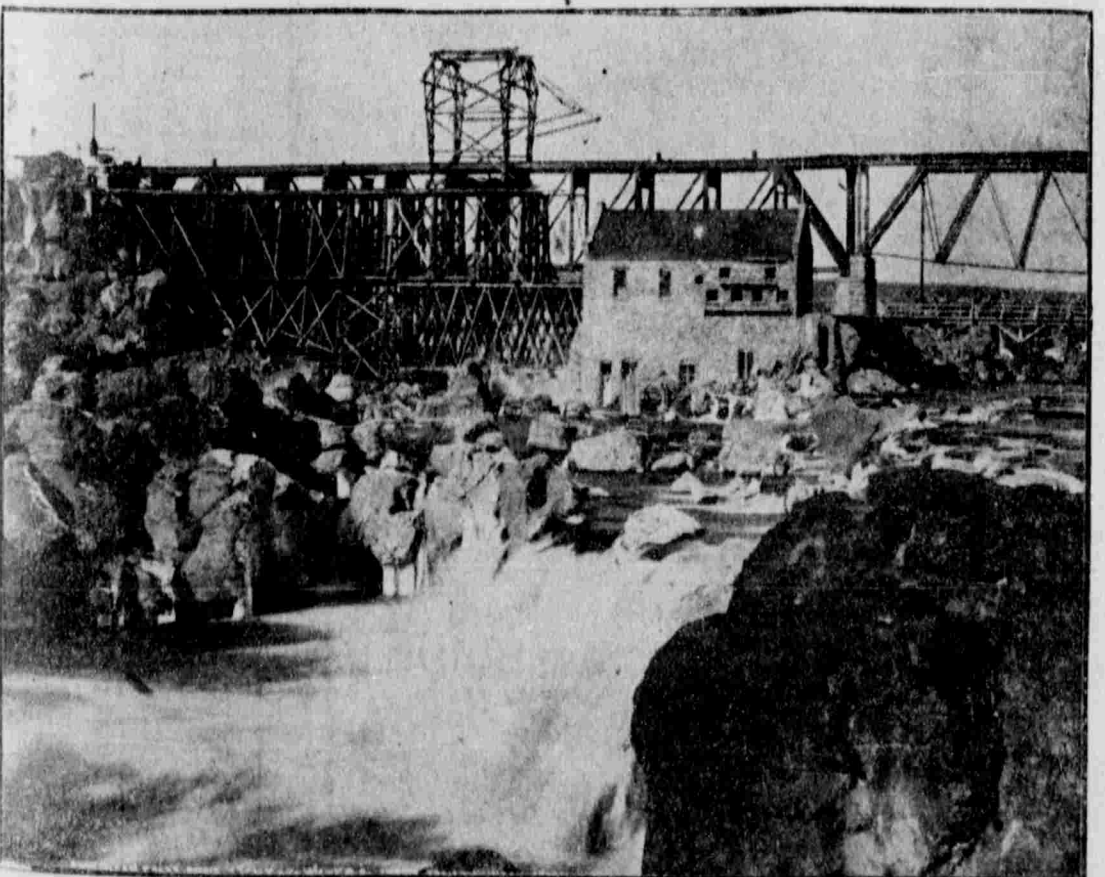
No trestle material was delivered at the lake for the work until after the month of June, 1902.

The Ogden-Lucien cut-off is essential, by a direct line, being by computation but 1,708 feet or 0.32 mile longer than an air line.



**ST. ANA VIADUCT ON SALT LAKE ROUTE.**

The above picture gives some idea of how the largest concrete bridge in America was built. This huge structure is now complete and is one of the features on the main line of the San Pedro, Los Angeles & Salt Lake Railroad.



**NEW OREGON SHORT LINE AMERICAN FALLS BRIDGE.**

Among the engineering feats accomplished during the past year in Idaho was the erection of the huge steel bridge across the Snake river at American Falls. The above picture shows only a section of this structure which was erected without an hour's delay to traffic.



**NEW OREGON SHORT LINE SNAKE RIVER BRIDGE.**

The above picture is a reproduction of a photograph of the new steel bridge across the Snake river near Huntington and which connects the states of Idaho and Oregon.



**LOCAL SHOP FOREMEN OF RIO GRANDE WESTERN RAILWAY.**

Top row, from left to right: R. B. Wells, C. F. Rablous, C. C. Butler, B. B. Owens. Middle row, from left to right: W. J. O'Neill, A. Thon, John Phillips, Frank Urban (General Foreman), J. T. Riddough, (General Car Foreman), W. C. Lambert. Bottom row, from left to right: H. J. Masterman, W. H. Tolhurst, D. C. Cooper, E. J. Hall.