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History of the Coalinga Monterey Pipe Line

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In the April number of the "Aoco," monthly publication of the Pacific, Associated, Amalgamated and affiliated oil companies, is an interesting article on the "History of the Coalinga-Monterey Pipe Line." The article was written by Fred Falkner, local resident engineer for the company, and is illustrated with photos of Superintendent L. T. Trumbull and views at various points along the line between Coalinga and the coast. The article is reprinted below:

HISTORY OF COALINGA-MONTEREY PIPE LINE

(Fred Falkner, Resident Engineer)

With the discovery and subsequent development of the oil fields of Coalinga came the stupendous problem of transporting the production of the district to market. The question first presented itself while the field was in its infancy and it was beyond human intelligence to definitely ascertain its true extent or predict its longevity, thus making the question more difficult to answer.

The Standard Oil company had completed its pipe line through the San Joaquin valley prior to this time, but owing to its limited capacity, it could not be depended upon to transport from the Coalinga field any more than the production from its own holdings in that vicinity. The small number of tank cars available was also inadequate to meet the demands of the producers who desired to ship their production.

When a line to Monterey was first proposed, there was much discussion as to its feasibility, because it would cross mountains where the lowest possible point for its highest elevation would expose the line to snowstorms. Some contended that this would lower the temperature of the line to such a degree that the low gravity could not be pumped at all during the winter months.

All doubts were finally overcome, however, and on July 10, 1902, the **National Oil and Transportation** company was incorporated to build a 6-inch smooth oil pipe-line from Coalinga to Monterey Bay. William Matson was made president, W. H. Crocker, vice-president, and George T. Cameron, secretary and treasurer of this company. These, with John A. Buck and N. C. Irwin, formed the directorate.

Right-of-way for a line 105.7 miles in length was secured from private individuals, through ordinances, from the board of supervisors of Monterey county granting the right to use any of the public or county roads in the county, and a permit from the war department to lay and maintain lines along Lighthouse avenue, U. S. Military reservation, Presidio of Monterey. Actual construction began in May, 1904.

On July 25, 1904, the National Oil and Transportation company transferred and assigned all its rights and title to the Coalinga Oil Transportation company, who more actively prosecuted the work of construction. The line was completed from Sec. 18-20-1b at Coalinga to the wharf at Monterey, with four pumping stations, in October, 1904.

The four original pumping stations, each consisted of two boilers, one oil heater and a single steam cylinder double-acting duplex pump. The initial station, constructed and operated by George Thorpe as its first engineer, now superintendent of the Santa Maria pipe line, was located on the

present site of Station B of the gathering system; the others were located at and are now parts of present stations 2, 4 and 7. The first oil was delivered to the initial pumping station on October 6, 1904, and pumping began over the line on October 19, 1904, the first oil reaching the storage tank at Monterey ten days later, on October 29, 1904.

The capacity of the line was found to be about 5000 barrels of 23.0 gravity oil per 24 hours, but as there was less than 2500 barrels per day available for delivery to the line, it was not until November 26, 1904, that the first cargo was loaded from the Monterey wharf.

As the feasibility of the project was assured and the production of the fields increased, the line soon attained its full capacity and in 1905 it

became necessary to increase it to meet the demands imposed upon it. During that year ownership of a majority interest in the stock was secured by the Associated Oil company. Four additional stations were built on the sites and are now parts of present Stations 3, 5, 6 and 8. These new stations consisted of three boilers, two oil heaters and two single cylinder double-acting duplex steam pumps. The necessary equipment was added to the stations previously built to bring them up to this standard.

The next few years saw speedy developments in the field and lower gravity of oil was encountered, so in 1908 it was found that the distance between the initial station and the second station was too great to keep up the maximum capacity of the line. A new station was built between these stations, 2.41 miles from the initial station on Section 36-20-14 on the site now occupied by Station No. 1 of the Coalinga-Monterey pipe line, and the former initial station became Station B of the gathering system.

During the year 1909, both pumps of the eight stations were increased in

efficiency by replacing the single steam cylinders with compound steam cylinders which increased the capacity of the line to 11,000 barrels daily, of 17.0 gravity oil.

To further increase the capacity of the line, it was decided to construct stations at points between the pumping stations to reheat the oil. A steam plant using the crude oil for fuel was designed and construction was completed of the present Station 3H, on December 10, 1910. A hot-blast furnace was later designed which would cost less and was thought to be more efficient and economical than the steam heater. Other heating stations were completed as follows: 6H, December 20, 1910; 5H and 7H in January, 1911; 2H and 4H in February 1911; and 8H in November, 1911. It was found unnecessary to build Station 1H. This increased the capacity of the line to 14,000 barrels per day.

On February 27, 1912, the title to the line passed to the Associated Oil company which soon encountered the difficulty of keeping up the capacity of the line with the continual lowering of the gravity of the oil from the fields. In order to accomplish this it was found necessary to install additional boilers, oil heaters and a larger pump at each of the pumping stations.

The hot-air auxiliary heating stations did not prove as efficient as was contemplated and were also accompanied with considerable danger due to explosions during their operation, Station 4H being the most troublesome. After a series of fires and accidents, an explosion occurred in this station on March 9, 1916, which totally wrecked the furnace and caused the death of one man. The station was then replaced by the present steam-heating station, which was completed on July 1, 1916.

Profiting by these mishaps, alterations were made to the remaining hot blast heaters to make them less dangerous and more caution was exercised in their operation. The deterioration of these hot, air heaters, however, proved to be rapid, and it was found advisable to replace Station 6H with a recently designed steam-heating station, which work is nearly completed at this time.

So we bring the pipe line to the present day and the problems which confront its management by the Associated Oil company. It is now planned to increase the capacity of this line to 15,000 barrels daily of 16.0 gravity oil.-

It has been decided in order to do this that it will be necessary to replace many of the boilers, install additional oil heaters at each pumping station, and replace all the remaining hot air and the old style steam-heating stations with the new style steam-heating plants. It will also be necessary to build an additional heating station, 3H-A, betwen 3H and pumping station No. 4, for use particularly during the colder weather in the mountains, and build the new Station 5H at a different point on the line in order to get its greatest efficiency. The construction of 3H-A and 5H is now under way.

There have been only two superintendents of the line. To Mr. S. A. Guiberson, Jr., fell the duties of shaping the policies of its operation in the early stages. He was succeeded in September, 1909, by Mr. L. T. Trumbull, who through careful application to duty has succeeded in building up an admirable working force which has brought the line up to the efficiency it has attained today. Both were ably assisted by Mr. George Knowles, the present traveling engineer, from whom much of this data was obtained.

The limits of this article allow us to mention only a few of the diffi-

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culties faced in the operation of the line. Situated as it is over the mountains, many parts of the roads become impassable for an automobile, and sometimes it is with great difficulty that they are traveled at all during the winter months. This makes hauling supplies to some of the stations hazardous and the superintendent's weekly trips of inspection are made with much discomfort.

The Salinas river is one of our greatest sources of trouble. Station 8 is located where the flood waters of the river have attained a height of six feet above the floor of the pump and suspended operation of the station for a time. It was also necessary to cross the Salinas river at a point seven miles south of Salinas. The present suspension bridge was built in 1911. This bridge is in itself an admirable structure, but the treacherous flood waters of the Salinas river are gradually eating their way toward the deadmen of the west abutment. Efforts have been made to stay the gigantic power of the winter floods in the river by pile protection to the bank but eventually this bridge will be destroyed unless more efficient protection can be invented for its preservation.