

UNION OIL COMPANY OF CALIFORNIA



BULLETIN NO. 18
AUGUST • 1922

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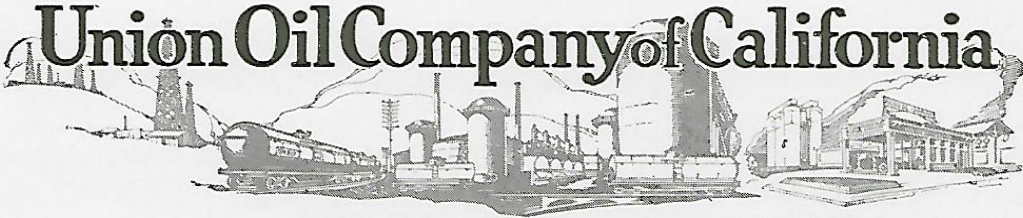
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Union Oil Company of California



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VOLUME 2

AUGUST, 1922

BULLETIN NO. 18

In Memoriam

It is with extreme regret that we have to record the passing of Mr. Isaac Milbank, one of the most able members of the Executive Committee and Board of Directors of Union Oil Company of California. He died on August 13th at his home in Los Angeles following an attack of apoplexy. At the time of going to press we have not received the official record of appreciation from his associates in the company, but we could not express a better nor a truer tribute to his memory than the following from a committee of the Los Angeles Stock Exchange:

Almighty God may stamp nobility upon the brow of man but His reaper pauses not.

A Life—it had not reached the allotted span, yet was filled with good works which make eloquent the summing of a fine and useful life.

A Name—high upon the immortal scroll of industrial pioneers, he made two blades of grass grow where one grew before.

A Record—his moments were prized jewels; no sunset shadow fell upon a misspent day; no circling year but crowded with benevolence and a thousand mercies.

An Epitaph—he lived for others.

A Requiem—the soul's melody—a benediction and a prayer.

A Memory—unselfish devotion, considerate regard, loving kindness, true friendship, fidelity and honor.

His own loved him; his friends trusted him; the world respected him. The needy and afflicted turned to him and never fruitlessly; he was rich in probity and scattered goodness with a lavish hand.

We may not fathom the mysteries of the Infinite, but such as he lived not in vain.

He was our friend.

Paul M. Gregg

Of pioneer stock, Mr. Paul M. Gregg claims Independence, Inyo County, as his birthplace, though the Gregg family later made its permanent home in San Luis Obispo, one of the oldest of our California settlements. Here his father was a prominent and successful attorney and for years a judge of the Superior Court, and the family was prominent in the life of the state. The son received his early education in the public schools and entered Stanford University when that institution first opened its doors in 1891. His father's professional experience doubtless influenced Mr. Gregg in the choice of his profession, and with the establishment of the Law School at Stanford he began his legal study, graduating in 1895 with the first four-year class, and being admitted to the bar during the following year. Until Judge Gregg's death in 1899 father and son were associated in the practice of law in San Luis Obispo, and Mr. Gregg continued his legal practice there until his removal to Los Angeles. Mr. Gregg was widely known as a public-spirited citizen in the community and as a successful attorney, and he severed many local professional connections of long-standing when he came to Los Angeles as a member of the law firm of Andrews, Toland, Gregg and Andrews in 1920. A year later he with-

drew from that firm to become counsel for Union Oil Company of California and to devote his entire time to the legal affairs of the corporation.

Following the announcement of the draft and during the early months of the war, Mr. Gregg accepted appointment as a member of the District Exemption Board whose field covered the larger part of Southern California. Appeals from the divisions of local boards were handled by the group of which Mr. Gregg was a member, and this arduous and exacting war service claimed practically all of his time until the signing of the armistice.

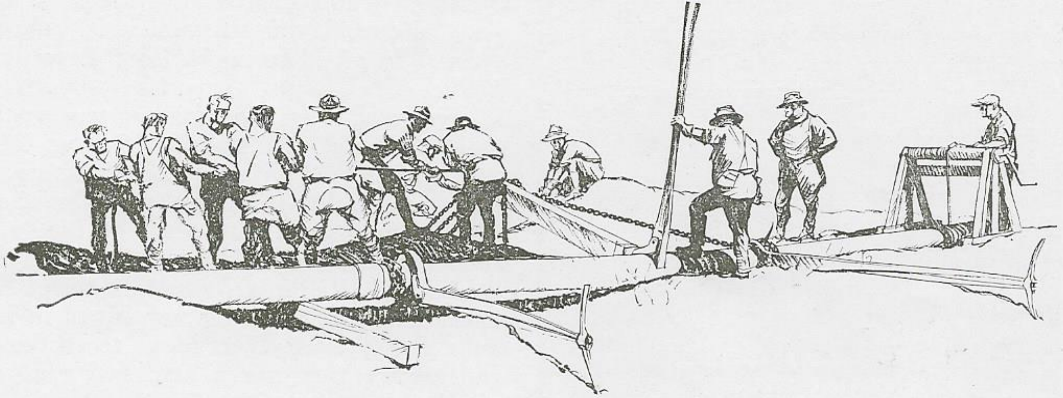
The early activities of Union Oil Company of California in the development of the Santa Maria field, followed by the construction of its Lompoc pipe line to tidewater at Port San Luis in 1904, were responsible for Mr. Gregg's first contact with the company's affairs, and was also the primary cause of his interest in the legal problems of the oil industry. To this branch of his profession he has devoted much study and in it he has largely specialized. He has been counsel for the Pinal-Dome Oil Company and represented many oil concerns in important litigation.

In addition to directing the legal work of the company, Mr. Gregg has served for the past few months as personal assistant to Mr. E. W. Clark, Executive Vice-President.



The Pipeliner

BY ALEX ROBERTSON



In the sixty years that the oil industry has been in existence in the United States, there has been no more colorful product of petroleum development than that characteristic personage who grew up with quantity production of oil and has since followed closely in its wake—the “Pipeliner.”



Strictly speaking, the term applies to the man who lays the pipe lines through which oil is transported from fields to storage, and from storage to coast terminals. Behind this dictionary definition, however, is the real significance of the man—and the coast-to-coast fraternity he represents; for the true old-time pipeliner, unlike regular oil field workers, seldom changes. He cares little about the actual drilling operations in the field through which his line is being laid. He wouldn't take a job on the rig unless pipe work was at an absolute standstill, and the last fellow pipeliner around town had rejected his request for temporary financial assistance the third straight time. He follows the lines, gradually drifting into those free, independent ways of the pipeliner; he does a turn on an old-time line in Pennsylvania, drifts into Louisiana and Texas, and works out of Tulsa for a spell. Then he hears of better pickings out in California, and here he has been ever since

—once a pipeliner, always a pipeliner.

The introduction of transporting oil by pipe line, which meant the birth of the pipeliner, marked an era in the development of the petroleum industry. Before this, crude oil was put into 42-gallon iron-hooped oak barrels, loaded into trucks and hauled to points from where further transportation was done by barges. That was the first step. Following the extension of the Atlantic and Great Western Railroad in 1862 and the excessive leakage of the barrels when loaded onto cars, came the 2000-gallon wooden vats, placed on ordinary flat cars. Soon the steel cylindrical cars appeared, gradually growing in capacity until the present standard of 12,000-gallon cars was reached.

But the magnitude of the oil industry soon demanded a method of transportation more convenient and less expensive than a railroad, and out of this necessity came the first pipe line, laid in 1862, by L. Hectchain of New York. Constructed on the siphon principle, with air chambers every 50 or 100 feet to equalize the pressure, the line conveyed oil from Tarr Farm, Titusville, Pennsylvania, to a refinery three miles distant. Different attempts were made to use the line constructed on this principle but excessive leakage at the joints rendered it unsuccessful.

The practicability of pipe line transportation was not thoroughly demonstrated, however, until three years later—the result of successful experiments by Samuel Van

Tyctel of Titusville, Pennsylvania. The pipe sections were carefully fitted with screw sockets, the whole system was but four miles long, and it carried a total of 80 barrels per day. Shortly thereafter similar short lines multiplied, causing for some time a bitter war between competing companies and the owners of oil wagons whose business was completely wiped out.



KERN RIVER PUMP STATION AND FIELD

The first trunk line was laid in 1874 from the lower oil country to Pittsburg, and consisted of 60 miles of 4-inch pipe. Trunk lines to Cleveland followed, the system soon being extended from the Pennsylvania fields to Buffalo, New York, Philadelphia and Baltimore; and from the Ohio fields to Cleveland and Chicago. Year after year the lines multiplied until in 1907 there were in the United States more than 45,000 miles of pipe ranging from 2 inches to 12 inches in diameter, the longest continuous line running from Oklahoma to New York City, a distance of approximately 1600 miles.

With this new and rapidly expanding type of work came the pipeliner. The isolation of the gangs in their long jobs of crossing unsettled mountainous or wooded sections of country, has knit them closer together, in addition to awakening a peculiar preference for their own work and the associations they form both on and off the job.

The Union Oil Company of California had not had extensive connections with the pipeliner until the construction of the Producers' Line in 1909, though Lompoc and Los Angeles pipe lines were built at an earlier date. But in this job, and the subsequent developments which followed its completion, a friendship was formed which the intervening years has cemented. Hundreds of pipeliners now on the Company's payrolls, many of them veterans of that

desert-conquering campaign of 13 years ago, can testify as to this.

The quick and efficient work done in laying this line, which was one of the biggest pipe line propositions ever tackled by any operators in this state, is still the cause of many a chuckle of satisfaction in official circles. In pipe line camps from the valley to the coast it will never be forgotten. The completion of the entire system, with its 205 miles of pipe line, its 15 main line stations, with huge pumps, heaters, storage tanks, and dwelling houses, and the telephone system paralleling the pipe line all the way, in the surprisingly few months which elapsed between the time when it first started and when oil was stored in its tanks, furnishes an object lesson to all those who are wont to face a hard task with a faint heart.

The paramount consideration in laying the line was the greatest haste consistent with good work. Developments in the oil situation in the San Joaquin Valley in 1909 prompted the organization of certain producers and the appointment of the Producers' Transportation Company, a newly formed subsidiary of the Union Oil Company of California, as selling agents. The young pipe line company faced the task of establishing a complete system which would serve at the quickest possible moment, members of the organization in the Coalinga, Kern River, Midway, Sunset and McKittrick fields.

The plan laid out called for one line from the Kern River fields to meet another from the Midway and Sunset fields at the main line station at McKittrick; the main



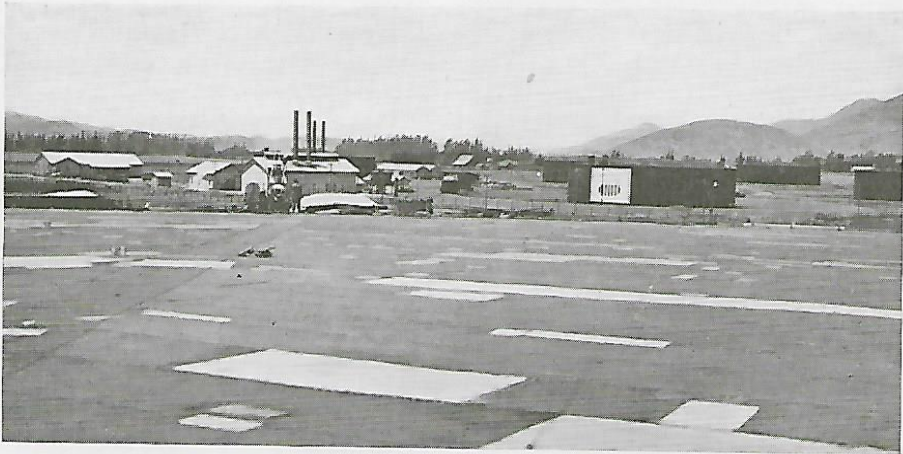
MCKITTRICK OIL FIELDS

line to stretch from the latter station into the desert to Junction Station, where the stream would meet the line from the Coalinga fields. The oil was then to be

SANTA
MARGARITA
STATION



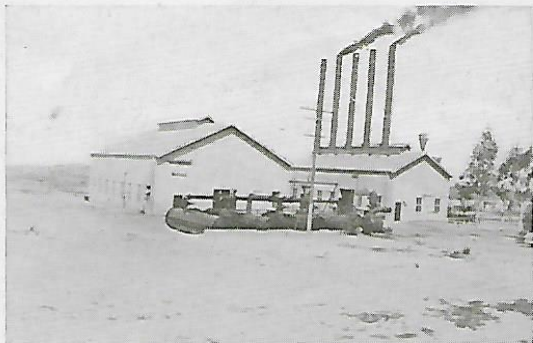
SAN LUIS OBISPO
STATION FROM
ROOF OF RESERVOIR



SUMMIT
STATION

pumped across the desert via Antelope, Shandon and Creston, over the mountains to Santa Margarita station; then over the Cuesta Grade and down the long slope to San Luis Obispo and the coast at Port San Luis, where shipping facilities were already installed. The plan looks simple enough on clean white paper, but before the joints of eight-inch pipe had spanned the desert hundreds of sturdy pipeliners had sweltered for months in almost unbearable heat and created pipe laying records which still stand as the best to be cited for "tong" gang work.

With W. T. Cushing, formerly with the Texas Company, as superintendent, R. O. Holleran and A. E. Norville as assistant superintendents, and Ralph J. Reed, present Chief Engineer, in charge of line and station location in the field, the line was quickly started, the first joint of pipe being laid at Coalinga, on July 29th, 1909. The Coalinga contingent, in charge of "Bill" Leary, laid the line from Coalinga to Junction; from the coast to Junction the work was done by foreman Ed Hendershot. On



McKITTRICK--HOME OF MIKE CALLAGHAN

the other lines, "Andy" Moran had charge of the construction from Bakersfield to Lo Kern; "Bill" Leary from Lo Kern to McKittrick; "Pete" Nelson from McKittrick to Junction, and "Casey" Bramham from Sunset to McKittrick. Over 1000 pipeliners were working on this one big job at the same time—in the different gangs, laying lines which met to complete the circuit. Besides the pipe line gangs there were telephone crews installing their system, station erection outfits setting up the main line pumps, gangs working on the construction of storage tanks, and carpenters putting up dwellings.

Many tales are told of those stirring days

between the start of the work on July 29, 1909, and March 8th, of the following year when the first oil was delivered to the coast at Avila. Some are true and some are otherwise, but that the men worked with phenomenal efficiency is certain. Some idea of the progress made can be gathered from the fact that Foreman Leary, with a tong gang of 50 men and a regular ditch crew, laid, ditched and covered 283 joints of the 8-inch pipe in nine hours, this representing the completion of over a mile and one-eighth of pipe line per day, a record that still stands.

Try to get a picture of the perfect organization of a pipe line gang essential to the turning out at this rate of speed of work that stands the necessary pressure tests. Every man must know his place on the job. Each joint, weighing approximately 600 pounds, is carried into place by four men handling carrier bars, placed in the last joint laid and held there until the "stabber" lines it up with the threads of the coupling and sings out "roll." Remember the regulars doing a "squads right" at the command "March"? That's the kind of discipline under which pipeliners work when they commence rolling pipe to make up a line. As soon as the command to roll pipe is given, the "hammer man" or collar pounder strikes the collar or coupling one stroke and away the pipe rolls to the right and into the recesses of the threads in the collar. This is accomplished by two sets of ropes, wound once around the pipe while fifteen or more men on each rope string out on it and unwind the rope much as a small boy sends a top spinning from his string.

When the joint is tightened in this manner, you will hear the hammer man rattle the hammer on the pipe and without a word, two or three pairs of the big lay tongs are thrown around the pipe, with six men on each pair; then, without the loss of a moment, the roll of the pipe further into the threads of the collar is continued. Each pair of tongs is kept stroking up and down alternately, the men keeping time with the beat of the hammer man, who not only keeps them stroking with as even a cadence as that of troops on the march, but also keeps the collar and pipe from binding and makes rolling easier. Never does the pipe stop rolling after the "stabber's" command. Should they fail in this,

their day's record is lost and there is no chance to best their last high mark. With another rattle of the hammer, two or three more sets of tongs are thrown on the pipe to be stroked alternately until the joint begins to get tight; then a final sound of the hammer brings them all into the same stroke, so that 24 to 30 men are exerting all their might and main screwing the joints together with lunges of the body on the big man-sized tongs. Day after day the pipeliner, exerting every muscle of his body, keeps up this grind with an occasional "blow" as he goes along. Then back to the job, with the sun beating down on his back and the perspiration pouring off his body.

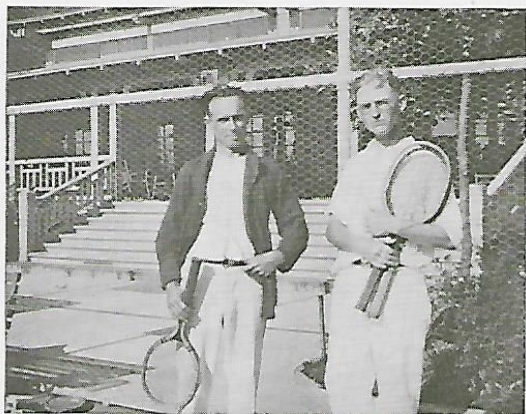
Many of the men who helped fight the way from Bakersfield to the Pacific in the laying of the Producers' Pipe Line, are still actively connected with pipe line work for the Union Oil Company. Among these are William Groundwater, present superintendent of the line; J. C. Burnett, superintendent Los Angeles Pipe Line; "Joe"

Stoltz, Walter Nelson, Harry Stowman and Walter Straley, foremen of the Producers, and E. H. Gould, now with the Los Angeles Pipe Line.

But the majority of the boys have followed the course of all good pipeliners. They worked a while on the Producers Line, and then laid off a while. Perhaps they came back again for a turn with "Mike" Callaghan at McKittrick, but it was pretty hot so they were glad when the job was finished and they could congregate daily around the Taft corners and "pop off." More than likely a few of them subsequently scattered to Texas, some went to Wyoming, and a few to Louisiana. Others of the old timers probably did a little term for Ed Whalen at Junction before lying around for a spell at Bakersfield or Taft, where, if you know the right cigar stand or pool hall, you can line up all the expert pipeliners you want at any time, and hear all the exciting yarns about the life of the layer of pipe to which you care to listen.

Tennis Tournament in Progress

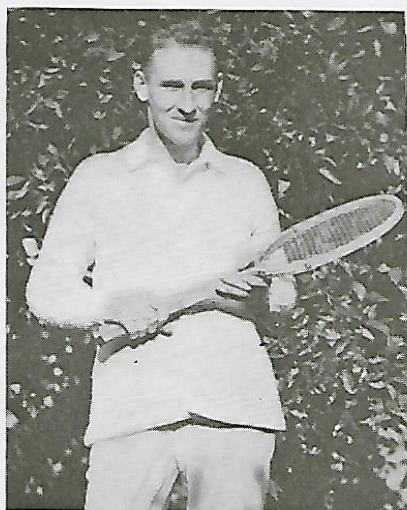
As this issue goes to press all but the final and near final matches in the annual Union Oil Company of California Tennis



SHERIDAN, BOYD—NORTHERN WINNERS

Tournament for the President's Cup have been played. In addition to the increased local enthusiasm, the tournament is the first of the yearly affairs in which a regular team of two members, winners of the Oleum and San Francisco championships, will travel south to take part in the final matches for the coveted trophy.

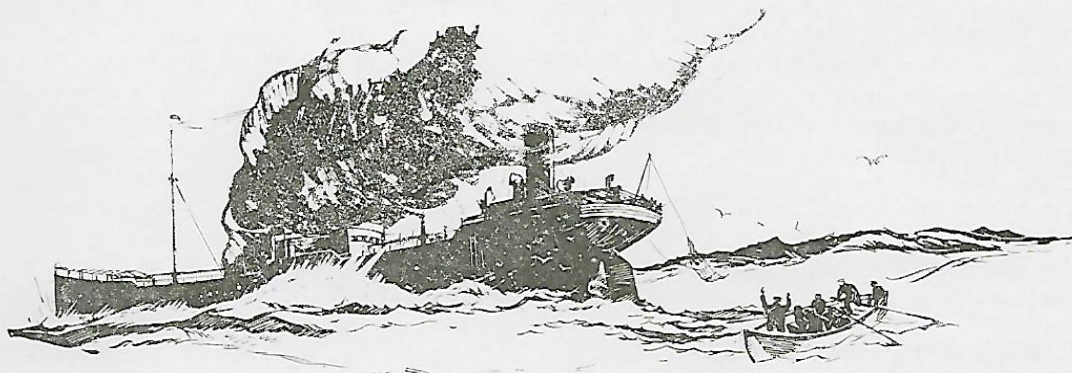
The semi-finals of the Men's Singles, including J. I. Sheridan of San Francisco, T. F. G. Boyd of Oleum, and two Los Angeles men, the finals of the same class and those of the doubles, which will see a Southern team against the two Bay City racquetters, will be played on September 9th.



HORNIDGE—HEAD OFFICE

S. S. La Habra Fire Off the Azores Coast

BY H. E. CATTERMOLLE



Several weeks ago two photographs in a Marine Department Steamship album showing the very much disfigured decks of the tanker "La Habra" (in the charter service of the Union Oil Company of California) caught the eye of Captain Atle Knudsen, present master of the vessel, and aroused memories of a thrilling battle with fire at sea which entailed the loss of seven lives and re-



sulted in many thousands of dollars damage to the ship and her cargo.

On the morning of January 11, 1915, the "La Habra" sailed from Talara, Peru, with a cargo of benzine and kerosene for the United Kingdom. Seven days later the vessel arrived at the Panama Canal, departing from the eastern terminal of Colon on January 19th.

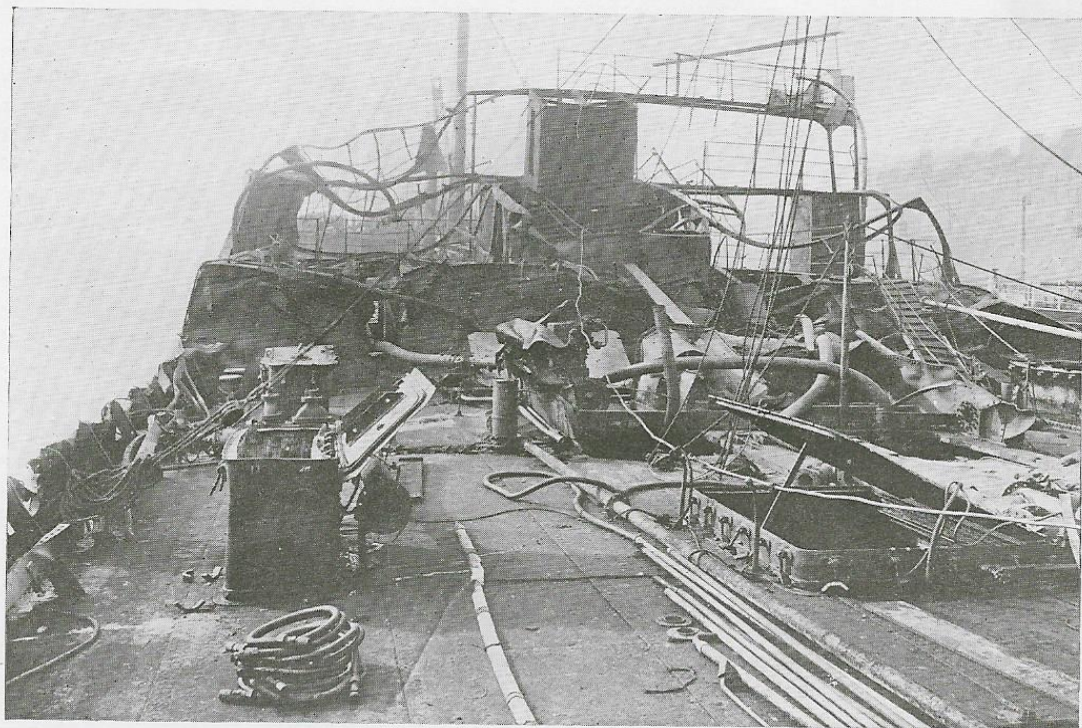
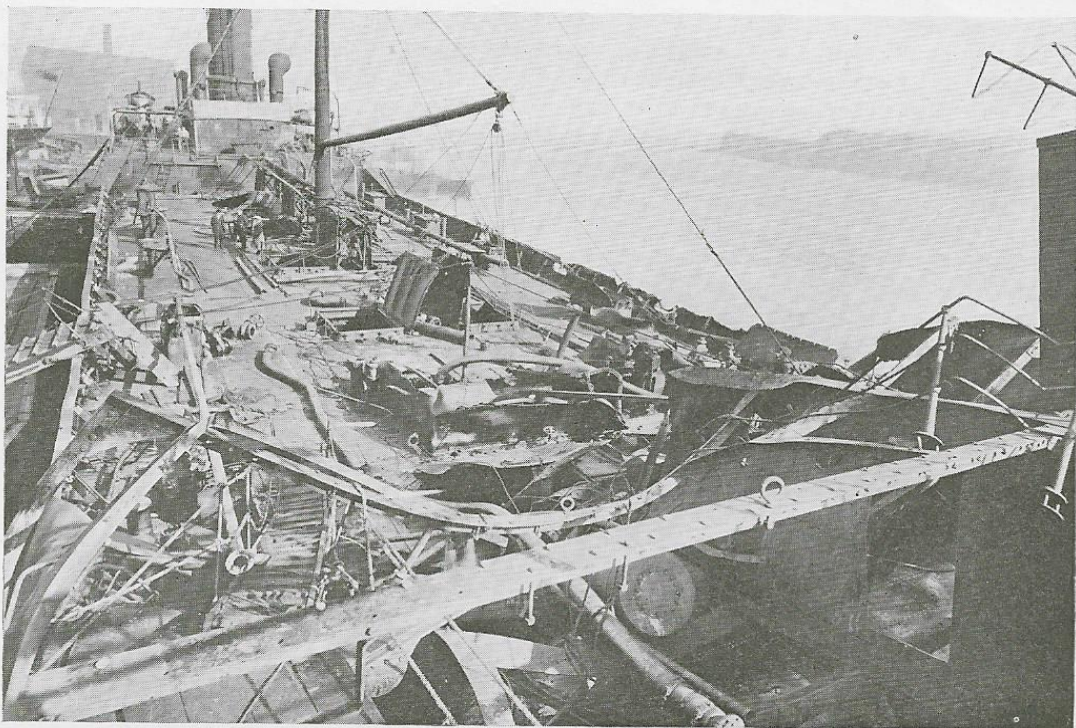
Fine weather and moderate seas were experienced until the morning of February 1st, when, in mid-Atlantic, a northerly gale sprang up and heavy seas were encountered. The ship soon began to labor heavily and ran under reduced speed until 10 o'clock on the morning of February 2nd, when the violence of the gale necessitated her being "hove to." During the afternoon wind and sea moderated and the vessel was again set upon her course.

At 8 o'clock the same evening a terrific

explosion was heard, a shaking and trembling felt throughout the ship, and flames were seen issuing from the pump-room. Another explosion followed immediately, wrecking the pump-room house. The rudder connections and engine telegraph were put out of commission and the Master and officers went aft to man the auxiliary tiller and bring the vessel's head into the wind and sea. The rest of the deck crew remained forward in their quarters on the forecastle deck.

The ship was rolling badly and the burning cargo began to overflow the tanks and spread over the deck, running off into the sea, where it continued to burn. The flames quickly ignited summer tanks numbers 2 and 3 and the main deck became a mass of flames. Heat from the deck caused the gases in the bunker tank to explode and this also was soon ablaze.

The fire continued to make headway throughout the night, lighting up the sea for miles around, and finally spread to the port boat deck. By strenuous efforts on the part of the engine crew aft this blaze was extinguished. It was then decided to lower away the port lifeboat, which had been badly scorched, and keep it under the stern in readiness to take off the crew. The first and second officers and four men manned the lifeboat. Due to the blazing sea about the ship they were compelled to pull away from the stern. When morning dawned the lifeboat with its six occupants



DECKS OF OIL CARRIER AFTER TWO-DAY FIRE AT SEA

was nowhere in sight. Neither boat nor crew was ever seen or heard of again.

Having no wireless, the "La Habra" was unable to call for assistance. There seemed to be only the choice between two horrible fates for the crew—that of burning if they remained aboard, or of drowning if they took to the lifeboats in the tempestuous sea.

Early on the morning of the 3rd of February the port poop bunker tank exploded, the fire spreading to the crew's messroom, the storeroom and the engine and boiler rooms. The port boatdeck again took fire and burned, despite all efforts to extinguish it, leaving only the starboard poop deck as a place of safety for the handful of men aft.

At this crucial point in the unfortunate adventure, with six casualties already recorded, the forlorn, hopeless little body of men huddled together on the poop deck, and the fire at its height, fate—or was it Providence?—and the keen judgment of the Norwegian Master, Captain Petter Bugge, combined to save the day. The judgment of the Master was displayed in his realizing that the only hope lay in the possibility of forcing the nose of his vessel into the gale with the hope that the huge seas breaking on the deck would ultimately drown the conflagration in the tanks. With the engines out of commission and only emergency steerage apparatus to rely upon, the task of heading the "La Habra" into the gale was by no means an easy one. Success ultimately crowned their efforts, however, and the huge seas did the rest in a comparatively short space of time.

The fire which had raged through the midship house having been extinguished, those of the crew who had been aft moved forward, fearing that the fire still burning in the bunkers should spread. While doing so, the ship's boatswain and his son endeavored to make their way forward arm in arm, but when amidships a large green comber caught them, hurling the boatswain against the bulwark and washing the boy overboard, to drown before his father's eyes and mark against the fire its seventh fatality.

It was not until noon on the 4th of February that the steel structure had cooled sufficiently for the men to move about, and the engine crew went below, where one

boiler was found to be intact. Steam was raised and the fire still burning in the bunkers was extinguished by smothering with live steam. By noon of the following day steam was up on two boilers and engines started.

Captain Bugge decided to proceed to the nearest port, which was Horta, Azores Islands, some 300 miles distant. As all charts, instruments and both the ship's compasses had been destroyed, the course was laid from a small atlas found in the fore-castle and the steering done by the stars, when available.

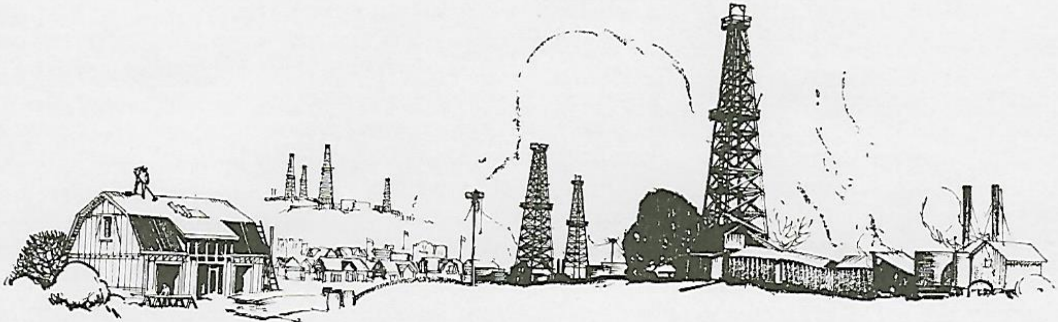
Early on the morning of the 6th of February a vessel was seen off the port bow. Distress signals were flown to attract her attention, but for some unaccountable reason no response was received. This was extremely disheartening to the crew, many of whom lay about the blackened and burnt hulk, incapacitated for work by the hunger and exposure of the previous four days. A few hours later, however, another vessel appeared and, upon sighting the "La Habra," bore down to her and hove to a few hundred yards distant. She proved to be the Norwegian steamer "Laila" of Christiania. The Master of the "La Habra" and three men pulled over to her in the small gig and explained their predicament. Charts, a small compass and provisions were procured and, when put aboard the "La Habra," the course was again shaped for the Azores. One day later Horta was sighted and port made late that afternoon.

At Horta only temporary repairs were effected, due to the limited facilities for handling ship-work at this port. After shipping a compass, instruments, charts, and storing the vessel, wreckage was cut away enough to allow navigation. She took departure from Horta on February 20th, in the condition shown in the photographs, arriving at Thameshaven (just below London) on February 27th, and discharged approximately 40,000 barrels of her original cargo, the balance of 25,000 barrels having been claimed by the fire.

She was repaired at London, refitted and was back in the service of the Union Oil Company of California in three months' time. She has been operating under charter steadily since that date.

Founding of Orcutt and Early History of the Santa Maria Oil Fields

BY W. H. GOSLINE



Editor's Note. On September the 8th the cornerstone of a new schoolhouse for the Orcutt Union School District will be laid in the town of Orcutt. The school board requested the Union Oil Company of California to furnish a brief history of the locality and the petroleum development concerned with it, the document to be sealed in a casket and placed in the cornerstone. The following article, the writer of which has been in close touch with the Santa Maria field work of the Union Oil Company for over twenty years, was prepared for this purpose.



On September the 8th the cornerstone of a new schoolhouse for the Orcutt Union School District will be laid in the town of Orcutt. The school board requested the Union Oil Company of California to furnish a brief history of the locality and the petroleum development concerned with it, the document to be sealed in a casket and placed in the cornerstone. The following article, the writer of which has been in close touch with the Santa Maria field work of the Union Oil Company for over twenty years, was prepared for this purpose.

The town of Orcutt was established in the spring of 1904 to meet the requirements of the newly developed oil industry in what is known as the Santa Maria Oil Fields, and incidentally to provide convenient headquarters and a material distributing station for the Union Oil Company of California. It is essentially an oil town, a Union Oil Company town, and just as the history of most every other town in California is linked inseparably with one or another of the great industries of the State, the story of the Town of Orcutt is woven into the history of the early development of oil in the Santa Maria-Lompoc District.

To Mr. W. W. Orcutt of Los Angeles, California, Manager of the Geological and Land Departments of the Union Oil Company of California, also a Director of the Company, is credited the selection and laying out of the town site, while Mr. E. W. Clark of Los Angeles, the Executive Vice-President of the same Company, but at that time General Manager of the Pacific Coast

Railway Company, is responsible for naming the station and town.

In 1901 the site of the present town of Orcutt was part of a grain field in an open stretch of country through which the Pacific Coast narrow gauge railroad wound its way from Santa Ynez to San Luis Obispo and Port San Luis. The small locomotives once a day made the journey with their freight, consisting mostly of grain, beans and beets, the products of the principal industries in the surrounding territory.

Oil or brea seepage in the region of the Santa Maria Oil Fields had long been known, and the territory was prospected by oil geologists as early as 1895.

To Messrs. McKay and Mulholland of Los Angeles, however, is due the credit for starting operations. The first oil lease was dated March 14, 1900. After a favorable report had been made by Mr. Mulholland on certain lands of the Jose and Maria Careaga ranch, the Western Union Oil Company was organized, drilled three prospect holes with a 72 foot Standard Rig and light drilling equipment and was finally rewarded in August, 1901, by striking paying quantities of oil in the third well located near the northwest corner of the Careaga property. This well, known as Western Union No. 3, was finally completed in March, 1902, and was the first to tap the vast oil reserves in that territory, and to reveal to the world another of California's immense underground treasures.

The usual excitement followed the discovery of oil in Western Union No. 3.

Oil operators flocked to the district in a wild clamor for possession of the favorably located lands, and the development of the Santa Maria Oil Fields began. Inquisitive but close mouthed land scouts were much in evidence in the district, and in a very short time most of the choice oil land was leased or purchased for oil development. Many new companies were organized, among them the Pinal Oil Company, Santa Maria Oil and Gas Company, California Coast Oil Company, Brookshire Oil Company, Dome Oil Company, Graciosa Oil Company and Rice Ranch Oil Company. Other interests, such as Union Oil Company of California, Standard Oil Company of California, Associated Oil Company and Southern Pacific, already operating elsewhere in the State, entered the field.

A well drilled on the Martello property by the Pinal Oil Company, an organization composed of Santa Maria and San Luis Obispo capital, became the second producer in the field in November, 1902, extending the proven area north over the Graciosa ridge, a distance of two miles from Western Union No. 3, the discovery well.

Mr. Orcutt, as geologist for the Union Oil Company of California, had kept in close touch with operations in this field from the beginning, and during the drilling of the Careaga and Pinal wells, he mapped the surface geology of the entire Santa Maria District, and wrote a forecast on the possibilities of the territory. His map has since been one of the official geological guides in the district, and most of the developments in the territory have confirmed his original appraisal. The Hartnell property was leased by the Union Oil Company in June, 1902, and following this transaction the Hobbs, Fox, Folsom leases and other lands on the Lompoc Monocline, in a total of 70,000 acres, were acquired. This Company's first oil well in the Lompoc District was Hill No. 1 on the Lompoc structure, completed the day before Christmas, 1902, in the then record time of fifty-six days drilling. Fox No. 1, completed in November of the next year, gave the Company its first production in the Santa Maria field proper. As a result of rapid development, the end of the year 1903 saw 22 completed wells capable of producing approximately 8,000 barrels of oil per day, and operators were already giving serious consideration to

the problem of providing suitable pipeline transportation for the oil to seaboard and refinery.

In 1902 a pipe line was laid from Western Union Careaga property to Careaga Station on the Pacific Coast Railway, where deliveries were made to the Standard Oil Company and the oil was either sold to the Pacific Coast Railway for use as fuel or shipped in tank cars to other points. Next was a line from Pinal Graciosa siding on the Pacific Coast Railway, where delivery tanks and loading rack were erected, and shipments of oil made by tank car.

The Union Oil Company had surveyed a line from their Lompoc properties to Harris Station, and along the Pacific Coast Railway to Port San Luis with laterals from its Fox & Hobbs wells connecting in

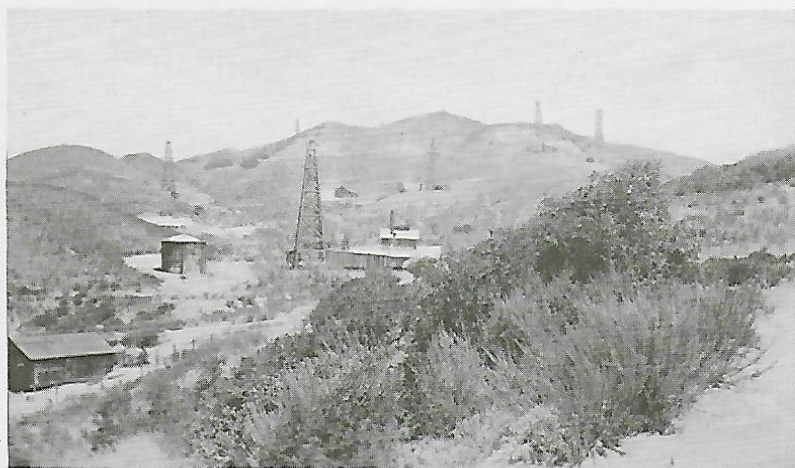
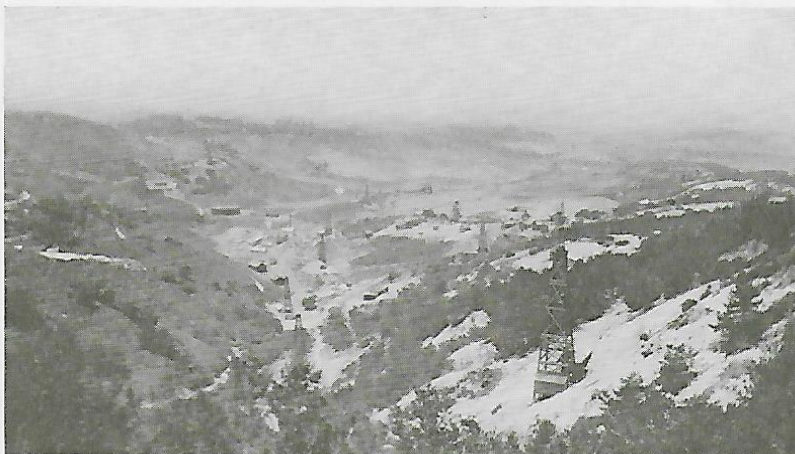


WHITE TANKHOUSE ON NEWLOVE FLAT

at a point just north of Graciosa siding. In the meantime, as a temporary measure, arrangements were made by Mr. W. W. Orcutt with Mr. E. W. Clark of the Pacific Coast Railway Company for the construction of a siding about one-half mile north of Graciosa, to be used by the Union Oil Company in shipping oil by tank cars. The siding was constructed in December, 1903, and was given the name of Orcutt Siding by Mr. Clark in honor of the geologist.

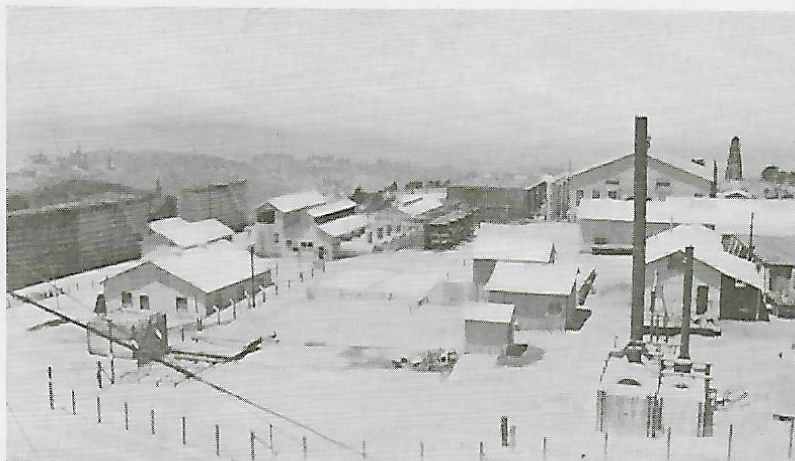
With the growth of the Union Oil Company's interests in the field, it became necessary at this time to establish a business center where oil well supplies and materials could be stored and distributed to advantage, as well as to provide accommodation and markets for the growing number of employees in the oil fields. At this time also other factors of the oil industry were seeking locations. The National Supply Company had practically decided upon Divide Station as the most favorable loca-

LOOKING
OUT INTO THE
SANTA MARIA
VALLEY



GRACIOSA
LEASE WELLS

ORCUTT
COMPRESSOR
PLANT--TOP
OF NEWLOVE
HILL



Dialect of the Oil Fields

BY MRS. CHARLOTTE RICKENBACKER



(CONTINUED FROM JULY ISSUE)

FORMATION, any rock substance encountered in drilling.

FORTY-FOOT BOARD, rotary method of drilling—the derrickman stands on the Forty - Foot Board (40 ft. in derrick) to tie back drill pipe and tools.



FRACTIONATION, the separation of crude oil vapors into various parts, each one being recovered at a different degree of heat.

FREE WATER, water which comes along with oil or emulsion from well and settles out naturally.

FROZEN CASING, casing which has become tight by cavings settling around it.

GAS POCKETS, accumulation of gas confined in the earth.

GAUGER, the man who measures the oil receiving tanks.

GOOSENECK, a pipe from the bottom of tank to drain off free water.

GRAVITY, Baume and specific. The weight of a certain volume of oil compared with the same volume of water.

GUSHER, well producing an enormous amount of oil daily.

HEADACHE POST, a post in the derrick directly under the walking beam. In case the beam should break this post would stop it from falling in the derrick and causing damage.

HEAVING PLUG, a wooden plug placed in the bottom of the perforated string of casing to keep out the heaving sand.

HEAVING SAND, loose sand which heaves up in the bottom of the hole.

HELPER, attends the driller on a rotary rig.

HELRAZER, an electric fishing tool by which an electromagnet can be made to exert a dynamic lifting force.

"HOLD," the fishing tools' grasp of the "lost" object sought for.

IMPRESSION BLOCK, a piece of wood or lead run down the hole on the bottom of the tools to get an imprint of the top of a lost article so that a suitable fishing tool can be made.

JACK PUMPING, pumping by means of a simple lever or bell crank.

JAR, the feel on the cable at the derrick floor of the blow struck by the drilling tools.

JARS, the links in the string of drilling tools which enables an upward or downward blow to be given to tools stuck in the hole.

JERK ROPE, a short cable about 20 feet long. By connecting this from the crank shaft to the drilling cable the tools can be operated without the walking beam.

JOINT, 20 ft. length of casing or pipe. Two, three or four joints of pipe make a stand, according to height of the derrick.

JUMPING A PIN, to break off the threaded end of a drilling or fishing tool. See milling.

KELLY, the top section of the rotary drill pipe. Square in form so that the rotary table can grip it in turning the bit.

LANDED, when a string of casing is permanently placed in a well.

- LEAD LINE**, the tubing which carries the oil from the well to the receiving tanks.
- LEFT HAND PIPE**, drill pipe with left hand threads used in unscrewing casing or drill pipe stuck in the hole.
- LINER**, smaller sized casing at the bottom of a hole connected with an adapter to larger sized casing.
- LOCATION**, the site of a well. Also the spacing of wells on an area to be drilled.
- MILLING**, in case of a broken pin to mill new pin on lost tool to enable to fish out same.
- MOUSE TRAP**, a tool used in fishing out rope when matted in a well.
- MUD**, the mixture of clay and water used in rotary drilling to float up the drill cuttings.
- MUD SCOW**, a bailer.
- MUDDING UP HOLE**, the use of thick mud to seal up formations by entering the sand pores.
- OIL STRING**, the casing used to keep the well open from the shut-off point to the bottom.
- OFF TOUR**, leaving work. Also time off duty.
- ON TOUR**, going to work or time at work.
- OVERSHOT**, drill pipe which runs over small diameter pipe and clears away debris so that the small pipe can be loosened.
- PACKER**, two metal cylinders with rubber between, the expansion of the latter making a shut-off between the casing and the walls of the hole. Bags of flaxseed, peas, etc., which swell greatly on absorbing water, were formerly used in wells to exclude water temporarily. Since the invention of cementing these measures are now seldom used.
- PERFORATING**, cutting holes in the casing to allow the entrance of oil.
- PICK UP**, the feel of the tension or the slight jerk on the line in the well when the tools are raised off the bottom.
- PITMAN**, the shaft connecting the crank shaft and walking beam.
- PLUGGED OFF**, When water in the lower part of a well is excluded from the upper part by a solid plug in the formation.
- PORTABLE RIG**, a drilling outfit mounted on wheels which can be hauled from place to place. Used for drilling shallow wells only.
- PULL OUT**, to hoist the tools out of the well.
- PUMPING**, raising the oil to the surface by means of a pump.
- REAMING**, enlarging hole after drilling so that casing can be easily entered.
- RE-DRILLING**, when a well caves in or the casing collapses it is re-drilled to the original depth.
- RIG**, engine house, belt house and derrick.
- RIGGING UP**, mounting the engine and setting all equipment necessary for drilling.
- RIPPER**, a tool used to rip off casing.
- RODS**, see Sucker Rods.
- ROTARY CREW**, five men: Driller, Derrick man, Cathead man or floor man, and two rotary helpers.
- ROTARY TABLE**, the portion of the rotary outfit which holds the drill pipe and makes it revolve.
- ROTATING**, method of drilling by rotating with drill pipe.
- SAMPSON POST**, the post the walking beam sets on.
- SAND LINE**, the line to which the bailer is attached.
- SAND PUMP**, a bailer.
- SAND REEL**, the reel outside the belt house on which the bailer line is wound.
- SCREEN PIPE**, pipe at the bottom of a well with screened holes to keep out the sand, and admit the oil.
- SHELL**, hard formation.
- SHOE**, short heavy section at bottom of casing string to protect the end from collapsing when being forced into formation.
- SHOOTING**, exploding nitroglycerine in a well to break up the formation and increase the flow of oil.
- SHUT OFF**, the successful exclusion of water or gas by cementing or driving casing into formation.
- SIDETRACK**, to drill past any obstacle.
- SKIMMING**, keeping the pump at a level in the well just above the water.

- SLIP SOCKET**, a fishing tool which takes hold of lost tool and enables it to be fished out.
- SPIDER**, the iron block over the hole which holds the pipe by means of wedges while drilling is going on.
- SPUD IN**, the commencement of drilling.
- SPUDDING**, the first steps in drilling before the hole is deep enough to use a string of drilling tools. The bit in spudding is raised and dropped by tightening and slackening the drilling cable by means of a "jerk rope" attached to the crank of the band wheel.
- STANDARD CREW**, two men, driller and tool-dresser; sometimes one helper.
- STANDARD TOOLS**, churn method of drilling with a cable. Also cable tools.
- STEM**, the part of the drilling tools between the bit and the jars.
- STOVE PIPE**, riveted casing used in upper portion of hole to prevent caving.
- STRING OF CASING**, a number of joints of casing fastened together and hung or landed in a well.
- STRING OF TOOLS**, consists of rope socket, drilling jars, drill stem and bit.
- STRIPPER**, a piece of rope wrapped around the oil cable, so when pulling the tools out of the hole it will strip the oil off the cable and keep it from spraying.
- SUCKER RODS**, the rods which connect the walking beam with the pump at the bottom of the well.
- SUMP HOLE**, hole in the ground near the derrick for surplus water or mud.
- SWABBING**, operation performed prior to bringing in a well. By means of expansion rubbers, the mud and water is swabbed out of the hole and oil takes its place.
- SWEDGE**, tool used on tubular material when it has collapsed or been damaged to bring to its natural shape.
- TELEGRAPH CORD**, control, used by driller, in the derrick, running back to the engine.
- TELEGRAPH WHEEL**, the wheel that the telegraph cord runs on.
- TEMPER SCREW**, standard drilling. Tool suspended from walking beam used by the driller to control drilling tools in the hole.
- THIEF**, implement for taking samples of oil at any point in the tank or reservoir.
- TONGS**, are used to screw casing or pipe together. Usually suspended by a wire line in the derrick to save heavy lifting.
- TOOL DRESSER OR TOOLIE**, driller's helper on a standard rig.
- TOOL JOINTS**, the tapered male and female or pin and box joints of the drilling tools.
- TORPEDOING**, the use of explosives at the bottom of a well to break up the formation to increase production. Also used to shoot off casing so as to be able to redrill.
- TOUR**, the hours a drilling crew works.
- TUBING**, the small-sized pipe in which the oil is raised by pumping.
- TWISTED OFF**, the parting of rotary pipe while in the hole.
- UNDER-REAMER**, tool used to enlarge the hole that is being drilled with a bit so that the casing can follow down.
- WALKING BEAM**, used in standard tool method of drilling to churn the tools.
- WALL HOOK**, to straighten tools loose in the hole.
- WATER STRING**, the string of casing successfully cemented to exclude water.
- WATER TEST**, the test of whether or not the cement behind the casing successfully excludes water.
- WILDCAT**, a well being drilled in an unproven territory.
- WORKING BARREL**, part of the oil pump.
- ZONE**, the bed or series of beds containing either water, gas or oil.

So many gods, so many creeds,
 So many paths that wind and wind;
 When just the art of being kind
 Is all the sad world needs.

Father (visiting college)—Son, those are better cigars than I can afford.

Son—That's all right, Dad, take all you want; this is on me.

California Oil Statistics for July, 1922

DISTRICT	Gross Barrels	DAILY AVERAGES					
		July	June	1921	1920	1919	1918
Kern River.....	631,741	20,379	20,733	18,357	20,377	20,907	22,083
McKittrick.....	199,284	6,429	6,816	5,672	7,106	7,773	8,385
Midway-Sunset.....	2,666,088	86,003	84,348	78,902	83,788	88,908	95,429
Elk Hills.....	1,104,055	35,615	36,765	49,549	19,853	77	.....
Lost Hills-Belridge.....	243,529	7,856	8,615	8,934	11,362	12,770	14,967
Coalinga.....	627,345	20,237	23,101	34,307	42,888	44,956	44,823
Santa Maria.....	279,179	9,006	9,154	14,973	15,869	16,665	19,747
Ventura-Newhall.....	254,179	8,199	8,004	5,762	5,601	4,858	3,827
Los Angeles-Salt Lake.....	105,957	3,418	3,355	3,601	3,608	3,625	3,691
Whittier.....	59,705	1,926	2,057	2,015	2,300	2,744	2,866
Fullerton.....	305,953	9,869	10,913	16,334	14,309	12,017	11,943
Coyote.....	608,781	19,638	19,718	20,326	23,859	27,952	34,563
Santa Fe Springs.....	480,811	15,510	13,400	571	.....	.....	.....
Montebello.....	592,762	19,121	19,601	24,838	30,395	33,153	18,735
Richfield.....	711,926	22,965	22,515	22,485	7,009	2,646	8
Huntington-Newport.....	837,531	27,017	25,188	6,901	104	.....	.....
Long Beach.....	1,869,086	60,293	42,935	207	.....	.....	.....
Redondo.....	13,962	450	306	.....	.....	.....	.....
Summerland.....	4,681	151	151	98	98	98	98
Watsonville.....	1,736	56	56	50	50	50	50
Total.....	11,598,291	374,138	357,731	313,882	288,576	279,199	281,215
June.....	10,731,942	357,731	.....	.....	.....	.....	.....
July.....	.....	.....	.....	374,138	374,138	374,138	374,138
Increase.....	866,349	16,407	.....	60,256*	85,562	94,939*	92,923*

* Decrease.

SHIPMENTS AND STOCKS

Stocks July 1st, 1922.....	40,584,895
July Production.....	11,598,291
Total.....	52,183,186
July Shipments.....	9,863,189
Stocks August 1st, 1922.....	42,319,997
Stocks Increase July.....	1,735,102
Stocks January 1st, 1922.....	31,556,277
Total 1922 Surplus.....	11,763,720
1922 Daily Surplus.....	55,475

DAILY AVERAGE

DAILY	July	June	1921	1920	1919	1918
Production.....	374,138	357,731	313,882	288,576	279,199	281,215
Shipments.....	318,167	306,186	281,177	310,941	282,873	290,836
Surplus.....	55,971	51,545	32,705	22,365*	3,674*	9,621*

SUMMARY OF FIELD OPERATIONS FOR JULY

WELLS

DISTRICT	New Rigs Up	Active Drilling	Completed	Active Producing	Aban- doned
Kern River.....	2	4	3	2,200	1
McKittrick.....	..	5	1	287	4
Midway-Sunset.....	26	83	18	2,456	1
Elk Hills.....	8	32	9	135	..
Lost Hills-Belridge.....	..	7	..	483	..
Coalinga.....	2	18	2	809	1
Santa Maria.....	..	8	1	322	..
Ventura-Newhall.....	4	44	1	560	2
Los Angeles-Salt Lake.....	..	2	..	672	..
Whittier.....	..	5	..	175	..
Fullerton.....	..	8	1	375	..
Coyote.....	1	5	1	231	..
Santa Fe Springs.....	19	96	8	15	..
Montebello.....	..	23	1	151	1
Richfield.....	2	35	2	151	1
Huntington-Newport.....	13	106	14	124	2
Long Beach.....	45	82	24	68	1
Redondo.....	1	7	2	4	..
Summerland.....	..	..	..	135	..
Watsonville.....	..	..	..	8	..
Miscellaneous Drilling.....	2	60	..	.....	2
July.....	125	630	88	9,361	16
June.....	108	641	52	9,473	10
Increase.....	17	11*	36	112*	6
Average Year 1921.....	90	536	57	9,425	14
Average Year 1920.....	77	403	49	9,299	13
Average Year 1919.....	58	340	47	8,774	18
Average Year 1918.....	50	362	50	8,210	13

* Decrease -Shortage.

Refined and Crude



Fear of failure is the worst of failure.

Doctor (looking at thermometer)—
Hum! I don't like your temperature.
Patient—Then why did you take it?

Don't do anything till you do it; and
when you've done it, stop doing it.—*William Gillette.*

She—I could die waltzing.
He—Excuse me while I speak to the
orchestra leader.

To know what you prefer, instead of
humbly saying "Amen" to what the world
tells you you ought to prefer, is to have
kept your soul alive.

Gladys—Jack gave me a rainbow kiss
last night.
Ethel—What kind of a kiss is that?
Gladys—Why, one that follows a storm.

I am sure it is a great mistake always to
know enough to go in when it rains. One
may keep snug and dry by such knowledge,
but one misses a world of loveliness.—*Ade-
line Knapp.*

Suitor—I would do anything in my
power to prove my love for your daughter.
Father—Would you support her?
Suitor—My dear sir, I said anything in
my power.

"That's a wonderful office boy you've
got."

"Yeah, he's a daisy. Doesn't smoke, cuss,
shoot craps or run away to ball games. A
perfect boy."

"I gotcha. What's his fault then?"
"Well, he has only one fault. He won't
work."

Courtship makes a fellow spoon, but mar-
riage makes him fork over.

"Father, what does the American eagle
stand for?"
"Anything."

To be what we are, and to become what
we are capable of becoming, is the only
end of life.—*Robert Louis Stevenson.*

Mistress (at the telephone, excitedly)—
Hello! Is this the butcher? Well, don't
send the cat's meat I ordered this morning.
The dear thing has caught a mouse.

I would not give a farthing for a man's
religion if his dog and cat are not better
for it.—*Rowland Hill.*

Judge—Why did you stick your knife in
this man?
Prisoner—Well, I heard the police com-
ing and I had to hide it somewhere.

In the school of life many branches of
knowledge are taught. But the only phi-
losophy that amounts to anything, after all,
is just the secret of making friends with
our luck.—*Henry Van Dyke.*

"Is this a fast train?" the salesman asked
the conductor.

"Of course it is," was the reply.
"I thought it was. Would you mind
my getting out to see what it is fast to?"

City Lady—Why does that bull look at
me like that?

Farmer—I suppose it's your red hat.
City Lady—Really! I knew that hat
was out of style, but I never thought a bull
would notice it.

