
DRILLING AHEAD

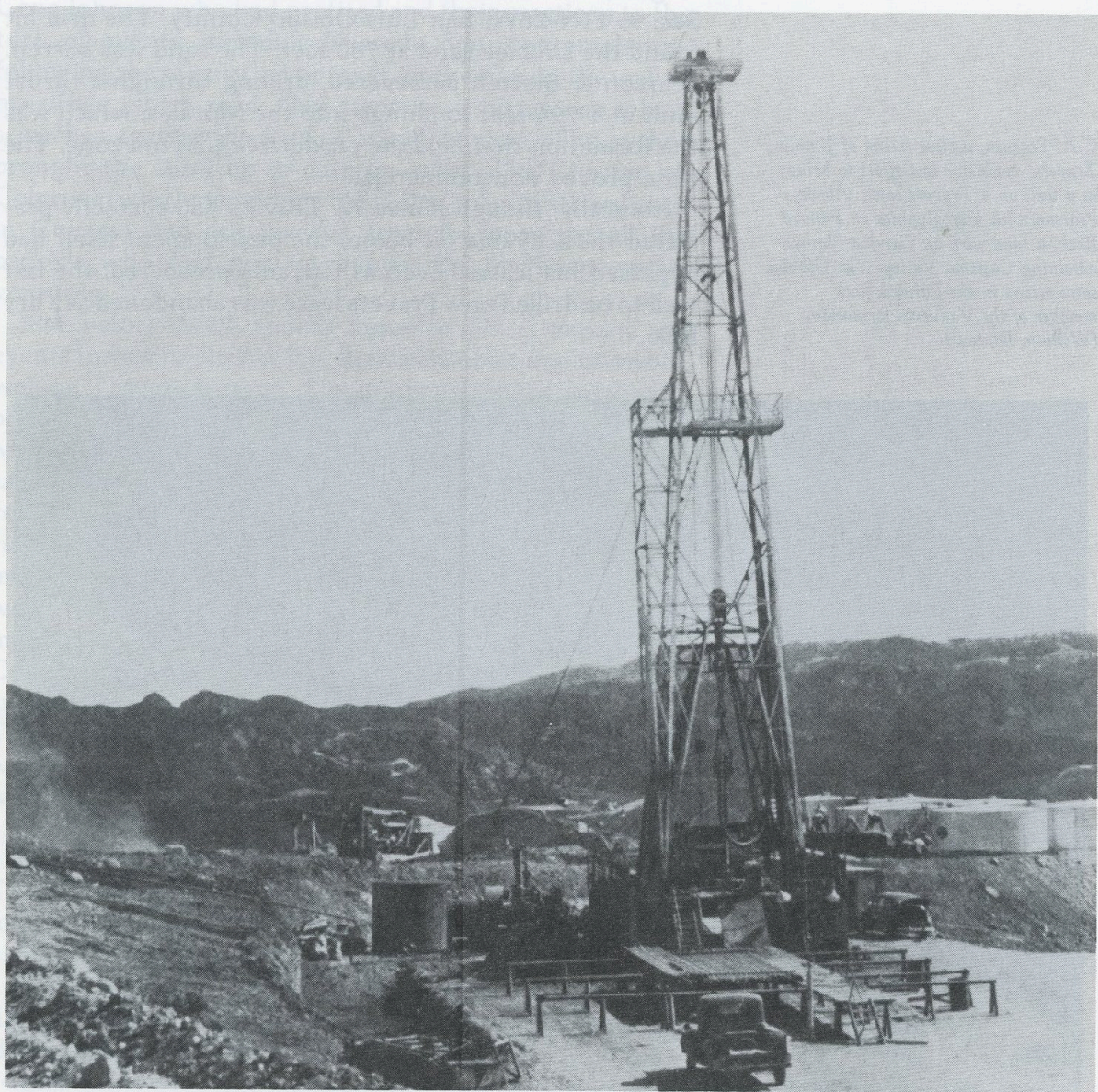
For Susie and Jim

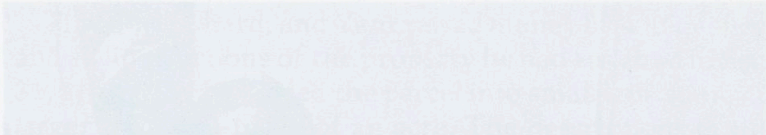
Tapping California's Richest Oil Fields

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Valley Publishers □ Santa Cruz

2 Confusion Hill





The completion of a shallow well by Nelson-Phillips Oil Company in Placerita Canyon some 20 miles from downtown Los Angeles in April, 1948, occasioned passing interest in California oil ranks, mainly because the well, though hardly a barnburner, offered hope of being the first commercial well in a field that had been discovered 28 years before and only intermittently produced. There was no hint the modest well would set in motion a series of events that within a year would make Placerita the scene of a drilling boom some would describe as the most aggressive in California oil history, surpassing for a few frenzied months such earlier townlot drilling booms as Signal Hill, Santa Fe Springs and Huntington Beach.

Geologically, Nelson-Phillips' Kraft No. 1 on Sec. 31, 4N-15W, Los Angeles County, did not even rank as a new pool discovery. The well was drilled within the limits of the Placerita field, which had been discovered in 1920 by Equity Oil Company, a firm that no longer existed. The field was located at the western end of the San Gabriel Mountains about two miles east of the town of Newhall and seven miles east of Pico Canyon, where California's first commercial oil well had been completed in 1876. Pico Canyon had been the place where Pacific Coast Oil Company had gotten its start. The company was the predecessor of Standard Oil Company of California, the state's biggest producer.

Unlike Pico Canyon, Placerita had spawned no success stories. In fact, more than one operator had broken his pick. The field's oil was heavy crude, running as low as 11 degrees gravity. The first reported production did not come until October, 1925, more than five years after the discovery. The production was 6 barrels a day. Because of the low gravity of the oil, only 4 wells were drilled by the mid-1930s. Production from the wells ranged from 6 to 19 barrels a day.

One of the first rigs to go to work on "Confusion Hill" was this Clyde Drilling Company rig, which drilled for Rothschild Oil Company. (California Oil World)



*Clyde Hall crew that worked the boom.
Left to right: B.J. Spears, lead tong;
Wilson Morris, cathead; E.A. Pitts,
derrick; and Ray Gossett, driller.
(California Oil World)*

In 1935, another operator appeared on the scene with hopes of activating Placerita. Yant Petroleum Corporation, headed by M.R. Yant, had acquired the four existing wells and, in a further show of faith, purchased a parcel of as yet undrilled ground one mile to the north. The parcel was the north half of the northeast quarter of Sec. 31, 4N-15W. Before undertaking any drilling on the parcel, Yant had proceeded to drill a well on ground to the west of existing wells. He had completed Yant No. 5 from total depth of 2,735 feet, bringing in the well in September, 1936, for a disappointing 10 barrels a day of heavy oil.

Times were hard, and Yant raised money by subdividing and selling portions of the property he had acquired in Sec. 31, 4N-15W. He divided the parcel into small lots, some no larger than one-tenth of an acre. The descriptions in the deeds were by metes and bounds and were based on the assumption that the property contained 80 acres, as normally would be expected, there being no reason to believe that section lines were anything but true east-west, north-south boundaries. In the transaction, oil and gas rights passed to purchasers of the lots. However, Yant had the foresight to take a community oil and gas lease. Before drilling operations could be undertaken on any of the properties within the community lease, Yant Petroleum Corporation went bankrupt, one more victim of the great depression that had engulfed the country.

No further development was undertaken in the Placerita field until March, 1948, when Nelson-Phillips, a Los Angeles company, spudded in to drill the Kraft No. 1, using a standard steel derrick that had been erected several years before. The company took the well to total depth of 2,222 feet, cutting a fault in the process. The lower portion of the hole was barren, but the upper portion showed promise. Nelson-Phillips plugged back, cemented a string of 7-inch casing and completed the well from the interval at 585-718 feet in the Upper Kraft zone of Pliocene age flowing 70 barrels a day of clean 16-gravity oil. Though production was modest, the gravity of the oil was higher than previously encountered, and the depth was attractive. Successful completion of the well started a small drilling campaign. By the end of the year, 23 wells had been completed at depths ranging from 500 to 1,500 feet for initial productions varying from 25 to 175 barrels a day. Production from the pool averaged 450 barrels a day.

Though production at Placerita was small compared to that being developed in Cuyama Valley, the activity loomed large to at least one distant observer. M.R. Yant, who was living in Hollister, was following developments at Placerita with keen interest. Yant still owned interest in the north half of the northeast quarter of Sec. 31, 4N-15W,

which lay only slightly more than one-half mile north of the Nelson-Phillips' Kraft well. He decided the time was ripe to try again.

Yant was working as an electrical contractor. The work brought him into contact with Ramon Somavia, a rancher in the Hollister area. Yant told Somavia of his prospect at Placerita and persuaded the rancher to put up money for an exploratory well. Somavia contracted with Gene Reid Drilling Company for a drilling rig, and in due course the Bakersfield contractor moved a small rig with a 96-foot Bender mast onto the proposed drill site on the brush-covered hill that Yant had subdivided in the 1930s. The subdivision, like so many others of its time, existed on paper only. The hill itself was empty, with no sign of streets or homes. Drilling began.

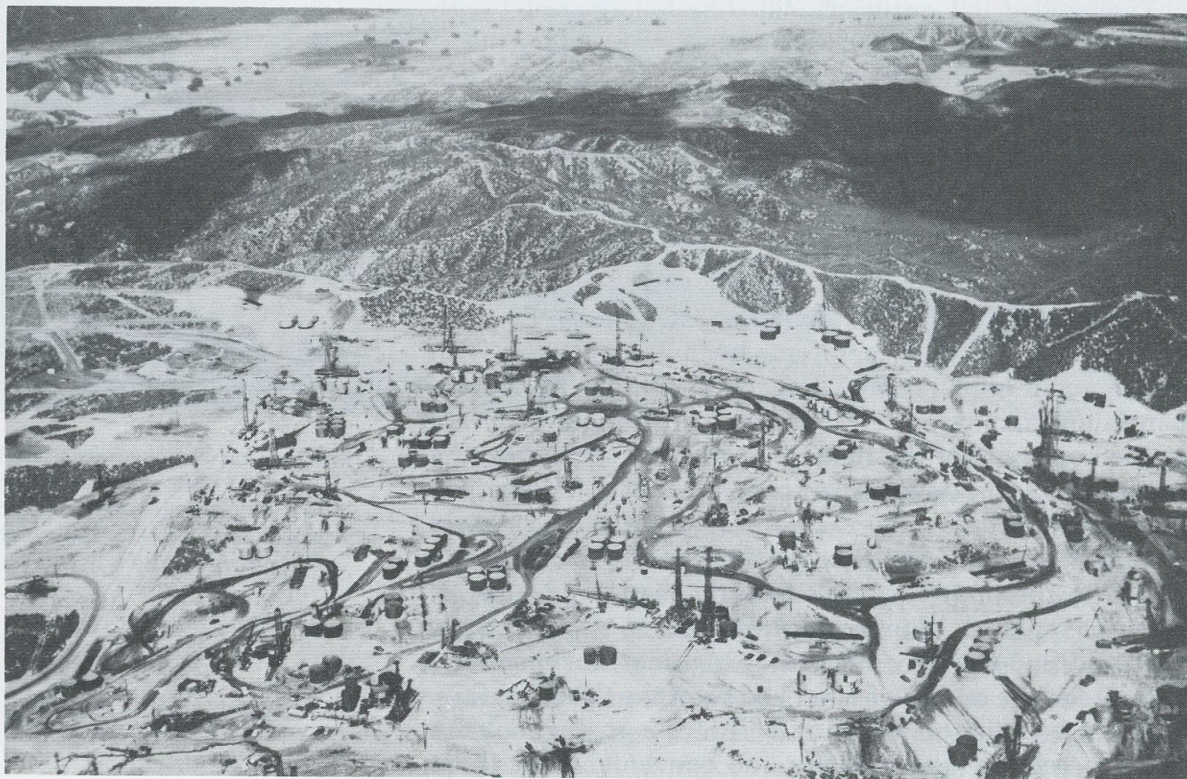
Just below 1,700 feet, the drilling bit found oil sand. The crew carried the well on down another hundred feet. The bit was still in sand. Somavia logged and ran casing. In early March, 1949, the Hollister rancher's Juanita No. 1 was completed flowing 340 barrels a day of 22.8-gravity oil through a $\frac{3}{8}$ -inch choke from the interval at 1,737-1,830 feet in the Lower Kraft zone. The well was the best yet for Placerita. It proved up an entirely new producing area with higher gravity oil than any that had been found before. Somavia lost no time hiring Jack Beckham, who had been with Clyde Hall Drilling Company in Bakersfield, to direct development of what was officially designated as the Juanita area of the Placerita field.

The discovery touched off a wild scramble for leases. The first finding on the part of those speculators looking for acreage was, not surprisingly, that the hill where Somavia had found oil—the Juanita area—had been highly subdivided, the area being covered by the north half of the northeast quarter of Sec. 31, 4N-15W. Some of those who had purchased lots from Yant had, in turn, subdivided their property, reducing parcels to as little as one-twentieth of an acre. The next discovery was that the assumption that the property contained 80 acres, in effect, that section lines were true, was not valid. In fact, the lines

*Clyde Hall says that marked the start.
Left to right: J.J. Sprague, land agent;
Wilbur Morris, oilman; E.A. Pitts,
derrick; and Ray Gentry, driller.
(California Oil World)*

*There were 31 rigs working on
"Confusion Hill" when Jerry Holscher
took this aerial photograph. He made
enlargements and sold them rig-to-rig.
Bob Kilpatrick, working as a
derrickman for Clyde Hall Drilling
Company, was one of those who bought
a photograph, paying \$1 for the print.
(Photo by Jerry Holscher, from Bob
Kilpatrick)*

were found to be off considerably, and the 80 acres that Yant had divided by metes and bounds were actually only 71 acres. Consequently, all of the parcels bordering on the exterior lines of the supposed 80-acre property were shortened by the overlap in deeds. Deeded parcels lapped over into adjoining lands and some on the north edge even extended up into Sec. 30, 4N-15W. Finally, it developed



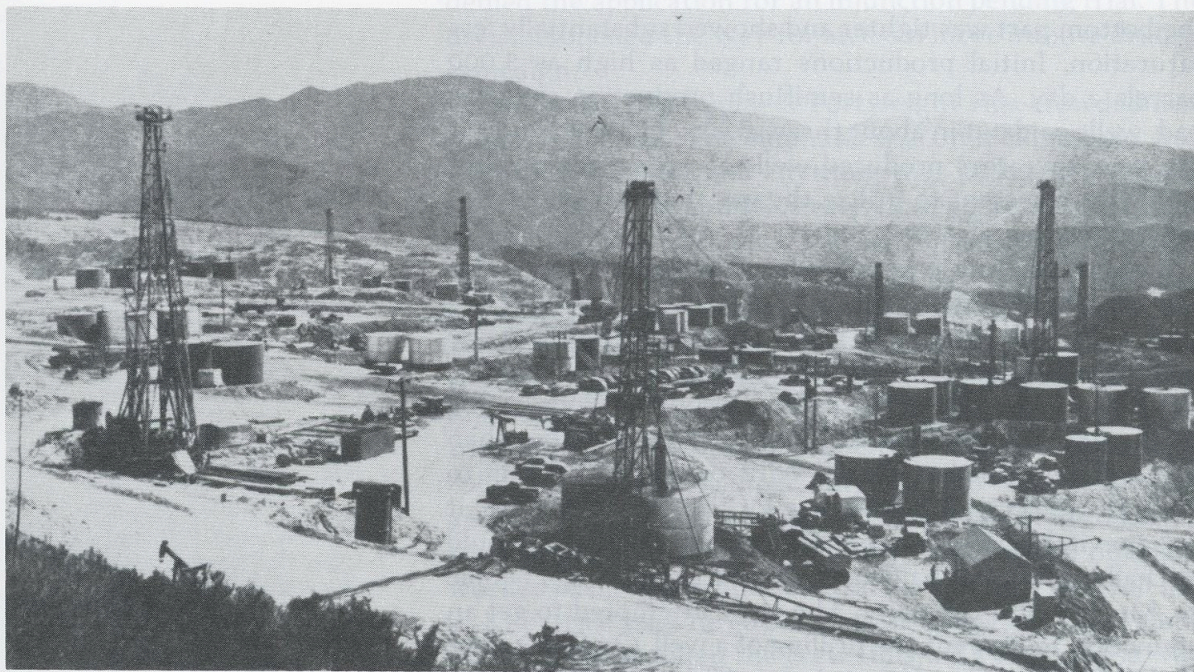
that in many cases the legal titles were tangled. In some cases, as many as three claimants to the same tiny parcel appeared.

Obviously, the oil that lay beneath the subdivided area recognized no surface boundaries. The oil simply lay in the earth, waiting to flow to the surface in greatest volume to those who tapped it first, inevitably diminishing as the pool was exhausted. To those who got wells down first would

go the flush production. Operators rushed to drill, mindful that each day's delay meant a loss of production to neighbors quicker on the draw. Scrapers graded roads, leveled drill sites, cut away settings for tanks. Contours of the hill disappeared. Portable spark-plug rigs crowded onto postage-stamp-size drill sites, working around the clock to put down wells as quickly as possible.

They called it Confusion Hill. The hill swarmed with drilling rigs, crews and service and supply men. One of the participants was Bob Montgomery, an engineer who had graduated from Stanford University two years before and, after a year with Richfield Oil Corporation, gone to work for Nelson Howard Company, a Los Angeles distributor of chemicals used in drilling fluids. Montgomery had handled sales at the Gene Reid rig that drilled the Somavia discovery well and, in the boom that followed, suddenly found himself living out of his car, handling sales and service to as many as 25 drilling rigs. He made an arrangement with Independent Exploration Company under which the company allowed him to pitch a surplus Army tent on property at the north end of the field for storage of chemicals, and hauled the 100-pound sacks from the tent to the various rigs on the fenders of his car. The job of servicing rigs was complicated by the fact that the narrow dirt road offering access to the oil field was constantly changing course. It was not unusual, Montgomery recalled, to start in to the field and find the way blocked by a grader, carving out a drill site in the middle of what had been the thoroughfare. It might be a matter of hours before the grader took the time to relocate the road for the convenience of those trying to get into or out of the field. In the course of his work, Montgomery became acquainted with Jim Casey, drilling superintendent for Miller & York, a contract drilling company operating several rigs in the booming development. The two became friends and four years later formed a contract drilling company of their own in Bakersfield.

At Placerita, contractors drilled the approximately 1,000-foot holes on footage basis, with the rate ranging



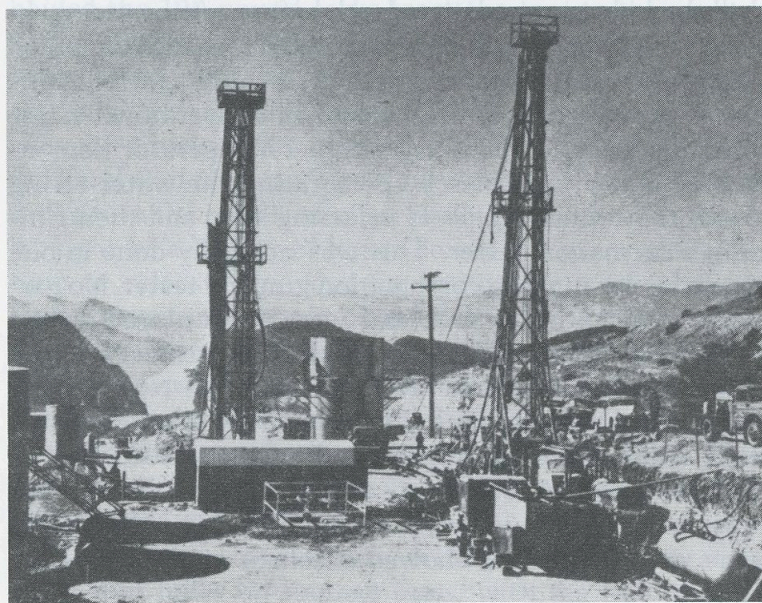
Portable rigs could drill and complete a Placerita well in as little as a week's time, sometimes bringing in the well for as much as 3,000 barrels a day. (Ira Carroll, Petroleum World)

from \$6.25 to \$6.75 per foot. The usual procedure was to drill the hole to completion depth before setting casing. In most wells, the operator landed either 8 $\frac{5}{8}$ -inch or 7-inch casing on bottom and cemented through perforations above the oil zone. A few wells had conventional water strings cemented above the zone. The operator demonstrated water shut-offs by perforating the water string above the cementing ports or casing shoe and then running a formation tester. This was normally done in one operation by running combination gun and tester. No particular difficulties or problems were encountered during drilling operations, and not a single well was lost because of mechanical problems. The average time required for drilling and completing a well ranged from seven to ten days, and the average cost from \$27,000 to \$30,000.

Wells tapped Pliocene pay some 300 feet thick at the most favorable structural position. The upper part of the zone was porous and showed excellent saturation while

the bottom part was tighter and showed substantially less saturation. Initial productions ranged as high as 3,000 barrels a day. As long as semiflush production could be had, wells paid out in about three weeks. There was no gas cap, and operators produced wells at unrestricted rates, making no attempt to utilize the gas that was present to repressure the oil zone.

A concerned observer of the congested drilling boom was R.D. Bush, who as oil and gas supervisor headed the state's Division of Oil & Gas. The Division sought to enforce the provisions of the Spacing Act embodied in Sections 3600-3608 of the Public Resources Code of the State of California. The act provided that no more than one well be drilled per acre. With operators rushing to bring in wells on whatever size lot they could acquire, it was inevitable that the constitutionality of the act would be challenged. The challenge occurred in the case of People vs. Metcalfe Oil company. The state attempted to get an injunction to prevent the drilling of a well. On September 23, 1949, Superior Court Judge Clarence M. Hanson



Atlantic Oil Company completed Lockwin No. 1, marked by the Christmas tree, left center. A.G. McHale moved in to drill an offset, Woodworth No. 1, right, on a lease measuring 33 by 61 feet. Gordon Drilling Co. offset with Peggy Moore No. 10, rig on left. (Ira Carroll, Petroleum World)

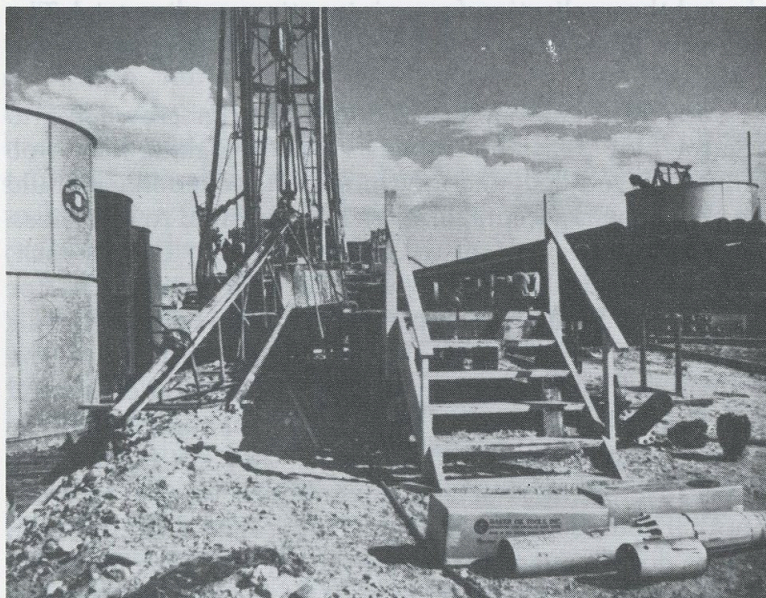
denied the application for an injunction pending trial. The decision opened the way for an even more intense drilling campaign.

Confusion Hill boomed. Forty-eight rigs crowded into the townlot area. The emphasis was on making hole, Bob Kilpatrick recalled, and anything that looked like it could do the job was acceptable, even if it appeared to have been pieced together out of a Cherry Avenue, Long Beach, junkyard. Kilpatrick, who worked as a derrickman for Clyde Hall Drilling Company, said there was a chronic shortage of rig hands and on more than one occasion as the four-man crew was driving in to the job, they encountered one or another contractor's toolpusher standing beside the road, trying to hire the men before they got to their rig.

Because of the shortage, anyone who wanted to work another tour, as eight-hour shifts are called in the oilfields, could "double over," either on the rig where he normally worked or on some other contractor's rig. If a man felt like it, Kilpatrick said, he could work as long as he could stand up. Sometimes when the crew finished a tour, those who still felt like working would drive around the townlot drilling area, looking for a driller who was shut down because he did not have enough men to make a trip, that is, to pull drill pipe from the hole to change the bit or, if he was out of the hole, to run back in with the drill string. A floorhand could earn a day's pay for an hour or two's work helping the driller get back on bottom with the bit so the driller could make more hole. The pay ran around \$12 to \$13 a day for a floorhand, \$15 to \$16 a day for a derrickman and \$18 to \$20 a day for a driller.

Because so many rigs were jammed into such a small area, Kilpatrick said, pipe racks sometimes were so close together the crew had to look out or someone might reach over and use their pipe rack.

Once when the Clyde Hall rig was working on a hillside location a half mile from the nearest surfaced road, there was a heavy rain and the dirt access road to the drill site all but washed out. The crew was getting ready to cement casing, but they dared not try to bring the cement trucks



In drilling Meyers No. 1, Atlantic Oil Company found itself hemmed in on both sides, so the crew slid the kelly out along the runway. (Ira Carroll, Petroleum World)

up the hill, especially since the drill site was on fill and they already were having problems with the fill settling. They had the drivers park the cement wagons on the highway. The drilling crew fell to with thirty-sixes, that is, large pipe wrenches, and ran a pair of 2-inch lines from the well to the highway. It was nighttime, and the men stood with flashlights at intervals along the line, signaling when to pump cement and when to stop. They got the casing cemented.

Drilling crews, Kilpatrick recalled, like others, sometimes found the road to the field blocked. They might have passed over the road in the morning only to find when they started out at the end of the day's work that someone had moved in a drilling rig and was rigging up in preparation to put down a well on what only hours before had been the only road into the field. Once the crew ran into a more serious problem. They were almost to their rig when they found the way blocked by a man with a shotgun. The man claimed the company for which the contractor was drilling the well had no legal claim to the property. He refused to let the crew go into the changeroom to change clothes so

Atlantic Oil Company completed Lockwin No. 1, marked by the Christmas tree, left center. A.G. McHale moved in to drill an offset, Woodworth No. 1, right, on a lease measuring 33 by 61 feet. Gordon Drilling Co. offset with Piggy Bank No. 10, rig on left. (Ira Carroll, Petroleum World)

they could go to work. The impasse continued for about an hour before a sheriff's deputy arrived. The deputy and the man with the shotgun talked awhile, then both left. The crew changed clothes and went to work.

One operator did not fare so well. Independent Exploration Company was drilling a well on what it thought was a valid lease when a deputy served an injunction, bringing the drilling operation to an abrupt halt. The oil company indignantly checked out ownership of the property. It developed that the party securing the injunction was, in fact, the legal owner. The company had cleared title to the lease through a title firm, but it turned out that a mistake had been made. The land actually belonged to someone else. Eventually the oil company collected \$75,000 from the title company as compensation for the title company's mistake.

Peak production at Confusion Hill came early in October, 1949, when for a few days the field's wells produced 36,000 barrels a day, all but 450 barrels of it developed in only seven months.

Forty-one operators in a year's time completed 145 producing wells on the 71-acre hot spot that M.R. Yant had subdivided. The operators included several well-known independents and a host of newcomers to California's production ranks. Those who brought in wells were Arvin Oil Company, Atlantic Oil Company, B & J Oil Company, M. Barratt & Ernest W. Bysshe Jr., Bevo Drilling Company, Brayton-Phillips Corporation, Buffalo Oil Company, Camden Oil Company, Caravan Oil Company, O.F. Collinge, Holmes Oil Company Inc., Holmes & Everts & Associates, King Oil & Gas Company, Maccliff Oil Company, Macmillan Petroleum Corporation, Mason & Wallace, Mawaco Inc., A.G. McHale, Warren L. Meeker, Tevis F. Morrow, Morton & Dolley, Newhall Refining Company, Northridge Oil Company, Len Owens Well Servicing Inc., Pacoil, Gus Pongratz, R.S. & L. Oil Corporation, Recknagel & Mangold Oil Company, Rothschild Oil Company, Serago Oil Company, Shaffer Tool Works, Shamrock Drilling Company, Louis V. Skinner & C.L. Best, Ray Smith

Oil Company, Ramon Somavia, Terminal Drilling Company, George Terry Drilling Company Inc., Three D Oil Company Inc., Twentieth Century Company, Watkins & Horton Inc. and Watmac Oil Company.

Others who brought in wells on adjoining leases included Crawford & Hiles, General Petroleum Corporation, Gordon Oil Company, Guiberson Oil Corporation, Independent Exploration Company, Indian Oil Company, Lake Oil Company, Midnight Oil Company, M & C Oil Company, Nelson-Phillips Oil Company and Standard Oil Company of California.

With operators producing wells wide open, production rapidly declined. During the same month of October, 1949, when production peaked at 36,000 barrels per day, decline set in and before the month ended, the field was down to less than 25,000 barrels daily. By the latter part of the month, most of the wells had ceased to flow. By the end of the year, most operators had put vacuum pumps on the casing at their wells to relieve some of the hydrostatic head and allow the oil to flow more readily into the wellbore.

General Petroleum Corporation, whose main trunk line from the San Joaquin Valley to Wilmington passed through the Placerita area, had the only pipeline serving the booming field, but the feeder line only moved a part of peak production. The greater part moved by truck and trailer units. Some filled up directly from the well without benefit of storage tanks. It was estimated that 100 truckloads a day left the field. Rothschild Oil Company was the largest operator in the Juanita pool and moved production to its two refineries near Santa Fe Springs as well as to the Olympic refinery near Long Beach, which Rothschild leased to process part of its production and store the balance.

Production from the Juanita pool demoralized the fuel oil market in Southern California. Marketers had to move the fuel oil after recovering the gasoline and other light hydrocarbons. Rothschild and others reduced fuel oil prices and consequently captured a large volume of fuel oil

business from other marketers. They also captured business from Southern California Gas Company. Gas consumers found they could save money by converting to fuel oil. Several communities operating steam generating plants also reverted to the use of fuel oil.

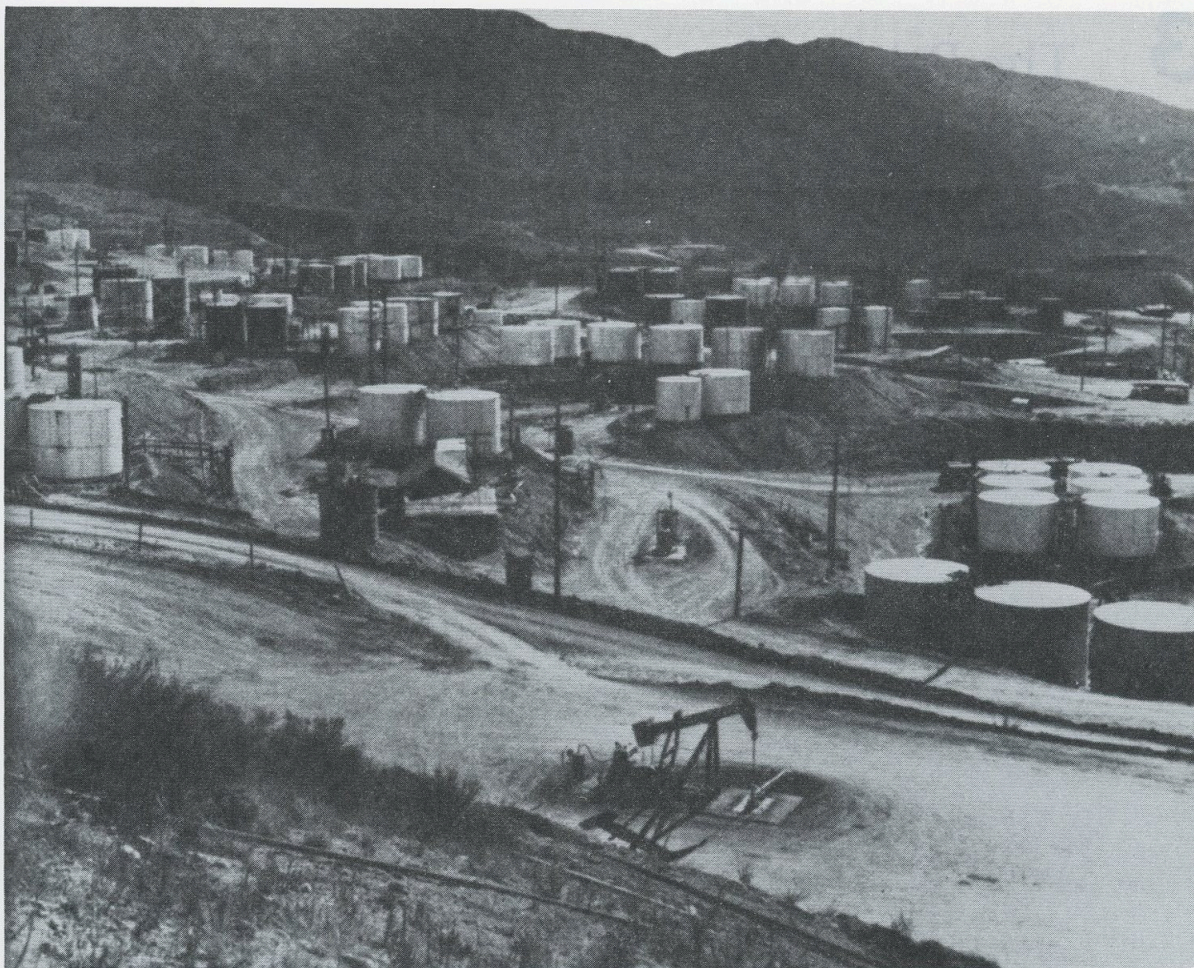
Crude from the Juanita pool had a posted price of \$1.32 per barrel, but many operators sold production for \$1.07 per barrel, or 25¢ below postings. When crude was delivered to refineries, the price was \$1.32, but this included delivery and transportation charges of 25¢ per barrel.

The Division of Oil & Gas took a dim view of the gas situation and notified operators in the field that unless steps were taken to eliminate the blow of gas, the Attorney General would be requested to take action. Meetings of operators were called at once. For a time it appeared that a voluntary curtailment plan would be successful. When it became apparent that no results were being obtained, R.D. Bush of the Division of Oil & Gas requested the Attorney General to institute action. The Attorney General proceeded to prepare a case. The Division charged 21 corporations and 19 partnerships with "wastefully causing and permitting natural gas and natural gasoline contained therein to blow, release and escape into the air."

In response to the Division's action, Judge Hanson issued an order requiring operators to show cause why a temporary restraining order should not be granted.

Negotiations between interested parties seeking an outlet for the field's gas met with failure. It was found that the gas had a high carbon dioxide content, ranging from 15 to 25 percent, which seemed to be increasing, and a low Btu. value, which made the gas unfit for domestic use. A study indicated the calculated gas reserve was too small to justify the erection of an extraction plant. It also appeared that a plant for the recovery of the gasoline alone was not feasible, because the gas had a low gasoline content, running to about 0.5 gallons per thousand cubic feet of gas. The gas wastage injunction action was placed off calendar in February, 1950, and no further steps were taken to stop waste.

Drilling in 1950 dropped sharply, falling off from the 253 wells that were drilled in 1949 to only 55 in 1950. Almost as quickly as they had come, contract drilling rigs moved out. By the close of the year, oil production had dropped to 12,233 barrels a day, far below the 36,000 barrels per day peak of the previous year. Quiet came to Confusion Hill.



When the rigs left, the hill that M.R. Yant had subdivided looked like a tank farm. (California Oil World)