

# PUBLISHED MONTHLY BY THE STANDARD OIL COMPANY (CALIFORNIA) OCTOBER 1923

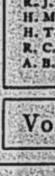
# "TWAS A DARK AND STORMY NIGHT"

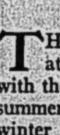
AND Oh! how welcome Pearl Oil's comfy warmth! A Pearl Oil — because it keeps the air sweet and clean-heat by the roomful-and no one need to budge to keep up the cheerful, efficient, little flame. Ready at the touch of a match to go all day, all night-sure warmth for living-room, bath, hall-anywhere steady, cheering warmth is wanted!

To insure best results, use only Pearl Oil-the cleanburning, uniform kerosene-refined and re-refined by the Standard Oil Company's special process. "Coal oil" or "kerosene" may mean any kind of kerosene - say "PEARL OIL"-copyrighted for your protection.









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PUBLISHED	MONTHLY BY
HE STANDARD OIL C	OMPANY (CALIFORNIA)
PUBLICATION OFFICE AND P	PRINCIPAL PLACE OF BUSINESS
STANDARD OIL BUIL	DING, SAN FRANCISCO

### A FINE RESULT FROM ADVERTISING

with the advent of autumn, the flight of the tractive and effective advertising. summer tourist is ending. Soon will come the winter visitors.

tourist creates another.

The principal reason for the increase of Pacific Coast and its attractions been so in advertisements in magazines and newspapers, in photographs, and in motion pic- who can be induced to do so. tures. Organizations devoted to the develop-

extensive campaigns, while the railroads erly done.

THE season of summer travel and recre- which come to the Pacific Coast from the L ation on the Pacific Coast is passing East have made great expenditures in at-

There is real gain to the Pacific Coast in all this. But not merely in the sums of money It has been a great tourist year on the the tourists spend, although the aggregate Pacific Coast, from Canada to Mexico. The of such expenditures is considerable, and national parks have never been so well pat- adds to our prosperous condition. The real ronized. Hotels and restorts have been filled. and lasting gain is in the direction of in-The railroads have brought more people creasing the permanent population of the to the great playgrounds of the Far West Pacific Coast states, ultimately leading to than ever before. Never have there been so the settlement of the great, empty, but fertile many motor-cars from the East, while the in- and valuable, areas which are crying for terstate travel up and down the coast has people. For it is experience that the tourist been much greater than in years gone by. is a potential settler, and the tourist who is Final estimates of travel have not been made, financially able to come to the Pacific Coast but we hear of increases of thirty, forty, and on pleasure bent, or as one who is looking fifty per cent or more in the number of visi- over the field for a new home, is probably tors to various points of interest over the the caliber of citizen the coast needs. Having number of last year. There is no reason to great numbers of people more familiar with doubt that next year will be greater than opportunities for business expansion in the this, for it is well known that one satisfied Far West will also lead to the establishment of new industries. \*

Of course, of the tens of thousands of tourists is advertising. Never before have the tourists who come from the East, a very large proportion will never leave their presalluringly set before the rest of the nation, ent residences or businesses to come this way, but there is an appreciable percentage

The experience of the year has proved the ment of the several states have carried on great worth of community advertising prop-

# Richmond Refinery was one of the points visited by the Congressional party during its recent inspection tour conducted under the auspices of the American Petroleum Institute. This is the party; the background is our cafeteria at this refinery, where the visitors were luncheon guests

STANDARD OIL BULLETIN

# DISTINGUISHED VISITORS

tion and one Representative from Virginia, was the result. a member of the Naval Affairs committee of the House of Representatives, recently the party. The Congressional guests were: tour.

national organization composed of leading D. Frederick, of Los Angeles; and Congressoilmen, representing all phases of the in- man P. H. Drewry, of Petersburg, Va. dustry. California is the leading oil-producing state of the Union. It occurred to the Institute that it would be an excellent plan to afford the state's Congressional Representatives an opportunity to gain first-hand information concerning this great industry of the state. The plan met with the Con- "Worse than that, I'm having reminiscences."gressmen's hearty approval, and the inspec- Cincinnati Tribune,

IN full accord with a certain plan of the tion tour, which began in the southern Cali-American Petroleum Institute, ten mem- fornia fields and ended four days later at bers of the California Congressional delega- Richmond Refinery, on San Francisco Bay,

In all there were over forty members in toured the oil-fields of California. Besides Congressman and Mrs. Walter F. Lineberthe Congressmen and members of their fami- ger, of Long Beach; Congressman and Mrs. lies, the party included officials of several of James H. McLafferty, of Cakland; Conthe big oil companies operating in this state. gressman Phil D. Swing, of El Centro; Con-The official host was President Thomas A. gressman Charles F. Curry, of Sacramento; O'Donnell, of the American Petroleum In- Congressman and Mrs. H. E. Barbour, of stitute, the organization that conducted the Fresno; Congressman and Mrs. A. M. Free, of San Jose; Congressman and Mrs. Clar-The American Petroleum Institute is a ence Lea, of Santa Rosa; Congressman John

> German Beggar (pocketing marks): It used to be that when you asked for money you would only get some food; now when you ask for food you only get some money,-Simplicistimus (Munich).

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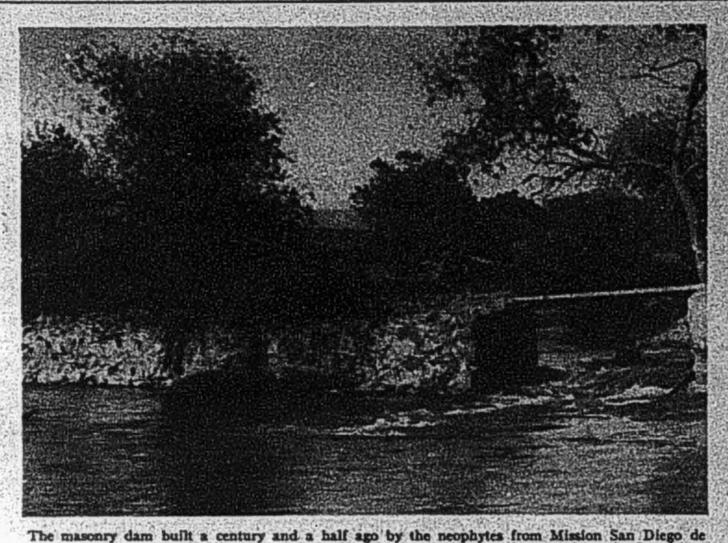
### WATER CONSERVATION IN CALIFORNIA

BY way of preamble, permission is asked here to mention a certain un-honored and unsung educator of a generation ago. She is to remain anonymous. It is not known that she ever was rewarded with any other title than the modest one by which she was known to her pupils, who were of the grammar-school grades. Whether death or matrimony eventually robbed the California public school system of her invaluable services this chronicler does not know. This, however, is recalled of her: it was her practice, when she desired to emphasize the importance of something, to ask her class to imagine that something as non-existent. "Children," she would say, "if there wasn't a bit of water in the whole world, what would happen?"

This might call forth answers to the effect that the flowers would wilt; that the little birds would die of thirst; that one wouldn't be able to take a bath, or go swimming; that there wouldn't be any rivers, or lakes, or ocean; that windmills, locomotives, and ships wouldn't be of any use; and that vegetables and fruit trees wouldn't grow. Eventually, through adroit questioning which inspired the answers given, it was firmly established in the minds of all in the class that without water there could be no life of any sort, and that, therefore, water was a most vital thing, and not to be wasted-which very thing someone had done by leaving a school faucet turned on.

In frank imitation of the foregoing method, the BULLETIN now puts the question: "What would California be-especially southern California-without irrigation?" It is not necessary to draw on the imagination for the picture, for it stands out hideously in the memory of many an oldtime resident of this fruitful southland. Many of them can recall when irrigation was little practiced here, and that without much understanding. They can recall seasons when expected rainfall failed to materialize and the periods of drought that resulted; when stock by the thousands perished of starvation or were shot down because there was no feed. There were years when the season of tillage was not followed by one of harvest; southern California's famous asset, sunshine, threatened at times to ruin it, or at least to forestall all agricultural development, in those non-irrigating days.

Those days are past when the success of agriculture in southern California is left to nature's distribution of water, and they never will come back. Our question should have been put thus: "What will southern California be-especially San Diego County-with more irrigation?" For that is the prospect with which this BULLETIN is concerned, and in this issue will be found data relative to two outstanding projects in the several that make up San Diego County's present water conservation program. Also in this issue, for what interest they may have, are notes bearing on an irrigation system which antedated by more than half a century any other real attempt at irrigation in California.



The masonry dam built a century and a half ago by the neophytes from Mission San Diego de Alcala, working under the direction of the padres. It served to impound waters from the San Diego River's flood discharges for use at the Mission

# CALIFORNIA'S FIRST IRRIGATION SYSTEM

engineer to design and construct permanent works for the conservation and delivery of water in California, according to the city of San Diego's hydraulic engineer, H. N. Savage, who notes this fact in an article recently appearing in California Southland. This pioneer irrigation project dates back approximately to 1769, the year Mission San Diego de Alcala was founded, and antedates by more than half a century any similar work in this state. The system included a strong masonry dam, eight to ten feet high, and several miles of conduit lined with handmade cement slabs. Considerable portions of the dam in a good state of preservation and still in place, having withstood the winter floods of almost a century and a half, are mute testimony as to the quality of the work. Also remnants of conduits are to be seen, as shown in the accompanying photographs. Here, in part, is Engineer Savage's description of this pioneer irrigation system:

"The Mission Fathers assigned to San

TO Padre Juan Garte belongs the credit Diego, with their remarkable comprehensive and honor of being the first irrigation knowledge and abilities, began the construc-

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### STANDARD OIL BULLETIN



Olive and paim trees may be seen making their last stand where once were the fruitful gardens of Mission San Diego de Alcala, Sunshine alone won't make a garden



tion of a masonry dam across the San Diego River at the outlet of a natural reservoir basin, located about ten miles up the river from the Bay of San Diego. The dam was evidently intended for diversion and was obviously located where, by the smallest relative expenditure, water could be impounded from the river's flood discharges, and continue to be available throughout the summer season for domestic and irrigation use on the lands about the Mission.

"The missionaries burned the native limerock and produced a hydraulic cement which they used in constructing both the dam and the conduit, the latter five miles in length from the dam to the site of the old Mission, where the water was delivered for the many hundred neophytes' domestic requirements and for the irrigation of the gardens and vineyards and olive groves."

Mistress-You seem to have a good deal of company, Mary. Maid-Yas'm. Dey's what I call my rainbeaux. Seven different colored gentlemen. Yas'm.-Princeton Tiger.



### LINING FOR IRRIGATION CANALS

IN the various irrigation districts of Cali- them so that the water cannot escape and I fornia are about thirty thousand miles of cause the land to become water-logged. This main canals and main laterals. It is esti- also prevents the loss of a large volume of mated that only about two per cent of these water through seepage, which is highly imwaterways are lined, the remaining ninety- portant in districts where water is scarce, and eight per cent being plain unlined earthen therefore valuable. In many cases the value canals.

lined canal possesses many decided advan- time. It is estimated that there is enough tages over one that is not lined. Constant water in the State of California to irrigate seepage from the canals year after year has all agricultural lands within her borders. resulted in raising the underground water- However, unless proper methods of conservalevel until in many localities the water so tion are undertaken, water will not be availclosely approaches the surface that the condi- able for more than half the total acreage. tions have become serious. Crops will not grow in water-logged land, and the danger is greatly reduced, which does away to a of increasing the alkali content is great.

condition. One is to install large and expensive pumping equipment and pump the water yet carry the same amount of water. from the land by means of deep-well pumps, successful, for often this does no more than may wonder why the percentage of unlined relieve the situation in the immediate vicinity ones is so great. of the well.

vent the leakage from the canals-to line construction. To build them necessitates

of water saved by lining would be sufficient No one has ever questioned the fact that a to pay the cost of lining in a relatively short

When a canal is lined the hazard of breaks large extent with the necessity and expense There are two methods of remedying this of patrolling. Also, a lined canal can be built materially smaller than an unlined one, and

With the obvious advantages of the lined which is costly, and usually is only partially irrigation canal over the unlined one, one

It is the cost. The most successful linings-The logical solution is obviously to pre- heretofore available are most expensive of

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### STANDARD OIL BULLETIN

This experiment in canal-lining was made by the South San Joaquin Irrigation District, on a lateral canal paralleling the Hogan Road, about four miles north of Manteca, California

need of lining canals, and, despite the heavy tic lining. expenditures attendant on their construction, the mileage is increasing each year. And the plea of both farmers and engineers has been for a less costly lining.

As a result, asphalt linings have been suggested, and are being tested, and there is every reason to believe that the experiments will prove that herein lies the solution to this outstanding problem confronting agriculture in California.

It is estimated that asphaltic-concrete linings from one inch to two and a half inches in thickness can be constructed for from six to ten cents per square foot, depending on the work, labor conditions, and other factors.

In the experimental work here in California, as depicted in the two accompanying photographs, sand, limestone dust, and asphalt, thoroughly heated, were mixed and spread over the graded earthen canal and rolled and compacted to a dense waterproof lining. It has been demonstrated that the high percentage of asphalt used not only seals the canal, but also reduces to a minimum the danger of cracking.

Present indications are that the demand of

heavy and burdensome bonds. Farmers as the California irrigation districts for a well as irrigation engineers have realized the cheaper canal lining will be met by asphal-

### Sales Force Changes

MR. H. B. FAIRCHILD, formerly Assistant District Sales Manager at Portland, has been appointed District Sales Manager at Sacramento, succeeding Mr. C. M. Harris, Jr.; the appointment effective October 1, 1923.

Mr. J. H. MacGaregill, formerly Assistant District Sales Manager at Fresno, has been appointed Assistant District Sales Manager at Portland, succeeding Mr. H. B. Fairchild; the appointment effective October 1, 1923.

Mr. E. H. Todd, formerly Substation Superintendent, Los Angeles, has been appointed Assistant District Sales Manager at Fresno, succeeding Mr. J. H. MacGaregill; the appointment effective October 1, 1923.

Mr. E. M. Burnham, formerly Assistant District Sales availability of aggregates, the location of the Manager at San, Francisco, has been appointed District Sales Manager at San Jose, succeeding Mr. C. O. Van Valer: the appointment effective September 24, 1923.

> Mr. L. L. Campbell, formerly Assistant District Sales Manager at Sacramento, has been appointed Assistant District Sales Manager at San Francisco, succeeding Mr. E. M. Burnham; the appointment effective October 1, 1913.

> Mr. A. A. Cobb, formerly Assistant District Sales Manager at Spokane, has been appointed Assistant District Sales Manager at Sacramento, succeeding Mr. L. L. Campbell; the appointment effective October 1, 1913.

> Mr. T. G. Travis, formerly Substation Superintendent at Los Angeles, has been appointed Assistant District Sales Manager at Spokane, succeeding Mr. A. A. Cobb; the appointment effective October 1, 1923.

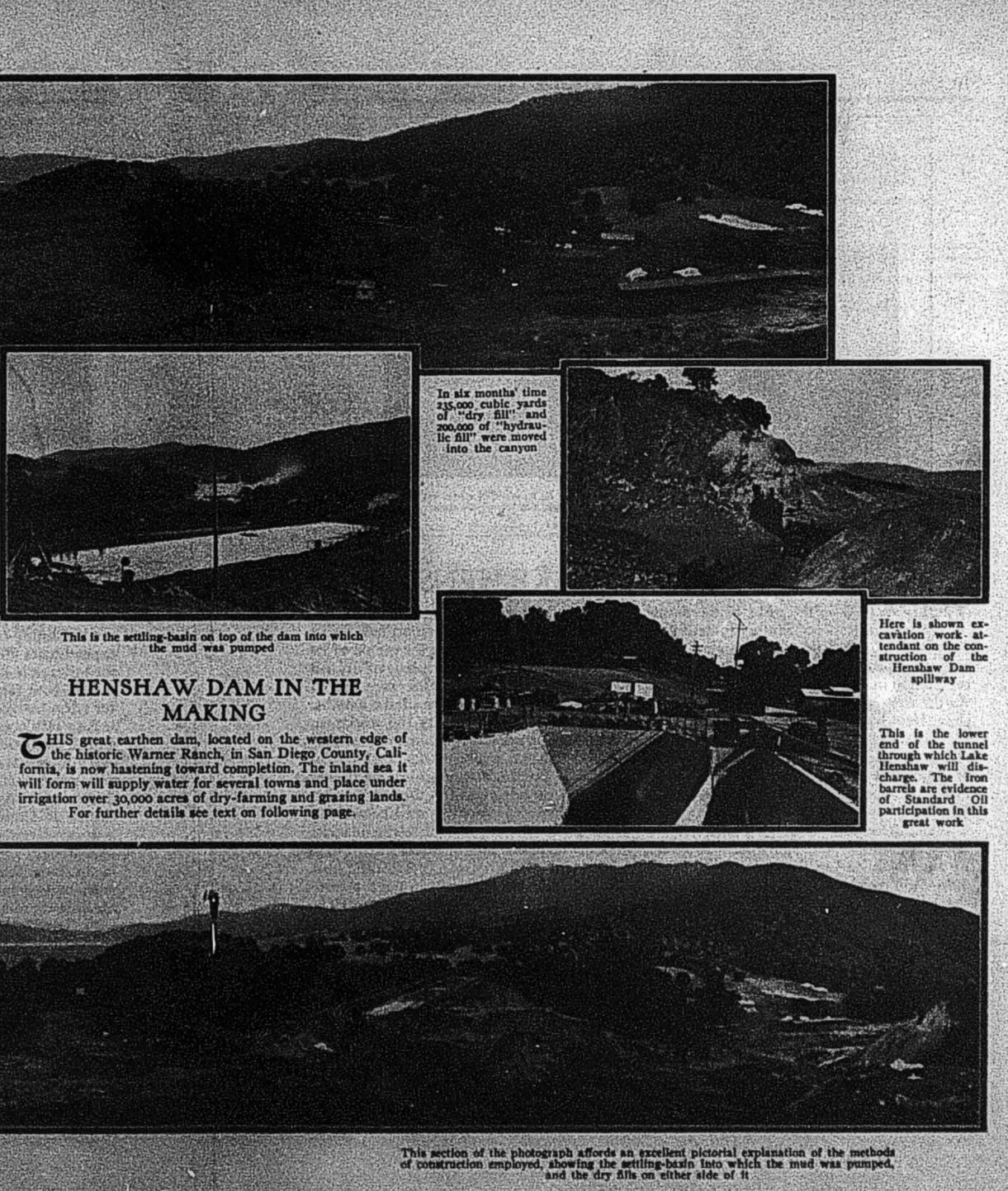


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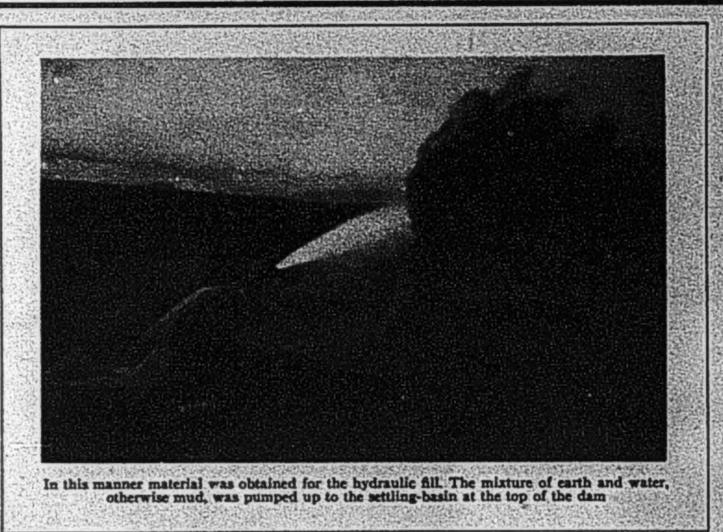
At times both wagon and mules threatened to be-come part of the dam

Transporting "hy-draulic fill"; water was the vehicle in which earth was moved by pump up to the settling-basin





Above (the left half of the photo) is shown the valley which Henshaw Dam will transform into an inland sea. The high ground in the center will become an island far from land



### HENSHAW DAM AND LAKE HENSHAW

COLLOWING in the wake of the devel- feet through at its base and 117 feet high, elsewhere in this BULLETIN, another great the canyon's mouth. During the period of its irrigation project is now hastening toward construction, 235,000 cubic yards of dry fill completion in San Diego County, California. and 200,000 of hydraulic fill were moved As the first step in this development, Hen- into the canyon in the space of six months. shaw Dam has been constructed. This huge The site of the dam, with its 400 workmen, barrier, which is located at the western edge its uncanny mechanical giants, the steamof the famous Warner Ranch, at the mouth shovels, tractors, motor-trucks, rock-crushmense storage reservoir, known as Lake of wagons carrying earth to the heightening Henshaw.

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lands adjacent to and above Rancho Santa from the regular routes of travel. Fé and northward in the vicinity of Esconas much as the combined capacity of all the doing their part toward bringing them to struction program.

Henshaw Dam is of dirt construction, 600 of the service.

r opment of Rancho Santa Fé, described with a crest line extending 1600 feet across of a great mountain valley, creates an im- ers, cranes, pumps, and never-ending stream crest, presented a scene of ant-like activity Water from this inland sea will irrigate which attracted many a sight-seeing motorist

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Standard Oil products, lubricating oils dido, Fallbrook, Oceanside, and Vista. Hen- and fuels, have been factors in the construcshaw Dam will impound 165,000 acre-feet, tion and development of both the Lake Henor 66,000,000 gallons, of water-almost shaw and Lake Hodges projects, and are still other dams in San Diego County, of which successful completion. The magnitude of there are many. It will place under irriga- these two projects may be better realized tion and make adaptable for intensive culti- when one learns that their full development vation from 30,000 to 35,000 acres of dry- will add approximately 70,000 acres to San farming land and grazing area, and furnish Diego County's area of irrigated lands. That water to several municipalities. Also, the de- Standard Products and Standard Service are velopment of hydro-electric power to the ex- taking part in these splendid undertakings tent of 4000 H.P. is incidental to this con-, is a fact highly gratifying to the Company, distinct and apart from the business angles

### **OIL FIELD NEWS\***

ACCORDING to figures collected by the American Pe-duction of crude oil in California for August amounted to 26,440,005 barrels, an average of 852,903 barrels per day-an increase of 37,997 barrels per day over July production. Stocks increased during the month 4,468,231 barrels. The total stocks at the end of the month were 83,123,835 barrels. The total stock increase for 1923, up to August 31st, was

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Kern River McKittrick Midway-S Elk Hills

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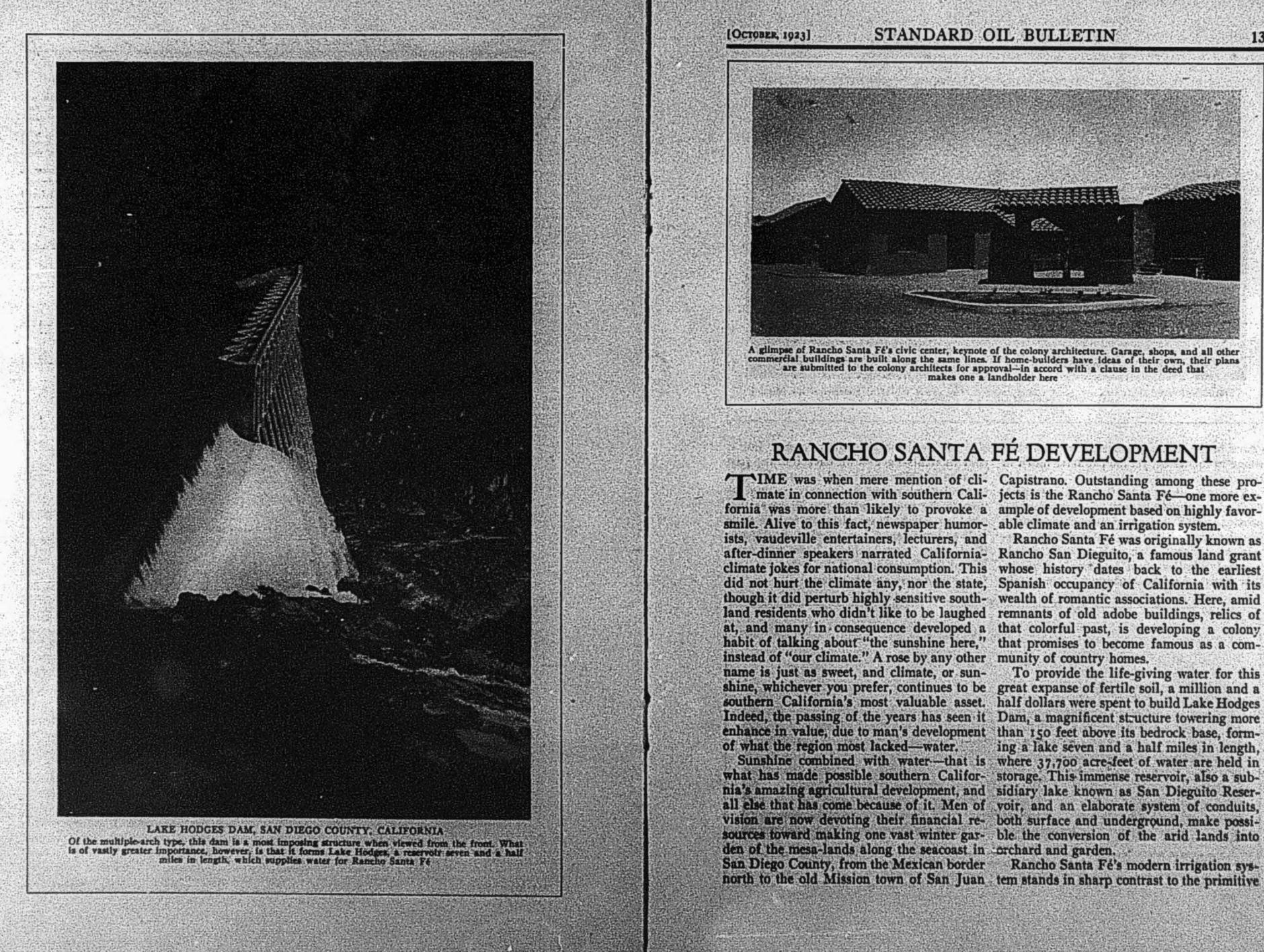
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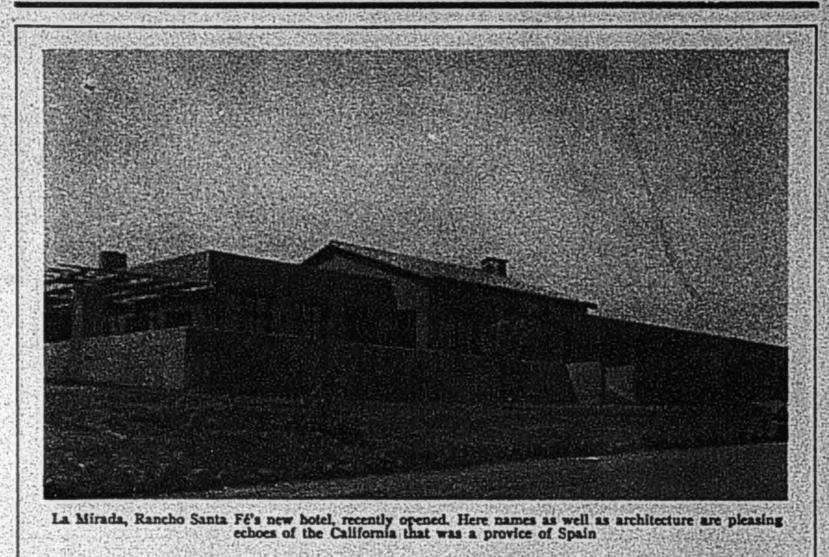
21,938,907 barrels. Indicated consumption for August was 21,971,774 barrels, an average of 708,767 barrels per day. This is an increase of 88,005 barrels per day over July consumption.

Sixty-one wells were completed during the month, with an initial daily production of 118,433 barrels, compared with 95 wells completed during July, with an initial daily production of 161,599 barrels.

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half dollars were spent to build Lake Hodges ing a lake seven and a half miles in length,



common.

fly back to the California that was once a turn to the present when you discover that province of Spain; and when one enters what you might have mistaken for the town Rancho Santa Fé's civic center they are cer- well or town pump is a gasoline-filling statain to do so. Thick-walled, with deeply tion; these town-builders have not overrecessed windows and iron-studded doors, looked the importance of the motor-car as a this group of adobe buildings is unmistak- factor in American life today.

efforts of the Mission padres, described else- ably of Spanish-Californian descent. But if where in this issue, yet the two have much in your thoughts have flown back into the past because of this quaint and beautiful archi-Viewing either, one's thoughts are apt to tectural display, just as quickly do they re-

OCTOBER

1923]



A lew acres of winter peppers under way at Rancho Santa Fé. Citrus fruits and alligator-pears are to be specialties—but they don't come in a season

### STANDARD OIL BULLETIN

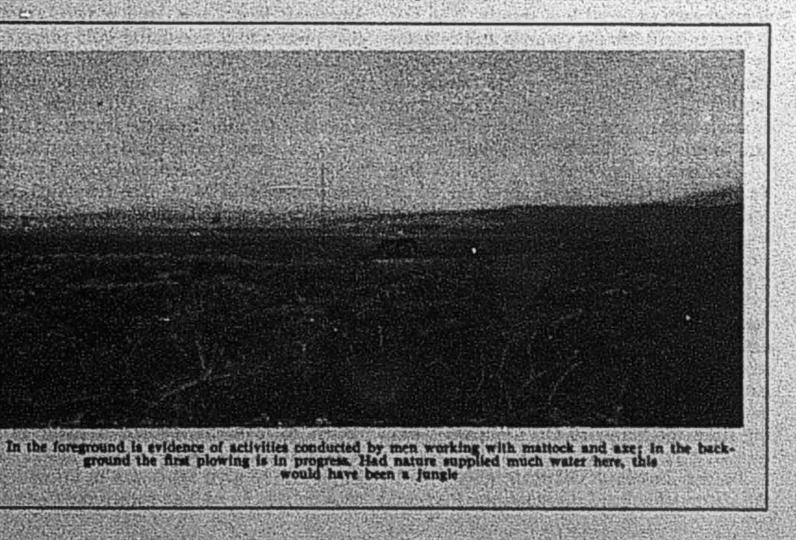


A tractor supply-point. Frequent deliveries of Standard Oil Products are made from our Oceanside substation to various points of activity on Rancho Santa Fé

of the colony's sponsors. With plenty of sun- velopment.

The growth of the Rancho Santa Fé shine, otherwise climate, and plenty of water, colony will be guided by technically trained things grow amazingly fast. It will be intermen-soil experts, architects, and engineers esting to see what the passing seasons bring, of judgment and experience-to take full agriculturally and otherwise, at Rancho advantage of what nature has contributed, Santa Fé, even if circumstances or inclinaand to create what is lacking; that is the plan tion preclude one's becoming party to the de-

15





The Standard Oil boys in action. This team was the winner of the first annual California industrial first-aid contest, held in Sacramento last Labor Day

### A STATE FAIR CONTEST

AT the recent California State Fair, held Cup, presented by E. D. Bullard Company, A at Sacramento, the biggest pumpkin of San Francisco, and a silver trophy offered was awarded a prize for being bigger and by our own Company for first prize. Each handsomer than all other pumpkins shown of the five members of the winning team in competition with it; and the fastest horses received a silver medal from the National likewise won awards for showing their heels Safety Council, a bronze medal from the to others who proved less speedy. The fair, American Red Cross, and a twenty-dollar in fact, is built around contests and competi- gold piece and a five-dollar gold piece. tive exhibits, the idea being to afford oppor- The Standard team was chosen from emciety of Safety Engineers of California. And Charlie Garing were substitutes. it was won by "the boys from Standard Oil." To date over one thousand Company emdustries, a police force, and a fire depart- conducted under the direction of the Bureau ment. The Fresno Fire Department took of Mines. The Company considers this trainsecond place, and the Empire Mines Com- ing a most valuable safety carrier; the men pany, of Grass Valley, third. The meet was trained appreciate safety measures and do hotly contested, the three highest scores be- much toward furthering the Company's

receiving 99 per cent.

[OCTOBER, 1923]

tunity for displays and demonstrations ex- ployees at the Wait Pump Station because emplifying human progress in California, these men had had the advantage of two through mediums that may vary in their na- periods of training from the Bureau of Mines ture as greatly as do silkworms and tractors. in the last two years, besides practice work Thus it happened that the California State among themselves between times. The team Fair this year was the scene of the "First was composed of M. A. Nee (captain), S. R. Annual California Industrial First-Aid Con- Bauman, A. L. McGinnis, M. P. Shea, and test," conducted under the auspices of the So- A. Nelson (patient). Martin Thu and

Ten teams competed, representing five in- ployees have been trained in first-aid work ing close, the Standard Oil Company's team efforts to make safety-first a habit in the organization. First-aid training has enabled To the Standard Oil team goes, besides employees to give assistance to injured perthe championship of the state, the Perpetual sons outside as well as within the Company,

### THERE IS A DIFFERENCE IN GASOLINES

ASOLINES-good, fair and poorare on the market. They give good, fair and poor results. However, it is not difficult to choose among them.

This Company's high-quality RED CROWN GASOLINE will give you all that you desire -easy starting with no sacrifice of power in the cool of the day or night, the full power and flexibility of your engine always, and protection against the difficultics, dangers and repair expenses attendant upon the use of inferior gasolines.

The experience of motorists shows that it pays to fill the tank with "Red Crown" and nothing else. Fill at Standard Oil Service Stations, or at garages or other dealers displaying the Red Crown sign.

### STANDARD OIL COMPANY

(CALIFORNIA)

THE GASOLINE OF QUALITY Easy starting with no sacrifice of power

1420165



THE N. K. MCCANN COMPANY, SAN PRANCISCO, NEW YORK



### CONSERVING THE WEALTH IN MACHINES

ZEROLENE oils and greases are more than high-quality petroleum products made from the world-famous Western Naphthenic Base Crude Oil; they are scientific achievements of this Company, worked for and attained to reduce friction and wear to the very lowest degree in automobiles, tractors, pumping and other engines and machines. They make available for useful work the maximum power of these mechanisms, and conserve the wealth represented in them by keeping them fit for the longest possible time. You can buy no better lubricants than Zerolene oils and greases—even if they do cost less.

STANDARD OIL COMPANY (california) **Ed Fletcher Papers** 

1870-1955

**MSS.81** 

Box: 51 Folder: 11

Business Records - Water Companies - Volcan Land and Water Company - San Dieguito System - Warner Dam (Lake Henshaw) and associated projects -"Standard Oil Bulletin" with articles and photos on construction of Henshaw Dam and on Hodges Dam



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