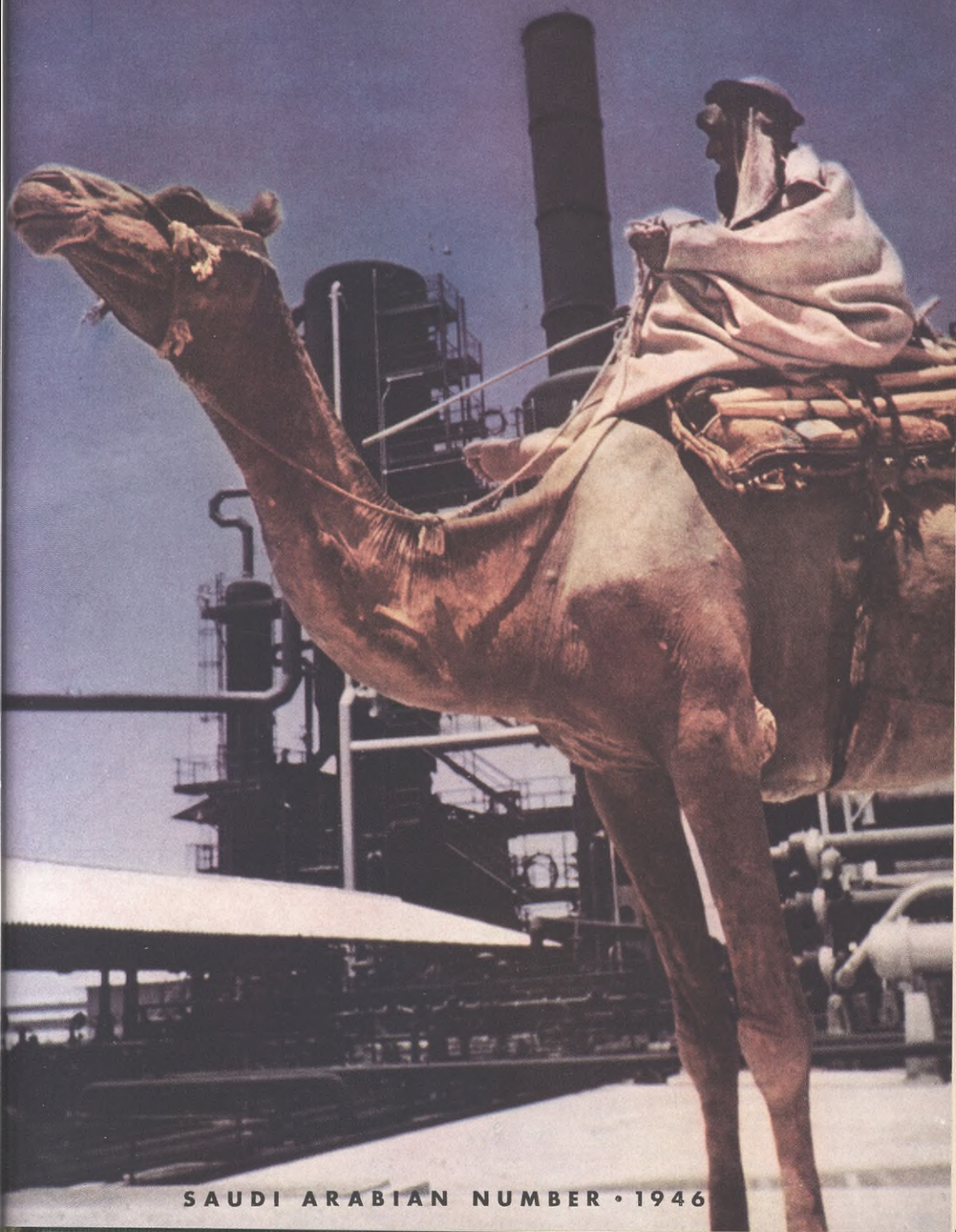


THE TEXACO STAR



SAUDI ARABIAN NUMBER • 1946



THE TEXACO STAR

Saudi Arabian Number — 1946

VOLUME XXXIII

NUMBER 4

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The front cover, a color photograph taken by a TEXACO STAR staff member, is a study of modern contrast in an ancient land. To this Bedouin on his camel—traditional symbol of Arabia to outsiders—the Arabian American Oil Company's refinery at Ras Tanura is now a familiar landmark and a symbol of progress

The inside front cover shows His Majesty Abdul Aziz ibn Saud, King of Saudi Arabia, and (standing) his eldest son, Prince Saud

A PUBLICATION OF THE TEXAS COMPANY

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★ This issue of THE TEXACO STAR tells the story of Saudi Arabian oil today. An attempt has been made to portray the development of a new frontier on our global oil horizons. It concerns the Arabian American Oil Company, which The Texas Company owns jointly with the Standard Oil Company of California. This issue also pays tribute to the Saudi Arabians, whose cooperation and friendship has made possible these chapters.

Brief

AND TO THE POINT

★ The official name of King Ibn Saud's country, Saudi Arabia, derives from the ruling family name *Saud*. It has been in use since September, 1932. Saudi Arabia comprises the greater part of the Arabian peninsula. By late 1932, King Ibn Saud had consolidated the major elements of his country—several of them kingdoms—into a single nation. He thus fulfilled his life mission: to unite his people in a strong nation under the law of Islam.

★ Air-age progress has brought Dhahran, which is near the Persian Gulf coast of Saudi Arabia, within 48 flight hours of New York City. Regularly scheduled flights carry a fairly steady flow of passengers to the Saudi Arabian air terminal.

★ Variant English spellings of Saudi Arabian names pose a problem. There are 28 letters in the Arabic alphabet which work into intricate phonetic combinations. Here, for example, are a few "correct" ways to spell the king's name: Saud, Saoud, Sa'ud, Seoud, Se'aoud, Si'oud, and Esseoud.

★ No less than in biblical times, the locust is a scourge to Arabian crops. Science has brought new weapons into action against the insect plague. "War maps" are kept to trace the advance of the airborne pests. Control headquarters are near Jidda. Arabs are encouraged to report swarms.



American wings soar over Abqaiq field where oil wells pierce Arabia's ancient terrain

New Genii in Araby



MANY thousand years ago, in the ice age, when most of the northern hemisphere lay buried under immense glaciers, Arabia was a fertile land. Three great rivers watered its plains and valleys. Grass and trees grew and flourished. Then, as the great polar ice cap retreated and the continents of Europe and North America woke to life again, Arabia slowly parched under a blazing sun and became a desert. The rivers dried up. The trees and grass vanished. The land became a dust bowl, then a mass of drifting sand and sun-baked earth one-third the size of the United States.

Birthplace of Mohammed and cradle of the Moslem faith, Arabia has known past glories, but for hundreds of years, until very recent times, it has remained remote, unknown, and isolated.

Most of its five and one-half million population have been the Bedouin—shepherds and camel herd-

ers who roamed the arid, hostile wastes in search of grazing for their flocks, wandering from one oasis to another in the wake of the scattered rains which produced short-lived patches of vegetation.

What little water there was existed only in primitive wells here and there in the desert and along the seacoast. Crude, goatskin buckets, drawn by donkeys or camels, lift the precious fluid to the surface of the earth. Near these wells the Arabs built their early towns and by primitive irrigation methods have fought the scorching heat and the relentless sand.

Some towns have grown and prospered. Trade has flourished, for among the Arabs there have always been great merchants. The products of Arabia—spices, incense, pearls, and dates—were very important to the outside world. Arabia Felix, as it was known to the ancients, was the land of frankincense and myrrh. But for townspeople and Bedouin alike, life was hard and dangerous.

To the Bedouin, the camel was and still is not only a means of transportation, but a source of food and shelter. On the long journeys from oasis to oasis, the Arab can live for days on a diet of dates and camel milk. He wears the wool of the camel for clothing, lives in tents woven of camel hair, eats the camel's meat and, lacking firewood, burns its dung for fuel. The Arabs call themselves "the people of the camel."

But in this strange and arid land grew a wonderful culture, the culture of hospitality. No one who claims his rights as a guest is ever turned away, and an Arab will give his last scrap of food to make a stranger welcome.

Crops, judged by modern standards, were pitifully small. Hunger was no stranger to the Arabs. Wheat has been grown wherever the limited water supply permitted. Even today, in most parts of the country, a few neighbors get together and reap the harvest just as their ancestors did ages ago.

The Arab is essentially good-humored in spite of his hard life. Even as he threshes the grain he does a little dance and sings a song.

He winnows the grain by letting the wind blow the chaff away, loads his patient donkey with the fruits of his toil, then faces toward Mecca and prays to the Giver of all harvests, the compassionate, the merciful.

Religion is not worn like a cloak in the Arab lands. It is a vital part of every good Moslem's life. Mohammed united the Arabs, purified their customs, bound them into one people, and filled them with a great faith. Five times a day even the humblest Arab stops his work, faces Mecca, and intones the sacred words of the Koran: "There is no God but Allah, and Mohammed is His Prophet."

Seat of temporal power in Arabia today is the



Fluted sands traced by hot winds cover much of Saudi Arabia, yet there are verdant areas, mountains, snow



Single-hump Arab camels, noted for speed, endurance, attract American youngsters near Ras Tanura refinery



Old Portuguese Fort at Qatif on the Persian Gulf marks rule by Portuguese before Arabs expelled them in 1698



Donkeys draw goatskin buckets from well at Riyadh, the capital. Donkey wells were nucleus of early Arab towns



Hofuf, one of the great oases, boasts many reservoirs, rich vegetation, and noted groves of fine date palms

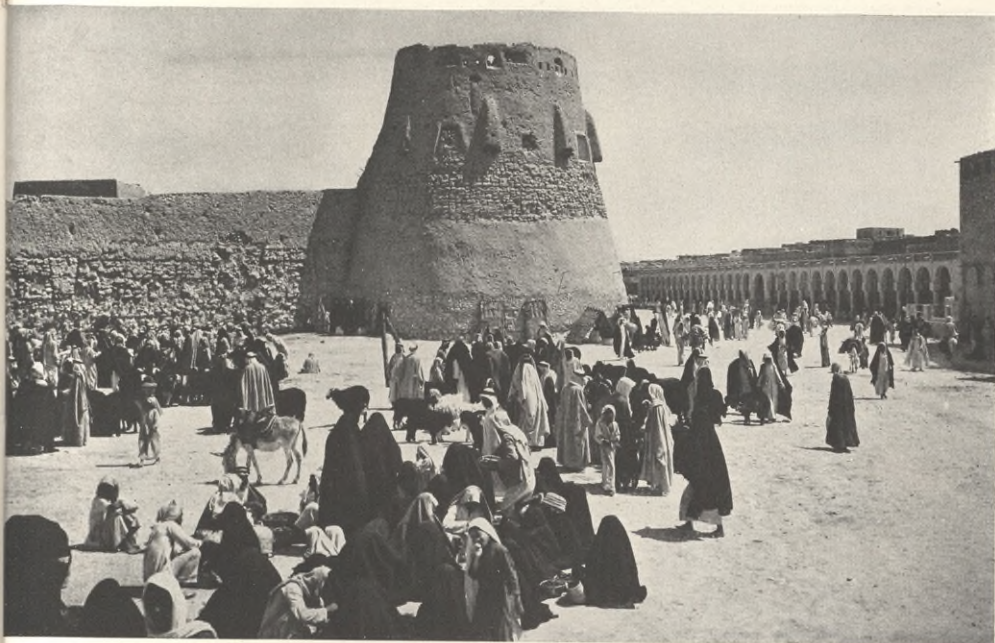


Eagerness to learn, coöperation, patience characterize native workers being trained at Ras Tanura, elsewhere

capital city of Riyadh, deep in the Nejd country, on the central Arabian plateau. There lives His Majesty Abdul Aziz ibn Saud, King of Saudi Arabia, defender of the faith of his fathers and his mighty ancestors, whose proud lineage goes back through centuries of Arab history.

Ibn Saud was born in 1880 in Riyadh, but spent his boyhood partly in the sandy wastes of the Rub al Khali (the Empty Quarter) in southern Arabia, and in Kuwait on the Persian Gulf. Even as a youth he felt that his mission in life was to reunite his people and put a stop to the ceaseless warring between tribes. A great fighter and a great leader, he conquered first the Nejd, Arabia's heartland, then pressed eastward to drive the Turks from the shores of the Persian Gulf, and finally went west to take the Hejaz, including the holy cities of Mecca and Medina. His country is a charter member of the United Nations, and his is a powerful and respected voice in the councils of the Arab world. Arabia's renaissance dates from the founding of Ibn Saud's régime.

During the lifetime of Ibn Saud, many new things have come into Arabian life. True, only a start has been made. Camel caravans still ply between the ancient cities, hauling cargoes, and a man's wealth



Flowing and colorful robes lend an exotic touch to the bazaar at Hofuf, one of Saudi Arabia's largest cities. As for centuries past, Arab merchants set up shop outdoors

is still reckoned by the number of camels he owns.

But today a new traveler is seen crossing the desert—a metal serpent, twisting and turning over the sand dunes—the oil pipe line. Modern motor trucks now travel the caravan routes and the ancient pilgrim trails over the rose-colored sands of the Dahana. For Saudi Arabia, barren of natural resources to the outward eye, has been blessed by Nature beyond the wildest dreams of those who raided and struggled for life across her sandy, wind-swept wastes.

Enormous quantities of petroleum have been formed thousands of feet below the earth's surface.

The presence of oil had long been suspected by geologists, and in the early 1930's King Ibn Saud asked American oil men to explore the country for petroleum. In 1933 the King granted a concession to the California Arabian Standard Oil Company, which later became the Arabian American Oil Company, and exploratory work began. The first well was drilled in 1935, but it was not until 1938 that the first successful well came in. Today oil derricks dot the landscape of the eastern coast of Saudi Arabia, and four large fields have been discovered.

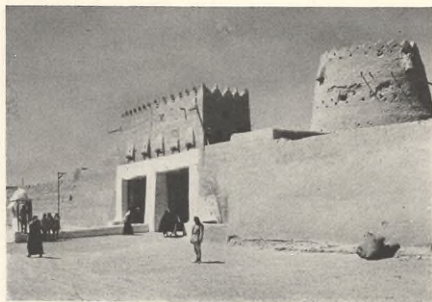
Arab workers have learned new skills, have proved both willing and nimble. They work hand in hand



Abqaiq field's derricks, pipe lines push back the horizons of mystery in a land long an enigma to the West



In the fertile Al Hasa region, which slopes gently to the Persian Gulf from flanks of arid sand, lies Hofuf with groves of famed date palms clustered outside the city wall



This gate opens into historic Riyadh. Seized by King Ibn Saud in 1901, the city has remained as his capital



Hospitality is deeply ingrained in Arab culture. Here an Amir, a local official, sips coffee with Americans

with American drillers. It takes about two years to train a first-rate Arab drilling crew, but the workers are industrious, loyal, and they get along well with their American partners.

Also, men who, a few years ago, knew only the life of the Bedu on the desert, now skilfully operate complicated oil refining equipment. American engineers and operators have trained their Arab co-workers well, and the Arabs have been good pupils.

Some Arab employees are of pure Bedu stock. Others come from the coastal cities near the Persian Gulf. Still others are those whose ancestors came to Arabia many years ago as African slaves.

The King is keenly aware of the tremendous importance of the oil development. He sees it as the greatest single means to modernize his country and improve the living standards of his people who, up to now, have had few opportunities for advancement.



Once the heart of the vast Islamic empire, Saudi Arabia has re-awakened under King Ibn Saud. Long dormant as a nation and spent by tribal wars, this land of ancient glory has joined the American petroleum industry to promote its great resource: oil. Sands that for centuries have borne nomad trails are now drilled by native workers

Portrait

OF A KING

His Majesty Abdul Aziz ibn Saud, King of Saudi Arabia, rises to his feet and stands at one end of the long audience chamber of his palace at Riyadh. He is a tremendously large man, taller than most Arabs and weighing well over 200 pounds. As he stands waiting for his visitors to approach him he leans slightly on a cane, a broad smile illuminating his swarthy features.

He greets each of his guests in turn with a hearty handshake, then his brow clouds. He turns and looses a torrent of Arabic at a nearby chamberlain. It appears that His Majesty is displeased. His guests have not been provided with Arab dress—required of all visitors. The chamberlain scurries from the room and the king waves his visitors to comfortable, overstuffed armchairs flanking his own, ranged along the wall of the room. With a wide grin he turns toward Floyd Ohliger, General Manager of the Arabian American Oil Company, and begins taunting him about settling down in Riyadh to live the life of a real Arab and a good Moslem.

"I'll even furnish you with a nice, Bedu wife!" the king offers. This is a standing joke between His Majesty and Ohliger, and a subject of discussion of many years' standing.

The king keeps up a running flow of easy banter—it is apparent that he enjoys Americans and relishes their humor. Like most of his countrymen, he is an accomplished user of his native Arabic, although he had no formal education. He speaks no English.

The conversation, conducted through an interpreter, ebbs and flows. It covers a range of subjects until at length, after a proper interval, the visitors disclose the purpose of their visit—permission to photograph His Majesty.

"Of course!" roars the king. "What would you have me do? Ride a horse or a camel? Fight with one of my soldiers? Perform a sword dance? I'll do anything you like."

The photographer explains that he would like to make pictures of His Majesty in familiar surroundings, possibly with some of his sons. The king's eyes light up. He is proud of his many children. Hearty acceptance of the photographer's terms are forth-



His Majesty Abdul Aziz ibn Saud

coming, and the king agrees to an appointment for the following morning.

Next follows a discussion, seemingly endless, of the proper time. In Arabia the clocks are set each day by the sun. Sunrise is zero; sunset is 12 o'clock midnight. The length of the day varies, but each day is, theoretically, just 12 hours long—from sunrise to sunset. It is now about four p.m. by our watches, but 11:10 p.m. by the palace clocks. His Majesty finally agrees to meet us the following morning at 2:30—or 10:30 a.m. by our watches.

Now a servant appears with the traditional Arab coffee pot and tiny cups. After the coffee, a brazier containing burning frankincense is passed around. As it goes from hand to hand, one is supposed to waft the smoke into one's beard and clothing.

A few minutes later comes tea—hot, strong, and sweet—deliciously flavored with mint. Then the incense is passed around again. Meanwhile, the king keeps up a steady flow of questions and discussion. Well-posted on world affairs (radio bulletins reach him each day—a short-wave radio connects the palace with the outer world) his comments are to the point and indicate a keen, well-trained mind. There follows a discussion of company affairs—reports of new wells, the number of Arabs now employed, housing projects, irrigation.

Now the king tells a story of Arab justice. He holds a weekly *mejalis*, or audience, and any citizen with

a grievance may appear before the king and make formal complaint at that time. Sometimes the king will decide the matter for himself. At other times he will put the question to a council of elders. He recalls that some years ago a woman complained that her husband had been working under a date palm when one of the king's servants fell from the tree and killed him. She demanded the servant's life as a forfeit.

The king explained that it had been an accident, and asked whether she would accept a cash settlement. The woman insisted on the servant's life, her right under the law.

The king pondered.

"You are right," he said. "Under the law I am forced to give you this man's life in revenge for your husband's death. But the manner of his execution is for me to decide. Therefore, I decree that he be tied hand and foot under a date palm. You, then, will climb the tree and fall upon him in such a manner as to kill him, just as he killed your husband."

She took the cash.

By now the second round of coffee has arrived. Arab etiquette decrees that the interview has terminated and the guests must ask permission to take their leave.

When the visitors return to the guest palace they find that tailors are at hand to measure them for Arab costumes. The tailors work all night on the costumes, and by morning they are ready.

The Americans don their robes and drive to the palace, a huge, sprawling structure of sun-dried clay. A large area on the roof of the palace has been set aside and strewn with beautiful oriental rugs and chairs. A few minutes later, the king arrives, conveyed to the roof by private elevator. His Majesty is

in a jovial mood, greeting his guests with a wave of his hand and an Arab salute.

While the photographer scurries about for the best angles from which to make his pictures, His Majesty scans news bulletins and converses with Ohliger about company affairs. The matter of securing a pump for a water well is discussed. It is explained that pumps are difficult to obtain from the United States. The king snorts in mock disgust. "Always an excuse!" he grumbles. "What's a pump? Just a few pieces of iron stuck together. Why don't you *make* a pump?"

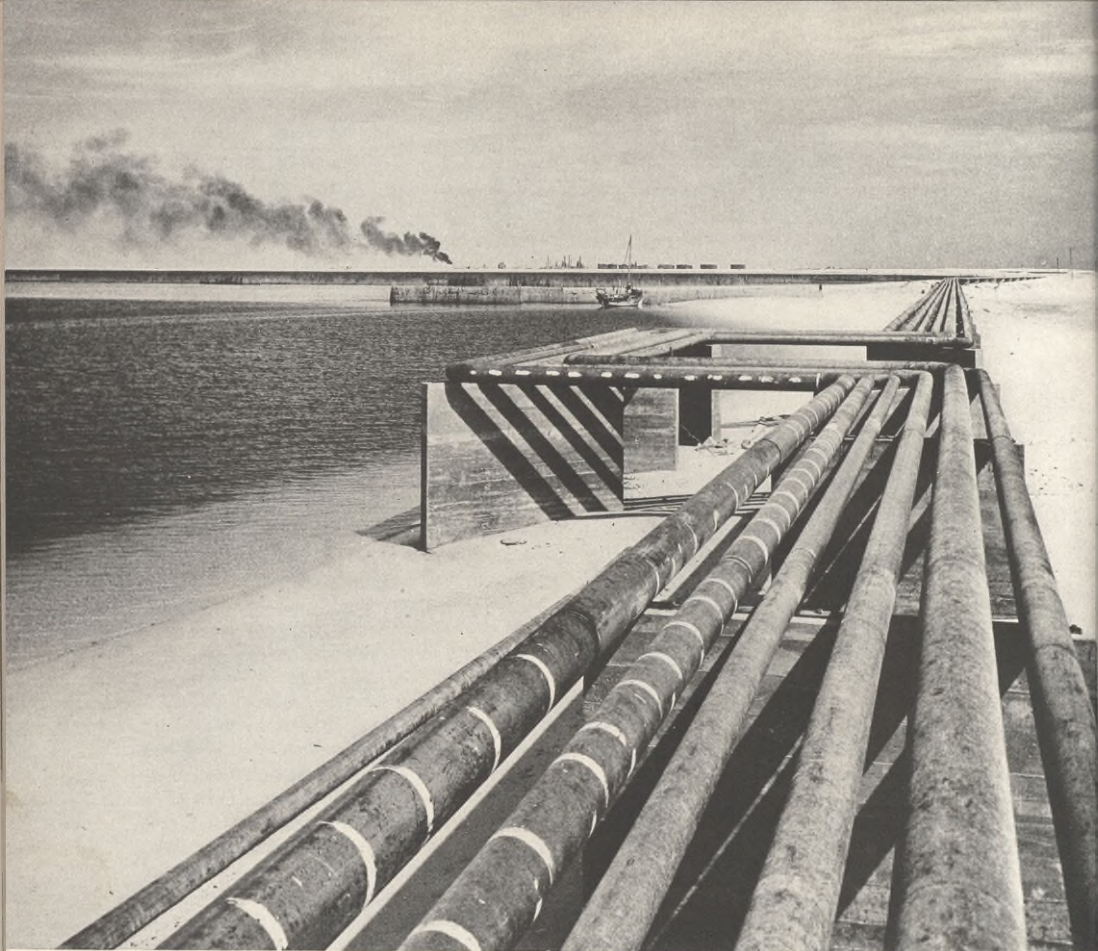
The sons have arrived—19 of them, by actual count—several are away from the city. Many of the older sons assist the king in administering the country's affairs. His eldest, Prince Saud, is His Majesty's Viceroy in the Nejd and has been named by the king as his successor. The second son, Prince Faisal, is Minister of Foreign Affairs and heads the Saudi Arabian delegation to the United Nations.

The king has many daughters, too, but Moslem custom forbids their being introduced to the visitors. Along with the other female relatives of the king they are quartered in the harem, in another part of the palace.

The photographer is having a field day, but now the sun is beginning to annoy His Majesty. He scorns to wear sun glasses, and it is difficult to see how he can longer stand the glare of an Arabian sun reflected against the snow-white walls of the palace. The visitors ask whether they may take their leave, and the king grants his permission. His Majesty's parting words are that he intends very soon to visit the company's operations, some 200 miles east of Riyadh. He rises, propels his huge bulk toward the elevator, and is gone.



Proud of his many children, King Ibn Saud is pictured here with 19 of his sons on the palace roof at Riyadh. Many of the older sons are the king's assistants



Pipe lines carry refined products to marine terminal from refinery at Ras Tanura

Oil from Another Gulf Coast

STRETCHING more than 100 miles along the eastern coast of Saudi Arabia, the present field facilities of the Arabian American Oil Company (see back cover) are evidence of one of the richest deposits of oil in the world. Just as our own Gulf Coast produces vast quantities of petroleum and is a center of oil refining and shipping, the Persian Gulf Coast of Saudi Arabia is endowed with similar potentialities.

Typical of Aramco's producing operations is Abqaiq field. Here oil is found at depths ranging between 6,500 and 7,000 feet. Present production from this field alone is about 90,000 barrels a day.

Oil from Abqaiq field is sent through a pipe line to stabilizers at Dhahran, about 40 miles to the north. Since Arabian crude has a rather high hydrogen sulfide content, it has to be stabilized before it can be shipped.

Some of the crude oil, after it has been stabilized, is sent by under-water pipe line to the Bahrain Petroleum Company's refinery on Bahrain Island, about 25 miles out in the Persian Gulf. The rest is processed on the mainland or shipped abroad.

About 40 miles northeast of Dhahran is Aramco's refinery at Ras Tanura. Ras Tanura is located on a



A new well is brought in at Dammam field, adding another derrick to the sandy reaches of eastern Saudi Arabia. A shepherd looks on as producing men burn waste oil in pit

beautiful strip of gleaming white sand. Here the company has built a refinery and an American colony, complete with mess halls, recreation facilities, two hospitals, and even a movie theater. Rated capacity of the plant is 50,000 barrels a day of gasoline, Navy special fuel, Diesel fuel, and other products. It is still under construction, being enlarged to greater capacity and with new buildings going up all the time.

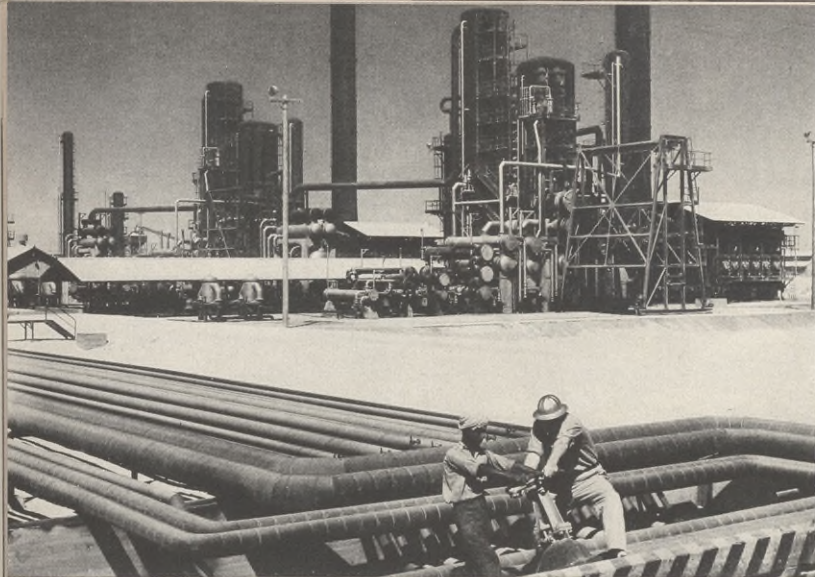
In the refinery itself, skilled native workers are quickly trained to handle routine laboratory tests. The quality of the finished product is controlled as carefully as in the parent companies' refineries in the United States.

Pipe lines carry the finished products from the refinery to the terminal and loading wharf, about three miles away. The company's marine terminal at Ras Tanura can handle four tankers at once, loading them at the rate of from 10,000 to 12,000 barrels an hour. Crude oil can be loaded at the rate of about 9,000 barrels an hour. The average tanker can be loaded and on her way again in about 12 hours.

In one important respect Ras Tanura refinery is similar to The Texas Company's great refinery at Port Arthur, Texas. Each is situated on a gulf coast which is of world-wide importance in the production, manufacture, and distribution of petroleum and petroleum products.

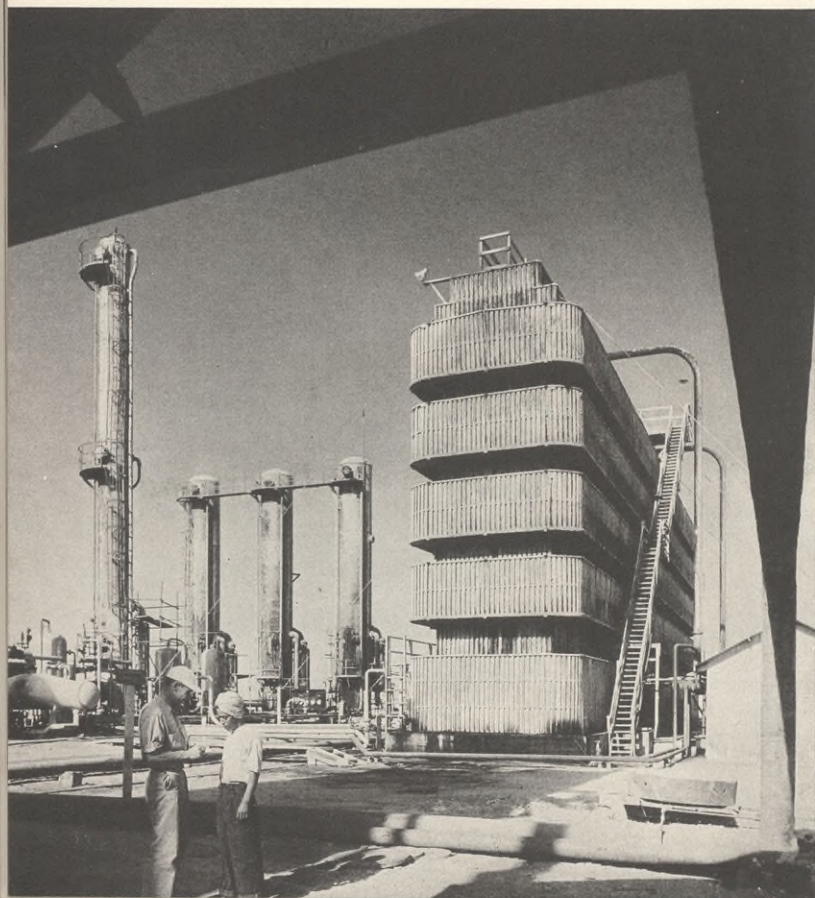


Ten-year veterans, like this native refinery worker, are given service awards, show great pride in their records



Rated at 50,000 barrels a day, Ras Tanura has actually turned out up to 90,000

(Below) Crude oil is stabilized in this unit at Dhahran, refined at Ras Tanura, Bahrain



Son of a nomadic people, this at crude stills. Oil brought pro



Oil from Another Gulf Coast

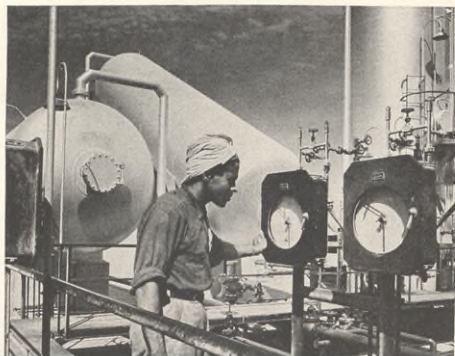


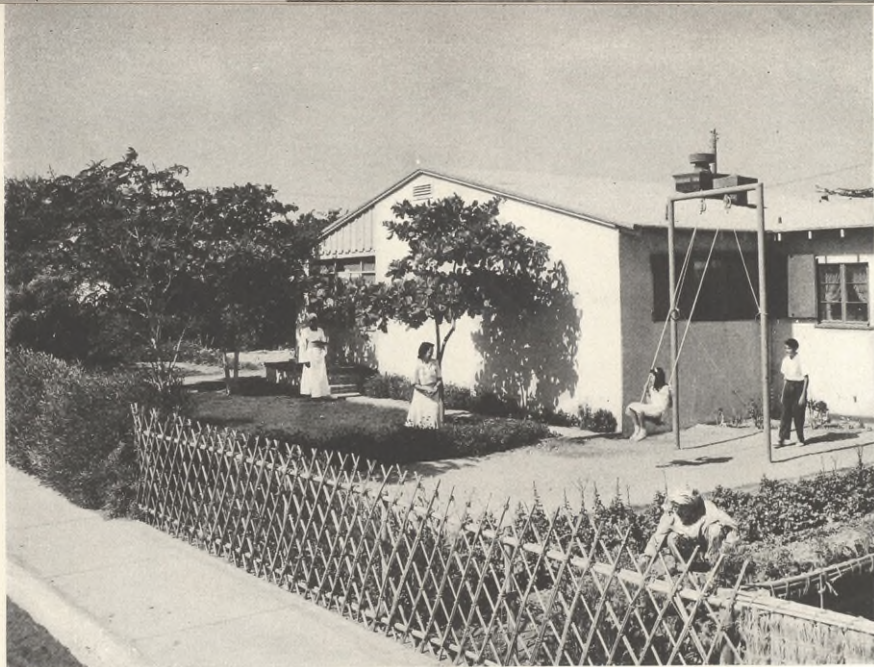
Like a great finger pointing south, Ras Tanura splits the tepid waters of the Persian Gulf. The gleaming sandspit holds a marine terminal (in foreground) and refinery to the north (in background)

A checks control panel
settled many Arabs

Carefully trained native workers, accurate instruments
assure control of all phases of Arabian refining

Arab-operated machine tools make repair
parts, save shipping time from "States"





Americans at Dhahran live in houses like this. Trees, flowers, even the soil, were imported

HOME IS WHERE YOU MAKE IT

AMERICANS can make a home anywhere. Take Dhahran, for example, where a thoroughly American community is set down in the midst of the Arabian desert. Just about as they would in Scarsdale, New York, or Berkeley, California, several hundred Americans—employees of the Arabian American Oil Company—live comfortably in modern homes at Dhahran.

In this American outpost, trees, grass, and flowers flourish with proper irrigation. Houses and offices are completely equipped and air-conditioned. Saudi Arabia is torrid in the Summer, but the climate is healthy and children thrive in it. The employees have their own fresh-water swimming pool and recreation facilities. The children go to school in the open air.



T. V. Stapleton, Aramco's Assistant General Manager, has tea with Mrs. Stapleton in their well-equipped, air-cooled home at Dhahran

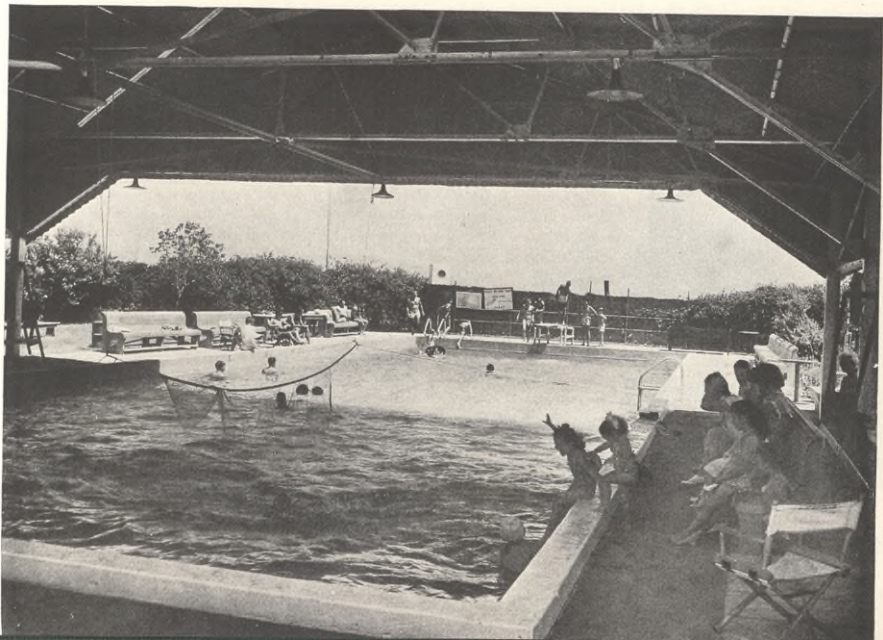


There are special outdoor recreation facilities at Dhahran for Aramco employees' children



Dhahran American community, showing club house (left foreground), swimming pool (center foreground), homes

(Below) The swimming pool at Dhahran is appreciated. At Ras Tanura, Americans enjoy dips in Persian Gulf



Aramco Concession

By JAMES TERRY DUCE

Vice President and Director, Arabian American Oil Company

At first, prospects were discouraging. Now, the Arabian American Oil Company's concession in Saudi Arabia is known to embrace one of the world's most prolific producing areas

ALL eyes in the petroleum industry are turned toward the oil concessions in and about the Persian Gulf. Here, as Everett L. de Golyer, noted geologist, expresses it, 150 wells have already indicated reserves of crude oil greater than the present proved crude reserves in the United States. We believe that as time passes, crude oil will be found here in volume sufficient to insure a supply of oil to the Eastern Hemisphere for generations to come. This, in turn, will relieve the strain on Western Hemisphere reserves, which up to now have largely supplied the world.

In a recent article in the *Yale Review*, Joseph E. Pogue, the well-known economist, indicates that total new reserves to be discovered in the Persian Gulf area may ultimately exceed 150,000,000,000 barrels. Approximately one-third of the prospective part of this area lies within the Saudi Arabian concession, now owned by the Arabian American Oil Company. On the other hand, this does not necessarily mean that one-third of these possible reserves will be found in Saudi Arabia, for like all other re-

gions of the world, the Persian Gulf fields vary in richness from place to place.

The Texas Company's interest in the Arabian American Oil Company was acquired through a series of fortuitous circumstances. About the year 1910, geologists of the India Survey found a few small oil seeps on the Island of Bahrein. Because the great Tertiary oil horizons of Persia and Iraq had been eroded from the island, and because they knew of no commercial oil in the older beds, they concluded that the chances for oil were not great. Later, however, a British group secured a concession covering the island. This group, in turn, sold it to the Gulf Oil Company. Gulf offered the concession to the Iraq Petroleum Company group, who recommended that Gulf dispose of it, and it thus came into the hands of the Standard Oil Company of California.

Standard sent E. A. Skinner to Bahrein and the first well was drilled at a site recommended by F. A. Davies, now president of the Arabian American Oil Company. This well proved that deeper horizons in



James Terry Duce

JAMES TERRY DUCE is well qualified to assay the importance of Saudi Arabian oil. He has been a director and vice president of the Arabian American Oil Company since 1938. He is a vice president of the Society of Economic Geologists and was a director of the American Institute of Mining and Metallurgical Engineers. During the recent war, he was director, Foreign Division, Petroleum Administration for War, from January, 1942, until October, 1943.

Mr. Duce was born in England in 1893 and grew up in Colorado. In 1915 he was graduated from the University of Colorado after majoring in geology.

During the first World War he served in the Army's Chemical Warfare Service. After military service he joined The Texas Company as a Geologist and in 1920 became Division Geologist, Rocky Mountain Division, Producing Department.

Subsequently, Mr. Duce served The Texas Company in various capacities as geologist and executive of subsidiary and affiliated companies in South America. In 1924 he was named Consulting Geologist for the Company and, at the time he was "drafted" to serve Aramco, was also vice president of the Colombian Petroleum Company and the Texas Petroleum Company.



Lloyd Hamilton



F. A. Davies

the Persian Gulf would be productive. Looking out across the Gulf of Selwa from Bahrein Island, Skinner and Davies saw on the Arabian mainland the low dome of the Dammam field standing against the sunset, and recommended to their company the acquisition of concessions there. As a result, the Standard Oil Company of California sent to Saudi Arabia a remarkable man, the late Lloyd Hamilton, who in 1933 sat down with King Ibn Saud of Saudi Arabia and negotiated a concession for what is now one of the most prolific producing areas in the world.

The concession covers 450,000 square miles. From its northern boundary to the south is as far as from Canada to Houston. It has an average width equal to the distance from Wichita to Denver. Exploration has barely begun. Much of the southern part of the concession has never been visited by Americans.

The king later stated that he had been impressed by the efficiency of the Bahrein operation, and added that he was glad to make an agreement with a company which would not involve itself in the complicated politics of the Middle East but would carry out its commercial mission of exploring for and developing oil fields. The king was able to grant this concession because of the Treaty of Jidda, made with the British in 1927. This treaty recognized Ibn Saud's complete independence and supplanted an earlier convention which compelled him to make contracts only with companies approved by British authorities.

As soon as the contract was signed, the Standard Oil Company of California organized California Arabian Standard Oil Company, which later became the Arabian American Oil Company. Exploration began and drilling was started in 1935. The prolific producing horizons of Bahrein were discovered in 1936, but proved to be non-commercial in Saudi Arabia. Early reports of some of the company geologists were discouraging. The geologist in charge of exploration, Max Steineke, persisted, however, in the belief that deeper horizons existed. As a result, in 1938 the seventh well found prolific deeper zones. Later, Mr. Steineke and his geologists reported two additional areas of great promise, Abu Hadriyah and Abqaiq, where fields were opened in 1938 and 1942. Before this had taken place, however, The Texas Company, in 1936, had acquired a half-interest in both the Arabian and Bahrein concessions.

By the time of America's entry into the war, three major fields had been found in Saudi Arabia and by the end of the war the fourth field, Qatif, had been added. Of these fields we only know the boundary of one, Dammam, which covers approximately 10,000 acres. Abqaiq, some 40 miles to the south, is only in the early stages of its development, but has already been proved over some 30,000 acres. In 1944, de Golyer estimated Saudi Arabia's reserves at a minimum of 2,000,000,000 barrels, but this has been enlarged by later developments. Abu Hadriyah

and Qatif are still one-well fields, but we know they are of considerable size. In addition, geologists report many other structures of great promise.

Such a bare recital does not give any indication of the difficulties and dangers surmounted by the personnel of the company in this tremendous operation. It must be remembered that at the time the concession was obtained, Arabia was almost *terra incognita*. Special permission had to be obtained to land on Arabian soil, and it was commonly believed that the local population would render a foreigner's life short and difficult.

During the years following World War I, a great change had come to Arabia. King Ibn Saud's conquest of all Saudi Arabia had quieted the tribal feuds which had torn the country, and this great statesman had adopted the policy leading to industrial development of his country. Nevertheless, when the early explorers, geologists, and production men landed in Arabia, they had to grow beards and wear Arabian clothes. The Arabs and the Americans, however, soon learned to trust one another, and no happier relationships now exist between a people and a company than between the Arabs and Aramco.

The climate of Arabia is severe. Winter temperatures may drop to freezing while minimum Summer temperatures are often over 90 degrees and sometimes run to 130 degrees at midday. The annual rainfall is only about three inches.

Difficulties were experienced with problems of water, health, and transportation. Fortunately, it was found that generally throughout the part of the country first explored, underground water supplies for ordinary purposes could be developed. The high Summer temperatures were combated by the gradual introduction of air conditioning. Communication and transportation problems were solved by the de-

velopment of special tires and equipment to enable wheeled vehicles to run over the sandy areas. These developments were of great value to the Army in planning its desert equipment during the war.

Even oil drilling was subject to unusual difficulties because the section through which the drill was pushed consisted mainly of limestone. Some of these limestones contained cavernous zones with water under high pressure. All these problems were conquered. At the present time, production is being run from three fields: Dammam, Abqaiq, and Qatif. By December of this year, after completion of the present construction program, the company will be able to put 260,000 barrels a day through its Persian Gulf ports of Ras Tanura and Al Khobar. This capacity will be amply supported by productive wells.

During the war the company built, as a war project, the Ras Tanura refinery. This plant is unique in many ways. First, it was financed entirely by the parent companies without Government help; second, it was completed on time and within cost figures estimated; and third, it has operated at 190 per cent of rated capacity of 50,000 barrels a day, and has become the mainstay of our naval fuel oil supply in the Far East.

The growth of the company has been phenomenal. Two years ago it was producing 18,000 barrels a day. Today, that production has been multiplied by 10.

We have just begun. The future, I believe, will prove that the Arabian American Oil Company will be one of the greatest assets of The Texas Company, the Standard Oil Company of California, and last, but not least, of the Arabian government. At the same time, it will guarantee a fuel oil supply for the United States Navy abroad for many years to come, and will protect the American people against any possible future shortage.



Designed in 1943 as a war project, Ras Tanura refinery went "on stream" in 1945, is mainstay of Far East naval fuel supply



Company officials honor proud native workers at 10-year service award ceremonies

PARTNERS IN PROGRESS

By quenching the thirst of Arabia—the thirst of the land and its people for culture and progress—American engineers, medical men, and scientists are altering the landscape and the natives' living habits.

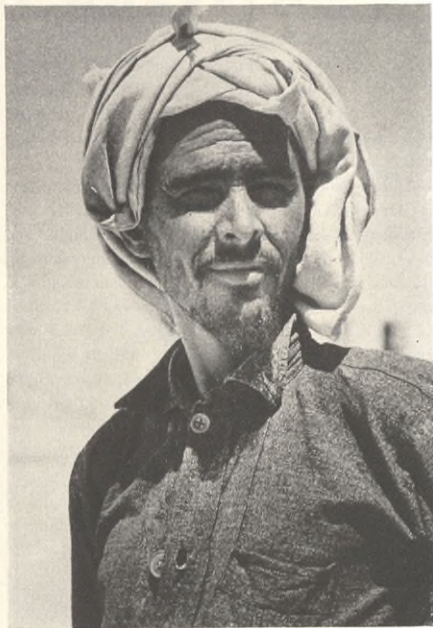
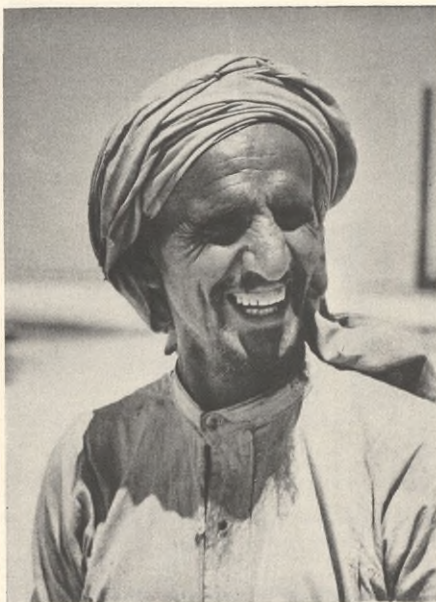
Thanks to great varieties of new employment, the nomads who formerly lived in tents and huts are learning the comforts of modern surroundings. They have mastered new skills in the oil refinery and on the drill rig. Arab farmers, with American assistance, have discovered a new knack for raising all kinds of foodstuffs on properly irrigated land. The Arabs now know the new security of adequate medical attention. They thrive on a new diet. They are a changing people.

Although the wages paid by the oil company provide new purchasing power for Arab workers and their families, and new security for the future, the company has helped its Arab friends in other ways. At Al Kharij, for instance, a full-scale agricultural experiment is under way. There, on a 2,000-acre tract, an irrigation canal, which the Saudi Arabian government built with the oil company's help, is bringing sufficient water to these acres to grow quantities of nourishing vegetables.

The conditions are similar to those in Arizona, and experts from the United States Government have taught the Arab farmers to use modern, scien-



Young Arab boys, junior employees of Aramco, get their "three R's" in schools which the company has provided



The withering sting of tropic sun and wind has burned itself into the flesh and memory of the Arabs. No longer slaves to climate, Saudi Arabs now fashion a new culture of industrial settlements, modern farms. Here are weathered faces of typical workers



Rising from sunset-colored sands, the minarets of the mosque in the Saudi camp at Dhahran mark the deeply religious nature of the Arab workers, who pray five times daily to Allah

tific irrigation methods. They raise alfalfa, melons, dates, tomatoes, onions, and many other farm products. Yields of wheat have increased many-fold, helping to feed a nation which has always been hungry.

Just as the coming of the machine age to Arabia moves water where it is wanted more easily, so their grain is now more readily prepared for use with the help of the modern threshing machine. Oil and wheat may at first seem widely separated, but a second thought establishes them as partners in progress, just as Arab industry and American ingenuity combine toward the rebirth of a strong nation.

In preventive medicine, too, the Arabian American Oil Company is pointing the way to something better ahead for the Arab. Each week has its "dry



Athletic games have been received enthusiastically by natives, who reveal great skill and fine coordination



Crude, temporary shelters made of thatching and poles housed native employees until new building was started



Modern, sanitary structures (above) are now gradually replacing the old-type housing for Arab workers (left)



The American hospital at Dhahran, a company project, is staffed and equipped to care for Aramco workers' medical needs ranging from out-patient treatment to major surgery

day," when all household urns in areas supervised by the company are emptied so that mosquitoes cannot breed. Irrigation in itself provides breeding places for mosquitoes, and with it must go mosquito control, such as oiling and dusting. An entomologist has just begun the work of identifying the various species of mosquitoes that carry disease throughout the Persian Gulf regions.

Much work is to be done to control trachoma, a particular scourge of the land, and to do away with amoebic dysentery. Great care is taken to provide pure water supplies to company camps, and the Arabs are taught by example the most sanitary methods of sewage disposal.

There are four hospitals in company areas, and these are equipped and run by the best American standards, with skilled American surgeons to perform even major operations. American nurses, many of whom served with the armed forces during the late war, carry on the pleasanter tasks of peacetime healing. Medical and surgical care, though primarily for employees, is shared in so far as possible by their families.

As rapidly as possible, the company is getting rid

of its crude, temporary housing, hastily built for Arab employees in the early stages of the country's petroleum development, and replacing it with modern, sanitary construction.

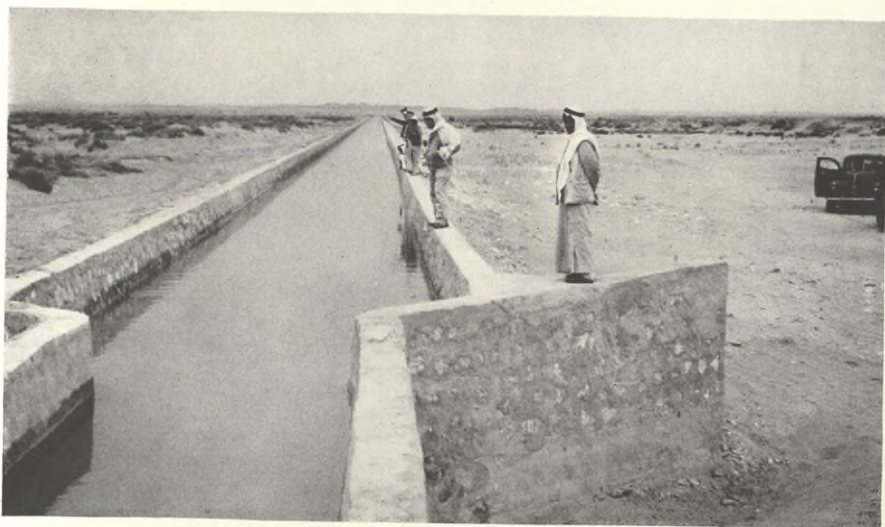
In coöperation with the Saudi Arabian government, the company provides schools for its junior employees. Until quite recently, the Arabs had little or no opportunity for recreation. They delight in games, and many of them are becoming first-rate athletes. For the 5,000 Arab workers in the so-called Saudi camp at Dhahran, the government has erected a Moslem mosque. Near Dhahran, Aramco engineers discovered a bed of excellent clay, and there a full-fledged brick factory is in operation.

Ten years of service with the company is recognized by the presentation of service awards to employees. More than 100 Arabs have been with the company 10 years or longer.

Says His Majesty Abdul Aziz ibn Saud: "We want to teach our people to help themselves to become better and more useful citizens of the modern world. We are very happy that in this enterprise we have as our good partners the representatives of the United States of America."



The search for food long drove the Arab over the broad wastes of his land. Today, at Al Kharj in the interior of Arabia, American experts teach Arab farmers modern methods



To irrigate the model farm project at Al Kharj, Aramco helped the Saudi Arabian government construct this aqueduct-canal. Pump-fed from a well, it waters a large tract



Ras Tanura refinery (foreground and center) is about three miles from the marine terminal and loading wharf (upper right), which are to the south, out in the Persian Gulf

ARABIAN AMERICAN OIL COMPANY

THE Arabian American Oil Company was incorporated in Delaware on November 8, 1933. Jointly owned by The Texas Company and Standard Oil Company of California, the parent companies are represented by the following directors on Aramco's Board of Directors:

H. D. Collier (Chairman, Board of Directors, Standard Oil Company of California)—Chairman of the Board;

W. S. S. Rodgers (Chairman, Board of Directors, The Texas Company)—Vice Chairman of the Board;

A. N. Kemp (Director, Standard Oil Company of California);

Harry T. Klein (President, The Texas Company); J. H. MacGaregill (Vice President and Director, Standard Oil Company of California); and C. E. Olmsted (Vice President and Director, The Texas Company).

F. A. Davies and J. T. Duce, President and Vice President, respectively, of Arabian American Oil Company, complete Aramco's Board of Directors.

Officers of Arabian American Oil Company, in addition to F. A. Davies and J. T. Duce, are: A. M. Martin and J. MacPherson, Vice Presidents; J. H. McDonald, Secretary and Treasurer; and K. H. Beekhuis, Comptroller.

The Photographs in This Issue

★ THE PHOTOGRAPHS in this issue of THE TEXACO STAR are by Robert Yarnall Richie and were taken for the Arabian American Oil Company on special assignment, with the following exceptions: Front cover, page 16 (by Bachrach), page 17 (the photograph of Lloyd Hamilton is by Affiliated Photo-Conway), and page 23 (lower).

The back cover design is by Guild O'Crafts, Inc.

(Right) A native line walker inspects the pipe line which carries Arabian crude oil from Abqaiq field to stabilizers at Dhahran. Aramco's field facilities are connected by a network of such lines as this one



SAUDI ARABIA

المملكة السعودية العربية



APPROXIMATE EXTENT OF
ARAMCO CONCESSION



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MILES

