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MAY-JUNE 1969

CONVOY TO NOWHERE

For a few minutes he sat quietly sipping his coffee. Then he lit his first cigarette of the long day. Now what? Coffee and a cigarette are an event when a day has few events. Story on page 34.

ARAMCO WORLD magazine

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Cover: Pounding like a comet across the face of the sun, a giant 434-horsepower Kenworth tractor challenges the choking dust and searing heat of Arabia's Empty Quarter on an eight-day supply convoy to a nameless desert camp. Photographer Tor Eigeland hurtled along with it to take the remarkable color photographs beginning on page 6.

On a Red Sea reef 80 feet down—

the Umbria and its cargo of death...

BOMBS BENEATH THE SEA

In the dim light, far beneath the surface of the Red Sea, the squat iron tubes scattered through the hold of the freighter looked like bowling pins. Then I swam closer, saw the stabilizers and realized they were bombs—part of a deadly cargo that has lain quietly but unpredictably on an African reef for 29 years.

I had first heard of this cargo 10 years before. Hans Hass, the famous underwater explorer, had visited it in 1949 and mentioned it in one of his books. I decided I would try to see it one day, but time passed and I never did. In the meantime, though, I began to piece together the story of the *Umbria*, a 10,000-ton Italian freighter that sank in 80 feet of water at the beginning of World War II with thousands of tons of ammunition, bombs and torpedoes in her holds.

Before World War II, the steamship *Umbria* was owned by the Lloyd Triestino Line. She carried passengers from Europe to Calcutta. When war broke out, but before England and Italy opened hostilities, the ship was converted into a freighter. In preparation for hostilities she was ordered to carry a cargo of bombs and shells—altogether about 6,000 tons of explosives—to the Italian colony Eritrea, and left Messina on May 29, 1940. Although no one knew it, it was to be her last voyage.

From Italy the *Umbria* steamed uneasily across the Mediterranean to the Suez Canal—uneasily because with England and Italy on the verge of war the captain, Lorenzo Muiesan, didn't like the idea of sailing a ship full of high explosives into what might turn into enemy territory at a minute's notice. At Port Said his uneasiness increased. It was clear that the British canal authorities —England then controlled the Suez Canal—knew something about the *Umbria's* cargo. It was also clear they did not relish the idea of letting it into the canal. And with good reason. If the *Umbria's* cargo were to explode, it could close Suez for the duration. Since England and Italy were *not* at war, however, the authorities had to let the *Umbria* pass through. They delayed her for three days—with a series of contrived inspections—but grudgingly gave way and under close escort the *Umbria* sailed

WRITTEN AND PHOTOGRAPHED BY LUDWIG SILLNER

down to Suez and out into the Red Sea.

For a short time, as the ship steamed down the coast of Africa, the tension eased. Then, out of the darkness, on the night of June 10, 1940, came a Royal Navy sloop, under the command of a New Zealand Lieutenant named Stevens. He and some British sailors boarded the *Umbria*, demanded the ship's papers, stationed guards throughout the ship and ordered the captain to set a course for Port Sudan. In the morning, on a hidden radio, Captain Muiesan learned why: Italy and Great Britain were at war.

The *Umbria* by then was heading for Port Sudan. If he were going to keep his cargo out of the hands of the English, the captain thought, he would have to act at once. Deciding on a bold gamble, he somehow passed on secret orders to his engineers, then invited the English officers to his cabin, offered drinks and asked for permission to get on with a life-boat drill that was, he said, regularly held at this time. The English agreed and the life-boats were swung out.

Down in the engine room, meanwhile, the engineers had opened flooding valves. The flooding went unnoticed at first but then the ship suddenly listed to port. Happily the captain ordered his men to abandon ship and, angrily, one assumes, the English joined him. As they rowed hastily away, the *Umbria*, the flag of Mussolini's Italy still flying at the stern, rolled onto her port side and sank just inside the Wingate Reef.

To get to this reef where the *Umbria* lay, I had joined a small party that a locally famous skin diver, 'Ali 'Ashi, had agreed to lead. It included a Jordanian banker, a young Swedish diver, an American and an English family. 'Ali was by far the most interesting individual there. He was—and probably still is—the only Sudanese diver who actually attacks sharks. What he does, he told us, is fire one spear into the shark's tail and, as the shark circles, biting at the tail, fire a second into his gills. At that point his score was 70.

We had met at 6 a.m. aboard 'Ali's 60-ton yacht in a bay near Port Sudan. Twenty minutes after departure we sighted four boat davits protruding from the water, and prepared to dive.

Except for the wooden deck the sunken ***Umbria*** looked very much as it did before it sank 29 years ago.

As we went down the water was clear and we could see thousands of colorful fish scattering like birds flushed from a field. The ship is so large we could not see either the bow or the stern, but we could see bizarre shapes of coral clinging to the hull. Despite its long immersion, the ship seemed intact—except for the wooden deck long since rotted away.

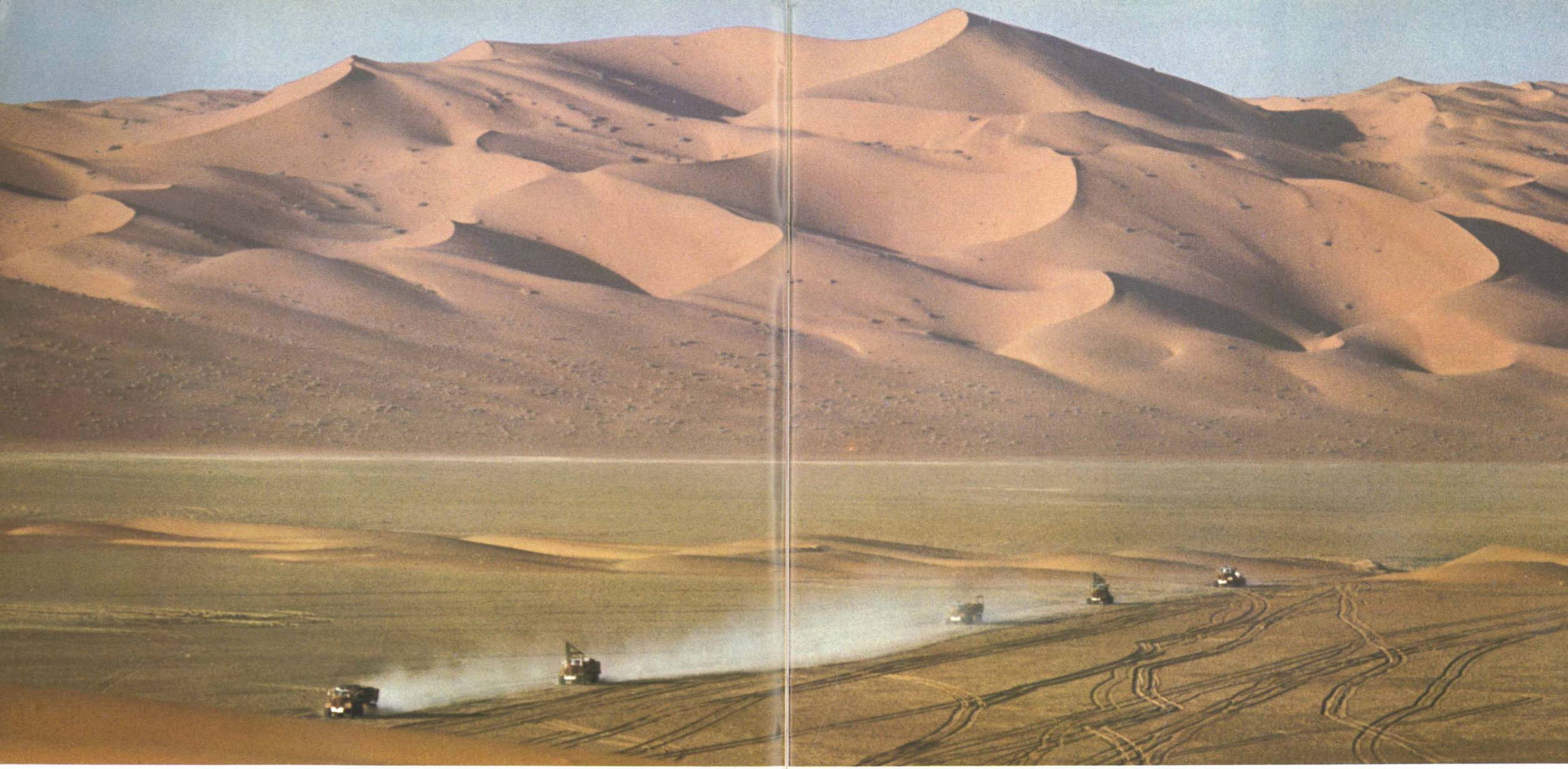
Since I had no air tanks, my exploration was limited. I had to go up for air at least every 60 seconds. At one point, however, I saw 'Ali and the others clustering around a dark opening just as I was about to go up. We had found the bombs. They were spotted with spongy growths, and were almost invisible, but the short, deadly shape, and the sharp lines of the stabilizers left no doubt as to what they were.

Not wanting to go up then, I clapped the Swedish diver on the shoulder and signaled that I needed air—the same signal, incidentally, that mutes use to say they are hungry. The diver passed me his mouthpiece. I took a deep breath and began snapping photographs as quickly as I could, wondering, perhaps foolishly, if my flash gun could possibly set off an explosion. It didn't of course, and after we had seen everything, we returned to the launch and headed back to Port Sudan.

En route, we talked about the wreck and wondered if any of the bombs and torpedoes could possibly be live. Since the area was still prohibited to shipping, it seemed possible. Someone said he hoped not because he had been told that 6,000 tons of explosives would create a tidal wave big enough to wipe out Port Sudan. There was silence for a while after that. But as the launch headed for our harbor, I could see that most of the group were staring thoughtfully back at the four davits poking out of the sea. There was no need to ask what they were thinking.

Ludwig Sillner, an expert skin diver and underwater photographer, was named Photographer of the Year for 1968 by the Underwater Society of America.

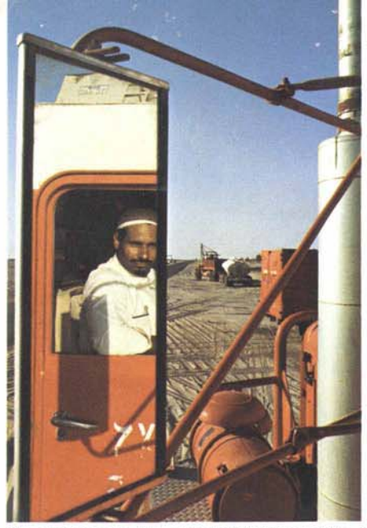
The divers who explored the wreck could barely make out bow and stern from amidships but even in the dim light of 80 feet down there was no mistaking the short deadly shape of the bombs.



CONVOY TO NOWHERE

BY DANIEL DA CRUZ/PHOTOGRAPHY BY TOR EIGELAND

Like a painting by Dali, a gleaming trail marker and a red cluster of trucks spot the patterned velvet of a surrealist landscape.



The passing scene from the rear-view mirror: desert cavaliers from the ambling past and the roaring present.

"*Bismallah ar-Rahman ar-Rahim*,"—"In the name of God, Most Gracious, Most Merciful...,"intoned Suwayyan Mas'ud and switched on the ignition. The Kenworth's diesel engine roared to life, and our tractor-trailer rig went hurtling down the highway at the vertiginous speed of 23 miles an hour, headed toward the nothingness of Saudi Arabia's Empty Quarter, the most awesome sand desert in the world.

Barring the unforeseen, in eight days we would reach our destination, a tiny bastion of aluminum dwellings, steel machinery, iron men and, everyone hoped, golden opportunity on an island of round-the-clock activity more than 600 miles away in the vast, indifferent sea of sand.

The end of our trail would be the site of an Aramco exploratory well, punching deep into the earth's innards to discover if there, in a remote corner of the Empty Quarter, petroleum in commercially exploitable quantities underlies the surface as it does in other areas of the Arabian Peninsula. If it does, every precious drop must be pumped to tankers on the distant Arabian Gulf coast by pipeline. Meanwhile, the drilling rig's appetite for soft sand and hard rock must be sustained with a daily ration of casing, cement, drilling mud, diesel fuel, acids and other malodorous chemicals, diamond-tipped bits, steel cable and similar necessities delivered to the site by another kind of pipeline—a pipeline on wheels.

We rumbled out of Aramco's Dhahran headquarters at the grim hour of 5:30 on a dark winter's morning, as one of a convoy of the sort which at regular intervals supply Aramco camps scattered across the Arabian subcontinent. Ours comprised four Dodge Power Wagons, and nine Kenworth tractors hauling a dozen big trailers ranging from a mobile dormitory unit sleeping four in private, air-conditioned rooms, to water- and diesel oil-tankers and a long, low bulldozer transporter to pull us out of the sticky patches.

From what I'd heard, the patches would have to be *very* sticky to stop the Kenworth's 434 horses. Designed to withstand the choking dust and intense heat of Arabian summers, it skims across the desert on six Goodyear 16-ply nylon, tubeless sand tires retailing at $1,100 a pair delivered, is powered by an apparently indestructible diesel engine, has six-wheel drive, power steering, air brakes, air conditioning, a compressed air supply to inflate its own tires, a 530-gallon fuel tank, davits and hoists on each side to facilitate tire changes, and a winch aft of the cab to drag itself up steep inclines. And although it has neither dashboard clock nor radio—which in any case would be drowned out by the engine's tremendous din—the Kenworth does boast a fancy price tag: $75,000.

It was soon evident that, in his secret heart, Suwayyan Mas'ud would have preferred the money spent on a Formula One Ferrari. Like the seasoned Grand Prix racer, every Kenworth driver is fiercely possessive of his vehicle, preens it, protects it, pampers it, and keeps other drivers at arm's length, exactly as if its 434 horses had been transmuted into a single magnificent racing mare. Suwayyan had exchanged his flowing *ghalabiya* for khaki shirt and trousers, but spiritually he was still one with his desert forefathers, a raider who likes the feel of the wind in his teeth and a fast mount beneath him.

South of Abqaiq, where civilization is represented by the occasional rusting hulk of an abandoned automobile, a plume of greasy smoke from some faraway gas flare, and slithering among the dunes great twin black serpents which turn out to be nothing more ominous than an oil gathering line and the Dammam-Riyadh railroad, Suwayyan turned abruptly off the road with an almost visible sigh of relief and struck off across the desert, into the open country which is the Kenworth's natural habitat. Anyone can steer a truck down an asphalted highway, his manner seemed to say, but it is a different matter to navigate among the dunes, without map or compass, landmark or guidepost, and hit the next rendezvous unfailingly.

I fashioned myself two sets of very white knuckles, while hanging on tight as Suwayyan crashed over yard-high salt bushes and bulled our way through the rolling hills of sand. His eyes restlessly patrolled the unfamiliar ground—for no ground is familiar where wind storms can reshape sand mountains overnight. My eyes followed his lead, but where I frequently saw nothing at all, or at most a vague alteration in the hue of the sand in our path, or a slight variation in the wave length of the sand ripples, Suwayyan saw trouble.

"*Wajid muu zain*,"—"Very bad," he would mutter, straining hard on the big wheel to swing the Kenworth and its wobbling diesel tanker and dormitory trailer in a wide arc. Beneath the deceptively innocent surface, he knew with a certainty he was powerless to explain, lay a layer of sand as velvety, treacherous and tenacious as the tentacles of an octopus. He repeatedly tried to indoctrinate me in his methods, to no avail; it was like trying to teach piano to a deaf mute wearing boxing gloves.

The ease with which desert drivers read the sands never fails to astonish me, but I learned later that the ability is common among the Bedouins, to whom this type of desert detection is often the margin between life and death. In the country we were then traversing, for instance, experienced Murrah tribesmen could examine a set of camel tracks and determine the beast's size and weight, how recently it made the marks, whether it was tired or fresh (and thus how far back along its trail forage and water might be found) and, if similar hoofprints were previously identified, the camel's name and pedigree.

As we rolled out of the dunes onto the flat brown plain, our pace grew hotter, along with the rays of the sun. By 10 o'clock the wind was a steady oven blast, and the sun was mirrored back at us from every grain of sand. Suwayyan Mas'ud, inured to Saudi Arabian summers, when sun temperatures soar into the 160's and above, didn't bother to turn on the air conditioner, nor did I want to appear effete by suggesting it. And so, until shortly before the sun set at five o'clock, I had seven idle hours to regret my timidity and to catalog the joys of desert travel: skin that shrivels to that of an exhumed mummy in the baking heat, eyeballs that ache and twitch from the blazing glare, lungs that rasp with dust so fine and penetrating that it seeps even into bottles with tops tightly screwed down, cracked lips, thirst that clutches at the throat five minutes after it has been slaked with a draught from the canvas water bag, soreness in bone and muscle magnified with each bounce from bush and boulder, ear drums ringing from the howl of the diesel engine, a brain that as the day went on slowly emptied itself of all but the numbed perception of animal discomfort.

Then suddenly, at five, the other trucks magically appeared, some arrived before us, others steaming up majestically toward us across the horizon. The mid-day stop with the sun directly overhead had been, like most reprieves, a blessing mixed with the realization that worse was to come; the final halt at day's end was unconditional release after serving a long stretch in the Kenworth cab. The roar of the engines ceased, and we could hear at last the infinite silence of the desert. The sun slunk out of sight, and almost at once the cool, cloudless sky was filled with the biggest stars ever seen by man.

For some minutes the drivers lay full length in the still-warm sand, savoring the contrast between the day filled with thunder and the night as it has always been in the desert—serene, immense, somehow overpowering, inspiring men to speak in whispers. Soon a campfire of dried sticks scavenged along the way sprang to life, and coffee was roasted, ground, brewed and served to the silent circle in the most ancient ritual of the Arab race.

Only after the traditional three tiny cups of bitter coffee had been drunk did the conversation become general and preparations go forward for the unvarying dinner of rice and mutton—the latter from a small herd of sheep purchased on the hoof near Hofuf and corralled in one of the trucks to be slaughtered as needed. The crew ate dinner in the fraternal manner of the desert, all seated in the sand around a large circular tray heaped

with rice and meat, and dexterously forming little spheres of rice with the right hand and popping them in almost the same motion into their mouths: where water is a luxury, the Arabs long ago learned the economy of washing hands rather than dishes and cutlery.

When ablutions were finished, the drivers sought the solitude of their sleeping bags, and by eight o'clock the only sound to be heard was the snore of the adenoidal and the sibilance of the wind rising through the scattered salt bushes. Looking up at the stars, I found it impossible to believe that I was in the same world as war and riots, forests and rivers, prisons and universities, overpopulation and urban sprawl. Here all was quiet, all was peace, all a vast emptiness.

The camp was astir at 4:15, a ridiculous hour to be awake and on the move. It was also cold, and I had time only for my three cups of steaming coffee and a mouthful of dry bread before the impatient growl of the diesels told me that the frustrated Indianapolis Speedway artists were ready to go. The first streak of dawn was the signal for a general revving of engines, and as the great wave of sound rolled out across the desert, we rolled right after it, almost as if we thought we could catch it.

There followed another day of hard grinding through the dunes, like the one before, like the ones that came after, dissimilar only in details. At lunch-stop that day we heard about—but unfortunately did not see—the snake that had been killed while trying to mount a Power Wagon running board; in the first telling the snake was four feet long, but before we dispersed for the afternoon it had grown to five, with no signs of shrinking. Later in the day we hit the first bad stretch of sand, forcing Suwayyan to reduce tire pressure from 35 pounds to 25, whereupon the increased flotation pulled us through a slow inch at a time. Toward sunset, we emerged from dune country to the hard, flat plain, and for an easy hour we sped along at top speed, sending up a spume of gray dust that could be seen for a dozen miles. That day, too, during a brief afternoon stop, we were greeted with a solemn "*Assalaam 'alaikum*"—"The peace of God upon you," by a solitary nomad wearing, of all things, a blue U.S. Air Force overcoat with two chevrons. He had come out of the desert from the south-west, on foot, and was heading north to seek work in the city. A few words of conversation, a grave salutation, and he trudged onward the way we had come, never looking back.

Nor did we. For two days we went south, then turned east, meeting no one but an occasional cameleer, or a tiny encampment of Bedouins grazing their camel herds near one of the two wells on our route. But to meet us, at every stop however brief, were swarms of voracious black flies that buzzed out of the empty sands to attack us. We could only speculate on what they fed when we weren't there, for the nearest scrap of vegetation was often miles away.

On the fourth day, we came at last to the red sand mountains. These awesome formations rise as high as 800 feet from the intervening plains, which here are flat brown *sabkhas*, or salt flats which catch the runoff of rains that sometimes come only at 10-year intervals. We would claw our way up to the top of the sand mountain, often —owing to the steep incline—at a half mile per hour, often with two or even three trucks hitched to each other for mutual support. Then, unhitching, we would roar down the opposite side at high velocity, straighten out on the pie-crust surface of the *sabkha*, which might be up to four miles across, and labor up the next mountain. I counted 55 *sabkhas* on the way—and the inexorable routine soon became deadly.

But now and again the routine was enlivened. We invariably accelerated downhill to get speed to sail up over the next smooth ridge without losing momentum. Frequently, however, we discovered on clearing the top that, instead of a gradual descent, before us the mountain dropped away at a sharp angle, hundreds of feet down to the *sabkha* bed. Only a frantic spinning of the steering wheel averted disaster, and *that* threatened to send our trailers jackknifing into the cab in which we rode. I could never quite get used to the taste of heart in mouth, but if the near misses bothered Suwayyan Mas'ud, he was careful not to show it.

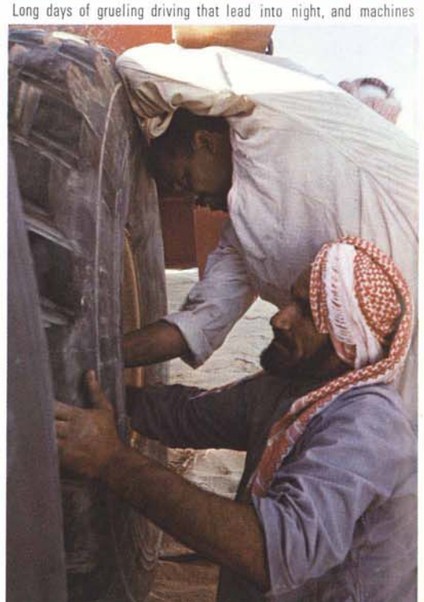
Considering the relentless pace, I wasn't surprised when, on the evening of the sixth day, we topped one last mountain and zigzagged down the slope to the exploration camp, two full days ahead of schedule. Nor, having accompanied him and watched him at work, was I surprised that Suwayyan's Kenworth led all the rest.

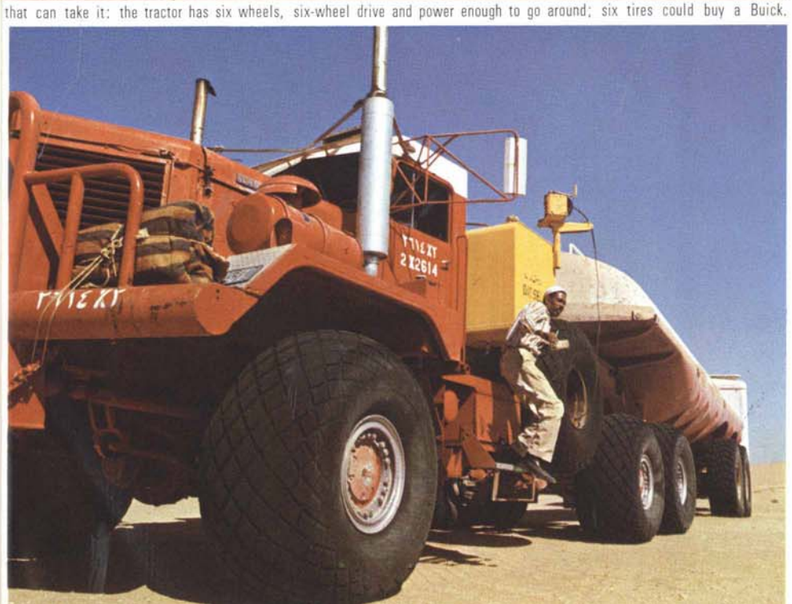
I had no doubt that, with the full day of rest he and the rest of the convoy now had coming, Suwayyan would be somewhere up front all the way home. With now-empty trailers, everyone, in fact, would be traveling faster. I suddenly had the happy thought that under those circumstances, no one would criticize me if I found an even quicker way back.

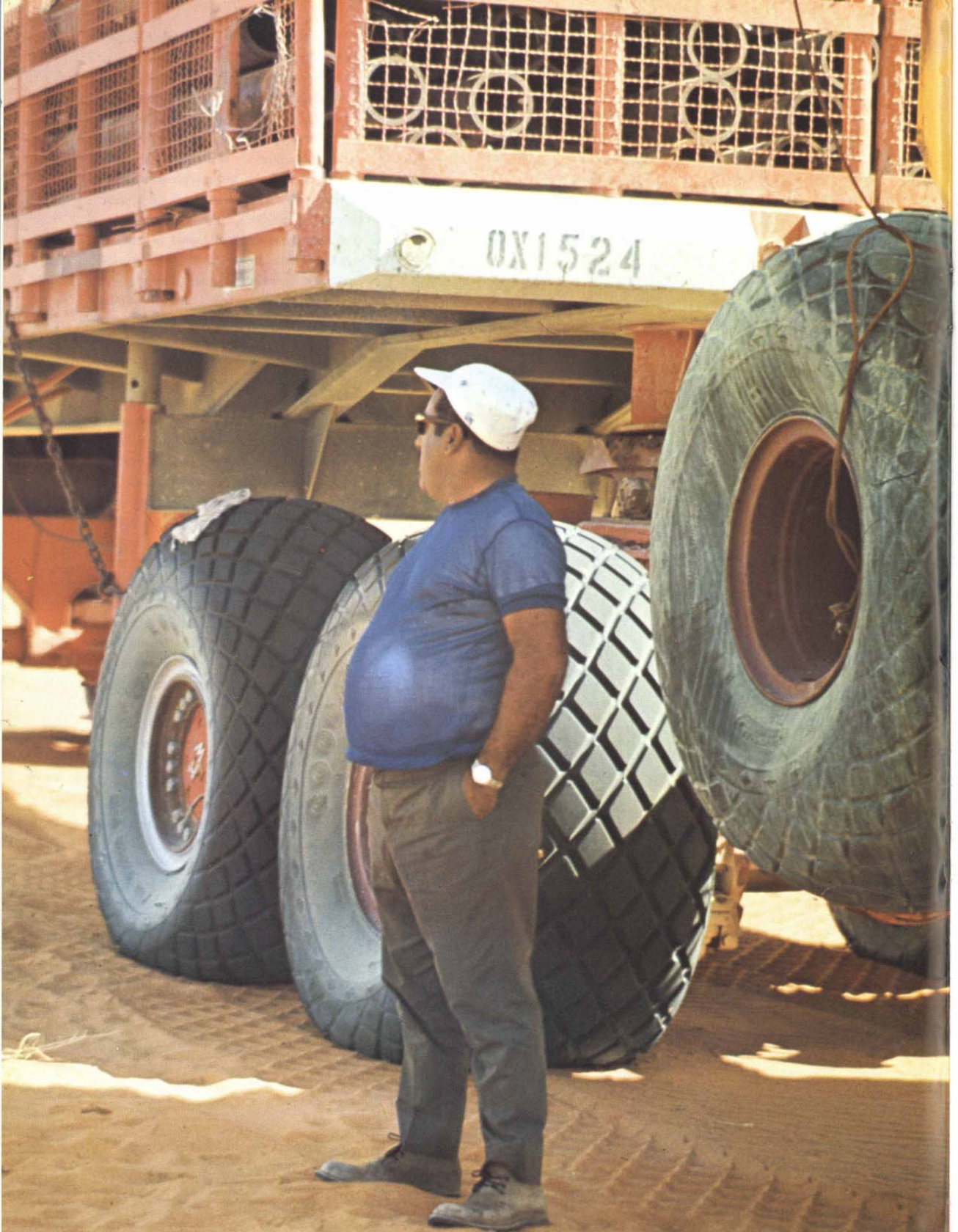
There happened to be one. A Fokker 27, used to ferry in personnel and fresh provisions, was at that moment sitting on the end of the *sabkha* air strip. A short time later I was sitting in it, but only for the 1½ hours it took to make the six-day trip back to Dhahran.

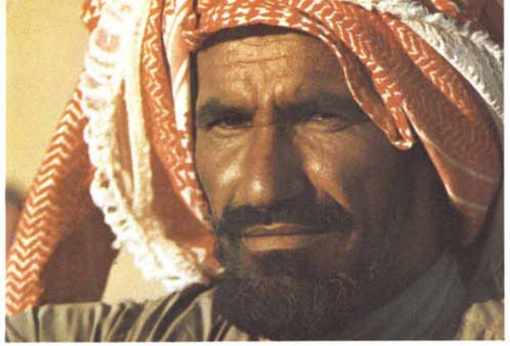
Daniel da Cruz is Chief Correspondent in the Middle East for the McGraw Hill News Service.

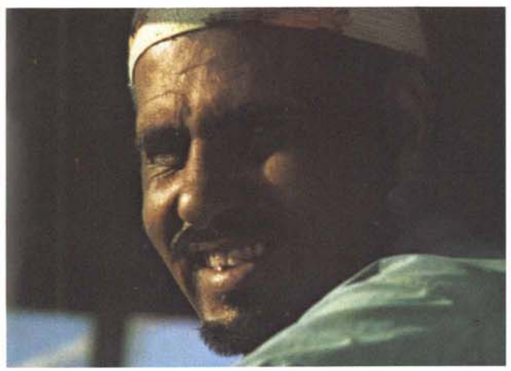
Long days of grueling driving that lead into night, and machines that can take it: the tractor has six wheels, six-wheel drive and power enough to go around; six tires could buy a Buick.

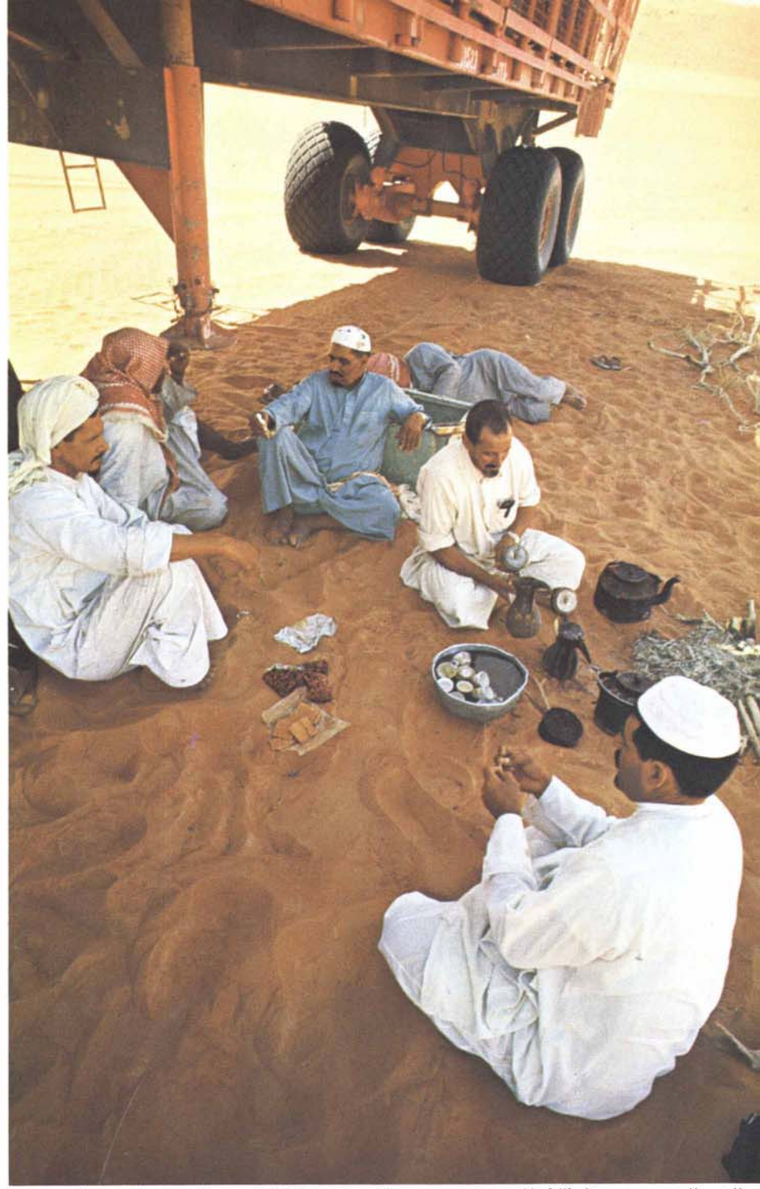




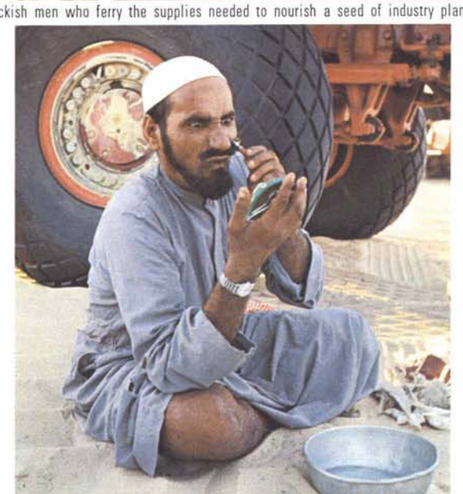


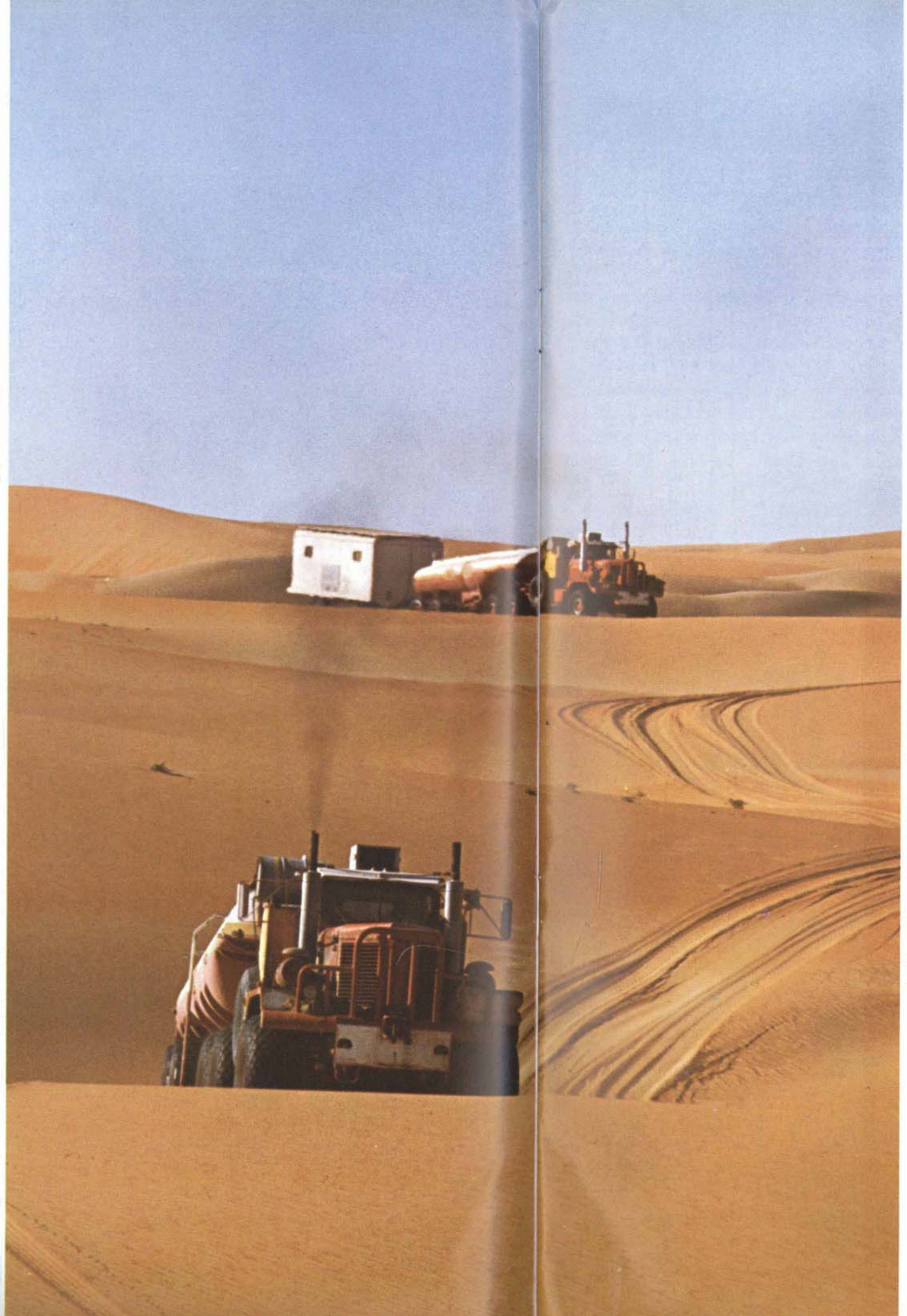


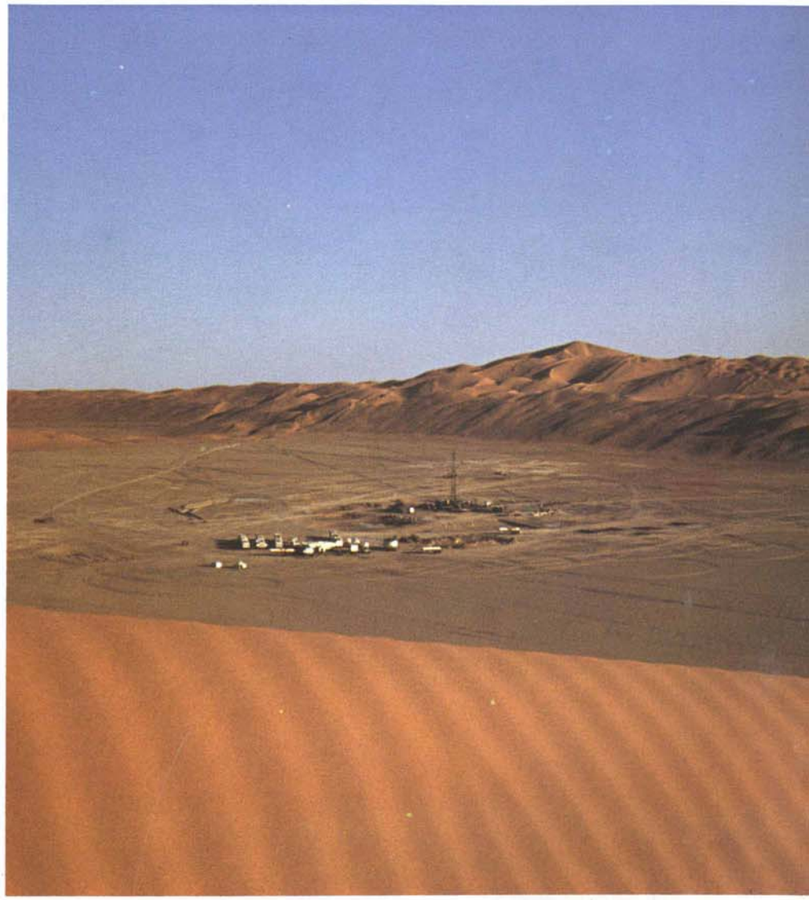




Men to match the machines: Aramco's trailblazers, the able, puckish men who ferry the supplies needed to nourish a seed of industry planted in an area once so void of life its name means "empty".

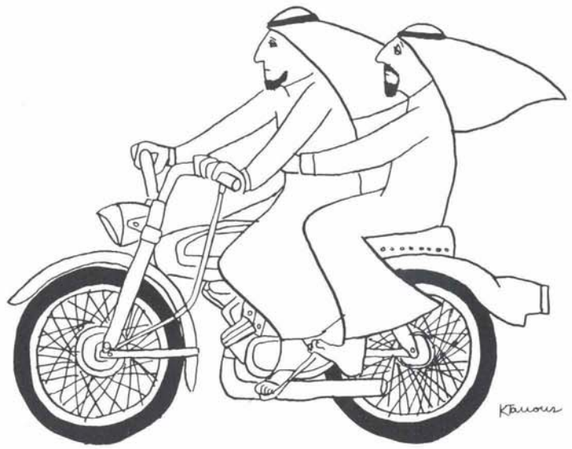






Like a fleet of cargo steamers, the convoy churns its way through one of nature's cruelest seas, through banks of dust, then mountainous, storm-tossed dunes, until a friendly tug helps it around a last treacherous cape towards its port of call, an island haven in the vast indifferent sea.

SHIP OF THE DESERT

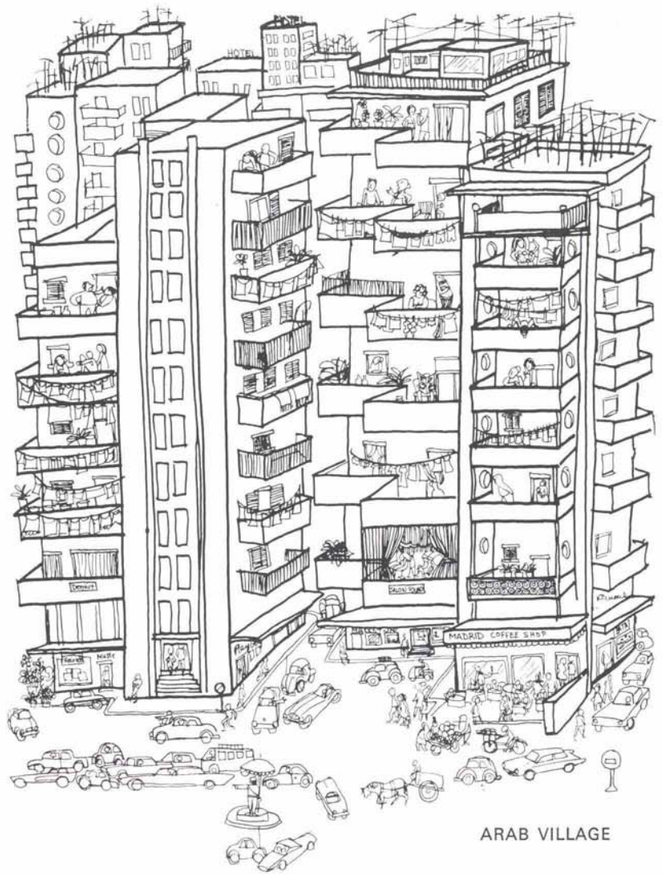


MRS. MOOSLIE'S MIDDLE EAST

Mrs. Mooslie (her name is really Kathe Tanous, but she happened to marry Mr. Mooslie) is an Arab by blood and marriage, but until recently she had never been to the Middle East. And when she did come it wasn't for very long. Less than a year, altogether, with only two weeks or so in Beirut. As her sketches on this and the next few pages may hint, however, it was long enough. In a few pointed sketches, no more than a few hundred brisk lines, really, she limned with a delightfully accurate eye dozens of those scenes that give life in the Middle East its amusing, different and very human flavor.

—The Editors

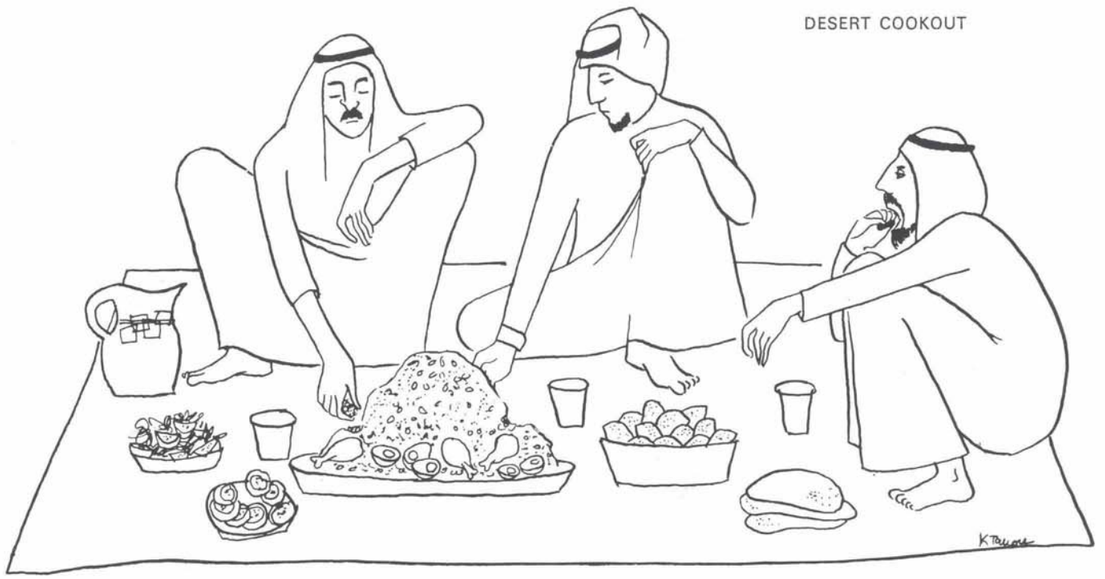
OASIS



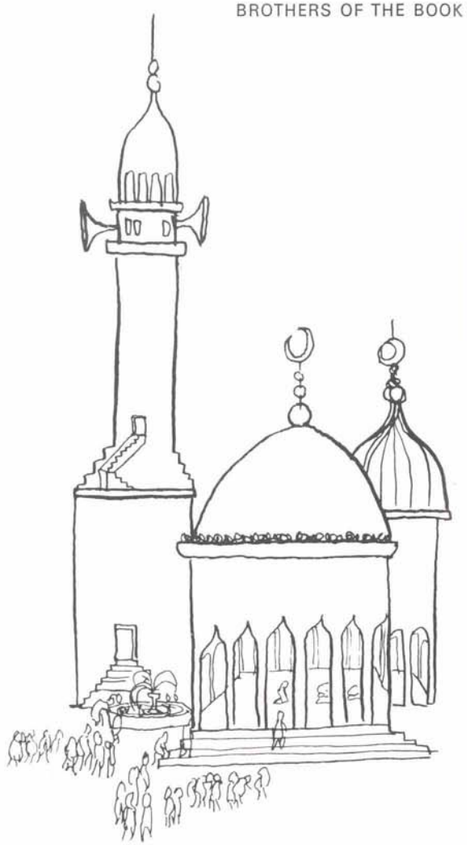
ARAB VILLAGE

BALANCED MEAL

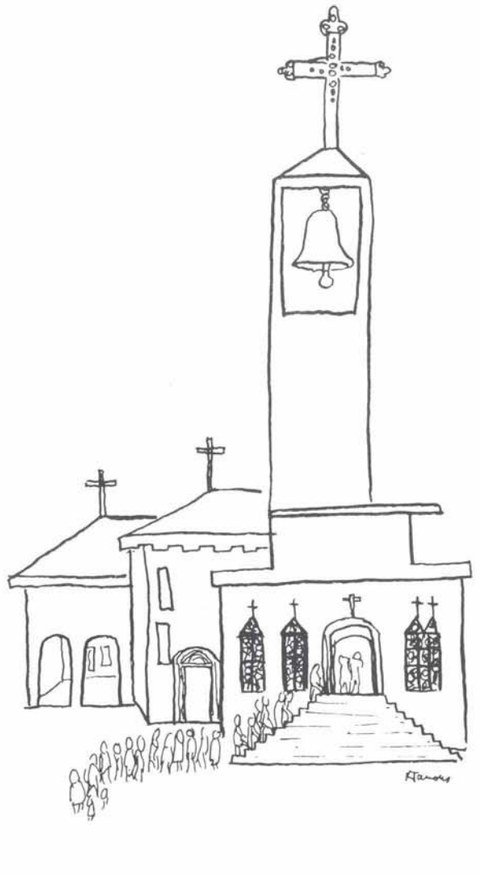
DESERT COOKOUT

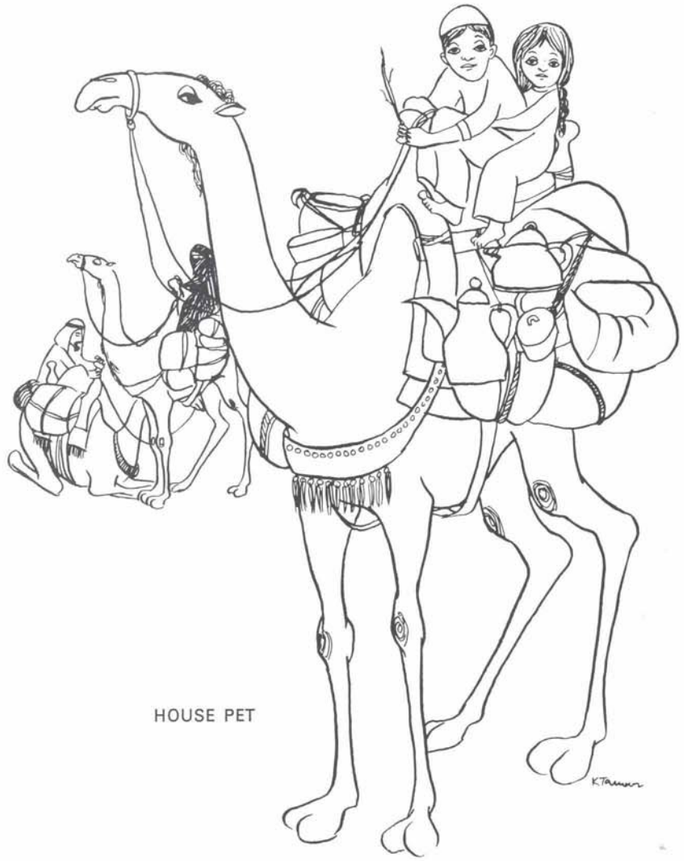


BARGAINS IN BAGHDAD



BROTHERS OF THE BOOK





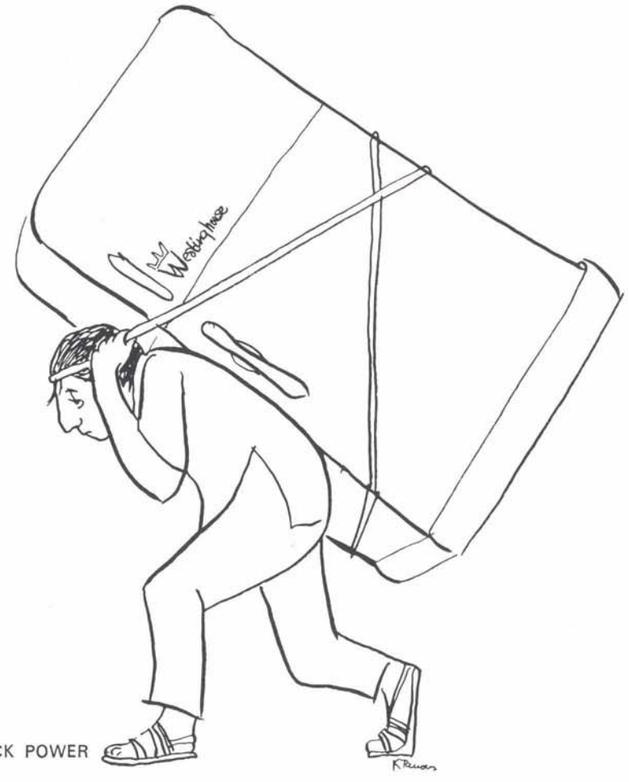
HOUSE PET

SUBURBIA ARABIA

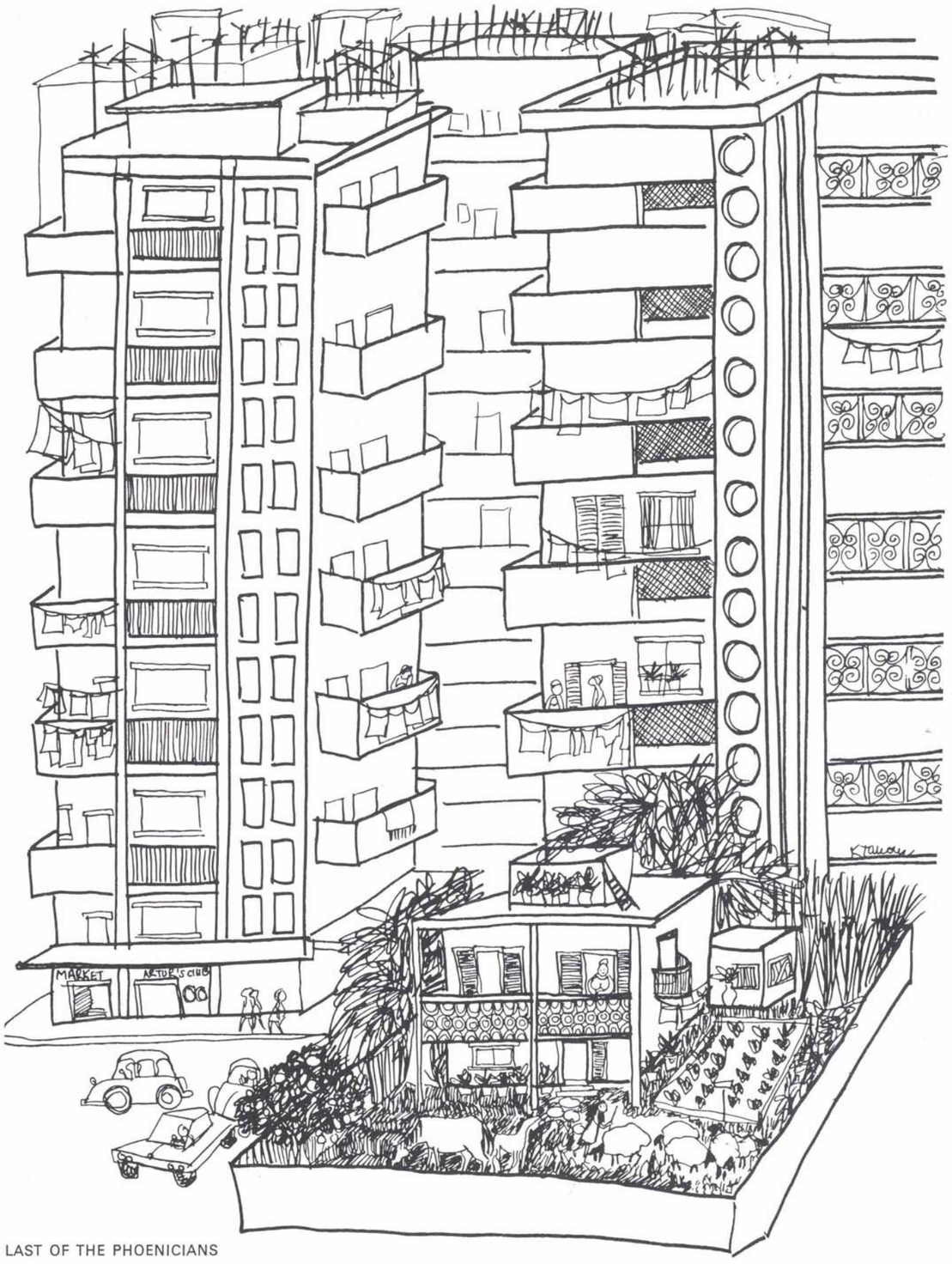
CROSS CURRENTS

OPEN CITY

... LIKE A WATER PIPE SHOULD.



BACK POWER



LAST OF THE PHOENICIANS

DISCOVERY!

the story of ARAMCO then

CHAPTER 9: THE SECOND WAVE

BY WALLACE STEGNER
ILLUSTRATED BY DONALD THOMPSON

SYNOPSIS—For the California Arabian Standard Oil Company the deep test well that the Company called Dammam No. 7 was the climax in the long, yet dramatic search for oil in Saudi Arabia.

The search had begun in the 1920's when various financiers, adventurers and engineers took the first bold steps that would eventually bring the Standard Oil Company of California, later Casoc, into the Middle East to negotiate an agreement with King Ibn Sa'ud, map the country, choose likely locations and begin to drill.

For the geologists and drillers in charge of such operations, these first years—the free wild years in a strange land—were exciting and memorable. For the Company they were excruciating—so much so that when Dammam No. 7 failed to produce anything after ten months of drilling, top executives ordered ace geologist Max Steineke back to San Francisco. There they put the crucial question to him: shall we go on with it or not? Max drew a deep breath and said yes, go on with it. Casoc did and a few months later brought in what was clearly a commercial field—to the delight of everyone from San Francisco to Riyadh.

Understandably King Ibn Sa'ud was particularly happy. He even decided to visit the oil camp and in April, 1939 set out with a 500-car caravan. Ten days later, he, his caravan and an entourage of approximately 2,000 people reached Dammam for ceremonies and feasting they talked about for years after. Two days later, His Majesty boarded the tanker D.G. Scofield *in Ras Tanura and turned the valve that would let Saudi Arabian oil flow into the world and the world flow into Saudi Arabia.*

In the meantime new problems had arisen. With the outbreak of World War II oil became more precious than ever and Casoc's negotiation teams were soon busily competing against avid spokesmen from Germany, Japan and Great Britain for their preferential rights in the uncommitted areas. The Company also had to find and train new men to replace the veterans who had come, found oil and gone. Some of those men were immediately assigned to help Saudi Arabia with a most acute problem: how to define frontiers whose accurate definition was suddenly of immense importance.

Saudi Arabia, a kingdom established over a period of a quarter century through the union of many amirates, sultanates and shaikhdoms, was never a clear image: its edges, or many of them, were blurred. The geographical unit of the Arabian Peninsula was not a political unit, and the precise line where the territory claimed by Ibn Sa'ud met the territory of Yemen, Aden, the Hadhramaut, Dhufar, Oman, Muscat, the Trucial Coast, or Qatar, was a matter of vague tradition and of agreements between Great Britain and Turkey that dated back to 1913 and 1914 and by which Saudi Arabia, for one, hardly considered itself bound. Where Ibn Sa'ud's territory joined the new state of Trans-Jordan was a matter of dispute. Where it met the shaikhdom of Kuwait, the buffer areas called the Kuwait and Iraq Neutral Zones, and the new state of Iraq, had been generally established between Ibn Sa'ud and Sir Percy Cox at the 1922 al-'Uqair Conference where Frank Holmes got the first oil concession for al-Hasa. The protocols of al-'Uqair described the boundaries between these northern neighbors and Saudi Arabia, but there had never been a survey, and the only available map was the Asia 1:1,000,000 Geographical Section, General Staff War Office 1917-1918, which Casoc surveyors had demonstrated to be inaccurate by as much as 25 miles at some points. Neither was there an adequate hydrographic chart of the Arabian side of the Gulf.

It was inevitable that the Company should take an interest in these blurred edges, for the concession ran to the boundaries of the country on south and east and north. But the Concession Agreement specifically prohibited any interference by the Company in the political affairs of Saudi Arabia, and the Company therefore could make no move to try to define its concession borders more clearly. It did, however, take the initiative in the hydrographic survey of the Gulf. And it did at the Government's request provide its surveyors on two occasions, once to survey in connection with an Iraqi party the border region along the north, from Kuwait to the Trans-Jordan border, and once to establish astronomical stations in the region around Selwa, at the foot of the Qatar Peninsula.

The hydrographic survey dated from the flurry of expansion in 1936, when Roy Lebkicher in London had several conferences with the British Admiralty to see if the Admiralty, either by itself or in collaboration with the Company, would complete its soundings of the Gulf waters on the Arabian side and survey the possible channels for the proposed company port at either Dhulaifain or Ras Tanura. Though the Admiralty was friendly and the Saudi Arab Government raised no objections to the notion of a joint British-Casoc survey, it shortly developed that the Admiralty did not have a ship or men available at the time. In the end the Company provided them, Captain Ike Smith of the *El Segundo* making the soundings and charts, and Charles Herring of the Engineering Department doing the coastal hydrography with a crew that at various times included Theodore F. Clausing, Jerry Harriss, J. Dougery, Hank Trotter and James Anderson.

There was a good deal of debate about the relative merits as a port site of Dhulaifain, which had high ground, and Ras Tanura, which was a long low sandspit sticking out into the Gulf. Ras Tanura won, and Lenahan applied for the reservation of land there for Company use. Subsequently, survey crews carried the coast hydrography along to the vicinity of the Neutral Zone border. They were at it off and on from July, 1936, to September, 1939, when Ras Tanura began to deliver oil to tankers.

By that time Casoc had begun to turn over its data to the Admiralty, and the Admiralty was incorporating the information in its charts. The channel for 20 miles was ultimately marked, not with the poles stuck in the bottom which had guided in the first ships with construction materials for Ras Tanura, but by permanent beacons. The lights were put in by Walt Miller and were serviced by tender.

Charlie Herring, who started out in charge of the hydrographic survey, was not there to see the end of it. The day after the Fourth of July, 1938, he and his wife, Pauline, started for Bahrain in the *Calarabia*. The weather was clear, calm, and hot; the sand bar, as they went half-speed through the shoals out from al-Khobar, was black with cormorants, and in one place they saw sea cobras lying inert in the water. Al Carpenter, in charge of the launch, loafed and smoked at the wheel; the four crewmen, barefooted and stripped to the waist, were making things shipshape. Cranky but very fast, the *Calarabia* straightened out in deep water and tore a long rip in the placid Gulf astern.

To Pauline Herring it was still romantic and exciting, almost as exciting as it had been when she was in charge of the drawing files in Socal's San Francisco office and catalogued draftsmen's sketches of the Arabian operations, before she met and married Charlie Herring. Now, sitting aft with her husband, enjoying the whip of the breeze and shouting to make herself heard, she was planning things she would buy in Bahrain's *suqs*.

About halfway to Bahrain, the *Calarabia's* whole stern blew apart, killing her instantly.

Herring, terribly injured himself, managed to swim to her and hoist her partly onto a floating hatch cover. The water was littered with smoking fragments and bits of gear; the launch was already gone. A little way off Al Carpenter, badly burned, was half-floating, half-treading water with a piece of wreckage for support, while two uninjured Saudi crewmen put together a raft from a half-burned life preserver, an empty fire extinguisher, and bits of planking lashed together with a piece of manila line. Onto it the three crawled or hooked their arms; onto it they pulled a third Saudi deckhand, hurt and half-conscious, and supported him there until he died.

The hatch cover that held up the Herrings had drifted a good distance away. Al Carpenter called, but got no reply. It appeared to him that Pauline was surely dead. He called again to Herring that they should tie themselves together, but Charlie either would not leave his wife's body or could not hear him. A little wind bobbed them, moved the floating wreckage around the edges of the oil slick. The great sky glared down, cloudless, nearly white with heat. Borne by winds or currents, the two little clusters of bodies drifted slowly farther apart.

About one o'clock that afternoon Dick Kerr came in from Bahrain on another launch and noticed that the *Calarabia* was not at her berth. He inquired of the pier gang pusher, who said that she had started for the island. The gang pusher had also seen smoke out in the channel, but thought it was a steamer at Manama. Kerr had imagination, and he was by that time a four-year veteran of Arabia, with a good notion of what trouble in that country could mean. He rounded up Oliver Boone and the two of them sent out boats to search. That evening they got in touch with Bahrain: the *Calarabia* had not come in. Bahrain too began sending out boats. In al-Khobar they cursed the restrictions on their use of radio for ship-to-shore communications.

About noon the next day Boone's boat found Carpenter and the two Saudi deckhands, still clinging to their patchwork raft. Carpenter, burned, broken, dreadfully sunburned, and in deep shock, was there only because the two Saudis had hung onto him for hours and refused to let him slip into the sea. Boone raced him to shore, while the other boats went on searching for Herring and his wife. That afternoon they found them floating close together, both dead. Still later they picked up the body of one of the crewmen, torn by barracuda.

That was the first bad accident involving Americans in Arabia. It saddened them all, for they were a tight little group, and Charlie and Pauline Herring had been very well liked. But the courage and endurance of the Saudi deckhands was the sort of demonstration that bound Arab and American together: there is no surer bond than shared disaster.

In the early days in the Arabian Peninsula, no one paid much attention to territorial boundaries. Even, in 1922, when Sir Percy Cox attempted to pin down Ibn Sa'ud's borders with Kuwait and Iraq, they came up with two Neutral Zones, one snuggled into the corner between Kuwait, Saudi Arabia and the Gulf, the other a diamond-shaped affair with its eastern point in Wadi al-Batin and its western point at Ansab (Nisab). From there the northern boundary of Saudi Arabia ran to Judaidat Ar'ar, from there to Mukur, and from there to the Jabal Anaza, situated in the neighborhood of latitude 32° North and longitude 39° East, where it terminated against the border of Trans-Jordan.

Since the land then was used for nothing but the grazing of sheep and camels, and the only valuable things along it were the water wells, which were used indiscriminately by Bedouins from both sides, no one cared exactly where that northern frontier lay and for 17 years no one really knew.

Now, however, with an Arabian oil concession reaching up to the line, and a Kuwait oil concession reaching down to it, it became vastly important. Realizing that ownership of an oil-producing structure that lapped only a mile or two over on one side or the other might be worth many millions of dollars, Saudi Arabia and Iraq decided they had better do something. They appointed a joint commission for a survey.

As was by now customary when a problem involving industrial or engineering know-how arose, the Saudi Arab Government turned to Casoc, and Casoc rented out two surveyors who, with Amir Abdul Aziz ibn Zaid (later Minister to Lebanon and Syria) as political representative, met the Iraqis at Wadi al-Batin on April 5, 1938, to launch a survey.

According to their instructions, they were to make, in conjunction with the Iraqi surveyors, sketch maps of the "corner" or "angle" points established by the Treaty of al-'Uqair, connect and reference these by a

system of triangulation along the boundary. They were also to collate topographical information regarding wells, towns, and prominent landmarks for about three miles on each side, and this the surveyors, Charlie Herring and Al Parker set out to do. Herring, however, was transferred three weeks later and assigned to the hydrographic survey that would, three months later, lead to his tragic death.

Herring's replacement, Dick Hattrup, a young engineer fresh out of Stanford, worked with Parker and the Iraqis until near the end of May, at which time they had finished about 40 per cent of the triangulation by methods which, according to mutual agreement, were to be of approximately third-order accuracy. The country along the border was broken and craggy, higher and rockier than the desert southward, and in winter grazed many camels that were gathered in summer around the wells.

They knocked off the survey during the heat of summer, returning to it in September and proceeding methodically through the completion of the Iraq Neutral Zone and on northwesterly until they were within 13 miles of Mukur in-Na'am, the Well of the Ostrich. And here they struck a snag. The al-'Uqair protocols carried the line from Judaidat Ar'ar to Mukur, but it developed that no one knew exactly where to start in Judaidat Ar'ar, which was a cluster of several wells. Did one start in the measured middle of these, or did one take some easily distinguished landmark within the area as a triangulation point, or did one establish by astronomical means the precise map-location of this lost dot of human settlement on the 1:1,000,000 War Office map and use that? The Iraq survey party, now under an Englishman named Godfrey, chose to establish their starting point by fixing the map-location; the Saudi Arab and Casoc party disagreed. So they went northwestward through the wilderness triangulating two distinct nets along lines a mile or so apart. And then, when they began to look around for Mukur, they found that the word *mukur* meant simply a well, and that there were two dozen localities containing the word *mukur* within a distance of 100 miles, and no clear indication which of them the treaty-makers had had in mind. Worse, the treaty-makers themselves had worked mainly on information provided by local guides so it was doubtful that *anybody* knew.

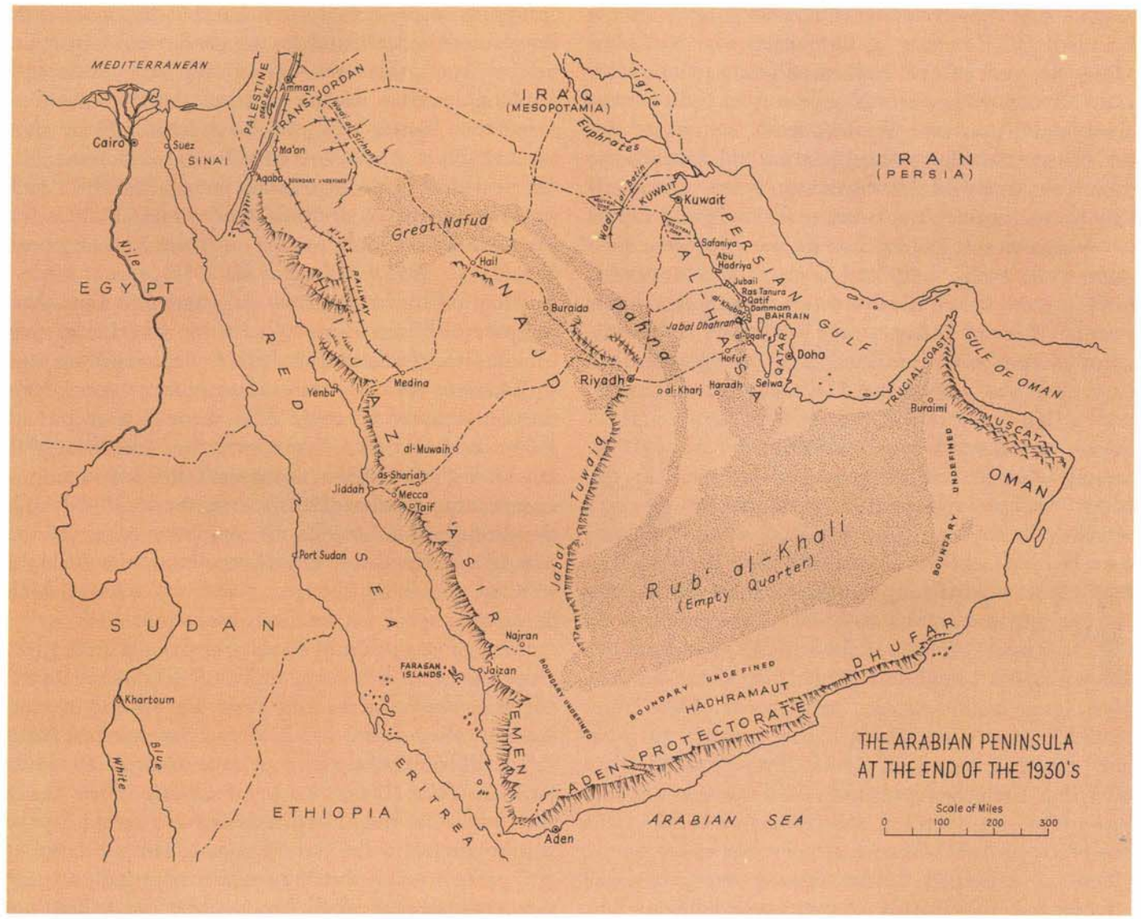
Since this was a problem not for surveyors but for politicians, the survey parties closed up shop for the summer in early June, 1939, and referred their difficulty to their respective governments. In July there was a conference at Riyadh. Nothing came of it, but the survey parties were ordered back to the field anyway, and from October 31 to some time in December Hattrup and his two helpers, John C. Wells and "Dutch" Schultz, sat in their camp near Mukur in-Na'am while the Iraq party sat in its camp 60 miles away, neither side able to continue and neither willing to give up the premises which had landed them that far apart. The government conferences went on, and the parties sat, sometimes driving back and forth to pay visits and exchange dinners. It was on one of those trips that they shot the ostrich.

Dick Hattrup accuses Roy Lebkicher of starting the story that he shot the ostrich. He insists that he did not shoot, but only shot *at* the ostrich, a featherless and most ungainly looking bird that popped up out of a wadi, escaped Hattrup's surprised and buck-fevered snap shot with the .22, but succumbed to a slug from the army rifle of the amir's soldier-servant a little farther down. Hattrup's glory is only partially dimmed by his miss: he is the only Casoc or Aramco employe so far uncovered who even got a shot *at* an ostrich, a bird which was then rarely found anywhere in Arabia except in the Great Nafud to the southwest of where they were then camped, and has never been seen since.

By that time, as it happened, the government representatives had come to an agreement, and soon the survey parties were able to get together again. Triangulation proceeded amicably to the Jabal Anaza, where a Trans-Jordanian delegation met them, listened carefully to the explanation of what had been done up there, and held its counsel.

Later, after years of negotiating, Saudi Arabia and Jordan agreed on their boundaries and conducted a joint survey which appears to have satisfied all concerned. But from the time when the parties shook hands and parted on Leap Year day, 1940, no more substantive accomplishments can be reported on the Iraqi-Saudi boundary. The survey data and the maps rest in the files somewhere, waiting political approval. Casoc and Dick Hattrup, having done their engineering part, and having no political part to play, went back to other jobs.

The best history of any action is the experience of the men who lived it. The history of Aramco in its early years is only very partially the agreements and contracts and transactions of the Company, its negotiations with the Saudi Arab Government and its



balance sheets and its effect on the world oil market and the policy of nations. It is also Fred Davies and Floyd Ohliger, Bert Miller and Krug Henry and Max Steineke and the other geologists, Bill Eltiste and Guy Williams and Jack Schloesslin, Felix Dreyfus and Dick Kerr, and after them the second and third and fourth waves of replacements and reinforcements—Jim Sutton, Les Snyder, Floyd Meeker, Dick Hattrup, Don Mair, Tom Barger, Walt Miller, Charlie Davis, James McPherson, dozens of others.

Perhaps what makes the early years memorable to them all is the freedom they had then, the absence of regulation and the bookkeeping of civilized business. On this frontier they were thrown on their own resources, they were given a job and trusted to do it, they worked twice as hard and faithfully as if they had been driven to do so, they had what in spite of the discomforts they knew was a grand job. They were attendants at the birth of a world. The "bug" might chase them out of Arabia, but frustration never would, and their morale was expressed in the words written home by a recruit who had just picked his way into their midst along al-Khobar's rough pier in 1936: "It's a great bunch of guys here, and the boss is a prince."

That feeling was shared by many recruits, some of whom didn't turn out to be such bad guys themselves: as a sample, one could do worse than record the experiences of Tom Barger, who would later become President and then Chairman of the Board of the Arabian American Oil Company (Aramco), the corporate successor to Casoc.

Tom Barger, brought up in Minnesota and North Dakota, got his first experience as a mining engineer in Canada and Montana. While he was riding out the depression working as a miner in Butte, he was hired

to go to Arabia by Doc Nomland, chief geologist of the Standard Oil Company of California, who told him: "Fifty per cent of the business is getting along with your partner, 40 per cent is surviving in the environment, and 10 per cent is professional." Nomland also told Barger that the Arabian venture did not look too promising, and that he might not be there long. If they pulled out of Arabia, however, he could expect to be sent to the Dutch East Indies. Meantime they wanted him badly in al-Hasa. Barger took Nomland at his word and broke all records on trips out to Arabia —he got there in 12 days—only to discover as he came down the pier, that the demand for his presence had been somewhat overstated. "A man with a big jaw and a big grin introduced himself as Steineke," Barger would relate later, "and said he didn't know exactly what he was going to do with me, but was happy to have me there." So much for breaking records.

For the next couple of days Barger read reports and tried to absorb in 48 hours the total known geology of the region. Then he drove up to Jubail with Walt Hoag in a Marmon-Herrington station wagon, and got bewildered and scared trying to get through the narrow, ditch-cut and crowded streets of Qatif. Two or three days after that, Steineke found a job for him: he could help make some astronomical observations and determine the precise location of several points down by Selwa, where an unsettled border dispute between Saudi Arabia and the British was creating friction. The Company was making these observations at the Government's request, as basic scientific data to be used in talks with the British.

On the way down, Steineke broke the rookie in with some more desert driving, first scaring him to death with roller-coaster churning across the dunes south of al-Khobar, and then turning the wheel over to him across the *dikaka* beyond al-'Uqair. Because he was scared of getting stuck in the sand, Barger drove like a madman. Steineke sat cradling the chronometer in his lap and let him go, at the mortal risk of his neck. He had a relaxed habit of letting a young man find his own way; it was a habit that endeared him to them for life.

Down at Selwa, Walt Hoag and Jerry Harriss, still hating each other cordially, were housed in a corrugated iron storehouse, Steineke dropped Barger and the chronometer off and drove back to Dammam, and for a couple of weeks the three surveyors made observations in the disputed zone. Barger understood that these were somewhat important to the Saudi Government; he did not understand until later how much political tension quivered along that border ready to be touched off, or that his first job in Arabia—so casually did important jobs fall to them in this environment—would involve him in an international problem that would smolder for years and eventually erupt in near-violence near Buraimi in 1955, and again in 1957.

They finished that detail and came into Dammam camp for Christmas. Hoag's distaste for Harriss was so unlimited that he demanded a transfer, and was sent to Jiddah to supervise the drilling of some water wells the Government wanted. That made a team out of Barger and Harriss—Tom and Jerry—and threw the raw recruit into the field in the most difficult, unknown and exciting section of all Arabia, the Rub' al-Khali, the Empty Quarter. On its northern edge, in the company of Harriss, a half-dozen *khuwiya* or Bedouin soldiers, a cook and houseboy and two or three Arab drivers, he spent the first four months of 1938.

No one else in camp except Harriss spoke English. Barger lived with his copy of Van Ess's *Spoken Arabic of Mesopotamia* open in his hand. Others had learned Arabic well and fast: Art Brown, Felix Dreyfus, Allen White and Bill Eltiste for four, and Harriss' erstwhile partner, Walt Hoag, best of all. Many others never got past the pidgin-Arabic stage. Steineke spoke Arabic always in the second person, feminine gender and present tense. But Barger learned it with a speed that astonished them all. By April he was talking not only with the soldiers and guides of their party, but with Bedouins whose dialects and pronunciation were markedly different from those of the townsmen.

Fortune could not possibly have been kinder to this tall, husky, and very competent young man. He had not been raised on the edge of the West for nothing; he had the proper frontier skills. He was a better shot even than Steineke, and there was no quicker way to win the respect of the Bedouins. He had a talent for laughter. And a good deal of his quickness at picking up the language came from the fact that the Arabs respected him and talked freely, and the further fact that Barger was a shirt-sleeve democrat fascinated by the Arabs and their rugged life. Also he was lucky in the guides assigned to the party. One was Abdul Hadi ibn Jithina, a member of the wild Murrah tribe that had sheltered Ibn Sa'ud's father when he was in flight from the Rashidi. The second was an old 'Amiri, Salim Aba Rus, wrinkled and bearded like a wise man out of the Bible. The third, who rapidly became Tom Barger's close friend, as he was Steineke's, was Khamis ibn Rimthan.

In few places on the world's surface could an American meet so much that was strange, unwritten, unknown. Only two Europeans had ever crossed the Rub' al-Khali: Bertram Thomas in 1930 and Harry St. John B. Philby in 1932. Barger and Harriss, working its northern edge from a base camp at Selwa, were only a few years behind the first western explorers, and in the course of their work they inevitably touched dozens of places where an American or European foot had never stepped. Many of the Bedouins who came warily out of the great wilderness into their camps had never seen a car. Old Salim the guide had never ridden in one until they came. About the only thing he knew about the foreigners was that they could cure ailments, and the first night Khamis brought him in he requested treatment for three: his back bothered him, he couldn't hear out of one ear, and he was constipated.

In those days, field parties carried a variety of drugs, and geologists prescribed with great confidence for many diseases. Old Salim's back was easy; analgesic balm would do the trick. His ear was harder. When Jerry Harriss questioned him, he found that Salim had once been a professional pearl diver, and that he hadn't heard out of that ear for seven years. Jerry asked him how the other one worked. It worked well, said Salim. "God is merciful," said Jerry. "Praise be to God that you can hear out of one ear at least."

That didn't exactly cure Salim's ear, but it left him without any recourse except to admit that God *was* merciful. Now the constipation. They gave him a compound cathartic pill. Salim appeared in the morning and complained that he had not been cured. Vowing to cure him or break records for effort, they filled a tomato can half full of a mixture of mineral oil and castor oil. Salim sniffed it and balked. When they warned him of all the things that would happen to him if he didn't drink, he said he was afraid his stomach would throw it out again. Barger found an orange, the last one of a sack left by Steineke when he visited the camp. Salim had never seen an orange before, but eventually was persuaded to drink the oil and eat the orange for a chaser.

In the morning he was wreathed in smiles. His stomach had "walked." And all through the next two or three days he talked earnestly to Khamis in the back seat as they drove. He had never in his life felt that he needed more than a camel, a woman, and a smooth piece of sand to keep him happy. He had now added oranges to the list.

Down in the Khor Qada region, near the great salt flat of Muttia, where the wells gave only salt water and tribesmen of al-Murrah lived for months on camel's milk, the party stopped at a salt well to fill their empty drums and cans with water for the car radiators. A band of Bedouins was there drawing water for their camels, and among them was an albino, a man who looked like a Scandinavian, with a snow-white beard and a pale skin reddened by exposure. They christened him the Lost Engineer because Khamis jokingly suggested that he was an American *muhendis* (engineer) whose car had broken down.

But *they* were the American engineers whose car had broken down: a few miles farther on they broke the drive shaft on their station wagon. Deciding to go on with the traverse in their other cars and return to this one later, Harriss took Abdul Hadi ibn Jithina and Ibrahim the driver back to the well to find a Bedouin to help guard the station wagon. They found only the Lost Engineer and his family still there. A colloquy ensued.

"*Peace be unto you.*"

"*And to you, God's peace.*"

"*How are you?*"

"*I am very well. How are you?*"

"*I am very well.*"

"*Praise God. God give you health.*"

"*God give* you *health.*"

"*God give you eyes.*"

"*God give* you *eyes.*"

"*God give you strength.*"

"*God give* you *strength.*"

These amenities went on for another five minutes. Then: "*We have a broken car, and come to see if you will assist in watching it.*"

"*For how much?*"

"*A rupee a day.*"

"*I will come for two rupees.*"

"*One rupee.*"

"*But it is necessary for me to have two rupees.*"

"*One rupee is the price.*"

They kicked this around for ten minutes. The Lost Engineer was sad at such a low offer until they took pictures of him and his family, and then he agreed to come for one rupee while his family looked after the camels.

Leaving Ibrahim and the Engineer, the party went on south-southeast for about 50 miles, Khamis

being the guide, though this was country he had never been in before. The second day they traveled about 60 miles in an angled course southeast, then south, then southwest, and finally northeast. The third day they drove northwest until noon, turned north a while, and then swung northeast to complete the traverse. For three days they had had no clear landmarks, no *jabals* or wadis, nothing but an expanse of rolling sand hills. Toward evening, Barger asked Khamis to give them a compass reading on the station wagon they had left. Khamis squinted a moment and raised his arm. "How far?" Barger asked. Another moment of thought. "About eight miles," Khamis said.

To test his "Bedouin triangulation" they pointed the cars on the course he set and took off across the roadless and characterless country. At a little more than seven and a half miles they came upon the station wagon. With some guides, they would have been able to rely on neither the direction nor the mileage, nor even the recognition of landmarks. The three they had in the Rub' al-Khali were all good, and Khamis incomparably the best of them. They learned to trust him as fully as they trusted their compasses and speedometers.

In camp it turned out that Ibrahim was disgruntled. He had been visited during their absence by many of the Lost Engineer's friends and relatives, all of whom, it seemed, had to be fed—they were *mukhtal*. Being told this, Ibrahim had fed them without protest. In his dialect, *mukhtal* meant "crazy." He didn't learn until too late that in the Lost Engineer's Murrah it meant only "hungry."

During the evening the Engineer demonstrated that he was a true Arab, and no Scandinavian masquerading. He reached over and punched Harriss on the leg.

"*Ya, Harriss! And will you pay me?*"

"*Yes.*"

"*Ya, Harriss. How much will you pay me?*"

"*Three rupees for three days.*"

"*But aren't you going to pay me six rupees?*"

"*No. The price was one rupee a day.*"

"*But I am a poor man.*"

"*The agreement was for one rupee a day.*"

A shrug. It was evidently useless. But it was worth a try.

Tom Barger was still with Harriss down in the Rub' al-Khali when the word came in March 1938 that No. 7 was a big producer. That was fine, but it did not immediately or drastically affect Barger's life, except possibly to keep him from being sent on to the Dutch East Indies. He went on doing the jobs that needed doing. For a while, after a brief return to the Dammam camp in April, he was doing surface mapping at Dick Kerr's seismograph camp at Abu Hadriya. When he had finished that he accompanied Max Steineke and Max Thornburg, then vice president of Caltex, on a trip up the coast as far as the border of the Kuwait Neutral Zone. None of their parties had been up to that boundary on the ground; Barger mapped it, and thus had a part in the establishment of another of Saudi Arabia's uncertain borders.

Back in the Dammam camp, he cleaned up the maps of all the field work he had participated in that season while Jerry Harriss prepared the geological report. Barger also prepared an appendix in which he included, with the brashness of youth and a six months' acquaintance with the country and with the Arabic language, a description of the flora and fauna of the Rub' al-Khali, a list of the Arabic names of the plants and animals, and a list of geographical names in Arabic, using an Indian interpreter in an attempt to get the spellings right. Khamis, who later in his career would become the chief adviser to the Arabian research section of Aramco on matters of place names, was considerably amused.

The geological report was still unfinished when Steineke sent Barger and Harriss off to Kashmir to follow the example of the first geological parties and do their paper work in the mountains. Harriss did not make notable progress on his report during their month at Srinagar; the last three days of their leave they spent down on their hunkers in a Karachi hotel room, frantically drawing contour lines onto maps. But they still didn't have it done when they arrived on Bahrain, and when Harriss had to go into the hospital there for an operation there was still further delay. Then Harriss fell in love with his nurse, a fact which made his recovery remarkably slow. In mid-September he was still not back, and the report was still not done. Rather than let him sit around doing nothing, Steineke sent Barger up north of Abu Hadriya to help Bill Seale measure a base line from which to begin an accurate triangulation net.

It sounded simple, Barger said later, but almost from the day he arrived it began to go sour. One day, for instance, after staying up all night futilely trying to stave off the arrest of their mechanic Shaubi (the man with the "spare wife") and their cook for a local offense, they returned to learn that they had a dead tractor out by the seismograph camp. "Just stopped," the driver said.

They also learned the heat waves were so bad they were unable to work in the daylight and would have to work that night.

Greasy with sweat, Barger rolled in and tried to get a few hours of sleep. Almost immediately Booger Arnold came over from the seismo camp and woke him to suggest going gazelle hunting. Bill Seale went instead and Barger went to sleep again. In a few minutes he was being thunderously thumped by Dick Kerr, overflowing with good nature and noise. He watched Kerr and Jim Cary eat lunch, and at 1:30 took to his bed again, his head thick with a cold and his prickly heat in full blossom. That evening when he cranked on the generator for the radio transmitter he couldn't make it go. Two days before he had had the whole thing apart. In his whole time on this station he had got about two messages through to Dhahran; most of the time what he sent was as intelligible as a fire siren.

That night he took the radio over and had John Lewis at the seismo camp work on it. The next morning he spent cleaning sand out of the tractor's carburetor and getting it started. When he returned to camp to communicate with Dhahran, the generator had conked out again.

He sat and looked at the generator a long while. He had had it apart enough times to know that it was useless to take it apart any more. It was cranked by a rope wound around a flywheel, like an outboard motor. After long thought, Barger jacked up the rear wheel of one of the pickups and started the engine and put the pickup in gear. Then he pressed the generator's flywheel against the rear wheel of the pickup, which spun it much faster than he could do with the rope. After a little tinkering, he got it running, and could turn his attention to greasing a couple of the Fords, a job Shaubi would have done, if still at liberty. And on the following evening Ramadhan would begin. That meant workers tired from fasting by day and staying up to eat at night.

It was a peculiar way to be a geologist, but it was the standard routine for making veterans in Arabia.

TO BE CONTINUED

From the dark holds of the *S.S. Concordia Star* last August the ship's cranes plucked a cargo that had taken nearly ten years to get to New York: 661 wooden crates containing the carefully packed stones of Egypt's exquisite Temple of Dendur.

At that stage, of course, the huge stones—some weighing six and a half tons—didn't look like much of a temple. Or even later, when they were stored in an inflated plastic "bubble" outside the Metropolitan Museum of Art. In fact, according to Dr. Henry G. Fischer, the museum's curator of Egyptian art, reconstruction will not be completed until 1972. Then, however, the public will finally see the prize for which the now-famous "Dendur Derby" was run.

The "derby", as the press tagged the long, earnest competition among museums and cities to get possession of the temple, did not really begin until 1965, when Egypt formally offered the temple to the United States as a gesture of thanks for the $16 million American contribution to the rescue of the Abu Simbel monuments. But the Metropolitan had been off and running long before that—ever since 1959, when Dr. Fischer saw and recommended Dendur during a trip to Egypt to scout for monuments the museum might wish to save from the waters of the Aswan High Dam. Later, through Dr. Fischer, the Metropolitan had also pressed successfully for Dendur at a meeting of experts to discuss which monument the United States should accept from Egypt.

On the matter of a site, however, the Metropolitan was less successful.

As a curator, Dr. Fischer saw the temple as a museum exhibit since it was small enough to be placed inside a museum. (Because it was only 80 feet long and a maximum of 26½ feet high, one correspondent tagged it a "mini-temple.") President Kennedy's assistant, Richard Goodwin, on the other hand, was inclined to picture the temple as it might look on the banks of the Potomac. Thus even before the temple was offered, the lines were drawn for a debate on what eventually narrowed down to this question: Should the temple be placed outside in Washington or inside in New York?

Despite its early interest the Metropolitan made no official move until 1965 when the White House decreed that institutions or cities interested in the temple would have to pay all expenses. Then museum officials met and announced that the Metropolitan would build an addition to the north wing, open an entrance from the existing exhibition of Egyptian antiquities, and pay for the dismantling of the temple, (already effected by Egyptian architects) plus all costs of transporting the stones from the Nile to the Hudson.

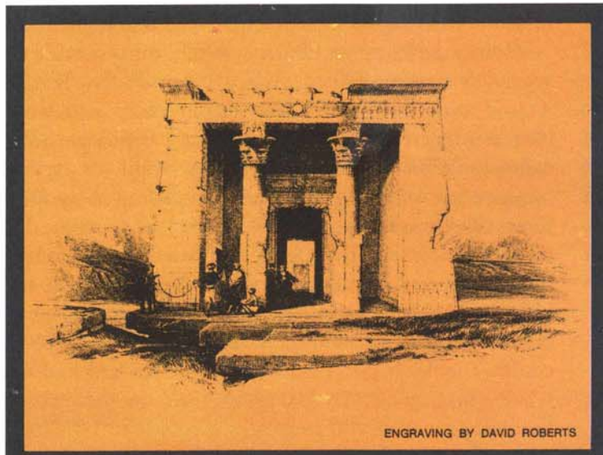
Another year elapsed, however, and nothing happened. Then President Johnson picked a five-man committee of experts to decide who could best rebuild it, display it, preserve it and, of course, afford, what for the Metropolitan eventually came to about $2 million. It was a high sum but as Dr. Fischer said: "You can't set a value on temples these days; they don't come on the market."

At the Metropolitan, meanwhile, New York Park Commissioner Thomas Hoving had been named director of the museum. He was not scheduled to assume his duties for some time, but to help get Dendur he pitched in early. One of his contributions was a scheme to transform the museum's projected gallery into a huge outdoor glass display case—an idea that softened resistance to the idea of relocating the temple indoors and gave the Metropolitan a definite edge over such contenders as the Smithsonian Institution of Washington, the city of Memphis, Tenn., and others.

Actually all the Metropolitan's arguments were impressive: the size and quality of the museum's existing Egyptian collection, the presence of the Egyptological library and the Institute of Fine Arts and the enormous number of visitors certain to see the temple (more than five million annually). But it was the matter of conservation that finally outweighed Washington's natural claim to any gift to the nation. The Smithsonian Institution, by then the major contender, was unable to prove that the temple's fragile sandstone could safely be exposed to the climate of Washington—or to vandalism. On April 27, 1967, President Johnson decided in favor of the Metropolitan, and in the fall Dr. Fischer went to Egypt to arrange to transport Dendur to the United States.

Although by then the third Arab-Israeli war had broken out and diplomatic relations had collapsed, Dr. Fischer had no difficulties with the Egyptian Ministry of Culture. It cooperated fully in employing the international group of companies which had moved the Abu Simbel monuments. And although it was an exacting job—each block had had to be absolutely immovable and provided with shock absorbers—they were ready for shipment within a year. At last on July 21, 1968 the *S.S. Concordia Star* carried the precious stones westward, as a *New York Times* correspondent wrote enthusiastically, "though the pillars of Hercules ... to a land unimagined by the men who hewed them."

William Tracy is the Assistant Editor of Aramco World Magazine.



ENGRAVING BY DAVID ROBERTS

A TEMPLE FOR THE METROPOLITAN

BY WILLIAM TRACY

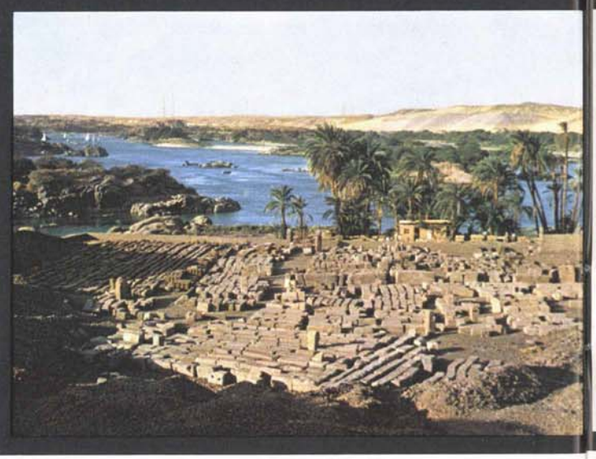
PHOTOGRAPHS BY DR. HENRY G. FISCHER
Courtesy of the Metropolitan Museum of Art

"You can't miss it. A big heap of stones, Eightieth Street and Fifth Avenue, just south of the Museum."

DRAWING BY ALAN DUNN; © 1968 THE NEW YORKER MAGAZINE, INC.

At Dendoor (sic), when the sun is setting and a delicious gloom is stealing up the valley, we visit a tiny Temple on the western bank. It stands out above the river surrounded by a wall of enclosure, and consists of a single pylon, a portico, two little chambers and a sanctuary. The whole thing, is like an exquisite toy, so covered with sculpture, so smooth, so admirably built. Seeing them half by sunset, half by dusk, it matters not that these delicately-wrought bas-reliefs are of the Decadence school.

— A. Edwards



"You can't set a value on temples these days; they don't come on the market."

BY ELIAS ANTAR / PHOTOGRAPHY BY TOR EIGELAND

A DAY IN THE LIFE OF IBRAHIM BADRAN

Not all refugees live in camps.

In the past 20 years, in fact, two thirds of the 1948 refugees—some 450,000 people—have refused to stay in the camps. They have gone on instead to build new lives in other Arab lands.

But these were the fortunate ones. The doctors and teachers. The masons and carpenters. The educated and the trained.

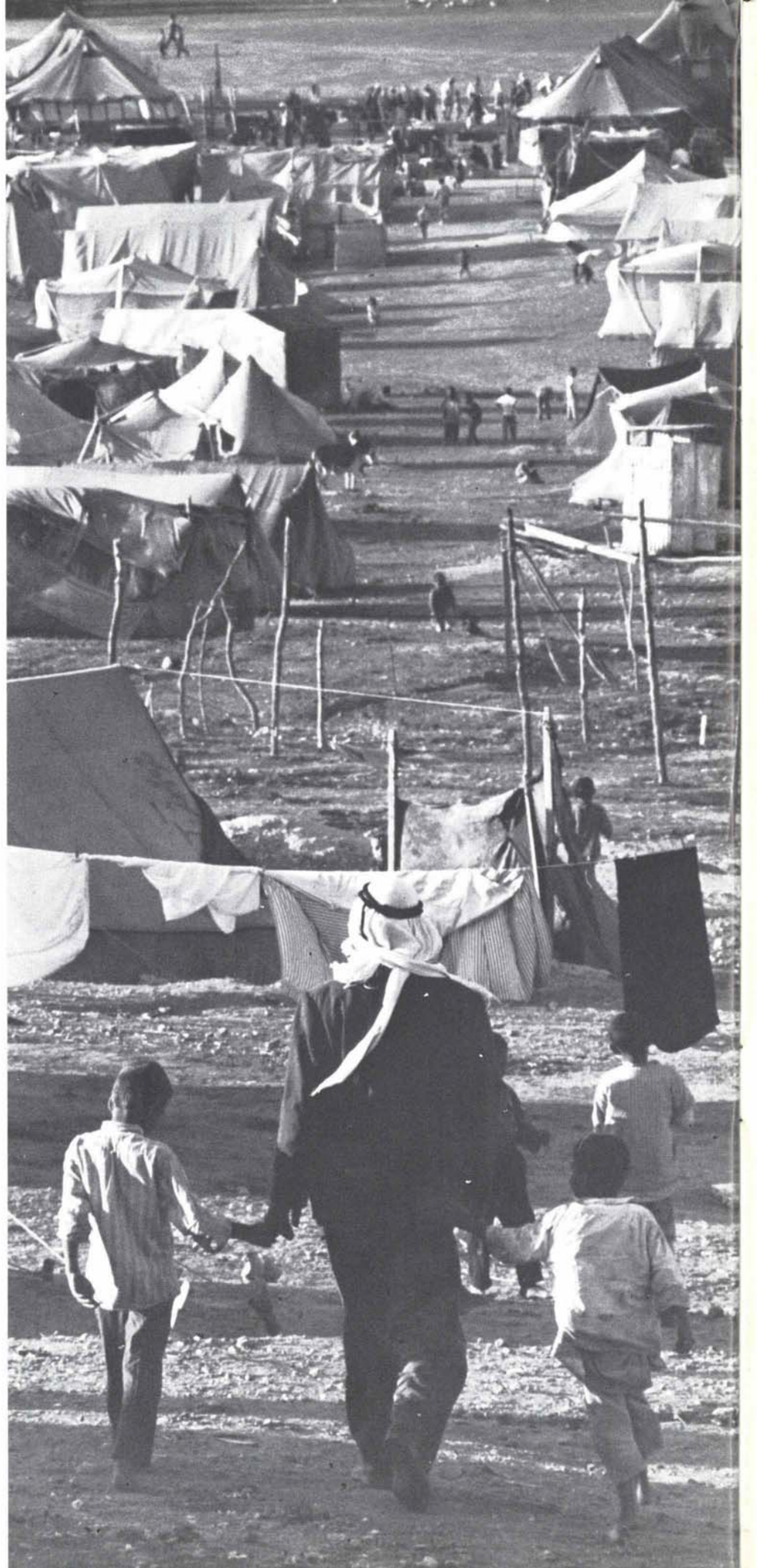
The others, farmers and laborers, the unschooled and unskilled, could not leave. They had to stay in camps; there were no other options. And although they number about one million now, they still have no other options. They still have to stay in camps.

This is the story of one of them.

* * *

According to Cassell's English dictionary, a refugee is "one who flees to a place of refuge, especially one who takes refuge in a foreign country in time of war or persecution or political commotion." In the Middle East, that definition certainly fits the refugees from what was once called Palestine. All have fled to a place of refuge in time of war, persecution and political commotion. And if the Arab countries in which the refugees live are not really foreign, they are still not home.

But beyond that general description, there are many different kinds of refugees. Some are cabinet ministers, politicians, administrators or government bureaucrats. Others, over the years, have become doctors, engineers, educators, lawyers, scientists and businessmen. Many are successful. A few are wealthy.



He met two of his children just leaving their classes.

The well-off, however, are a distinct minority and their daily lives are no different from those of men of their position anywhere else in the world. The rest, unfortunately, fit only too well the general concept of the refugee: penniless, destitute, bitter people who live in teeming, squalid camps, who work when they can find any but usually cannot, and who spend their days in hopeless discouragement. People who have done their best in a situation where their best was of no avail. People like Ibrahim Ali Badran.

Ibrahim Ali Badran is a farmer. Until 1948, he grew olives, figs and grapes on seven acres of land in Beit Suosein in the Ramleh district of Palestine near Tel Aviv. With the creation of Israel and the outbreak of war he fled across the mountains to Jericho, and ended up in one of the three great refugee camps that soon grew up there.

Ibrahim was sure then that he would return to his farm when the war was over. But when the war did end he learned he could not go home. He tried, he said, but found he could not, and the years began to go by.

In Jericho, on the West Bank of the Jordan River, there was not much for another farmer to do. Ibrahim had no money and in any case there was no land for sale. From time to time he hired out as seasonal help to some local farmers, but there were already too many men for the little arable land available and now there were thousands of refugees looking for work too. As the years went by, however, the refugees, with the help of the United Nations Relief and Works Agency (UNRWA), developed an economy of sorts and a peaceful, if not bountiful, life.

Then two years ago, in June, 1967, the Arab-Israeli war broke out for the third time and again the refugees fled, this time across the Jordan River to the East Bank, and sought shelter in an emergency tent city thrown up as soon as the fighting was over by UNRWA and the Jordan government. Later they moved to a camp in sight of Jericho.

In the new camp it was as though the hands on the clock had been turned back 19 years. Except that it was worse. Now the best land was on the other side of the river, along with the empty houses, the deserted schools and clinics. On the other hand, there was no better place to go, so Ibrahim stayed on—stayed on, that is, until February, 1968 when the unceasing Israeli-Jordanian clashes across the river began to mount in fury. Then he and his family fled one more time, settling at last in a camp a few miles outside Amman, the capital of Jordan. There in an UNRWA tent 12 feet long by 9 feet wide, he again took up the monotonous day-to-day existence that is the lot of refugees from Vietnam to Biafra.

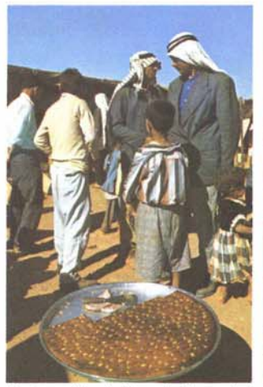
One day, this spring, Ibrahim and his family awoke early. Farmers to the bone, they had never quite broken the habit of waking before sunrise. While his wife fed the baby Ibrahim dressed, went outside and walked 50 yards to the nearest latrine. It was a corrugated iron and cement cubicle that served its purpose and may even have met the minimum standards of health and sanitation. But the stench was overpowering.

Returning to the tent, he found his wife had prepared a breakfast of bread and cheese and placed it in two aluminum plates on the canvas floor. The family sat in a circle and ate silently, the children rather reluctantly. Ibrahim's eldest son, 16, got up first, said goodbye and walked to the line of buses waiting outside the camp, waiting to take passengers to Amman.

Ibrahim's son often went to Amman. There was little else for him to do. He tried to look for work occasionally but it was so obviously useless that after a while he rarely did more than go through the motions. There were just too many people, and too little work.

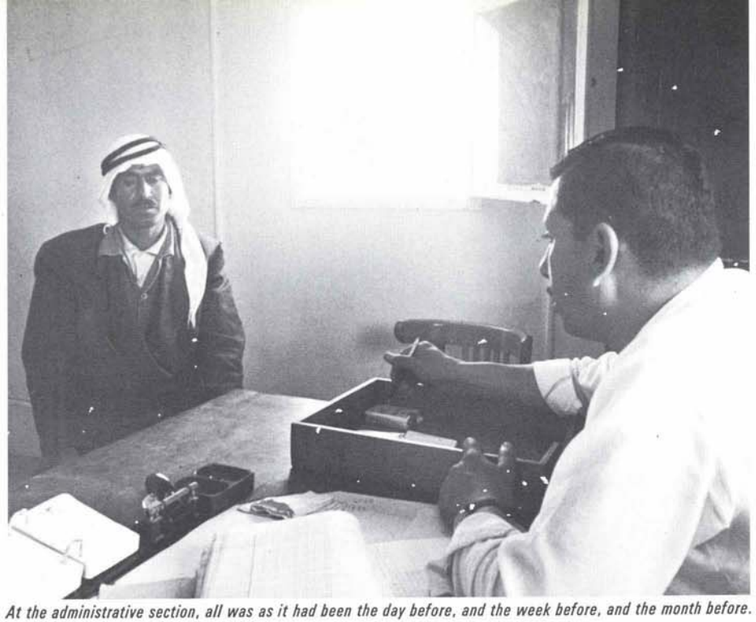
The children left next, the older ones off to their tent school, the younger ones outside to play in the brown dust. Some children did not go to the school tents set up at the edge of the camp, but Ibrahim insisted that his children go. His wife left last, hoisting an empty petrol tin onto her shoulder and trudging off to a pump to get some water. Ibrahim was alone.

For a few minutes he sat quietly in the tent, sipping his coffee. Then he moved to a rock outside the tent and lit his first cigarette of the long day. Now what?



He turned back through the market place with the usual crowd of men and women milling around.

They listened to one station, then another. Nothing new.



At the administrative section, all was as it had been the day before, and the week before, and the month before.

For Mustapha Hussein, a portly 45-year-old field laborer from the Jerusalem area, that question did not arise, at least for today. He had work to do. He was going to dig a latrine.

With two friends, Hussein had managed to land a subcontract to dig five latrine pits in their section of the vast camp. The contract had been awarded by UNRWA to a contractor, and he in turn had handed it to the three men. They would get half the money and the contractor the other half.

Hussein and one partner, his friend Abdullah, were already halfway down the third pit that morning and their partner was starting on the fourth. Hussein met his friend at the worksite, and Abdullah dropped down into the hole and began digging with a pickaxe. They were supposed to share the digging, but in fact Abdullah did most of it. A lean and grizzled 60-year-old, he fitted into the cramped 7-foot hole much more easily than the portly Hussein. But Hussein was not idle. Hitching his striped silver-and-blue ankle-length robe to his belt, he began to carry the earth away in a rubber bucket made from an old truck tire. "It's hard work in this packed earth," Hussein said. "If we strike rock halfway down, we have to start all over again and we don't get paid for the unfinished hole."

The three men would each get the equivalent of $3.20 for the whole job —"barely cigarette money" as Abdullah put it—but for that day at least they had work and they made the most of it.

* * *

Ibrahim finished his cigarette and walked to the administrative and food storage sheds at the edge of the camp. Maybe something new was happening. As he walked, he remembered that his turn to collect his family's monthly rations was coming up in two days. He was used to the routine, and it did give him something to do, but he didn't like it. It meant rising at 4 a.m. to get a place in line and then waiting until 10 a.m. when the food distribution began. He knew that by the time his turn came he would be sweltering, his headcloth would be brown with windblown dust and he would be cursing the U.N., the government, the police—everyone, in short, who could remotely be blamed for the fact that he, Ibrahim, had to stand in line for food for his family. Besides, he felt like everybody else that the rations weren't enough. The biggest item for each member of the family was 22 pounds of flour, plus small amounts of beans, sugar, rice and 13 oz. of oil. On rare occasions there was some jam, or a couple of tins of preserved fruit.

At the administrative section of the camp, all was as it had been the day before, and the week before, and the month before. Nothing new. He turned back past the UNRWA supply sheds with the usual crowd of men and women milling around them, and walked through the market place of the camp to a makeshift coffee house of canvas and wooden poles which had been erected by an enterprising refugee with a little capital and was run by another. There, in the din of the blaring radio and the cries of the vendors outside, he sat down with some friends for a cup of coffee.

As usual, the talk was of the latest developments in the Middle East. Ibrahim didn't own a radio, so he asked what the morning newscasts had to say. There wasn't much but they discussed it anyway and decided as they did every day that this state of affairs couldn't go on for much longer. Something had to happen. They had to go back home soon. They had to.

The wistful ritual over, the men retired to the shade of a large tent in a quieter part of the camp for a game of *sija*, a variation of checkers. They usually traced out the pattern for the game in the dust and played with white stones and bottle caps for counters, but recently they had gotten hold of a real set. Ibrahim played a bit but then became restless. He withdrew and walked over to a noisy crowd of refugees he had been noticing for some time.

The people were gathered around a group of visiting officials from Amman, clamoring and reciting their woes.

They decided as they did every day that this couldn't go on much longer.

Ibrahim thought of pressing forward and asking them if they could provide any work but decided against it. In his experience, such visitors never could.

* * *

At another camp 25 miles away, Hafez Khomayyes was not so diffident. He stepped forward eagerly and invited a visitor from the city into his tent for a cup of coffee. His expansiveness was automatic, for Khomayyes had been a candidate from Bethlehem in the last general elections and despite his reduced circumstances, the smooth air of the politician still clung to him.

A man in his 50's, Khomayyes was an incongruous figure in the general drabness of the camp in his long white robe and city shoes.

"I have no money," Khomayyes said simply. "I brought some with me when we left, but I have spent it all. Now I live on U.N. rations, and some friends from Bethlehem who live here in the camp also help me out. They are refugees too but they are more fortunate than I am. I do nothing all day," Khomayyes added. "What is there to do? I almost never go to the city because there is no work to be had there. There is none here either."

* * *

Turning in sudden irritation, Ibrahim strode past the crowd and headed back to his tent. On the way he met two of his children just leaving their classes. They were going to the camp kitchens for their hot noonday meal, a service provided by the Jordan government through UNRWA's facilities. He started along with his children, then stopped, his eye caught by an unusual sight in the new camp: a small patch of ripening tomatoes.

* * *

For Moussa Jibrin, who tended it with loving care, that tomato patch was a tenuous link with home. Originally from a village in the Hebron area, where he had owned a few acres of land, Jibrin had fled to Ramallah in 1948 and was lucky enough to become a tenant farmer, even though he no longer owned land. But when he fled once again in 1967, he ended up practically penniless.

He had planted the tomato patch, about the size of a large dining-room table, to supplement his rations and to sell the surplus. A kilo of tomatoes brought in the equivalent of 22 cents on a good day.

Jibrin protected the tomatoes by erecting a thornbush shelter around the patch to keep out grazing goats that belonged to the people in the adjoining tent. His father, a stooped old man in a red fez and long silvery robe, also sat by the patch during the day to keep an eye on it. Zainab, the eldest of Jibrin's children and a graceful figure in the traditional embroidered robes, watered the plants whenever Jibrin was away on his occasional visits to Amman to look for work.

Since the tomatoes fetched so little money, was the effort worth it? "We have to plant something," *Zainab said.*

* * *

Glancing at the sun, Ibrahim realized it must be time for the noon broadcast. He saw a group of men huddled around a radio against the side of a ramshackle grocery store and joined them. They listened to one station, then another, then heard a couple of songs and switched to a third station to hear more news. Nothing new.

When he returned to his tent for lunch, Ibrahim found his children playing outside and his wife sweating over a kerosene stove with a tin pail on it. From all the tents nearby came the hissing of stoves, the chatter of women talking, the whining of children. The family sat down to lunch on the floor, the pail now on a cement block to raise it from the ground. The food was the same as yesterday—a simple stew of rice and beans with a few pieces of meat. They ate in silence, one of the children occasionally shooing a curious hen away from the entrance of the tent.

The meal over and the children out at play again, Ibrahim began to doze, the baby next to him. His wife picked up some clothes that needed patching and went to see a friend who had somehow managed to bring her sewing machine with her when she had fled across the river.

Later, Ibrahim decided it was time for a look at the papers. He went to the coffee house, where some refugees returning from Amman had brought a newspaper with them. They passed the paper around. Everyone looked at the pictures. Somebody read a few items out loud. Some of the stories aroused interest and there was a discussion about whether it would be better to leave the camp and try to live in Amman. They knew the city was terribly overcrowded but if they were on the spot, wouldn't it be easier to find work?

* * *

Soleiman Issa could have told them it made no difference. He had been living in Amman ever since he fled from his farm near Hebron,.and had been just as luckless as the camp refugees in finding a job.

A spare tall man of 60, Issa and his family lived in one room and owed several months' rent on it. But he didn't complain much. Despite the cramped quarters, Issa knew he was more fortunate than other refugees, some of whom lived in caves in the rocky hillsides overlooking the city.

"I am an old man now," said Issa, a timeless figure in long gray robes and a skullcap on the back of his head. "Too old to fight, too old to emigrate and start again. I can do nothing but farm, and I have lost my land. There is nothing for me to do."

* * *

As the discussion went on, listlessly, mechanically, Ibrahim sat and listened, sometimes participating, sometimes just staring into space.

By this time it was dusk, and Ibrahim got up and returned to his tent. He found that his wife had taken the baby to have its tuberculosis shot at the camp clinic earlier in the afternoon and still had not returned.

Ibrahim lounged at the door of the tent and smoked yet another cigarette. At this time of day in his village, he reflected, he might be sitting at the door of his house gazing out over the undulating fields stretching to the horizon. Here there was no horizon. There was only the next row of tents.

* * *

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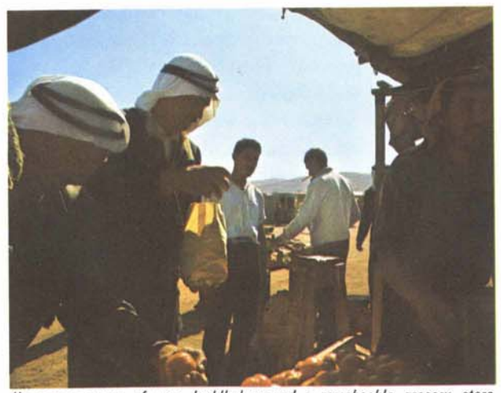
Elias Antar, an AP correspondent, writes regularly for Aramco World Magazine.



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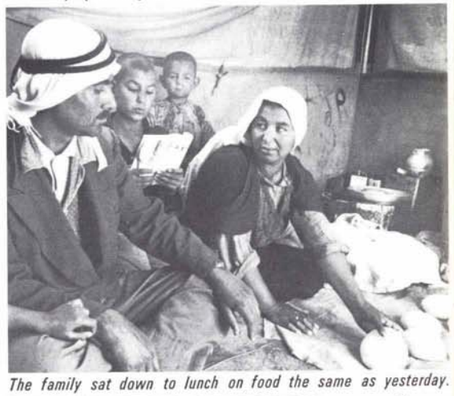

The family sat down to lunch on food the same as yesterday.

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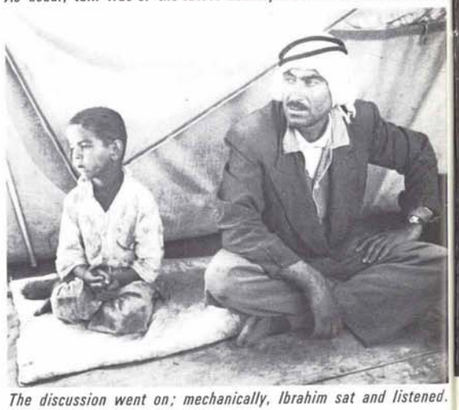

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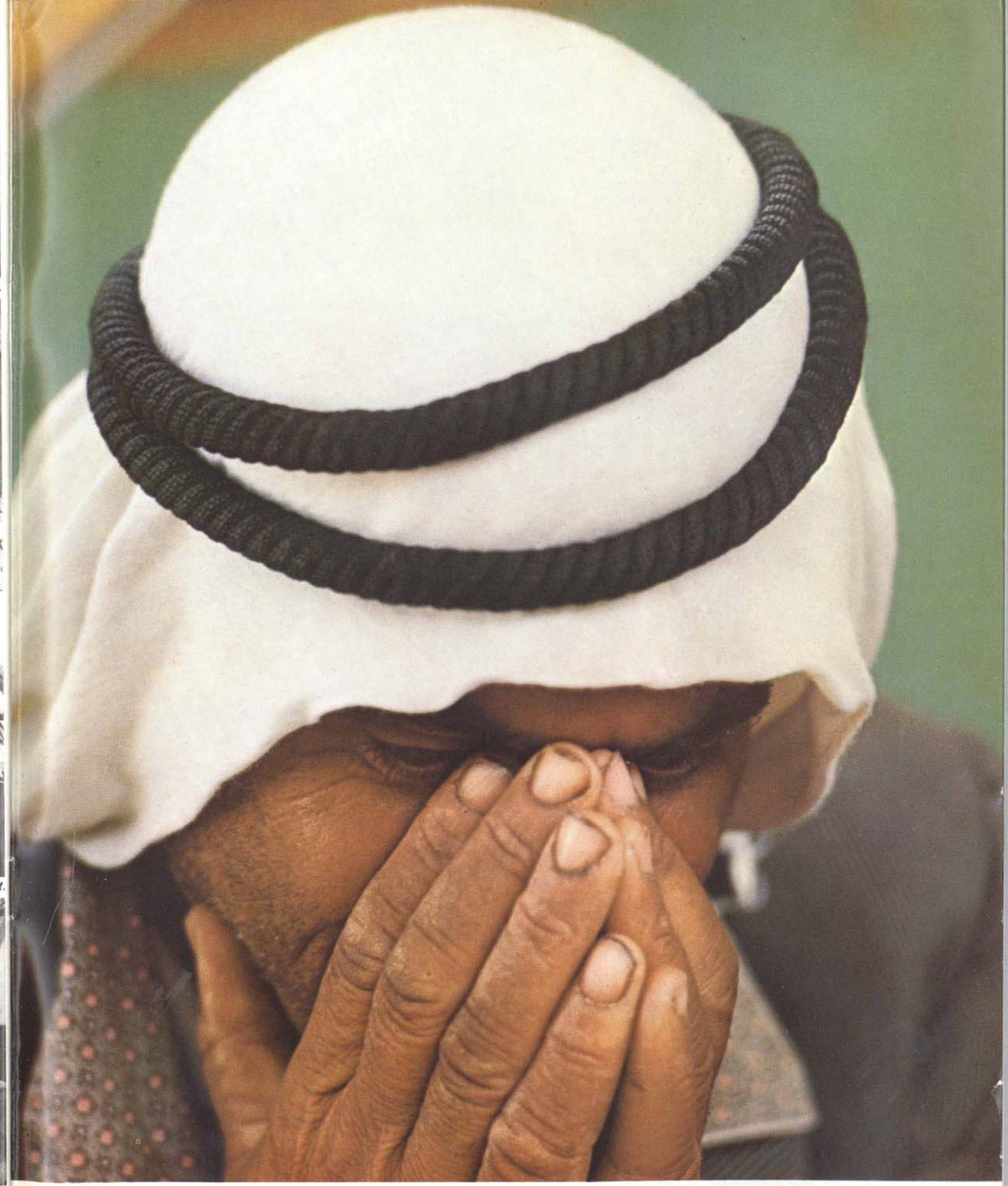

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