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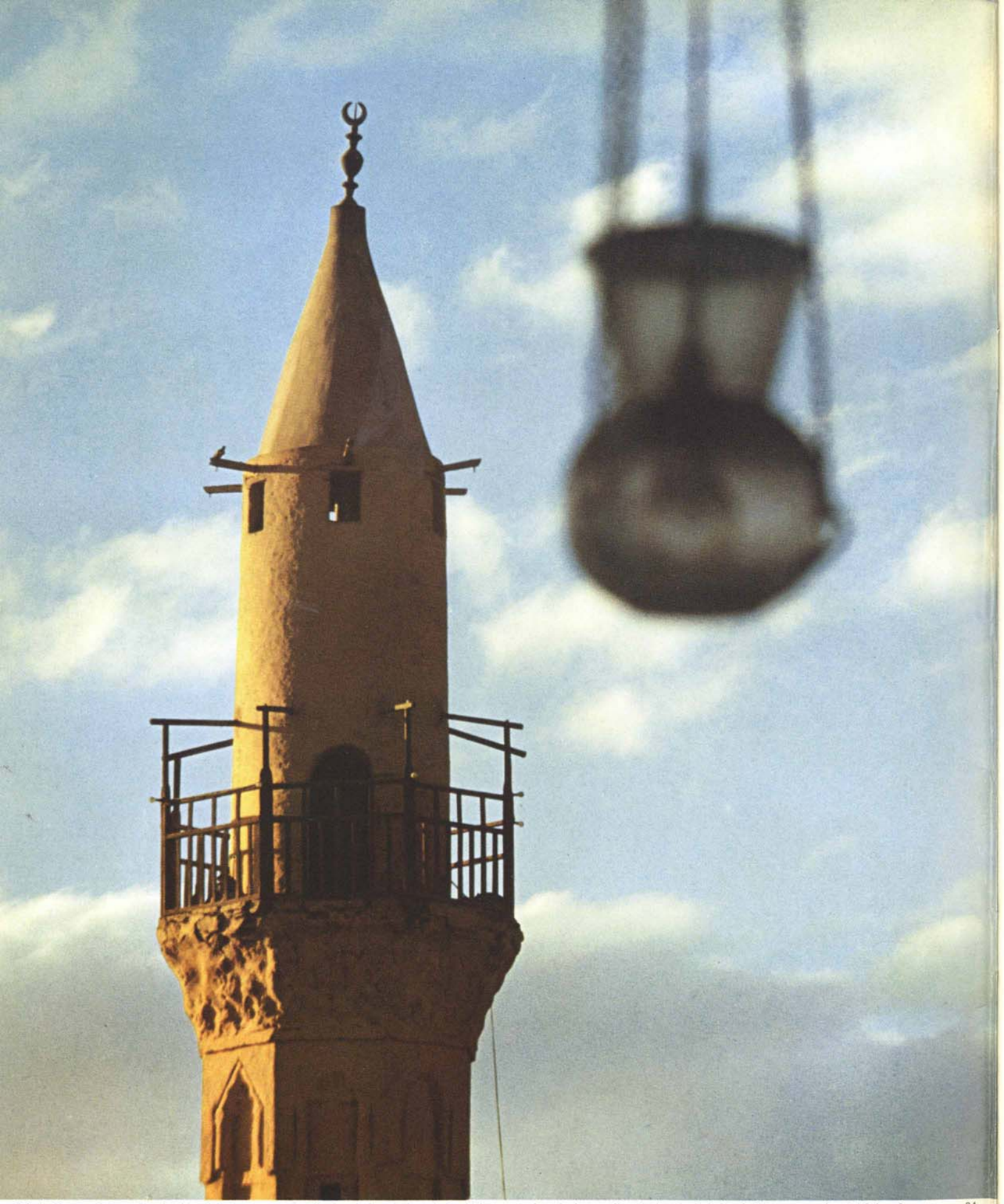
# ARAMCO WORLD magazine


SEPTEMBER-OCTOBER 1969


TOM BARGER: MYTH OR MAN?



Cairo's Mosque of 'Amr, Egypt's oldest Islamic structure, recalls Egypt's first Arab capital, which was supplanted, then swallowed when the Fatimids, 1,000 years ago, founded Cairo. Story on page 24.

# ARAMCO WORLD magazine





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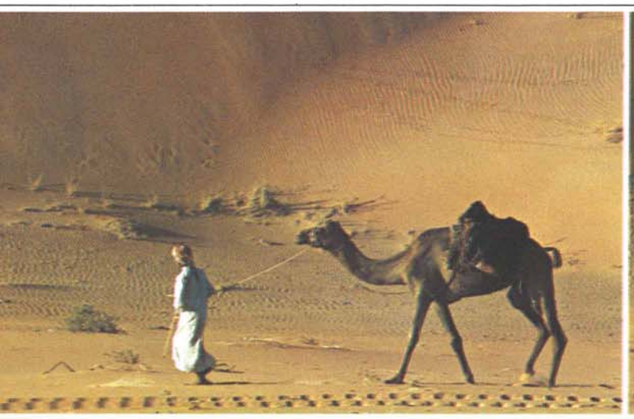
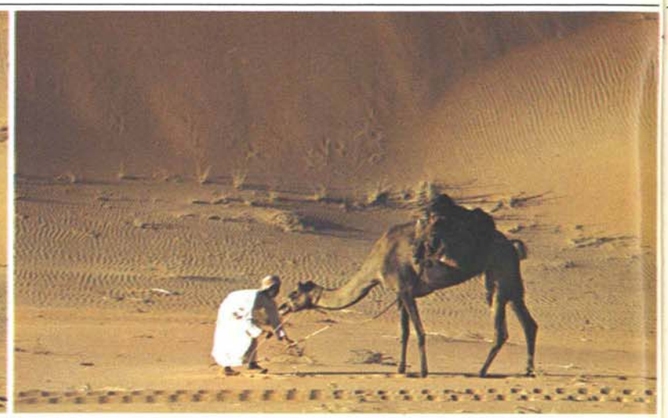
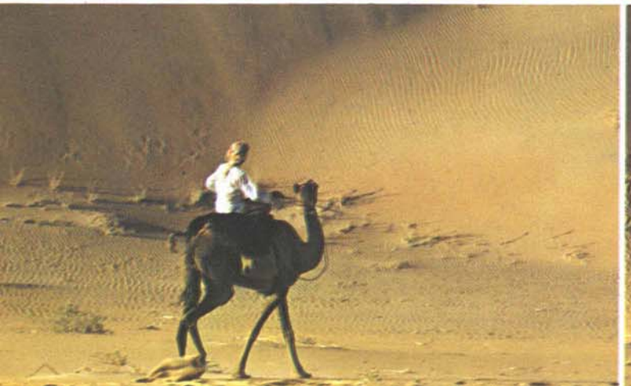
Cover: On September 1, Thomas C. Barger, portrayed here in watercolors by designer Don Thompson, stepped down as chairman of the board and chief executive officer of the Arabian American Oil Company after 32 years as surveyor, geologist, liaison man, Arabian affairs expert, and, at last, president of the company. Story on page 4.

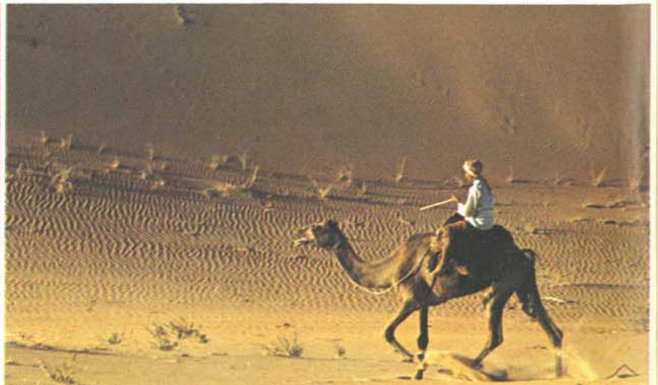
# CASTAWAYS IN THE SANDS

PHOTOGRAPHY BY TOR EIGELAND









Deep in the Empty Quarter recently a photographer saw a vision.

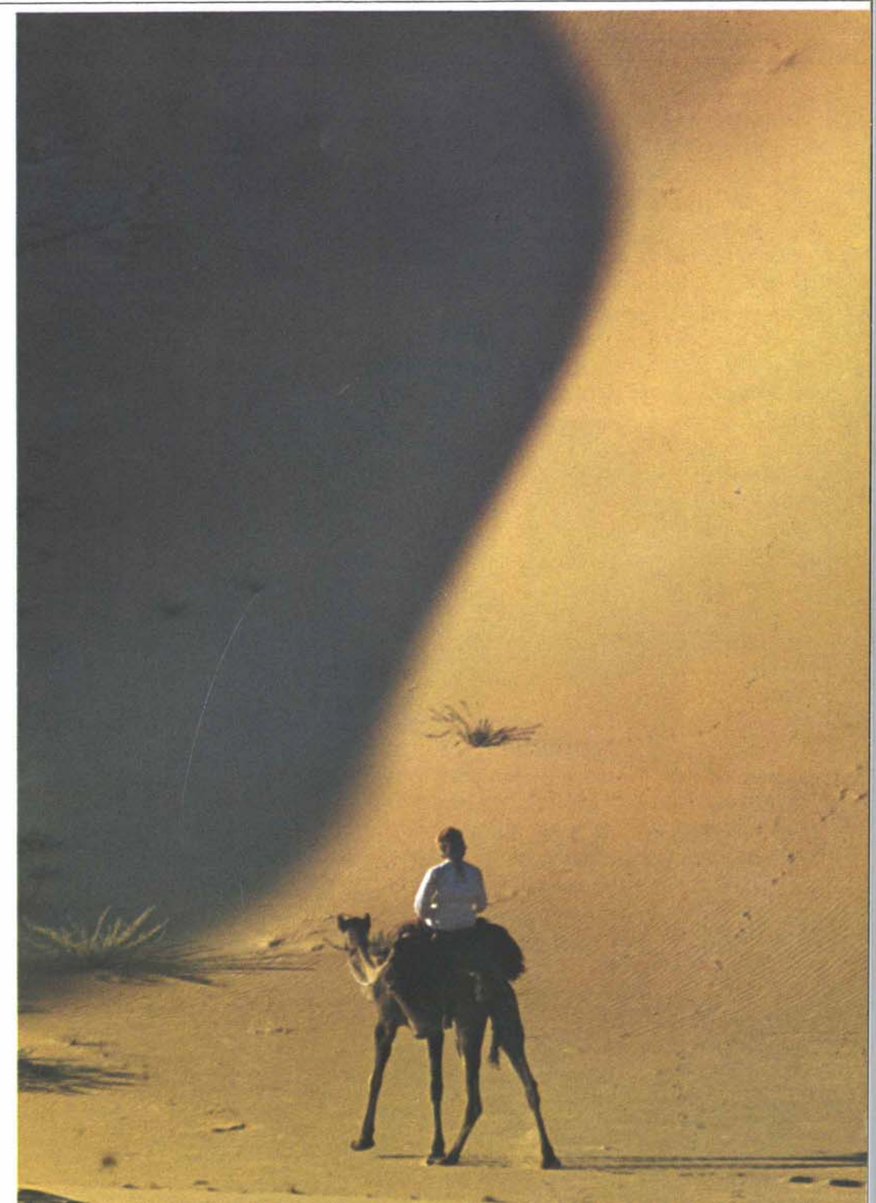
He had been assigned to drive with a convoy of great supply trucks churning their way through the desert to a remote islet of exploration (**Aramco World**, May-June 1969), but as his eyes restlessly scanned the passing dunes he saw a sight that caught at his memory as well as his eye: a boy, a Bedouin boy, and his camel walking across the desert.

It may not have been an extraordinary sight in other ages. Man and animal, after all, have faced nature together since the domestication of the dog some 10,000 years ago, and boys in remote areas still may own and ride animals as varied as oxen, llamas, elephants, reindeer and water buffalo.

They won't long, though. Into the wild tundra and mountain meadows, into dark forests and teeming marshes and onto the open plains, into the lands where cantankerous prospectors and their burros, lonely cowboys and their ponies, shepherds and their flocks were once the only wanderers, urban society with its roads and buildings and lights is beginning to push its way.

Saudi Arabia is no exception. Highways, pipelines and power lines stretch further into the plains and deserts each year. Jet contrails arch across the sky like bridges to the future. Villages grow. Modernization, which has so little room for simple things, is coming.

On this day, though, there was none of this. There were only the boy and his camel, drifting along like castaways from a disappearing past, crossing a dune in lovely solitude, a vision of the past to be captured quickly on film before it vanished into an onrushing future.



# TOM BARGER:

# myth or man?

Sure he's easygoing, but if you knew him for five minutes you'd know that's about as informative as saying Raquel Welch is a girl!

BY PAUL F. HOYE

No one has ever suggested that Tom Barger be canonized but if someone does it will be a hard movement to block. Barger, it seems, is not merely the head of a large oil company. Lord, no. He is also the most intelligent, resourceful, imaginative, judicious, energetic and honest executive east of Rockefeller Center, a scholar who wolfs page-size bites of philosophy or physics between orange juice and coffee, an athlete of Olympics caliber, an explorer who would have beaten Amundsen to the South Pole by two weeks, a marksman worthy of the U.S. Marine Corps, and a photographer to rank with Steichen. He is good. He is brave. He is wise.

That's the portrait, anyway, that emerged recently from several weeks of diligent rummaging by a team of Aramco writers into the career, character and personality of the man who on September 1 stepped down as chairman of the board and chief executive officer of the Arabian American Oil Company. And if you are about to point out that I would have to be exceptionally naive to expect any sort of critical assessment from close friends, loyal associates, or employes who expect to thrive in a company he runs, you won't get an argument here. But neither will you be particularly original. A crusty—and obviously cynical—reporter not long ago made the same point but put it a little more bluntly. "Look, friend, Eagle Scouts don't get to be presidents of oil companies."

It's an arguable point, of course, and as we shall see there is a network of friends and acquaintances literally worldwide in scope who *do* argue it. To such men, ranging from at least one presidential adviser to a handful of weathered Bedouin guides, Thomas Charles Barger is an extraordinary man whose achievements and character speak eloquently for themselves.

What is surprising, actually, in view of the unanimous respect that surrounds Barger's reputation, is that there was any criticism at all. But there was. Tucked away in odd corners of the company's Dhahran headquarters are a few dedicated skeptics who quite openly wonder whether the Tom Barger myth could possibly be true.

> *"In fact, he never really ran anything until he ran the whole goddamn company."*

One man, for instance, took issue with such pet parts of what the skeptics acidly call "the Superman myth" as his great sense of humor, ("You step on one of his pet prides and watch out!"), and his unfailing kindness ("Try making a sloppy presentation. He can be scathing!") Another raked him over the coals for being a poor administrator.

"People were always pleased when Barger moved ahead," he said, "but once he got moving he never again had to cope with the tedious routine that the other slobs did because they always had him on special assignment. In fact, he never really ran anything until he ran the whole goddamn company."

Another man who knew him back then agreed. "He was so tied up with other affairs that to get to see him you literally had to ambush him on the way to the men's room."

Understandably, no one was shouting such opinions up and down the halls of the administration building and you wouldn't have to hire the Houston Astrodome to accommodate the dissenters. Still, they sounded a refreshing note. They also suggested that it was a man and not a plaster saint who chugged over to the Saudi Arabian mainland from Bahrain on a December day in 1937 and stepped ashore onto an unfinished pier to meet the company's invaluable Max Steineke.

Years later, in the comfortable president's office in Dhahran, Barger would say that the main reason he set foot on that pier was because the price of copper dropped in Butte, Montana. It was a story he related to at least one of the reporters who from time to time have come by to take the measure of Aramco's top gun. Overly impressed by Aramco's size, some of those writers weren't always as thorough or as kind to the company as the company would have liked, but they were pleasant to Tom. Even the Aramco executives who felt that the *Wall Street Journal's* "awesome oil giant" and *Time's* "obliging goliath" were somewhat misleading phrases agreed that you couldn't quarrel with *Time's* description of Tom as "easygoing." "Although," as one added sourly, "if you knew Tom for five minutes you'd know that's about as informative as saying Raquel Welch is a girl."

Tom Barger was born in Minneapolis in 1909, the son of Mary Barger and Michael Thomas Barger, a man who started out with the Minneapolis grain exchange and retired as a chairman of a bank. He grew up in Linton, North Dakota, studied for two years at St. Mary's College in Winona, Minn., and went on to the University of North Dakota's College of Engineering in Grand Forks to earn one degree in mining and metallurgy and come within 12 credits of another in chemical engineering. After graduation he went from one job to another: three years as a surveyor and miner in Canada, a year as engineer, assayer and assistant manager of a silver and radium mine in the Northwest Territories and more than a year as an associate professor of mining at his old university. Then he got a job in research with the Anaconda Copper Mining Company. Unfortunately, between the time he accepted the job and got to Butte the price

> *"What is surprising actually, in view of the apparently unanimous respect that surrounds Barger's reputation, is that there was any criticism at all. But there was."*

of copper had collapsed and so had the job.

In those days, the late 1930's, the Great Depression was still coiled around the economy and jobs were scarce. That's why Barger, however reluctantly, accepted a job as a miner instead. It was also why he immediately began to explore the possibilities of moving on. One offer came from a state university interested in finding a dean of mining engineering. Barger turned it down when he learned he was expected to spend six years getting a Ph.D. Even the rugged heat of a copper mine seemed preferable to that.

Then came a letter from J. O. Nomland, chief geologist of the Standard Oil Company of California, inviting him to come to California for an interview. Barger was willing but to get time off meant asking a rough foreman for an unusual favor. Still, it had to be done.

"Boy, anything that'll get you out of these mines is a good thing," the foreman said, and sent him along.

In California Nomland came quickly to the point: Socal was exploring a concession area in Saudi Arabia and had need of a surveyor to work with a seismographic crew. Was Barger interested and could he get there in a hurry? Barger was and could. Five weeks later he stepped off the company launch in al-Khobar to meet Steineke and launch a career that would last 32 years.

On Aramco's roster of heroes Max Steineke rates pretty high and with reason: it was largely his intuition and diligence that solved the mysteries of eastern Arabia's stratigraphy, helped find the first oil in March, 1938, and eventually led Aramco to the great Abqaiq and Ghawar oil fields. But Steineke rated pretty high with his men too. A burly, big-jawed man with a passion for work, he had that rare faculty of knowing how to get out of a man all that the man had in him. For Tom Barger no better approach could have been devised.

There was one bad moment at the al-Khobar pier. Steineke, unaware that Barger had established a record of sorts in getting from North Dakota to Saudi Arabia in 12 days, shook hands and said: "I don't know what the hell I'm going to do with you, but I'm glad to have you." But then he did what he had done with everyone else: he gave him work to do and let him get on with it.

The first job was to get familiar with the known geology of Arabia and in the 48 hours allotted Barger gave it a game try. Then he went off to help survey some points along an uncertain frontier at the base of the Qatar Peninsula, spent four months in reconnaissance in an area measuring some 40,000 square miles, then did some mapping, and, summer having come, set off with his partner, Jerry Harriss, to the cool Kashmir in India to finish the geological reports.



The Kashmir trip was not spectacularly successful; that nice cool air kept distracting them. But it provided one good laugh. En route through what was still British India they noticed that everyone traveling seemed to be "Brigadier" or "Major", so for laughs they signed in at a customs station as "Colonel" Barger and "Major" Harriss. One night at a somewhat less than sober party someone asked Harriss how Barger had gotten to be a colonel at such a young age. Harriss said Barger had won a battlefield commission fighting Indians

> *"Barger turned it down when he learned he was expected to spend six years getting a Ph.D. Even the heat of a copper mine seemed preferable to that."*

outside Chicago—and was believed. The next day, as Barger, Harriss and some subalterns from the Northwestern Frontier lolled in the sun on a houseboat in the river, one said, "I bet the colonel here could tell us stories, if he had a mind to." Barger looked around to see who they were referring to, realized, as Harriss began to choke with laughter, that it was himself and hastily decided to go for a swim.

In the next two years Barger ranged through most of Saudi Arabia, but especially in those areas rarely traversed by westerners: the Dahna and Jafura sands, the barren Abu Bahr plains and the Empty Quarter.

His last field trip was a deep thrust to Layla and as-Sulayil near the base of the Tuwaiq Escarpment, an area no one from Aramco had ever seen and which only one westerner had penetrated—the famous H. St. John B. Philby—and that had been back in 1917.

They were memorable years and out of them would come the stories that would shape the colorful Barger mythology: the lean young hunter bringing down a running gazelle with a .22 from the back seat of a car racing across the plains, or lassoing another from the running board;* the bold young linguist inviting the King of Saudi Arabia to coffee in stumbling Arabic; the resourceful young geologist

*See pages 19–23

using whiskers to adjust a sextant; the earnest scholar studying Arabic and petroleum geology by lamplight in his tent; the desert botanist collecting and naming plants; the shirt-sleeve democrat making friends with every Arab in sight.

The stories, it should be said, are true. Barger himself provided the outlines in letters to his wife and his father, both of whom kept them. Friends have added their versions. Guides have filled in details. If they have passed into the mythology, they are still essentially accurate. In any case in the spring of 1940 the most vivid chapters came to a close. Barger went on leave. When he came back, nearly a year later, he would be assigned to government relations. He had been doubtful about the change but during leave he had decided to make it. When he did he took his first step toward Aramco's distant executive suite.

In Beirut recently a gallant lady who knew Barger in the 40's—and is one of his most articulate admirers—was asked when she first suspected that he might be going on to greater things. The lady looked surprised: "Why, we *always* thought that," she said. "He was so *able*."

This was not quite as apparent to Barger. Assigned in the early 1940's to a crew in Arabia charged with keeping at least a small production program going, Barger

> *"The report, a confidential 83-page, 20,000-word document was a searching examination of the unique problems that Aramco faced and would face in the years to come."*

spent much of this period helping raise chickens and vegetables to fill out lean wartime diets, and the rest either tracking Rommel's advance on Cairo with colored pins on a huge wall map, or helping plan an evacuation route to Aden.

But then the war ended and Aramco, caught up in the urgent post-war demand for oil to fuel the reconstruction of shattered economies, plunged into the turbulent expansion cycle that had begun in 1943 and was now to transform this small outpost of

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the petroleum industry into one of the major producing companies of the world.

For some men, some of the older breed, this intrusion of a large, modern, highly technological organization into their hard but simple frontier routine was an unsettling experience; it demanded of them adjustments they could not make. For men like Barger it was simply another challenge to which they responded with enthusiasm and vision.

Even that early, for example, Barger saw that the company's very existence in Arabia might depend on the quality of its relations with the Arabs. In an original, unassigned report dictated during half-hour breaks in his regular job, he set out to warn Aramco how important this was. The report, a confidential 83-page, 20,000-word document, was a searching examination of the unique problems that Aramco faced and would face in the years to come. It was also an almost prophetic outline of the broad, often radical programs of social, educational and economic participation in the life of Saudi Arabia that Aramco would introduce and nourish during the next 20 years.

Aramco management, as it happened, was not unaware of the problems either. But impressed with the young man's energy and foresight they invited him to attend a meeting of key brass in the Pocono's, Pennsylvania, convened to define the problems and discuss solutions. Barger not only attended but, as a record of the meeting suggests, wound up shouldering a good share of the assignments: Mr. Barger will compile accurate medical statistics to see what effect western medicine is having on Saudi employes. Mr. Barger will try to find a more descriptive title than "Effendi" for higher class Saudi employes. Mr. Barger will

organize an economic study of the Middle East. Mr. Barger will institute dual-language letterheads for stationery. Mr. Barger ...

Characteristically, even those assignments didn't seem to satisfy his alarming appetite for special projects. About the same time he was reading intensely on the subject of desalination and wondering about the possibility of making sugar from dates. Two years earlier, according to Dr. George Rentz, one of America's top Arabists, he had instructed Rentz, then an employe, to concentrate on building up a library on Arabian affairs. Later he pressed for Aramco's purchase of the papers and books of Philby. The library is the finest collection of material on the Arabian Peninsula in the world now, Rentz said recently, "but in 1946 Aramco's entire Arabian library was in a three-by-five-foot bookcase in somebody's office—probably Barger's."

Some of the projects that interested

***"About the same time he was reading... on desalination... and wondering about making sugar from dates."***

Barger most—better medical facilities, aid to local industry, a home ownership program for Saudi workers—were only on the periphery of his main job in those days, but then, as one of the skeptics pointed out, Barger could never confine himself to the job at hand. "He was always identified with the future. He was always the planner, the idea man ... always planning new areas of endeavor."

Predictably, though, such activities neither went unnoticed nor hurt Barger's career. In 1946 he had been named a company representative; in 1947 relations superintendent in charge of research, analysis and planning, and, in the same year, assistant manager of government relations. In 1949 he became manager. Now in 1952, as the expansion period was peaking, he moved up to general manager of concession affairs, then director of local government relations.

In the meantime, expansion had effected startling changes in Arabia. Production had shot up from a wartime low of 11,809 barrels a day to 824,757 in 1952. Safaniya, the world's largest offshore oil field, had been discovered. A great pipeline was carrying oil to the Mediterranean. The work force had gone up to nearly 25,000 employes and executive management, had moved physically to Saudi Arabia.

Not the least of the changes had occurred in early 1945 when the first chin-up contingent of wives arrived.

There were seven, each with stories of her three-month odyssey through Portugal, Spain and Egypt via freighter, train, yacht and plane. Among them was a young lady with luminous eyes, a warm smile and a seven-year-old marriage certificate that read: Kathleen Elizabeth Ray Barger.

Like her husband, Kathleen Barger came from North Dakota, bringing with her a heritage of ranches and badlands: a great-grandfather with a background in railroading who helped draft the state constitution, a father who was a rancher, and a tradition of self-reliance. (At six, she related once, she fell off a horse, broke her arm and had to walk two miles to the ranch.)

That tradition was only one of several she would later bring out to Saudi Arabia. Another was a love of horses that had begun almost as soon as she could walk, grew during cattle roundups and would be passed on to her children in Dhahran—to the discomfort of an allergic husband who, one hears, keeps one sneeze away at all times from all horses.

Kathleen quite probably did not know that when she first met Barger, and once she had it wasn't important. Barger, then a mining professor, was also moderator of the campus Newman Club which Kathleen, like most young, fervent Catholic girls of the 1930's, had wasted no time joining. They were both more or less engaged to other people at the time, but it wasn't long after that they quietly broke off the other alliances and began to see each other regularly. That continued until Mr. Nomland made his proposal to Tom after which Tom apparently made his to Kathleen. Kathleen agreed, married him on November 18, 1937, and said goodby three weeks later. Neither suspected that

***"In Beirut recently a gallant lady... was asked when she first suspected that he might be going on to greater things. The lady looked surprised: 'Why we always thought that,' she said."***

because of housing shortages in Arabia and the advent of World War II they would be separated for seven years with only two leaves of a few months' duration each to ease the loneliness. Now here she was, with her own share of the odyssey to relate plus the beginning of one of those episodes that kept enlivening the lives of the Bargers—and also suggests what kind of girl Tom Barger was bringing to Arabia.

"On the ship to Portugal," a friend said, "Kathleen caught the eye of a charming 60-year-old aristocrat from Spain who immediately named her 'the Empress' and pledged eternal affection. She fended him off, of course, but she did it so sweetly that the Marquis, owner of a famous vineyard, later sent her a case of sherry with each bottle labeled: 'La Emperatriz Catalina.' He also began to write to her, insisting she come visit him in Spain. Finally, Kathleen did—with Tom and five of their children. The Marquis, still enchanted with Kathleen, arranged a fiesta in her honor and they stayed up all night, every night, and remained close friends until the Marquis died."

The arrival of the women—and not long after, the children—was a landmark in the development of Dhahran. Shaken by what they found, once the excitement of reunion had waned, they began to press for immediate improvement in what wasn't really much more than a dismal mining camp: cramped houses, yards and roofs still paved with a film of crude oil (Dhahran's blackout measure against bombers); treeless streets through which sand swept like snow during a blizzard; and flies, in the days before DDT had been either discovered or condemned, by the millions. It wasn't the end of the world but there was a marked resemblance.

In a sunny garden many years after, Kathleen, talking over the sound of a fountain splashing in the corner of the yard, would admit that she hated the desert then. "I hated it and I fought it," she said.

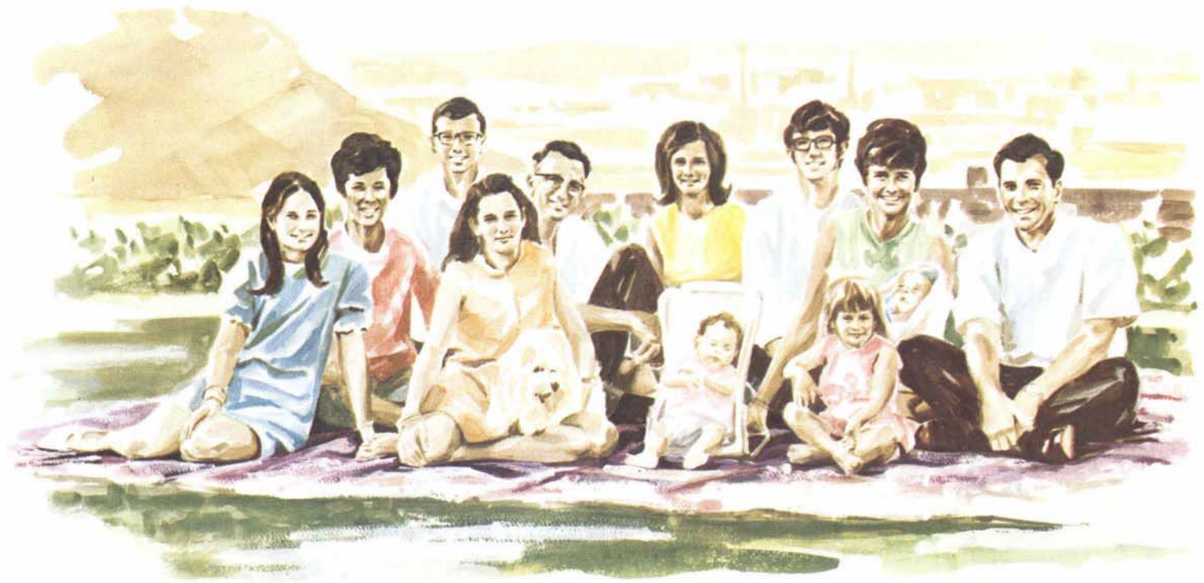
She fought everything else as well: high prices, shortages, sickness and monotony. To save money she served a relentless diet of hamburger. Even when pregnant she did without milk and fresh fruit for months. To cope with sickness, she brought out all the old remedies, plus new drugs just coming into general use: penicillin and the sulfa drugs. Against monotony and boredom she took part in camp shows or gave formal dinner parties. Some grumbled about the Bargers "putting on the dog," but most people came and were glad of the chance to show the flag.

And, of course, she raised her family: Ann, a tall pixie of a girl who would follow her father to the University of North Dakota, graduate in 1963, then, to everyone's surprise, return to Saudi Arabia after getting married, and start raising three children within driving distance; Michael, a lean, likeable copy of his father, a National Merit Scholarship finalist and a recent prize winning graduate (for his Arabic) of Georgetown University; Timothy, high-spirited, confident and carefree, a diver good enough to work on underwater pipelines one summer, and a June graduate of Santa Clara University in California; and the three younger girls, Mary, now a freshman in Stanford University, Norah and Teresa, pupils in the Santa Catalina School in California.

Even for Dhahran, where children sprouted a lot faster than the grass did, this was a large family, and for years, friends said, it seemed larger because no matter what you were doing, or where, the Bargers seemed to be doing it too. Tennis. Camping. Swimming. Snorkling. Collecting old pottery fragments. Horseback-riding. Water skiing. They tried everything.

It was not all fun and games. School, reading, even dinner table conversations were matters of importance. No question

ILLUSTRATIONS BY DON THOMPSON



was ever dismissed as trivial—if they didn't have the answer they looked it up—and serious research was as natural as brushing their teeth. Kathleen once found 11-year old Mike reading the encyclopedia late at night and asked if he were doing homework. "No," he replied casually, "I'm learning the Armenian alphabet."

Another thing the Bargers took seriously was their Roman Catholic faith which, nicely leavened with an irreverent wit, Tom, later to be a Knight Commander of the Order of St. Gregory, and Kathleen, named a Lady of the Holy Spulchre in 1968, wove into their entire outlook on life. It would be intrusive to get into the details of that philosophy but it does go far beyond such obvious manifestations as Kathleen's tireless work on behalf of Arab refugees or such other causes as helping the flood victims in Florence a few years back. Barger, for example, has been an outspoken opponent of the treatment accorded Arab refugees, yet last year when someone in the States, completely misreading his beliefs, began sending him a "hate sheet" he took a red crayon and wrote across the front page in bold letters: "THIS IS THE MOST SCURRILOUS PUBLICATION I HAVE EVER SEEN. REMOVE MY NAME FROM YOUR MAILING LIST IMMEDIATELY."

In the Barger household the study is the intellectual and social center. Like the bedrooms, it is strewn with books (prudently catalogued) and magazines, on subjects as far apart as archeology, the liturgy, guns, and politics. When the kids came home they used to go right to the study, kick off their shoes

***"The Marquis, still enchanted with Kathleen, arranged a fiesta in her honor and they stayed up all night, every night..."***

and start to read. It got so bad that Kathleen once tried to levy fines on anyone who left his or her shoes in the study. She had to quit, however. It got too expensive.

The Barger house, a low, spacious structure with carpets everywhere, a broad lawn and a small garden, is a sharp contrast to the cramped houses that Kathleen Barger lived in immediately after the war years and steadily filled up with children. And the story of how they got to it still produces a nostalgic smile. One day, Mrs. Amy Davies, wife of Fred A. Davies, then chairman of the board of Aramco, jokingly compared Kathleen's cramped house with the spacious executive mansion. "Kathleen," she said, "if you have a seventh child you're just going to have to move into our house. It's the only one big enough."

The Bargers did not have a seventh child. Nor did they move into the chairman's house. But four years later they did move into a more modest house across town when Barger, after some executive grooming as representative to the Saudi Government and assistant to the president, was named president himself. Some said he chose the other house out of humility. Skeptics said he just preferred the view. Barger said it was because there was more room for the kids.

In his book, *Discovery*, author Wallace Stegner wrote that the best history of any action is the experience of the men who lived it. If so the best story of Aramco is the story of Tom Barger. For as the company grew so did he.

In 1938, when Barger joined the company, oil had not even been discovered in commercial quantities. Today, as he retires as the head of that company, it has already produced 10 *billion* barrels of oil and in 1968 became the first operating company in history to produce more than a billion barrels in less than a year. By whatever standards you name, it is a very large company requiring a very large man to run it.

Not long after he became president, Barger made a remark to a friend. "The day a man becomes president of a company," he said, "is the last day he knows what's going on in that company." It was a casual comment yet it was also characteristic of Barger's style of management, a style one associate described as "an abiding interest not merely in managing, but in the *process* of management."

This took many forms. He sent executives for language training to the Middle East Centre for Arab Studies. He backed advanced management courses at Harvard, Columbia and Cornell. Years before Peter Drucker became fashionable, Barger had read his books, talked to him and promoted his management theories throughout the company.

Theory, of course, is one thing, practice another, as some yeasty young talent scornfully pointed out when the subject of Tom Barger came up over Dhahran dinner tables—as it inevitably did the past few months when just about everyone was discussing his imminent departure.

According to these young men, Aramco's management recently has been "outdated" and "unsophisticated." One of them even said so at a high-level meeting called to discuss a management improvements program. Many who took the course, the man said pointedly, were saying that Aramco's management is the "let's-not-rock-the-boat variety."

That sort of criticism never disturbs Barger, friends say, (typically, his response to the above was to simply frown and say,

***"Kathleen... if you have a seventh child you're just going to have to move into our house. It's the only one big enough."***

"If that's true, we had better do something about it.") but, they add, remarks on his lack of sophistication are certainly true.

From an ingrained habit of doing things for himself, Barger's approach to everything is individualistic. He is wary, for example, of sending out reports or letters that he hasn't either written himself or edited extensively. And if he wants to discuss some memorandum with someone he often just marches into the person's office with it rather than save time by telephoning. "He does not," as one friend put it, "always use the tools available to him."

Whether this approach is ineffective is, of course, open to dispute and—as is true of any effort to assess Barger—all the evidence lies with men who are unanimously enthusiastic about him and who will immediately tell you a story to show you why.

Some of the stories admittedly sound as if they have been collected for the *Reader's Digest:* Barger heaving a slab of chocolate cake at a cantankerous welder who was bullying a Saudi waiter; lending his coat to a shivering dancer in an icy, wartime nightclub in Paris; lovingly adjusting a cranky engine in his boat rather than replace it; or asking friends, "Have you read ...?" and quoting an obscure fact on an obscure subject.

Others, more recent, tend to show him as the successful corporation executive: Barger racing through a long, highly technical report at incredible speed, correcting errors and almost simultaneously signing it; Barger posing incisive, knowledgeable questions to experts in abstruse fields that the yeasty young men were sure he knew nothing about; Barger impatiently breaking into presentations with an obviously superior grasp of the subject at hand.

Like the desert mythology these stories, give or take a detail or two, are true. What is odd about them, in fact, is not that they strain anyone's credulity but that they somehow still fail to capture the qualities that, when all is said and done, are at the heart of any truthful assessment of Thomas Charles Barger, qualities that, like it or not, believe it or not, add up to this fact: the Barger myth is no myth, it's all true.

In a cynical age, and in this publication, such a statement isn't likely to go unchallenged. In fact, as one New York reporter can testify, it already has been.

This reporter, addressed himself during one visit to puncturing what he was certain was an inflated image. Like many people he didn't quite believe that somewhere between geologist and chairman of the board Barger hadn't bruised one tender ego, elbowed someone out of a promotion, or given Kathleen Elizabeth a good belt in the chops. A week later, however, he gave up and flew back to New York. "Couldn't find a wart," they chuckled.

Admittedly, this proves nothing. Ever so faintly, however, it suggests that the often embarrassingly lavish praise sources have been spooning onto researchers' plates

recently, might be somewhat more than misguided nostalgia. In fact, since the sources include not only the royal, corporate, and diplomatic brass you'd expect, but also 50 or more geologists, photographers, writers, cartographers, priests, bankers, teachers, archeologists, secretaries and mechanics, it whispers that maybe—just maybe

*"People seem to think there is a mystery to it. There isn't. He is quite simply a man of immense intellectual vitality."*

mind you—Barger is as extraordinary as the mythology says he is.

This does not imply even a small degree of perfection. He sweats. He swears. He makes blunders, gets discouraged and, one hears, is perfectly capable of unleashing on overconfident boys all the scornful anger an informed and disciplined mind can feel toward minds which are neither. Nevertheless in any balanced judgment, Tom Barger scores light years above average in every department, be it brains, drive, personality or character.

A good question at this point is why? What sets Barger apart? Does he have one of those extra Johnsonian glands we used to hear about? Is he a Rosicrucian without knowing it?

Men close to Barger snort openly at the idea that there's any secret to Tom Barger's success. "What people forget," one said, "is that Barger was never ordinary. He wasn't just a romantic figure out there in the desert chattering Arabic and chasing game. He was also damned good at his job and continually got better. And if you go back even further you might notice that he was at the top of his graduating class, that he almost qualified for *two* degrees, that he was president not just of his class but of his fraternity and the Newman Club, and was a professor at 26 years old. He didn't have to come to Arabia to be a success."

Another friend was even more indignant. "You can carp all you want about 'Eagle Scouts' and 'Superman,' but the facts are incontestable. He does speak Arabic, he is a scholar, a photographer and an archeologist, his family life is great, he can tear a motor down and fix it, he is loyal to his friends, he has run Aramco very successfully for ten tough years and he is indeed a perceptive and compassionate man."

"People seem to think there's a mystery to it," he went on. "There isn't. He is quite simply a man of immense intellectual vitality.

This does fit. Although personal warmth and kindness probably account for his popularity, it is intellect that is at the heart of this extra dimension that people seem to look for: an unflagging ability to improve and change. He knows more now than he did 30 years ago; he knows more this week than he did last week and probably

will know more tomorrow than he does today. By such means, and almost exclusively by such means, did he carve out a career and a character that is rare in industry and is unlikely to be seen in the Middle East again.

What is probably the most definitive description of Tom Barger, however, came from a man who worked closely with him for years. This man listened a while, then got out a letter and gave it to a writer. "If you want real insight into Tom Barger," he said, "read this letter. I think it sums up better than anyone else can what he stood for, what he accomplished and what he held in esteem."

*"'If you want real insight into Tom Barger,' he said, 'read this letter. I think it sums up better than anyone else can what he stood for, what he accomplished and what he held in esteem.'"*

The letter read as follows:

*"Now that he has been officially replaced... I feel free to write to you... to express our regret on his departure.*

*"I suppose (he) will be best remembered for his humaneness and his humanism. Quite obviously he was greatly liked and respected by everyone who knew him, regardless of nationality. His command of Arabic, in public speeches as well as in private conversation simply extended and strengthened an affection and trust the Saudis had already given him. Nevertheless, that an American could have a social evening with half a dozen Arabs at which Arabic was the only language used, is remarkable. I add that his popularity was in no small measure due to his personal humility, his eagerness to listen and a complete absence of personal arrogance.*

*"As an American citizen in Saudi Arabia I valued even more highly his grasp of the affairs of the Kingdom, his quick intelligence, his imaginative counsel and mature judgment, and his readiness to perform unpleasant duties. At no time in our long acquaintance have I known, or heard, of any instance in which he has ever let personal feelings influence his actions. And his judgments... were based upon understanding and knowledge, not on prejudice or suspicion..."*

The letter, which referred to the departure from Saudi Arabia of one of Barger's close friends, United States Ambassador Parker T. Hart, was dated 13, June 1965, addressed to the Assistant Secretary of State and signed by its author: Thomas C. Barger.

# QA-5

BY BRAINERD S. BATES / PHOTOGRAPHY BY S. M. AMIN

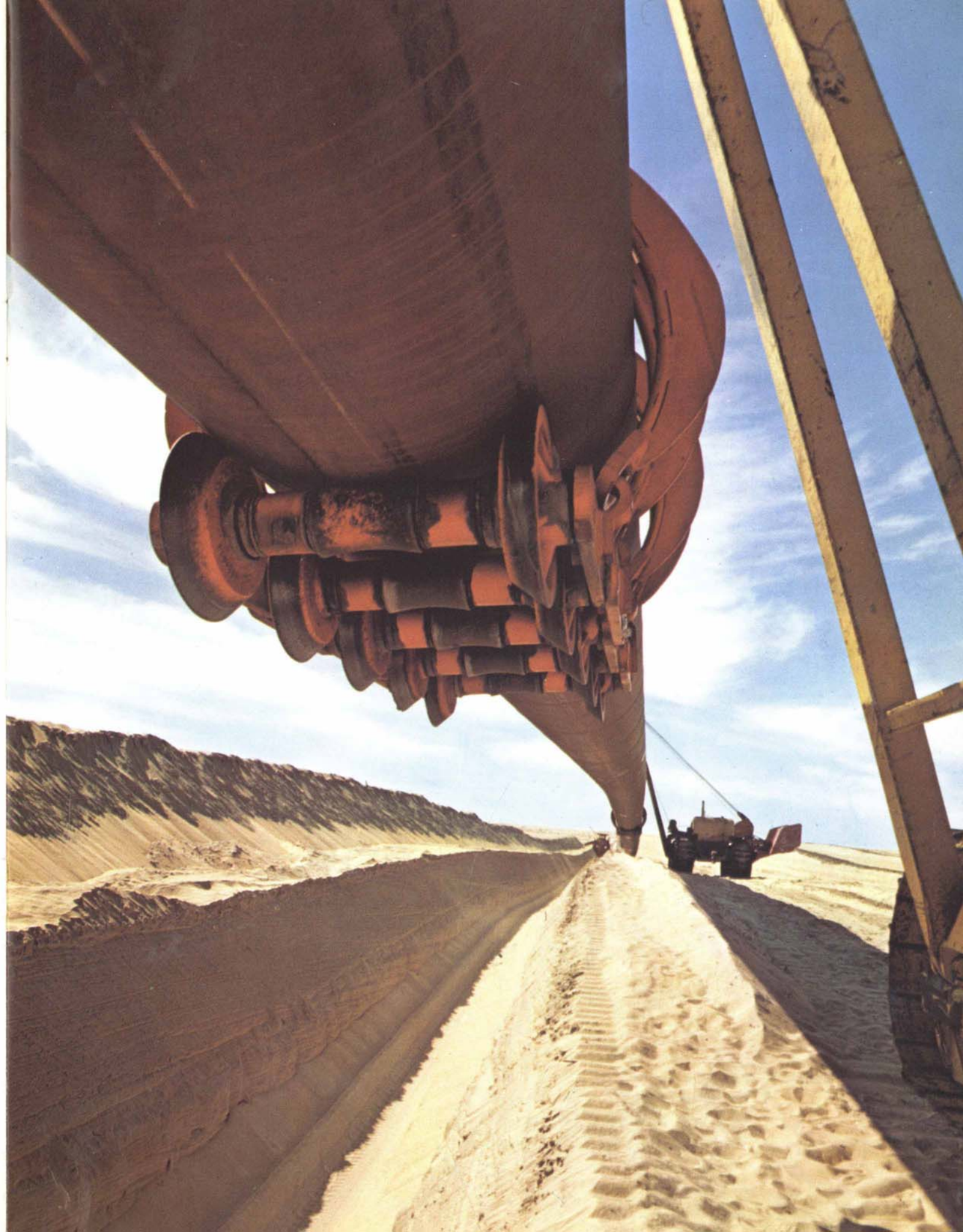
If the distance between Abqaiq, Aramco's producing center, and a place called Qatif Junction were criss-crossed with railroad tracks instead of pipelines, this 42-mile stretch of sand and scrub would resemble Philadelphia's Main Line shooting out towards Chicago. As the name indicates, Qatif Junction is the link-up point for many of the numerous pipelines which link Aramco's prolific fields with its large refinery and busy marine terminal at Ras Tanura and with the feeder leading into the trans-Arabian pipeline which ends 1,100 miles to the west on Lebanon's Mediterranean coast.

Over the years, as Aramco has drilled more and more producing wells in its Abqaiq and Ghawar fields, ever-larger pumping and pipeline capacities have been needed to move the oil toward the customers. To the original 30-inch pipeline between Abqaiq and Qatif Junction—called the QA-1—three other parallel lines were added until there were four lines in the QA complex. But there was still a problem. While increasing quantities of crude oil were being produced, they weren't quite large enough to justify additional pumping capacity. At the same time, the four existing QA pipelines were insufficient to handle the increased flow of oil coming out of Abqaiq.

Pipeliners, however, have means of overcoming this type of dilemma and during this past spring have been applying them on the Abqaiq-Qatif Junction right-of-way. Instead of constructing the fifth line—QA-5—in one continuous operation, they have been laying it in increments, starting at the junction end, and tying the sections built into the adjacent QA-4. Part of the crude oil pumped into QA-4 at Abqaiq gets shunted into that portion of the QA-5 already laid and connected at various places with the older line by jump-overs.

This is useful because two pipelines sharing transportation of a given flow of oil—even if only part of the way—are more efficient than one line taking the entire load because the interior surface friction of the oil is divided during the time it flows in the two lines. This reduces significantly the back pressure at the pump location and enables the pumps themselves to send more oil through the existing lines with the horsepower available.

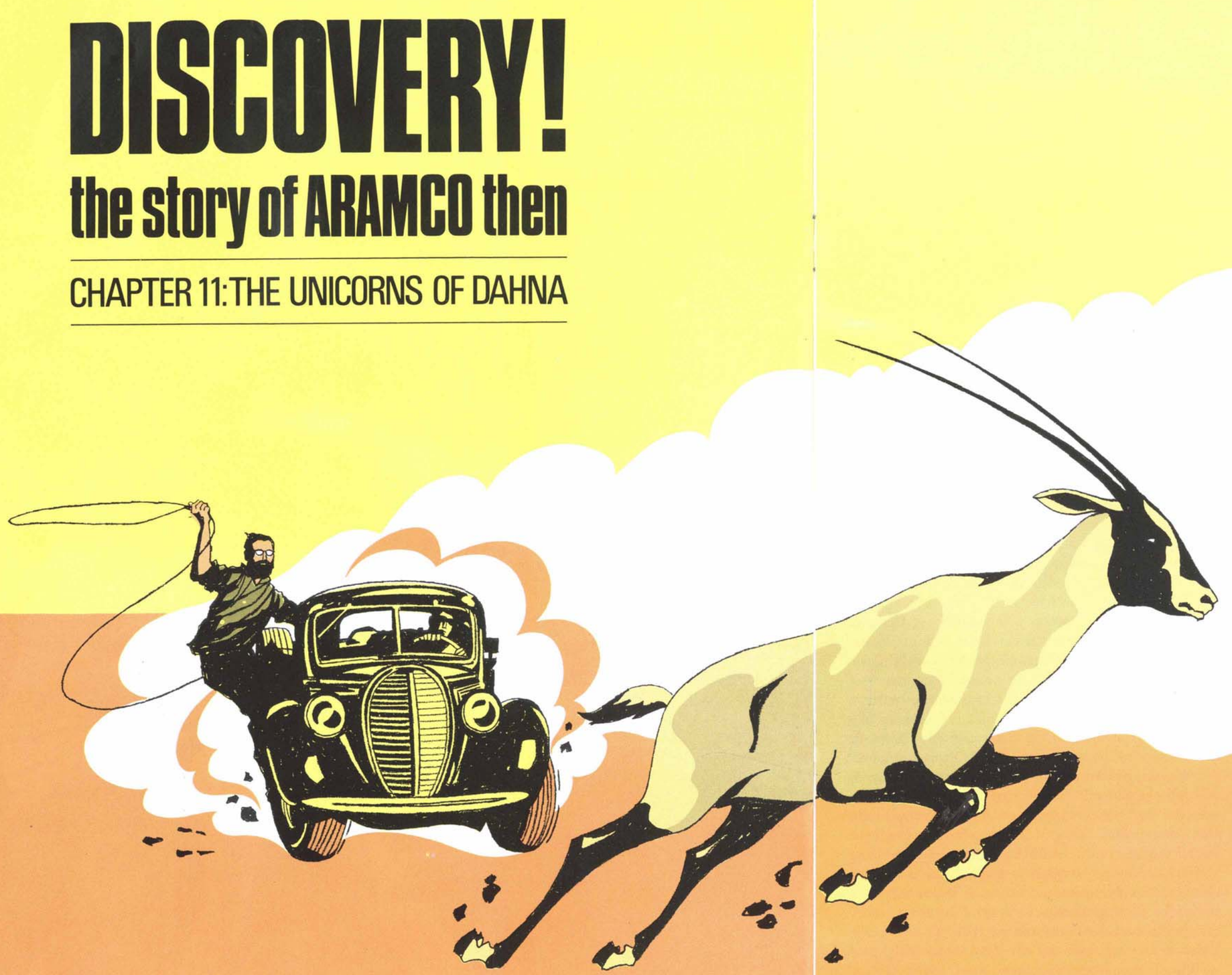
The new QA-5 line, ranging from 40 to 42 inches in diameter, is being laid under the sand instead of on steel pipe supports, which are necessary only when the terrain is covered with hard rock. The pipeline follows the earth's natural contours along the route, and where these change rapidly pipe lengths have been bent on the construction site by special hydraulic equipment to make them comform to the lay of the land.



# DISCOVERY!

## the story of ARAMCO then

## CHAPTER 11: THE UNICORNS OF DAHNA



BY WALLACE STEGNER

ILLUSTRATED BY DONALD THOMPSON

*SYNOPSIS: There wasn't ever a time, it seemed later, when everyone could just relax and say the job is done. For more than 15 years the effort to find Arabian oil had been underway—starting with the adventurers and financiers of the 1920's and ending with the successful discovery of oil in 1938 by the California Arabian Standard Oil Company—but the pace had never slackened.*

*One reason was that the Saudi Government kept coming up with little jobs for Casoc to do. One involved the assignment of two surveyors to define certain of the kingdom's boundaries, now, when they might include or exclude a major oil field, of primary importance. Another had to do with hydrographic soundings in the Gulf, a job that was assigned to likeable Charlie Herring. Charlie started the job but never finished it. En route for a day's outing on Bahrain he and his wife Pauline were killed when the cranky company launch exploded and sank.*

*They had other tasks too, like preparing for the first visit of King Ibn Sa'ud. The King led a caravan of 500 cars and 2,000 people to Dhahran to preside over ceremonies marking the day the first tanker carrying Saudi Arabian crude sailed to western oil markets.*

*Then came the fire.*

*On July 8, 1939, Dammam No. 12 exploded, sending a shock wave of sound and air rolling across the desert and a column of flames 200 feet in the air. One man was killed instantly and Bill Eisler was burned so badly that Monte Hawkins' heroic rescue and the subsequent medical efforts were of no value. He died a few hours later.*

*The next 10 days were a test for the men in Arabia. Although alone with one of the world's worst oil fires they decided they would put it out themselves. Dangerous as it was, it was their fire, by God, and they were going to make the most of it. To do so they had to go right into the heart of the volcano, rigging screens, closing valves, trying this, trying that. But they went. And they went again. Until one day they got a grip on it, a grip they slowly tightened until they could get some mud into a line and snuff it out like a match.*

*They were happy men that day. First they cabled the experts in New York to go on home. "Fire extinguished," they said smugly, "Professional fire fighters not needed." Then they all got stoned, slept a while and went back to work.*

The German invasion of Poland on September 1, 1939, made its repercussions felt even to the shores of the Gulf. The news came as no special surprise—the Company had been fearing war, and stockpiling against the possibility, for some time—but the outbreak of actual fighting meant an immediate threat. It seemed plausible that the Axis, fully aware of the importance of Gulf oil to the British fleet, might have planted troublemakers, saboteurs, and possibly even armed groups in the area. Technically neutral, but feeling threatened nevertheless, Dhahran pulled in all the geophysical and geological parties from the desert and put the exploration crews, with their cars and trucks, on 24-hour-a-day patrol around Dhahran and between Dhahran and the other wells, camps and installations. Twenty-four hours a day operators monitored everything that they could get on the radio, English, German, French, Italian, Russian, and American. The boys in the bunkhouse—they had set up one of the field radios to keep track of events—concurred in liking the French news best: it came on in a soft feminine voice.

While Tom Barger, who had been recalled from the field along with the other geologists, led a reconnaissance group on a swing around the concession area, there were long conferences in Dhahran on the possibility of air attacks, on problems of logistics and supply, on security measures. But Barger and his party, talking with every band of Bedouins and every local amir they could find, came across nothing suspicious. Everyone received them with hospitality, no potential saboteurs looked at them out of the corners of their eyes in the *majlis* or around the campfires. Eventually Dhahran decided it was safe to send the field parties back to their work. People wrote reassuring letters back home but the optimism had a certain nervousness about it. It struck them all that the home office in San Francisco didn't seem to be sufficiently alarmed. San Francisco was not sitting on an important and logical target, and San Francisco was not in frequent contact with the British on Bahrain, who as active belligerents and custodians of Britain's oil supply were sobering companions.

Actually, after the first scare, the war did not much affect them except by the gradual choking off of their supply lines, and in the beginning that result was not too apparent. Other difficulties crept back to absorb them more—the routine, day-by-day problems of reconciling their heavily mechanized industry with local habits and with the local Arab representatives and police. Compromise and agreement were easier at the policy level, between Lenahan and Najib Salha, say, than between the men in the field and the Saudi local officials. Here in the Eastern Province the contact was man to man, and since each man was the product of a culture profoundly different from that which had formed the other, there were inevitable incidents of misunderstanding, prejudice, conflicting notions of law and justice. One of them, on December 19, 1939, involved John Ames.

Ames was one of the Bunyans. As a by-product of drilling oil wells, he created legends, often in the company of Hank Trotter, once an All-American at California, or of Bill Eltiste, Steve Furman or Homer Florey, a boiler-maker whose hands were so stiffened from using hammers and sledges that they used to lay a silver rupee on the bar and bet him that he couldn't pick it up.

They told, and still tell, a good many stories about John Ames. They said, for example, that once Trotter, Ames, Furman, Florey, and Dr. T. C. Alexander were gazelle hunting up near Kuwait. The country was *dikaka* and gravel plains, rough but without serious hazards. Nevertheless, in the midst of the flint plains where only genius could have found a rock bigger than a teacup, Florey and Alexander found and hit a rock three by six feet. They moved it about a yard, mostly inward upon the bumper and radiator of the pickup. The crowd, all of them capable, if necessary, of rebuilding the pickup on the spot, swarmed out to fix the thing up.

A block on the sand, a few twists of the jack handle and they had the front end up in the air. John Ames crawled under, and lying on his back began to hammer and pound. In a minute he had pounded the pickup off the jack and brought the truck's front cross member down across his chest. Pinned down, he swore, briefly. Then he said, "Get the damn thing off me." Trotter stooped, got a grip, tightened, grunted, and lifted the front end off the ground. "How's that?" he said, meaning was the car high enough for Ames to crawl out. But Ames, who thought Trotter had knocked the car off the jack in the first place, crawled out swearing at Hank, resisting Alexander's attempt to examine his chest and implying humorlessly that it was a kind of bum joke to drop a truck on a man. In a minute he crawled back under to resume work, saying to Trotter, "Now stay away from this car, God damn it!"

The Bunyans were of a breed loud, tough, strong, rowdy, good-natured, superbly adapted to the hardness of the life they lived and the job they did, and by and large trying seriously to live up to Company policy and get along with Arabs and respect Arabian customs. They were considerably better behaved, probably, than they would have been at home: Heine Snyder, a driller, once complained that "there wasn't a decent fight in the whole damned four years." It was a queer oil field. It appeared even queerer when John Ames, driving through the Dhahran camp at about 16 miles an hour on December 19, struck a boy who darted from behind a parked tractor.

Ames stopped within 18 feet. He picked up the boy and took him to the Company hospital and waited around anxiously while it was determined that the victim had a broken leg and lacerations on the head, but was in no danger of dying. While Ames was waiting, the Saudi police descended and yanked him off to jail; because he was contrite and sorry about what had happened, he went peaceably. But it at once appeared that he was in serious trouble.

Just how serious was the question. Striking and injuring a pedestrian with an automobile is a grave offense anywhere—and Saudi Arabia is no exception. Further, all residents in the Kingdom, including Americans, were subject to the Shari'ah law, a code with some troubling differences if compared to American practices.

On the official side, there was confusion. Ahmad Lary, al-Hasa representative of the Bureau of Mines and Public Works, was inclined to one line of action, Ghalib Taufiq, the Chief of Police, to another. Ames sweated in jail while the argument went on. Ohliger, unable to obtain Ames' release, protested against the local attempt to treat him as if he were a common criminal and insisted that the police regulations in matters of this kind should be discussed with higher authorities.

Dhahran got on the radio to Lenahan, and Lenahan took the case up with Najib Salha, and Najib instructed Ahmad Lary to release Ames into Ohliger's custody. After that, the police and the Company would be allowed to present their arguments and evidence separately to their Jiddah offices, whereupon the *qadi* would consider both sides and decide the amount that Ames was to pay as indemnity to the parents of the injured boy. From the beginning, Najib held that Ames should pay hospital and doctor bills as well as the wages the boy would have received during his hospitalization. And if the boy died, he added, Ames' guilt would not be decided according to American practices, but by the *qadi* in accordance with Shari'ah law.

As it turned out the boy not only lived and collected his reparations money, but emerged from the hospital 15 pounds heavier and cured of malaria, scurvy and an enlarged spleen. But the possibility that an American might be subject to Shari'ah law was enough to make a man thoughtful. The Americans may have been largely ignorant of Shari'ah law but they did know there were some disturbing possibilities. For if it was a small case, by the standards of Americans grown calloused to death by automobile, and geared to handle accidental death or injury in specific legal ways and by an impersonal code, it was not small in Saudi Arabia, where everything from food, housing and habits of recreation to the most basic law of the land was under pressure along the frontier contact of cultures.

Most of Arabia, even the Dahna and the Jafura sands, is laced and crisscrossed with camel tracks. But beyond Ain Muqaiinima, the last well on the edge of the Rub' al-Khali—an old well to judge by the ten-foot bank of camel dung around its mouth, and indispensable in spite of the hydrogen sulfide stink of its water—there were no tracks. Southward between the Dahna and ar-Rimal reached the long, perfectly flat gravel plain called Abu Bahr, the Father of the Sea, and for miles there was nothing to break the incredible flatness or the equally incredible barrenness.

As the Texans say of the Staked Plains, you could look farther and see less than almost anywhere in the world. Not *a jabal*, not a sandhill, not a dune, not a shrub or a blade of grass, not a rock bigger than a pebble. Tom Barger's party made their traverses across it by sticking a piece of adhesive tape on the windshield and another below it where the shadow of the first would fall, and marking the shadow with a pencil. Then they set the car on the compass course they wanted, and every 20 minutes stopped to correct their course as the shadow moved leftward. It was the nearest thing to marine or aerial navigation that solid ground could provide, and it went on without a break until nearly noon. Then the country ahead began to roll, and the Dahna dunes closed in from the right. Here, as the Arabs said, the desert "lived." A recent rain had moistened it, and now there was grass in a narrow yard-wide band along the foot of the dunes on the south side. When the desert "lived" here, the Murrah said, there might be hunting since the *wudayhi* sometimes strayed up from the depths of the Rub' al-Khali. This was unlikely since the *wudayhi*,

or oryx were among the rarest of Arabia's animals. No one in the party, even the Arabs, had ever seen a wild one. Still, as Barger squatted behind the sedan, sheltering himself and the mercury from the sand which had begun to blow, and shot the sun, Khamis the guide continued to talk about the possibility.

Then they climbed back into the car and started to turn around and saw three—as fabulous as beasts out of a fairy tale, as improbable as three unicorns.

Today, it is forbidden to shoot most game in Saudi Arabia. As in other parts of the world Saudi Arabia has learned the need for conservation. But then things were different and within seconds, as the oryx broke and ran, the sedan and the pickup were roaring after them.

Johnny Thomas, a recruit from the University of Washington, had cut loose with the shotgun, and one of the two bigger *wudayhi* was down. Barger, driving the sedan, waved at the soldiers to look after it, while he tore out in pursuit of the other big one. The third, a calf, they ignored.

The oryx was not as fast as a gazelle; they gained on him. A little too anxious, Thomas fired with the shotgun before they were quite within range. Khamis emptied the .22, but because of the angle he hit him in the side and hind quarters. Then the bull stopped, and Khamis dropped him with a shot in the head, but before they could come up to him he was on his feet and running again. Tom Barger slid over, reloaded the .22, and shot three times. The oryx went down to stay.

Meantime the soldiers in the pickup had had their own thrills. When they drove up to the cow that Thomas had shot she rose up and charged them. Soldiers scattered in every direction. Some of them got to the truck just ahead of her two-foot horns, which rammed into the spare tire like bayonets. Then she also went down to stay.

To complete their sweep, they tracked the calf to where he had stopped among the dunes nearly a mile away. Barger pursued him slowly while Thomas and Khamis crouched on the running board, and at a propitious moment Khamis dove off like a bulldogger in a rodeo and had him.

For the next day or two they ate the best meat that Arabia provided, and they kept the calf, Butch, force-fed with a medicine dropper. The soldiers scoured the country for miles to bring in bunches of grass, but then they ran out of condensed milk and the inhospitable reaches of Abu Bahr provided no more stubble. For a while Butch existed on Klim, which left him a little pale and sickly, but not too sickly to refuse to butt anything that came close. He gave it to a soldier who came in to get his eyes treated and he knocked the wind out of a sheep who wandered into his orbit. At night he refused to sleep outside, preferring to root and scoop an illusory hole in the matting they spread for him in the tent. He submitted to being wrapped in a flannel shirt on cold nights, and when he wandered outside and got tangled up in the tent ropes he blatted for help like an airbulb auto horn.

He was everybody's baby. But he was symbolic of the losses that accompanied the gains of the industrial invasion. Butch's parents had been unable to escape hunters chasing them in a car, the kind of hunting that was to virtually wipe out both oryx and gazelle before conservation laws were put into effect. And Butch himself, treated more kindly by the newcomers, died of their kindness; born to subsist on an occasional wisp of grass, he fell so greedily upon the alfalfa they brought him in the supply truck from Hofuf that he bloated up and perished in convulsions.

Within two weeks they came across five more oryx. They had broken down a truck in the Abu Bahr and removed the whole rear assembly, axles, differential and all. They had to pull it apart with the lorry while one side was anchored to the pickup, and then they had to dig the broken bearing fragments out of the differential, install new bearings, and put the truck back together. They were feeling in a mood for a change of chores when Khamis spotted the tracks of five *wudayhi* moving northeast. By a coincidence which they nudged just a little, they too were working in that direction. At lunch, for a laugh, Barger rigged up a lasso out of a piece of rope and demonstrated for the soldiers how cowboys caught cows in America. They were not impressed.

A half hour after lunch, however, they ran into the herd and as two calves veered off, Barger decided he would show them that the cowboy method was not as silly as they thought it. He climbed out on the running board, and hanging on by his eyebrows, while Thomas brought him up beside a fleeing calf at 30 miles an hour, he lassoed her on the fourth cast. Then they ran down the other one and he hindfooted it and spilled it neatly on the very first throw. This time the Arabs *were* impressed, and complimented him many times on his "idea." If there had been any more *wudayhi* in Abu Bahr that season he might have started a cultural revolution, and turned the Bedouins into vaqueros.



The boy from North Dakota was developing into a man of real stature in the field. He had every frontier competence in addition to sound scientific training and personal qualities that set him apart. From the beginning he had been the one who carried the conversation when the field parties found themselves invited to drink coffee with Ibn Jiluwi, or local amirs, once or twice with the Crown Prince Sa'ud when he was camped near them, and most notably when King Ibn Sa'ud came through on his visit to Ras Tanura. Though he might go visiting in a pair of pants whose seat had long been gone, and which he had to cover by a woolen *bisht* that drowned him in sweat, Barger could hold his own in most conversations, stumble through a more formal visit with the Crown Prince without the necessity of an interpreter, and even get a "Praise be to God" out of the taciturn Ibn Jiluwi. He had a native grace, and a sensitiveness to Arab notions of decorum. Not only did he know much of interior Arabia better than almost any Company man except perhaps Steineke, but he knew Arabs.

One day Steineke came down to the Jabrin oasis that was their base for the Rub' al-Khali exploration, and said that he had been approached by the Government Relations Department to see if Barger could be wooed away from geology. Steineke left it up to him: Barger had a long leave coming, his first contract was about up, his second could be negotiated on the old basis or on the new. What was certain was that he could come back either way, to a promotion and a raise. He was the kind who grew with the job.

Tom Barger did not think, then, that he wanted to go into government relations, where he had no training to build on except a knowledge of Arabic. Time and the accidents of the war period would change his mind. His knowledge of the Arabic tongue and the Arab people was more valuable to the Company than all the training he had slaved through in geology and mining engineering. But before he made the decision that would move him over into the area where Bill Lenahan, Bill Burleigh, Roy Lebkicher, Floyd Ohliger and Gavin Witherspoon worked, there was a last job in the field: an exploratory trip to the towns of Layla and Sulaiyl, at the foot of the Tuwaiq Mountains, and a look at the new concession area south of Sulaiyl which Lenahan had obtained in his negotiation of May, 1939. No one from the Company had ever seen any part of that country. Layla was all but virgin territory. The only westerner who had ever visited it was H. B. St. John Philby, and he had been there only once, in 1917.

Max Steineke, prevented at the last minute from going, sent Dick Bramkamp, the paleontologist, in his place. While they waited for Bramkamp to arrive with the mechanic Shaubi, Barger and Thomas amused themselves by planting 60 frogs in the wells of the Jabrin oasis, so deadly with malaria that the Bedouins came there only at date-picking time. It was the geologists' pious hope that the frogs would eat the larva of *anopheles* and that the names of Barger and Thomas would be immortalized in the medical journals. They also had a bath and shampoo, the first of either in two weeks, and Thomas oiled up his hair and beard, which in ordinary times were full of dust and practically felted. They had a contest to see who could find the longest hair in his beard, a competition which Barger won by a sixteenth of an inch with a hair just about three inches long. But Thomas's beard proved more useful, if not so ornamental, because his whiskers were perfectly round, and Barger found that he could use them as cross hairs when adjusting the sextant.

When they had all that taken care of, and were sitting in the tent enjoying the itch of unaccustomed cleanliness, a sudden windstorm struck them, blew all their papers off the table, filled the tent with fine sand, swung the lights. They staggered out with their eyes full of grit and tightened the ropes and got the tent secured and came back in. It had lasted only minutes—just long enough to dirty everything up again and fill Johnny Thomas's oiled beard with a new collection of real estate.

Their destination was so deep inland, and the isolation of the inhabitants from western contacts so complete, that Ibn Jiluwi sent an extra 10 soldiers from Hofuf to accompany them. The eyes of Salih the cook popped when he saw them. Their Amir, Muhammad ibn Mansur, was Ibn Jiluwi's tax collector and right-hand man, and came by the special command of Ibn Sa'ud. The nine "soldiers" were all prominent men, four of them amirs themselves. Physically and in every other way they were a very superior lot.

They loved a joke and they took the trip as a picnic, and because Ibn Jiluwi was in Riyadh visiting the King, his own tea-maker came as one of the Hofuf detachment—a stout and cheerful man named Faraj,

loaded down with a rifle, a Mauser pistol and two bandoliers of cartridges. He had a trick of adding rose water to the tea, which gave it a touch of sumptuous, oriental splendor. Faraj carried the rose water in an old Scotch bottle, and he treated it with great care.

Two Autocar lorries, two pickups and a sedan, loaded with 15 soldiers, two geologists, two cooks and a houseboy, and three drivers, left the Jabrin camp and made the Dahna sands by noon. That night they camped in a desolate waste of rocks on the Huraisan Plateau, and the following afternoon, as they came from the east across a great plain, they saw black islands of palm groves floating on the mirage, and mountains beyond. That was Layla, the capital town of al-Aflaj. Hordes of ragged boys and a good many men poured out of the towns of Layla and Saih, to the south, and stared at them where they camped, but none came close. Amir Muhammad ibn Mansur sent word of their arrival by three of his soldiers; somewhat later, he dressed in his best and took his whole army in to pay a call on the local amir. Later still, on invitation, the entire party went in to dine with the son of the amir, acting as host in his father's absence.

This they were used to—the great platters heaped with layers of wheat gruel, rice, whole sheep, chickens. Tidbits were piled on the plates of the guests, so that they didn't have to enter the tugging contest, all with the right hand, by which the Arabs wrenched boiled mutton off the carcass. When they had had enough they rose, wished the blessings of God on the host, and held out their hands for the servant to pour water over them. Being guests, they were lucky: first whack at the towel.

Layla was surrounded with old mud forts, most of them from the time just before Ibn Sa'ud brought peace, but some of them reputed to be of the time of 'Ad, the king of the mythical lost city of Wabar (which some think is Ophir) in the Rub' al-Khali. West and southwest of the town were the clear blue *ains*, or wells, of the Aflaj, called wells presumably because there was no word for lake among the Arabs of Arabia. One the Americans measured was 85 feet deep, and one they swam in was a quarter mile wide and three-quarters long. From all of them covered canals led out, some of them into barren sand long gone back to desert. Along the canals were the stone manholes, designed to be built up above advancing dunes, that they knew from Qatif. Where a dune had moved on, the manholes were left like a row of chimneys across the desert.

After the first excited outpouring from Layla at their arrival, the inhabitants stayed out of sight. The visitors moved uneasily, conscious of being watched. Muhammad ibn Mansur and his soldiers disliked the place intensely; no one would salaam them, and people refused to sell them meat, calling them servants of Unbelievers.

Other people of the region were less standoffish. At Wasit, up the Wadi Hamar in the Tuwaiq Mountains, they could hear a mile away the mighty drone of voices as the inhabitants came running to look at the first foreigners and the first cars they had ever seen. These were friendly. So were the people of Sulaiyl, southward along the Tuwaiq Escarpment, which they reached two days later after examining the surface geology of the wadis that emptied every few miles into the desert, and after a thunderstorm had soaked them in the night. Sulaiyl, at the mouth of the great Wadi Dawasir, was a round of dinners and visits and coffee; the Hofuf soldiers, who had sworn that if they went back through Layla they would hand a beating to anyone who would not salaam them, mellowed under constant hospitality.

At Sulaiyl, too, Barger had the often repeated opportunity to play doctor, which could be heartbreaking when it was not, as in old Salim's case, funny. The first patient brought to him was a 10-year-old boy who had hurt his leg weeks before by falling off a camel. "God lengthen your life, O my uncle," he said in greeting, and lay without whimpering as Barger examined the leg, evidently broken, much swollen, and scabbed with continued infection. Barger told him to soak the whole leg in hot salt water twice a day and keep a clean rag over it. Beyond that, it was with God. *Allah kareem* —God is kind.

The boy came back next evening and, magically, the swelling was very much less. The doctor prescribed more of the same treatment, gave the boy a couple of Maria Theresa thalers (dollars) and some clean rags, and had done everything he could. Another boy, paralyzed from the hips down, who was brought in by his tearful father on a stretcher, he could not help. "This sickness is from God, and if He wills, He will cure it. *Allah kareem*. I can do nothing for him."

Down in the new concession area, at the well called Hisy, where a donkey drew water under the protection of a mud fort, they met a very old man, wrinkled like a monkey, whom the soldiers nicknamed the Old Man of Hisy, the Brother of 'Ad. "O, Old Man, how old are you?" they said to him, and grinning with wrinkled gums he creaked in his low old voice, "*Mubty*"—ancient. He would not accept a ride in the sedan back to his fort. "I will go by foot," he said. "I have gone a long way on my feet." He had never seen an automobile before, but he was not surprised by it. If such a thing appeared by his *ain*, it was God's will.

Ain Hisy was their deepest penetration into unknown Arabia. Three days later they were back at Layla, where they stopped only for water. Their meat needs did not need to be satisfied by the Layla *suq;* they had been having great gazelle hunting. The soldiers, who preferred the certainty of buckshot, were a little astonished to see Barger pick off a running gazelle (and gazelles had been clocked at nearly 40 miles an hour) with a .22 from the back seat of the sedan.

From Layla they went back toward Jabrin, stopped while Thomas, Barger and Dick Bramkamp made some important geological examinations just west of the Dahna, and got into Jabrin camp in the midst of boiling heat on the 18th of April, 1940. Within a month Barger was on his way to Dhahran, and in a couple of months more on his way home on long leave.

When he came back in 1941 the war would have sharply restricted Company activity, field work would be suspended, and after driving Roy Lebkicher across Arabia as a temporary replacement for Bill Lenahan, who was leaving after eight years, Barger would find himself a government relations man. Garry Owen would arrive in the spring of 1942 to take over Lenahan's work, and Lebkicher would return to Dhahran as manager of relations. The camp at Dhahran would have been pinched in upon itself, into what Phil McConnell would label the Time of the Hundred Men. For quite a long time, the new country Barger and Bramkamp had opened up would stay unvisited, as remote as if it still belonged to 'Ad the King of Wabar, or his ancient relative the Old Man of Hisy.

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*Editor's Note: The concluding chapters of* Discovery! *will be continued in the January-February issue because the next issue will be devoted entirely to a survey of education in the Arab East.*

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# CAIRO *a millennial*

BY IRENE BEESON

PHOTOGRAPHY BY TOR EIGELAND

"There were marble fountains, birds of 'wondrous plumage,' and animals 'such as the ingenious hand of the painter might depict...'"

As anniversaries go, Cairo's Millennial has been grim.

Despite brave efforts to focus on the dancers, singers, painters and other artists come to mark this rarest of events, Cairo's attention has been elsewhere, a harsh reminder, perhaps, of the night 1,000 years ago when, according to legend, the whim of a raven gave a new city an ominous name.

It was August 8, 969. General Gawhar, in the name of the Fatimid Caliph, had just conquered al-Fustat, then the capital of Egypt, and had chosen a site north-east of it for a new palace to house the Caliph when he came to claim his prize. Around the site, mattocks in hand, stood laborers listening for the sound of bells strung on ropes outlining the site. According to his plan General Gawhar would ring the bells at the most favorable conjunction of the planets. But just as Mars reached its zenith a raven darted down and perched on the rope. The bells rang, the laborers began to dig, and the city became "The Warrior", in Arabic, "al-Qahira," twisted later by western tongues into "Caire" and "Cairo."

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# SUEZ *a centennial*

BY JOHN BRINTON

PHOTOGRAPHY BY TOR EIGELAND

Engravings courtesy J.M. Dent & Sons Ltd.

"It was grand; it was splendid; it was magnificent—as befitted one of the few moments in history that was truly historic..."

Under the sound of the guns the echoes of the past are muted. This, on the eve of its 100th birthday, is the story of the Suez Canal.

In July, 100 years ago, Ismail, Viceroy of Egypt, toured the Continent grandly handing out to the crowned heads of Europe invitations to ceremonies marking the opening of a canal through the Isthmus of Suez. He also invited 1,000 notables of the day, including 100 famous men like Zola, Dumas and Ibsen who were to come as his personal guests-i.e. all expenses paid.

Even for a ruler known for extravagance it was an extravagant gesture. And it was only the first of many. Before the end of the ceremonies he would build a new road to the pyramids, construct a palace for the Empress Eugenie of France and build an opera house. He would also commission, but not get in time, an opera by Verdi, give a ball which 6,000 people would attend, and import 1,500 cooks and servants from Europe to tend to things. It was grand; it was splendid; it was magnificent—as befitted one of the few moments in history that was

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Unlike orthodox Muslims, the Fatimids, founders of Cairo, encouraged representational art such as this plate, now in the Islamic Museum.

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Until that fateful night, Egypt's capital had moved up and down the Nile Valley for 5,000 years—changing name and site according to the wishes of conquerors and dynasties. Most recently—that is, when the Caliph al-Mo'ezz attacked Egypt—the capital had been the Roman-ruled Misr which the first Muslim conquerors of Egypt had named, in 641, al-Fustat.

Like Cairo, the name and site of al-Fustat, whose charred ruins archeologists are just now excavating after 800 years, was chosen by a bird: a dove that laid an egg in the tent of 'Amr ibn al-'As, the Arab conqueror of Egypt, as he was about to march on Alexandria. 'Amr immediately declared the spot sacred and when he returned, triumphant, from Alexandria, instructed his soldiers to build their quarters around the tent, thus giving the new city its name: "town of the tent." Later a mosque—the mosque of 'Amr, Egypt's first Islamic religious building—was erected on the site of the tent.

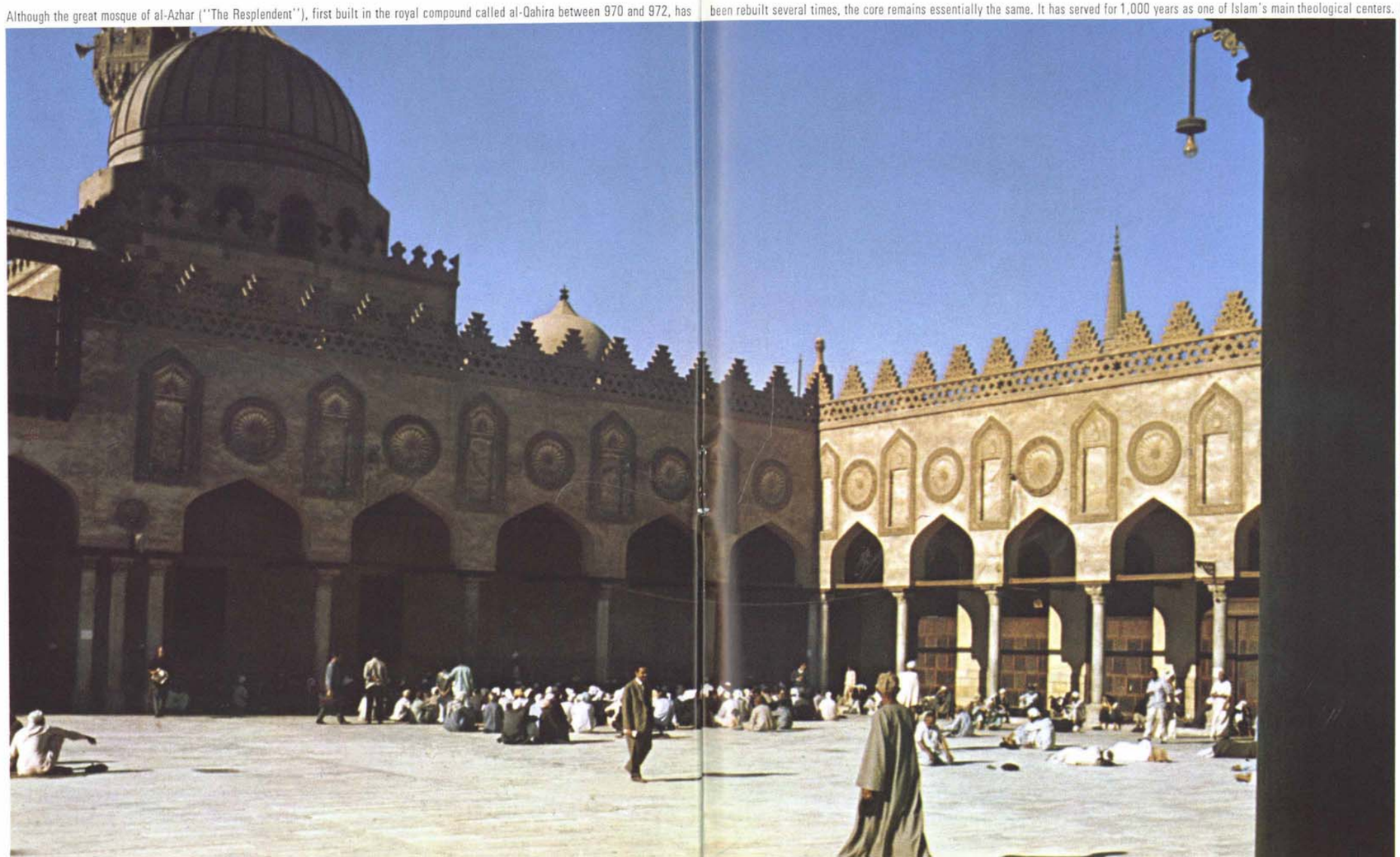
For a time after the Fatimid conquest al-Fustat continued as the metropolis of Egypt. Although nearby Cairo was growing, it was still essentially a royal enclosure reserved for the Caliph, his court, slaves, administration and army. Al-Fustat was the real capital and for years after, travelers marveled at its beauty. The geographer Ibn Hawkal, for example, wrote in 987 that al-Fustat, then about a third the size of Baghdad, was a city of shaded streets, gardens and handsome markets with houses up to seven stories tall, and large enough to accommodate 200 people. And nearly 70 years later, a Persian, Nasir-i-Khusron, marveled at the wonderful wares in Fustat markets: iridescent pottery so delicate he could see his hand through it, costly green transparent glass, rock crystal, tortoise shell and a profusion of fruits and flowers and vegetables even during the winter months.

In the meantime, the Caliph al-Mo'ezz had made a significant decision: he would move his court to Cairo. Egypt, for some 300 years a province administrated by governors appointed in such centers of Muslim power as Damascus, Medina and Baghdad, was now to be a center of power itself. And the compound called al-Qahira would be its capital.

By then the royal compound was an impressive place. Stretching from what is now Bab-al-Futuh to Bab Zuwayla, and from Bab al-Ghurayyib beyond al-Azhar Mosque to Khalq Street, was a wall so thick two horsemen could ride abreast on it, and so long they had to build seven gates to provide adequate access and egress. Inside, in an area measuring half a square mile, was a *rahba* (a square now called Khan al-Khalili) so large that 10,000 soldiers could parade in it. On the eastern side was the palace of al-Mo'ezz. This palace, which occupied nearly a fifth of the compound, was the structure the historian Makrizia would later say had "four thousand chambers," one an Emerald Hall with pillars of marble, another the incredible "Golden Hall", a pavilion where the Caliph on a golden throne surrounded by his chamberlain and gentlemen in waiting surveyed, from behind a screen of golden filigree, the festivals of Islam.

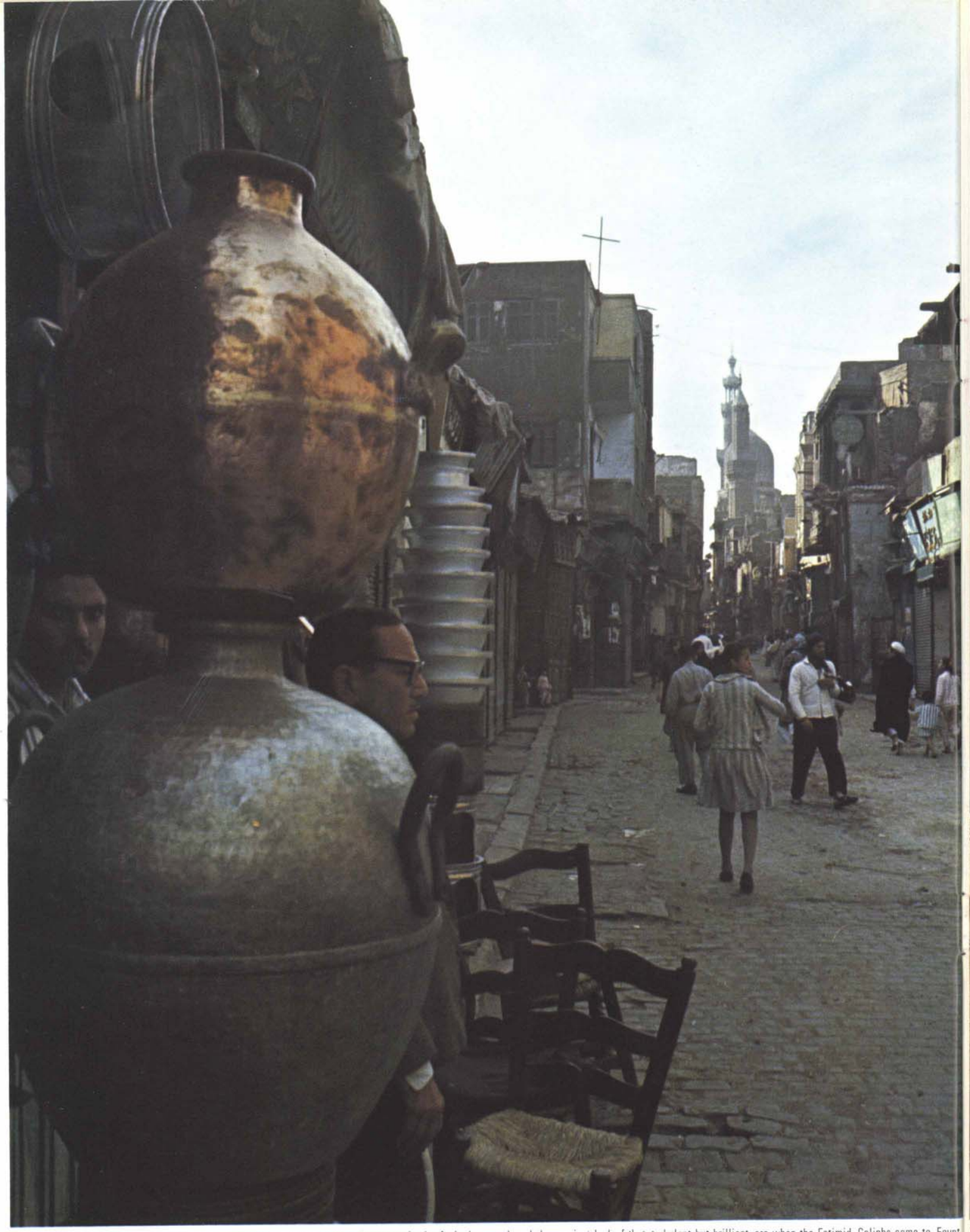
The compound was so large that from a distance, according to Nasir-i-Khusron, it looked like a mountain. And the palace was so magnificent that only the words of one who was there could properly capture it. Such a one was William of Tyre who in 1168 came to Cairo with the ambassadors from the Crusaders. They were led, he wrote, through long mysterious corridors and guarded doors, across a spacious open court and arcades on marble pillars, and along halls with ceilings inlaid with gold. There were marble fountains, birds of "wondrous plumage," and animals "such as the ingenious hand of the painter might

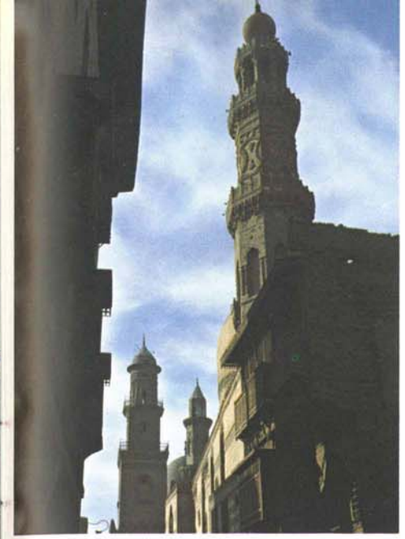
Although the great mosque of al-Azhar ("The Resplendent"), first built in the royal compound called al-Qahira between 970 and 972, has been rebuilt several times, the core remains essentially the same. It has served for 1,000 years as one of Islam's main theological centers.

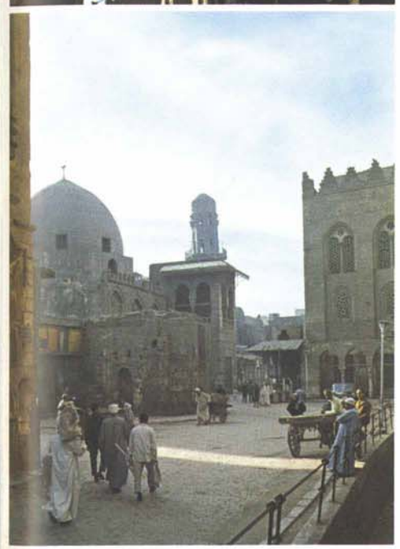


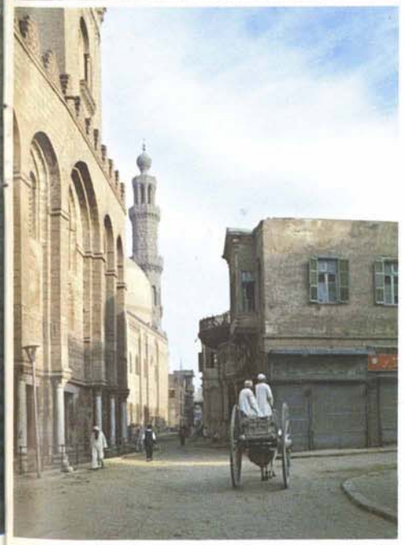
A detail from wooden gates of the long-vanished Fatimid royal palace.

Surviving still are beams of the Salah Tala'ai Mosque near Zuwayla Gate.









Even today, behind the gates of old Cairo, quarters like Bayn al-Qasrayn Street retain the feel, the sound and the ancient look of that turbulent but brilliant era when the Fatimid Caliphs came to Egypt to put their stamp upon an era and to found a noble city.

depict, or the license of the poet invent..."

Finally, he said, they came to the throne room where "the multitude of pages and their sumptuous dress proclaimed the splendour of their lord ... and the heavy curtains broidered with gold and pearls were drawn aside and on a golden throne robed in more than regal state, the Caliph sat revealed."

Another great structure constructed in the compound was the great mosque of al-Azhar ("The Resplendent") built between 970 and 972, rebuilt several times since, yet remaining at the core essentially the same. Five years later, the Caliph's son al-'Aziz would dedicate the mosque to learning, a step that would make it, during the next 1,000 years, a major theological center of Islam, with students from all over the world gathering for instruction in Islamic theology, law and tradition, and in Arabic, grammar and rhetoric. But that was later. At the beginning it was simply a great mosque and the scene for Caliph al-Mo'ezz's official arrival—and the beginning of a profound change in the history of Egypt.

For Egypt, the advent of the Fatimids was far more than a change of rule and the shifting of the capital. It was a complete departure from the country's religious, political, social and cultural traditions, a period in which Egypt asserted itself as the leading country of the Muslim Empire.

The men responsible for this change were al-Mo'ezz, and his son al-Aziz. The father, who had coveted Egypt for years, only ruled there for two years but during them he cleared the way for his son's 21 years of peace and prosperity.

One of the important contributions made by al-Mo'ezz was tolerance. Although a Shi'ite, he avoided extremes in substituting his beliefs for the orthodox Sunni teachings that had been predominant until his conquest. Another was economic strength. At Maks near present day Ezbekyia he built first docks, then ships: 600 ships, some measuring 275 by 110 feet, a fleet that strengthened trade so substantially that Egypt soon rivaled Baghdad.

To pay for the extravagances of an entourage already 20,000 strong, and his own love of luxury (he even encouraged representational painting, an art form banned by orthodox Muslims), he instituted a system of tax collection so rigorous it produced the equivalent of $150,000 a day from al-Fustat alone.

Al-'Aziz followed his father's example. He added his own palace, "the Lesser Western Palace," plus the Golden Hall, the Great Diwan and the Pearl Pavilion—all of which have vanished. He laid the foundations of the Mosque of al-Hakim in which the dome was later introduced. Samples of the Islamic dome can be found still in three Fatimid mosques in Cairo: al-Azhar, al-Hakim and al-Guyushi. This charming little mosque perched on the edge of Muqattam Hill, was built in 1805 by Badr al-Gamali, and is the only mosque of that period with a minaret intact.

Had the rest of the Fatimid Caliphs followed the example of al-Mo'ezz the history of the next 177 years might read quite differently. But with the accession of the mad al-Hakim the story of the Fatimid turns into a saga of repression, famine and war that would go on and on until the day in November, 1169 when troops ignited 20,000 barrels of naphtha and burned al-Fustat to the ground in a fire lasting 54 days.

Ominously, the reign of al-Hakim, nicknamed "the lizard" by a tutor, began with a murder. Fifteen years old, already feared by the court for his "terrible blue eyes" and a thunderous voice that made even adults tremble in his presence, al-Hakim immediately ordered the death of the regent who had served him for four years. It was the first of many such orders as, for 25 years, Hakim sought to force all Egypt to comply with his often ecentric decrees.

Not only did he ban alcohol, as one would expect from a good Caliph but also ordered the destruction of vineyards, outlawed raisins and confiscated honey. He forbade all games, even chess, and ordered shoe makers to stop the manufacture of outdoor footwear for women—to force them to stay indoors all the time. Eventually women were not only forbidden to appear at their latticed windows but also from going onto the roofs of their own houses. In 1005 he also instituted widespread persecution of Egypt's Christians. His final outrage—the one that led to his downfall—was to proclaim himself the incarnation of God, a violation of orthodox beliefs. When the people threatened revolution he sent in troops but lost control of them.

Bab al-Futuh is one of three great stone gates still standing.

Despite a few improvements to Cairo —the Hakim mosque, the Musalla al-Id, and the Dar al-'Ilm (The Hall of Science) in the great palace,—the reign of al-Hakim seemed to spoil the Fatimid line. Although there were peaceful and prosperous periods —most notably one 20-year period during the 58-year reign of the handsome and amiable al-Mustansir—much of the Fatimid story thereafter involves battle, disease, and death.

During al-Mustansir's reign, for example, Turkish elements in the army fought the Sudanese and Berber elements for ten years, drove them out and took Cairo; they were only defeated when Badr-al-Gamaly, the shrewd and forceful governor of Damascus, was brought in by al-Mustansir to restore order. In 1066 there began a seven-year famine during which women would barter a house for a sack of flour and butchers sold horses, jackasses, dogs and cats. After the famine there was plague.

Badr-al-Gamaly and his son Afdal Shahansha did bring a period of tranquility to Egypt. They pacified Fustat, borrowed money and restored agriculture. During that period artisans of the land—the plasterers, woodcarvers, glassblowers and jewelers—recorded in stone, wood, plaster and in glass and precious stones, the glory of the Fatimids. There were major improvements effected in the city too, notably the construction of a new wall and the three great stone gates, Bab al-Futuh, Bab al-Nasr and Bab Zuwayla, all three of which stand today as monuments of the Fatimid period.

During ensuing reigns, however, the dynasty staggered to its end in a series of palace revolts, and uprisings so serious that in 1149, the people of Cairo appealed to Amir Tala'i ibn Ruzzik, governor of Ashmunain in Upper Egypt to come to the rescue. He did and soon after he built a mosque to mark his victory. It stands today near the Bab Zuwayla.

By now, however, the Crusaders had moved west from Jerusalem, and were threatening Egypt. When Tala'i failed to drive them away he too fell.

The end was in sight, and after a governor of Upper Egypt called Shawar marched on Cairo and seized the vizierate from Tala'i's son it was not long in coming. Soon involved in the constant struggle for power, Shawar offered a third of Egypt's revenue to a Sunni prince called Nur id-Din for his support against the rebels. Nur id-Din came, soon broke with Shawar who was then involved with the Crusaders, and, after Shawar's great fire had reduced al-Fustat to smoking ruins, invaded the city, and named Salah-id-Din as prime minister, the same "Saladin" who would loom so large in the later events of the Middle East, and would also, in 1171, suppress the title of "Fatimid Caliph" forever.

With the destruction of al-Fustat, Cairo, naturally, began to grow. Some of the sumptuous palaces had been sold, the others fell into decay and as the centuries went by what had been the glory of the Fatimids slowly vanished in the spreading sprawling mass of Cairo until today, on the 1,000th birthday of the city, only a few mosques, ancient gates, and sagging walls, and some fragments of pottery and carving remain as evidence of this violent, yet also brilliant, beginning to one of the world's most famous cities.

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*Irene Beeson is a free lance correspondent for several British and Middle East newspapers and magazines.*

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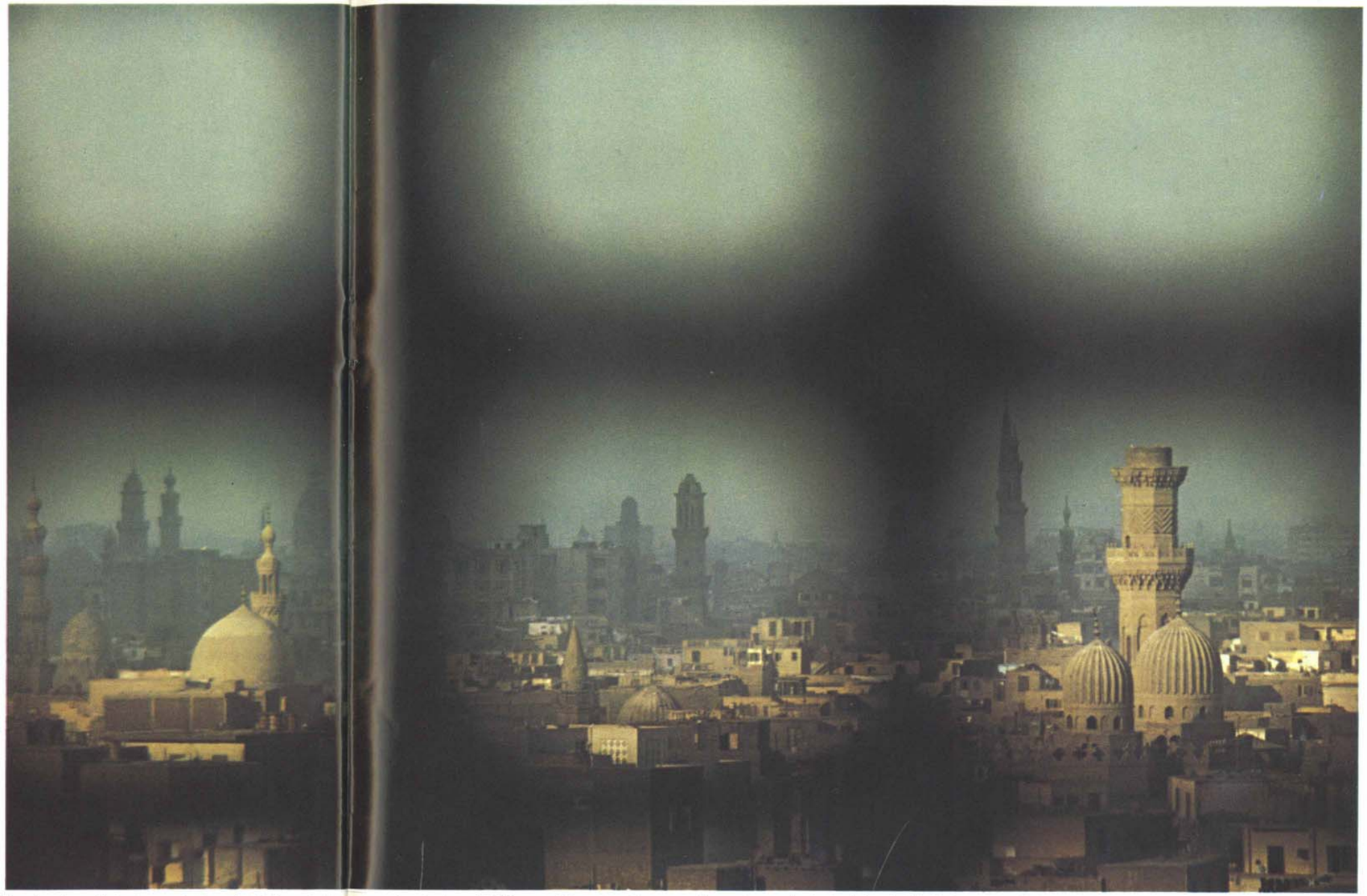
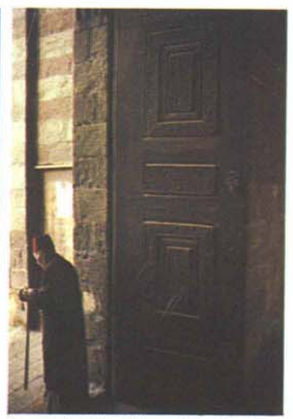


Through an iron grill, the towers and spires of old Cairo magically emerge from the haze of 1,000 years of history as exciting, as sparkling as they were in the days before the Fatimid dynasty began the long and often violent slide toward disaster and final destruction.

A museum now preserves ancient al-Azhar gate.

Zuwayla Gate is still a busy entry to old Cairo.



Doors of al-Fakahani Mosque have glow of age.

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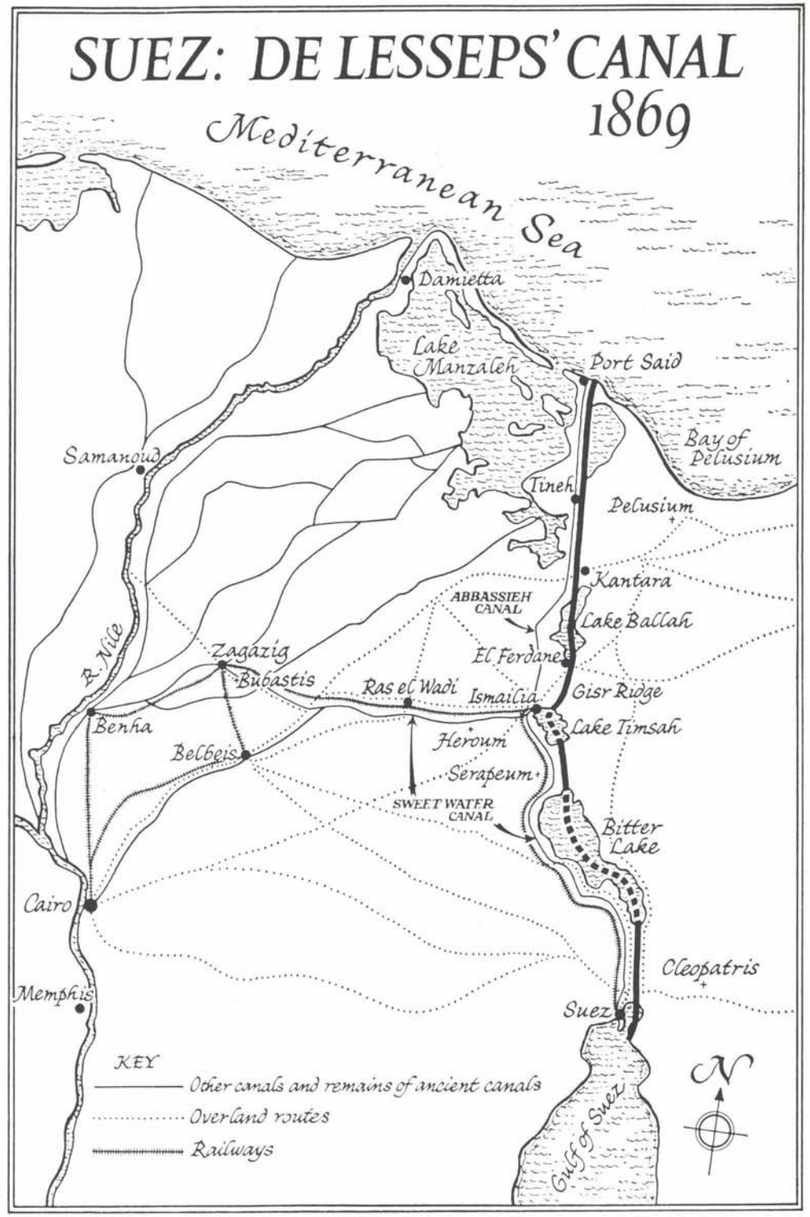
truly historic: the opening of a canal linking the Mediterranean Sea with the Red Sea, Europe with India, West with East.

The Suez Canal was not a new idea. As early, possibly, as 2,000 B.C., a canal linking an ancient branch of the Nile with the Bitter Lakes was built. Around 500 B.C., a Persian conqueror named Darius extended it, but stopped when he was warned that the Red Sea was higher than the Mediterranean and the opening of a canal would bring the sea flooding into Egypt. (A myth, that would persist through Napoleon's invasion of Egypt and get even stronger when French engineers made what Lord Kinross called "a miscalculation of major proportions.")

But history moved on. Greeks came and built locks near what is now the shell-pocked town of Suez. Romans under Trajan put slaves to work digging a new link to the mainstream of the Nile and called it "Trajan's River" Arabs, 100 years later, reopened "Trajan's River," then finally filled it up again as a defense measure and left it that way for another 1,000 years. During that time Europe found a route to India around Africa and, until Napoleon landed in Egypt, forgot about its filled-in ditch across the isthmus.

Napoleon's invasion of Egypt had a tremendous impact on England. Safe behind its shield of stout English sea-power, getting rich on the returns of its swift merchantmen, England, until that moment, had been perfectly content to subdue its interests in the Mediterranean. But roused by the possibility that France would control an area from which it could threaten England's grip on India, British statesmen decided on a course of action that would shape history for the next 119 years. They decided that England would, hereafter, prop up the sagging military strength of the Ottoman Empire which still ruled, however feebly, all of the Middle East. It was a fateful decision, one that would drag England into the Crimean War, spawn the ill-fated Chesney expedition to develop a new route to India via the Euphrates river (*Aramco World*, March-April, 1969) and harden into a stubborn, illogical opposition to the dynamic Frenchman who was to become the 'Father of the Canal,' Ferdinand de Lesseps.

The story of Ferdinand de Lesseps is as odd as it is fascinating. It begins with a






19-year old boy going off to Spain as a very junior diplomat, winning fame for some skillful negotiations there and in Egypt, but later falling into disfavor with the new rulers of Republican France and resigning, apparently a failure at a young age.

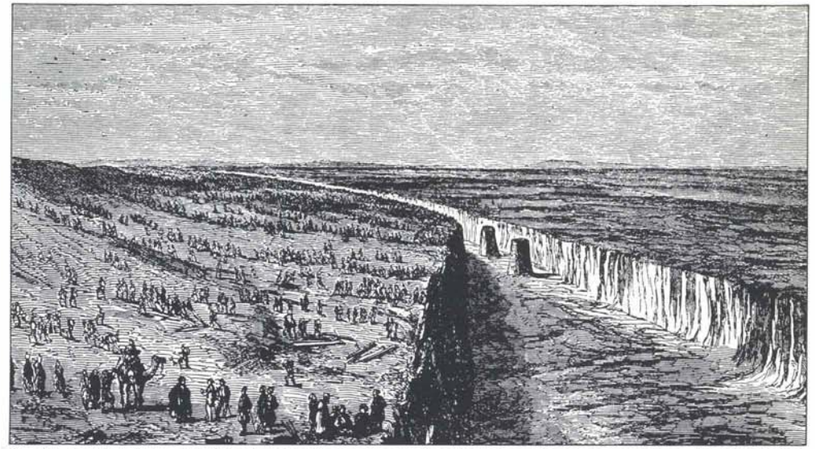
During his career, however, De Lesseps had met many interesting individuals: Thomas Waghorn who had fought such a heartbreaking fight to convince a stubborn British government that an overland route to India across the Isthmus of Suez was feasible (*Aramco World*, November-December, 1968); Adolphe Linant de Bellefonds, an engineer in the service of Egypt and a fierce proponent of a canal; Prosper Enfantin, a religious fanatic whose faith somehow saw a canal as a route to salvation and, above all, a chubby little prince with an appetite for macaroni.

The prince's name was Muhammad Sa'id. He was 13, corpulent and lazy—to the dismay of his father, the great Muhammad Ali, Viceroy of Egypt, whose own physical prowess and vigor had been important factors in his rise to power. Insistent that this condition be remedied, the story goes, the viceroy put Muhammad Sa'id on a strict diet and sent him to the harbor in Alexandria each day to exercise on a naval vessel there, a vessel, as fate would have it, not far from the home of Ferdinand de Lesseps, then vice consul in Alexandria.

The vice consul who had amiable relations with Muhammad Ali's whole family, took pity on the boy and secretly let him into his kitchen and fed him great helpings of macaroni. It was a small kindness, but as one writer later put it, a "landmark in the history of the canal." Muhammad Sa'id never forgot that kindness and when, 20 years later, he became viceroy, one of his first acts was to repay it: he granted De Lesseps an exclusive concession to construct a canal.

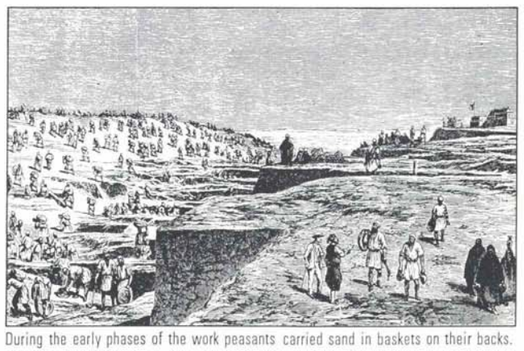
As history and De Lesseps himself have made clear, this was not as fortuitous as a brief summary sounds. De Lesseps did not simply stumble into a good thing; he quite coldly planned it and had, as a matter of fact, been planning it for some time.

As one version has it, De Lesseps's plans for Suez had germinated years before when, quarantined in Alexandria, he read the the report of Napoleon's engineer J. M. Lepere on the feasibility of building a canal.

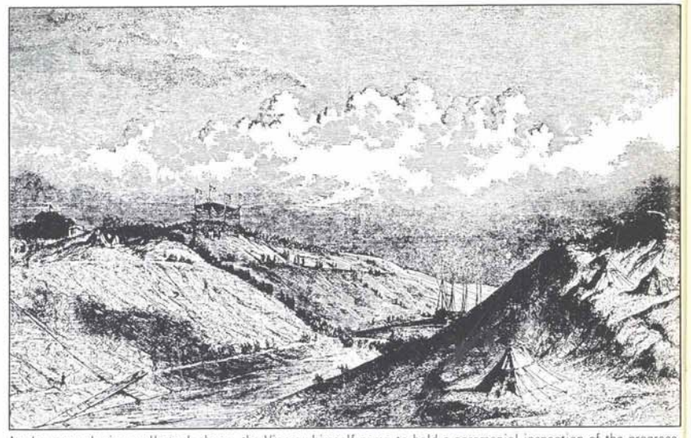


A period engraving shows some of the thousands of peasants conscripted for work, cutting the channel between Ismailia and Suez.

The Mediterranean entrance to the Suez Canal viewed from the northwest with Port Said, foreground, and Port Fuad, opposite.

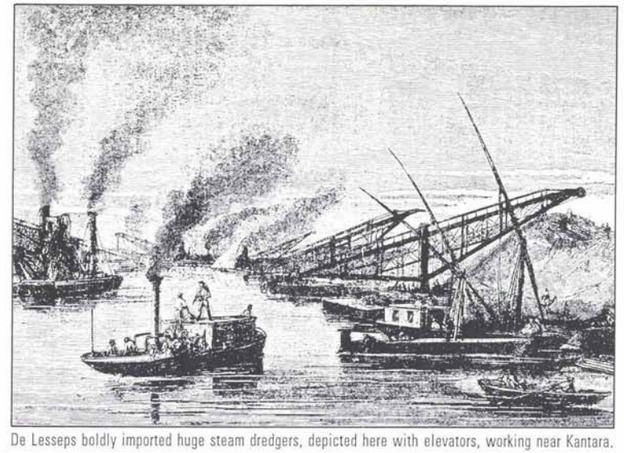


During the early phases of the work peasants carried sand in baskets on their backs.



As the great sloping walls took shape, the Viceroy himself came to hold a ceremonial inspection of the progress.

Ferdinand de Lesseps, who conceived the canal–then built it.



De Lesseps boldly imported huge steam dredgers, depicted here with elevators, working near Kantara.

Soon he was to see Waghorn prove that even an overland route across the isthmus was a shortcut. He also came into contact with a mystical religious sect called the "Saint-Simonians" whose beliefs had somehow come to focus on construction of a canal. He discussed the matter with Linant and Captain Chesney, both of whom had corrected the myth that one sea was higher than the other. It is also known that he kept an eye on the possibilities during the next two decades—even to the point of making an inquiry not long before his prince came to power. In short, De Lesseps did not come to his patron with a sudden inspiration, but with a scheme that had engaged his thoughts for years. De Lesseps was a man who looked ahead.

The actual decision was made under most dramatic circumstances. It took place during military maneuvers in the desert, to which the new viceroy had invited De Lesseps, and the best version is De Lesseps' own:

"*On the 30th of November, 1854, I presented myself at the tent of the Viceroy, placed on an eminence surrounded by a wall of rough stones, forming a little fortification with enclosures for cannon. I had remarked that there was a place where we could leap with a horse onto the parapet, there being a terrace outside on which the horse had clearance of a footing. The Viceroy welcomed my project, and requested me to go to my tent to prepare a report for him, which he permitted me to bring him. I vaulted on my horse, which leaped the parapet, galloped down the slope, and then brought me back to the enclosure, when I had taken the time necessary to draw up the report, which had been ready for several years. The whole question was clearly set forth in a page and a half; and when the Prince himself had read it to his followers, accompanying it with a translation in Turkish, and had asked their advice, he received unanimous answer that the proposal of the guest, whose friendship for the family of Mohammet Ali was known, could not be otherwise than favorable, and that it was desirable to accept.*

"*The concession was immediately granted. The word of Mohammet Sa'id was as good as a contract.*"

In the capitals of Europe, the viceroy's decision provoked sudden meetings and long discussions. The presentations were varied but the point was the same: that an upstart with neither money nor power, and for unknown motives, had suddenly thrown a weighty new factor onto the delicate balances of power in 19th-century Europe and that this could not be permitted to happen. England, with Lord Palmerston at the head of its government, was particularly alarmed. Permit a French company to develop—and then control—a new route to India? A route through which French warships could carry troops to the vulnerable sub-continent? Never, said Palmerston, and sent off word to his envoy in Istanbul: under no circumstances can England permit the Sultan to approve this step.

It was a shrewd move. For Muhammad Sa'id, friend or not, had cautiously added a codicil to his sweeping grant to De Lesseps. The codicil simply said that before construction of a canal could be initiated the "concession must be ratified by His Imperial Majesty the Sultan." It was a natural condition; however shaky his grip, the Sultan still ruled Egypt and still laid claim to Sa'id's loyalty and obedience. But it gave England, the Sultan's chief supporter, a lever with which to exert pressure on De Lesseps and England exerted it. For the next 12 years the Sultan would steadfastly refuse to ratify the concession.

The building of the Suez Canal has always seemed like a great engineering challenge; a man-against-the-desert epic of formidable magnitude. And certainly it was not easy: to excavate millions of cubic feet of sand in the waterless wastes of a desert required an incredible effort—if just to bring a stream of fresh water close enough to permit the work to go on. But the highest point of land involved was only 59 feet above sea level, and it was being cut in a straight line. Once De Lesseps had persuaded the Viceroy—in one of his more shameless schemes—to conscript peasants by the thousands and force them to work on the excavations, the engineering problems were relatively minor. The major ones he soon solved by the bold importation of huge new steam dredgers. No, the engineering was not the main problem. The real problems were in politics, finance and diplomacy, fields, as it turned out, in which Ferdinand de Lesseps excelled.

The Sultan's initial refusal was a body blow to De Lesseps. After visiting the capitals of Europe he realized *how* serious, and developed his tactics accordingly. Instead of trying to persuade the Sultan directly, he decided it would be far easier to persuade the Emperor of France to persuade the Sultan. De Lesseps would form a company which the Emperor of France could support. Naturally the formation of a company required capital which could be accumulated by the presentation of a scientifically sound project.

It was enough to discourage a titan, but De Lesseps went confidently forward. He formed a group called the International Scientific Commission and sent it to Egypt to prepare a report on the feasibility of a canal. With the report of the commission in hand—"proving" that the canal was quite practical—he wrung a second concession from Sa'id and then, for the next five years, unflaggingly traveled, talked and planned his venture. He saw Queen Victoria and Albert. He talked to the Royal Geographical Society. He approached the Prime Minister of Austria. He harangued editors, businessmen and bankers and, simultaneously, mounted a worldwide propaganda campaign.

Support grew, especially after native troops in India rebelled and England sent troops across the isthmus to save time, thus proving one of De Lesseps' major contentions. But it didn't grow fast enough so in 1858 he formed a company—the *Compagnie Universelle du Canal Maritime de Suez*—and with chilling deceit persuaded Sa'id to put up enormous amounts of capital that western investors were supposed to have provided.

When even that failed to move the Sultan or affect the English position he decided on a reckless gamble. If it failed, so would the canal. But he had negotiated long enough; it was time to bring the issue to a head. It was time to see if the French Emperor was going to permit England to frustrate a project of such vast import to France. He ordered the start of construction and with appropriate ceremonies and suitable fanfare, the first spadeful of desert sand was turned and the Suez Canal got underway.

In recent times, a dredger fighting the constant battle against silting looked not much different than those of a century ago.

As De Lesseps had expected, Europe responded violently. From Prime Ministers, Viziers, shareholders, bankers and consuls in five countries came a torrent of arguments, and at last the Sultan stirred. He issued an order to the company to cease work. De Lesseps had not expected this. Worse, Sa'id, his friend and supporter, was losing confidence. The company was clearly foundering.

Whether the next step was taken in desperation or whether Ferdinand de Lesseps had cynically maneuvered public opinion so as to bring it about is a point that scholars can debate forever. Whichever it was, De Lesseps took it. He went personally to the Emperor and put the question to him: will the Emperor of France permit England to block a vital French enterprise? The Emperor, Napoleon III, hesitated and then said softly: "M. de Lesseps, you can count upon my support and protection. The British opposition is unimportant. We must just trim our sails to it."

This was the turning point. It solved nothing in itself; in fact the company was to totter and nearly collapse several times in the coming years as politicians and financiers, sensing victory and profit, closed in on De Lesseps and nearly snatched his prize from him. But the French Emperor's

decision cleared the way and the Sultan ratified the concession in March, 1866. Construction proceeded to such an extent that it was soon clear that success was inevitable. Everyone saw it, including the Khedive Ismail, successor to Sa'id. In July, 1869 he set out for Europe issuing his invitations to the opening. He promised everyone it would be worth attending.

Now it was a race against time. Palaces were going up, a seven-mile road was inching toward the pyramids and an opera house was being completed. But the canal was still not finished and at the last minute they had found, on the bottom of a narrow passage, a ledge that had been overlooked, a ledge high enough to tear the bottom out of a ship. Try dynamite, said De Lesseps. Impossible, said the engineers. No one has ever set off that big a charge underwater. We have no choice, De Lesseps said. Try it. They tried it and in an enormous explosion that sent canal water spraying over a good part of the desert, demolished the ledge, and opened the canal.

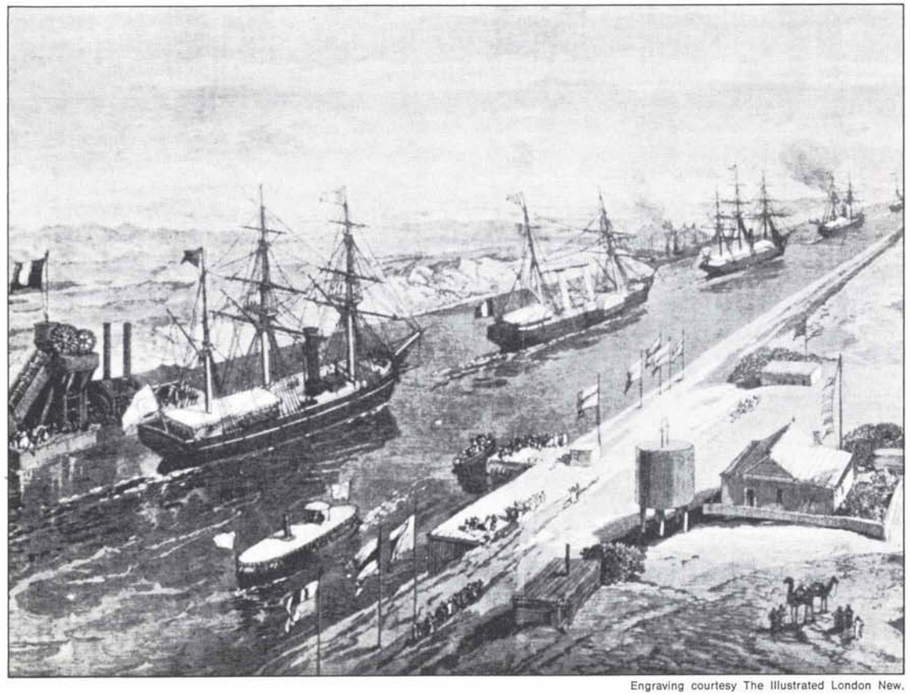
At Port Sa'id, Cairo, Suez and Ismailia, meanwhile, royalty, nobility, wealth and fame were gathering for the momentous occasion—the voyage of the monarchs through the canal. At Port Sa'id, the *L'Aigle* already lay at anchor while the Empress went sightseeing. Around her were gathering corvettes, frigates, yachts and merchantmen from everywhere. Prince Henry of the Netherlands was there. The Emperor of Austria was coming. So were the Crown Prince of Prussia and others.

At the last minute Ismail, pale and shaking, summoned De Lesseps. A ship sent through to test the canal had gone aground and was blocking the passage. De Lesseps was stunned. We'll float it, he promised. Float it, said Ismail grimly, or blow it up!

It was not necessary. The ship floated free and not long after *L'Aigle*, as majestic as its royal passenger, weighed anchor and moved into the canal followed at carefully spaced intervals by 40 other ships. In stately procession they proceeded to the first stop: Lake Timsah where thousands of spectators cheered their arrival and French warships, firing salvo after salvo, signaled the beginning of 24 hours of celebration. There was a banquet given by De Lesseps, an "equestrian fantasia," and a great dinner for 1,000 guests served on tables set in the dunes under the desert stars. As Ismail had promised, it was worth attending.

The next day the great convoy moved on to the Bitter Lakes where the royal guests rowed back and forth in the dark to visit each other as rockets soared into the sky. On the third day they reached Suez. It was the sight of the century. As the great ships slowly rounded the last turn, came about and dropped anchor, with all flags flying, cannons thundered, crowds cheered and band after band played lustily under the sun. The Suez Canal was open at last. It was November 19, 1869.

*John Brinton, a specialist in 19th-century Middle East history, contributes regularly to Aramco World magazine.*



Engraving courtesy The Illustrated London New.