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ARABIA THE BEAUTIFUL

ARAMCO WORLD

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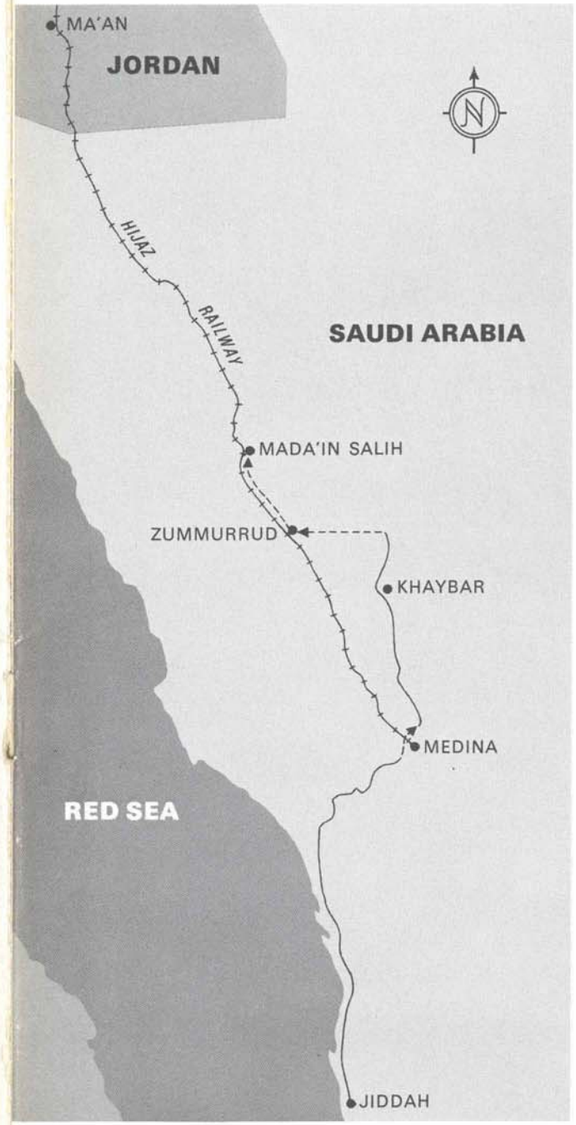
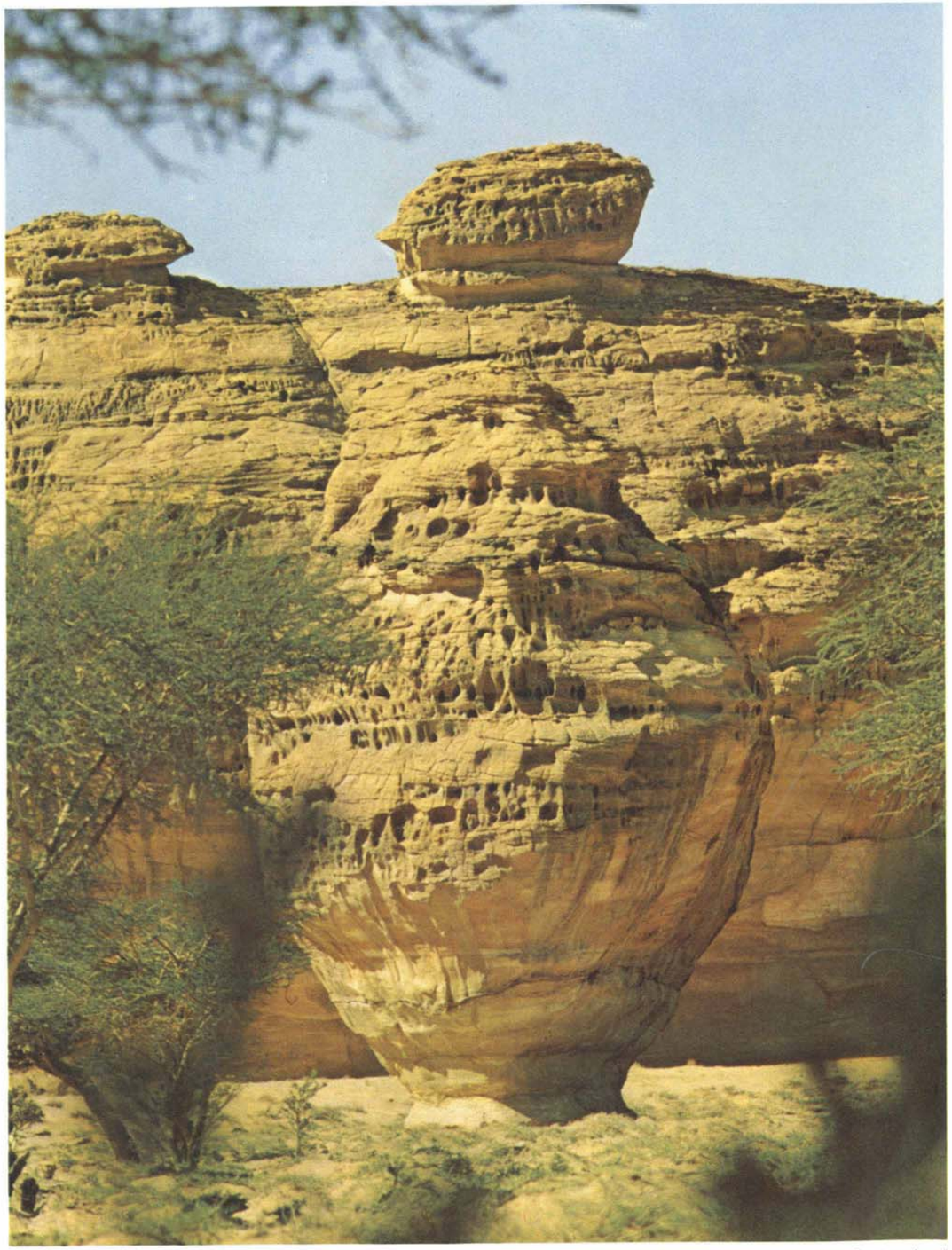


Years ago in America the lonely grandeur of plain and sky and mountain inspired a hymn that sang of a vast and lovely land stretching away to the majesty of purple mountains towering up toward blue and spacious skies. The hymn was called America the Beautiful.

Recently, beneath the spacious skies of another, much older land, the lyrics of that hymn came, almost unconsciously, to the lips of a small party of Americans traveling through the northwestern corner of Saudi Arabia. For there, in a valley of golden sandstone, they found Arabia the Beautiful.

The valley is called Mada'in Salih—the "City of Salih"—and it lies on an ancient caravan route 500 miles north of Jiddah deep in the region called the Hijaz. Around it are other valleys dotted with high spines of eroded sandstone marching off in rows toward the west where, legends say, lie even larger valleys, rich in formations of unimaginable beauty.

It is a strange country almost entirely unknown to the West. The Hijaz Railway once served the region but that was in an era when few travelers ventured into Saudi Arabia. Until very recently, in fact, visitors were numbered in the dozens and even today fewer than 200 Westerners have ever been there. Therefore, this issue of Aramco World *is devoted to Mada'in Salih and the monuments, natural and otherwise, that make it truly, Arabia the Beautiful.*



"Just south of here ... is a globe of sandstone shaped like the crown of an English bowler. Across the valley there's a formation that looks like a Greek amphora."

NORTH FROM JIDDAH

STORY BY PAUL F. HOYE, Editor of Aramco World / PHOTOGRAPHY BY BURNETT H. MOODY, Chief Photographer, Aramco

Jiddah
March 1

'The trucks are ready and so are we and at dawn, *Inshallah*, we head north—north from Jiddah to Medina, to the ruins of the Hijaz Railway, to what I hear are areas of scenic grandeur unmatched this side of the American southwest, and to Mada'in Salih, with its tombs, legends and its ancient curse.

'The trucks are preposterous—huge red Ford 800's big enough to bowl in and fitted with 12-ply tires, special sand gears, and belly tanks that can hold 150 gallons of gasoline. However, with a thousand miles of what I'm told is pretty rugged driving ahead, I assume they're necessary.

'We loaded our gear aboard this afternoon and Moody seems to have touched all the bases. There's food enough for a battalion—everything from Maine lobster to peanut butter—two tents I think they got from Ringling Brothers, compact, two-burner Primus stoves, lamps, cots, sleeping bags and—since it's supposed to get very chilly there—a pair of rather elegant, if incongruous, *après-ski* boots.

'There are also six barrels of drinking water and the photographic equipment—cameras for both Moody and Sa'id and two large leather cases crammed with light meters, lenses, filters in all the colors of the spectrum, a tripod and enough film to make Mathew Brady go green. And, of course, there's my equipment too: one spiral notepad, one pencil and two felt-tipped pens. Pity they already found Livingstone; not only would we have found him faster, but we would have had it in *Life* the week after.'

Jiddah
March 1

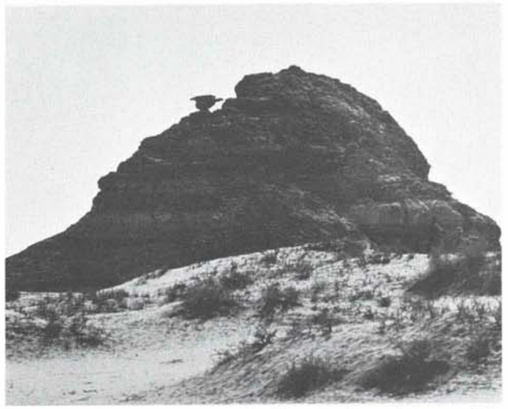
'In jotting down the above notes I was thinking that this seemed like an excessive amount of gear to take along for two weeks no matter how rugged the country up there is supposed to be. Tonight, however, during a visit with a man who has been there I discovered that I may have been hasty. "You're not going for a drive in Central Park," he said. "You're going to Mada'in Salih and that's 500 tough miles from here. If you forget anything, forget it for good." Since he's one of the few Westerners who've been up there, he ought to know...

'Anyway we're ready and in the morning we go. If even half of what we've heard is true this ought to be quite a trip. We'll soon see.'

Outside Medina
March 2

'Somewhere in the darkness over this hill, where we've made our first camp, lies Medina, the Second City of Islam. They call it the "Radiant City" and the man who coined that phrase was as observant as he was poetic. I wouldn't be surprised if he first saw the city as we did today—through a break in the low brown mountains at the precise moment when the hot brassy glare of the afternoon sun was giving way to the soft red-gold of sunset. We had just rounded a bend in the road when the driver silently raised a finger and pointed. And there was Medina, a dramatic flash of white in the distance, a long rectangle of low walls and high mosques, the thin needle points of the minarets and the dome of the Prophet's Mosque poking up from a jumble of low whitewashed buildings. We stared entranced and then it was gone and we were jolting west across the sands in search of a place to camp.

'Until that point, it had been a drowsy day. This morning, late, and in that state of confusion that no amount of advance preparation can ever quite allow for, we left Jiddah, lumbering past the handsome palaces that look across the coastal boulevard to the harbor, and then heading north up the coast. At first there was the usual lift of excitement, but as we droned along, roadside signs ticking off the kilometers, there was less and less of note to



"There ... in perfect profile ... was the silhouette of a great stone eagle."

see. Traffic, heavy around Jiddah, dwindled and soon there was only an occasional bus carrying pilgrims north to Medina. Off to the left, west, the Red Sea sparkled in the hot sun and off to the right the flat gravel plains stretched off to shadowy hills in the distance. By the roadside, at intervals, stood simple accommodations for pilgrims and rude stands where soft drinks and food are sold. Occasionally a man would wave his hand or a child would yell and once, just before we swung inland, we swept by a caravan of camels—there were exactly 73—marching along in that steady awkward rhythm that is the camel's own. But still time passed slowly and eventually I began to think about our destination and to review what I'd read about it.

'Mada'in Salih, I recalled, is a valley some 500 miles north of Jiddah where an ancient people called the Nabateans carved a series of tombs into the rock, and where, according to tradition, a prophet named Salih later called down a curse upon the inhabitants when they killed a miraculous camel brought forth from the rocks by God. From that time on, naturally, the Bedouins and most travelers generally avoided the place. Which accounts, I suppose, for the relative isolation of Mada'in Salih despite its location on a major caravan route and on the old Hijaz Railway. Few dared defy the curse and so, for more than 12 centuries, the tombs, and whatever else was there, have mouldered in the sun, untouched, unexplored, unexplained...'

In Camp
March 3

'Out of the darkness this evening, silently and without preamble, strode an old Bedouin. "*Assalumu 'alaykum*," he said, the traditional "Peace be unto you," and crouched down to try Muhammad's tea. He liked it and I can understand why. Muhammad—he's the No. 2 driver—makes superb tea. He makes it in a small, smoke-blackened kettle over a twig fire. *Only* over a twig fire, in fact. We offered him the use of a camp stove and his scorn was scathing. "The flavor," he said, "is in the smoke."

'Today was tiring. We had heard that there are two ways to circle Medina, one that takes almost two hours and another that takes 40 minutes. We found the short route, a meandering track that cuts west and wanders northward through a long valley commanded by a circular mud-brick fort on a ridge 300 feet above. The valley is spotted with small deserted villages of brown mud-brick, the bricks melded one into the other so that the surfaces have become sagging lumpy masses of crumbling sand. With the boles of palm trees poking out of the walls at roof level they could be adobe huts in Mexico or Arizona.

'Even though we took the short route, however, we didn't save much time. Halfway around, Muhammad's truck bogged down in soft sand. One minute we were racing along confidently on what looked to be a firm, packed-gravel surface. The next we were roaring like mired elephants as the big 12-plys bit fruitlessly into deep loose powder. Misfir, the head driver, sensed the trap the very second that the surface changed, swiftly shifted down, engaged the big sand gear and tramped hard on the gas. He almost escaped completely and was close enough to firm ground to coax it out. Muhammad wasn't so fortunate. He sank to the hubcaps. To get him out we had to lay a track of thick planks and metal treads, wrench the planks and treads out of the sand as fast as the truck drove over them and ram them down in front of the tires again while the wheels were still moving. It took sweat, swearing, hard work, and all the power those big Fords could muster. Preposterous, did I call them?

'With Medina behind us, the land, almost imperceptibly, began to change. Yesterday, only the arid brownness of the low mountains—or perhaps they should be called *jabals*—broke the flat monotony of the coastal plains. But this afternoon the land began to roll in gentle swells and there appeared great stretches covered with a layer of round black stones that look as if someone had painstakingly sorted them for size and then carefully leveled them with a rake. Geologists, I believe, call them igneous rock and say they were flung out of the earth centuries, or maybe even eons ago, by the belching fury of volcanic action.

'As the afternoon wore on the changes became more pronounced. The smooth black stones gave way to larger jagged fragments heaped up in huge mounds and looking as if they had been soaked in tar and set out to dry. For contrast occasional dunes of soft beach sand sloped off from lee ridges, improbably golden against the black sheen of the rock. There were also salt flats, blindingly white, like snow on an Alpine slope, and, rarely, from patches of alfalfa, flashes of bright green like English grass in the spring. Finally, impossibly, there was a lake—a big lake, cool and blue in the shadow of a great brown *jabal*. I felt an overpowering urge to stop and swim in the cool waters

continued on page 7

NOTES ON THE NABATEANS

BY THOMAS C. BARGER

Thomas C. Barger, president of Aramco, has enriched an amateur's knowledge of archeology with substantial reading and 30 years of exploration in Saudi Arabia. He added to it this year with a trip to Mada'in Salih and subsequent research into the history of the region.

In 312 B.C., about 10 years after the death of Alexander the Great, a Greek general who had served with Alexander led an expedition against a city called Petra in what is now Jordan. He captured the main fortress, looted it and retired with the city's treasure. As he retreated, however, the defenders of the city counterattacked, in an unexpected night raid, massacred the Greeks and recaptured the treasure. The defenders were called Nabateans and this was their first appearance in recorded history.

Who were the Nabateans? To give an exact answer is difficult; reliable information about them is sketchy. After their initial appearance, for example, they dropped out of historical sight until about 169 B.C., nearly a century and a half later. And even then there is only an unexplained reference to their capture of a certain high priest. Again there is a period of silence until about 100 B.C. when they began to appear with more frequency—in their own inscriptions as well as in Roman, Greek and Jewish sources. Their period of prominence was so short, however, that much of what is believed today has been pieced together as much from conjecture as from evidence.

Apparently the Nabateans were of Arab origin, probably Bedouins out of the Arabian desert, who settled, at least for a time, in a wild, mountainous land south of the Dead Sea and clustered around what is famous today as the "rose-red city" of Petra, a city carved from sandstone and guarded on its eastern approach by a narrow, easily defended defile and a fortress on an immense rock that could be reached only by a single, hand-cut ascent. All around the city were rose-red sandstone formations and the Nabateans expended a great deal of time and effort carving tombs into the cliffs. These tombs had facades representing elaborate temples — Greek-inspired, probably — with small, plain, unadorned chambers cut in behind the "doors" to serve as crypts.

With the well-guarded Petra as a base of power the Nabateans were able to control the important roads to the coast south of the Dead Sea and all of the desert country lying to the east of the towns in what is today Jordan and western Syria. In other words they controlled all the lands east of the settled country ruled by the Jews and Romans and other sedentary peoples. (Including, probably, Damascus, so that it is likely that at the time St. Paul was making his escape by being let down the city wall in a basket, the governor of the city was a Nabatean.) They also maintained access to the Mediterranean through an area due west of Petra that is today known as the Gaza Strip, and extended their control south into what is today Mada'in Salih in Saudi Arabia.

To the Nabateans, control of this territory was probably no less than a matter of survival. Through it ran the ancient caravan routes over which came the main source of the Nabateans' wealth and importance: incense. In that era the Roman Empire and the Greek states used incredible quantities of incense for their civil and religious ceremonies, and nearly all of the incense seems to have come from South Arabia—from what is today southern Yemen and Hadhramaut. Incense comes from the sap of a certain tree found then and to this day in the highlands of those regions.

Because their prosperity depended almost exclusively on incense, however, the Nabateans were bound to suffer if their Roman customers could find a cheaper way of getting it. And the Romans did find a cheaper way. They shipped it on their galleys up the Red Sea to ports closer to Egypt and the Mediterranean. Since the caravans plodding overland could not compete with the swift galleys it was virtually the end of Nabatean wealth and influence. Toward the end of the first century A.D. they began to decline and a century later had disappeared altogether as a separate state and people and their magnificent capital in Petra was left, deserted and empty, to the wind and sun and an occasional Bedouin, for 1,600 years.

Up to this point most of the information is reasonably well documented. But there are other aspects of Nabatean history and culture which are still open to speculation and dispute. One of the most important questions has to do with Mada'in Salih.

There is no doubt that Mada'in Salih was a Nabatean settlement—Charles Doughty's sketches of the stone inscriptions proved that beyond any doubt—but there is disagreement as to whether it was merely an outpost of the Nabateans from which the Nabateans picked up the incense and transshipped it to Petra, or a large thriving settlement strong and self-sufficient enough to dictate terms to the tribes to the south.

The first view stems from the basic belief that the Nabateans were not only of nomadic origin, but were still nomads in the era of Nabatean eminence. It is based on what so far is a failure to find ruins which might indicate a settlement. This theory is helped along by the writings of a Roman called Diodorus, whose sources are unknown but who wrote that the Nabateans were completely nomadic and that they abstained from planting and sowing under threat of death as well as from drinking wine and building permanent homes.

In the absence of data to refute it, this view, of course, must be considered. But other findings suggest quite another story. First of all there have been no excavations in Mada'in Salih and it is entirely possible that there are ruins there—beneath certain dunes and mounds that are certainly not natural. More importantly, ruins in and around Jordan show that the Nabateans were most ingenious in conserving and using water for agriculture and probably had more land in crops than

there is now. In Mada'in Salih itself the Bedouins today are cleaning out wells which in size and number suggest that at one time there might have been several square miles of gardens in the vicinity—enough to have supported a sizeable population. Furthermore the Nabateans produced a distinctive pottery of excellent quality and workmanship—all of which means that if the Nabateans were nomads they were most unusual nomads since nomadic people rarely develop water conservation systems or fine pottery.

The other view—that Mad'in Salih was a large, strong settlement—seems more reasonable if only because it is unlikely that the South Arabian tribes would have simply halted their northern advance at a given point because the Nabateans asked them to. It is much more likely that they stopped because the settlement at Mada'in Salih was big enough and strong enough to bar them from going further.

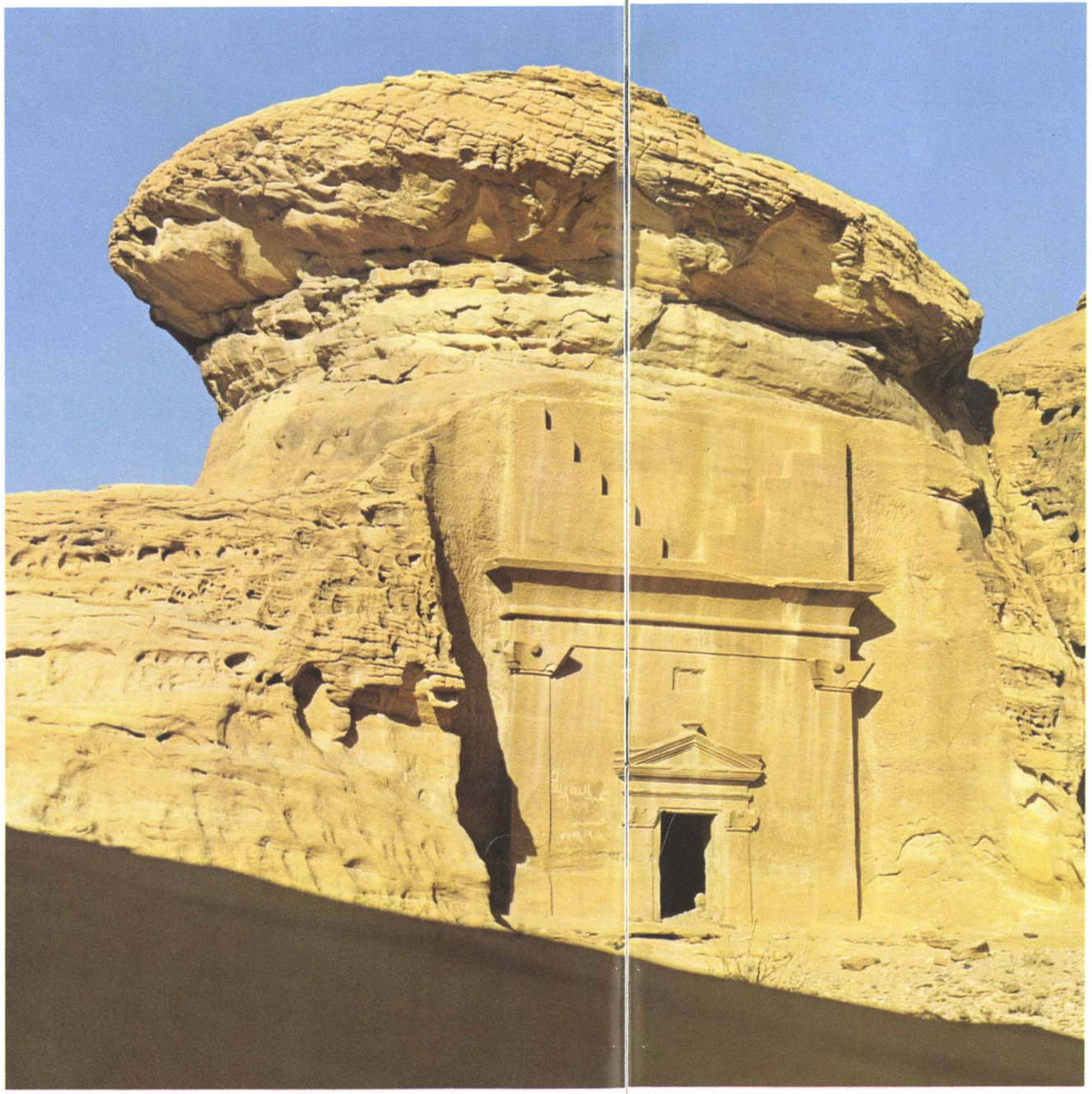
Supporting this view is the interesting fact that the tombs to be found on the sandstone cliffs above the oasis of Al 'Ula—just a few miles south of Mada'in Salih—are not Nabatean tombs. They are similar, but key differences in the pattern and inscriptions found there indicate that the people who carved those tombs were probably South Arabians, not Nabateans. Thus it seems that between Mada'in Salih and Al 'Ula there existed a definite frontier marking the southernmost extension of the Nabatean Kingdom and the northernmost penetration of the South Arabian traders.

If that were the case, however, it would leave the major question about Mada'in Salih unanswered: what happened to it?

It is logical that with the decline of the incense trade—after the Romans conquered the Nabateans—Petra would have declined. It also seems reasonable that if Mada'in Salih were a small outpost of nomads it, too, would have vanished with the end of the incense trade. But if there were a large agricultural settlement there, why would it disappear? The fortunes of Al 'Ula were also dependent on incense, but because of its agriculture it survives to this day, so what happened?

No one can answer that question with any dependable degree of certainty, but there might be a clue in the Koranic story of the prophet Salih in which an "earthquake" shook the valley to punish the villagers for rejecting God's prophet. Geologists see no evidence of an earthquake in Mada'in Salih. But the Koranic word translated "earthquake" can also mean "a calamity from God." Couldn't it have been, for example, a plague that drove the Nabateans away forever?

The only honest answer of course is: no one knows. Which is why Mada'in Salih is perhaps the most fascinating part of the story of the Nabateans.



"We looked... and there, in the face of the cliff, etched deeply into the rough rock, was what seemed to be the entrance to a great temple but was, of course, a tomb. We had arrived at Mada'in Salih."

and looked tentatively at the driver only to see him dissolve into laughter. My lake was a mirage, nothing but a mirage...'

In Camp
March 4

'Before we get underway this morning and I get distracted again, I must jot down a few notes about our head driver Misfir. We didn't realize it until yesterday, but Misfir is a remarkably able and resourceful individual. That was when he rescued two drivers, one of whom had been stranded for four days.

'The first rescue took place not far from a town called Khaybar. An unusually heavy rain had washed out nearly a hundred yards of roadway and since repairs hadn't yet been made it was necessary to make a wide swing through the sand to get by. Just before we regained the road, a driver flagged us down and pointed to a half-ton Dodge truck hub-down in a wadi. It turned out that the Dodge was not only stuck, but that the motor wouldn't start. It looked like a lost cause, but Misfir nonchalantly ordered the driver to jack the truck up until the wheels were free, bent and began to spin the wheel. It struck me then when he was doing—changing the position of the fly wheel so the starter could be released. Something clicked and Misfir climbed in, thumbed the motor to life and began to jockey the vehicle backwards out of the sand with indifferent ease. Twenty minutes later the driver waved his thanks and was gone.

'The second rescue took place on the barren track that wanders off to the west from the paved road. A truck was parked up ahead surrounded by half a dozen Bedouins. The driver signaled for help and told us he had been stranded there for four days, depending on the Bedouins to supply him with food and water. Misfir took about five minutes to give his diagnosis: the gas line was plugged. He detached the line, blew air through it and tried the starter. The truck coughed and caught. Misfir explained to the man what he must do if the line continued to fill up and in a few minutes that driver too went roaring down the road.

'As we got back in the cab and started off again I inspected him more closely. He's a big man with the barest trace of a beard, and a hearty laugh. He's also very strong. Just the day before, I recalled, Muhammad had stalled and to get him started Misfir had to "crank" the truck, by spinning simultaneously the wheels, drive shaft, and fanbelt. He's also unusually alert. Shortly after we left the paved road he looked sharply at our other truck and suddenly reached up and yanked the cord to the horn and sent a two-note bellow echoing over to Muhammad. When Muhammad stopped, Misfir pointed to a trickle of precious water coming from the spigot in one of the hiptanks. I could barely see the trickle even then. And shortly after that he saw a movement by the side of the road and before I could even guess what it was, he had stopped and begun to fill the goatskin water bag of a Bedouin woman who was

walking with two children to a distant encampment. He had ignored dozens of similar pleas prior to that point but somehow he knew that in that case it was an emergency.

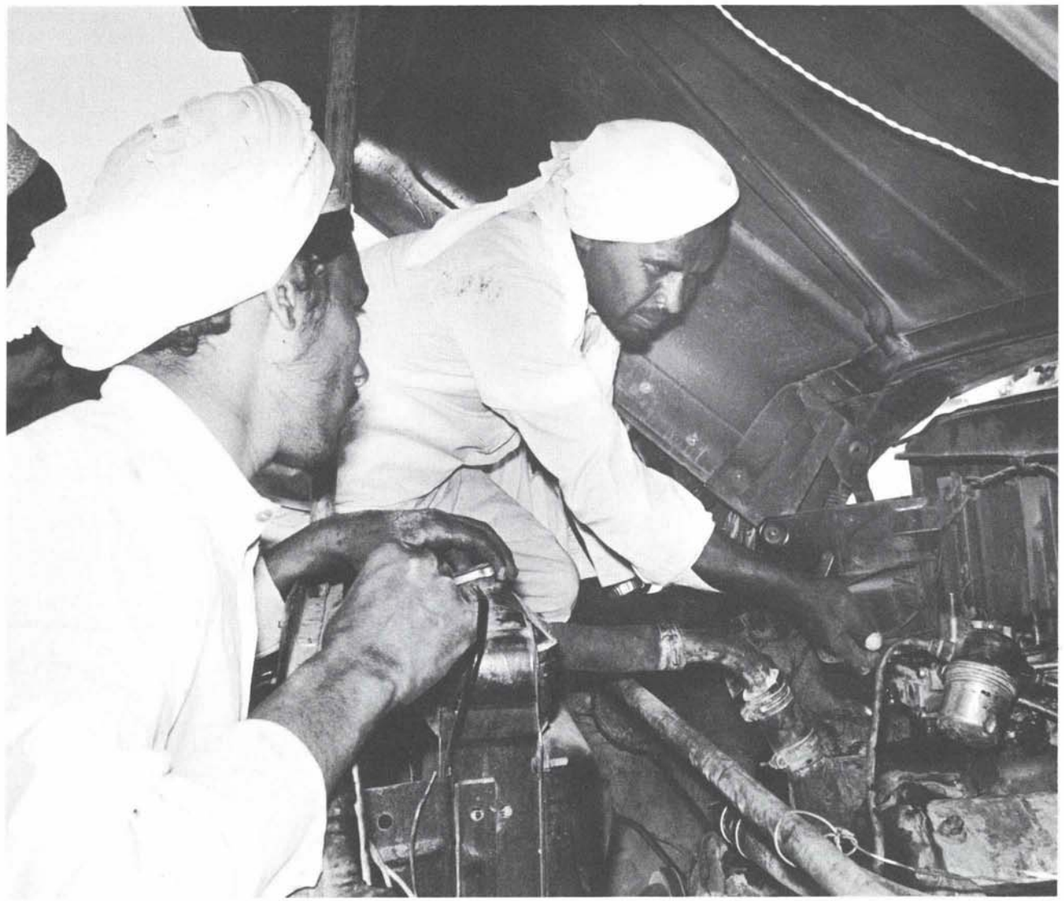
'From Sa'id we learned that Misfir came from a small village near the Yemen border, that as a very young man he crossed the peninsula to Dhahran, got a job with the Arabian American Oil Company (Aramco) and began to go to school. He spent six years studying mechanics and working in Aramco shops and then decided to strike out on his own. He bought a truck and began to haul cargo over the rugged road to Yemen. Later, he bought a second truck and has just added a service station to his holdings. I would risk a small wager that it won't be the last addition...

'I should add one more note. The other night Moody was explaining that the reason we slept in the truck was that we'd been told that *agharib* (scorpions) abounded in the region. Misfir looked surprised and then laughed. "*Agharib*," he said contemptuously and pantomimed being bitten, sucking out the venom and spitting it on the ground. He then deliberately stretched out on the sand, wiggled deep into a comfortable position and closed his eyes. We didn't join him.'

Zummurrud
March 4

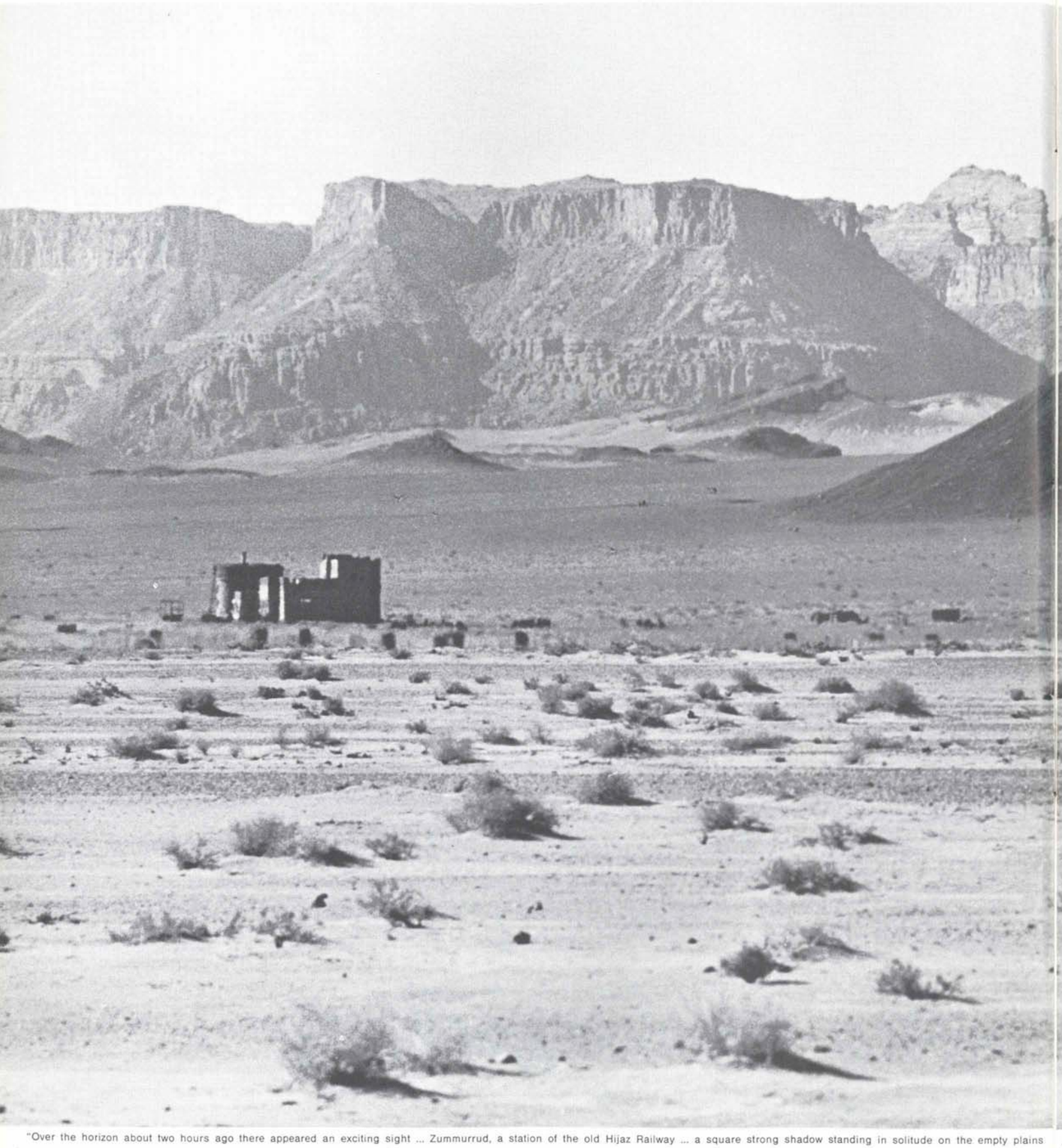
'Over the horizon about two hours ago there appeared an exciting sight. It was a building—Zummurrud, a station on the old Hijaz Railway.

'Somehow it was a surprise to find Zummurrud. We'd been jolting along for hours on the faint rugged track that twisted through hills as black and high as slag heaps by Pennsylvania coal mines, past stretches of flat sand touched with tones of pink and green, and, at one point, by the whitened bones of a camel. Then, unexpectedly, there was the station, a square strong shadow standing in solitude on the empty plains. Moody nearly impaled himself on his



"Misfir took about five minutes to give his diagnosis: the gas line was plugged. He ... blew air through it and tried the starter. The truck coughed and caught."

"Last night we camped near an oasis called Al 'Ula — which has ... its own tombs carved into a great red cliff high above the scented gardens of the oasis."▶



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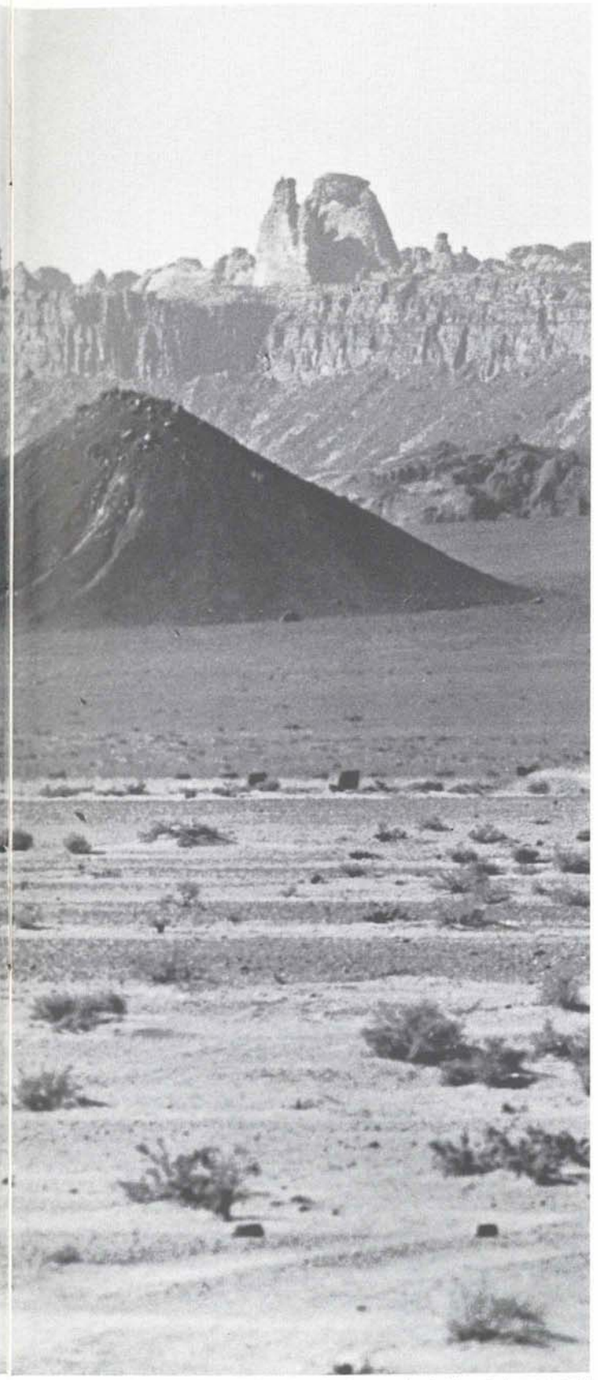


... with its inevitable suggestions of the valor, the dangers, the battles of a bygone era."

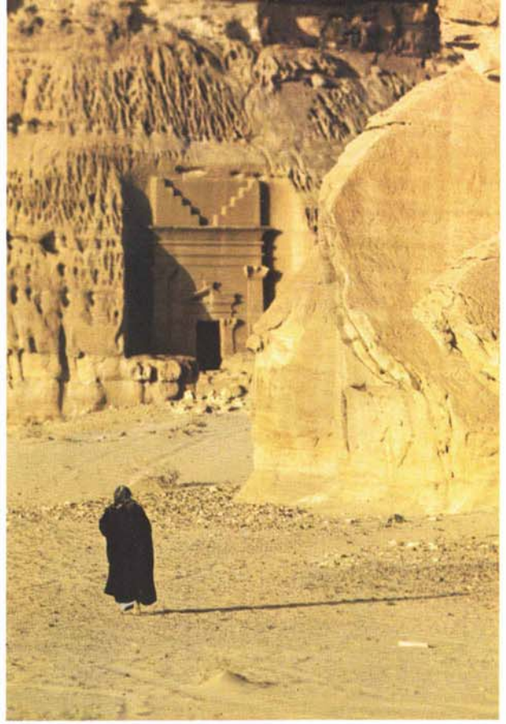
tripod as he scrambled to the platform over the cab to get distance shots of the structure. I can't say I blame him. For some reason, reaching Zummurrud was an exciting moment—possibly because it meant we had reached the Hijaz Railway with its inevitable suggestions of the valor, the dangers, the battles of a bygone era.

'We stopped to explore the station, of course, and afterward sat in the shade for lunch and looked out at the empty plains and savored the silence and began, inevitably I guess, to wonder what it was like 50 years ago when the crews of workers and soldiers swarmed southward, mile by dusty mile, spiking the rails to the desert floor, fighting off hostile Bedouins and wondering when their hot hard labors would ever end. Then, no doubt, Turkish sentries paced the parapets above each station and looked down the tracks to the south where a great purple mountain looms large against the sky, or north across the empty prairie, waiting, perhaps, for the sight of smoke signaling another train carrying pilgrims south to Medina. Later, probably, as war came, the sentries crouched nervously behind the heavy doors set deep in stone casements, rifles loaded and cocked, and peered out through narrow slits wondering when the nearby hills would yield up a line of mounted raiders behind the robed figure of Colonel Lawrence. Over there, for example, behind that *jabal*. The riders could assemble quietly there, form a rough line of battle and then move out at a trot, swinging wide to encircle the station, breaking finally into a galloping charge, their rifles winking fire and the staccato reports of gunfire exploding into the silence and rolling off in echoes across the great empty plains...'

Mada'in Salih
March 5

'The first truck, its tires spewing a high arch of yellow dust into the air, careened around a high formation of sandstone and suddenly halted. Misfir braked too and Moody leaned out motioning urgently behind him. We looked, Misfir and I, and there, carved into the face of the cliff, etched deeply into the rough pinkish rock, was what seemed to be the entrance to a great temple, but was, of course, a tomb. We had arrived at Mada'in Salih.

'In a word the first impact of Mada'in Salih is wonder, although by then the sheer grandeur of the land had already begun to exhaust our quota of wonderment. Last night we camped near an oasis called Al 'Ula—which has, we noticed, its own tombs carved into a great red cliff high above the scented gardens of the oasis. This morning we left early, following the railbed as usual, squirmed under a great overhang and swung west. After a wild dash through a field of fine but treacherous white sand we entered a valley and paused in amazement. Suddenly, unbelievably, we were no longer in Saudi Arabia, but in the American Southwest—Utah, perhaps, with its Monument Valley, or Arizona with its Painted Desert. Before us stretched the country of Mada'in Salih, a country best



"Over the sands ... came an old Bedouin wearing a black cape and hood."

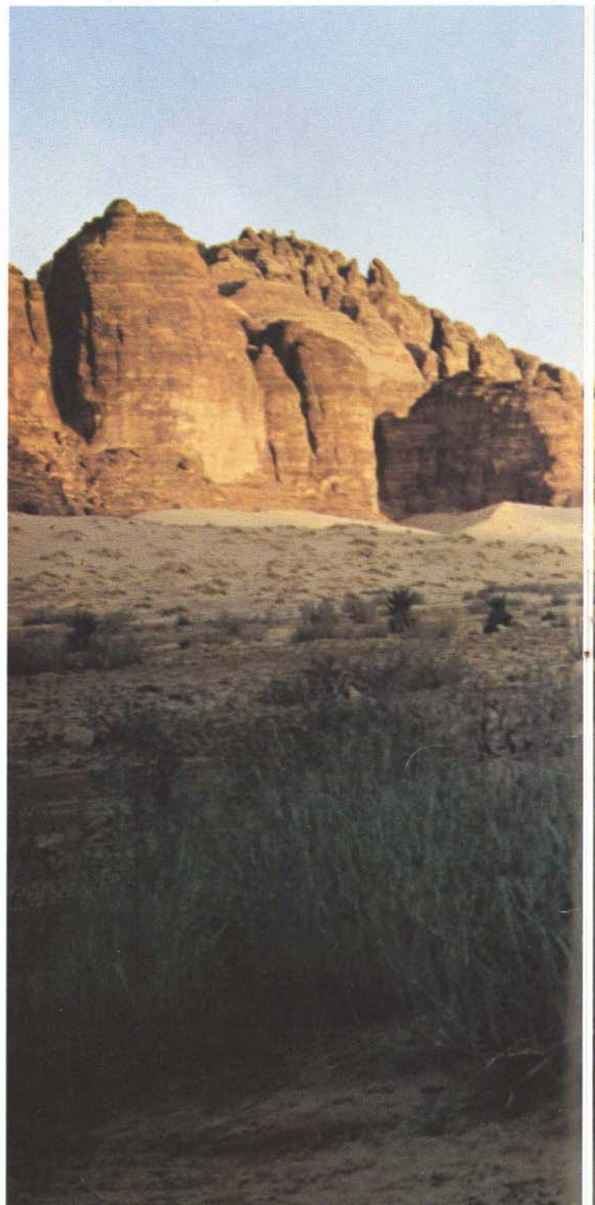
described by Parker T. Hart, former U.S. Ambassador to Saudi Arabia, after he saw it from the air two years ago:

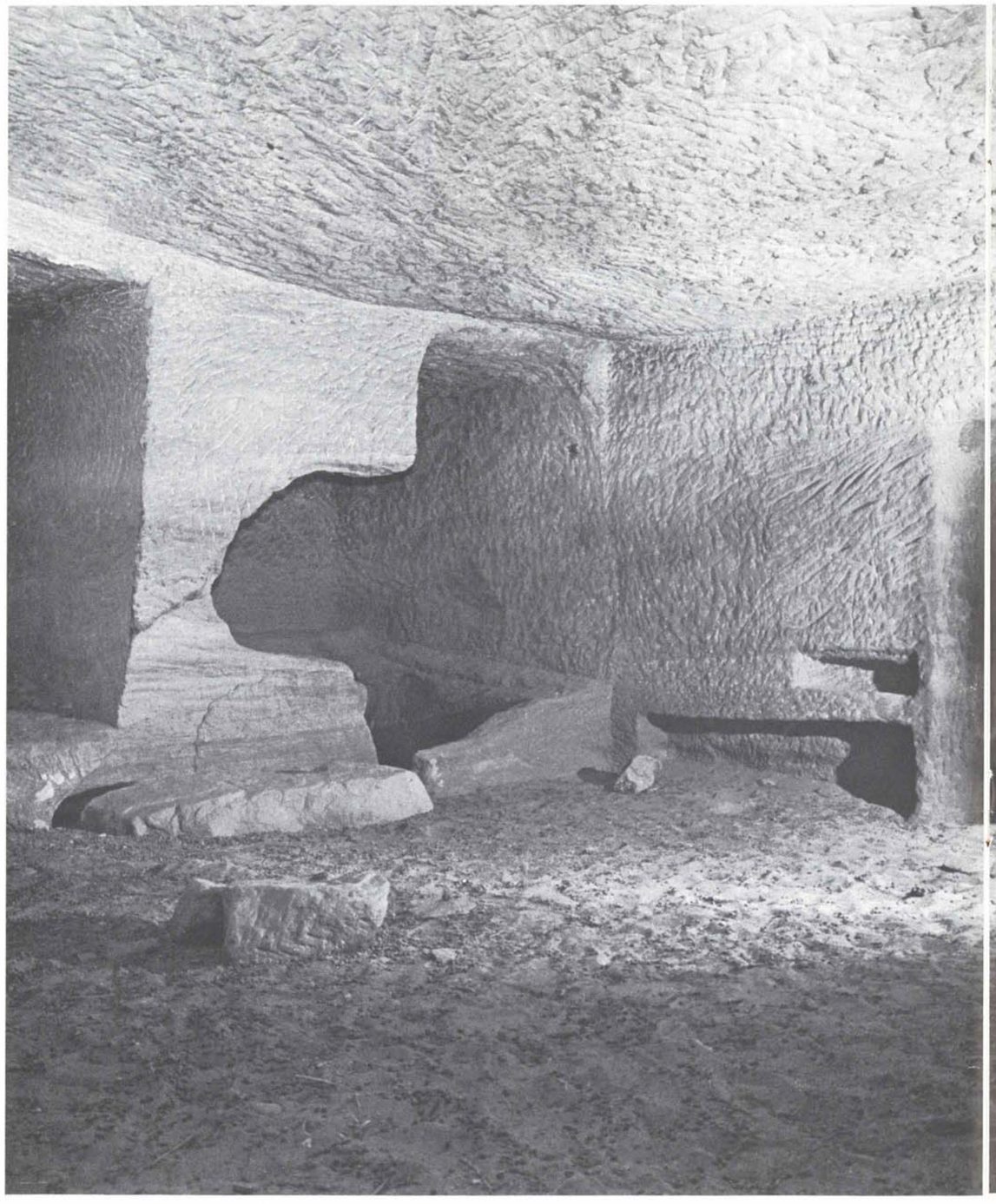
"For about forty miles the valley stretched north-south like a sea of yellow sand from which rose innumerable great islands of tawny pink sandstone, often sheer walled and several hundred feet in height, sculptured by wind and sand into columns, pinnacles, spires, saw teeth, natural bridges, profiles and every oddment of erosion conceivable to man's imagination. At the base of many, the tomb entrances were clearly visible. The width of the great valley varies from perhaps ten to twenty-five miles, larger than the Grand Canyon and far more impressive than Bryce Canyon or Cedar Breaks, sandstone classics of the American Southwest..."

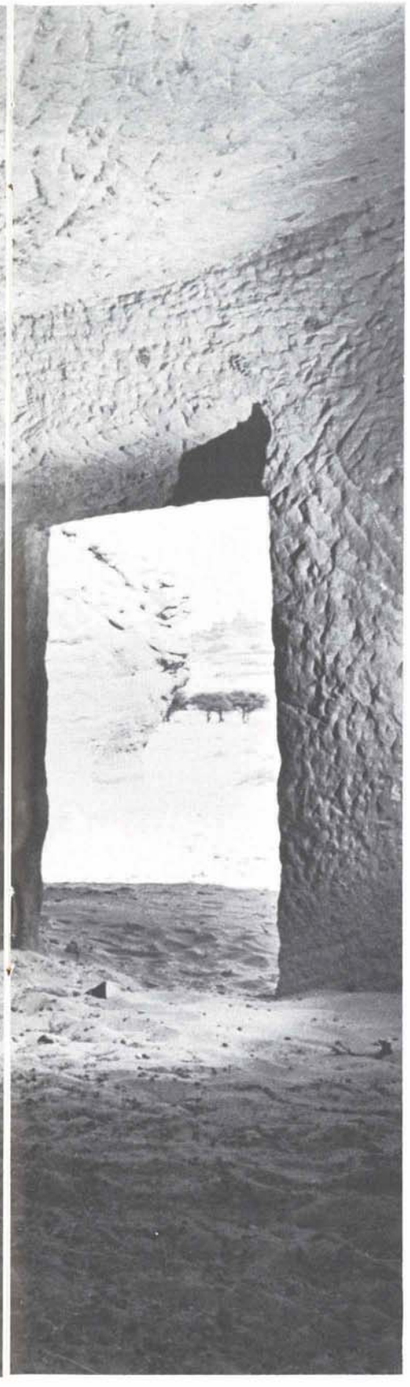
'To which I can add little, except perhaps the sense of surprise at finding such unlikely country in Saudi Arabia. We got out of the trucks and just stood there for a little while trying to take it in. Moody and Sa'id set up their cameras and I wandered off and sat down in a circle of shade under an acacia tree. By my foot a colony of black ants with golden dots on their tails scurried about on industrious errands. Overhead, two large, jet-black ravens wheeled and swooped and then, borne by an updraught of warm air, shot upward and out of sight. One of the drivers pointed east and there, outlined in perfect profile against the morning sun, was the unmistakable silhouette of a great stone eagle, its wings partially extended, its beak curved sharply toward the ground. To the north, poised upon a towering ridge, was still another eagle, this one facing us, his wings spread wide for flight. "The Valley of the Eagles," someone murmured. Indeed, indeed.'

continued on page 17

"For about forty miles the valley stretched north-south like a sea of yellow sand from which rose innumerable islands of tawny pink sandstone often sheer walled and several hundred feet in height... The width of the great valley ... varies from perhaps ten to twenty-five miles..."







THE MONUMENTS-I

BY CHARLES M. DOUGHTY

Charles M. Doughty, author of the classic Travels in Arabia Deserta, *was probably the first Westerner ever to visit the northwestern corner of Saudi Arabia and see the monuments at Mada'in Salih. These few comments are reprinted from an abridged version of that book with the permission of the Liveright Publishing Corp., 386 Park Avenue S., New York.*

"In a warm and hazy air, we came marching over the loamy sand plain, to Mada'in Salih and we alighted at our encampment of white tents, pitched a little before the kella (fort)...

* * *

"Now I had sight at little distance, of a first monument, and another hewn above, like the head of some vast frontispiece, where yet is but a blind door, little entering into the rock, without chamber. This ambitious sculpture, seventy feet wide, is called Kasr el-Bint, 'the Maiden's Bower.' It is not as they pretend, inaccessible; for ascending some ancient steps, entailed in the further end of the cliff, my unshod companions have climbed over all the rocky brow. I saw that tall nightmare frontispiece below, of a crystalline symmetry and solemnity, and battled with the strange half-pinnacles of the Petra monuments; also this rock is the same yellow-grey soft sandstone with gritty veins and small quartz pebbles ..."

* * *

"Backward from the rock, we arrived under a principal monument; in the face I saw a table and inscription, and a bird! which are proper to the Hijr frontispiece; the width of sculptured architecture with cornices and columns is twenty-two feet—I mused what might be the sleeping riddle of those strange crawling letters which I had come so far to seek! The whole is wrought in the rock; a bay has been quarried in the soft cliff, and in the midst is sculptured the temple like monument. The aspect is Corinthian, the stepped pinnacles—an Asiatic ornament, but here so strange to European eyes—I have seen used in their clay house-building at Hayil. Flat side-pilasters are as the limbs of this body of architecture; the chapiters of a singular severe design, hollowed and square at once, are as all those before seen at Petra. In the midst of this counterfeited temple-face is sculptured a stately porch, with the ornaments of architecture. Entering, I found but a rough-hewn cavernous chamber, not high, not corresponding to the dignity of the frontispiece ..."

"We returned through the ... rocks; and in that passage I saw a few more monuments ... Under the porch of one of them and over the doorway are sculptured as supporters, some four-footed beast; the like are seen in none other. The side pedestal ornaments upon another are like griffons; those also are singular. The tablet is here, and in some other, adorned with a fretwork flower (perhaps pomegranate) of six petals. Over a third doorway the effigy of a bird is slenderly sculptured upon the tablet, in low relief, the head yet remaining. Every other sculptured bird of these monuments we see wrought in high natural relief, standing upon a pedestal, sculptured upon the frontispiece wall, which springs from the ridge of the pediment: but among them all, not a head remains; whether it be they were wasted by idle stonecasts of the generations of herdsmen, or the long course of the weather. Having now entered many, I perceived that all the monument chambers were sepulchral ... The mural loculi in the low hewn walls of these rudely four-square rooms, are made as shallow shelves, in length, as they might have measured to the human body, from the child to the grown person; yet their shallowness is such that they could not serve, I suppose, to the receipt of the dead. In the rock floors are seen grave-pits, sunken side by side, full of men's bones, and bones are strewed upon the sanded floors. A loathsome mummy odour, in certain monuments, is heavy in the nostrils; we thought our cloaks smelled villainously when we had stayed within but few minutes. In another of these monuments, Beyt es-Sheykh, I saw the sand floor full of rotten clouts, shivering in every wind, and taking them up, I found them to be those dry bones' grave-clothes!"

* * *

"Little remains of the old civil generations of al-Hijr, the caravan city; her clay-built streets are again the blown dust in the wilderness. Their story is written for us only in the crabbed scrawlings upon many a wild crag of this sinister neighbourhood, and in the engraved titles of their funeral monuments, now solitary rocks, which the fearful passenger admires, in these desolate mountains. The plots of potsherds may mark old inhabited sites, perhaps a cluster of villages: it is an ordinary manner of Semitic settlements in the Oasis countries that they are founded upon veins of groundwater. A suk perhaps and these suburbs was Hijr emporium, with palm groves walled about ..."

Mada'in Salih
March 6

'This morning, just a few minutes ago, Mada'in Salih welcomed us.

'It was barely dawn. The sky was touched with pink and white and the breeze was cool, and a bird I couldn't see was chirping with what I must say was understandable enthusiasm. Some distance from camp, Moody, sweatered and hooded against the chill, was squinting through his long telephoto lens waiting for the clean fresh rays of morning sunlight to filter through the valley and bring the rich muted color of rocks and sand to glowing life. Over the sands behind him, walking swiftly, came an old man. He was a Bedouin wearing a black cape and hood and a white robe. He was barefoot and smiling and in his hand he held a brass coffee pot with a sharp curved spout.

'"*Assalumu 'alaykum*," he said and dashed thin, tart Arab coffee into a cup. Three times he poured and three times I drank. "*Shukran*," I said finally and he moved on to Sa'id and the drivers. When everyone had been served he bowed slightly, smiled again and trotted back off across the desert. We don't know where he lives but there's no habitation visible for nearly a mile so he must have walked at least that far and must have gotten up in the dark to pound the coffee and brew it. A memorable beginning to our stay and a pointed reminder that the tales of Bedouin hospitality are founded not on myth but on heartwarming fact...'

Mada'in Salih
March 6

'From up here, the summit of a twisted crag in this weird jumble of rock called Jabal Ethlieb, the valley of Mada'in Salih has a harsh but compelling beauty. It's just past noon and in the heat of the sun the valley is creeping into the shade to await the coolness of the afternoon. Here and there, to be sure, there are small flutters of motion. A Bedouin woman, small and shapeless in black, walks from one low tent to another. A white kid prances stiff-legged away from the herd. A camel nibbles cautiously at the top of a thorn bush. A lizard, almost invisible, skitters up a dune and darts into a hole, his tail leaving a thin, shivery line traced in the sand. But over most of the valley the stillness of the afternoon is descending, a stillness as tangible and as heavy as the heat itself.

'Actually it's hard to decide which is more impressive —the natural wonders carved by the hot abrasive touch of the wind or the tombs carved by the Nabateans. I incline toward nature. Just south of here, for example, a few hundred yards away, is a globe of sandstone shaped like the crown of an English bowler. Across the valley there's a formation that looks like a Greek amphora, another that resembles a coyote, his howling nose pointed at the sky, and a third that is surely the stern of a Spanish galleon. All around are the pitted cliffs, battlements, turrets and steeples.

'Yet to decide in favor of nature at this point wouldn't

"It's clear that the tombs gain much ... from the magnificence of their settings..."

be fair, since we've only just begun to really look at the tombs. We started out yesterday, Moody, Sa'id and I, hiking and climbing throughout the valley, Moody to capture it on film, I on paper, and actually the only valid observation I can make so far is that the Nabateans certainly moved a hell of a lot of rock.

'That observation, I know, is not exactly remarkable but neither is it entirely facetious. Some rough measurements I made today suggest that the construction of these tombs required prodigious labor. One tomb, for example, is set back into the cliff 10 feet, measures some 30 feet across and possibly 60 feet high. This means that just to get into the cliff deep enough to start cutting out the facade, the Nabateans had to first excavate some 18,000 cubic feet of sandstone. Then they had to carve the facade itself before burrowing in to excavate the chamber and the burial niches. Not far from this summit where I'm making notes is located what has been called the *Diwan* or "Council Chamber." It's no more than a huge cubic space cut into the sandstone, but if my paced measurements are anywhere near accurate, some 47,000 cubic feet of stone had to be excavated to create it. Considering the rude instruments available at the time, and that the 29 tombs I've counted so far are a long way from the total number here, it seems logical to assume that carving the tombs must have kept a lot of men busy for a long time. (Which suggests in turn, I imagine, that this valley must have once supported a large and vigorous population. I suspect that the archeologists will have a great time when they come.)'

Mada'in Salih
March 6

'I'm beginning to see what Lady Crowe meant.

'Lady Crowe is the wife of the former British Ambassador to Saudi Arabia. She came here two years ago in the same diplomatic party that included Ambassador Hart and Dana Adams Schmidt of *The New York Times*. She later wrote an excellent account of the trip in which she said that the tombs of Mada'in Salih have a "provincial" look to them and suggested that the artisans who worked on the tombs merely copied or adopted certain simple Roman and Greek designs. I agree. Once the first excitement of seeing them has subsided it's clear that the tombs gain much of their attraction from their inaccessibility and the magnificence of their settings; as works of art the imposing facades promise much more than they contain.

'After visiting the rest of the tombs on the east side—there are 64 in all, 22 of them in the *Kasr al-Bint* butte—I made a rough map of all the sites and then examined it carefully to see if they formed some pattern that might indicate which were done first or explain why one rock face was chosen over another, or why one decoration was applied to Tomb A and an entirely different decoration to Tomb B. But I found nothing.

'Moody, incidentally, climbed to the "bower" itself, a

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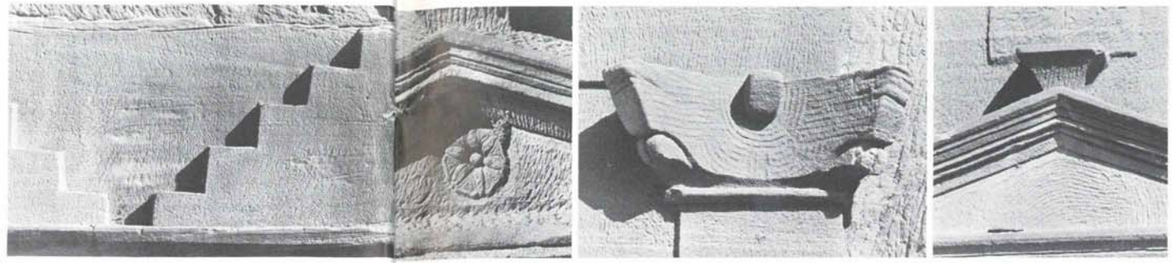


THE MONUMENTS-II

BY PÈRE JAUSSEN AND PÈRE SAVIGNAC

Only one archeological expedition has ever been sent into Mada'in Salih. That was in 1907 when two French priests from the School of Oriental Studies in Jerusalem made an exhaustive study which was published as Mission Archéologique en Arabie, *by the Société des Fouilles Archéologiques in Paris. These excerpts are taken from that study.*

"In the spring of the year 1907 we left for Teima, Mada'in Salih and el-'Ela (Al 'Ula). Because of insurmountable difficulties only the second of those places could be visited and studied at leisure ... This volume, therefore, ... concentrates on Mada'in Salih, the ancient Hegra of the Nabateans, al-Hijr of Arab historians and geographers ..."

* * * *

"The funerary monuments of Mada'in Salih, like most of those at Petra, are a form of architecture entirely unique which one finds only in the land of the Nabateans. From this point of view, therefore, we can talk about the Nabatean style ... But if one stops to consider the style a bit closer, it quickly becomes apparent that ... its originality consists of having grouped elements sometimes strongly dissimilar and of very diverse origin."

* * * *

"A quick look at the tombs ... suffices at once to divide them into two main categories: those we might call 'battlement tombs' and ... 'staircase tombs.' Both are distinguished by the upper part of the monument which one notices immediately. The former, much less numerous and also, in general, much simpler and smaller, are crowned by a convex molding supporting a row (sometimes two) of battlements of a special shape, sculptured in the rock ... The latter end up in a groove, generally called the Egyptian groove, surmounted by a double stairway of five steps each, parting in the center and rising toward the sides where the last steps form the two extreme corners of the facade ...

"The battlements, with the four or five steps that crown a large number of tombs, have often been considered to be of Assyrian origin. The Arabs, in their turn, must have passed them on to the Nabateans. Does one have to attach any sort of symbolism to the steps (of the battlements)? We do not believe that the Nabateans did, any more than the Arabs did ... The Nabatean architects and their successors saw in the battlements a simple ornamental motif and they made them with four or five steps according to the height necessary for proportions agreeable to the eye.

"The second way of crowning the funerary tombs ... the 'double staircase' ... can well have been developed from the 'battlements'; it corresponds in fact to the two half-battlements placed at the extreme corners. The 'staircase' ornamentation is simpler than the other, maybe also less elegant, but has the advantage of lending itself to a more considerable development ... the number of 'steps' (of the 'staircases'), five, seems to have been adhered to rigidly. We only turned up one exception, a small tomb with four steps, and have not seen a single example of a crowning staircase with six steps."

* * * *

"Among the different objects and symbols present on the facades of the tombs at Mada'in Salih we noted at once the vases placed at the angles, sometimes even at the top, of the pediment. There are two sorts. On the large monuments there are, ordinarily, large, fluted urns ... On less important tombs, the urns are replaced by small amphorae of elongated shape ..."

"The grotesque masks, sculptured in relief in the center of various niches and on the facade (of one of the tombs) have, in general, a character of their own. One could believe, at first sight, that they are mere capricious displays, but then, do not the two snakes that appear always with them give those masks a symbolic value? The head of the reptiles disappears invariably behind the human head near the ears, sometimes a little higher (and) images of snakes also appear on some of the monuments at Petra."

"Another theme of decoration on the large facades of al-Hijr is the eagle, posed at the top of the pediment crowning the door's frame ...

"According to Doughty, the Arabs saw in those figures aquatic birds, whereas the Syrians took them for falcons or eagles. Their shape, however, is so characteristic that one can say without hesitation: they surely are eagles."

"On another tomb, two animals above the door also deserve special mention. Their bodies look very much like those of a lion or, rather, a lionness. Could the six-petalled star placed between the two animals be the symbol of Venus, typified usually by a star with six or eight petals?"

"The sphinxes seen above the doors (of two tombs) are also, very likely, the fantastic beings which, like the lions, are carved on a large number of monuments for the purpose of decoration, but also with an allegoric purpose. The two decorating (a certain tomb) have a beardless human face and the body of an animal difficult to identify. Seeing it, one thinks not so much of a direct and somewhat unsophisticated copy of a model of Egyptian origin, but rather of the influence of a Phoenician theme which was already obsolete at the time it impressed the Nabatean traders."

* * * *

"The inscriptions on the tombs of Mada'in Salih date from the year 1 B.C. till A.D. 75. It is possible to believe that some monuments preceded or came after these dates but it is difficult to deviate very much. We believe also that one would not be far from the truth in estimating that the period during which the facades of all the tombs were executed, was, more or less, one century. Most of the tombs, and the finest ones, date back to the reign of Aretas IV (9 B.C. until A.D. 40) ..."

"Inscriptions and graffiti on the tombs and also on the rocks at Mada'in Salih are in Nabatean (the most numerous and interesting), Minean, Lihyanite, Thamudic, Greek, Arabic and Turkish."

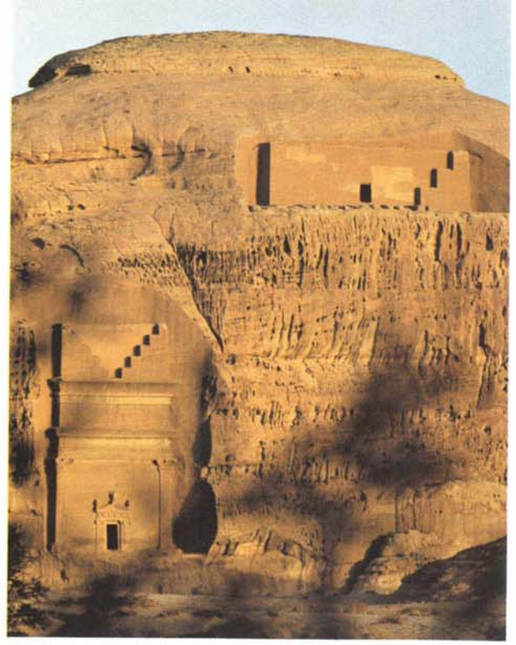
"Most Nabatean texts tell at length by and for whom a tomb was cut ('by Husabu son of Nafiyu son of Alkuf, of Teima, for himself and his children and Habu, his mother and Rufu and Aftiyu his sisters and their children'); they may include a warning, and sometimes a curse, to all who make inscriptions in the tomb, or sell it, rent it or use it for whatever purpose. It is mentioned when the tomb was made ('in the month of Sebat in the thirteenth year of the reign of King Haretat of the Nabateans who loves his people') and, often, the names of the sculptors."

* * * *

"Examining the tombs of Mada'in Salih well, one gets still another impression. The regard of the Nabateans for their dead has often, and without doubt justly so, been stressed. Yet their concept of the afterlife ... is not the only motif behind the creation of the splendid monuments one can admire at Petra and al-Hijr. There is so much frontage that pride must have had something to do with it. At al-Hijr, especially, the interior has been neglected compared to the exterior and it is clear that one wanted to do things grandly and beautifully to display his wealth and magnificence.

"The contrast is striking when after having seen the fine walls of Kasr el-Bint, one visits the necropoles of Thebes. There all the decorations are on the inside. The Egyptians, uniquely preoccupied with ideas on future life, carved out palaces in the bowels of the earth, the access to which had to be concealed with the utmost of care. With the greatest finesse they sculptured and painted reliefs never intended to be seen by the human eye. In contrast, the rich Nabatean merchant, often a parvenu, tried to beautify the outside of his tomb, and to give it an outward appearance of splendor. He reserved for the facade the finest workmanship the artists of the city were able to produce, while the burial chamber was more or less neglected.

"But one must not exaggerate or even generalize too much, though, because the Nabatean tombs of Petra, in their entity, are delicately executed, inside as well as outside, and the vaults have been hollowed out, and often hidden, with great care. This makes the slovenliness found in most of those at Mada'in Salih all the more evident. One might ask if the niches in the walls, made in haste and in great disorder, were not, to a large extent, the work of a later people, the Thamud for example. Some have been hollowed out so clumsily that the facades have been ripped open; it is difficult to believe that this would have been the work of the first owner, who had taken the trouble to carve himself such a fine monument. This way of interment is, it is true, also found in Petra, but it extremely rare, especially with the interior of the handsome tombs, while, in al-Hijr, it abounds."



"Moody climbed ... to a tomb carved on a ledge some 300 feet up in the air."

tomb carved on a ledge some 300 feet up in the air. There, goes a legend, a girl's lover was killed by the girl's father for the usual reasons. Moody, looking for a good spot from which to photograph the tombs on the west side of the valley, found an easy way up at the south end—the same one apparently that Doughty mentions in *Arabia Deserta*. He says it leads across the face to just above the Maiden's Bower. He also says there are some burial niches cut into the rock right out in the open.'

Mada'in Salih
March 7

'Began checking the tombs on the west side this morning. There are more than I thought, many tucked away in little cul-de-sacs or cut into small isolated formations. These over here are apparently exposed to the wind; they're badly eroded and in several places are almost obliterated.'

Mada'in Salih
March 7

'Unless there are any tombs I haven't seen—and since I made a rather wide sweep in all directions, I doubt it—there are 111 tombs in Mada'in Salih. The total is probably higher, but I eliminated five that were so badly eroded they might have been natural caves.'

Mada'in Salih
March 8

'The only trouble with Mada'in Salih is that there's too much to see and time is running out.

'Moody, for example, has just been told by a Bedouin that there is a large formation near here literally covered with inscriptions. Obviously we'll have to go see it. Also we want to inspect the ancient wells, especially those dug out recently by Bedouins in search of more water for crops. And, of course, there's still the Mountain of the Camel.

'The Mountain of the Camel—it's actually an enormous butte, not a mountain—is a towering ridge at the western edge of the valley. It stands in a brooding purple haze like a great Gothic cathedral, distant, intriguing and somehow mysterious. We've been calling it the Mountain of the Camel because we thought it was the mountain from which Salih called forth the miraculous she-camel. We're not as sure of that now, but we do know that it is the mountain into which the she-camel's calf is supposed to have vanished when the aroused residents of the valley sought to kill it. It is also the scene of a new and fascinating postscript just related to us by a Bedouin from Yemen.

' "On certain moonlit nights, when the cool winds blow across the sand," he said, "the Bedouins of the valley have heard a strange sound in the distance, from high up and far away—the sound, they say, of a frightened baby camel crying for its mother."

'I had planned to hike over there anyway, but since hearing that story and noting that a full moon is at hand, I've given it first priority...'

Mada'in Salih
March 8

'Well, I've seen the Mountain of the Camel.

'This morning, from here, I thought it imposing. Tonight "imposing" just won't do. I left camp early, expect-

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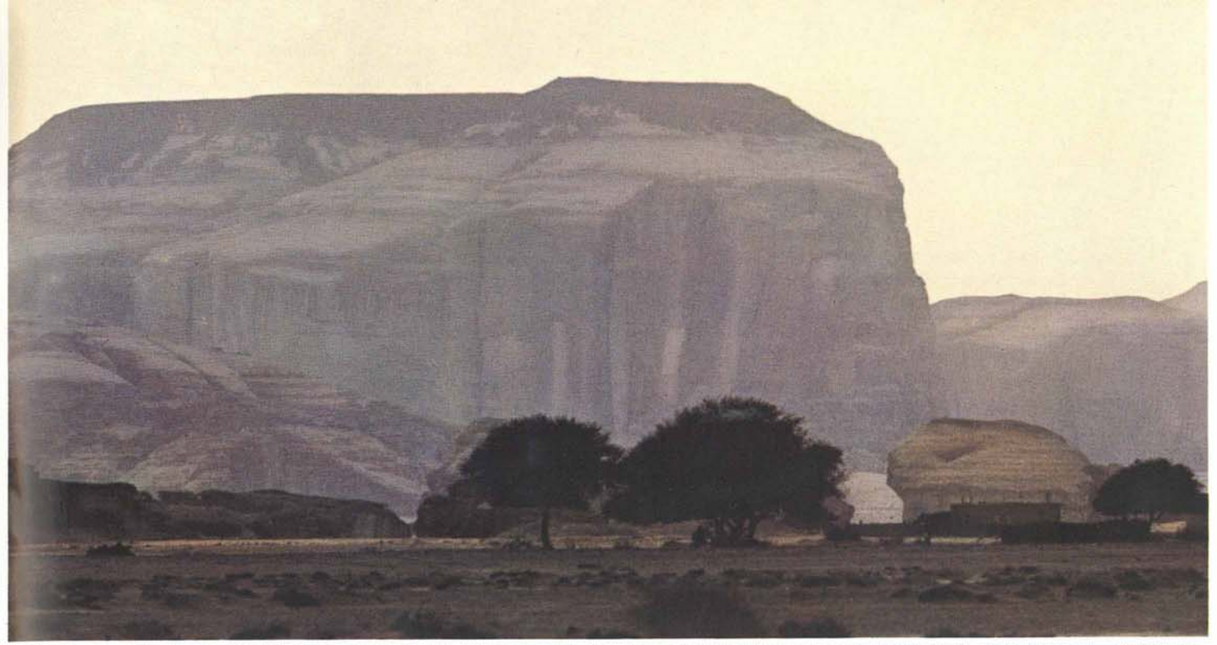


"The Mountain of the Camel ... is a towering ridge at the western edge of the valley. It stands in a brooding purple haze like a great cathedral, distant, intriguing ... mysterious."

THE MIRACLE OF THE CAMEL

BY PETER CROWE

Lady Peter Crowe, world traveler and author of five books, is the wife of the former British Ambassador to Saudi Arabia. In 1963 she visited Mada'in Salih and wrote an article for the Royal Central Asian Journal, *July-Oct. 1964, from which this excerpt, with the permission of the Royal Central Asian Society, is reprinted.*

Mada'in Salih is identified by Muslims with the story of the prophet Salih in the Koran. As with Noah in the Bible, this concerns a prophet whose teaching was rejected by the people to whom he was sent, with the result that their city was destroyed by a natural calamity.

Over the centuries the commentators have elaborated the tale in all sorts of ways, particularly as regards the reference in the Koran (in connection with the story of the prophet) to a she-camel which the disbelieving people hamstrung. According to the legend, when the people of Thamud refused to listen to the prophet's words, they proposed that at a certain festival they should pray to their gods and he to his, and see which would answer. When the day came the Thamudites first prayed to their idols, with no result. Then their prince, Jonda, challenged Salih to conjure forth a she-camel, big with young, from the rocks nearby and swore that if the prophet brought this miracle to pass they would believe him.

Salih asked it of God. The rocks shuddered as though in labour and a she-camel came forth, big with young. Seeing the miracle, Jonda believed, and some few with him; but the rest of the Thamudites still repudiated the prophet and glorified their own idols.

Meanwhile the miraculous she-camel drank up all the water from the village well, but at the same time she produced inexhaustible supplies of milk. Some commentators say that she went through the village streets crying, "If any wants milk, let him come forth!" This caused both wonder and dismay, for although the people appreciated the milk they feared for their supply of water. Finally, although Salih begged them to spare the she-camel if they hoped to avert the wrath of God, the Thamudites lamed the miraculous animal by cutting her tendons, and then killed her. Her young foal, however, came forth from the womb unharmed and vanished into a great rock which still stands as a landmark on the western side of the valley, its summit close to a thousand feet.

Then Salih warned the people to stay inside their houses for three days. And on the third day "a terrible noise from heaven assailed them; and in the morning they were found in their dwellings prostrate on their breasts and dead."

Whether the Thamud were contemporary with, and related to, or subject to, the Nabateans is not clear. Pliny and Ptolemy mention their settlements, including one that is apparently Mada'in Salih, as oasis towns on the route from South Arabia. Later this route was gradually abandoned, being replaced by sea travel and by a trade route up the Persian Gulf and then overland, through Palmyra. The settlement at Mada'in Salih probably came to an end at about the same time as the Nabateans at Petra were finally overthrown by the Romans (A.D. 106). From the inscriptions copied by Doughty it is clear that all the monuments there date from the first century A.D., that all are Nabatean, and that all except one are tombs.

But in the time of Muhammad five hundred years later, no one could read these inscriptions. The history of the people was forgotten. Passing by these rock-hewn facades, scattered throughout the valley, and seeing no other houses (for no one yet knows where the people lived), the Bedouin concluded that these buildings must have been the dwellings of an ancient pagan race. Those who were brave enough to venture inside discovered human bones, which even in Doughty's time they claimed to be those of giants, although he found them quite ordinary.

So, presumably, arose the legend of the people of Thamud, struck dead in their houses overnight. Tradition may also have associated their downfall with one of the volcanic outbreaks which long ago led to the formation of the Harrat, as they are called, the enormous fields of black lava which cover several areas in North Arabia and which are desolate enough to make anyone brood on past cataclysms. And so the city of Thamud became one of the cursed cities, like Midian, and Sodom and Gomorrah, its fate an awful warning of what might befall those who rejected the prophets of God.

ing to reach it in less than an hour, and even though I detoured through the clusters of *jabals* west of camp (on the off-chance that there might be unrecorded tombs tucked away in there) I still thought I'd reach it quickly. But after crossing a flat clay plain and climbing a high dune I discovered that the butte still seemed to be a good distance away. It certainly was. It took another two hours to get there and only then, as I trudged down the far side of another dune, did I realize just how large it is. Large? It is stupendous! From the base, where great hills of black shale slope down several hundred feet more and fragments of broken rock as big as cottages form jagged pyramids, the sheer cliff, streaked with tawny stripes of rust as wide as highways, rises up and up and up. A thousand feet? Twelve hundred feet? I couldn't begin to estimate. Moody will have to get it on film.'

Mada'in Salih
March 9

'In the moonlight, as in the sunlight, Mada'in Salih has an unforgettable beauty. Off there to the east the weird shapes of Jabal Ethlieb lean at drunken angles against the dark blue sky. In the west, the bulking shadow of the Mountain of the Camel looms large and mysterious. Above, the heavens are alive with glittering pinpoints of brilliant light; you could hang your coat on the Big Dipper and almost read by the North Star. The wind is cool and the moon is rising higher. Since this is our last night, it is a good time for summing up...

'Today, in high spirits at the prospect of leaving, Muhammad and Misfir treated us to a hair-raising drive through the valley, a bruising, full-gallop run between and over the hummocks that dot the valley floor. I will say that we got around the valley in a hurry and could at least take a look at and photograph some of the things we had missed: the inscriptions—characters about three inches high cut into the face of a large stone about 12 feet across and 16 feet high, a series of mounds laid out at roughly regular intervals, along what could easily have been a street, ancient wells recently re-excavated, a particular tomb we hadn't inspected and, again, the Mountain of the Camel.

'As we visited these places and speculated about them, it occurred to me that all we had come up with in our five days of exploration of Mada'in Salih were questions. Who, for instance, cut those inscriptions we saw this morning? When? And why in this particular place, not even close to a tomb? Above the inscriptions a triangular hole pierces the stone. Was it cut through with the iron tools of the Nabateans or by the silent abrasion of wind? And is it an accident that this hole throws a triangle of light almost exactly on top of a mound at sunrise? Or could this be an altar where some unknown rite came to its climax as the sun climbed over the twisted rocks of the Jabal Ethlieb?

'And the mounds? Are they the houses of an ancient village, or merely the remnants of some post-Nabatean settlers? Or just mounds? And when were the wells first dug? By prehistoric man? By the Nabateans?

'The questions actually are limitless. I noticed, for example, that in almost all of the tombs are the dry, gray shells of old wasps' nests, hundreds of nests which must have housed hundreds of thousands of wasps. Since wasps must have great quantities of water and vegetation—sophisticated vegetation at that— doesn't that imply that there must have been a tremendous amount of cultivated vegetation in the valley at one time? And doesn't that in turn imply agriculture? And people? And homes?

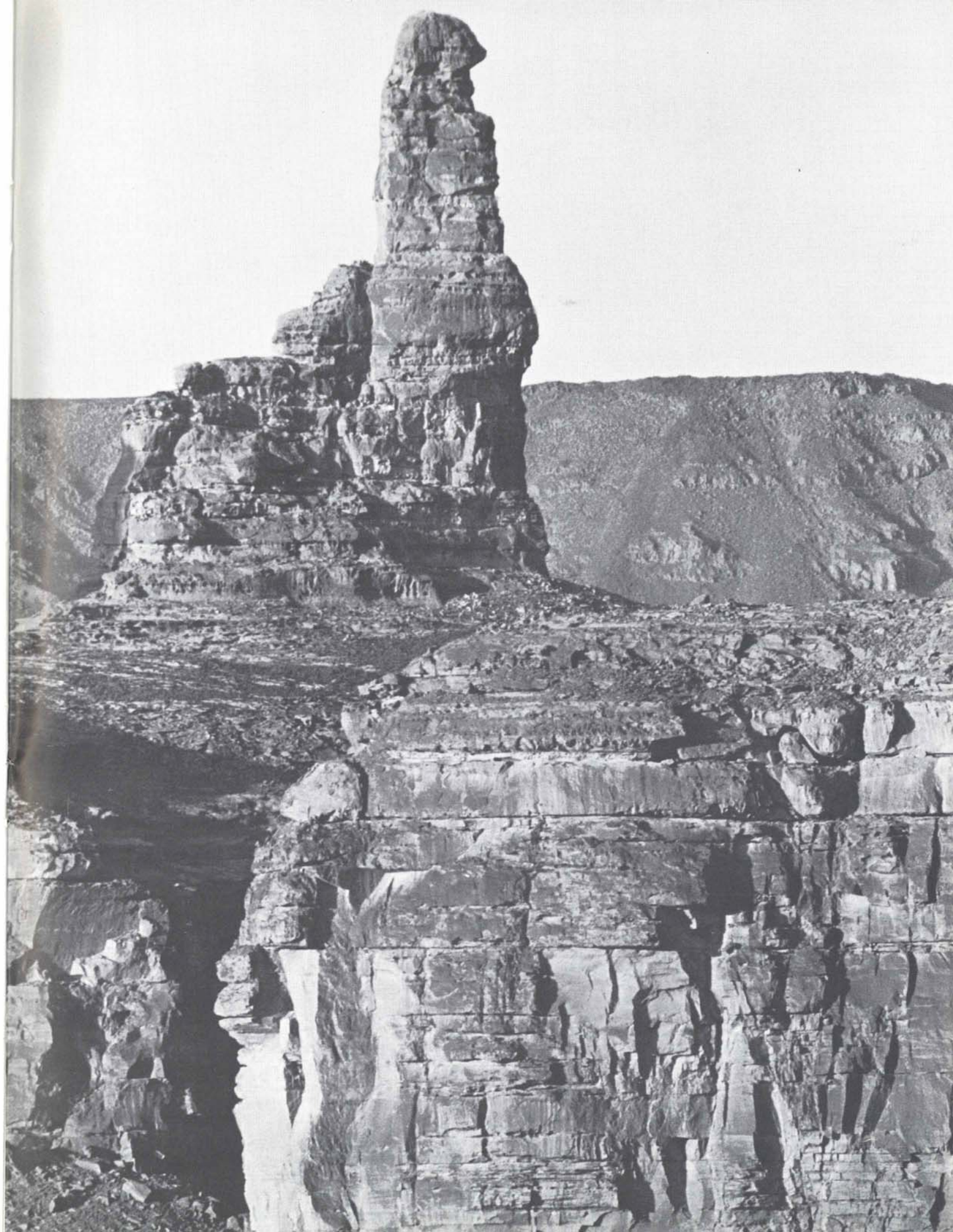
'Looking out at the valley tonight, a desert valley, lonely, incredibly silent under the stars, it's hard to even imagine Mada'in Salih as it might have been then, lush with growth, perhaps dotted with small homes from which people bustled forth to greet caravans plodding into the valley with cargoes of incense or myrrh from South Arabia. But it could have been and if so—the central question of Mada'in Salih—what happened?

'No one knows, of course, but it probably won't be long before the answers begin to emerge. The Hijaz Railway is being rebuilt and in a few years travel to Mada'in Salih will be relatively easy. Then the archeologists will come and will put their shovels into the great dunes near Jabal Ethlieb and the Mountain of the Camel and into the dirt in the tombs in the rock, and soon the valley will give up its secrets.

'In a sense this is very sad. There are not many regions like this left in the world—isolated, peaceful, undisturbed by the probings of the scientist and the browsings of the tourist, and retaining that certain aura of mystery and legend that the modern world so rarely has room for any more.

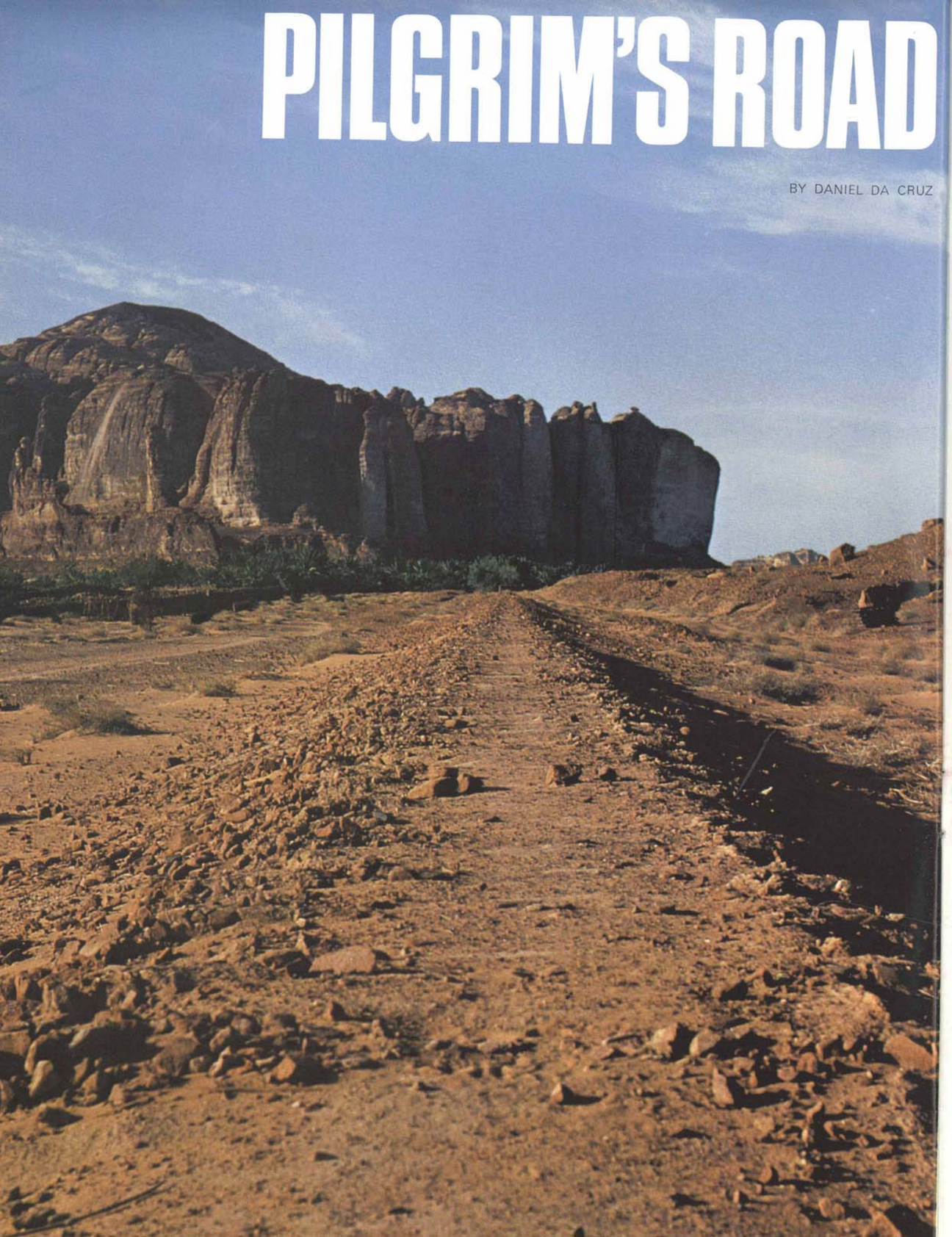
'That, however, is in the future. Tonight Mada'in Salih is still inviolate, still shrouded in legend and touched with romance. Which is why, a few minutes from now, I think I shall take a final look around. From the west there's a cool wind blowing across the sands and in the sky the moon is getting brighter. I think I'll just walk and listen in the stillness. You never know what you might hear—the cry of a lamed camel for instance, or the deep ominous thunder of an ancient earthquake or—who knows —maybe even a baby camel on a dark ridge crying faintly for a mother who will never come...'

Paul F. Hoye is a graduate of St. Anselm's College in New Hampshire and a former reporter and columnist for the Providence Journal, *Providence, R.I. As a 1962-63 Ford Fellow in Columbia University's Advanced International Reporting Program he specialized in Middle East affairs prior to becoming editor of* Aramco World.



PILGRIM'S ROAD

BY DANIEL DA CRUZ



Over mountains, through valleys, across the rock-strewn plains run the tracks of one of the world's most famous railways...

It was near ten o'clock when we heard the signal gun fired, and then, without any disorder, litters were suddenly heaved and braced upon the bearing beasts, and the thousands of riders mounted in silence. The length of the slow-footed multitude was near two miles, and the width some hundred yards in the open plains. We marched in an empty waste, a plain of gravel, where nothing appeared and never a road before us."

So wrote the 19th-century explorer of Arabia, Charles M. Doughty, as he set out from Damascus with a caravan of 6,000 pilgrims and 10,000 camels and pack animals. Destination: the Holy Cities of Medina and Mecca. Expected time of arrival: some 40 to 50 days thence—more if desert wells were dry or the caravan attacked by Bedouin marauders. Making the *hajj*, or pilgrimage, in those days demanded more than religious zeal; it required courage, endurance and money, and the bleaching bones of those who lacked these prerequisites marked the way south with disturbing frequency.

Small wonder, therefore, that the news of a great railway project, to link Damascus with Medina and Mecca, was received with joy and thanksgiving by the Muslim world when proclaimed in 1900 by Abdul Hamid, Caliph of Islam and Sultan of the Ottoman Empire, on the occasion of the 25th anniversary of his accession to the sultanate. The Sultan, as it happened, hoped that his announcement might bring belated luster to a reign characterized by a stern despotism, and yet neither the idea of a railroad, nor its execution depended in the least upon Abdul Hamid. The idea was spawned in the mind of a German-American, Dr. O. Zimple, as early as 1864, when the fever of railroad building in the United States was at its height, and no project anywhere seemed impossible; and it was pushed to completion by a Syrian Arab named Izzet Pasha al-'Abed.

Izzet Pasha al-'Abed was a remarkable man. Second secretary to Abdul Hamid, he was named president of the Hijaz Railroad Commission and charged with not only building the railroad but paying for it. In an empire whose chronic deficits had won it the name, "The Sick Man of Europe," this was not to be easy. But Izzet Pasha al-'Abed was equal to the task. Unlike projected railroads in even the healthiest of nations, the Hijaz Railway financed the entire operation without a single foreign loan or the floating of a single bond issue.

Izzet Pasha engineered this remarkable feat with a combination of applied psychology and arm-twisting that compels admiration even today, when fund raising is almost a science. His initial move was to pursuade Sultan Abdul Hamid to donate first $250,000. For the sake of their *amour propre*, the Khedive of Egypt and the Shah of Iran felt impelled to do the same. With the example of their rulers before them, the peoples of all Muslim nations, rich and poor alike, soon fell into line, contributing what they could. This, of course, was not nearly enough. So, with the zest for extracting revenues for which they were celebrated, the Turks collected an impost of five gold piasters on every new house built in the Ottoman Empire, required every member of the Turkish civil service and armed forces to "contribute" 10 per cent of one month's salary (yielding one million dollars), instituted a head tax of five gold piasters on every male citizen in the Empire, and issued special Hijaz Railway stamps. The sale of titles swelled the ranks of the "beys" and "pashas," and brought in capital quite out of proportion to the rather tattered glory of belonging to the Turkish nobility.

By the time the railway was completed and in operation, the Turkish Government had collected not only enough to pay the construction costs but to provide a surplus equal to $1.75 million. Thus the Hijaz Railway became probably the first in history to be paid for before selling its first ticket, the first to start life with a cash surplus, and undoubtedly the first to be operated by a *waqf*—a self-perpetuating, nonprofit religious endowment for the administration of property according to Muslim law.

Work on the Hijaz Railway began in May, 1900, with a route survey by the Turkish engineer Hadschtar Muchtar Bey, in what today would seem an incredibly offhand manner: he simply tagged along behind a Medina-bound pilgrim caravan, taking his sightings and jotting down his observations as he jogged along on camelback. Considering the route that the railroad was to cross, this approach seems today almost unbelievable. It began in Damascus, headed due south over the bare rolling plains of Hauran, passed Der'a and what is now Amman, climbed the mountains east and south of the Dead Sea, and dropped down to the fastness of Hijaz bordering the Red Sea. It included the eerie landscape south of Ma'an that one observer likened to that of the moon. The valleys, that observer said, are "chasms and gorges... full of twists and turns, 1,000 to 4,000 feet deep, barren of cover and flanked on each side by pitiless granite, basalt and porphyry... piled up in jagged heaps of fragments..." At other places the country is "blue-black and volcanic," the observer wrote, adding that eventually it changed into a "valley of soft-black sand, with more crags of weathered sandstone rising from the blackness."

Despite that, the imperturable engineer explored no alternative routes, believing—with good reason as it turned out—that over the centuries the caravans were sure to have found the easiest and best routes. Furthermore, a sure water supply, so necessary to camel caravans and railway operations alike, was assured from ancient wells which marked the route at intervals.

The following year the German engineer Messner was given the honorary title of "pasha" and put in charge of an international team of engineers: 17 Turks, 12 Germans,

Across the empty plains of Saudi Arabia runs the route of the Hijaz Railway, abandoned more than 40 years ago. Photography by Burnett H. Moody

5 Italians, 5 Frenchmen, 2 Austrians, 1 Belgian and 1 Greek. Since labor along the line was nonexistent—there were Bedouins, of course, but those sons of the desert scorned manual labor as not befitting free men—the Turkish Army supplied the deficiency with a draft of 5,630 enlisted troops, mostly from Syrian and Iraqi regiments.

Lacking lateral access to the projected line, for there were then, as now, few roads in the area able to bear heavy loads, the construction crews were obliged to carry all food, fuel and building materials with them as they went, instead of stockpiling them along the route where needed. Despite these cumbersome logistics, the line snaked steadily southward. It crossed the plain of Hauran, lurched down the precipitous gorge of the Yarmouk River into the Jordan depression, ricocheted through the valleys until once more gaining the highlands near Ma'an. From an altitude of 3,540 feet at Ma'an, the line dipped down and up again to 3,780 feet at al-Mutalla' in present-day Saudi Arabia, tobogganed to 1,290 feet at Hadiyyah, and, finally leveled out at Medina at an altitude of 2,050 feet.

Although only at rare intervals did the railway cross running water, it intersected innumerable dry river beds which at unpredictable intervals of one, two, or sometimes even five years, became raging torrents from sudden cloudbursts somewhere along their course. It was therefore imperative to build bridges across their dusty beds, or risk washouts of long sections of track when the rains came. In all, some 2,000 bridges and culverts were constructed, without exception from native stone found nearby instead of concrete, which would have had to be imported at great cost. The tedious labor involved in chipping irregular stone into smooth square or rectangular blocks was performed by poorly paid conscript troops, but so well were the flat-topped or arched culverts and bridges built that today, 60 years later, 1,500 of them survive only marginally impaired.

Like the bridges, the other aspects of the railroad's civil engineering were solid and built to last. Rails of 21.5 kilograms-per-meter (14.33 pounds-per-foot) section were secured to steel ties weighing 88 pounds each, chosen for durability and low-maintenance qualities. Beneath them the roadbed of crushed-rock ballast, 12 inches deep, rested on a rather narrow embankment of local gravels. The 42-inch gauge, unique among the world's railroads, was undoubtedly selected as a military precaution, for the line would be completely useless to an enemy whose rolling stock were of a different gauge. An additional military measure was the construction of many more "station" structures than were actually needed, for many of them were erected in the middle of the desert, hundreds of miles from the nearest human habitation. Forty-eight in all, the interval between stations averaged 11 miles, just about right for armed patrols stationed at each to maintain the security of the line between. Built of stone and suggestive of frontier blockhouses, the stations had rifle-slots instead of windows. Emphasizing the fortress aspect were the water wells that surfaced in an inner courtyard out of reach

In a decaying shop at Mada'in Salih stands a well-preserved locomotive.

of possible attackers and an ingenious arrangement by which defenders could pour a murderous fire into the courtyard should the outer defenses be breached.

The terrain through which the Hijaz Railway was built is uncommonly hostile to man, but the weather can be even more taxing. Describing the rigors of the summer season, a European observer related how on one trip in Hijaz "the hot breathlessness changed suddenly to bitter cold and damp, sun blotted out by thick rags of yellow air over our heads. Brown walls of cloud rushed changelessly upon us with a loud grinding sound. It struck, wrapping about us a blanket of dust and stinging grains of sand, twisting and turning in violent eddies. Camels were sometimes blown completely around. Small trees were torn up and flung at us. The storm lasted eighteen minutes, then down burst thick rain in torrents, muddying us to the skin, and we had to run to high ground to avoid flash floods."

Neither the lunar landscape, however, nor the climate stopped the work construction for long. On September 1, 1901, the Damascus-Der'a section was inaugurated. A year later to the day the Der'a-Zarqua section was opened, followed by the extension of the line to Amman in 1903, Ma'an in 1904, Tabuk in 1906, Mada'in Salih in 1907, and Medina in 1908. Between 1900 and 1908, the year the Hijaz Railway went into active operation, the Turks had put down 808 miles of rail, a very respectable engineering feat considering the imposing handicaps and the quality of the completed line, which an American railway engineer recently described as "technically, a first-rate job."

Although the Hijaz Railway had originally been planned to extend all the way to Mecca, Medina was destined to be its southern terminus. Increasing resistance from peninsular tribes, who keenly felt the loss of revenues as railway carriage replaced camel caravan in transporting pilgrims, made it impolitic for the feeble Ottoman government to insist on pushing the line farther. Nor did the Hijaz Railway have its former champion to press its case, for Minister of the Waqf Izzet Pasha al-'Abed had, like his master Sultan Abdul Hamid, been deposed the very year the railway was completed by a revolt of the "Young Turks."

The romance and novelty of the Hijaz Railway largely evaporated with its completion although it retained one noteworthy distinction: reflecting its Muslim mission and ownership, the railroad's management did not allow non-Muslims to approach Medina closer than Ma'an without special permission (just as on the 212½-mile stretch between Mada'in Salih and Medina only Muslim engineers and workers were employed). Otherwise it became just another railroad, prosaically transporting the paying public between Damascus and Medina in an elapsed time averaging three days. The Hijaz Railway settled down to grow old gracefully.

It was not to be. Within less time than it took to build it, winds of war blew hot upon the Hijaz Railway. Turkey entered the Great War on the side of the Central Powers, and its occupation of the Middle East threatened the narrow bottleneck of the Suez Canal, through which passed the vital lifeline between Great Britain and its maritime bases in India, Singapore and Hong Kong. No longer was the Hijaz Railway a beneficent pathway for devout Muslims making the *hajj*, but a military highway down which Turkey could send its armed might, strengthening its grip on the Arabian Peninsula and, by its mere existence, pose a constant threat to British power in Egypt.

Winston Churchill summed up the British position in typically apocalyptic terms:

"The Turkish armies operating against Egypt depended upon the desert railway. This slender steel track ran through hundreds of miles of blistering desert. If it were permanently cut the Turkish armies must perish: the ruin of Turkey must follow... Here was the Achilles' heel, and it was upon this that this man in his twenties directed his audacious, desperate, romantic assaults..."

"This man" was, of course, T.E. Lawrence who was to become famous in the West as "Lawrence of Arabia."

Colonel Lawrence also saw the military value of the railroad but developed a different theory about how to combat it. "Our ideal," he wrote, "was to keep his (the Turk's) railroad just working, but only just, with the maximum loss and discomfort."

In practice, the strategy the Allies adopted was based on the strengths of the Arab warriors. The Bedouin was unused to formal operations, in which organization and a preponderance of firepower were usually the deciding factors. But his assets of mobility, toughness, self-assurance, knowledge of the country, intelligent courage and love of surprise attack were ideal for hit-and-run operations which would cut the line, harass patrols and keep the Turks making repairs, answering false alarms and chasing phantoms. In a typical operation, the Arabs with one or two British demolition experts would suddenly materialize out of the desert, swoop down on the line and disperse or annihilate the Turkish patrol guarding that section of the railway. In the hour or so before Turkish troops could arrive in force, sappers would first conceal trigger-action mines up and down the right-of-way to take care of reinforcements arriving by train, then go to work on the vital bridges or overpasses. Filling drainage holes in the spandrels with three to five pounds of explosive gelatine each, fired by short fuses, they could bring down a whole line of arches, shatter the supporting piers and strip the side walls, all in six minutes of frantic work.

At the first sign of Turkish troops, the Arabs would mount their camels and melt into the desert, as silently as they had come.

The tribesmen went at their work with extraordinary zest. In the first four months after the Allied capture of Aqaba they destroyed 17 Turkish locomotives and many miles of track. Within a year, traveling on the Hijaz Railway had become an uncertain adventure. At Damascus passengers scrambled for back seats on trains. Engineers struck. Civilian traffic languished, and, as the war approached its close, ceased altogether.

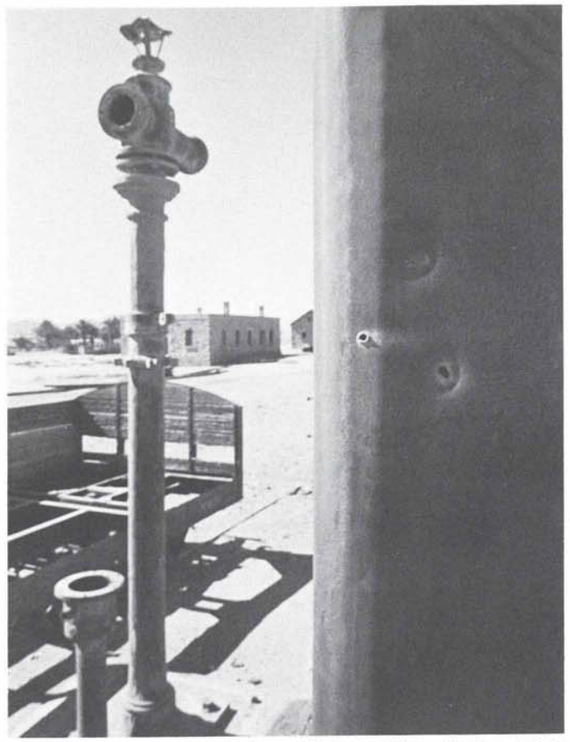
In 1918, as the British and Arab forces swept almost unimpeded toward Damascus in the last great offensive of the war in the Middle East, the roles of the two sides were reversed. The Allies, who by then held the Hijaz Railway from Der'a to Medina, feverishly repaired what they had spent two years in destroying, so that they could use it to bring troops, ammunition and food to the front from the South. The Turks, having bled themselves white trying to keep the line running, now devoted their best efforts to destroying it. They were as frustrated in the second undertaking, however, as they had been in the first. Within weeks the Allies rolled triumphantly into Damascus.

The Allied strategy of disrupting, rather than destroying, the Hijaz Railway had been rigorously applied; the revolt in the desert accounted for the total destruction of perhaps no more than a few miles of roadbed. According to his own account, Lawrence, a man not given to self-effacement, confessed to the demolition of only some 80 bridges, out of a total of 2,000. Why, then, with the major portion of the Damascus-Medina railway still serviceable —from Damascus to Ma'an, in fact, regular service has been almost uninterrupted up to the present day—was not the line repaired and put into full operation immediately after World War I?

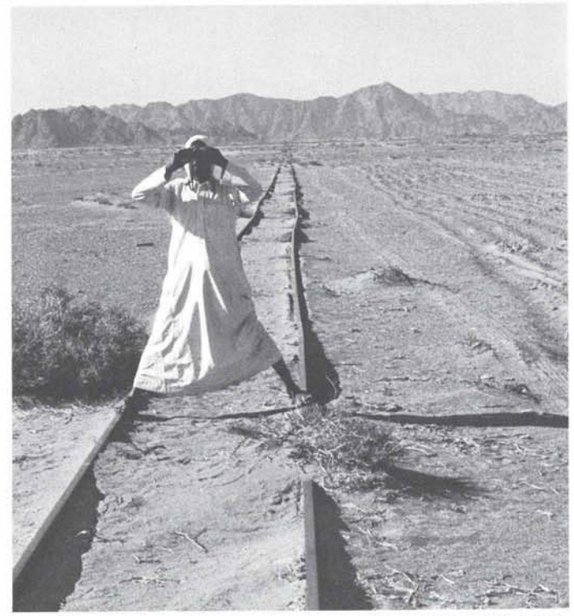
The answer must be sought in the political cross-currents that buffeted the Middle East after that war. Neither Britain nor France, assuming mandatory powers in the new Arab nations carved out at European conference tables, found it in their interest to re-establish fast and easy communications between Damascus and Medina, which would tend to unite what they had just split asunder. Against this obduracy, all attempts by the Muslim world to restore the road of the pilgrims foundered. When in 1938 the late King Ibn Sa'ud of Saudi Arabia announced the gift of 50,000 Turkish gold lira toward the restoration of the Hijaz Railway, the Syrian Government enthusiastically responded by earmarking 270,000 Syrian pounds for the same purpose, whereupon French occupation forces prorogued the Syrian Parliament and the project died.

It wasn't until both Syria and Jordan became fully independent that serious efforts to rebuild the Hijaz Railway bore fruit. An Executive Committee for Recommissioning the Hijaz Railroad Line was established, with four members each from Syria, Jordan and Saudi Arabia. King Ibn Sa'ud put $570,000 at the Committee's disposal in June, 1955, for a study of the damaged portions of the line and an estimate of rehabilitation costs of the Ma'an-Medina section. The committee, in turn, in August, 1956, awarded an American engineering firm a contract to make the survey and the engineers went forth to see what the years had done to Izzet Pasha al-'Abed's great project. They quickly found the answer: not much.

Preserved by the dry desert air, engineers noted, great segments of rail still ran straight and true across the sands, unrusted, the dates of manufacture—1907 and 1909—still perfectly legible. Some stations were in almost perfect



Evidence of Colonel Lawrence's attacks are still clearly visible in old railway stations.

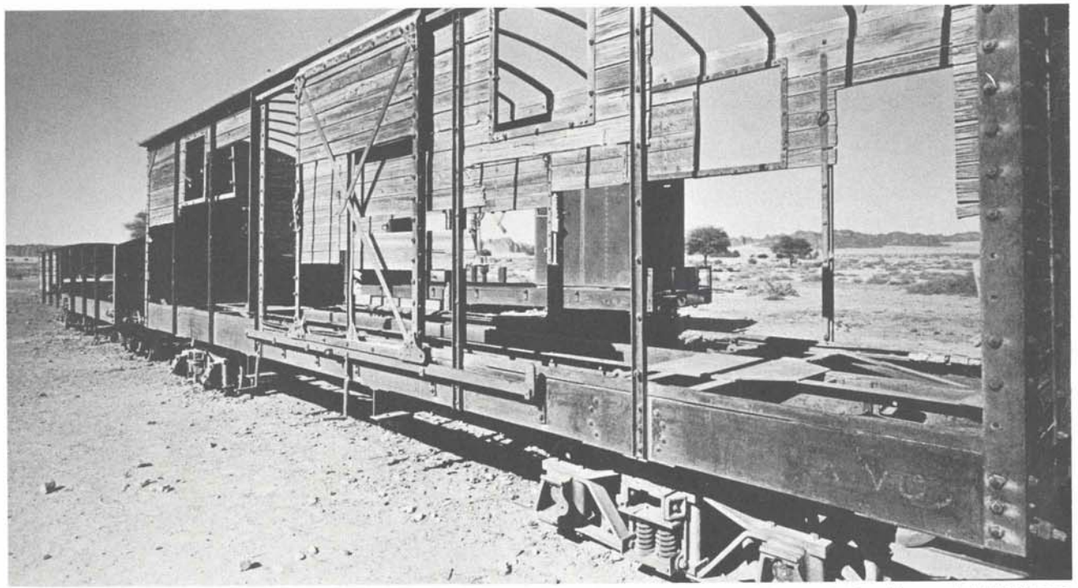


Most of the old track, like this segment near Zummurrud, has been removed recently.

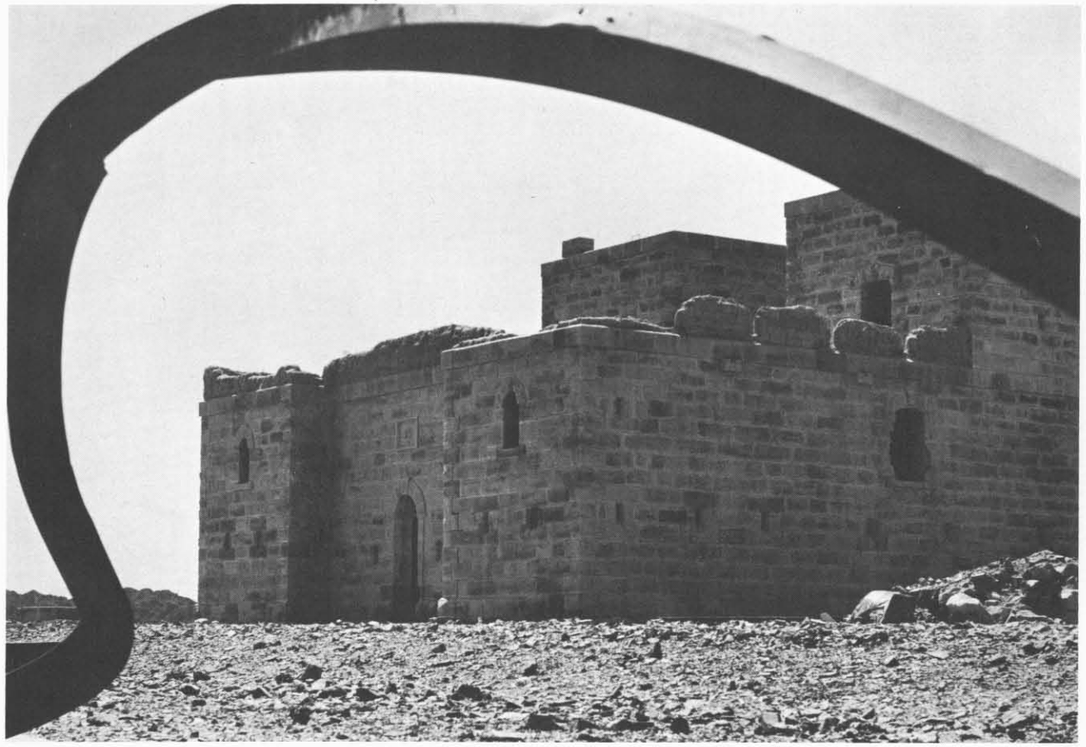
condition despite evidence inside of nomadic occupation —ashes from cooking fires, the residue of herds of goats quartered within against the wind and inscriptions in Arabic of the local equivalent of "Kilroy was here." At some stations the gaunt steel frames of passenger and freight cars stood silently on sidings, their wooden sides, roofs and seats long since stripped away to fuel Bedouin campfires, but their coiled springs, flanged wheels, couplings and fastenings still intact. In others it seemed as if the workers had one day just suddenly vanished, leaving things exactly as they were in the middle of a normal work day. At Mada'in Salih, for example, a locomotive, seemingly intact, stands to this day on a track in a repair shop with a jack affixed to the front end ready to raise it into the air for repairs. Scattered on the floor are layers of broken roof tile inscribed: "Tuileries Romain Boyer-Marseille." Outside is a flat-car with two square water tanks punctured with bullet holes, and a coal car with enough coal still in it to stoke the locomotive. Along a 'street' that leads by what were once barracks for Turkish troops, Bedouin children today play in the sand while others bend over their books in a station house that the government has converted into a school.

In their formal reports, the engineers gave reasons for cautious optimism about the feasibility of rebuilding the railway. Considering that the line had been laid down half a century previously, had been subjected to systematic sabotage for two years by British and Arab raiders, and had received no maintenance at all south of Ma'an since 1917, the line was in surprisingly good shape. On the abandoned Ma'an-Medina section, some 37 miles, or about 7 per cent, of the track was gone, most of it ripped up by the British between Ma'an and Mudawwara in World War II to build a spur. Sand dunes covered eight miles, or 1.6 per cent of the line, in drifts ranging from six to 16 feet high and up to 1,000 feet long. Blown sand was a greater problem, for it lodged between the rails up to four inches deep for a distance of 160 miles, 30 per cent of the way between Ma'an and Medina. Washed-out embankments accounted, finally, for an additional 31 miles or 6 per cent of the line; this was the direct result of silted-up drainage systems, which impounded, instead of discharging, the occasionally heavy December-to-March rains. The operating portion between Ma'an and Damascus was also in relatively good condition.

Agreement among the governments of Syria, Jordan and Saudi Arabia to reactivate the entire Hijaz Railway line was a foregone conclusion. The project was to be financed by splitting the estimated $30 million construction cost equally among the three governments, with the aid of an eight-year loan for materials by the International Bank for Reconstruction and Development. The successful bidder for the project, a consortium of the British engineering firms Alderton Construction Westminster, Ltd. and Martin Cowley, Ltd., signed the contract for the job on December 6, 1963. This group, the Hijaz Railway Construction Company, Ltd., in turn retained Mr. L.B. Franco as project manager and Mr. William Cruse, president of the American Railway Engineers' Association, as chief engineer. Mr. Franco, an American construction engineer with a distinguished record of achievement on five continents, assembled a crew of 25 Syrian, Jordanian, American, English, Belgian and Malayan engineers, and began work



On short lengths of remaining rail (left) or on sidings still untouched by the reconstruction workers (above), stand the gaunt, stripped frames of old freight cars.



Hijaz Railway stations were built as forts as well as stopping places and have castle-like rifle slots instead of windows. Many are still in near-perfect condition.

in March, 1964. If the projected construction schedule is met, the last spike will be driven sometime in the fall of 1966.

The state of the art of railway building is probably among the slowest-changing of the engineering sciences, for nearly all railroads are still basically steel rails fixed to wooden ties resting on a solid stone-ballast foundation. But there will be changes, some in the fundamental specifications. The roadbed will be reinforced with a 12-inch layer of ballast; the crown will be widened about two feet and on much of the main line the original rail, which was taken up and stacked along the route last spring, will be replaced by a more durable steel rail weighing 31.1 kilograms per meter (21.85 pounds per foot). The old steel ties, installed 28.16 inches apart by the Turks, have also been taken up, and it's clear, looking at their corroded tips, why they will be replaced. Good for their day and extremely rugged, they were, unfortunately, susceptible to corrosion from the moisture held by blown sand. In their stead the contractors will lay down ties of worm-resistant and practically indestructible Australian *jarrah* wood measuring 4½″ by 8″ by 6′6″, much cheaper than steel even when spaced more closely at intervals of 24.16 inches. The rails will be fastened to the ties with elastic spikes of the latest design.

When the Turks ran the railroad, the maximum speed was 25 miles per hour, which, with coaling and watering stops, added up to a three-day run between Damascus and Medina. Shooting for a new maximum speed of 44 mph and a one-day run, the engineers will iron out many of the sharper bends in the line (some of which have radii as low as 425 feet), introducing transition curves and replacing the worst curves with gentler turns having radii of more than 1,000 feet. The steepest gradients will be eased to a maximum of 1.99 per cent—still fairly steep by American railroad standards. In all, the reduction of gradients and expansion of curves will require some two million cubic yards of new earthworks.

According to the present timetable, the next order of business, now that the old rails and ties have been removed, is the reconstruction of grade crossings, station houses and wells. Meanwhile, building stone for culverts and bridges will be prepared, mostly by traditional methods used by the original builders. By then, the new steel rails and wooden ties will have arrived, and the laying of track will begin at the rate of more than a mile and a half a day—three miles if track is laid from both ends.

Before the project is completed, 60 per cent of the rail, nearly all the ties and all the switches will have been replaced, involving the importation of 23,000 tons of steel rails from Europe and 750,000 *jarrah* ties from Australia. Considering the anticipated speed with which this material will be installed and the 5,000-odd men needed to do the job originally, the labor force—a mere 300 men—which will do the work seems a printer's error. The difference, of course, is in the phalanx of dozers, trucks, cranes, scrapers and other mechanical devices available today. A U.S.-made stone crusher, for example, will do the job previously requiring the full-time hard labor of 1,000 men. And a track-laying machine costing less than $20,000 will enable a small crew of technicians to lay 85 miles of track in 54 days.

Machines won't solve all the engineers' problems. Despite a revolution in transportation techniques, all material must still be brought to the site either by road from Aqaba or by rail from Beirut, just as it was by the Turks. The builders must still drill wells along the line for their water (the old wells have long since silted up), going down from 200 to 275 feet in most places, but over 2,750 feet around Ma'an. There is no way to avoid corrosion on that part of the line which crosses the desert's extensive salt flats, and as for positioning drainage structures across the river beds, this can be the engineer's nightmare, since water comes down different dry watercourses each year. Even the surveying, done from trucks rather than camelback this time, is a problem. In the winter of 1963-64, ice and snow blocked access roads to the rail line, and from May to September the day temperatures of 115° to 135° F produce mirages that make goulash of transit readings. Some of the dilemmas are strictly economic, such as the proposed elimination of a long switchback halfway from the Jordanian border to Medina. Entirely feasible from the engineering standpoint, it would cut two minutes off the schedule, but the cost—$500,000 in new bridges and other structures—was thought prohibitive for two minutes of anybody's time, and the idea was quietly dropped.

So far, the work is proceeding smoothly and systematically, and there is every reason to believe that it will finish on schedule. When it does, five diesel-powered trains a day (twelve times as many as formerly) will speed in each direction, accommodating 5,000 passengers as well as mail and freight. Because there is only one track this will involve, of course, an extensive use of sidings. During the *hajj* season, 12 trains daily will be put in service, and 15,000 passengers will make the trip in 24 hours in comfortable contrast to the 6,000 who made the six-week trip by camel in Doughty's day. Settlements will spring up along the line at many of the 33 of the 48 original stations which are to be rebuilt. Fresh fruits and vegetables will flow southward into natural markets in Saudi Arabia, and mineral wealth from the peninsula will seek its outlet on the Mediterranean littoral. Jordanian phosphates from the Dead Sea, one day soon to come into commercial production for the export market, could well justify a spur line to Aqaba; a similar intriguing possibility is a branch line from Medina to Yenbo on the Red Sea.

Attractive as these incidental advantages will certainly prove to the economic and cultural life of the region, the Hijaz Railway will remain in the future primarily what it was in the past: the high road of the devout to the holy cities of Medina and Mecca, the means of fulfillment of the Koranic injunction that every Muslim make the pilgrimage at least once in his lifetime.

Daniel da Cruz, an expert on the Middle East, writes regularly for Aramco World.