

Radio on the pipeline

THE new oil pipeline of the National Iranian Oil Company is to have radio communication for the control of pumping along its six hundred mile extent. The contract for the equipment, worth £300,000, has been awarded to our Company in the face of keen foreign competition. Equipment being supplied includes eighty-four of our V.H.F. multichannel equipments, type HM.181, together with a considerable quantity of telephone carrier equipment and diesel electric plant. The four principal stations along the route will be at Abadan, Ahwaz, Azna and Teheran, and the survey, carried out earlier this year, involved working over some of the

hardest terrain yet encountered by our survey teams.

John Palmer, survey and installation engineer, gives us his story of the job.

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I suppose some people imagine Persia to be a hot, flat, arid country, vaguely romantic. When I heard I was to go out there on a survey for the National Iranian Oil Company, I got out an atlas and found that not only was it a very large country, stretching from the Persian Gulf to the Caspian Sea, and bordering on Iraq to the west and Afghanistan to the east, but it was also largely mountainous, with many peaks over 10,000 ft. Reports from D. C. H. Mellon, who had gone ahead to prepare the way, were somewhat alarming. Temperatures around zero had been encountered, and a Land-Rover cylinder-block had frozen and been cracked, despite anti-freeze.

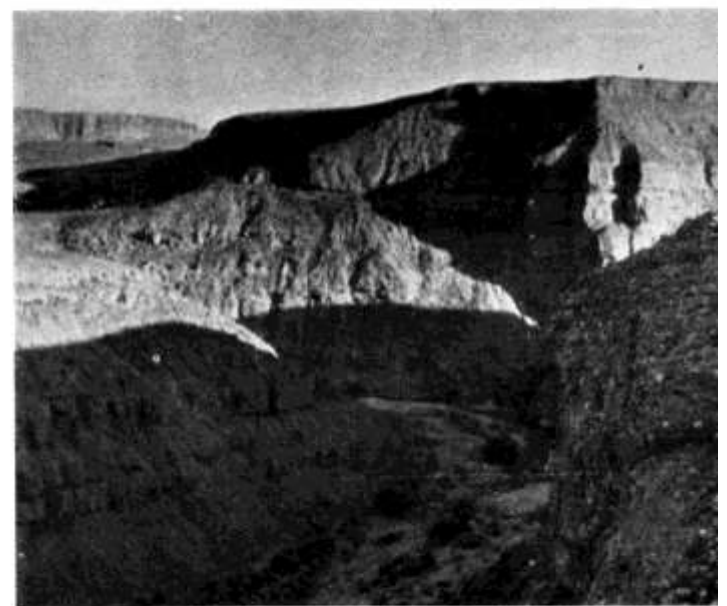
In view of these reports Roger Gale and I packed our warmest clothes before we set out one wet day in January. We changed aircraft at Amsterdam and flew through the night across Europe and the Middle East. When dawn broke we were over Persia, and the landscape took shape below. The sight was not encouraging. As far as we could see were range upon range of jagged mountains, covered with snow. Not a sign of human habitation, a tree, a road or a railway broke the monotony.

We landed in Teheran at lunch time, met the agent, Mr. Galustian, and spent a night before taking off again, this time in a less luxurious Dakota of Iranian Airlines. The Dakota flew lower than the airliner which had brought us, and we passed between mountain peaks that looked even less hospitable at close range. However, our destination, Ahwaz, proved to be in the desert and clear of



snow. The last lap of the journey was accomplished in a borrowed jeep, which rattled and jolted us a hundred miles over the plain to Andimishk, where the sight of a VHF mast and some green tents told us that our journey was at an end, and soon D. C. H. Mellon was greeting us.

The purpose of the survey was to find suitable sites for the repeater stations of a VHF multichannel network linking the various pumping stations on the Abadan-Teheran pipeline. Our first site was in desert country, quite warm even in winter, although distant snow-covered peaks constantly reminded us that we had a long stretch of mountain country to traverse before the job was done. This first camp looked somewhat incongruous—a tall mast, with tents below, and a busy engine intruding into the vast silence of the plain. The peasants scratching a precarious living from the sand took little notice of this alien establishment, but continued to plough their sections of the common land with ancient and primitive implements. Camels sauntered indifferently by, and donkeys passed carrying skins of water. Occasionally a horseman galloped past. The scene was Biblical, and in the evenings when the plaintive notes of the shepherds' pan-pipes and the tinkle of sheep bells were the only sounds it was



RIGHT (from top to bottom): The oil pipeline from Abadan to Teheran in course of construction. It will carry oil over the desert and through the mountainous regions of Persia to the expanding industry of the capital

Each of the pumping stations on the pipeline will be connected by radio telephone. Our survey team had to compete with all conditions from intense heat to freezing cold. Here is Arthur Starkey in one of the jeeps which the team used on their route

The pipeline crosses the desert plain from Ahwaz and then enters the foothills. This shows a river-bed track which reaches the mountains through a deep gorge

easy to imagine oneself drifting two thousand years into the past.

One morning we awoke to find another ancient craft had been practised in our midst. While we slept an unseen hand had inserted a knife, deftly slit the tent lacing and reached inside to remove Roger Gale's clothes, hanging within. Thereafter we arranged that the shadow of an armed guard, sitting on a bed, should be projected on the tent wall, clearly visible to any marauder. This armed guard, constructed of cardboard and about eighteen inches high, proved an excellent deterrent and we had no further visitations.

We were joined shortly after our arrival by John Poole and George Simpson, who with Arthur Starkey completed the team, and we started to move up the line, camping and making measurements at intervals. We had only two Land-Rovers, the rest having been delayed, and had to hire a local pickup, owned and driven by a villainous-looking character called Habda.

In the course of a few weeks we left

the plains and moved steadily higher into the hills. Arabic gave way to Persian, it grew colder, and the roads deteriorated from bad to impossible. Habda's face grew longer as the weather grew worse and he got further from home, and finally after breaking two springs in one journey he decided we were mad and left us, rather abruptly. So abruptly, in fact, that only the timely intervention of the Iranian Army prevented us from being stranded on a 6000-ft. hill.

During this part of the survey we had little time to see anything of the country. We lived in a little world on our own, strangers in a strange land. Our visits anywhere were only fleeting ones, and our behaviour must have seemed distinctly odd to the village people. However, they were most helpful—in fact almost too keen to help, as once when we asked if there was a possible route for a jeep to get up a certain mountain. Only after we had got the Land-Rover stuck in a gully between two large rocks on a gradient of one in two did we realise that our informant had assumed that where goats could go, so could Land-Rovers.

It was exactly two months after our departure for Ahwaz that the team drove into Teheran. We felt lost in the traffic of the big city, and the tree-lined tarmac avenues were a dream after the interminable potholes and sand of the country roads. We explored the night life and plunged into an orgy of shopping, for Teheran is a fine modern city with European goods in the shops as well as Persian treasures, and British and German cars on the roads. When we arrived it was still cold, and the mountains which dominate the town, rising to a magnificent peak of nearly 19,000 ft., were covered in snow. Later



Climbing to a test site previously selected from the map, John Palmer carries the aerial in his hand, the feeder coiled round his shoulder and the radio gear in his rucksack



Above the snowline. Roger Gale speaks on the R.T. from a site 7000 feet above sea level, at the top of the Razan Pass. The forty-mile-long valley runs down to the left and it was near this site that the Land-Rover cylinder block water jacket froze in spite of strong anti-freeze mixture

the climate becomes rather like an English summer, without the rainy days.

Our stay in Teheran was all too short and soon we were off again down the line. We returned to Ahwaz in May and found the temperature approaching 120 degrees in the shade. We had experienced in five months a temperature range considerably greater than would be possible in a year at home.

It was a pity that we did not have the opportunities we should have liked to visit the more interesting parts of the country and learn more of the customs and language of the people. Persia



At Tang-i-Fanni Roger Gale talks on the R.T. during tests with a possible repeater site. Local people from this wild region were engaged to help carry the heavy gear to test positions



A peasant family of the plains by their house built in the usual style with stones and a dome-shaped roof of mud. The hens wander in and out, very much part of the family



Making friends with local people on the survey route. This venerable village dignitary and his companions were all very proud of his pipe



One of the beautiful mosques in Teheran. The mosaic on the walls is all done in tiles of blue and green. [All photographs by the author]

abounds in history, of course, but although we camped near the remains of ancient Susa, the most interesting archaeology lay around Persepolis, some hundreds of miles to the east of our route. I was fortunate in being able to spend a day in Isfahan, the old capital of the country. The ancient and beautiful architecture and placid atmosphere contrasted strongly with the western bustle and reinforced concrete of Teheran. Here the ancient crafts were most in evidence, copper-smiths and carpet makers carrying on their trades for all to see in the open-fronted work-rooms of the bazaar.

What memories will remain strongest in my mind? On one side the heat of Ahwaz in May and the dust storms and smell of Abadan. On the other, the grandeur of the mountains, the freshness of the villages with their trees and gardens, and the incredible patience and hardiness of the villagers, striving to wrest a livelihood from the barren countryside.