The Persian Gulf Command: Lifeline to the Soviet Union

by Frank N. Schubert

In 1941, the Middle East was an obscure and remote corner of the world to the United States. Intelligence operatives in the War Department knew virtually nothing about the region. In fact, when questions first arose about possible operations in Iran, the best source of information proved to be the Library of Congress, where consultants on Islamic archaeology provided maps and information on roads and other transportation routes.

Other nations that were already embroiled in the war in Europe did not share American ignorance. In August 1941, Great Britain and the Soviet Union, longtime competitors for dominance in the Persian Gulf and Afghanistan, jointly occupied Iran, which seemed inclined to support Germany. The Soviets controlled the area north of the capital city of Teheran, Britain took the south, and they jointly held Teheran. The treaty that legitimized the division in September 1941 guaranteed Iranian neutrality for the duration of the war and the end of the occupation within six

His Royal Highness, the Shah of Iran (center).

months of the end of hostilities. The treaty gave Britain and the Soviets firm control of Iranian communications.

Although the occupation was designed to deny the area to Germany and its Axis partners, Iran turned out to be a positive asset to the Allies. The country provided a reliable supply route to the Soviet Union, which was reeling under the huge German offensive that started in June 1941, just when other routes, particularly the northern oceanic route from the Atlantic ports of the United States to Murmansk and Archangel, were proving very hazardous to Allied shipping. It was in the development and use of this critical supply line that American Army engineers came to play a major role.

The United States Military Iranian Mission opened its doors in September 1941. Under Colonel Raymond A. Wheeler, a career engineer officer who won fame later in the war for his work in the India–Burma theater, the mission set out to help the British by building supply facilities for their forces in the Persian Gulf and by assisting their efforts to support the Soviet Union. As the situation evolved, Wheeler and his successors concentrated on the latter job. Wheeler had the right credentials. A former engineer of maintenance of the Panama Canal and acting governor of the Canal Zone, he specialized in railroad and highway construction, both of which would be primary elements of American work in the region.

Initially, construction support for Wheeler's mission was assigned to the Corps of Engineers, which established the Iranian District under the North Atlantic Division for the job. Colonel Albert C. Lieber became the district engineer. He controlled the execution of engineer tasks, while Wheeler remained the final authority regarding which projects were carried out until the command developed its own construction service in 1943.

In 1942, Wheeler's office began an evolution that ultimately turned it into the Persian Gulf Command. Two months after Colonel Don G. Shingler replaced Wheeler in April 1942, the office was redesignated the Iran–Iraq Service Command, which reported to the Cairo headquarters of U.S. Army Forces in the Middle East. Then, in August, Shingler's office became the Persian Gulf Service Command. In a final

Major General Donald H. Connolly. (15 March 1948).

change in December 1943, the organization became the Persian Gulf Command and reported directly to the War Department in Washington. Like Shingler, Major General Donald H. Connolly, who took command in October 1942, and Brigadier General Donald P. Booth, who followed in December 1943, were engineer officers. All three were West Point graduates and had served in Corps of Engineers districts in the United States. Connolly, who ran the Persian Gulf Command during its buildup and peak operation, had directed New Deal work relief construction programs in Los Angeles during the height of the Depression and had been the Civil Aeronautics Authority head when the war started.

Iranian climate and topography represented severe challenges for road and railway builders. North of the Persian Gulf ports stretched a 175mile-wide salt desert. Temperatures in the summer reached a searing 160°F, and rain averaged 6 inches a year. Further north, the Iranian plateau was cut diagonally from the northwest to the southeast by mountains with peaks as high as 13,000 feet. Passes in the mountains were between 8,000 and 9,000 feet, and snow drifts of 7 to 10 feet blocked the roads in winter. Temperatures ranged from over 100°F to below zero. At least the northernmost portion of the country adjacent to the Caspian Sea was temperate with only rare winter frosts, but overall Iranian climate and topography represented a much greater challenge than the relatively straightforward rail and road construction jobs themselves.

Even before the Americans arrived, the British understood that the Iranian State Railway held the key to the main supply route. The British hoped to raise the capacity of the single main line to the north tenfold, from 200 to 2,000 tons

per day, and to move an additional 12,000 tons a month toward the Soviet border by highway. The United Kingdom Commercial Corporation had charge of procurement and delivery of goods for shipment to the Soviet Union. This quasi-governmental British firm soon gave way. Within six months of American entry into the war, Iran became eligible for lend–lease assistance. By the end of 1942, the Americans in Iran had direct responsibility for the flow of supplies through the Persian corridor to the Soviet Union and an organization in Iran to carry it out.

From late 1942, the main concern of the United States in the Persian Gulf was transportation to the Soviet Union. The Germans were inflicting heavy losses on Allied shipping to the Arctic port of Murmansk, and the Red Army was fighting desperately to throw back the Germans at Stalingrad. These developments underscored the need for a secure supply route that was open all year. To assure such access from the Persian Gulf, the principal land routes from the Gulf were the keys. The ports of Ahwaz, Khorramshahr, and Bandar Shapur in Iran and Basra in Iraq had capacities far beyond that of the railway and road. "It was obvious," T.H. Vail Motter, author of the official history of the Army's work in the Persian Gulf, wrote, "that substantial backlogs would accumulate at the ports until inland clearance could be brought into balance with port capabilities."

The main highway north from the Persian Gulf extended 636 miles from the port of Khorramshahr to Kazvin. Substantial portions of the southernmost 172-mile leg to Andimeshk were completed in 1942. First the engineers finished a temporary highway, resurfacing a stretch of desert track that generally paralleled the railway. Then alongside they started an all-weather 24-foot highway that gradually sloped up across the desert from Khorramshahr at an altitude of 10 feet to Andimeshk at 500 feet. The constructors faced dust storms in the summer and heavy rains in the winter.

Delays came from many causes. Equipment shortages, exacerbated by the occasional sinking of vessels—such as the *Kahuku*, which went under near Trinidad with 7,480 tons of supplies destined for Iran in June 1942—were always severe. The worst shortages involved rollers for compaction and the absence of good base course materials for the southern

segments of the road. The design took these scarcities into account. The southern section was built on an earthen embankment that was scraped, sprinkled, and compacted with sheepsfoot rollers. Further north, around Ahwaz, builders used local sandstone over an earth embankment. Beyond there, gravel was available. For the entire length of the highway, the subgrade was sealed with cut-back asphalt and covered with a 2-inch mat of soil asphalt. Although concrete was hard to find in Iran, asphalt was readily available from the oil refineries at Abadan.

With some segments still incomplete, the southern desert stretch of the highway experienced a major flood in the spring of 1943. Two bridges and 8 miles of road were completely washed out, and a 30-mile section had to be rebuilt. In the haste to finish the job, specifications calling for a 10-foot elevation above the desert floor were ignored and the number of culverts was reduced. When the rains came, the rivers overflowed, and soon the road was in a 200-square-mile lake with 3-foot waves lapping against the embankment. "One day," Waldo Bowman of *Engineering News–Record* wrote, "the job was in a dust bowl and 24 hours later it was merely a causeway across a lake." The road to Andimeshk was finished in 1943, rebuilt largely by troops of the black 352d Engineer General Service Regiment, who arrived 1,325 strong at Khorramshahr in March 1943, just in time to take on the project.

Much of the road to Andimeshk had been built for the district by civilian contractors. But a transition to a military work force was underway by the time the next leg to the north started. The change was due generally to the entry of the United States into the war and the threat to the Persian Gulf from Axis armies operating in North Africa. Specifically, the security situation in Iran north of Andimeshk was uncertain. The nomads of the plateau and mountains were less friendly than the people of the south. The War Department militarized all overseas construction contracts in the last four months of 1942, and the contract with Folspen, a combination of Foley Brothers and Spencer, White, and Prentis, was converted at the end of the year. By then, Folspen had made a major mark on the program. The firm had completed much of the southern portion of the highway and solved a critical supply shortage by suggesting importation of steel girders

from the newly demolished Sixth Avenue elevated line of New York City.

The transition to a military work force eliminated the need for a contracting office to manage the operation of civilian firms and brought the end of the Iranian District in May 1943. The Persian Gulf Service Command divided its vast area of responsibility—it was about the size of Texas and California—into three districts of its own. After a brief time in which a commandwide construction service operated in all three districts, the districts themselves took over construction, much like the Corps of Engineers.

Within a month of the dismantling of the Iranian District, the engineers and British forces began work on the road from Andimeshk to Kazvin. The 334th Engineer Special Service Regiment, augmented by Iranian civilian workers, converted the extant rough road between Andimeshk and Malayer into a highway adequate for truck convoys. This regiment, which was activated at Camp Claiborne, Louisiana, in mid-1942, was one of two such units in Iran, along with the 363d. The Office of the Chief of Engineers had tailored these regiments specifically for construction assignments with a larger number of skilled construction machinery operators in senior noncommissioned grades than conventional general service regiments. The 334th started out with its companies divided between the port of Khorramshahr, the highway, and the American base camps at Ahwaz and Teheran; but in July 1943, the entire regiment went to work on the Andimeshk–Malayer highway, including construction of a 240,000-gallon water reservoir near Andimeshk.

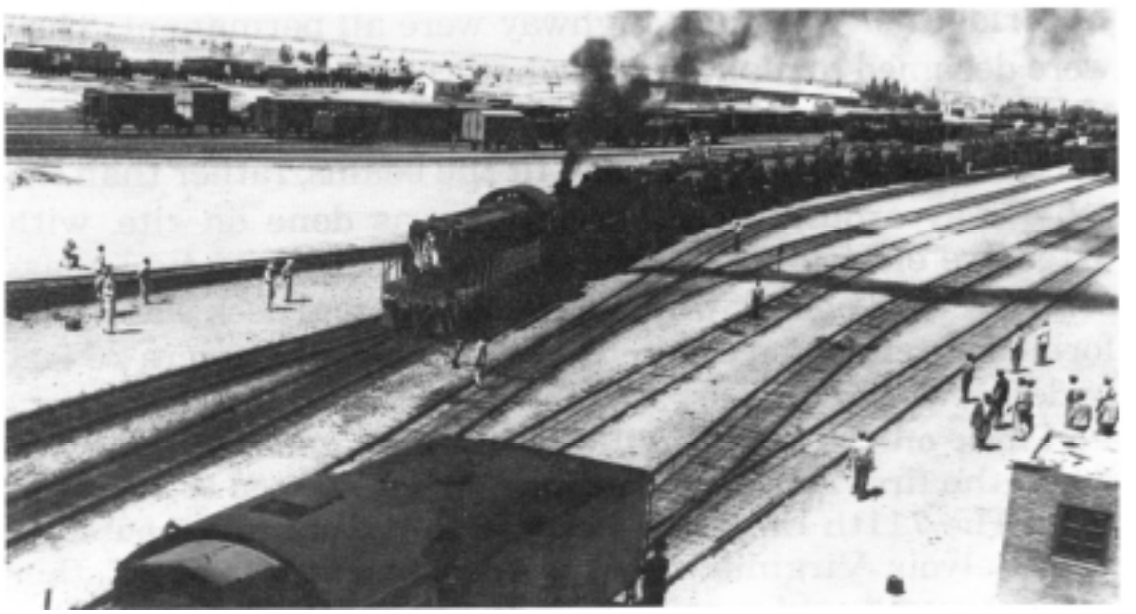
Theirs was a big job. Beyond Andimeshk were rugged mountains and deep gorges with abrupt and steep 10 to 12 percent ascents. Badly paved in places and elsewhere not surfaced at all, the road itself was a great hazard to those who sought to straighten its curves, reduce its hills, replace its surface, or relocate the worst stretches in 1943. The road was desperately needed. Until the pavement was completed, driving the highway with its many miles of washboard was an ordeal. One soldier wrote as the work was getting underway in the summer of 1943 that "vibration shook the trucks to pieces, broke off gas tanks, and pounded the men's kidneys to jelly." Overall, the Americans built 250 miles of the road to Kazvin; the British built 200 miles.

A Persian Gulf Command service road bridges a gorge at Talehzang, north of Dezful. *(Donald Connolly Collection, Office of History, Corps of Engineers)*

Bridges on the main highway were all permanent. They were designed to make use of whatever materials were available. Because the old salvaged steel beams came in various sizes, bridges were designed to fit the beams, rather than the other way around. All fabrication was done on site, with extensive electric welding. Abutments of gravity type mass concrete were placed, while piers, beams, and deck slabs were formed of reinforced concrete. Decks themselves were 26 feet wide between curbs.

Work on the main highway was just getting underway when the first American railroad troops started to arrive in Iran. The 711th Engineer Railway Battalion was created at Fort Belvoir, Virginia, in June 1941 from portions of other engineer units and recruits from the Engineer Reserve Training Center there. The 711th was the first railroad operating battalion assembled during the war and was unlike later units of the same type, which were sponsored by specific railroads and consisted mainly of employees of those lines. Before the 711th arrived in the Persian Gulf, it and the other battalions like it were taken from the Corps of Engineers and assigned to the new Transportation Corps. But when it was organized, it was an engineer unit commanded by Lieutenant Colonel Marshall J. Noyes of the Corps of Engineers.

The Iranian State Railway represented quite a challenge for those who were expected to increase its capacity ten-fold. Its north-south standard-gauge main line, according to Lieutenant Francis J. Lewis, who wrote the official history of the military railway service in the gulf, combined "in fantastic concentration practically every conceivable phase of engineering and railroad construction." Built between 1926 and 1939, "it was a fantastic railroad," with 3,000 bridges, 231 tunnels, and a range of 7,400 feet in altitude. The line was vulnerable to falling rock, floods, snow, rain, and drifting sand. But the Persian Gulf Command was up to the challenge. In fact, in its last two years of operation, the railroad far surpassed the goal of 2,000 tons per day and averaged 3,397. During the peak month of July 1944, a prodigious 7,520 tons of equipment and supplies went up the line to the Soviet Union every day.



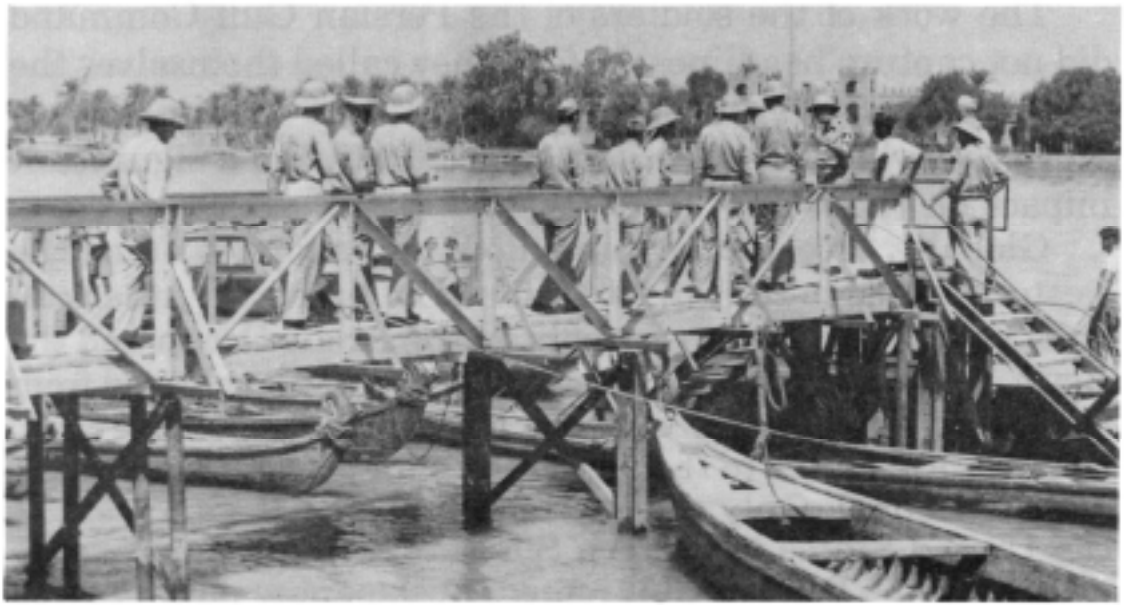
A ceremonial train carrying the 3-millionth ton of lend-lease aid to the Soviet Union leaves a Persian Gulf Command rail yard. ***Donald Connolly Collection, Office of History, Corps of Engineers)***

The railroad remained the primary lifeline to the Soviets, "the ready-made steel backbone of the Iranian supply line," according to the official command history. Still, the highway provided an important auxiliary route. The availability of parallel truck and rail lines created options when one or the other was not usable. When the floods disrupted highway

traffic in the spring of 1943, trains carried all goods from Khorramshahr to Andimeshk, where they were transferred back to trucks.

Under an agreement with Britain signed in July 1943, Engineer troops kept the road open from Khorramshahr to Kazvin, in spite of floods, rock slides, and snow storms. The 352d General Service Regiment did much of this work. Within a month, the regiment was strung out between Khorramshahr and Andimeshk, keeping the road clear. One company drove trucks north, another operated sand and gravel pits for the entire command, and the other four repaired the highway, which took a continuous beating and needed regular attention.

Other construction supported the main effort on the transportation routes. The first projects concentrated on the expansion of the ports. At the docks on the gulf, as with the roads, shortages of equipment and materials led to improvisation and the search for supplies. For example, the long piles that were needed for jetties in the extremely fluid coastal soils were spliced together from teak piling purchased in India. Later came the vehicle assembly plants at Khorramshahr and Andimeshk, where trucks destined for service in the Red Army were put together from major components shipped from the United States.



A group of U.S. senators inspects Iranian waterfront installations developed to speed the flow of American supplies to Russia, (Office of Technical Information)

After these operational facilities came lower priority projects, with barracks, hospitals, mess halls, and latrines taking precedence over administrative buildings and service clubs. The command built its headquarters at Amirabad, on the rising ground between Teheran and the mountains, and a major railroad–highway transshipment base that included ordnance workshops and camps for 3,000 at Andimeshk. In these facilities too, improvisation was the order of the day. With timber so scarce, troops assembled roofs from boards stripped from the beta-pack crates in which truck components had arrived at assembly plants. These were nailed on slender ballie poles cut from the ever-present silver-leaf poplar and covered with locally made tar paper and a sand–asphalt mixture.

At every step, operations were hampered by the extreme weather in what Joel Sayre of *The New Yorker* called "that queer drear, roasting land of Iran," and by the theft of an estimated 250 miles of copper communications wire for conversion into bazaar trinkets. Despite the obstacles, by the end of 1943, a total of 36 posts, housing nearly 30,000 American troops, and 44 airstrips dotted the landscape. The structures at these camps were unusual: because of the availability of kiln-fired mud bricks and the scarcity of timber, buildings in the Persian Gulf theater were among the few permanent structures built by engineers during the war. The bill for the construction work totaled nearly $100 million.

The work of the soldiers of the Persian Gulf Command did not capture headlines. In fact, they called themselves the FBI, the "forgotten bastards of Iran." But despite the obscurity in which they worked, their efforts had a significant impact on the war.

Globally, five routes funnelled war supplies from the western Allies to the Soviet Union. The line from American Pacific ports to Siberian harbors on the Arctic Ocean and the Black Sea route available after Axis navies were cleared from the Mediterranean Sea were the least important. Next came the Atlantic routes to the North Russian ports of Murmansk and Archangel. Only the sea lane from the Pacific ports of the United States to eastern Siberia carried a greater tonnage than the Persian Gulf route. The Japanese navy ignored this traffic, but because of this route's vulnerability, it only carried nonmilitary supplies.

Over 4 million tons of war supplies went to the Soviet Union from the Persian Gulf. Open all year and relatively safe from enemy interdiction, the gulf provided the largest lifeline for military equipment and supplies. The vast amount of material that went north from the gulf included nearly 45 percent of the 400,000 lend–lease trucks of American origin that were given to the Soviets. As T.H. Vail Motter, the official historian of the Persian Gulf Command, noted, "the significance of the Persian Gulf route is measured by its tonnage accomplishment and its fulfillment of strategic necessity."

Sources for Further Reading

This article is based largely on T.H. Vail Motter, *United States Army in World War II. The Middle East Theater. The Persian Corridor and Aid to Russia* (Washington, DC: Office of the Chief of Military History, 1952).

The multivolume official Persian Gulf Command history, on file at the U.S. Army Center of Military History, was also helpful, particularly the construction volume by Sergeant V.H. Pentlarge.