THE GREEN AND THE BLACK

Social and Economic Aspects of a Coal Mine in Afghanistan

by Louis Dupree

Kabul
April 1963

My interest in coal-mining operations in the Darra-i-Suf (Valley of Caves) district of Afghanistan dates from November 1959. Having spent the entire day in an archaeological survey of caves and mounds south of Buina Qara, I was groping my way through the darkness in a Land Rover, trying to find the local governor who would give me a night's lodging.

The car's headlights roamed slowly over the winding, bumpy road. Suddenly, three figures loomed up. They turned and stared, surprised, for few vehicles ventured so far south of Mazar-i-Sharif at that time. I stopped to ask directions, but before I could say, "Hukumati-Qala Sakari kojast?" one of the trio exclaimed in English, "My God! What are you doing here?" I squinted in the dark and identified two of the strangers as Americans, well bundled against the cold, snow-expectant, November air. The third appeared to be Afghan. I introduced myself. They reciprocated: Robert Davis, International Cooperation Administration coal-mining expert; William Adorno, ICA civil engineer; Ahmadullah Khan, American-educated (two years at the University of Utah) mining engineer.

Before curling up that snowy night inside my sleeping bag on a mud floor, I learned what brought the three engineers to Qala Sakari: coal, that dirty, dark mineral so necessary to industrial development. Recalling the defaced green fields of Pennsylvania and West Virginia near abandoned mines, I could picture black slag heaps on the green hillsides of north Afghanistan and to begin with was less than enthusiastic about my new friends' venture. Mr. Davis and Ahmadullah Khan, however, supported the project wholeheartedly.

Mr. Davis: "The coal here in Darra-i-Suf, first discovered in
1886, is subbituminous, but better than coal being mined elsewhere in Afghanistan, and the reserves are much larger."

Ahmadullah Khan: "And according to tests, the Darra-i-Suf coal will make excellent coke for industrial smelting."

Mr. Davis: "The first surveys were undertaken by the Geological Survey of India in 1940-42 directed by a geologist named West. He estimated a reserve of 14.5 million tons in the Dahan-i-Tor area. Later research upped the estimate to more than 60 million tons in the whole Darra-i-Suf district. Our main problem is inaccessibility. By road Darra-i-Suf is 400 miles from Kabul and 100 miles south of Mazar-i-Sharif, the two main potential markets. And as you know, the road in places is no road at all. That is why we are in the road-building business now, instead of mining coal."

Several surveys over many years confirmed the potential importance of the Darra-i-Suf coal deposits and induced the Afghan government to build a 75-mile rough country road (including two bridges) from Haibak (Samangan) to Qala Sakari in 1958. It took 32 days to complete the road; four months to construct the bridges. But no motorable road connected Qala Sakari with the mine at Dahan-i-Tor, 18.5 miles farther south. Mr. Davis and Ahmadullah Khan came to Dahan-i-Tor in the fall of 1959 and, with the help of local authorities, constructed a passable road in 20 days. The governor and Engineer Ahmadullah divided the road into meters per man for all the villages along the route; the rougher the terrain, the fewer meters per man. In the most difficult area, for example, they allotted only 53 centimeters per man. Labor received 15 afghanis per day on the Qala Sakari-Dahan-i-Tor road. (In the past, the Afghan government paid nothing for road-gang labor. Officials and soldiers simply turned out a village when a road needed to be built or repaired. Now, in most instances, the government pays.) The villages responsible for the various segments did not have to draft villagers to do the work, but could hire outsiders. Before completion, some 15,000 men and boys (or about one-half the male population of Darra-i-Suf) worked on the road. The maximum number of workers in one day reached 2,000. Total cost of the road approximated 500,000 afghanis, or about 26,000 afghanis per mile.1

Forcing people to build a road, however, will not mine coal, nor transport it to Kabul, and in November 1959 exploitation of Darra-i-Suf coal appeared many years away. On paper everything looked fine, but many remained pessimistic about the possibilities of extracting and transporting coal from such a remote area. Officials in the Afghan
Ministry of Mines and Industries looked hard and critically at the project, essentially American-oriented and located north of the Hindu Kush Mountains in an almost exclusively Russian-aid area. The Russians, helping Afghanistan explore for oil in the north, wanted responsibility for all mineral exploration and exploitation in north Afghanistan, and viewed the American encroachment with a jaundiced eye. A German Geological Mission assisting the Afghans to organize a geological survey also desired to help develop the Darra-i-Suf. Afghan officials responsible for operating actively producing coal mines at Karkar and Ishpushta (near Pul-i-Khumri) pooh-poohed the idea of Darra-i-Suf becoming a major coal-producing area, and emphasized their own known reserves. Some of these officials added, however: "If the Darra-i-Suf mines do become exploitable, all coal mines should be put under a single administrative unit — Pul-i-Khumri."

The crash construction of the Qala Sakari-Dahan-i-Tor road by Davis, Adorno, and Ahmadullah Khan cinched the mine as a joint American-Afghan effort, but the act was just beginning and many protagonists were waiting in the wings.

**Brief History of Coal Mining in Afghanistan**

For centuries isolated communities have exploited exposed coal seams in parts of Afghanistan, including those near Pul-i-Khumri (Ishpushta and Karkar), Darra-i-Suf, and several near Herat in northwest Afghanistan.

The Afghan government opened the Karkar-Ishpushta mines for development in 1941-42, in order to supply fuel for power in the expanding textile-industrial complex at Pul-i-Khumri. Systematic exploitation began in 1954 when the Ministry of Mines established a branch called the Coal Union under the direction of Soviet-educated Gholam Ali as president. (He since has been elevated to be in charge of all mining operations for the Ministry.) One year later, Abdullah Rahimi, Japanese-educated mining engineer, took over as president of the Coal Union, a job he still holds. Under Rahimi's guidance (and the assistance of a succession of Japanese, German, American, and Czech advisers), the Ishpushta and Karkar mines jumped annual production from 22,000 tons in 1955-56 to about 66,000 tons in 1961-62.²

Rahimi also built barracklike dormitories and greatly improved the living conditions of the miners, who, until 1960, had lived in filthy, semisubterranean huts. The Coal Union, like many beginning compa-
(1) The Dahan-i-Tor mining area. (2) The Ishpushta mining area. (The Karkar mines are very close to Pul-i-Khumri.)
nies that have difficulty recruiting workers, gave dissidents (including fugitive criminals) jobs and a chance to build new lives. Coal Union officials seldom asked a miner about his past. They were happy enough to get bodies (about 500 were needed for the two mines), and pay them on a sliding scale of 14-17 afghanis per day, with a bonus at the end of the year, geared to production, and an annual 20-day paid vacation. To encourage job applications by family men, Rahimi opened a shop where miners' wives could make miners' uniforms at a piecework rate.

King Mohammad Zahir Shah visited the Ishpushta-Karkar mines in 1959. Impressed, he decorated the foremen and gave each a 2,000-afghani cash award and 10 jirib (1 acre equals 2 jirib) of government land. Prime Minister Mohammad Daoud followed and gave the foremen another 10 jirib each and ordered an additional bonus: 200 afghanis for each miner with over ten years of service; 100 afghanis for each with under ten years. The total bonus came to about 50,000 afghanis, and as nothing had been said about where the money should come from, Coal Union officials had a difficult time shaking loose the funds. This caused some discontent among the miners, but at last the Prime Ministry came through with the necessary money.

Already, folk heroes have arisen, as they always do among miners, lumberjacks, seamen, and others who follow hazardous, profane trades. One miner, who had worked at Karkar from its beginning, went to Kashmir in 1947-48 to fight with the Pathan irregulars against the Hindus before the Pakistani Army entered the picture. (Many other Afghan Pathans joined the fight, going to Kashmir as much for loot as to support their "Muslim brothers" in the fight against Hindu "infidels." The miner returned with several cows, a new rifle, a wife, and other loot. He died shortly after. In accordance with his request, his body was buried at Karkar mine. In time, his grave will probably become a shrine for miners and their wives.

American technicians assisted in bringing power lines from Pul-i-Khumri to Karkar, and now ventilators and hoists made in the United States help maintain mine safety and increase efficiency. So far, only ten men have been killed in mine accidents at Ishpushta and Karkar. (The bodies of two still have not been recovered from a flooded shaft.)

But, according to American technicians, the reserves at Karkar and Ishpushta are limited (4 million tons and 360,000 tons respectively), and expansion of the diggings becomes increasingly dangerous.
Several fires have broken out in the past few years, most at Ishpushta, resulting in the closure of the pits involved and, consequently, reduced production. Because of this, some American technicians question the ever-increasing annual production figures published by the Coal Union. An official Afghan publication, Afghanistan News (April 1962, p. 15, published by the Afghan Embassy, London) reported a drop in production to 50,000 tons in 1961-62. Official Coal Union figures, however, announced 66,000 tons for 1961-62.

Since 1958, American aid to coal mining has pointed toward Darra-i-Suf, partly because United States experts feel that Ishpushta and Karkar have little future developmental potential. This has naturally caused resentment among the Afghans connected with the Coal Union. In 1959 the Afghan government hired several Czech mining engineers to advise the Coal Union on the operation and expansion of Ishpushta-Karkar mines. At first enthusiastic, the Czechs now tend to support the original, pessimistic American predictions, and several elaborately planned projects have been scratched. Karkar and Ishpushta, however, still have much coal to exploit. An expanding, regional industrial development in Afghanistan will demand more than the approximately 60,000 tons now extracted annually by the Coal Union, and the Darra-i-Suf reserves will probably make up the difference.

Past and Projected American Aid to Coal Mining

United States aid to Afghan coal mining began in 1951. The first protocol agreed that the United States should provide "... advisory services to the Afghan Ministry of Mines and Industries in solving special problems with respect to coal production and mineral exploitation, (2) training of Afghan nationals in the United States and third countries, and (3) in-service training of Ministry personnel." (Project Progress Report, Kabul, USOM/A, June 30, 1961, p. 63.)

The first specific United States-Royal Government of Afghanistan agreements, signed on October 12, 1953, spelled out the commitments of both governments. The present operations come under an agreement signed on January 28, 1955, and subsequent yearly agreements signed since then.

From February 1951 to July 1955, the United States Bureau of Mines lent four mining engineers to ICA. These engineers were sent to Afghanistan where they surveyed many of the country's mineral deposits (beryl, chromite, lead, zinc, talc, slate, etc.), but concentrated
their efforts mainly on increasing production at the Ishpushta and Karkar mines. Coal production jumped from 10,000 tons in 1951 to 30,000 tons in 1958, according to ICA sources. The Afghans claim only a jump to 20,000 tons, still a sizable increase.

It has become fashionable among Afghans to minimize the efforts of the first American mining engineers who came to their country (1951-55). The major criticism is that United States technicians spent little or no time at the mines. In the words of one Afghan official: "They would come to the mines from Kabul maybe once every two months. They would look in the entrance of the mines and make great pronouncements about the lack of safety and the lack of efficiency. Then they returned to Kabul and their comfortable homes and their round of parties. They would write up monthly reports about all they had done and how the increase in production was all their doing. We needed technicians who would live with us at the mines." (This comment is only partly true, but the fact that the Afghans believe it is significant.)

The Afghans had also been dissatisfied with Japanese and German mining engineers previously hired under contract, so in 1958 they turned to the Czechs. Today, several Czech mining engineers and their families live at Karkar and Ishpushta. They have contributed to improved mine safety and mapped most of the reserve seams, something recommended and begun by Japanese, German, and American technicians. For all practical purposes, the United States aid program abandoned Karkar-Ishpushta to the Czechs in 1958.

Many Afghans and others feel that it was a mistake for the Afghan government to hire foreign technicians to replace Afghans already working at the mines. In some cases, production actually dropped after the foreign advisers took over. Some of the displaced Afghan engineers felt bitter at the lack of confidence shown in them by their own government.

The six American mining technicians now in Afghanistan, generally win high praise from the Afghans, especially since one or more usually live at the Dahan-i-Tor mine in Darra-i-Suf. (Two became seriously ill in the line of duty, one with paratyphoid, the other with malaria.) One specialist even kept his vacationing eleven-year-old son with him at the mine for several weeks. The boy, wearing his own helmet and lamp, made a big hit with the miners as he followed his father into the pits. The same specialist also brought his wife and daughter to the mine for a short visit.
United States monetary commitments to mineral resources and coal-production projects totaled about $1,949,000 through June 1961, of which $625,000 was spent exclusively for the Darra-i-Suf project. The total committed included an $800,000 loan. As of June 30, 1961, ICA expenditures against the commitment totaled $1,480,000. Afghan expenditures as of June 30, 1961, approximated 15 million afghanis.

Of the $800,000 loan, $760,000 covered an order for trucks, now used mainly to haul coal from Ishpushta and Karkar mines to Kabul. Although 12-ton trucks had been specified, the delivered vehicles were only of a six-ton to seven-ton capacity. By extending the sides of the trucks and strengthening the springs, the Afghans ultimately converted them to carry about eight tons. The reason for the discrepancy between the specified size and the delivered size of the trucks has not been disclosed, although the possibility that corruption was involved somewhere in the transaction has not gone unmentioned at the unofficial level.

The remaining $40,000 of the loan went for maintenance shop equipment at Pul-i-Khumri and Kabul.

Other United States aid provided 20 prefabricated buildings to serve as Ministry of Mines and Industries repair shops, and $20,000 worth of tools and other equipment, plus a full-time automotive maintenance adviser.

Under United States government grants, several Afghans have studied—and are studying—mining engineering abroad. Nine Afghans have received scholarships to study mining engineering in the United States. In addition, three have gone to the United States and one to Turkey on leadership grants.

The first equipment delivered to the Dahan-i-Tor mine came in the shape of 100 picks and 100 shovels, initially used by workmen constructing the Qala Sakari-Dahan-i-Tor road in 1959. The fiscal year 1960 saw the expenditure of $109,000 in ICA funds for 50 mine cars, rails, a compressor, rock and coal drills, wheelbarrows, hand tools, an electric generator and an electric hoist. The ship transporting the mine cars from Belgium sank in the English Channel. ICA placed another order for 50 cars in India and most of them arrived in the late summer and early fall of 1962. Of the 450 categories of supplies ordered in fiscal years 1960-61, only the rock and coal drills remain undelivered. They sit in a Peshawar (Pakistan) warehouse awaiting the outcome of an unsettled fire-insurance claim. The still undelivered major item ordered in fiscal year 1962 is a $20,000 short-wave transmitter.
and receiver, which will give the mine direct and instant radio contact with Kabul. Some question this expenditure, because government telephone lines now connect Qala Sakari and the mine, and normally a phone call can be made from Kabul to the mine in less than an hour. Before late 1962, however, no quick communication with the outside world existed. The nearest telephone sat in the hakim's office at Qala Sakari, 20 miles and one hour's drive away.

Recently a road grader and bulldozer for the mine arrived in Afghanistan via the new Iranian in-transit route. The grader will be driven under its own power and the bulldozer transported by a tractor-trailer to Samangan (Haibak). From there, this equipment will travel over the desert road, grading as it goes, and then perform the same task over the Qala Sakari-Dahan-i-Tor road.

June 30, 1966, technically marks the end of AID's assistance to mining projects in Afghanistan, by which time the Dahan-i-Tor mines should be producing 150,000 tons annually, and the less productive mines east of Herat producing 10,000 tons annually. Presumably, Ishpushta-Karkar will continue at about 50,000 tons a year. At the conclusion of the projects, the United States will have contributed approximately $800,000 in loans and $2.5 million in grants, and the government of Afghanistan will have expended approximately 36 million afghanis.

The Green: The Valley Before the Mine

In the summer of 1962 I returned to Darra-i-Suf for the first time since November 1959. Summer is the time of wheat harvest, and several farmers passed on sheaves of wheat to us as we drove along the familiar bumpy road. The gift of wheat harked back to the coronation of Ahmad Shah Durrani (1747-1773), first ruler of a great indigenous Afghan Empire, when a sheaf of wheat symbolized the support of his reign by the peasantry as well as the nobles.

The scenery from Qala Sakari to Dahan-i-Tor alternates from small valleys to high mountains, where lalmi (highland wheat) fields scar the loess-covered hills. The Dukhtar Ab (River), but really a creek, must be forded several times in approaching the narrow, high-walled Tangi Hasani Pass.

Many nomads, about 80% of them Pushtun and 20% Baluchi, pass through the Darra-i-Suf in the late spring. Most Pushtun nomads in this region are Mandozai, a branch of the Ghilzai tribe, which originally
lived in eastern Afghanistan. The groups string out like ants along the narrow trails, moving from the dry, hot, parched Turkestan Plains to the west of Mazar-i-Sharif up into the cool mountains in search of grass. Seldom does a single segment have more than 100 black goat-hair tents. On the move, the sheep, goats, camels, cattle, people often clog up the narrow passes, so that motor-vehicle movement must be measured in sheep power, not horse power, increments. This makes no difference now, because few vehicles travel these roads.

The long arcs of migration usually swing north before reaching Samangan (Haibak), the nomads traveling slowly to winter quarters in the Turkestan Plains, pitching their tents in traditional grassy areas south of the Amu Darya (Oxus River), the boundary between Afghanistan and the USSR. Some, however, continue to move westward to the Shibarghan and Maimana area.

The nomads' moves resemble intricate military operations. When the mountains are not too steep and rocky to be covered with grasses or wheat stubble, the sheep and goats use the high trails, grazing as they climb along tended by the younger shepherds. From a distance they resemble long, disjointed snakes, moving in parallel lines. Such sheep and goat trails crisscross the hills of Afghanistan looking like a diagram of a genetic mutation gone wild. The livestock, older men, women, and children plod the lower valley trails. Camels shuffle along with the unconcern of their species, secure in the knowledge that only they, of all creatures, know the hundredth name of Allah.

The packs creak as the animals move heavily laden with tents, poles, pots, pans, five-gallon kerosene containers, clothing, wooden and leather sunduqs (boxes filled with worldly possessions and trade goods), iron cooking trivets, and tambourines. Small children, kids, lambs, and even puppies often sway polyhedrically, safely tied on the camel packs. Donkeys and sometimes cattle also serve as beasts of burden. Horses proudly sniff and stamp; the only burdens they ever feel are human. A small boy will walk alongside the trail, holding one of the band's most precious possessions: a hurrikan (kerosene lantern, corruption of the term, hurricane lamp). Large, savagely trained, mastiff-like dogs accompany the nomads and guard both the lower and upper trails. When camp is set up, these fierce dogs will let neither man nor beast approach the tents without their masters' consent. Nomads clip the ears and tails of these dogs, they say, for two reasons: to prevent illness and to give them the advantage in a fight—no ripped ears or torn tails for the Afghan nomads' dogs. But one need not be afraid of these brutes. If a snarling mastiff, the size of a small pony, approaches, simply pick up a rock and hurl it in his direction. Do not turn your back
on him. He will keep his distance, and may circle slowly, showing his massive teeth, but he will not attack unless ordered to by his master or if you panic and run.

An occasional lean, graceful, speedy tazi (Afghan hound) lopes alongside the caravan. These gentle dogs can run down and hamstring the fastest gazelle and hold it patiently until their masters catch up to cut the throat of the hapless beast. Muslim custom dictates that no animal can be eaten unless, while still alive, its throat has been cut—then the meat is khalal (clean or kosher); other meat is kharam (unclean or forbidden).

Because the various sections of the moving subtribe must mesh their movements to prevent confusion on the trail, scouts from each segment stay in touch with those ahead and behind. The groups occupy traditional camping grounds, often outlined by stones, pausing for a night or several nights as the situation demands. Occasionally, one group may graze for three or more days while the group ahead moves rapidly to the next grass. While in camp, the nomads daily move their herds to mountain pasturelands, but in separate groups. Each subsection within a moving band paints distinctive designs on the tails and backs of its sheep. Sometimes the nomads tattoo the same design on their women.

The group may move only two or three miles in a day; or it may move up to 15 miles a day over barren passes to reach a fertile camping ground. When the nomads stop for the night, the women set to work immediately. The men stand guard and get the sheep and goats ready for the night. Most work is woman's work. They make the tents, put up the tents, take down the tents, load the camels, unload the camels, cook the food, make the butter, weave and sew, bear children and have the responsibility for raising them. The men play at being men. They sing songs of love and war. (The ideal personality type of the Afghan is the warrior-poet.) They plot feud revenge and often carry out raids from their winter quarters. At times, they hire nearby villagers to watch over their flocks by night—or full-time in winter grasslands. I have sometimes asked nomadic men: "What work do you have?" They quickly and invariably reply: "Hich!" (Nothing!) All Afghans envy the life of the nomad. It is, of course, much more difficult than the nomads describe it to be, but as with many men who live with and against nature, they prefer to laugh at their hardships and would not give up their way of life for all the farming land in Afghanistan—especially if they had to farm it. But the Afghan government slowly encroaches on the green grasslands of the nomad, in the Turkestan Plains and elsewhere. Where
Threshing wheat with horses.

Hazara mud huts west of Dahan-i-Tor.

A skull on a stick scares birds away.
Nomads east of Dahan-i-Tor.

Caravan south of Mazar-i-Sharif.

A tazi (Afghan hound).

Nomad camping ground near Qala Sakari.
Miners empty a coal car.

A group of Hazara miners at the entrance to a mine tunnel. The coal car was purchased in India with United States aid funds.

A panoramic view of the mine area, summer 1962.
American Ambassador John Milton Steeves visits the mine. Left to right: Engineer Ahmadullah Khan, mine director; Abdul Karim Azimi, Governor of Haibak Subprovince; Ambassador Steeves; Abdur Rahman, Governor of Darra-i-Suf District.

Miners hand-carrying sacks of coal from the west tunnel.

Left to right: Marlin Moore, Luther Lewallen, and a Hazara dynamiter. The first two, American mining engineers, resided at the mine in the summer of 1962.

Her buildings have been completed since then.
once agriculture proved impossible because of fluctuating annual rainfall, irrigation now permits year-round water control and farmers move in. When the nomads return from the spring-summer cycle of movement, they sometimes find part of their grazing land occupied by pioneering farmers. Resistance proves useless because the largely Russian-trained Afghan Army backs the farmers. But many marginal grasslands still exist in the loessal foothills of the north, so the nomads seek out new areas. In Afghanistan, unlike Iran, the nomad does not own grazing land, but simply depends on traditional grazing rights. Often the search for new grass throws the group off its time schedule—in 1962, for example, the last nomads passed through Darra-i-Suf about three weeks late.

Many nomads, realizing that time and the government are against them, make a compromise. They get permission to farm the grasslands of their traditional winter quarters and become seminomadic. A part of the group remains behind to raise some crops when the bulk begins its warm weather cycle. Often those left behind continue to live in black tents and refuse to build the usual mud huts. The nomad continues to look on the farmer with contempt and even after he becomes seminomadic, semisedentary, and eventually fully sedentary, his pride of nomadic ancestry makes him feel superior to his age-long farmer neighbors.

As of the summer of 1962, Pushtun and Baluchi nomads still moved up and down the passes and valleys of Darra-i-Suf, seeking green grass for their flocks, and serving as the most important link of many Hazara, Tajik, Aimak, Turkoman, Kazak, and Uzbek villagers with the outside world. (Total sedentary male population of Darra-i-Suf approximates 30,000-31,000.) Sometimes nomads camp immediately outside villages.

As the nomads bring in news and trade goods, the search for grass has its commercial side. In fact, several nomads told me they considered herding secondary to trading. The system involves both cash and barter, with barter more important than cash in most areas. Items brought in by the nomads include: kerosene, matches, cloth, sugar, tea, spices, peppers, guns, ammunition, iron tools, milk and milk products, livestock, hides, leather, rugs, carpets, and rogon (fat of the fat-tailed sheep, used in cooking). In exchange for such goods, the farmers offer grains, fruits, nuts, and vegetables. The nomads' sheep and goats also perform a symbiotic function with the farmers' fields. They graze over the stubble of freshly reaped fields, depositing manure, which, when plowed under, helps fertilize the fields.
Many farmers remain in perpetual debt to nomadic traders. Some eventually sign over their farms to nomads and become tenant farmers. Sometimes violence occurs when a farmer continues to welsh on his debts or a nomad pushes a farmer too far. Two years ago, a Pushtun nomad killed a Hazara farmer who refused to pay his debts. The kinsmen of the Hazara claim the nomad charged exorbitant interest, and they still wait for a chance for vengeance. The nomad requests Army protection each time he passes the village of his victim. To government officials both parties deny the killing: the Pushtun because he knows he would be prosecuted, the Hazara because they want to extract the personal revenge so dear to the mountaineer.

Eight different destah (village administrative units) exist in the Dahan-i-Tor mine area.

<table>
<thead>
<tr>
<th>Place</th>
<th>Ethnic Group</th>
<th>Religion</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fulah</td>
<td>Hazara (but call themselves Tajik)</td>
<td>Sunni Islam</td>
<td>Hazaragi</td>
</tr>
<tr>
<td>Masud</td>
<td>Uzbek</td>
<td>Sunni Islam</td>
<td>Uzbek Turkic</td>
</tr>
<tr>
<td>Yusufi Tajik</td>
<td>Tajik</td>
<td>Sunni Islam</td>
<td>Tajiki Persian</td>
</tr>
<tr>
<td>Yusufi Hazara</td>
<td>Hazara</td>
<td>Shia Islam</td>
<td>Hazaragi Persian</td>
</tr>
<tr>
<td>Dai Medad*</td>
<td>Hazara</td>
<td>Shia Islam</td>
<td>Hazaragi Persian</td>
</tr>
<tr>
<td>Sari Walang</td>
<td>Mixed Hazara**</td>
<td>Shia dominant***</td>
<td>Hazaragi Persian</td>
</tr>
<tr>
<td>Aimak</td>
<td>Aimak</td>
<td>Sunni Islam</td>
<td>Hazaragi Persian</td>
</tr>
<tr>
<td>Latbi</td>
<td>Tajik</td>
<td>Sunni Islam</td>
<td>Tajiki Persian</td>
</tr>
</tbody>
</table>

* Dai Medad destah, a scattered area which reaches as far south as Bamiyan.
** Including Besud, Joghori, Dai Zangi Hazara.
*** Some Sunni also.

Each destah has a kariehdur (village leader). Karieh means village in Persian and Pashto (other terms for village exist, but karieh is the most functional in Dahan-i-Tor). Under new regulations, according to local Hazara farmers, every 50 families can select a kariehdur, and each village must have at least one. The kariehdur is informally selected by his fellow villagers to serve for three years; until three years ago the term was one year. He becomes responsible for the collection and transmission of taxes to the hakim (district governor) in Qala Sakari, the nearest official government representative. The kariehdur receives no pay from the government, but collects an extra 10% of total taxes due as his salary. Every three years the competition for the post of kariehdur increases. One reason: if he agrees to keep a man's taxes low, he can collect a little graft on the side.
If, however, the villagers consider the kariehdur a government informer, they can dismiss him with a simple majority understanding. A village committee notifies the hakim of the decision and the villagers informally elect a new kariehdur. The hakim normally approves unless the new headman has black marks against him in the government books.

An important informal power structure still exists, and consists of the zamindars (landowners) and all those considered to be sahib rusuk (one with face). Usually the kariehdur will be a zamindar.

Every three years, the Darra-i-Suf district (loosely defined for political purposes, but specifically defined for administrative purposes) elects a wakil (parliamentary member) to the National Assembly in Kabul. According to local Hazara zamindars, at least 500 males must vote for the wakil in order for him to be elected. At the same time, the villagers elect a second wakil to serve on the advisory council of the hukumran (subprovincial governor) in Samangan (Haibak). The wakils need not be zamindars by law, but invariably they are. The advisory council of the hukumran meets twice a week to discuss current problems in the capital of the hukumran (subprovince, technically called Hukumat-i-Kalan). The hukumran advisory council elects one of its members to serve on the provincial assembly at Mazar-i-Sharif.

Through this structure the central government reaches all the way down to Darra-i-Suf in the administrative sense. The table below describes the relationship:

<table>
<thead>
<tr>
<th>Political Unit</th>
<th>Name</th>
<th>Local Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nation</td>
<td>Afghanistan</td>
<td>Wakil from Darra-i-Suf to National Assembly</td>
</tr>
<tr>
<td>Province</td>
<td>Mazar-i-Sharif</td>
<td>Member elected from subprovince advisory council</td>
</tr>
<tr>
<td>Subprovince</td>
<td>Samangan (Haibak)</td>
<td>Member elected from Darra-i-Suf to advisory council</td>
</tr>
<tr>
<td>District</td>
<td>Darra-i-Suf</td>
<td>No elected representation</td>
</tr>
<tr>
<td>Village</td>
<td>Dahan-i-Tor</td>
<td>Elected kariehdur</td>
</tr>
</tbody>
</table>

The nomads who pass through Darra-i-Suf have no representation in the various levels of government, nor do they want it. They avoid contact with government officials as much as possible.
The Hazara are the dominant ethnic group in Darra-i-Suf, mainly residing in the villages of Dahan-i-Tor, Asani, Kamach, Ziraki, and Karai. All the destah are sedentary except those of the Uzbek, who live semisedentary existences. In the summer, part of the group moves to alpine pastures away from the nomadic lines of march, and lives there in domed yurts (chapari) with its flocks of sheep and goats. Most of the group, however, remain in the winter farming community. (Among the seminomadic Pushtuns, the reverse is true.)

The sedentary farmers raise mainly wheat, maize, barley, and alfalfa. Other crops include potatoes, tobacco, and vegetables. Fruits and nuts (apricots, apples, grapes, peaches, walnuts) were introduced about ten years ago. In the winter, snow freezes most activity. The landless peasants and the poorer farmers often go to Mazar-i-Sharif to work as seasonal labor; on sunny days, women weave carpets on outdoor looms.

Land and the attendant land tenure system occupy much of the thinking and almost all the activities of the farmers. About 50,000 jirib (25,000 acres) are under cultivation, or about 2 jirib per adult male. Actually, approximately 100 families own the 50,000 jirib, but the largest landowner in Darra-i-Suf employs only two families of sharecroppers: one family farms the landowner's 30 jirib of abi land; another, his 200 jirib of lalni land. Abi land is irrigated, bottomland; lalni is mountainside land. The sharecropper's share varies with the richness of the land, but the usual pattern follows the traditional five-part distribution. Abi land: if the landlord furnishes all but labor (land, water, draft animals, seed), he gets 4/5 of the crop, but if the sharecropper furnishes seed, bullocks, and labor, he gets 1/2 of the crop. Lalni: if the landlord furnishes all but labor, the sharecropper gets from 1/6 to 2/3 of the crop (depending on the amount of time he has worked with his present landlord), plus an annual allowance of clothing and foodstuffs. If the sharecropper furnishes all but the lalni land and water, he gets from 3/4 to 4/5 of the yield.

The Darra-i-Suf, with its pattern of small holdings, does not have an absentee landlord problem, but every sharecropper dreams of owning his own land. And here the mine plays a major role.

The Black: Culture Change and the Mine

For the San Tomé mine was to become an institution, a rallying point for everything in the province that
needed order and stability to live. Security seemed to flow upon this land from the mountain gorge. 

Before the mine came, Darra-i-Suf exhibited a delicate ecological balance—or as nearly a balance as human nature permits. Settled farmers with small landholdings, and a few semisedentary Uzbeks made up the ethnic picture. Seasonal migratory nomads passed through the region and had a symbiotic relationship with the villagers (their sheep and goats fertilized the fields in return for grazing privileges), and the nomads spread news and traded goods for cash or barter. Most problems revolved around the perpetual and increasing debts of the farmers, and the eternal hunger of the landless to own land. The mine, in the three short years of its existence, drastically altered several patterns, but did not destroy the cultural fabric. The current directions of change can probably be shifted by judicious planning, but the process of change itself cannot be stopped.

The people of Darra-i-Suf look on the miners with a mixture of contempt and respect. To quote one of the powerful local leaders (a Hajji or one who has made the pilgrimage to Mecca): "In a forest, one can find good trees and one can find bad trees." However, even today, some of the more tradition-minded oppose the mine and its operations.

The local inhabitants call the miners toryan (blackies), but the miners look on themselves as a new elite. Three years ago no one in Dahan-i-Tor had seen a pneumatic drill or a stick of dynamite; now, many men rate as experts, according to the American advisers. The dynamite, of Russian and Polish manufacture and probably 20 years old, causes worry, however, and one American said, "Sometimes it blows, sometimes it doesn't. Then the problem is whether to investigate or not. So far, thank God, no one has been hurt, and thank God we have an order of good American dynamite on the way!!" The toryan learned quickly to operate electric hoists and to put steel arches in the tunnels as supports. Their adaptability to modern technology becomes especially significant when one realizes that even the wheel is unknown in most Afghan villages. One seldom finds a wheeled cart in rural Afghanistan. Away from the main roads, domesticated animals provide almost all transport; most Afghans walk to their destinations.

Some old ways still intrude; an iron hand of Fatima is prominently displayed in the helmet-battery recharging shed. It serves as an amulet to protect the batteries. Most Muslims consider representations of the hand of Fatima, the favorite daughter of the Prophet Muhammad, good luck symbols.
No forced labor exists, as it does at the older Ishpushta-Karkar mines, which have been using Army draftees as labor for the past several years. Difficulties of recruitment at Ishpushta-Karkar have increased because the complex annually becomes more dangerous to work. The toryan of Dahan-i-Tor work voluntarily, and, unlike the Ishpushta-Karkar miners, are not exempt from compulsory service in the armed forces. Last summer at the peak agricultural season (harvesting, threshing, winnowing, grinding wheat into flour), only a few Dahan-i-Tor miners missed work for more than two or three days. Even the June manure-piling (for fuel and fertilizer) and plowing activities caused little absenteeism.

Most Afghan villages have surplus labor, which, at the end of the annual agricultural cycle, leaves the village for urban centers to work as seasonal labor. Local development projects now enable the surplus labor to work closer to home. Old evils plague the new projects, however, especially the "kickback," so familiar in American labor relations. To get a job on a new road, dam, irrigation, airport, or mine project, the worker must often kickback the equivalent of several months' pay to the foreman responsible for hiring. The Afghan director of the Dahan-i-Tor, Ahmadullah Khan, has practically eliminated this evil. He fired three of his clerks when he learned they were trying to form a "protective association," also familiar in American racketeer labor circles. The miners were "invited" to pay 10% of their salaries to the clerks to guarantee their jobs. To keep kickbacks at a minimum, four men watch the treasurer pay the men: the mine foreman and three local leaders (including the kariehdur of Dahan-i-Tor).

The flow of new money into the Darra-i-Suf (about 35,000 afghanis a month in salaries; total as of July 1, 1962, about 3 million afghanis) brought several con men into the area. Two men from Kabul traveled from village to village claiming to be medical doctors with orders to inoculate all women in the buttocks and breasts. However, having concern for the modesty of the villagers, they offered to sell forged documents authenticating the shots. Another Kabuli "Inspector General" type ordered the villagers to pay a new (but nonexistent) government tax on stoves, because the villagers could purchase government coal cheaply (1 afghani per seer or 16 pounds) from the mine. The hakim and the mine director joined efforts to drive these con men from Darra-i-Suf.

The new money also attracts legitimate businesses. In Qala Sakari, the administrative center of Darra-i-Suf, the bazaar rapidly expands, as witnessed by an increase in the number of shops and the
flood of goods from Mazar-i-Sharif and Kabul. A new barber-dentist and photographer moved down from Mazar. The miners, proud of their helmets and uniforms, all want their pictures taken. These photographs become part of the family treasures. Pride of uniform extends over to Juma (Friday, the Muslim Sabbath), and I have seen many off-duty miners helping their families thresh or winnow wheat while still dressed in uniform and helmet. Many, however, wear traditional turban caps under the hard helmets.

Most villages in Afghanistan have several part-time specialists, farmers who double as carpenters, ironmongers, masons, cobblers, etc. Because of the increased demand for their talents from the new specialists (the miners), many now ply their trades full-time; some have moved to Qala Sakari and set up shops. On ruz-i-bazaar (Market Day, now on Thursday), the miners or members of their families flock to Qala Sakari to buy new turban cloth, old clothes, wrist watches, mirrors, tobacco, and snuff. As the mine continues to develop so will the bazaar, and soon Qala Sakari will have two market days a week, and eventually, every day will probably be a market day.

Because of the mine, local farmers, three years ago, began to grow more vegetables, including carrots, radishes, spinach, onions. In 1962 some farmers, without a thought for the morrow, sold most of their wheat to the mine and had to beg replacements from the government. "The greedy always go hungry," said one of the more thoughtful villagers. But the shortage, temporary and limited, did create some ill will toward the mine, even though the fault lay with the individual farmers.

Two other important economic by-products have shifted the local patterns. The villagers consider the young miners good marriage prospects because of the regular pay, and the marriage age may drop considerably. The miners will be able to pay the necessary bride price earlier to expectant fathers-in-law. Actually, "bride price" is misleading. In reality, an exchange of goods occurs. The groom takes away a good worker from his father-in-law's household, and the money tends to compensate for this loss. In addition, the bride usually brings a sizable dowry (especially clothing) to the groom's hut.

The other economic shift relates to the farmer-nomad debt pattern. Almost all the miner families have paid off their debts and now buy goods for cash from the nomadic traders. One old man whose son is an expert dynamiter told me, "The mine is a gift from Allah!" A graphic illustration of the debt cancellations can be seen daily at the
office of the hakim at Qala Sakari. Three years ago, between 50 and 100 persons from the Dahan-i-Tor area daily appeared at the government offices to complain about debts—either that a borrower had failed to pay or a lender was charging exorbitant interest. Recently, no more than five daily presented petitions about debts. Now that most of the miners' families are out of debt, they save money to buy land, cattle, horses, and wives, in that order of importance.

Until the fall of 1961 the nearest school (founded in 1959) was located at Qala Sakari. Several local religious leaders objected to the founding of a secular school in Darra-i-Suf but the hakim remained adamant and built the Qala Sakari school. At Dahan-i-Tor, the mine director decided to start a school for the miners' children who lived within a two-mile radius of the mine, and again several mullahs objected and advised families not to send their children. Over their objections, the hakim and the mine director opened the school in the fall of 1962 to all boys five and six years old, including a young son of the mine director. Previously, in 1961, the hakim ordered a census taken in Darra-i-Suf and issued identification cards to all males, which set forth name, name of father, approximate age, and place of residence. Thirty-two five- and six-year-olds showed up for the first day of school, but the hakim noticed that three from his compiled list were absent. He sent soldiers to collect the truants. They returned with three teenagers who, in size, were closer to twenty-five than five. On their identity cards, which the hakim immediately confiscated, they were indeed listed as five-year-olds. The reason was simple. The three young men had bribed a census taker to falsify their identity cards in order to avoid the two-year compulsory military service which Afghan law requires of all physically fit adult males.

So the school began, but not without further problems. Three teachers have come and gone, and the fourth remains only because the mine officials pay him a supplementary salary. Few teachers want to live in isolated Dahan-i-Tor.

The mine officials also had to make a deal with the miners: the boys would go to school in the winter, but would be released in the spring and summer to help in the fields. The class now holds its sessions in the mine administration building. On the first day of school, however, neither stove nor chairs had been provided. An American mining engineer (Luther A. Lewallen) found the boys huddled in a corner, trying to keep warm in the cold room. He sought out the mine director, who immediately rectified the situation. The American also noticed that most of the boys had no shoes. He started a campaign to collect money
for shoes and obtained contributions from the mine director and his staff and the American technicians. The American Society of Kabul (TASK) was among the donors. The fund also provided each boy with a tablet and pencil.

Health has not been neglected. Although the Army Medical Corps recently drafted the mine doctor, the mine still has a trained pharmacist who, for the time being, also acts as doctor. To ensure the miners an adequate diet, the mine director included a mess hall in the central administration buildings—the miners pay a small sum for meals. Eventually the mess hall will double as a recreation hall where movies can be shown. Early in 1963, the American technical team attached a generator to a jeep motor for the specific purpose of showing movies. Previously a movie projector had been delivered to the mine, but the 1,000-watt bulb of the projector exactly equaled the 1,000-watt capacity of the available generator, making projection impossible. The miners will be shown movies about mine safety, mining techniques, health and hygiene with a Persian commentary by the mine director. He hopes to expand the movie service so that the miners' families can also benefit.

The central administration buildings will eventually include a dormitory for about 125 bachelors, and a shower room with 20 shower heads for the use of all miners.

One major nonmining health hazard (outside the ubiquitous sanitation problem) remains to be combatted: malaria. In August 1961 a UN-trained Afghan malaria team began to survey the Dahan-i-Tor area and hoped in 1963 to begin eradicating the disease. The number of people afflicted with chronic malaria varies from section to section in north Afghanistan. Joint UN-Afghan efforts have created many malaria-free areas. Other places have greatly reduced its incidence. For example, three years ago, 49% of the population of Aq Kupruk (north of Dahan-i-Tor) had recurrent malaria; today, only 10% suffer from this disease.

No miners have yet been seriously injured, and the United States technicians constantly stress mine safety procedures and periodically make spot checks to see if the miners have weeded out dangerous habits. What they discover during such impromptu inspections often horrifies the advisers. The miners simply do not understand, for example, what could happen if a loaded coal car were to break loose. The American experts sometimes despair of teaching the men to stay out of empty cars as they are being lowered. Lack of proper ventilation
also plagues mine safety. United States aid has provided excellent ventilation fans, but to save operational costs the Afghan officials run them only part time, thereby increasing the danger of explosion.

Bad roads and the habits of Afghan truck drivers sometimes cause delays and accidents. Lorry drivers under contract to the Ministry of Mines and Industries prefer to take the longer route from Samangan to the mine via Tashkurgan and Mazar-i-Sharif in order to pick up paying passengers along the way. The new short direct road does not offer such prospects. Often several weeks elapse between departure of goods from Kabul and their arrival at Dahan-i-Tor. Drivers usually own the lorries, and operate as an independent lot. The lack of true competition keeps them from understanding the urgency of time in the Western transport sense. They stop at every teahouse to talk to friends and slowly move toward their destinations, overloaded with goods and passengers.

* * * * *

All the miners at Dahan-i-Tor are Hazara. Basically, the Hazara are physically Mongoloid, speak Hazaragi Persian, and follow the tenets of Shia Islam. When the mine operates at peak capacity, 250 will be employed, 90 of whom will be underground. All the administrators, clerks, truck drivers, mine foremen, and assistant foremen are Pushtun. The mine director, however, represents the new breed of forward-looking, young Pushtuns and believes in the importance of nation over tribe. He says: "I am Afghan first, not Pushtun." In his relations with local Hazara leaders, he genuinely tries to consider their points of view—an attitude still far from common among Afghan officials. (Pushtun officials sometimes even beat non-Pushtuns, including village leaders, for minor infractions. I have personally witnessed such performances, which, it is pleasant to note, become rarer each year.)

One important characteristic of the miners (and the lorry drivers as well) is that they are fast becoming a cohesive group within (not outside) the cultural patterns of the Darra-i-Suf area. Their spokesmen sound like incipient union leaders, and they speak with authority in village councils. This creates some tension between the traditional village leaders and the miners which will probably increase as the mines become more and more important to the economy of the region, especially since the miners are much younger than the traditional village leaders in this predominately patriarchal society.
The Mine Develops

Mining experts say that mining operations must be considered in three phases: exploration, development, and exploitation. At present the Dahan-i-Tor mines fit into the exploratory phase of mine development, but the physical plant above ground is almost complete and consists of about 20 buildings. The central administration buildings include bachelors' quarters and a four-bed hospital; lamphouse; generator building; compression shed; warehouse; hoist house; two Quonset-type storehouse and workshop huts; housing for the director, deputy director, and American technicians; four family houses for miners; and a house for the foremen. The mining personnel initially constructed buildings as well as roads. Two brick kilns and a lime kiln produced building materials, and the Ministry of Mines and Industries purchased and shipped up sheet-metal roofs, lumber, glass, and cement. Two hundred men worked at the mine during the construction phase. Of these, 50 worked in the mine, the rest above ground. The mine director also laid out a park and an orchard. Since miners need trees for shoring and timber is scarce in Afghanistan, he established eight tree farms (over 600 acres) near the mine.

Pilot mining began in 1960, using primitive hand-carry methods to bring coal to the surface up the slippery 15%-35% slope tunnels. An electric hoist arrived from the United States in 1962 and American Ambassador John M. Steeves traveled to Dahan-i-Tor to dedicate it. Ambassador Steeves operated the hoist to draw up the first official load of coal. An American mining engineer went to check the coal car just before the Ambassador went into his act, and found a wheel off the track. The technician quickly remedied this condition saving no end of embarrassment. At first the hoist lifted two coal cars at one time, but United States mining engineers calculated this strained the presumable safety factor for the three-eighths-inch cable. Now only one wagonette (1,600 pounds) comes up at a time, an average of 30 carloads (48,000 pounds) coming to the surface each day. Before the ban on hauling two wagonettes at a time, 50 carloads rose daily.

From 1960 to July 21, 1962, a calculated 3,438 tons of coal have been mined at Dahan-i-Tor.10

<table>
<thead>
<tr>
<th>Period</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960 (eight months work) to March 21, 1961</td>
<td>1,372 tons</td>
</tr>
<tr>
<td>March 21, 1961 to March 21, 1962</td>
<td>985 tons</td>
</tr>
<tr>
<td>March 21, 1962 to July 21, 1962</td>
<td>1,081 tons</td>
</tr>
</tbody>
</table>
Coal sold went to the following use: (142 seers equal 1 long ton)

<table>
<thead>
<tr>
<th>1961</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Army in Mazar-i-Sharif</td>
<td>9,600 seers</td>
</tr>
<tr>
<td>Petroleum Company, Mazar</td>
<td>2,800 seers</td>
</tr>
<tr>
<td>Police (Prison to make bricks)</td>
<td>24,800 seers</td>
</tr>
<tr>
<td>Private Houses</td>
<td>8,480 seers</td>
</tr>
<tr>
<td>Kabul (Ministry of Mines)</td>
<td>38,900 seers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1962 (to August 1)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prison in Mazar</td>
<td>17,600 seers</td>
</tr>
<tr>
<td>Airport at Mazar</td>
<td>1,200 seers</td>
</tr>
<tr>
<td>Army in Mazar</td>
<td>2,400 seers</td>
</tr>
<tr>
<td>Ministry of Mines</td>
<td>9,000 seers</td>
</tr>
</tbody>
</table>

The labor costs of mining Darra-i-Suf coal in 1962 approximated 142 afghanis per ton, but transporting the coal to Kabul costs about 1,700 afghanis. A ton of coal in Kabul costs about 1,800 afghanis. Roads inadequate to heavy transport constitute the major problem, and for this reason the Afghan government emphasized the development of its internal road system during the first Five-Year Plan (1956-1961) and carries over this emphasis in the Second Plan (1961-66).

Change With Minimum Tension

The economic and social changes which accompanied the development of the Dahan-i-Tor mine were not planned. Why did these changes occur so rapidly and without much tension? Why did the people of Darra-i-Suf accept the changes? Several reasons can be cited:

1) Darra-i-Suf is an ethnic gray zone. As mentioned previously, many ethnic groups live in Darra-i-Suf. True, few villages contain more than one ethnic group, but the area as a whole sits on several ethnic boundaries: Hazara in the south; Uzbek, Turkoman, and Tajik in the north and east; Aimak to the west. Pushtuns (especially the nomads) entered the area in the late 19th century when Amir Abdur Rahman Khan forced them to move north after they had revolted against his rule. Therefore, no unified ethnic opposition greeted the appearance of the mine on the landscape. (In contrast, United States and Pakistani members of the Geological Survey of Pakistan have experienced difficulties in making surveys in the highly integrated Pushtun area of Pakistan, and several times have been forced to leave their assigned research zones.)
2) The Afghan mine director and the Darra-i-Suf hakim gave positive direction. In a nation where face-to-face relationships mean so much, a lack of co-ordination or understanding on the part of either of the two principal Afghans locally involved in the mine project could have caused failure. The close co-operation of the mine director and the hakim, however, has assured success thus far. What would happen if either or both were transferred is a matter for speculation.

3) American technicians live at the mine. The impact of the presence of Americans living and working with the miners cannot be underestimated. The miners and officials respect the work of the technicians more than before, and respect the Americans more as individuals because of their genuine interest in the mine and the area. The technicians teach the miners new techniques, and new ideas constantly flow in both directions.

4) Village-nomad relations were improved, but patterns did not change. The payment of debts produced an increase of good will between nomads and villagers, and now the nomads make profit more quickly with the cash-and-carry system. A negative note (from the point of view of the nomads) enters here, however, for the new shops at Qala Sakari may eventually replace the nomads as the chief suppliers of commodities to the villagers.

Thus, the beneficial social and other changes were largely the result of the fortuitous interaction of several factors: the location of the coal, the ethnic gray zone, and the economic need to relieve the debt patterns, brought on by the planting of nomads in the ethnic picture in the late 19th century. Such accidental success in peripheral areas cannot be accepted as the basis of planning assistance to other nations. Furthermore, the real economic value of the Darra-i-Suf coal field to the regional development of Afghanistan has yet to be determined in practice and many mining experts remain pessimistic.

The Concept of Regional Development in Afghanistan

In addition to coal, the Afghans have two types of energy available for regional development—electricity and oil. Hydroelectric power for small regional industrial complexes will operate largely in the eastern and southern parts of the country: the American-Afghan Helmand Valley project; the Soviet-Afghan projects at Darunta and Naglu; the Pul-i-Khumri power complex; the power station and dam at Sarobi, a West German-constructed, Afghan-financed project.

Soviet-Afghan petroleum exploration and drilling in north Af-
Afghanistan recently discovered large oil fields, but exploitation of these oil resources appears to be at least a decade away. Gas may be utilized sooner. Eventually, private homes and government offices may switch to oil, but the small industries outside the zones of hydroelectric power must depend on coal, probably for another generation, and the best-known reserves, in both quality (20% lump, in addition to excellent coke for industrial purposes) and quantity (60 million tons in a ten-mile radius of Dahan-i-Tor) exist in the Darra-i-Suf.

The coal reserves at Dahan-i-Tor take on added significance in the light of the discovery of sizable iron deposits of unknown quality near Bamian. Although the coal and the iron are located relatively close to one another, again a road must be constructed to link the two. The Afghan government recently approved (in principle) plans to set up a small iron and steel mill at Bamian, which hopefully will lead to the manufacture of machinery and machine tools. Afghanistan needs these products for development and now imports them at tremendous expense from the Soviet bloc, the United States, and West Germany. In fact, most of Afghanistan’s development programs aim at encouraging the production of certain items which constitute a serious drain on its foreign exchange; petroleum products, textiles, and cement currently being the most important.

The future of the mines, then, relates to the total development programs in Afghanistan. Roads, communications, better briquetting facilities, the education of mining specialists, exploration of iron resources, improved administrative techniques; these constitute but a few of the interrelated projects. Quantitative change is evident; an analysis of qualitative change must wait.

I would like to thank Mr. Howard Turner (Chief, Industry and Engineering Division, United States Overseas Mission/Afghanistan) and Mr. James Cudney (Program Division, United States Overseas Mission/Afghanistan) for their generosity in making materials available to me.

[Photographs courtesy United States Information Service, Kabul; Communications Media, United States Overseas Mission/Afghanistan; Ahmadullah Khan.]