

# International Boundary Study 

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Afghanistan - Iran Boundary
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TABLE OF CONTENTS
Page
I. Background ..... 2
II. Analysis of Boundary Segments ..... 3
A. The Northern Segment. ..... 3
B. The Central Segment ..... 8
C. The Southern Segment ..... 12
III. Conclusion ..... 15

## AFGHANISTAN - IRAN BOUNDARY

## I. BACKGROUND

The waters of the Helmand River have long been a bone of contention between Afghanistan and Iran. Rising in the mountains west of Kabul, the Helmand River flows for most of its course through Afghanistan but, before emptying into the Hamun-e-Saberi, it forms the international boundary between the two states. Continued use by both countries is vital to the existence of the population of the Seistan region. However, in spite of the differences in views concerning water allocation and other riparian rights, the physical location of the international boundary has long been accepted without dispute.

Four arbitral awards, three British and one Turkish, have served to establish the present boundary between Afghanistan and Iran.

The presence of British arbitration, delimitation and demarcation commissions along this boundary stems from the provisions of the 1857 Treaty of Paris whereby the British Government agreed to arbitrate all conflicts between Persia and Afghanistan.
"Article VI
His Majesty (the Shah) further engages to abstain hereafter from all interference with the internal affairs of Afghanistan. His Majesty promises to recognize the independence of Herat and of the whole of Afghanistan, and never to attempt to interfere with the independence of those States.

In case of differences arising between the Government of Persia and the countries of Herat and Afghanistan the Persian Government engages to refer them for adjustment to the friendly offices of the British Government, and not to take up arms unless those friendly offices fail of effect."
A) The first arbitration occurred in 1872 under the supervision of Sir Frederick Goldsmid. The arbitral award, which was accepted by both Persia and Afghanistan, placed the boundary along the main channel of the Helmand River with the Kuh-i-Malik Siah as the "fitting point" to the south and "a line drawn from the Naizar, or reed area, to the Kuh Siah near Bandan" constituting the northwest terminal point. The boundary apparently was neither surveyed nor demarcated.
B) In the next decade, the northern boundary between Herat and Persia became a source of conflict and again British arbitration was requested. Between 1888 and 1891 Major General C.S. MacLean, the Assistant Governor-General of India and the British Consul General for Khorassan and Seistan, examined the Persian and Afghan evidence and laid down a compromise boundary. The Hari Rud system and 39 pillars to the south marked the award from the Russian tripoint to latitude $34^{\circ} 20^{\prime}$ North.
C) In 1896, the Helmand changed course and the boundary again became a point of conflict. Persia for the third time referred the question to British arbitration and Colonel Sir Henry McMahon was charged with the reestablishment of a boundary in accord with the Goldsmid award and the altered circumstances (i.e., the river change). Trigonometric surveys were carried from India to tie the area into the Greater Indian Network and 38,000 square miles were surveyed at scales of 4 miles to the inch $(1: 253,440)$ and one mile to the inch $(1: 63,360)$. By May 15, 1905, the McMahon Commission had placed 90 markers along the boundary from the tripoint on the Kuh-i-Malik Siah to the Kuh Siah.
D) Finally, the undemarcated central section was submitted to Turkey for arbitration. From October 1934 to May 1935, General Fahreddin Altay and his staff held discussions with the Afghan and Iranian commissions, studied all available documents and examined the terrain between the previously demarcated sections. General Altay rendered his decision on May 15, 1935, resulting in 48 demarcation pillars (Nos. $40-87$ ) to close the undemarcated section. In addition five pillars ( $\mathrm{A}-\mathrm{D}$ and H ) were erected between the Hari Rud and Pillar No. 1 of MacLean to mark more definitively this segment.

The 550-mile boundary is demarcated by 172 pillars, or approximately one pillar for every three miles of boundary. The pillars are distributed as follows:

| Sector | No. of Pillars |  | Date of Placement |
| :--- | :---: | :---: | :---: |
| Northern | 39 | $1888-1891$ |  |
| Northern | 5 | 1935 |  |
| Central | 38 | 1935 |  |
| Southern | $\underline{90}$ |  |  |

## II. ANALYSIS OF BOUNDARY SEGMENTS

## A. The Northern Segment

While the MacLean Arbitral Award implies that the Hari Rud forms the boundary in the north, all doubt as to the location was removed by the Altay Award of 1935 which states:
"General MacLean has indicated the end point of the frontier at Heriroud (Hari Rud), and the Russo - Afghan Frontier Protocol indicates, as well, that the Russian frontier starts slightly more (to the) north in the surroundings of Zulfikar (Zulfiqar). The result is that the Heriroud, located between these two points, must constitute the frontier. Since the Heriroud is a fairly large river, the frontier should follow its thalweg."

After departing from the Hari Rud, the boundary followed its westernmost tributary, the KaliKale (Kal-i-Kalla) to the position of the first boundary pillar. The Altay Mission, however, in reviewing this segment reported:
"The Iranis wanted as the frontier the more easterly tributary and [not] the more westerly. Since these two tributaries fill up and shift constantly, neither of them can clearly delimit the frontier. A straight line between the place where the river divides [immediately north of Narap-Darband] and the place where the [Herat-Meshed] road crosses the river and where the river starts again will be the best frontier. Three monuments must be erected, at the two ends and in the center of this line, as indicated on the map by (A.B.C.), and there must be established at the confluence of the Kali-Kale River north of the Heriroud a monument with the letter (H) and between the latter and monument (C) another one, at the edge of the Kali-Kale River, with the letter (D) so that the frontier is plainly visible in the terrain."

The MacLean Line of demarcation extended from pillar No. 1 some 30 yards from the left bank of the Kali-Kale at a point approximately 300 yards from the canal take off on the right bank of the river. The boundary extended about 41 miles to the southwest and then southeast to terminate at Pillar 39 (c. $34^{\circ} 20^{\prime}$ North, $60^{\circ} 55^{\prime}$ West) on a spur to the west of Chah Surkh. For the central portion the boundary is composed of short line segments but in the north (Pillars 2-5) and in the south (Pillars 29-38) watersheds are utilized. The MacLean demarcation description is as follows:

## No. of Pillar Description

1 A masonry pillar 6' x 3' at a distance of 34 paces from left bank of Kal-iKalla, and 300 paces below point where old canal takes off from right bank. Pillar 1 is plastered with gypsum mortar. Line runs Straight to pillar 2.

2 A masonry pillar on top of a rounded conical hill. A narrow neck forming watershed connects it with Karawal hill. At $35^{\circ}$ a little ridge of red rocks crops up out of ground at a distance of 40 feet. Pillar 2 overlooks valley of Kal-i-Kalla. Line to 3 follows watershed.

3
A masonry stone pillar plastered with gypsum on a stony platform forming summit of a double-headed hill, the second highest in the range. The second summit is about 80 yards distant and bears $232^{\circ}$. Both summits about same height and from the plain present the appearance of a V . Line to 4 follows watershed.

4 A masonry pillar about 5-1/2' in height plastered with gypsum; partly brick and partly stone. Pillar 4 is built on a summit of a double-headed rocky eminence on the backbone of a ridge, at the point where the Koh-i-Sartip spur branches off. Line to pillar 5 follows watershed.

5
A brick pillar about 6 feet high and about 3 feet in diameter plastered with gypsum, situated on a level platform on a short ridge which marks a conspicuous depression in the range. Line to pillar 6 runs straight.

6

A masonry brick pillar on a low rising ground on the edge of a ravine. Line runs straight to 7.

A masonry pillar on plain, no remarkable feature in vicinity. Line runs direct to pillar 8, last portion being up slope of hill. Height about 6 feet, diameter about 3 feet, plastered with gypsum.

A masonry pillar on top of a grassy hill a little out of the line on account of it having been found necessary to choose a better site. No remarkable feature in the vicinity. Pillar 8 is about 5 feet high and $3-1 / 4 \mathrm{in}$. diameter, and is plastered with gypsum. Line runs direct to pillar 9 .

A masonry pillar on a low mound in plain, 6 feet high by $31 / 4$ in. diameter. No remarkable feature in vicinity. Line runs direct to 10 .

A masonry pillar on a low remarkable promontory overlooking the Kavir at a distance of about 300 yards from the junction of Nos. 5 and 6 branches of the Shorab. At the point of the promontory is a small low- walled enclosure used by the nomads for prayer. Hence name of Ziarat. The pillar is close to the northern end of the wall. Line to 11 runs straight.

A masonry pillar on a low mound in the Kavir. It is a little out of line to avoid soft ground. Line runs direct to pillar 12. Plastered with gypsum.

A masonry pillar on a low mound in Kavir plastered with gypsum. It is placed 5 paces west of proper site to avoid soft ground. Line to 13 runs straight.

A brick masonry pillar minâr-shaped with cap, about 8 feet high and 3 feet in diameter without plaster except on cap. All the Persian pillars except when specially mentioned are built on this pattern. It is placed on a low mound. Line to 14 runs straight.

A masonry pillar as above on a low mound. Line to 15 runs straight. It is surrounded by soft muddy Kavir.

A masonry pillar on a mound near edge of Kavir. Line to 16 runs straight.
A masonry pillar placed a little out of straight line between 15 and 17 owing to some error on part of mason and Persian Agent.

A masonry pillar forming the eastern corner of the deflection round the Hashtadan Mound stipulated for by the Shah. It is 440 yards due E. of a point, 200 yards due N. from the centre of the Hashtadan Mound. Line to 18 runs straight.

A masonry pillar forming the S . angle of the deflection round the Hashtadan Mound. It is 440 yards due S. of the centre of the mound. Line to 19 runs straight.

A masonry pillar placed 330 yards due W. of a point 220 yards due N . of the centre of the Hashtadan Mound. Line runs straight to Pillar 20.

A masonry pillar as above. Pillar 19 not visible.
A masonry pillar in open plain. Line runs direct to pillar 22.
A masonry pillar in open plain. Line runs direct to pillar 23.
A masonry pillar in the open plain. Line to 24 runs direct.
A masonry pillar in the open plain forming the N.-W. angle of the boundary line. Line runs direct to pillar 25 , and crosses road between Karat and Ghorian at 220 paces.

A masonry pillar in open plain, 70 paces from the head well of a Kanat on account of which this pillar had to be rebuilt. Line to 26 runs straight.

A masonry pillar in the open plain at a distance of 60 paces from head of a line of Kanats. Line to 27 runs direct.

A masonry pillar in the open plain. Line runs straight to 29 .
A masonry pillar in the open plain. Line to 29 runs direct.
A circular stone masonry pillar about 9 feet high on the highest and central point of the bluff called point of Kadaona. It is on the edge of a long steep slope, facing pillar 28, which forms a great part of the distance between the two pillars. Line to 30 follows watershed.

An obelisk-shaped brick masonry pillar about 9 feet high on a low neck at eastern end of the Kadaona bluff, from which pillar 29 and Hashtadan Mound are just visible. Line to 31 follows watershed which takes a curve round by the south.

An obelisk-shaped brick masonry pillar about 8 feet high on the S . point of a conical hill on crest of watershed which begins to rise here. Line 32 follows watershed and is nearly straight.

An obelisk-shaped masonry pillar about 9-1/2 feet high standing on a
conspicuous point on watershed which from plain looks like a doubleheaded mound on southern head of which pillar stands. To the S., separated by a deep ravine, is the Koh-i-Safid in Persian soil, which at a distance seems joined to the hill on which the pillar is. Line to 33 follows curves of the watershed.

A masonry pillar, minâr-shaped, on the centre of three rounded knolls which form crest of watershed consisting of high rolling down. Line follows watershed to 34.

A masonry pillar built on a little platform close to a black rock on the crest of the range. To the N.E. is the Siah Koh. Line follows watershed to 35.

A masonry pillar on a knoll on crest of watershed, not conspicuous; the hills being rolling down. Line follows curves of watershed to 36 .

A masonry pillar on a high knoll without any remarkable feature in vicinity. Line follows curve of watershed to 37 . There is a considerable rise to 36 .

A masonry pillar on the top of a high hill visible from all directions. This is the true end of the Kadaona range proper. There is a great dip from 37 and 38 to which line follows low watershed.

A masonry pillar on a knoll on the low watershed of rolling hills separating the Tirkisht and Sargardan basins. Line runs straight to pillar 39.

A masonry pillar on a flat rocky spur jutting out from the southern end of Yal-i-Khar, and forming the northern head of the Chah Surkh valley. On the northern side of the promontory on which 39 is situated is a ravine, the northern side of which is the prolongation of the Kadaona range, and forms the head of the Tirkisht valley. It is generally known as the Katal Surkh. On the south the promontory is joined by the low watershed running up from the Simtik range, which divides the Chah Surkh and Sargardan drainage. Pillar 39 is just opposite the point of junction. This pillar protects the line of communication between Chah Surkh and Tirkisht, which passes through the bay formed by the Katal Surkh and the pillar promontory.

## B. The Central Segment

The 250-mile long central segment extends from the southern terminous of the MacLean Line (Pillar 39) to the northernmost point of the McMahon line on the Kuh Siah. In all the Turkish Commission erected 38 pillars, apparently without benefit of the trigonometric surveys.

Although originally requested to settle the dispute in the Hashtadan Plains immediately to the south of the MacLean Line, the Altay Commission completed the delimitation and demarcation of the entire undefined boundary.

According to Altay, "outside of three farms (estates?) located at Yezdan, this vast area does not contain any inhabited place or cultivated area. There exists, however, several wells and sources of fish and salt water."

The description of the established frontier according to the Altay Award is as follows:
Monument No. 40 (Pillar): on the small hill located $21 / 2 \mathrm{~km}$. west of the preceding monument.

Monument No. 41: on Ata Mehmet hill, $41 / 2 \mathrm{~km}$. west of the preceding monument.
Monument No. 42: on the slope (Ince Sirt), $41 / 2 \mathrm{~km}$. west of the preceding monument.

Monument No. 43: on the hill about 5 km . west of the preceding monument.
Monument No. 44: on the hill located about 4 km . west of the preceding monument on the west slope of the Sergerdan valley and east of the Seydo spring.

Monument No. 45: 1000 m . west of the preceding monument and 150 m . north of the Afghan cemetery.

Monument No. 46: 400 m . southwest of the preceding monument and very close to the corner of the last garden wall of Moussaabad.

Monument No. 47 will be placed 1200 m. southwest of monument No. 46 on the slope west of Norey spring. Beyond monument No. 47, the frontier runs southward following for a distance of about 2 km . the small line of the water divide, to descend south of the Sergerdan River. Monument No. 48 will be built on the hill on the north bank of that river. From there, the frontier follows the Sergerdan river southwestward for a distance of 4 km . to the small hill of Karatas Tepe in the valley where monument No. 49 will be emplaced.

From there, the frontier crosses the Sergerdan River and reaches the ridge line of the western part of Simtik Zengilap mountain where, $21 / 2 \mathrm{~km}$. farther on, monument No. 50 will be set on the summit of Nariabizuri; and monument No. 51 will be built 4 $1 / 2 \mathrm{~km}$. south of the preceding monument on the Tchot Tepeh.

Beyond monument No. 51, the frontier descends again to the Sergerdan River which it follows for a distance of about 10 km . and then arrives at the fork of the two beds of this river, one old and one new, where monument No. 52 will be emplaced.

Following the old bed of the Sergerdan River from there for a distance of about 10 km. and leaving Siyah Keduyi Afghanistan to Afghanistan and Siyah Keduyi Iran to Iran, the frontier reaches the salt lake on whose shore monument No. 53 will be built.

From this point, the frontier crosses the lake southward and reaches the shore west of Kalayarik.

Kalayarik forms the southernmost corner of the salt lake. This locality is not a village; it serves as a wintering place for numerous Afghan tribes. Afghanistan's possession of this locality results also from other documents. Consequently, the frontier line will start from monument No. 54 which will be placed at the lake shore 6 km . northwest of the above locality.

A road from Iran to Afghanistan runs along the southern part of the salt lake. This road crosses Gala Havuz. The two governments must establish frontier posts on this road. The best location certainly is on the two sides of Gala Havuz. The Iranian post can be built on the western slope of Gala Havuz and the Afghan on the opposite slope. Gala Havuz is not a village, it is an uninhabited place which contains two ancient brick cisterns. The distance separating them is 50 m . They are partly destroyed and abandoned, repairs can make them usable for the frontier posts which would get from them whatever water they need. For this reason, the western cistern has been given to Iran while the eastern goes to Afghanistan.

Monument No. 55 will be erected at an equal distance from both cisterns. Starting from this point, the frontier line will run southward for about 8 km . to reach the summit of Hachim Tepeh. Monument No. 56 will be established on the summit. No. 57 will be built on Talat Tepeh 7 km . southeast of the preceding. This point is the end of (lake) Dakpetergun.
... the frontier line beyond Talat Tepeh must run southeastward and reach the crest located 9 km . away where monument No. 58 will be established. The trace will continue southeastward to the point, called Kutchuk Kara, located 5 km . away at the edge of the lake, where monument No. 59 will be erected; while monument No. 60 must be placed, in the same direction and cutting the northern tip of the lake, on the hill located south of the mouth of the Kachrut.

In this manner, the spring of Petergun and Cahi Tum will remain on Iranian territory while the spring of Homaguk and Tchahah Mehmet will remain on Afghan territory. The frontier will continue eastward for a distance of 10 km ., and monument No. 61 will be established 4 km . north of the Yezdan customs building and monument No. 62 will be set at a point 4.5 km . northeast of the afore-mentioned building and 100 m . east of the start of the aqueduct to Yezdan and about 5 km . southeast of monument No. 61.

Monuments No. 63, 64, and 65 will be erected, the first 2.5 km . southwest of monument No. 62 on the north bank of the Havuz creek, the second about 2.5 km . west of the preceding and on the south bank of the same creek and the third about 2 km. west of monument No. 63 on the north bank of the same creek.

The bed of the Havuz creek will constitute the frontier between monuments Nos. 63 to 65 . The frontier then turns southwestward and continues to the water course, called Chorab, for a distance of 5 km . leaving the Nazar Khan farm in Afghanistan and monument No. 66 is set on the north bank of the Chorab. The frontier then turns southeastward to reach monument No. 67 which will be erected on the Chor crest about 2.5 km . south of the Chorab spring. Thence, it turns south for a distance of 5 km . in the direction of Mt. Keboude leaving the Keboude farm and the Keboude crest on Iranian territory. Monument No. 68 will be emplaced on the north bank of Roud Gouloughe which passes to the north of Mt. Keboude. Leaving to Iran the road from Keboude to Khocheab (Masumabad) as well as the Mazenghi spring and Mt. Mazenghi, the frontier runs southwestward along the northern and western slopes of Mt. Keboude, but at a slight distance, so that it leaves to Afghanistan the road which runs from these slopes towards Chorab. In order to ensure this condition, monument No. 69 will be established at a flat place west of the Keboude massif.

The frontier line then runs southwest for a distance of 12 km . and reaches the hill northwest of Guhu Duz. Here, monument No. 70 is set. Thence, it runs southwestward following the ridges to reach the Chorab gorge about 15 km . away. Monument No. 71 will be emplaced on the hill north of the above gorge. The Chorab spring will remain in Afghanistan; Tchah Tek and Masumabad (Khocheab) will remain on Iran territory.

Continuing still southwestward from the Chorab spring, the frontier crosses the gorge and follows the line of the water divide and ascends towards the Ghur Kah crest where monument No. 72 is emplaced.

Beyond Chur Kuh, the frontier turns southward leaving Meliki in Iran and Kahrizak Tchuhap in Afghanistan and reaches the western peak of the black twin mountains which constitute the end of the Afghan massifs. Monument No. 73 has an elevation of 500 m . and is located west of the above peak. The locality of Gulverde remains in Iran.

It continues southeast crossing Dachte Naomid nearly in the center and monument No. 74 is set about 35 km . from monument No. 73 and about 15 km . west of Tchah Mezar. Continuing in the same direction for about 25 km . the frontier leaves Tchah Mezar in Afghanistan and passes 500 m. west of Tchah Tchangar; monument No. 75 is established at that place. The locality of Surtig remains in Iranian territory.

Continuing still in the same direction for a distance of 15 km ., the frontier reaches
the point located at the edge of Derin Dere where monument No. 76 will be placed. Monuments Nos. 77 and 78 will be erected, the first at a point about 12 km . southeast of monument No. 76 and 4 km . west of the rocky hill located at the north end of the Heftadger massif; the second about 7 km . from the preceding on the road from Tchah Demdem to Tchah Sekeh and 5 km . west of Tchah Sekeh. This locality has been given to Iran with Tchah Demdem remaining in Afghanistan.

The frontier line then turns south for a distance of about 15 km . and continues in a direct line to monument No. 79 which will be erected on a hill located at the entrance to the Gurguri gorge and on the south bank of the water course leaving that gorge. The Gurguri gorge remains on Iranian territory.
... The frontier line must run southward, after entering the Gurguri gorge, towards Siyahkouh. Monument No. 80 will be erected on the highest crest of Mt. Altay. It will then jump to the other peak south of the first and thence, following the Sari-Kaya rocks which form a natural line of separation like a wall, it will reach the Fuad crest where monument No. 81 will be erected.

Thence it will descend, always following the Indjeh-Kaya ridge, toward the Asperan water course and monument No. 82 will be built on the median ridge which is 4 km . from there while monument No. 83 will be placed on the Sivri Tepeh crest 3 km . south of the preceding. This frontier will ensure for the Afghans Mt. Asperan from which they extract the millstone grit and the Asperan spring of salt water which the tribes need while it will give to Iran the Asperan plain which extends before Mt. Kuh to Porzouri. ... The crest on which monument No. 83 will have to be established is the one located west of the road from Asperan towards Goline: This road belongs to Afghanistan.

The frontier line continues southward for a distance of about 7 km . and reaches the isolated crest, called Kulei Serdar, on which monument No. 84 will be erected. Then, still continuing southward and crossing certain water courses and certain ridges, it will turn towards Siyah Kouh. It leaves Goline and Dhah Mar in Afghanistan and Tchendi Beloutch in Iran.

Monuments No. 85, 86, and 87 will be erected, the first on the crest west of Goline, the second on the high peak which rises about 8 km . south of the first, and the third on the mountain located south of the second. Thence, the frontier returns to Siyakouh (Siah Kuh).

## C. The Southern Segment

The 182-mile southern segment, as noted above, was surveyed, delimited, and demarcated by Colonel Sir Henry McMahon between February 1903 and May 1905 as part of the Seistan-Helmand River settlement.

The final arbitral statement of McMahon described the boundary:

1. The boundary line between Persia and Afghanistan in Seistan was defined in my arbitral award of November 1903 as follows:
"The boundary line in Seistan between Afghanistan on the east and Persia on the west should run as follows, i.e., from the Malik Siah Koh in a straight line to the Bandi-i-Kuhak and thence along the bed of the Helmund river to the point of separation of its two branches, the Rud-i-Parian and Nad Ali channel. From there it should follow the bed of the Nad Ali channel into the Sikhsar and along the bed of the Sikhsar to a point near Deh Yar Muhammad where the Sikhsar has been diverted towards the west in the water channel shown on the map which joins the Shela-i-Shamshiri near to Deh Hassan Kharot. The boundary line should follow the left bank of this water channel to the Shela-i-Shamshiri leaving Deh Hassan Kharot on the east. It should then run in a straight line separating the hamlets of Deh Ali Mardan on the west from Deh Ali Jangi on the east to Tappa-i-Tilai; thence in a straight line to the most western of the mounds of Tappa-i-Shaharaki; thence in a straight line to the most western mound of Tappa-i-Kurki; thence in a straight line to Shalghami, and thence in a straight line to Siah Koh, Bandan."
2. The above award having been accepted by both Governments, I have now demarcated the boundary line by boundary pillars in strict accordance with that word. The following remarks will clearly explain the boundary line and the manner in which that line has been demarcated by pillars.
3. The starting point of the boundary line is marked by a boundary pillar on the summit of Malik Siah Koh which was constructed by the Afghan - Baluchistan Boundary Commission in 1896 and is known as Boundary Pillar No. 186 of that Commission.

The latitude and longitude of this and all other Seistan boundary pillars, the position of each with regard to prominent places visible from them, and all necessary particulars of their size and construction are fully stated in the list of boundary pillars attached to this statement.
4. The position of each boundary pillar is also clearly shown in the two maps attached to this.
5. From the top of Malik Siah Koh to the Band-i-Kuhak (also called Band-i-Seistan) the straight line of boundary has been marked by 51 pillars. As these are all in exactly one straight line a further description of each is unnecessary; and it suffices to say that No. 12 is on the south bank of the Shela, No. 36 on the north bank of the

[^0]Sana rud, and No. 51 on the left bank of the Helmund river where the Rud-i-Seistan leaves that river at the Band-i-Kuhak. Between pillars Nos. 8 and 9 and between Nos. 12 and 13 are 3 and 8 miles respectively of heavy sand through which it was not possible to demarcate the line with pillars.

Besides these 50 pillars there are 16 smaller marks also exactly on the straight line. The positions and particulars of these are stated in the attached list of pillars. They bear the following numbers in that list: - 13A, 14A 15A, 16A, 17A, 18A, 18B, 18C, $21 \mathrm{~A}, 23 \mathrm{~A}, 23 \mathrm{~B}, 25 \mathrm{~A}, 26 \mathrm{~A}, 32 \mathrm{~A}, 43 \mathrm{~A}$, but in order to prevent confusion with boundary pillars they have been shown in the map attached to this only as small black dots without numbers.
6. From the Band-i-Kuhak demarcation with pillars was unnecessary along the course of the Helmund river as far as the point of separation of the Rud-i-Pariun and Nad Ali branches of that river. To mark this point pillar No. 52 has been built at a distance of 94 feet from the left, i.e., Persian bank of the Nad Ali channel, and pillar No. 53 has been built at a distance of 65 feet from the right or Afghan bank of the same channel. The boundary line thence follows the Nad Ali channel. The old ruin of Burj-i-As marks the right bank of that channel near Nad Ali, and pillar No. 54 marks the right bank at that point where the Shela-i-Charakh leaves that channel. From pillar No. 54 the Nad Ali channel is known as the Sikhsar. Pillar No. 55 marks the left bank of the Sikhsar at the point where the Deh Dost Muhammad canal takes off from it, while pillar No. 56 also marks the left bank at the point where the Sikhsar again turns northwards. Pillar No. 57 has been built on a prominent mound called Tappa-i-Sikhsar which is situated at a distance of 240 feet from the right or Afghan bank of the Sikhsar.

Further north, pillar No. 58 which has been built at a distance of 109 feet from the right bank, and pillar No. 59, which is situated 20 feet from the left bank of the Sikhsar stream, mark the point where the boundary line leaves the Sikhsar as defined in my award. Pillar No. 58 is built alongside the site of Deh Yar Muhammed. That village mentioned in my award has lately been deserted and no longer exists.
7. Further demarcation of the course of the Helmund river and the Nad Ali and the Sikhsar streams is at present impossible owing to the nature of the banks, which are liable to be inundated. Moreover further demarcation appears unnecessary at the present time as the course of the water in those streams clearly marks the boundary. Hereafter should any of those streams dry up by reason of a change in the course of the Helmund, and cease to be water channels, their course can easily be ascertained and demarcated if necessary, with the aid of the pillars and places above described.
8. From pillar No. 59 the course of the boundary line is demarcated by pillars Nos. 60 and 61 built on the left bank of he water channel which joins the Shela-i-

Shamshiri near Deh Hassan Kharot. Pillar No. 62 has been built to mark this point on the south bank of the Shela-i-Shamshiri close to Deh Hassan Kharot. From here the straight line to Tappa-i-Tilai has been marked by pillars Nos. 63, 64, and 65, the last named being built on the top of Tappa-i-Tilai. It is necessary to note here that the villages of Deh Mardan and Deh Ali Jangi mentioned in my award as being on either side of this line have been deserted since my award was delivered and neither of them now exists.
9. To illustrate the boundary line from the point of separation of the Rud-i-Pariun and Nad Ali channels to Tappa-i-Tilai in greater detail than is possible in a map of 4 miles to one inch, a map of 1 mile to 1 inch of that portion of the boundary line is attached to this statement.
10. Pillar No. 66 has been built on the top of the most western of the Sharaki Tappas and the straight line onwards to Tappa-i-Kurki is marked by pillars No. 67 and 68, the latter being situated on the top of the most western of the Kurki Tappas. On the straight line between pillar No. 68 and Shalghami, which is marked by pillar No. 70, pillar No. 69 has been built. The land on which pillars No. 67 and 69 has been built is generally under water, but as it happened to be dry at the time of demarcation massive masonry pillars have been built at those points which it is hoped will last a long time.
11. From pillar No. 70 at Shalghami, the straight line of boundary to Siah Koh has been marked by 19 pillars, Nos. 71 to 90 . Of these pillars some are built in Naizar lands subject to inundation, and every care has been taken to build them strong and massive enough to last a long time. The line from pillar No. 70 to pillar No. 76 passes 600 feet south of the most southern edge of a prominent Tappa called Tappi-i-Kharan, 3,223 feet south of the centre of top of southern face of Tappa-iShaghalak, and 1,485 feet south of the highest point of Tappa-i-Musjidak. Between pillars Nos. 76 and 77 the line crosses the open water of the Hamun and demarcation was impossible. Pillar No. 77 is on the west shore of the Hamun, and the line thence ascends the barren and waterless glacis and slopes of the Siah Koh. Pillar No. 90 is on the summit of Siah Koh, which is also known locally as the Nar-iAhu.

## III. CONCLUSION

The entire 550-mile extent of the Afghanistan - Iran boundary has been delimited and demarcated as the result of four arbitral awards ${ }^{1}$ by impartial third powers. Other than the chronic problem of allocation of the vital waters of the Helmand, no dispute on the location of the boundary has been registered since the decade before World War II.

Since neither Afghanistan nor Iran has issued large or medium scale maps of the frontier area, the British Quarter-Inch Series GSGS 3919, which has been reproduced as AMS K501 and U511, is recommended as the best series for compilation purposes. This map series was originally published by the Survey of India. While the original boundary surveys and triangulation data have never been published independently, they are quoted as sources for the Quarter-Inch Series (See Sheet H-41-B, Zubal, 1923, War Office 1941).

[^1]This International Boundary Study is one of a series of specific boundary papers prepared in the Office of the Geographer, Department of State, in accordance with provisions of Bureau of the Budget Circular No. A-16, Exhibit D.

Government agencies may obtain additional information and copies of the study by calling the Office of the Geographer, Room 7334, State Department Building, Department of State, Washington 25, D.C. (telephone: Code 182, extension 4276). Unfolded copies of map enclosures may be obtained from the Map Library, Code 182, extension 3322.


[^0]:    * The word "junction" was used in my original award, and is now replaced by the more correct term "point of separation."

[^1]:    ${ }^{1}$ The Goldsmid Award was in a sense nullified by the shift in the course of the Helmand. The McMahon Award reestablished the Goldsmid Award along the new channel.

