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Issued by the Intelligence Branch, Quarter Master General's Department.

SECRET.

To appear in annual return—see rules inside.

B. 29 / S. A. No. 34

MILITARY REPORT

OF THE

NUSHKI-CHAGAI-WESTERN SINJARANI COUNTRY.

COMPILED IN THE INTELLIGENCE BRANCH, QUARTER MASTER GENERAL'S DEPARTMENT.

COMMENCED BY

CAPTAIN R. E. ROOME,

6TH BOMBAY CAVALRY (JACOB'S HORSE) (1897).

REVISED AND COMPLETED BY

MAJOR W. C WALTON,

104TH WELLESLEY'S RIFLES,

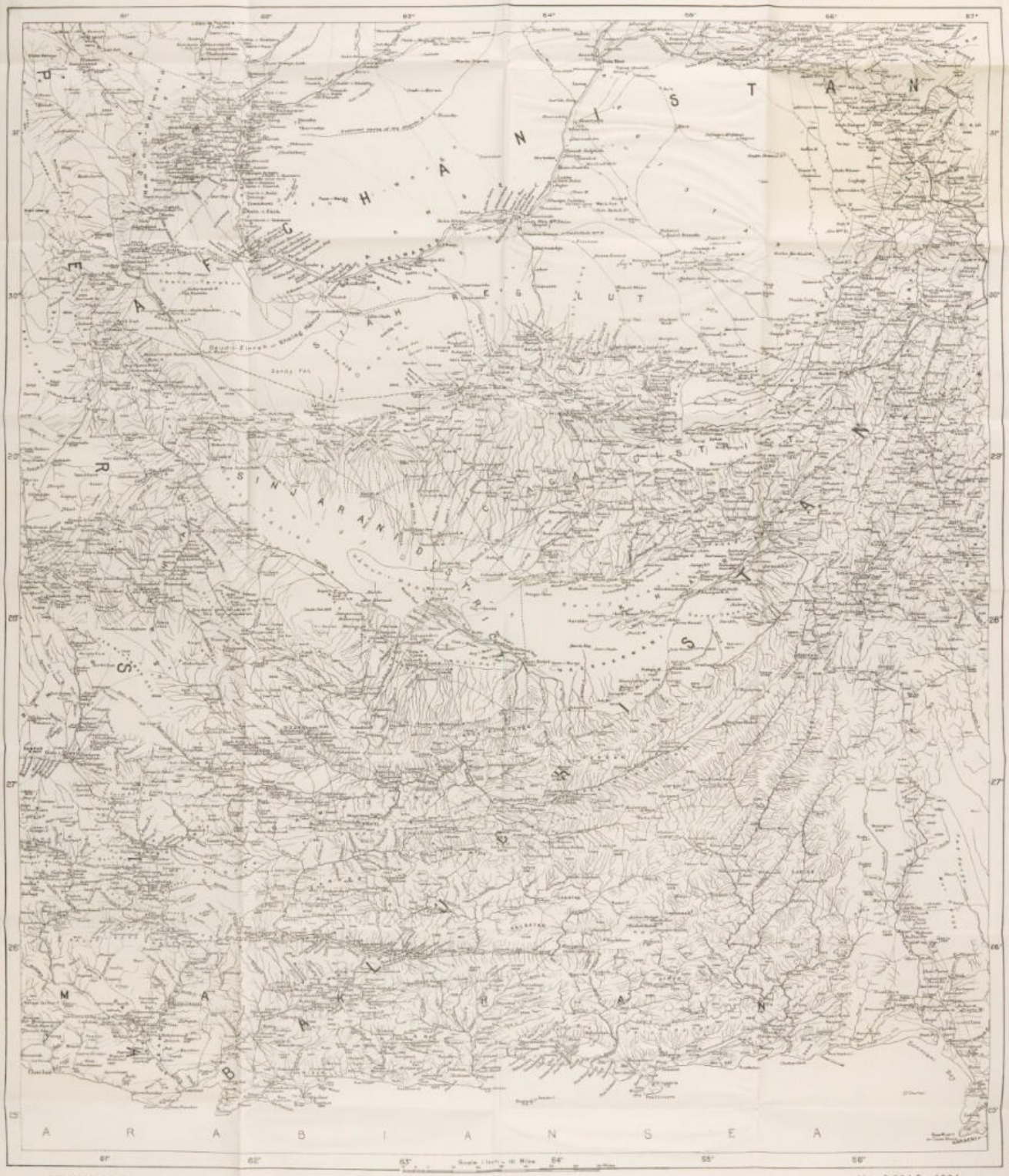
Deputy Assistant Quarter Master General. (*1903*).

SIMLA:

PRINTED AT THE GOVERNMENT CENTRAL PRINTING OFFICE.

1904.

MAP OF SOUTHERN BALUCHISTAN.



No. 3,034-I., 1904.

Issued by the Intelligence Branch, Q. M. G.'s Department.

To the personal charge of P. S. to H.E. the Viceroy.

CUSTODY AND DISPOSAL OF SECRET DOCUMENTS.

The Commander-in-Chief desires that, in future, the following regulations may be strictly adhered to :—

1. When an Officer, who has signed for the receipt of *secret* documents on Army Form A. 2006, either *resigns his command or vacates his appointment, he will hand over all such documents to the Officer taking over his command* or replacing him in his appointment, either temporarily or permanently, receiving from him a receipt in duplicate for them on Army Form A. 2006. The Officer handing over the documents will send immediately through the proper channel one of the receipts thus obtained to the Intelligence Branch, Simla, from which the documents were issued, and will retain the other copy in his possession.

2 If the Officer in charge of *secret* documents quits his post on leave of absence, or on duty for a period of over two months, the same formalities will take place on his departure and on his return, as on a change of appointment.

3. Every Officer after having signed for the receipt of *secret* documents will be held *personally responsible* for them, even after he has left the station or the Service unless he has handed over his charge in strict compliance with the above orders. In case of an Officer quitting his station for less than two months, it is optional for him to hand over the *secret* documents in his charge to another Officer with the above prescribed formalities, but if he does not do so, he is as responsible for them during his absence as he is during his presence at his station.

4. The Officer to whom *secret* documents are issued will keep a list of the *secret* documents in his charge, which list will be compared when taking over the documents with the receipt form then signed. He will compare the documents personally with the list on the 1st of January in each year, and will furnish a report, on Army Form A. 2007, certifying that he has done so.

ALFRED GASELEE, Brigadier-General,
Quarter Master General in India.

Intelligence Branch,
Quarter Master General's Dept. in India ;
Simla, 1st December 1899.

(Diary No. 147 of 1901, *China*).

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PREFACE.

The following report is divided into two parts. Part I deals with the Nushki-Chagai-Western Sinjarani country from the general military point of view, being subdivided for this purpose into various chapters. Part II is in the form of a Gazetteer and describes topographical and other details alphabetically.

In conjunction with this report information as to communications (Chapter II) is to be found in "Routes in Southern Baluchistan," a separate Intelligence Branch compilation.

The authorities consulted in the compilation of this report were :—

1. The reports on the development of the Baluch-Persian caravan route, and on the Nushki, Chagai, and Western Sinjarani Districts for the years 1897, 1898, 1899 and 1900 by Captain F. Webb-Ware, C.I.E.

2. Letter from the Secretary to the Government of India, to the Agent to the Governor General in Baluchistan, No. 2652-F., dated Simla, the 6th October 1899.

3. Numerous notes by Captain R. E. Roome, 6th Bombay Cavalry (Jacob's Horse).

4. Report on the country surveyed in Western Baluchistan by Mr. G. P. Tate, Assistant Surveyor, 1889-90.

5. Chagai and Seistan Political diaries.

6. Gazetteer of Baluchistan completed and edited by Lieutenant R. Southey.

7. Note on the Sinjaranis by O. T. Duke, Political Agent, Kalat.

8. Memorandum on the country south of the Baluch-Afghan boundary line by Captain A. H. McMahon, C.I.E., dated 22nd July 1896.

SIMLA;
The 16th February 1903.

(Sd.) JOHN E. NIXON, *Col.*,
Assistant Quarter Master General,
Intelligence Branch.

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1. Sketch map of Southern Baluchistan.
2. Map showing signalling stations on the Trade-route.
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GLOSSARY OF VERNACULAR TERMS USED IN THIS REPORT.

Ab ...	... Water.
Bad ...	... Wind.
Badasia ...	... Windmill.
Bad-i-sad-o-bist-roz	... The 120 days' wind.
Bed ...	... Willow.
Bhusa ...	... Broken straw.
Bug or Bog	... Marsh.
Chah ...	... A well, or a shaft.
Chaman	... A grassy plain.
Chauki ...	... A building used as a police station.
Chakul ...	... Waterfall or a spring issuing from ground elevated above the plain.
Dak ...	... A clear alluvial plain.
Daman ...	... The skirt, or glacis slope of hills.
Dann ...	... A small *hamun*.
Dasht ...	... A gravelly or stony plain.
Duz ...	... A robber.
Hamun ...	... A large lake swamp or place where the drainage of the surrounding country collects, though often dry.
Kafila ...	... A string of baggage animals.
Karez ...	... An underground water-channel.
Kaur ...	... A water-course.
Kavir ...	... A plain covered with salt efflorescence.
Kharwar ...	... A measure of grain equal to 100 Tabriz maunds; an ass-load; 400 lbs.
Khassadar	... Irregular military police.
Kisan ...	... Small.
Koh, or kuh	... Hill, or mountain.
Lut ...	... A waterless tract, a desert.
Malik ...	... Headman of a village or tribal section.
Mazan ...	... Large.

Nawar	...	... A depression in the sandy desert, containing water after rain. A pool, a natural or artificial tank.
Pat	...	... A flat plain of chalky alluvial soil.
Reg	...	... Sand.
Robat	...	... A caravanserai, a "chauki" or "thana."
Rod	...	... A river.
Safed	...	... White.
Sayad	...	... A descendant of the prophet.
Sarai	...	... A rest-house open to all travellers.
Sarhad	...	... Boundary or frontier.
Sel	...	... Flood.
Shela	...	... River or *nala*.
Shirin	...	... Sweet, potable.
Shor	...	... Salt, salt marsh.
Siah	...	... Black.
Tagaz	...	... A species of tamarisk.
Tank	...	... A gorge or defile.
Wash	...	... Drinkable.
Ziarat	...	... A shrine.

CHAPTER I.

GEOGRAPHY.

The Nushki-Chagai-Sinjarani country.

The country dealt with in this report is that portion of Baluchistan lying immediately south of the Baluch-Afghan boundary, from the Sarlat hills on the east to the Koh-i Malik Siah on the west, a distance, in a straight line, of about 320 miles, the average breadth south of this line being about 100 miles. It is situated between latitudes 27° 30′ and 30°, and between longitudes 61° and 66° 10′.

Boundaries.

It is bounded on the north by the desert regions of Afghanistan south of the Helmand; on the east by the Sarlat range, and the territories of the Khan of Kalat; on the south by Kharan, Makran, and the Persian district of Bampusht; and on the west by the Jalk, Damani and Sarhad territories of Persia.

Divisions.

This tract of Baluchistan is divided, for the sake of convenience, into three districts, *viz.*, Nushki on the east, Chagai in the centre, and Western Sinjarani on the west.

Nushki District.

The Nushki district has an area of about 2,000 square miles, and comprises the plain country south of the Baluch-Afghan boundary line, with the Sarlat range on the east, and on the south the Kharan border which is marked by the watershed of the Ras Koh range; the western line runs from Koh-i-Sheik Husen northwards through Lala and Ziarat-i-Sayad Mahmud to the Baluch-Afghan boundary about half-way between pillars 156 and 157. There are several small villages scattered over the Nushki plain, the largest of which has about 250 shops,* and bears the same name as the district. This is the only village of any importance between Quetta and the Persian frontier to the west. In fact, after leaving a point 10 miles to the west of Nushki, there are no villages at all up to the Persian frontier. It is the natural starting place for caravans crossing the deserted area lying between it and the Persian border.

Chagai District.

Chagai is the centre of the three districts, with an area of about 10,500 square miles. The Chagai district consists of two fertile portions, *viz.*, the alluvial plains surrounding Chagai fort, and Dalbandin. The latter is an extensive plain of an average breadth of about 9 miles, confined on the north and south by the Chapar and Ras Koh hills, and extending east and west 20 miles, until it is lost in heavy sand-hills. The south of the Chagai district is marked by the watershed of the Ras Koh range. Its western boundary line starts from Gaukok hill, near Galichah wells, and runs north-west to Manzil Chauki, and thence north to the Baluch-Afghan boundary opposite Gidan Koh.

Western Sinjarani District.

The south of Western Sinjarani district has not yet been demarcated, but for the purposes of this report it may be understood that Western Sinjarani includes the Mashkel district, and has an area about double that of the Chagai district. It consists for the most part of a barren desert of alluvial soil divided by sand-belts,

* *Note.*—Owing to bad seasons only about 30 of these 250 shops were occupied in 1903.

and studded with extinct volcanic peaks. Its eastern boundary line runs due south from Gaukok hill to the Sianeh Koh range, thence the southern line runs along the watershed of the Sianeh Koh till it meets the Perso-Baluch frontier line which it follows to Koh-i-Malik Siah.

General description. The physical features of the Nushki-Chagai-Sinjarani country, with the exception of the large tracts of cultivated and culturable lands around Nushki town, Baghak, Dalbandin, the fertile lands of the Dak and many little spots of cultivation hidden away amongst the hills, consist of sandy deserts, and stony or gravelly plains, bordered by ranges of barren limestone and shale mountains, and containing some mountains of volcanic origin.

Hamuns. Owing to the peculiar formation of the country the drainage finds no outlet to the sea, but on arrival at low level ground which is surrounded on all sides by somewhat higher ground forms *hamuns*, wastes, or large lake swamps. Some *hamuns* entirely dry up and become vast salt beds in the hot season, whilst, as a rule, after rain these immense salt lakes are covered with rushes, grass, and water-fowl. In the south the smaller *hamuns* are called *danns*.

Nawars. The smaller depressed areas in the north-eastern portion of the country are called *nawars*. In these the rain water collects and remains for some time, and they are, in many parts, the only water-supply of the country.

Registan. Along the whole of the northern boundary, and north to the Helmand, stretches a desert, to cross which at its narrowest part between Sukaluk and Khwaja Ali entails a march of 50 miles without water.

This desert is called Registan in its north-east portion, the Lut in its centre and the Siah Reg to the west. It encroaches on a considerable portion of the northern limits of the Nushki-Chagai-Sinjarani country. But although the desert has encroached, it has not yet done so sufficiently to give a sound basis for the supposition that this country is impassable for troops, who would, on the contrary, during the cold weather months, have no very serious physical obstacles to overcome.

Even across Registan there is nothing in the nature of the country, desert though it be, sufficiently difficult to prevent bodies of lightly equipped troops marching from the Helmand to Chagai and Nushki by different routes.

This desert is a vast expanse of ridges and hillocks of loose red sand, of considerably greater elevation than the adjacent alluvial plains, covered with a profuse growth of *tagaz*, a species of tamarisk with white bark and leaves most suitable for camels, besides many other sorts of camel forage and, after rain, with grass. It abuts on Shorawak in a long line of sand bluffs, touches the end of the Khwaja Amran to the north of the district and, sweeping round north-westwards across the end of the Kadanai valley, follows the line of the Dori and then of the Tarnak, until the latter falls into the Helmand. The ranges or spurs which run south-westwards from the watershed of the Indus all terminate at the edge of the

desert, leaving only a few scattered outlying hills rising like islands from the sea of sand.

Near its border, the sand-hills are pretty thickly sprinkled with bushes and vegetation. The hollows often hold patches of alluvial soil which can be and are cultivated in favorable seasons. This region of half desert is said to stretch from 5 to 10 miles inwards, and affords pasturage to numerous flocks of sheep and herds of camels. Wells are fairly numerous though at long distances apart.

The tribes, to whose country the desert is contiguous, value it greatly and resort to it in winter. It also affords harbourage to broken clans and wild robbers who have no other home, and to numerous Baluch and Brahui nomads.

It is said that several hundred families with all their flocks and herds are sometimes dependent on a single well; they leave the sand deserts for the three hottest months in the year, but even then go no further than its edge.

The shifting sands of which the desert is composed are blown into ridges varying from 100 to as much as 500 feet in height. These ridges run parallel to one another in broken billows with an apparent general direction of north-north-west to south-south-east.

The slopes on the windward side are gentle; those to leeward are about 45°. The ridges are liable to shift their position and would therefore prove a serious obstacle to the construction of a telegraph wire, or any permanent road. One storm might obliterate the track completely unless some methods, such as that used by the Russians on their Trans-Caspian railway for checking the drifting of the sand, were adopted.

From recent observation and enquiry it would appear that the rate of advance of the sand in the direction of the prevailing wind, that is, towards the south-east, where it is unchecked by rivers or other obstructions, is about 2 feet in the year. It is not likely that the average progress of the desert along its whole border would be more than 50 or 60 yards in a century.

Mountains.

The general lie of the hills follows that of the Makran system; that is to say, the chain of hills is twisted from the north and south line of the hills of Northern Baluchistan to one running nearly east and west; but, as the Persian boundary is reached, the hills again curve northwards, and thus a vast irregular semi-circle, conforming more or less to the curve of the Helmand river, is formed, with the Khwaja Amran range at the eastern point and the Persian Plang Koh at the western extremity.

The Sarlat range.

Commencing from the east the first hills met with are the great ranges of the Brahuik system, which is a prolongation, southwards, of the Takht-i-Suliman mountains. The term "Brahuik" has been assigned to this mountain system owing to the inhabitants being Brahuis. The western fall of the Brahuik hills appears to be a prolongation, southwards, of the Khwaja Amran mountains, and,

like these, is composed principally of shales and clay slates. North of the point where the Lora river debouches on to the plains of Shorawak is a mass of limestone hills parallel to, but well advanced beyond, the main fall of the country. This range drops under the Shorawak plain, allowing the waters of the Lora a free passage outwards, but reappears further south under the name of the Sarlat range.

The Ras Koh range. South of Nushki the limestone forms a succession of apparently isolated low hills. But a very short distance further south it forms a continuous series of parallel ridges which rapidly increase in height, until they culminate in the Ras Koh peak (9,896′).

East of the Ras Koh the watershed is formed by a continuous ridge of clay slates and shales, in colour grey, dark purplish brown, and sometimes nearly black. West of Ras Koh the hills are of the same nature, consisting of limestone and shaly hills until the peak called Malik Surindag (6,516′) is reached. West of this point there is merely a single ridge which shortly afterwards disappears under the sand.

Gaukok hill. At the end of this limestone range is the low isolated hill known as Gaukok (5,000′).

The Koh-i-Sianeh range. Following the boundary line between Kharan and Western Sinjarani south from Gaukok across the desert for about 60 miles, the Koh-i-Sianeh range is struck just east of the point where the Mashkel river bursts its way through by the Tank-i-Zorati rift on its way to the Hamun-i-Mashkel. This range is composed of lofty mountains of dark grey clay slates to which it probably owes its name. It extends over nearly three degrees of longitude, and, roughly speaking along the arc of a circle whose centre lies in the Hamun-i-Mashkel.

Hills on the Persian side of the border. Parallel to the Sianeh Koh and about 30 miles to the north is another range of sandstone and shaly hills. These hills continue westwards, and break into innumerable parallel ridges forming a mass of hills between the Safed Koh, the Koh-i-Gili, and the Koh-i-Drukan, and the Mashkel desert to the north.

There is an outcrop of trap in the Jujak hills which is the name of a part of the lower hills.

Jalk is situated at the western end of the valley between the Sianeh and Jujak hills in the open country.

Safed Koh. The Safed Koh is a mass of parallel ridges rising to 8,000′ in height. It is composed entirely of huge amorphous boulders of granite and gneiss. The colour of the rocks being a cold grey, with a very decided whitish tinge, it contrasts strongly with the dark clay slates and shaly hills around it, as well as with the dark brown sandstone of the Jujak hills. Hence the name Safed Koh.

The Koh-i-Gili. The Koh-i-Gili to the north-west (about 9,000′) seems to be of a similar character to the above. The higher ranges further west are composed almost entirely of the older and volcanic rocks. These hills are very bare and, but for a few shrubs, and an occasional fig tree growing between the rocks, are destitute of vegetation.

The Mirjawa range. Coming again to the Perso-Baluch boundary line which was left to the north with the Sianeh Koh, it is followed along

the Mirjawa range north-north-west to Koh-i-Malik Siah (5,632′) upon which is the Pillar No. 186, marking the junction of the Baluch, Afghan, and Persian boundary lines.

From the Koh-i-Malik Siah, in a south-easterly direction, the principal peaks are: Robat Koh, 5,264′; Lar Koh, 7,669′; Kacha Koh, 7,164′; Saindak Koh, 3,547′; Drana Koh, 3,644′; and Pachinap Koh, 3,580′. This range is approximately 100 miles in length.

The Chagai-Sarlat.

Besides the ranges which compose the semi-circle above discussed, there is a mass of mountains occupying the north of the Chagai district, and extending into Western Sinjarani.

The Chapar range.

About 15 miles south of Chagai is the Chapar range, a long line of high dipping limestones running in an east and west direction. On the east is the Mekh-i-Rustam hill (4,232′) and on the west the Kisan Chapar (4,170′). The main limestone mass, together with the more or less shaly partings in its upper and lower portions, has a thickness of about 300 feet. It rests upon a considerable thickness of green shales and sand-stones, similar in appearance to those which constitute the Khojak hills.

The Malik Naru hills.

West of Chagai rises the great mass of the Malik Naru hills, sometimes called the Chagai-Sarlat, which form the watershed between the Helmand and the Gaud-i-Zirreh to the north and the Mashkel Hamun to the south. To the north-east the high range is inaccessible and quite impassable, except by mountaineers, between the Shibian and Mazari passes. To the west lie the lofty mountains of Malik Teznau (7,686′), Malik Naru (7,915′), Nilgan (8,355′), and several other summits over 6,000′. This part of the range is traversed by three roads converging on Sukaluk.

Strategical importance of the Malik Naru range.

Owing to its situation the Malik Naru range commands all roads from the Helmand, either from the west or the north, and therefore occupies an important strategic position on our north-western frontier. Captain A. H McMahon in 1896 referred to it as the "Key of Baluchistan, and of the Southern Helmand valley." In these hills water of the best quality is abundant everywhere, *gorkah* grass, the very best of forage, grows in luxuriance, and sheep and goats are everywhere obtainable at a small price.

The Koh-i-Sultan range.

The Koh-i-Sultan mountains lie about 10 miles to the west, and, before the ridge joining them to the Malik Naru range was levelled out by the sand accumulations, formed the western spur of the main mass.

They are a barren and uninhabited mass of craggy volcanic peaks, impregnated with sulphur, alum and other minerals. Owing to this fact the water at Kondi and in all the wells in and round the Koh-i-Sultan, excepting perhaps that at Amir Chah and at Washab spring which though saline are drinkable on occasions, are so full of minerals as to be unfit for human consumption.

The highest peak of the Koh-i-Sultan is Miri (7,656′), and there are several other peaks around the hollow which is the former centre of volcanic activity which are over 7,500′ high.

Damodim-Koh-i-Dalil.

Continuing westwards the highest peak of Damodim is 6,333′, and 20 miles west of Damodim the isolated volcanic peak of Koh-i-Dalil is 4,476′.

There are several other smaller isolated peaks of volcanic origin in the vicinity.

Rivers.

None of the rivers find an outlet to the sea, but all except two flow into or towards a *hamun* or large lake swamp, and therefore the description of the river system can be most simply arranged according to the drainage of the *hamuns*.

The three hamuns.

The large *hamuns* are three in number, *viz.*:—

(1) The Lora Hamun in the Chagai district.

(2) The Hamun-i-Mashkel in the south of Western Sinjarani district.

(3) The Gaud-i-Zirreh which, politically speaking, is not within the limits of Baluchistan, but geographically pertains to it.

General description of rivers.

The rivers which drain into these *hamuns*, as might be expected in a country of so scanty and intermittent a rainfall, are, generally speaking, no more than torrent beds, filled with a flood after rain in the hills. These floods are dangerous, sometimes carrying away flocks and camels. They rise very suddenly and owing to the steep fall of the torrent beds they come down with great force, and are of short duration, their stony beds becoming quite dry in a few hours. There are very few streams with a constant flow of water, but, as a rule, water appears for some hundreds of yards, and then disappears, to reappear a mile or two further down, as is the case with most rivers of Baluchistan.

Wherever a river-bed is, however there water may be found by digging a few feet below the surface.

The two rivers that do not flow into any *hamun* are the Kaisar and the Bulo.

The Kaisar river.

The Kaisar rises in the Sarlat range, and collects the drainage of South-Western Shorarud and the Kishingi valley. Its three chief tributaries are the Singbur, the Galangur, and the Ghori streams.

For the last 4 miles of the Galangur water, almost perennial, runs in its bed, and, after its junction with the Singbur, the water is perennial and flows in a very fine stream. Many parts of the bed are covered with so thick a tamarisk jungle that a way can only be forced through with difficulty.

The Kaisar river serves to irrigate about 3,000 acres of land around Nushki town.

The Bulo river.

The Bulo river is less important. It rises in the Western Malik Naru range, in the southern slopes of Saruma near the Rahibo pass. It is formed by the junction of the Talaran and Gurgarok *nalas*. Passing west of Kisan Chapar it serves to irrigate a portion of the Dalbandin plain. In the last 4 or 5 miles of its course its bed is well covered with tamarisk jungle, and an abundant growth of grass.

The Lora Hamun.

The Lora *hamun* lies about 3 miles due east of Chagai fort. It is about 35 miles long and 4 to 9 miles broad. It is a bare plain of hard baked clay, destitute of vegetation and impregnated with salts, over which the Lora river flood-water lodges, until dried by

evaporation. Water is said to lie over the *hamun* for the three winter months, and for one month subsequently the *hamun* is impassable During the remaining eight months the direct road across it is the one generally used, and is as good going as any macadamised road.

All the roads across the *hamun* are impracticable for animals, except in dry weather. Any water got by digging would probably be salt. A strip of good grass, 2 miles wide, lines the western edge of the *hamun*.

From the east this *hamun* receives two rivers, the Kulawo and the Lora; on the west it receives the drainage of a portion of the Malik Naru range which flows into it by a large number of small ravines.

The only river deserving of description here is the Lora river to which the flooding of the *hamun* is due.

The Lora river.

The Lora river drains the whole country between the Khwaja Amran, including the Sarlat, and the watershed of the Indus, as far south as some 20 miles beyond Kalat. Some of its chief tributaries are the Shal Lora, the Kakar Lora, the Pishin Lora, the Surkhab, the Badezai Chur, the Dori Nala, and the Shora Rud. The latter brings with it the whole of the drainage of Kalat, Mungachar, Mastung, Gurgina, and Kardagap. After passing through the Aliabu gorge and sweeping round the spurs of the Sarlat range the valley of the Lora is wide and open and presents many spots fit for encampment. After the junction of the Tang stream the river, shut in between the Khwaja Amran and Sarlat ranges, runs for fully 16 miles through an extremely narrow and tortuous defile, of an average width of 100 yards. After this gorge and the ruined fort of Mir Alam are passed, the country gradually becomes more open, until near the hamlet of Pir Muhammad *karez* the river finally debouches on to the plain of Shorawak. There is a crossing to Pir Muhammad *karez* near the debouchure, and others opposite the villages of Putla Khan, Zabardast, and Miru Khan, good camel tracks, but they would require labour to make them fit for the passage of artillery. After passing Mandozai the Lora bends to the south, and, where crossed by the Nushki road (Routes in Northern Baluchistan, No. 142), 3 miles south of Saiad Bus, the bed is only 60 yards wide and about 15 feet deep, the banks are alternately scarped and shelving, and, when the bed is dry, artillery can cross without difficulty; but if any water is running, the ford approaches a quicksand. If in the least wet, brushwood should be cut from the banks and laid down the whole way across, to form a roadway for animals. A quantity should also be kept ready to fill up as fast as the roadway is trodden under.

Floods run down as rapidly as they rise, and can seldom stop the passage of troops at regular crossing places; but it is unsafe to take animals into the Lora defiles if the weather be at all unsettled.

The water of the Lora is slightly saline, but quite drinkable, and not unwholesome if taken for a few days only.

The Hamun-i-Mashkel.

The Hamun-i-Mashkel in Western Sinjarani covers about 500 square miles.

In spite of its large drainage area there is very little water in it, and that is salt and undrinkable. It is covered with a saline deposit and is probably the ancient bed of an inland lake. During heavy rain the floods which rush down the Mashkel river cover the surface of the *hamun* with water.

In appearance it greatly resembles the Rann of Kachh; but the salt which covers the latter is much purer and whiter in appearance. In the eastern part of the *hamun* there is a place where salt is rudely gathered by breaking the surface crust and selecting those fragments that contain least earth. This spot is sacred in the eyes of the people, being under the immediate protection of the saint called Shah Sultan. It is the great centre from which the people of the country to the west obtain their supplies of salt.

The Morjin river.

Into, or in the direction of, this *hamun* runs the drainage of all the surrounding country. It forms the basin of all the drainage of the Koh-i Sultan and Malik Naru ranges on the north, the chief affluent being the Morjin *nala*, the natural continuation of the Bulo river, which lost itself in the Dalbandin plain; after receiving the drainage of the Gat-i-Barote and hills to the north the Morjin flows into the Morjin *hamun*. The overflow from the Morjin *hamun* (or *dann* as it is sometimes called) escapes by the Meshki river to the Hamun-i-Mashkel. Its bed is dry except when in flood which clears in a few hours. Water can, however, be found in most places in its bed, and in the beds of its numerous affluents by digging to a depth of 13 to 15 feet.

The Sorap Nala.

On the east from the Kharan hills only one *nala* runs in the direction of the *hamun*, *viz.*, the Sorap river which rises at Radoizonk and flows for 30 miles in a south-westerly direction when its bed becomes obliterated by moving sand-dunes. It probably runs underground to the *hamun*.

Water runs for 2 or 3 miles below Sorap springs, but it is decidedly brackish.

The Mashkel river.

From the south comes the drainage of the Koh-i-Sianeh range, a large number of *nalas*, and through the range flows the Mashkel river, which, rising in the up-lying valleys of the Sarhad, forces its way through the Sabz-i-Koh by the Tank-i-Grawag, and then after flowing in a north-east direction through a fairly broad valley, some 9 miles wide, again forces its way through the Siahan and Kunaren ranges by a defile similar to the first, called the Tank-i-Zoratti, and entering the sandy Mashkel plain meets the Bibi Lori Kaur about 28½ miles from Zoratti. Just before it enters the great Mashkel *hamun* the whole bed has a width of about 13 miles, divided into several small surface channels, the largest of which is called the Kuhnador and has water in it.

This river is of some military importance, as the highway from Panjgur to Seistan lies along it. There appears to be at all times an abundant supply of water in its bed, or under its surface, and both the bed and the banks are in many places well covered with fuel and camel-grazing.

The Tahlab river.

From the west the only river of any importance is the Tahlab river. It flows into the *hamun* through a wide delta, thickly wooded with large tamarisk bushes. There is some good water at its source south-east of Duzdap plain which shortly disappears to reappear for a short distance at the junction of the Mirjawa river. It is again dry until within 20 miles of its mouth, when a series of deep lagoons and stretches of running water occur for several miles. Its delta is usually dry, but the water is close to the surface. In its course it receives the drainage from the Persian hills, its chief tributaries being the Kaur-i-Khan rising on the north side of the Bed pass, the Dar-i-Giaban rising on the south side of the Bed pass, the Mirjawa river, the Andai, the Garo, the Miraka, and the Durbkan, in all of which there is either running water or water near the surface. The tributaries from the east are small and only contain water after rain.

The general direction of the Tahlab river is south-east, and its total length is about 150 miles. The name Tahlab, however, is only applied to that section of the river between Nodo, *i.e.*, two marches south of Mirjawa and the Hamun Mashkel.

The boundary between Baluchistan and Persia runs for nearly 90 miles along its banks. The best road from Mashkel to Seistan lies along the west side of this river.

The Gaud-i-Zirreh.

The Gaud-i-Zirreh is a vast *hamun* in Afghan territory west of Koh-i-Malik Siah and north of Amir Chah. The altitude of this *hamun* is 1,510 feet, and most of the *nalas* that drain towards it have their sources at an altitude of 3,000′; it is therefore probable that their underground drainage affects its waters. The Shela or Shelag river is the only visible source of water in the Gaud-i-Zirreh; this stream is the channel by which the overflow water in the Seistan *hamun* is drained off.

CHAPTER II.

Communications.

General description.

The Nushki-Chagai-Sinjarani country is pre-eminently suited to camels. The whole country to Panjgur yields the *tagaz*, and other sorts of camel forage. It is essentially a *camelry*, not a cavalry, country.

Mounted infantry, acquainted with the habits of, and carried by, camels, are the force indicated as best suited for the country; guns could be dragged nearly everywhere, camels being utilized for draft power; in fact, a force equipped with the right sort of camels, and furnished with a sufficient number of water skins, should find but little difficulty in crossing this country in any direction. There is no part of this region, except perhaps the actual desert which lies between the two roads from Kharan to Jalk and the tract of land lying west of Manzil and north of the Koh-i-Sultan and Drana Koh ranges, in which the sinking of wells will not procure a supply of water.

Baluchi.

As for the Registan, the desert-people say that a thousand camel sowars can go where they like carrying their supplies and

armed with cow-skin buckets and raw-hide ropes, 150 feet in length, to enable them to draw water from the wells which are often very deep. For a lightly equipped, handy force, the difficulties of the Registan, always supposing the tribes inhabiting it to be friendly, may be overcome by energy, readiness to appreciate local customs, and by the use of modern appliances. No doubt care, forethought, preparation and previous local enquiry would be needed, and an efficient guide well acquainted with the country is an absolute necessity. Roads and tracks are soon obliterated by the sand; moreover, because there is water in a certain spot in one year, it does not follow that any will be found there in the next year. Incautious travellers have before this lost their way, and perished in the desert.

In June 1903 Lieutenant Rose-Price reported as follows:—"It appears impossible to give a lasting report upon the water-supply, or the grazing. At the various stages along the trade-route the permanent garrisons of levies, etc., are so small that a few wells suffice for their needs as regards water-supply. The remaining wells, which are unused, are liable to become stagnant and foul, or to be filled up with sand. For this reason, although there may be reported to be, at a certain stage, so many wells, so much water, etc., on a certain date, it by no means follows that this amount of water will be there at future times. At stages where the water-supply is obtained by sinking pits in *nala* beds, the same remarks apply, as regards the uncertainty of the supply, though from a different cause. A fall of rain causes freshets in these *nalas*, which come down with great force and wash away dams, or fill up pits, thus necessitating further work to produce water. It would, therefore, appear that no certain report on the water-supply can be made and that, should a force intend to march along this route, it would be necessary for a reconnaissance to be sent ahead to find out the actual conditions of the water-supply at the time. The grazing, as regards value and quality, varies according to the years and seasons. On the outward march of the signalling parties, in January and February 1903, the grazing was poor and innutritious, doubtless because the country had been suffering from two years' drought. In June 1903 the grazing was very good, owing to several heavy falls in the spring."

It may be added that the above remarks are applicable not only to the trade route, but to the whole of the Sinjarani country. In whatever direction it may be desired to move troops it would be advisable to send out a party, not only to reconnoitre the road and to report on the water-supply, but to clean out old wells, dig fresh wells and pits, and thus renovate the supply.

The rain is the main factor in deciding whether troops can be moved through this country or not, as on the rainfall depends, not only the water-supply, but the grazing for the camels. December and early spring are the seasons when rain may be normally expected. After good spring rains, the whole face of the country is changed, and roads, formerly impracticable for want

of water and grazing, become useful routes and remain so till June or later. The heat later than June, however, precludes all but the most necessary movements, until October, when the climate becomes more temperate. But between October and the December rains the grazing and water are at their worst. The season from February to the end of May, therefore, appears, under all considerations, to be best for the movement of troops.

The routes referred to marginally are "Routes in Southern Baluchistan."

1. *Quetta to Nushki, length 91 miles, 5 stages.*—There are several routes by which Nushki may be reached from Quetta, and they are all described in "Routes in Northern Baluchistan"; but as they are all outside the limits of the Nushki-Chagai-Sinjarani country, it may be sufficient to here describe the main route by the South Barak pass which is used by *kafilas*, and is the postal and trade route. **Route No. 30.**

For the first four stages from Quetta to Kishingi the country is on a level with the plateau on which Quetta stands, and there are villages and supplies within easy access of the road: from Kishingi the road descends abruptly to the level plain on which Nushki is situated. The road throughout has been made with inclines, not too steep for camels, and it is practicable for wheeled artillery, but being unmetalled throughout, it is unfit for wheeled traffic. Stages 3 and 4 are 26 and 24 miles, respectively; these are very long marches. The water-supply at the stages is good, but on the road between stages it is bad. Facility of communication between Quetta and Nushki is a matter of very great importance, seeing that Nushki is the natural starting point for caravans crossing the deserted area lying between it and the Persian border; it is, in fact, the proper terminus of the Nushki-Seistan trade route. It is also the natural depôt for all caravans from Garmsel, the Helmand valley, and Shorawak; from these districts during the month of November 1901 trade was brought into Nushki to the value of Rs. 1,02,866. This latter fact is one of military importance as showing the ease with which the desert between Nushki and the Helmand can be crossed at the proper time of year.

A metalled road between Quetta and Nushki is, at present, regarded as an unnecessary expense, but the necessity for railway communication between the two places has been recognised, and the line is now in course of construction. The heading of the Nishpa tunnel is expected to be through by the 1st of January 1904 and the tunnel to be completed by the 1st January 1905. The heavy work between miles 4 and 7 will be completed by November 1903.

The cuttings in banks in Shekh Wasil gorge will be completed about August, and the tunnel by the end of December 1903.

The line will probably be opened by June 1905. There are three ranges of hills separated by plateaux, each plateau being lower than

the preceding one, on the way from Quetta to Nushki. In the middle range of hills the railway will have to pass through a gorge close to Shekh Wasil, through which the river flows from the Kanak plateau to the Kardagap plateau. But it is in the last descent into Nushki where, owing to the steepness, the special difficulty comes in.

The water between Quetta and Nushki is impregnated with salt and is also scarce, but not so scarce as a casual traveller on the road might be led to imagine. Between Kardagap and Nushki, quite apart from the four well-known wells at Kishingi and the water in the Kaisar river which supplies Nushki, there are at least eleven small springs or wells (not counting dry wells), all more or less available for troops coming down towards Nushki, though not all close to the trade route. Fuel is also a very important question, for the only wood procurable is the tamarisk which is found in a few localities several miles apart.

General John Jacob, Commandant of the Sind Cavalry, pointed out, half a century ago, how important was the strategical position of Nushki. Its geographical position in the break between the Sarlat and Ras Koh hills, at the point where the general lie of the ranges begins to change from north and south, with a sweep round to the east and west lie of the Kharan hills; its position as the natural junction of all the roads from north, south, east and west, but more especially of all the roads leading from the Helmand by the shortest way into India; and, finally, its position on the flank of the defensive line of the Khwaja Amran range; all these mark Nushki as a place of commanding military and possible future commercial importance.

Route No. 31.

2. *Nushki to Robat* (*Koh-i-Malik Siah*), *length 372 miles, 20 stages.*—The road leading out of Nushki next in importance to that already described is the Nushki-Seistan trade route which runs westward from Nushki within the borders of British Baluchistan as far as Robat; here it passes round Koh-i-Malik Siah and turning northward enters Persian territory.

This trade route is practicable for all arms throughout in fine weather; an *ekka* has, in fact, been driven along it, but it is better suited for camel transport. For convenience of description it may be divided into three portions,—1st, to Dalbandin, 2nd, to Mirui, 3rd, to Robat.

1st portion.—As far as Dalbandin the road passes through country answering to the description usually given of it, *viz.*: "an ideal camel country." There is ample camel grazing, the going is extremely good, the water good at most stages, and, in the course of a few years, there will probably be a considerable increase in the amount of cultivation locally.

2nd portion.—To Mirui. This consists of only three marches of moderate length. The going is good, the water from the wells very fair, and there is sufficient camel grazing.

3rd portion.—Mirui to Robat. This latter portion of the route is in every way more difficult to traverse. Sandy ground

and *pat* is left behind, and the track, throughout most of its length to Robat, lies over ground covered by sharp pieces of broken shale or slate, which usually lame riding camels after a few days' consecutive marching. The marches are extremely long, 87 miles having to be covered in four stages between Mirui and Mushki Chah.

From Mushki Chah to Saindak an alternative route to that by Sahib Chah was used by *dák* sowars and travellers in 1903 as follows :—

Mushki Chah to Humai	about	13 miles.
Humai to Borghar	„	20 „
Borghar to Amalaf	„	18 „
Amalaf to Saindak	„	8 „

This route is only a camel track, passable for all arms, except at a point about 4½ miles from Mushki Chah, in the hills to the north-west of that place, where the track leads over a low *kotal*, requiring a few hours' work to render it fit for wheeled artillery.

Humai wells are amongst some low sand-dunes, bearing 120° from Koh-i-Dalil and about 5½ miles in a straight line from that hill. Water is good and plentiful about 5′ to 10′ below the surface. There are 10 wells and more could be made; and fuel is fairly plentiful, and camel grazing very plentiful, in the vicinity. Space for camping is very extensive, but there are no supplies.

Borghar is a temporary stage only and depends on the presence of water in Borghar *nawar* which only holds water for a short period after a rainfall. Except a small supply for an account of which see Part II under Borkuh. There is no fuel; camel grazing is scarce, and there are no supplies. Space for camping is very extensive.

There is one well about 6 miles west of Humai, to the north of the camel track and south of Koh-i-Dalil, but the water is very brackish.

Camel grazing on this 3rd portion is by no means abundant at all stages, and if a considerable number of camels were taken along the road at the same time, or in successive parties at short intervals, it would probably be necessary to send the camels a considerable distance to obtain grazing. Even parties of 50 camels would, after a time, have to go a considerable distance to graze.

Between Mirui and Robat, the ground is cut into ridges by the action of the water draining from the neighbouring hills. This is especially the case in the last three marches into Robat, and the first two onwards from Robat to Seistan. The stages are long, of 18, 17, 25, 16 and 24 miles, respectively, the ridges are incessant and the slopes up and down steep. These marches would be very trying for laden camels pushing through quickly, and would probably completely knock up animals drawing guns or wagons.

The water-supply along the road, though slightly saline after leaving Quetta, is fairly good as far as Mirui. From this point it is distinctly saline, in varying degrees in different places and at

different times of year, being worst at Mushki Chah and Saindak. Baluchis drink it and thrive on it, but it is liable to affect natives of India, and would without doubt cause a great deal of sickness amongst British troops.

From Dalbandin to Robat, there is no soil, and no cultivation could, apparently, ever be introduced; supplies, therefore, would either have to be carried or collected beforehand. The latter plan would probably work best, as every additional camelman or camel helps to drain the resources of the road.

Baluch camels or some species of camel used to travelling over stones and boulders must be employed. The ordinary camel of Sindh is quite unsuitable for military purposes in this country, as a few quick marches reduces him to a condition in which he cannot be ridden at all.

Supplies are now obtainable in small quantities from the store depôts at the different stages, but troops would have to carry supplies, although it might be possible to collect a small amount from the Nushki and Dalbandin cultivation, or supplies could be laid in along the route from Nushki at one end and from Seistan at the other. From Chah Sandan (stage 11) to Seistan the supply of firewood is very scarce, but is plentiful in Amalaf and Saindak *nalas*.

It is only between Tratoh and Mukak *karez*, a stretch of 95 miles, that anything approaching a waste is crossed. Even here patches of grass are to be found in every *nala* bed, and, as far as camel grazing is concerned, there is sufficient for the requirements of caravans. After heavy rain, which is very rare in this country, the *nalas* crossed by the route become raging torrents for a few hours, cutting away the ramps which have been made where the road crosses them, and the alluvial soil becomes so heavy and sticky that camels can traverse it only with the greatest difficulty, but can generally make detours by the lower slopes of adjacent hills. The water lies in huge ponds amongst the sand-hills for some days after rain. The difficulties caused by rain are, however, not only unusual, but very temporary. As a military road, this route from Nushki to Robat has many disadvantages, the chief of which are the difficulty of local food and forage supply, and the badness of the water, as already noted, at some of the stages. There can be little doubt that both these disadvantages could be modified.

The route is at present impracticable for unmounted men or for British troops, as the stages are extremely long, all supplies would have to be carried, and on infantry worn out by forced marches, with no water obtainable between stages, the water of the wells would probably have a bad effect. Generally speaking, it is difficult to bring troops through Baluchistan by the trade route owing to the wells of saline water being at long intervals apart. The route could, however, by laying in ample supplies at all stages, increasing the number of wells and decreasing the distances between them, be made available for large bodies of troops.

There are three natural positions, where the road could be best defended against a force attacking from Seistan.

1. The mouth of the gorge at Hurmak, where the road leaves the level plain stretching from Seistan to Koh-i-Malik Siah, and enters the hills.

2. The point near Saindak, where the road after skirting for about 50 miles the line of the Mirjawa hills, enters the gorge leading to Saindak.

3. The point where the road from Robat enters the hills, about 12 miles before reaching Mushki Chah.

At each of these points, the approach is over level, open ground and near the mouth of the gorge a strong position could be taken up.

In the vicinity of Kacha Koh there is ample water for a division, as there is also in the Piran *nala*. The Piran *nala* is the furthest point westward along this route where a division could concentrate on account of the water.

Owing to the absence of physical difficulties a railway line could be quickly and cheaply constructed from Nushki to Koh-i-Malik Siah. By this route sand is almost avoided and stones for the ballasting of the lines are ready at hand. Alignments for a railway or metalled cart road would be nearer the foot of the hills, and slightly longer than the present route, to avoid sand and mud.

Major Scudamore reports on the signalling experiments made by him as follows :—

"The best line of practicable signalling stations from Dalbandin to Robat is given in the map attached to this report.

"The atmospheric conditions prevalent in the country militate against any prolonged or permanent success in maintaining a signalling line. Dense heat or dust haze is very common, frequently blotting out all view from 2 to 4 miles.

"This condition of affairs continues for four or five days in succession, and probably follows four or five days' sandstorms which render the atmosphere similar to a London fog.

"After a week or so of these conditions the atmosphere clears, and one could not wish for clearer weather or a more distinct view, but experience during the first three months of the year 1903 showed that days on which signalling communications could be carried on uninterruptedly were few and far between.

"The record run for heliographic communication is 73 miles, and even in Arizona, with the clearest of atmospheric conditions prevalent, this has not been beaten."

This Arizona record was nearly equalled by Lieutenants Rose-Price and Gordon who succeeded in establishing a record run for the 5-inch heliograph, *viz.*, 71 miles from Koh-i-Dalil to a point in the Kacha Koh, south of Maki (Muhammad Raza Chah)."

This direct run was established on a particularly bright clear day and continuous direct communication between these points could not be depended on.

Signalling stations were furnished as under :—

No. 1.	Dalbandin . . .	6 men, 38th Dogras.
„ 2.	Durrak Zand . .	6 „ 35th Sikhs.
„ 3.	Merui . . .	6 „ 38th Dogras.
„ 4.	Kardak . . .	6 „ 35th Sikhs.
„ 5.	Mizil	6 „ 37th Dogras.
„ 6.	Washab . . .	6 „ „
„ 7.	Hills near Mushki Chah	12 „ 36th Sikhs.
„ 8.	Koh-i-Dalil . .	12 „ 26th Punjab Infantry.
„ 9.	Amalaf . .	6 „ 25th „ 6 „ 26th „ All Muhammadans.
„ 10.	Beduk ridge .	6 men, 25th Punjab Infantry.
„ 11.	Maki ridge, 5 miles south-west of Chah Muhammad Raza	6 „ 15th Sikhs.
„ 12.	Kila Robat . .	6 „ 15th „

Posts 7, 8 and 9 were strengthened to 12 men in March 1903, partly because their camps were situated at some distance from the signalling station, and partly because the presence of extra men in the centre of the line admits of easier reinforcement to other posts in the event of sickness, etc. The stations at Durrak Zand and at Koh-i-Dalil were each distant about 6 miles from their water.

Fifty-eight camels and two ponies were employed on the whole line in lifting stores and water for the signallers. In spite of depressing circumstances and occasional heavy marching, and exposure, the parties all maintained excellent health, and there were only two or three cases of mild fever. (For a detailed report see Appendix V.)

Route No. 32. 3. *Robat (Koh-i-Malik Siah) to Nasratabad (Seistan), length 106 miles, 8 stages.*—After leaving Robat, which is the last halting place within British Baluchistan, and passing round Koh-i-Malik Siah, the trade route turns northwards and enters Persian territory. The track is fit for camel transport throughout, and might, with a little labour, be made fit for wheeled transport. Between Nawar Chah and Hauzdar, stages 2 to 4, the track is, however, liable to inundation when the Helmand *hamun* overflows. From Robat as far as Muhammad Raza Chah, stages 1 to 5, supplies cannot be obtained locally, but must be laid in from Seistan, where they are procurable in large quantities; thence onwards supplies are plentiful. At Girdi Thana and Hauzdar fuel and camel grazing are scarce, but at all other stages they are abundant. Water is abundant at all stages. There are levy posts for the protection of the route, and

serais at Hurmak, Nawar Chah, Girdi Thana, and Muhammad Raza Chah. At Hauzdar there is an old Persian fort, surrounded by a moat, which is occasionally full of water until late in April. The shape of the fort is oblong, and it has ten turrets on the high walls which are in good repair, with numerous houses and domes within the walls.

This route is populated and provided with supplies sufficient for the use of caravans nearly the whole way; caravans proceeding to Neh and Birjand, therefore, prefer this road to the more direct desert route from Hurmak *vid* Ledhi Chah, Gali Chah, Chungi Shor, Safidawa, Madeh to Neh, 159 miles, and thence to Birjand, which is 116 miles further on.

The road from Hurmak to Seistan has, however, many disadvantages for camels, the chief of which is the Seistani fly which causes them much trouble. On the whole, there is no serious obstacle to traffic on this section of the trade route, and under proper management the road might, no doubt, be made fit for wheeled traffic.

4. *Nushki to Kandahar, length 190 miles, 12 stages.*— During the greater part of the year *kafilas* travelling from Nushki to Kandahar prefer to keep along the western lower slopes of the Khwaja Amran range until they strike the Chaman-Kandahar road at or near Spin Baldak, a few miles north of Chaman. They then continue along the main road to Kandahar. Five alternative routes are, however, given, collected from native information, which take an almost straight line across the Registan between Jat Poti and Kandahar. These routes are interesting, chiefly from the fact that they tend to prove the assertion that, at certain favourable seasons of the year, the Registan is traversable in almost any direction, between the Helmand and the Khwaja Amran range. Route No. 1.

5. *Nushki to the Helmand river, length 169 miles, 14 stages.*— These are all routes from, or from near, Nushki leading across the Registan to the Helmand river. They are so similar that a general description is all that is required here. They are all difficult owing to want of water, except between the months of December and May. After good rains the water lies in the *nawars* for some months, and then it is that the Registan is said to be traversable in almost any direction. It may, at any rate, be taken as almost certain that it can, under the conditions mentioned, be traversed by the routes given. Routes Nos. 10, 11, 12, 13, 14 and 15.

The tracks are fit for camels, and, in some stages, are easy for all arms, but in others, owing to sand, must be considered as almost impassable for wheeled artillery. There is generally a good supply of wood and camel grazing. Were the inhabitants friendly, it is probable that sheep and goats in considerable numbers would be procurable.

The best route from Nushki to the Helmand would appear, from the reports, to be that given by Sheik Mohi-ud-din in 1889 *vid* Sinduri, Sher Shah Nawar, Kohi, Arab, Junu Khan, Maksud, Miren, Shekh Mulla Fakir and Basabat, a distance of 168½ miles

in 10 stages. The longest distance without water on this route is 32 miles between Arab and Janu Khan, and the next longest is 22 miles from Janu Khan to Maksud. At Janu Khan Sub-Surveyor Ahmed Ali Khan reports :—"The encampment and water are good with plenty of wood, grass, and forage for camels."

Routes Nos. 16 and 21 (*a*).

6. *Nushki to Khwaja Ali on the Helmand* viâ *Kani and Shah Ismail, length 221 miles, 16 stages.*—The first 55 miles of this route lie within British territory, but about 8 miles south-east of Kani the Baluch-Afghan border is crossed. About half-way between Kani and Gaza Chah the frontier is again crossed into British territory which is eventually left about 2 miles north of Gaza Chah on the road to Safia.

The road is easy in fine weather ; to the 80th mile it traverses a desert plain, the surface of which is a light hard alluvial clay, covered with camel scrub, and broken by occasional sand drifts. The road mostly avoids these drifts, and, except where they are crossed about Sinduri and Kani, affords good going for all arms and train animals in dry weather. In wet weather this portion would become heavy and slippery, especially for camels.

The most favourable time for moving troops from Nushki to the Helmand is in the cold weather; that is to say, in October, November and December, or after rain which falls about December and January, and very occasionally in July.

Between the 80th and 92nd miles the low range of the Kanuk hills is crossed by an easy defile practicable for guns. From the 92nd to the 111th mile the track traverses a gravelly plain running westward below the northern slopes of the Malik Naru range, and is excellent going for all arms in all weathers. From the 111th mile onward the travelling is over the usual gravelly and stony plain, but is somewhat interfered with by sand ridges which become very frequent between the 196th and 208th miles. Doubtless by daylight a good part of the sand might be avoided by judicious detours, but this portion of the route would be difficult, at least, for wheeled artillery.

Water is good throughout the route, and in sufficient quantity for a brigade except between Galla Chah and Khwaja Ali, a distance of 56 miles, in which except in *nawars* after rain there is a complete absence of water, although it may be obtained probably by digging. All the wells throughout the road would have to be cleared out or fresh ones dug. With the exception of fuel and long grass and a few hundreds of sheep no supplies are available.

The main column of the Seistan Arbitration Commission traversed this route in January and February 1903, but on this occasion water was found in a *nawar* called Jelal Khan, 25 miles from Galla Chah, and 23½ miles from Khwaja Ali, thus breaking the waterless stage between these two places, which is variously estimated as from 56 to 48½ miles.

The strength of the column was 988 men and 1,467 camels, and there was everywhere a sufficient supply of water except at the rain water pool of Jelal Khan.

The Commission experienced bitterly cold weather and lost a number of camels on the road, and a few followers. Three different routes were used by the Mission to cross the Registan to the Helmand, and the following is the account of the three routes traversed, given by Colonel A. H. McMahon :—

"(1) From Galur *viâ* Nawab Khan Chah to Landi Wali Muhammad. [Route No. 19 (*a*).]

(2) From Salihan *viâ* Arbu to same place. [Route No. 22 (*a*).]

(3) From Mamu to Khwaja Ali *viâ* Galla Chah. [Route No. 21 (*a*).]

"These routes have proved very easy and satisfactory ones. The distances without water work out as follows, *i.e.*, in the case of—

(1) 54½ miles.

(2) 56 „

(3) 49 „

"No party had any trouble in getting ample water at the watering places for their requirements. Until two old wells now filled up at Nawab Khan Chah are cleaned out, it would perhaps be unwise to send a large number of men by that route, but our whole force* could easily have gone in one party by route (2), and a very much larger force than our combined one could have come by route (3).

"Apart from this several alternative routes can be used from Nushki to the points whence the start across the desert has to be made, *i.e.*, Galur, Salihan, and Mamu, with as much or more water at their different stages as on the route we traversed. Another good route across the desert leads off from Sukaluk to Khwaja Ali, a distance of about 48 miles. There is ample water at Sukaluk, which can be reached by either the route we now took to Mamu or *viâ* Robat and the route taken by the Baluch-Afghan Boundary Commission in 1896.

"I mention this to show that, as far as water difficulties are concerned, there is nothing in the country between Nushki and the Helmand to impede the advance of large bodies of both men and animals."

Although Khwaja Ali is less than 2,000 feet above sea level, the nights were cold, and the Mission experienced about 10 degrees of frost.

This route offers a line for a railway from Nushki to the Helmand valley and thence to Seistan.

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* *Strength*—

British officers	12
Warrant officers	2
Native Attachés	3
Men	1,464
Horses	156
Riding camels	49
Baggage camels	2,200

Route No 17. 7. *Kani to Shah Ismail* viâ *Umbai, length 41 miles, 3 stages.*—From Kani an alternative road shorter and more direct than that *viâ* Galla Chah and Kanuk leads through the Kanuk hills *viâ* Umbai to Shah Ismail.

There is, however, less water, and sand drifts render it heavier than the Galla Chah road; in addition there is a heavy gradient on it. This road *viâ* Umbai is that generally taken by caravans, who consider good grazing and short distance preferable to water-supply.

There are no supplies along this route, except camel grazing and firewood which are plentiful. Water is obtainable at all stages, sufficient for a small force. More could probably be obtained by digging.

Route No. 18. 8. *Saiad Bus (Shorawak) to Zaru, length 84 miles, 3 stages.*—This route connects Jat Poti with the Nushki-Shah Ismail route. It is probably fit for all arms and camel transport; there are no supplies obtainable on the road, but firewood and grass are plentiful, and, except in summer, water is abundant.

Route No. 19. 9. *Zaru to Safar on the Helmand, length 114 miles, 8 stages.*—The ordinary route to the Helmand is undoubtedly by Shah Ismail and Khwaja Ali. A direct desert route, however, is given by Captain Roome from native information.

There is no water for 60 miles between stages 3 and 5, but water is obtainable at all stages except at stage 4, and fuel and camel grazing are probably plentiful.

Route No 19 (a). 9. (*a*) *From Galur to Landi* (*left bank of Helmand*) viâ *Nawab Khan, length 78¼ miles, 5 stages.*—This route was followed by a column of the Seistan Arbitration Commission consisting of 3 British officers, 76 men and 98 camels in January 1903.

Major Wanliss reports on the transit as follows:—"A considerable amount of traffic passes over this route; *kafilas* from Landi proceed to Dalbandin and Mashkel, and barter grain in exchange for dates.

"Sufficient water and grazing for the above party was found at all stages except at Alangi Pat, 13½ miles from Galur and 12½ from Nawab Khan Chah, but this appeared a likely spot to obtain water if a well were sunk, and in years of rainfall probably a considerable body of water collects here.

"The going is good throughout for baggage animals, but would be very difficult for wheels in the first few miles from Galur and the last few miles from Landi owing to heavy sand. Except fuel and camel grazing there are no local supplies."

Captain Webb-Ware, who accompanied this column of the Commission, says that he has verified the statement that "Nawab Khan Chah is one of a line of wells which marks the junction of the Registan and the Lut. This line of wells starts from Shoro and Nok Chah, two wells about 2½ miles west of Nawab Khan Chah, which have of late been allowed to fall into disuse, and extends eastwards in an almost unbroken line of 60 miles or more. The names of these wells and the distances apart as gathered from

local information are given below. From each group of two or three wells tracks take off to the Helmand":—

Haiyat Chah, 3¼ miles to Gami Chah, thence

8	„	Sarak	„
13	„	Behman	„
2	„	Abdul Nabi	„
4	„	Karam Khan	„
3	„	Janu Khan	„
3	„	Ruhdaiu	„
3	„	Chatuk	„
4	„	Mahmahasi	„
3	„	Fakir	„
4	„	Safar Khan.	

Route No. 20.

10. *Husen Nawar to Bagat on the Helmand, length 124 miles, 3 stages.*—This is another desert route, which, owing to the long distances without water, cannot be regarded as useful for the movement of troops.

Routes Nos. 22 and 22 (a).

11. *Shah Ismail to Deshu on the Helmand, length 117½ miles, 4 stages.*—Instead of proceeding from Nushki to Galla Chah *vid* Shah Ismail and thence to Khwaja Ali, it is possible to proceed direct across the desert from Shah Ismail *vid* Arbu, striking the Helmand at Landi Wali Muhammad Khan. This entails a march of 65 miles without water; the desert is good going for camels, but probably too sandy for wheeled traffic of any sort. After striking the river the road more or less follows the river west to Deshu; on this part of the route water is abundant and supplies are procurable in "reasonable quantities." From Deshu the road may be followed along the river to Khwaja Ali and so to Seistan; there is also a direct road to Chakansur, and another road leads across the river north to Kash, Khor Malik, and Farah.

There is no doubt that 10,000 men or more could easily be marched from Seistan along the Helmand to Girishk. But it seems hitherto to have been considered that the routes across the desert were impracticable except for small raiding parties.

But in 1901 Captain Webb-Ware pointed out that a force of 10,000 men with necessary camel transport could, with a little care and arrangement, be marched across the south-west portion of the Registan desert, especially if the assistance of the Registan Baluch tribes were first obtained.

Shagul Khan, Loharzai Mamasani Baluch, is the head of the nomads of this district of Western Registan, and his assistance would be of the first importance for such a march.

It is evident that, were it possible for such a force to cross the Registan in a body, the trade route, or a railway aligned on the trade route, would, in time of war, be a precarious line of communication for an army in the field on the western frontier.

In January and February 1903 a large party of the Seistan Boundary Commission with 900 camels crossed the Registan by

this route, and, with the exception of the want of water between Arbu and the Helmand, it was found to "present no difficulties for infantry, cavalry, and pack transport.

"There are, however, a few places where sand-hills are met with and, though some of these might be avoided, the route would be difficult in places, though not impracticable for guns and wheeled transport."—(*Douglas.*)

As far as difficulties of water-supply are concerned, it is considered that 1,000 men with the necessary transport could easily cross the desert by this route alone, and, perhaps, in a favourable year, double this number might be got across. As there are several other routes by which it is possible to cross the desert, it may perhaps be allowed that Captain Webb-Ware's estimate was sufficiently reliable as a rough calculation.

Rou es Nos. 23 and 24.

12. *Nushki to Chagai.*—There are two roads. The direct road *viâ* Muhabbat and Thal is 86 miles, 5 stages, and the longer road by the north of the Lora *hamun viâ* Sinduri, Husain Nawar, and Kani is 94 miles, 6 stages.

Both roads are fit for camels, but owing to sand drifts the direct road would be distressing to any troops, and almost impracticable for wheeled artillery; there are more sand drifts on the shorter road than on the longer road, which is also the Shah Ismail road as far as stage 5, and is good for marching and fit for wheeled artillery. The short road across the *hamun* would be impossible in wet weather, and it would then be necessary to use the longer route which avoids this *hamun*. Supplies must be carried. Water, fuel, and camel grazing are procurable at all stages, but water is not abundant, and at Thal it must be dug for. From Thal there is also the choice of passing round the south of the *hamun* by Zarala. Supplies in small quantities are procurable at Chagai.

Routes Nos. 25, 26 and 34.

13. *Chagai* viâ *Barab Chah or Mamu to Sukaluk.*—From Chagai there is again a choice of routes. The road to Sukaluk branches at the 42nd mile from Chagai, 6 miles before reaching Barab Chah. The left branch, Route No. 25, proceeds by an easy ascent of about 80 feet into the Barab Chah plain down the centre of which drains a shallow sandy *nala* which is good going for all arms. Thence *viâ* Samuli and Robat to Sukaluk, 89 miles, 7 stages. The right branch, Route No. 26, goes *viâ* Shorakin, Kuchen, Mamu, and Robat and is 94 miles, 7 stages.

There is a direct road from Mamu to Khwaja Ali skirting the western limits of a great desert, about 1,500 square miles in area; although shorter than the road *viâ* Sukaluk, it is so totally devoid of water that it is seldom used. The road *viâ* Robat and Sukaluk, on the other hand, is frequently used by *kafilas*.

Both the roads from Chagai to Sukaluk are fit for laden camels, but are inferior to the road leading from Shah Ismail to Mamu and Galla Chah, as neither the going nor the water-supply are so uniformly good and capable of development. For cavalry, however, and in a lesser degree for infantry, these would serve as useful auxiliary roads to the main line by Shah Ismail, or for all arms,

if the heaviest sandy portion of it lying east of Chagai be not taken into account. This sandy portion could be circumvented by using the trade route as far as Yadgar and thence proceeding by Route No. 34 to Chagai, a distance of 32 miles, reported fit for all arms, with water, fuel and camel grazing all along the route.

On the portion west of Chagai cavalry would find good grass at most points.

The road runs altogether among hills, passing over stony plains or through ravines, all rougher going than on the Shah Ismail road, though at no points abnormally so, or very rocky. There are no *kotals* of any difficulty, and it could be rendered practicable for guns with little labour. The water-supply is abundant, or capable of being made so, except between Doganan and Barab Chah where the existing supply is sufficient for small parties of travellers and is capable of development. Fuel and camel grazing exist throughout in abundance; also good grass.

The only other local supplies would be some 1,500 sheep at Chagai.

14. From Sukaluk again there are two roads leading to the Helmand across the desert. One to Khwaja Ali, a distance of 48 miles, without water or supplies, and the other to Deshu, about 50 miles, without water. **Routes Nos. 27, 28 and 29.**

The roads are, on the whole, good over a gravel plain, but about 4 or 5 miles of sand-hills are encountered between the 18th and 22nd miles.

From Robat, south of Sukaluk, a desert road leads to Amir Chah in the Koh-i-Sultan mountain; but this road is of small importance and is unfit for the use of troops owing to the long distances to be traversed without water. From Amir Chah a desert march of 85 miles with very little water leads to the Gaud-i-Zirreh and so to the Helmand.

15. *Khwaja Ali to Juwain Fort* viâ *the Helmand river, 185½ miles, 13 stages.*—Having arrived at the Helmand river at Khwaja Ali, it is possible to follow the river bank either west and then north-west to Seistan, or east and then north by east to Girishk, from which latter place the road to Kandahar is easy. **Route No. 8.**

The first named route following the river to Seistan is 132 miles, 10 stages. The first three stages are good for wheeled artillery; the fourth stage is indifferent; in stage 5 repairs are required to make the road good for wheels. The fifth stage brings one to Chahar Burjak, and from this place there is a choice of crossing the river followed by this Route No. 8, or of continuing along the left bank as described under Route No. 9 following. The river is generally crossed at Chahar Burjak, 67½ miles from Khwaja Ali, but the ford there is capricious. The best of the regular crossings is said to be the Kukru ford, which is passed at 47 miles from Khwaja Ali.

If the destination of the troops were Seistan proper (Persian territory), and not Lash Juwain or Farah, the Helmand would not be crossed and the route would be continued to Nasratabad by No. 9. Even to go to Lash Juwain, the route through Seistan

proper would be the best, if a causeway were made across the neck of the Naizar.

From Chahar Burjak northwards the road on the right bank of the Helmand and east side of the *hamun* is liable to be interrupted by inundation, which, at times, covers a large portion of the plain. It should be remembered that the flood season of the Helmand and of all rivers in Southern Afghanistan is in spring. In the case of the Helmand the bulk of the flood water comes from the melting of the snows and the heavy spring rains in the Hazarajat. The July rains are uncertain and scanty in this region, and no local rain seems to affect the river, which is at its lowest in August. It then rises slowly at first, but more rapidly in February, and March and April are the flood months. The river is said to fall quickly after April, and then the Seistan fly makes its appearance, and the heat is great, while fever is very prevalent. When this road on the Afghan side of the river is under water, travellers go round by Chakansur, or even by Kadah, and appear generally to make for the Minar-i-Khwaja Siah. When the road is not flooded, it is practicable for all arms. There is no good ford for troops between Chahar Burjak and the Band-i-Seistan, but there are some which might be crossed by men mounted on camels.

At 108½ miles from Khwaja Ali a road branches from this road west to the Seistan *band*. The *band* is a dam made of bundles of tamarisk, stretching entirely across the river from bank to bank. The difference of the water-level above and below the *band* is 4 feet. The river above the dam is 350 yards broad and 10 feet deep; below it is about 129 yards broad. From above the dam, on the west bank, a canal called the Rud-i-Seistan takes off; it is 20 yards broad, and the water is about 8 feet deep. It goes to irrigate Persian Seistan.

From below the dam another canal takes off on the eastern bank, the river being again *banded* for the purpose. This canal is called Nadali; it is about 20 feet across, and 12 feet deep.

The navigability of the Helmand, beginning at Girishk, ends at the Band-i-Seistan. From this point the main road may be taken to Nasratabad, about 24 miles north-west, or the Nadali canal may be followed for 16 miles, when it is crossed and the road followed to Lash Juwain.

Route No. 9.

16. *Chahar Burjak to Nasratabad (Seistan) by the left bank of the Helmand, length 75 miles, 6 stages.*—Chahar Burjak is on the north bank of the river, but if proceeding from Khwaja Ali to Seistan, the river would not be crossed to Chahar Burjak, but halt would be made on the south bank. This road on the left bank is said to be never interrupted by floods, and the country people assert that Seistan proper has comparatively little fever, and is not an unhealthy district. This opinion is borne out by the Vice-Consul of Seistan. The road is over a level plain, and crosses the Traku canal in stage 1, another canal near Bandar Kamal Khan, stage 2, an old canal near Gur Haji, stage 3, one of the channels of the Helmand, 12 miles further on, in stage

4, and in stage 5 at 60 miles from Chahar Burjak it reaches the Kuhak canal, also called the Rud-i-Seistan, which is about 60 feet wide and 8 feet deep. This has to be crossed on rafts made of reeds, of which there were only two available in March 1872. There is a ford, 5 feet deep, lower down. It is probable that all these canals can be crossed in places by wheeled artillery, but the report is not clear about this, nor about supplies, water, fuel, and camel grazing which are probably obtainable at all stages.

Seistan district is very fertile, and abounds in supplies. With a causeway across the Naizar these supplies would be available at Lash Juwain, or in the higher and healthier district of Kala Kah.

Route No. 7.

17. *Kala Bist to Khwaja Ali* viâ *the Helmand valley, length 128 miles, 11 stages.*—The road follows the left bank of the Helmand, and the country for the greater part is cultivated and level. The road is in some stages described as being "good," but whether it is good for camels or for wheeled transport is not stated; it is probably passable throughout for laden camels, and perhaps for field artillery. It is probable that supplies are generally plentiful and water abundant.

Kala Bist is situated on the left bank of the Helmand about 2 miles above the junction of the Arghandab; from this place there are two roads fit for artillery leading to Kandahar, 99 miles, and one up the Helmand to Girishk, about 27 miles.

The following passages across the Helmand are noted on this route:—

1. At Gudar Barhana, 16 miles from Kala Bist, a ford leading to the cultivated and populous district of Zaras.
2. At Landi Wali Muhammad Khan, 78½ miles, a ferry where *masak* rafts are used. Here a road comes in from Nushki.
3. At Kala Sabz, 93½ miles, two fords in winter, girth deep, leading to the village of that name.
4. At Deshu, 105½ miles, a village on the left bank, and on the right bank immediately opposite is the fort of Kala Khan, and a road across the Dasht-i-Margo to Chakansur; here the road from Sukaluk comes in from the south; there is, therefore, almost certainly a ford near.

Route No. 41.

18. *Nushki to Nasratabad (Seistan)* viâ *Ekmach, Paniham, Amir Chah, and Galli Chah, length 427 miles, 21 stages.*—This route passes through Baluchistan as far as Amir Chah, stage 13; thence through Afghanistan to the 17th stage, and afterwards through Persia. It is fit for camels, and perhaps, as far as the going is concerned, for wheeled artillery, but it would be almost impossible to march troops along this road owing to the long distances to be traversed without water. Under present conditions, in order to get to Amir Chah by the easiest way, the trade route would be followed as far as Mirui. After leaving Amir Chah water is found at Zeh at 19½ miles; thence to Galli Chah, a distance of 88 miles, water is only obtainable in small quantities

at Dardan and Godar-i-Shah, and the water at these places is very brackish. Supplies must be carried, and the supply of fuel is scanty. This route is often used by *kafilas* from Seistan desirous of avoiding the Persian customs post at Hurmak (Koh-i-Malik Siah).

The following account of a journey from Seistan by way of Kuhak, Dak-i-Dela and Zirreh to Kirtaka by Captain MacPherson, Officiating Political Agent at Chagai, is of interest, inasmuch as it demonstrates the practicability of moving small bodies of troops across the desert even in the height of the hot weather, and also from the narrative of the nature of the difficulties likely to be encountered in such a journey.

The track followed is a *kafila* route joining the Nushki trade route at Kirtaka considerably shorter than the usual route by Kila Robat.

Bujir-i-Khusta, Kuhak in Seistan to Kirtaka, 16th to 20th June 1903.

"The detachment of 24th Baluchis, consisting of approximately 50 men, left main camp on the afternoon of 15th June, marched all night and arrived at the village of Dak-i-Dela, 25 miles, at daylight next morning. The same evening they marched on to Bujir-i-Khusta, another 7 or 8 miles. The track as far as Bujir-i-Khusta is well defined and over gravelly *dasht*. I joined the camp at Bujir-i-Khusta on the evening of the 16th June.

"At 5-30 P.M. on the 17th the whole camp, which now consisted of a sum total of 114 men with 105 camels and 8 ponies, set out for Zirreh. For the first 8 miles or so, *i.e.*, as far as Kila Afzal, there is no track at all; but the old fort at Kila Afzal forms a landmark on which to march when half the distance has been covered. At Kila Afzal there are about 20 houses and a couple of wells, the latter about a mile apart. The nearer of the two is said to contain the best water. The other well near which I halted for dinner contained scarcely any water at all. I fancy, however, by clearing and digging, the water-supply could be very largely increased. There was no water at all in the *nala*. After passing Kila Afzal the track again passes over gravelly *dasht* and is very well defined. There were at least half a dozen camel tracks, which would point to an extensive traffic along this route. The troops marched all night till 5 A.M., and camp was then pitched in the middle of the *dasht* near a *ziarat* known as "Ziarat-i-Haji." The spot selected for camping was unfortunately bad, as, had we marched another 2 or 3 miles, the camels would have found very fair grazing in a number of *nawars* which were passed along the track after this point. As it was, I am afraid the animals got literally nothing at all to eat. The total distance covered from Bujir-i-Khusta to Ziarat-i-Haji must have been a good 30 miles. The total water-supply carried from Bujir-i-Khusta was a couple of *chagals* and a water-bottle per man of the detachment and one *chagal* per man for remainder. In addition I also brought about 20 pairs of *masaks*. Unfortunately these latter leaked rather badly and, when we arrived

at Ziarat-i-Haji, the majority were only a third full and some quite empty. The supply, however, such as it was, was ample to see the party as far as Zirreh.

"At 4-30 P.M. on the 18th the whole camp marched off again. For the first 8 miles or so the track was over the same gravelly *dasht* and very well marked. Beyond this, however, and almost right away as far as Zirreh, the track is extremely difficult to follow especially on a dark night. As it was, on two occasions, our party, though accompanied by three guides, managed to lose the track and we had to retrace our steps once for nearly a mile. I do not think it is safe to travel over this part except by daylight, or when there is bright moon. Camp Zirreh was reached at about 4 A.M., and the total distance covered from the last camp was something like 25 miles. For about 5 miles before Zirreh is reached the track passes through a fairly dense tamarisk jungle and, for some 3 miles before that again, through sand-hills.

"At Zirreh, which is situated on the Shela, we found a pool of stagnant water, red in colour and incrusted with salt and, generally, as evil to contemplate and to smell as it was to drink. In fact it was hopelessly undrinkable for both man and beast. The only drinkable water is to be obtained from wells at the edge of the pool. There were a couple such when we arrived, but even the water in these was so bad that the majority of camels and horses utterly refused to touch it. We dug a few more wells at the edge of the pool in the hope of obtaining sweeter water, but the mistake was made of digging them too near the pool, instead of as far away from it as possible in the bed of the Shela, with the result that the water in these new wells turned out to be worse than that in the wells already in existence. These latter were subsequently slightly improved by digging and clearing, but the water was so bad that, by the afternoon, the whole camp was down with severe diarrhœa; and this state of affairs continued until Kirtaka was reached the next morning, and good water obtained. There is any amount of camel grazing all round Zirreh, but owing to the animals having been practically two days without water, the majority refused to graze. Another evil effect of the Zirreh water was that, so far from being thirst quenching, it seemed to have the opposite effect, with the result that, once a man began, he had to go on drinking it in greater quantities and this of course intensified the diarrhœa. Altogether what with the men down with diarrhœa, the camels ungrazed and unwatered for the two preceding days and the prospect of a 30-mile march ahead to Kirtaka, I must admit, at this point, to having felt somewhat anxious as to ever reaching Kirtaka. Indeed I very much doubt whether the men would ever have reached Kirtaka the next day had there not been nearly 40 spare camels by means of which followers and all were able to get a ride for a very great portion of the distance.

"We marched from Camp Zirreh for Kirtaka at 5-30 P.M. on the 19th. For the first 8 miles or so in the daylight the track was clear and the going easy. So long as it was light I rode on

ahead with my riding camels as far as possible so as to pick out the track for the main camp which was following. I was told there was a very difficult bit ahead through sand and I was anxious to accomplish as much of this as possible before dark, as the moon did not rise till 1 A.M. The sand-hills commenced at about the 8th mile and about 2 miles beyond this I collected a large quantity of fuel and made a bonfire and then rode on. A couple of miles beyond this I repeated this process and then went on again. Unfortunately it had become dark by now and we could only advance very slowly. After proceeding a little way we found ourselves in deep sand amongst sand-hills and it was evident we were right off the track. The guide, however, seemed pretty confident that it would be alright and we should soon get on to the track again, and so we blundered on for about another mile. At this point, however, I refused to go any further, as we were in a terrible mess, and, had the main camp followed in our tracks, which it was likely they would do, they could never have been extricated from the jumble of sand-hills. We therefore decided to retrace our steps, but it was so dark we could not see to do this and so just followed a general line. Fortunately after a while we saw the glow of one of the bonfires we had previously lighted, and by marching on this by sheer good luck we found ourselves, in due course, on the track again. As it was no good attempting to go on further, then in the dark we lit another fire and decided to halt till the main camp came up, which they did very soon afterwards. On explaining the mess we had got into to the two guides with the main camp, we learnt the pleasing intelligence that, had we attempted to continue in our previous track across the sand-hills, we should never have got out of them, as they continued in that direction for miles. It appears that at the spot where we got off the track if, instead of going into the sand-hills, we had followed the bed of a *nala* known as the "Katcho" *nala* which comes down from the hills between Kirtaka and Maki, we should have met with no difficulties at all and the track thenceforth right away to Kirtaka would have been very easy going. With the assistance of a lantern, which I was able to supply to the guides, they were able to get on to this track and, beyond the fatigue of a long march, there were no further difficulties along the route, and the head of our party eventually reached Kirtaka the next morning about 6-15 A.M., the rear-guard coming in at about 8 o'clock. The total distance from Zirreh to Kirtaka could not have been less than about 32 miles. The men were exhausted when they got in, and, as I have already stated, I do not think, under the circumstances, they could have accomplished the distance without the assistance of the spare camels.

"The sum total of these remarks is that I do not think the route is a safe one to march along except by day or by bright moonlight, and then only with good guides. The water at Zirreh, in its present condition, is about as bad as it can be and, as the marches from Bujir-i-Khusta are very long, *viz.*, 30, 25 and

32 miles, respectively, if troops are marched along it, especially in the summer months, a very large water-supply should be carried and also spare camels for the men to ride. The first march might be shortened by starting from Kila Afzal instead of from Bujir-i-Khusta, but in this case precautions would first have to be taken to see there was a sufficient water-supply at Kila Afzal. When I passed through there was a very insufficient supply there even for my small party.

"Instead of marching *viâ* Zirreh to Kirtaka it seems I might have taken an alternative route *viâ* Godar-i-Shah to Maki otherwise known officially as Chah Muhammad Raza (on the trade route). The only advantage of this route, however, over the Zirreh-Kirtaka route is that the marches are somewhat shorter. I was told that Godar-i-Shah lies on the Shela and is about 4 *farsangs*, *i.e.*, about 16 miles or a day's march above Zirreh. The water at "Godar-i-Shah" and at "Sham-Sher" is always good, whereas that at Zirreh is said to be always bad. The objection to the Bujir-i-Khusta-Sham-Sher route is that 8 or 9 miles of sand-hills are said to intervene and these are really unsafe to cross by night. There is said, however, to be less sand along this route than between Sham-Sher and Trakhun which track was traversed last year by Captain Webb-Ware.

"Godar-i-Shah and Sham-Sher are different places about 3 miles apart; both are on the Shela, but Sham-Sher is further up the river, *i.e.*, more to the west than Godar-i-Shah. The water at Sham-Sher is the better of the two; in fact, it is quite good, as the country about there is sandy, whereas at Godar-i-Shah it is *shora*."

Route No. 42.

19. *Nasratabad to Chagai* viâ *Jilejil and Ekmach, length 308 miles, 13 stages.*—The same want of water renders this route impracticable for troops between Nasratabad and Jilejil.

From a point a few miles south of Sehkoha for 185 miles to Jilejil the track runs across a desert through Afghanistan. Water is found at Huruk, 89 miles from Sehkoha, in small quantities; and again a small amount of brackish water is obtainable at Langar-i-Sultan, 13 miles, and at Salu Chah, 24 miles from Huruk; then there is a distance of 50 miles across waterless heavy sand to Jilejil. The latter place is a few miles west of Afghan-Baluch Boundary Pillar No. 176 on the Afghan side of the border at the north-western extremity of the Malik Naru range. Here water, camel grazing, and fuel is plentiful. The road then goes west to Patkok, where it is joined by the road from Khwaja Ali *viâ* Sukaluk, and whence a road strikes off for Butig *viâ* Diwanak and Lal Khan. The road now continues along the bed of a *nal* in a south-south-westerly direction, crossing the Gonshero pass into the Amuri river, the bed of which is followed as far as Pushtiwan springs whence the southern slopes of Malik Teznan are traversed to Mirui, the 10th stage on the trade route, 160 miles from Nushki.

Between Jilejil and Mirui water is good and abundant, and camel grazing and fuel plentiful. At Amuri, 29 miles from Jilejil, another road from Khwaja Ali *viâ* Sukaluk, Robat, and the Kadui pass joins in; it follows the Amuri south to Jalk *viâ* Chah Sandan, Solgaz, Paniham, Zaian, and Gali Chah, branching off from this route at Pushtiwan.

From Mirui the trade route may be followed to Dalbandin, whence there is a good road following the bank of a canal for about 5 miles; it then traverses a plain crossing the Bulo and Garmab streams, after which the Koh-i-Okar and Kisan Chapar hills are crossed into the Chagai plain.

Route No. 44.

20. *Chah Sandan to Saindak* viâ *Amir Chah, length 139 miles, 7 stages.*—The trade route was at first aligned to run by this road, but owing to the want of water at Sir Reg, which entailed a march of 37 miles from Manzil to Amir Chah, without water, and owing to the drifting sand, it is now aligned to pass south of the Koh-i-Sultan range. The heavy sand and scarcity of water on this road render it impracticable for ordinary military purposes, and for wheeled artillery.

Route No. 35.

21. *Butig to Jilejil, length 41 miles, 3 stages.*—Butig is the first stage on the route last discussed; this route connects it with Jilejil on the Afghan-Baluch border, whence there is direct communication with the Gaud-i-Zirreh, with Sukaluk *viâ* Robat, or with Mirui *viâ* Pushtiwan. On leaving Butig the road goes east for a mile and then over low easy hills to Lal Khan Chah. It ascends the bed of the Diwanak ravine and passing over a low pass in the western slopes of the Malik Naru range descends by a stony track to Patkok, thence over sandy level country, heavy in places, to Jilejil. Water, fuel, and forage are abundant along the road. From Jilejil to Pulaluk on the Helmand is a distance of 50 miles, without water, over a sandy desert.

Routes Nos. 43 and 48.

22. *Saindak to Amir Chah* viâ *Amalaf and Duzgi, length 70 miles, 3 stages.*—This is an alternative route to that discussed under Route No. 44, and of much the same nature. In fact, the best way to get to Amir Chah appears to be to stick to the trade route until Mushki Chah is reached and then to go north by Route No. 48, which is, however, bad going for camels. Another alternative is to go from Mushki Chah to Duzgi and thence by Route No 43, which gives the choice of two routes from Duzgi to Amir Chah, one of which is practicable for laden camels, but neither practicable for wheeled traffic.

Route No. 36.

23. *Meski to Zirreh* viâ *Amir Chah, length 198 miles, 5 stages.*—Under present conditions it is difficult to imagine any case in which a necessity would arise for troops to traverse this road, which may be considered impracticable. All the routes radiating from Nushki, and from the Nushki-Seistan trade route, to the Helmand have now been discussed.

It will be seen that, though none of them can be considered as devoid of serious difficulties for the march of troops, there are several from Nushki and from the line Nushki-Sukaluk leading to the Helmand, which can be regarded as practicable at the season of the year during which there is water in the *nawars*. The routes leading to the Helmand from the line west of Sukaluk as far as Koh-i-Malik Siah may be regarded as impracticable for anything but small *kafilas*.

The lines of communication south of the trade route have now to be considered.

Route No. 55.

24. *Dizak (Persia) to Nushki* viâ *Panjgur, the Rakhshan valley and Kharan, length 390½ miles, 22 stages.*—The Rakhshan valley route, from a military point of view, is, perhaps, one of the most important roads leading out of Nushki. It was traversed in February 1901 by the Political Agent, Kalat, accompanied by an escort, numbering, inclusive of troops, levies, and followers, about 500 men, with 100 horses and mules and over 300 camels. It is fit for camels throughout, and, judging from the report, could, with little difficulty, be made fit for all arms.

The only places not now practicable for wheeled artillery appear to be in the narrow passes between the Garuk and the Drug valleys south of Kharan, and in the Tafui gorge south of Nushki.

The water-supply along this route is good and capable of considerable development. Fuel is procurable at all stages, though scarce at a few, and supplies are procurable at Naoroz Kalat, Kharan, Isai (Panjgur), Dehak, and Dizak.

The importance of all routes leading west from Nushki depends, chiefly, on the importance of Seistan and of the Helmand valley. But their value is also dependent, to a certain extent, on the use that can be made of them as lines of communication in rear of a possible future line of defence between Quetta and the sea.

Route No. 161.

25. *Gwadur to Jalk* viâ *Talar pass, Parom, and Isfandak, length 321 miles, 17 stages.*—This is one of the main routes from the coast northwards to Jalk. It is fit for camels throughout in fine weather, but owing to the number of *kotals* to be crossed would not be a good line on which to make a cart-road.

The following are the passes which render traffic difficult:—

In stage 3 the Talar drift; in stage 7, Garuk pass; in stage 9, Palamgwaz *kotal* (3,360′); in stage 10, Dar Damagh *kotal* (3,691′); in stage 11, Kesri *kotal* (3,942′); in stage 13, six *kotals* averaging from 3,526′ to 4,203′; in stage 15, Bonsir *kotal* (4,786′).

From Isfandak, stage 14, to Jalk over the Bonsir *kotal* the road is good throughout and could easily be made practicable for wheeled artillery.

From Jalk to Ladis there are three routes:—

I.—By the desert, passing *viâ* Nahu and skirting the base of the hills west of the Tahlab river, with regard to which Jennings expresses the opinion that, even in its present condition, it is fit for wheeled traffic. The distance from Jalk to Ladis by this route is 122 miles.

II.—To the west of the above *viâ* Nahu and skirting the hills, 158½ miles.

III.—Still further west *viâ* Gusht and joining (II) at Bug, 189½ miles.

Route No. 49. 26. *Jalk to Hurmak* viâ *Ladgasht and Ladis, length 240 miles, 15 stages.*—There is another road from Jalk which, after passing by Ladgasht to Maksotag over level ground, follows close along the western bank of the Tahlab river.

Sub-Surveyor Ahmed Ali Khan traversed this road and reports that it is fit for camels, but very heavy in places for wheeled artillery. At six of the stages the water is brackish, but at the other 9 stages it is good.

This route crosses the following *kotals*:—

In stage 10 the Dar-i-Giaban *kotal* which is rather difficult for laden camels; in stage 12 the Bed pass by an easy ascent of about 200′; in stage 14 the Khan Muhammad Kushta *kotal* and the Shamidar *kotal*, both easy for laden camels, with an easy gradient on both sides.

At Hurmak the Quetta-Nushki-Seistan trade route is met.

Route No. 54. 27. *The Rakhshan river (West Panjgur) to Jalk* viâ *Kuhak and Isfandak, length 76 miles, 5 stages.*—This route is a more northerly alternative to that given in Route No. 55, and appears to be practicable for the passage of guns with a small amount of labour.

Between Panjgur and Kuhak the Mashkel river has to be crossed. This river would be a serious obstacle when in flood, probably causing a delay of several days. The bed which is bounded by steep cliffs is about 800 yards broad, and in ordinary circumstances there is running water of 3½ feet in depth in a channel of 20 yards breadth; guns could be hauled across.

Behind Kuhak the lofty Sianeh Koh extends east and west, some 8 miles distant, and to the foot of the mountain there is a steady rise. About 8 miles to the east lie the lower hills in which the Koh-i-Sabz terminates. Between these two ranges down the narrow interval called Tahank a road leads from Kuhak to the Mashkel river, meeting it on the north of the Koh-i-Sabz. Here the road branches, one branch following the Mashkel to Jalk, the other leading eastwards to Washuk and Kharan, running between the two great ranges.

From Kuhak there are said to be two roads to Isfandak; the lower and better road followed by this route keeps most of the way to the course of the Mashkel river, the other taking a slightly more northerly course. There is no pass across the Sianeh Koh by which laden animals can cross the range between the Mashkel passes and the Bonsir pass.

Two and a half miles east of Isfandak this road is joined by the road from Panjgur *viâ* Tump. From Isfandak the road turns north into the Shirando *kaur* and over the Bonsir *kotal*. The descent to the former and that from the Bonsir *kotal* are at present impracticable for guns; but as the whole distance is short, a few days' labour would suffice to make a good gun road. The Bonsir *kotal* cannot be turned in its immediate vicinity, but there is a road leading to Jalk *viâ* Patura which is said to be practicable for wheeled artillery; there is, besides, a road to Jalk *viâ* Dehak and Dizak. In fact, Isfandak is a junction of important roads, for from the south comes the road from Gwadur *viâ* Kej-Bolida and Parom; also a road from the coast *viâ* Mand-Pishin, the Nihing river, and the Shahri *kaur*; whilst from the west comes the road fit for wheeled artillery from Bampur. Thus Isfandak occupies a position of considerable strategical importance, commanding the roads from the north and west, and situated on the flank of the road from Jalk to Panjgur by the Mashkel passes.

Route No. 59.

28. *Kharan to Gurgarok, length 108 miles, 8 stages.*—The most direct route from Kharan to the Helmand lies over the hills north-west of Kharan by the Tatagar gorge, Zard, the Pirpuchi *kotal*, the Pishuk and Bulo streams to Gurgarok where the Chagai-Sukaluk road is joined. The road is easy for baggage animals and could, without difficulty, be made practicable for wheels. The top of Pirpuchi *kotal* is about 200 feet above Zard, and from it the view stretches out across the Dalbandin district to the Naru range, the line of road being clearly visible to the north down a long broken valley. After leaving the Kharan hills the road is across a level plain. Water, fuel, and forage are procurable at all stages.

Route No. 60.

29. *Kharan to Chagai* viâ *Seh Saman pass, length 74 miles, 5 stages.*—The most direct road from Kharan to Chagai lies over the hills north-north-west of Kharan by Eri Kalag and the Seh Saman pass, entering the Dalbandin plain at Shah Nawaz Khan. The road is fit for camels, but very steep and difficult in the pass; it could be easily made very fair by a working party of forty or fifty men in a few hours. Water is procurable at all stages, but supplies must be carried. The Seh Saman is also called the Raloi pass.

Routes Nos. 62 and 63.

30. *Kharan to Jalk or Amir Chah.*—Instead of crossing in a southerly direction the hills into the Rakhshan valley and then proceeding *viâ* Panjgur to Jalk, there is a more direct road following a line slightly south of west from Kharan along the southern slopes of the Ras Koh range as far as Gali Chah. The road is a level well-marked track, fit for camels and probably for field artillery. On the south lies the sandy Kharan desert, on the north the hills. Supplies must be carried, but camel forage and fuel are procurable throughout, and there are plenty of wells of which the water is drinkable. From Gali Chah at 106 miles from Kharan the road branches, one road passing south, the other north, of the Hamun-i-Mashkel. The southern branch continues *viâ*

Rahrau, Galugah, and Ladgasht to Jalk, which, by this road, is 198½ miles distant from Kharan. The road is good throughout, but sandy in places; from Ladgasht to Jalk, a distance of 25 miles, it passes over a flat, hard and waterless plain.

The northern branch from Gali Chah proceeds *viâ* Zaian, Paniham, and Isa Tahir, meeting the trade route at Kondi, thence the direct road may be followed to Amir Chah, which, by this route, is 206½ miles from Kharan. The road lies for the most part over a flat level plain, but, between Gali Chah and Zaian, the whole march is over heavy sand, difficult for well-laden animals, and probably almost impassable for artillery.

Route No. 39. 31. From Regin, which is passed at 90 miles from Kharan, a road, mostly used by *kafilas*, branches off *viâ* Sorap to Nuhli and thence to Mirui, 49½ miles, where it meets the trade route. Wood, grass, and water are plentiful at Sorap and Nuhli, but at the former halting place the water is brackish.

Route No. 47. 32. *Sehkoha to Kharan* viâ *Amir Chah and Kondi, length 384½ miles, 21 stages.*—This route passes north of the Gaud-i-Zirreh, then turns south. It is not suited for the use of anything but *kafilas*, and very small parties of troops. Kondi is the 13th stage on the trade route, 225½ miles from Nushki. The road from Kharan to Kondi *viâ* Galla Chah (173¾ miles) has been discussed under Route No. 63, which passed round the south of the Ras Koh range. This route passing by Paniham and Sorap turns east-north-east along the northern slopes of the Ras Koh range as far as Baluk. It then turns south-east by Zard and, crossing the Tatagar pass by an easy ascent with a difficult and steep descent for ¾ mile, goes down a *nala*, difficult in places, until it emerges into the plain, 30 miles west of Kharan.

From Kondi as far as Radoi Zonk the water-supply is very bad; between Paniham and Sorap, a distance of 43 miles, none is met.

Route No. 47 (*a*). *Rudbar to Amir Chah, length 73 miles, 3 stages.*—The route from Rudbar to Amir Chah, which is the difficult portion of Route No. 47, is commonly used by all caravans proceeding to or from Kharan, Panjgur and Eastern Mashkel, and is an important route west of the Galur-Nawab Khan route. Except for small parties of troops, carried on camels, and for caravans, this route may be regarded as impracticable.

It was traversed by Captain Webb-Ware in February 1903, and is thus described by him:—

"The first march is to Phullen *nawar*, distance 14¼ miles. On leaving the bed of the Helmand, at the 3rd mile, the track leads up a gentle slope to the summit of the plateau which runs parallel to the left bank of the Helmand.

"At the 7th mile the country begins to fall away sharply to the south, and reveals a huge, dry, flat depression, covered with saline efflorescence, which stretches away to the south-west as far as the eye can reach.

"Phullen *nawar* is situated on the edge of the lowest of the series of the drainage terraces which lead down to the shores of this inland sea.

"The *nawar* was 300 yards long by 50 yards broad and held an abundant supply of fresh water, the result of recent rain. This plain is the eastern extremity of the Gaud-i-Zirreh. Eight miles to the north-west of Phullen *nawar* is a spring of indifferent water called Chatok, for which caravans going north from Amir Chah usually make. The marches are: (1) Amir Chah, (2) Reg, (3) Chatok, (4) Kalat-i-Mardan Shah.

"About 3½ miles west of Chatok there is another well called Hirok, which has water of fair quality, but only sufficient to supply the needs of six to eight camels. A mile or so beyond Hirok is yet another well, or shallow water hole, called Lal Muhammad, regarding which no reliable information was obtained. The water in the well marked Salu Chah on the map is always indifferent and is undrinkable in the summer. The next march is across the desert from Phullen *nawar* to Phullen Reg, distance 31½ miles.

"For the first two miles the track runs amidst low sand-dunes, interspersed with patches of ground impregnated with salt, which form the northern shores of the Gaud-i-Zirreh.

"At the 7th mile the track strikes away to the south-west, and enters the main Amir Chah-Chatok route, which proved to be so well defined that there was no difficulty in following it up.

"The Gaud-i-Zirreh is left behind at the 13th mile and from thence onwards the track crosses one after another of a series of sand belts running east and west which overlie a black gravel plain. "Phullen" means in Baluchi "scattered" and the halting place, situated as it is in a small basin surrounded on all sides by detached sand-hills, fully justifies the name.

"The next march to Amir Chah, 27 miles, is even more arduous and the pen is unequal to describing the awful nature of the country through which it passes. To the east a line of sand mountains, to the west and north the saline depression just passed, and to the south the distant peaks of the desolate Koh-i-Sultan range framed the scene.

"First came *dasht* plain with sand heaped together in indescribable confusion; further on the ground became more confined and broken; and as the mountains were approached, a series of *nalas* choked with sand was traversed.

"Immediately outside Amir Chah the sand-dunes rise to a height of nearly 1,000 feet. It is the practice for caravans proceeding to the Helmand valley to halt at the foot of these hills their first day out and send their camels back to Amir Chah to be watered, preparatory to making a bold bid for the elbow of the Helmand. Usually by Chatok.

"In a country whose chief characteristics are sand, *pat* and *dasht* plains there is, naturally, nothing to prevent the traveller going from any one to any other point, but, at the same time, the tracks in actual use are limited in number and well known, and these are the only ones which can safely be used. The map shows three roads leading to Shah-i-Mardan, but the objective of all routes in this part of the country running north is Kila Afzal and the Helmand."

Route No. 64. 33. *Kharan to Jalk* viâ *Washuk and Nok Chah, length 224½ miles, 13 stages.*—South-west across the eastern end of the Kharan desert to Washuk, 75 miles, thence this route skirts the northern slopes of the Panjgur hills and the Sianeh range. For 20 miles before Washuk is reached, and for 6½ miles after, the road goes over heavy sand; elsewhere the road is good and fit for all arms, except that, after leaving Nok Chah, 178½ miles from Kharan, numerous *nalas* running down from the hills have to be crossed. Distances of 25 and 26 miles, without water, intervene between Shahnah and Pir Kanda, which latter is reached at the 204th mile. Supplies are procurable at Washuk and some at Jalk, but none at intermediate stages. On the whole, the camel grazing and water-supply on this route are very inferior.

Route No 65. 34. *Washuk to Jalk* viâ *Galugah, length 152 miles, 9 stages.*—This route is the same as Route No. 64 as far as Palantak, 121½ miles from Kharan; it then strikes off in a north-west by westerly direction. Except that it avoids the broken ground encountered on the other route, it has no apparent advantages over it, and the distances to be traversed without meeting water are even greater.

Route No. 33. 35. *Dalbandin to Jalk* viâ *Gali Chah, length 141½ miles, 7 stages.*—Dalbandin is the 7th stage on the trade route, 123 miles from Nushki. This is the most direct route connecting the trade route with Jalk, but it is not fit for the use of troops owing to the deficiency of the water-supply. Heavy ridges of sand are crossed on the road which make marching very difficult, and fit for lightly laden camels only.

Route No. 130. 36. *Panjgur to Meski, length 168½ miles, 10 stages.*—There are four passes through the Koh-i-Sabz range north of Panjgur by which roads run to Meski, and any of these may be followed. Commencing from the west and passing eastwards the passes are named the Grawag defile, the Bibi Lori, the Korkian, and the Palantak.

The Grawag defile is the most difficult of all these, and the Palantak is the easiest, especially with regard to railway construction. The Palantak is practicable for artillery, and the flood through this pass does not run so high as through the others. These passes are described in detail in the military report of Makran. It may be sufficient here to describe the route by the Grawag defile, which is reached at 29 miles from Dashtak Panjgur. The road winds through this defile for 10 miles, crossing and recrossing the stream many times. When the river is up, the track is impassable owing to the depth and swiftness of the current, but a road could be made, at a considerable expense, so as to be above the flood mark. The defile is very strong, abounding in excellent positions, but these could be turned by light infantry. It could also be turned to the west by a long detour following the Gazinda ravine and then the Tump ravine, emerging on the bank of the Mashkel at Tump. The road then crosses the valley between the Koh-i-Sabz and the Siahan ranges, a distance of 30 miles, when it enters the latter range by the Zoratti defile; this pass is similar to the Grawag pass, and is about 8 miles through. The Mashkel river is now crossed, and the road traverses a level gravelly plain for 37 miles *viâ* Mian Rud to Nalaf,

then heavy going is met for 30 miles over sand, or in the sandy bed of the Mashkel. At 149½ miles the road passing over arable land reaches Godar, an important site, as from it roads go to Chagai, Jalk, Naru, Tahlab, and Kharan. It would be a suitable place for a depôt, being the point where the river has to be left, and possessing soil which might be cultivated; here stores might be collected and sheep maintained. The road then passes for 14 miles over the salt encrusted bed of the Hamun to Meski. It seems probable that the more eastern route *vid* Zaian avoiding the Hamun would be preferable. This route is fit throughout for camels, and water is abundant as far as Nalaf, thence onwards the supply is precarious, but can be obtained by digging. Fuel and forage are abundant except at Mian Rud. From Meski the desert route may be followed north-west to Isatahir joining the trade route at Kondi, about 30 miles from Meski, and 235 miles from Nushki.

37. *Saindak to Ladis* viâ *Mirjawa, length 35 miles, 2 stages.*— One way to get from Nushki to Ladis is to follow the trade route for 31²¾ miles to Saindak, then branch off south-south-west and cross the Mirjawa pass, which is in parts extremely difficult for laden animals, and is about 8 miles in length. The western entrance of the pass is reached at 18 miles from Saindak. The easiest way however is to go to Mukak on the trade route, thence to Mirjawa, a short level march of 14 miles. Ladis is situated on the main road from Seistan to the south. The cultivation in the vicinity of Mirjawa and Ladis is said to be capable of considerable development, and it is hoped that this country may in the future furnish supplies for the use of travellers on the trade route. **Route No. 45.**

38. *Robat to Kirtaka* viâ *Bug Thana, length 57¼ miles, 3 stages.*—From Robat to Kirtaka by the trade route is 40¾ miles; this, therefore, is a longer alternative route; on leaving Robat it keeps a more southerly direction going west of the Kacha Koh as far as Said Langar, whence it turns west and passes through the hills by a track which is difficult for laden camels, but could easily be improved if necessary. The water-supply by this road is good and abundant, and camel grazing is plentiful. **Route No. 40.**

39. *From Mirjawa to Robat (Koh-i-Malik Siah), length 86 miles, 3 stages.*—This is an eastern alternative to the main route from Ladis to Robat, and links the latter, which is the most western point on the trade route, with Duzdap, whence some forage is obtainable; and with Mirjawa, whence it is hoped that supplies may eventually be forthcoming for the use of the trade route. The water-supply on this road is bad, and supplies must be carried; it is passable for camels. The country between Koh-i-Malik Siah and Ladis is barren, waste, and sparsely inhabited; there is no recognised track to follow, but water is to be found at the head of the Dar-i-Giaban river, Sataro, Bibi Mah Chah, and Siahcher Chah. The latter is situated about 2 miles south of Koh-i-Khwaja Misk. From Mirjawa there is also a road to Mukak, the 16th stage on the trade route from Nushki, distant 14 miles in a north-easterly direction. Major Showers on page 18 of his report of his tour in Makran and Mashkel, Part I, writes of Mirjawa as fol- **Route No. 50.**

lows:—"In proceeding from north to south the great mountain barrier of the Koh-i-Taftan can be turned on its east side by three roads (1) from Ladis *viâ* Sango, (2) from Ladis *viâ* Andai and Gazo, and (3) along the border *viâ* Gorani, Maksotag, etc. Mirjawa practically commands all these, and it is therefore a position of great strategical advantage. An enemy moving south on Jalk and Dizak say would, if forced to march to the west of Taftan, not only be exposed to a flank attack, but he would also have to go a very long way round and by less favourable roads.

"A post at Mirjawa, too, would control the trade passing over the roads mentioned, and at the same time be a considerable protection to the Nushki trade-route against the Damanis."

Route No. 166.

40. *Duzdap to Bampur, length 195½ miles, 12 stages.*—From Duzdap, which is 25 miles to the south of Koh-i-Malik Siah, the main Seistan-Bampur road may be followed to the latter town. For 135 miles this road is fit for wheeled artillery, then the road is liable to interruption from floods, and there is no diversion which can be considered practicable for wheels. With this exception, the whole distance is, apparently, practicable for field artillery, and most of it for all wheeled traffic.

Supplies are not procurable on the road, but fuel, grass, and grazing are plentiful, and water is abundant at all stages, though brackish at the first two. It would appear that the best route from Koh-i-Malik Siah to the coast lies through Bampur, and passes entirely through Persian territory.

Routes Nos. 55 and 118.

41. *Nushki to Pasni* viâ *the Rakhshan valley, Panjgur and Turbat, length 466 miles, 30 stages*—This is the most direct through communication between Nushki (the eastern extremity of the trade route) and the coast. This route has been used throughout by small bodies of troops at different times. It passes south of Nushki through the Tafui gorge to Naoroz Kalat and Kharan. Thence it leads by the Garuk and Drug valleys into the Rakhshan valley *viâ* Shireza Kalat to Isai (Panjgur). From Panjgur by Route No. 118 it continues south-west across the Parom plateau passing by Diz through the eastern spurs of the Zamran range into the Bolida valley at Chib, thence through the Garok gorge, which is practicable for camels only in fair weather, to Turbat in the Kej valley From Panjgur there is an eastern alternative route *viâ* Balgattar into the Kej valley, which avoids the Garok gorge and is easy going for camels, but the water-supply by this eastern route is precarious.

This road from Nushki to Pasni is practicable throughout for camel or mule transport. Considerable labour would be required to make the passes, more particularly those between the Garuk and Drug valleys south of Kharan, and the Garuk gorge between Bolida and Kej fit for the passage of wheeled artillery.

Supplies are procurable at Naoroz Kalat, Kharan, in the Panjgur valley, and in the Bolida and Kej valleys, but it would be advisable to have previous arrangements made for their collection.

The water-supply would probably be sufficient throughout for a battalion of native infantry accompanied by a troop of cavalry and two mountain guns, or even for a larger force if measures were taken to have the wells cleared out beforehand.

Routes Nos. 117, 118, 125, 129, 130, 38 and 31.

42. *Pasni to Koh-i-Malik Siah* viâ *Turbat, Panjgur, Ladgasht, Kondi, and the trade route, length 561 miles, 31 stages.*—Direct through communication between the Arabian Sea and Koh-i-Malik Siah (the western extremity of the trade route within British territory) is best maintained by the Charbar-Bampur route which is practicable for a large force, but not for wheels throughout. An alternative route to the Charbar-Bampur route lying for the most part on the Persian side of the Perso-Baluch border is given in next para. 43. It may not, however, be at all times desirable to encroach on Persian territory when proceeding from the Makran coast to the western portion of the trade route.

This section therefore deals with a through route lying entirely within territories under British control.

It is not suited for forces accompanied by large numbers of horses and mules; gram, barley, and other horse grains cannot be locally obtained; the water-supply is not adapted for watering horses or mules along the road; grass and *bhusa* are scarce at many stages; and, finally, the country is either too broken or too sandy for the effective use of mounted troops. Infantry mounted on camels, with camel transport, would be mobile. The number of mountain batteries should be as few as possible, and even one regiment of cavalry would throw a great strain on the resources of the Supply Department. The above remarks apply equally to this route and to that discussed under section 43.

From Pasni as far as Panjgur the road described under para. 41 is retraced; thence the road passes *viâ* Route No. 130, through the Grawag and Tank-i-Zoratti defiles. From the northern entrance of the latter it turns north-west to Ladgasht, thence north again to Kondi *viâ* Godar, Meski, and Isa Tahir. From Kondi the trade route is followed for 147 miles to Koh-i-Malik Siah.

There are no difficulties for troops with camel transport except the Garuk pass, and the scarcity of water on the route north of the Koh-i-Siahan range.

Route No. 117.

43. *Pasni to Koh-i-Malik Siah* viâ *Turbat, Niwano, Dizak, Gusht, and Ladis, length 452 miles, 30 stages.*—This is the most direct route between Pasni on the coast and Koh-i-Malik Siah, but it passes through Persian territory. It lies to the west of the preceding route after leaving Turbat. The Kej Band range is crossed by a pass, 10 miles west of the Garok. This pass and that over the Zamran range north of Niwano have never been used by troops, but they probably present no great difficulties to camel transport. The northward march would be continued after passing through the Bampusht hills to Dizak onward *viâ* Gusht, Kamalabad, and Gazo to either Mirjawa or Ladis. This is the easiest and most direct route. An alternative goes *viâ*

Gusht, Khwash and Sango to Ladis, but the latter portion of this skirts the broken country round the eastern base of the Koh-i-Taftan. A third alternative *vid* Ladgasht was discussed under section 26 of this chapter. From the Ladis-Mirjawa valley there are at least three routes going north, *viz.*, direct up the open valley from Mirjawa to Duzdap, or, due north from Ladis *vid* Duzdap, or, from Mirjawa *vid* Mukak and the trade route. Under present limitations of water and supplies, a force larger than half a battalion with a troop of cavalry and two mountain guns would find considerable difficulty in traversing the entire distance.

CHAPTER III.

Fortified posts.

The fortified posts in the Nushki-Chagai-Sinjarani country are chiefly maintained for the protection of travellers on the Quetta-Nushki-Seistan trade route. These posts, or *thanas*, exist at Nushki, Dalbandin, Mirui, Saindak, and Robat. There are also *chowkis* at 13 other halting places on the trade route, and one off the route at Amir Chah (see Appendix I).

The *thanas* consist of four mud walls, rectangular in plan, flanked by four double-storeyed towers, one at each corner. They contain quarters for the thanadar, munshi, and levies; and in some cases, as at Saindak, enclose a flour-mill, post-office, *bania's* shop, and godowns.

At Mirui, in addition to the *thana*, a mud tower kept in good repair, is situated on the hill overlooking the *thana*.

These posts are held by the levy establishment under the orders of the Political Assistant. But it must not be supposed that they are anything more than a temporary protection against local robbers, for they are, as a rule, commanded by hills in their vicinity, and the walls of soft mud and brick would not stop a bullet from a modern rifle; moreover, the accommodation in most is very small.

Although the post at Amir Chah is not on the trade route as at present aligned, the post is maintained, because it is only four marches distant from the fertile wheat-fields of Garmsel, where supplies are always obtainable in unlimited quantities; it is the point of junction where four separate roads converge, and, while dominating the Koh-i-Sultan range, it commands the only watered road, west of Mirui, from Kharan and Mashkel to the Helmand. The post at Amir Chah is held by one duffadar and four sowars of the Sinjarani levies.

Chagai Fort.

Besides those mentioned above, there is at Chagai a square mud fort of 50 yards side, situated in a plain. The present Sinjarani Sardar is allowing this fort to fall into ruins, preferring to live with his tribesmen in a blanket tent. The water-supply of the fort is to be had from eight wells, each about 4′ in

diameter, with 1½′ of water lying 15′ below the surface; there is also one well at Suliman Chah, distant 1½ miles to the south-east. The quality of the water is good, and the quantity would only be limited by the time and means available for well sinking. Grass and fuel are abundant in the vicinity.

CHAPTER IV.

Climatic and Sanitary observations.

The best season for the movement of troops is from the beginning of October to the middle of April. In the late autumn, winter, and early spring the climate is agreeable, extremely dry, and apparently salubrious in spite of the great variations in temperature that occur.

Blizzards. There are, however, disagreeable storms, due perhaps to the sudden changes in temperature; these occur, as a rule, after mid-winter, and recur, frequently with great violence, until the beginning of April. Thick with clouds of sand the north-west wind sweeps over the open desert, piling up the sand against all obstacles, and filling all interstices. During these storms the temperature falls rapidly, sometimes even to below zero. After the wind has dropped the sand haze, which does not settle for two or three days, keeps the temperature down. These blizzards are seldom accompanied by rain or snow. Should snow fall on the plains, it never remains more than a few days.

The temperature of the plains north of the Kacha Koh and Koh-i-Sultan ranges is always less than of those to the south of these ranges, owing partly to their greater elevation, and partly to the fact that the sand of the Registan does not retain the heat, as does the alluvial soil of the southern wastes. In the Registan, even during the hottest weather, comparatively cool nights are experienced.

The summer. The hot season generally sets in early in April, and towards the end of the month the heat becomes excessive on the plains, more especially in the depression extending along the south of the Kacha Koh, Koh-i-Sultan, and Malik Naru ranges. The temperature at Panjham, west of Dalbandin, on the 2nd May 1897 is reported by Captain R. E. Roome to have reached 127° F. about midday in a double-fly hill tent.

At Nushki itself, during June, the average maximum temperature is said by Captain Roome to be about 110° F. in the shade.

Mr. Ouseley, representative of the Dehra Dun tea association, passed along the trade route in July 1901. He was very favourably impressed with the road, and ridiculed the idea that it is not a hot-weather route. He experienced no real discomfort from the heat, as bungalows had been built at nearly every stage. He took with him over 30,000 lbs. of tea, and did the journey in under a month.

He took the temperature at the different stages along the route, and the following is the list of temperatures recorded by him; temperatures were probably taken inside the bungalows:—

Date.	Name of place.	Time of day.	Thermometer reading.
28th June 1901 ...	Nushki	3 P.M. ...	94
29th „ ...	Mull	Noon ...	91
30th „ ...	Padag	„ ..	88
1st July 1901 ...	Yadgar	4 P.M. ...	96
2nd „ ...	Dalbandin	„ ...	91
3rd „ ...	Sotag	„ ...	89
4th „ ...	Merui	„ ...	95
5th „ ...	Chah Sandan ...	„ ...	100
6th „ ...	Tratoh	„ ...	101
7th „ ...	Kundi	„ ...	99
8th „ ...	Mashki Chah ...	„ ...	92
9th „ ...	Sahib Chah	„ ...	94
10th „ ...	Mokak Karez ...	„	95
11th „ ...			101
12th „ ...	Saindak Thana ...	„	97
13th „ ...			96
14th „ ...	Kirtaka	„ ...	92
15th „ ...	Chah Muhammad Raza ...	„ ...	95
16th „ ...	Robat Killa	3 P.M. ...	94

Wind. During four months, commencing from the middle of May, the *bad-i-sad-o-bistroz*, or 120 days' wind, blowing from across Registan, carries with it clouds of sand, obscuring the country in a dust-haze. Rising about 9 A.M. this wind increases in violence until the afternoon, then decreases till sunset, and there is usually a lull during the night.

Rain. Rain is looked for in December, and hoped for in the early spring, but the land is subject to long periods of drought. There is, however, generally sufficient to bring up a luxuriant growth of grass on the hill-sides and sand-dunes. Should this crop fail, the flocks must die, as, owing to the lack of irrigation works, there is no substitute in the country.

Medical observations. Sore eyes, often resulting in total blindness, is the prevailing complaint in the country. Glasses to protect the eyes are a necessity for travellers, who should also take a *chick* to hang over the door of their house during the day to keep out flies, sand and glare.

Stone in the bladder is somewhat prevalent amongst the inhabitants.

Ague and chest affections are not common, but on the 31st May 1901 the Political Assistant reports that "fever is very prevalent in the Saindak and Mirjawa districts."

CHAPTER V.

Resources.

The Nushki-Chagai-Sinjarani country is in course of development, and it may reasonably be expected that all its resources will increase to a very considerable extent when the country has enjoyed a more prolonged period of rest, and the advantages of tranquillity and orderly government begin to make themselves felt.

Agriculture. Judging from the remains of large irrigation works, and the traces of a former cultivation around the ancient ruined tombs and forts on the plains, the country was at one time far more cultivated than at present, and efforts are being made to encourage the people to settle on the land. It is important for the success of the trade route that food supplies should be locally procurable, and it would certainly increase the value of the country, from a military point of view, were it rather less of a desert than it is at present.

Crops. The principal crops grown are barley, wheat, and *jowari*. The method of cultivation is simple, and similar to that of India generally.

The area under cultivation is very small considering the amount of suitable land; the following are the chief reasons for this:—

(*a*) By far the larger proportion of the inhabitants are flock-owners. The country has been in an unsettled state for so long that it has been found more convenient to have all the property in a movable form. Standing crops would, to a certainty, have been destroyed by enemies.

(*b*) The scarce and intermittent rainfall and general want of water for irrigation purposes over the whole country. *Bands* and irrigation cuts were also liable to be destroyed.

(*c*) The character of the people who are too lazy and indolent to care about the hard manual labour necessary to raise crops.

(*d*) The proximity of the Helmand, where grain is plentiful and cheap. The year's supply being easily obtained by bartering a few sheep or goats.

Agricultural districts. The chief agricultural districts are the lands of the Dak, watered by the Lora river; the Nushki lands watered by the Kaisar river; the Baghak lands watered by *karezes*; and the Chagai lands near Chagai and Dalbandin irrigated by *karezes*. The produce is no more than enough to supply the requirements of the inhabitants in the vicinity. A large amount of grain is imported from Garmsel.

Fruit and vegetables.

There is almost a complete deficiency of vegetables and fruit. Onions are cultivated at Kalag in the Ras Koh range, and wild grapes are not uncommon. Melons are grown successfully, and potatoes and native vegetables might grow. Dates are only cultivated to a very small extent, and that only in the southern portion of the district in the vicinity of the Hamun-i-Mashkel, the principal date groves of the Sarhad lying just without the southern boundary of these districts. The following are the principal date groves within British territory and they are all to the south-west of the Hamun-i-Mashkel :—¼ Ladgasht, Sorgaz, Akichay, Wadian, Gwalistan, ½ Analo, ½ Rodo, Bedi, ¼ Gawag. There is also a grove on the west side of Koh-i-Malikgat, but its cultivation has been badly neglected and the dates are very inferior. The Gwan (*Pistachio Cabulica*) grows on any of the hills, especially in the Chagai Sarlat.

Forage.

As in the other parts of Baluchistan *bhusa*, chopped wheat stalks, is used as forage for horses and mules. The local supply being insufficient, large quantities are imported from Seistan and the Helmand valley. Horses readily eat and flourish on dried or green *barshow* grass, which is found in the plains; it grows in clumps and, when young and tender, forms excellent forage; when dry it has the consistency of small dry twigs. Horses will also exist on the *drubh* and *sabak* grasses. In the mountains after a good rainfall there are many grasses that can be used as fodder, but nowhere is there sufficient for grazing horses; all must be cut and brought in. The slightest shower of rain in the spring months brings up a profuse growth of the grass locally known as *vega*, which is good grazing for flocks. On account of the scarcity of grazing for horses the country is not suitable for the movement of large bodies of cavalry.

The supply of grass grown is not sufficient to supply the requirements of a force travelling with horses or with mule transport; in such a case everything would have to be carried. Camels, however, can everywhere find sufficient grazing; but in dry seasons camel grazing becomes very innutritious and arrangements should be made for a grain ration for camels on the march.

Although the winter is generally said to be the best time of the year for the movement of troops in this country, it would appear, from the perusal of a large number of reports, that, during the early winter months, both the camel grazing and water-supply are in their very worst condition. After the spring rains, however (should there be any), the grazing becomes green and succulent, and the water-supply is renovated: the springs, which in winter contained a nauseous and unwholesome mixture, become fit for man to drink, and remain so perhaps as late as June, or even later. It is therefore probable that troops would find less difficulty in moving between March and July than between October and March.

Fuel.

The *tagaz* bush, and the tamarisk, which afford grazing for the camels, also form excellent fuel, the latter being also used as hutting material. There would be little difficulty in collecting fuel sufficient for a brigade for one night anywhere, except in the

southern vicinity of the Koh-i-Sultan ; even here there is a small bush, the roots of which may be used as fuel. In the mountain regions the dwarf-palm grows in the *nala* beds, and, like the *tagaz*, burns well even when green.

Building wood.

For building purposes the Padah (*Populus Euphratica*) is probably the best, though very scarce. The tamarisk grows to a large size near Baghak, Mekhmall, Dalbandin, Chagai and in the *nalas* of the Lar Koh range, and does for rough building. Use could also be made of the date palms near Malik Gat and of the *Gwan* trees growing on most of the mountains.

Water-supply.

Water is more generally distributed over the country than was at one time supposed. The tract of land lying west of Manzil and north of the Koh-i-Sultan and Drana Koh, and the desert lying between the two roads from Kharan to Jalk appear to be the only waterless regions in these districts. In the plains east of the Chagai Sarlat wells are more frequent than to the west, and, though a large proportion of the well water is brackish, the inhabitants and animals of the country drink it without any apparent ill-effect. Appendix II gives a list of wells in Nushki district and the adjacent Registan, made out before 1891, since which more wells have been dug.

In the Registan, after rain, water collects in the *nawars*, or depressions forming tanks amongst the sand-dunes ; there is then no difficulty in moving anywhere about the country. Portable filters should always be carried.

Amongst the hills springs are frequently to be met with, and the water is good.

Wells have been opened at all stages along the trade route.

Trade.

Trade converges on Nushki from five different sources :—

(*a*) From Jalk *viâ* Galla Chah and Dalbandin, chiefly dates.

(*b*) From Seistan *viâ* the trade route, sheep, goats, local Seistani products, including *ghi*, wool, *namdahs* and carpets.

(*c*) From Garmsel *viâ* Khwaja Ali and Sukaluk, *ghi*, wood and grain.

(*d*) From Eastern Helmand *viâ* the Purdil Khan road, wool, *ghi*, grain and dried fruits.

(*e*) From Shorawak, by numerous routes across the frontier, *ghi*, wool and grain.

The Nushki *banias* used to conduct their purchases through trusted Baluch agents to whom they advanced large sums ; these purchased at the different centres such local products as they could obtain, and in due course despatched them through Nushki to Quetta.

When accounts were made up the profits realized were equally divided between *bania* and agent. This is no longer the practice The Baluch now all come into Nushki.

Commerce.

The commerce of the Nushki-Chagai-Sinjarani country is chiefly confined to the trade route, which runs through the whole length of the land from east to west connecting Quetta with Seistan, and thereby connecting Indian and Persian commerce.

The following are the figures of the maundage and the value of the trade, as given by the Political Assistant, Chagai, during the past four years :—

Year.	Maundage.	Value. Rs.
1897-98	19,966	5,89,929
1898-99	23,116	7,28,082
1899-00	61,917	12,35,411
1900-01	52,000	15,34,452
1901-02	...	19,89,858
1902-03	...	10,40,299

These figures up to 1902 show a steady and progressive advance made by the Nushki-Seistan trade route during the course of its existence. When the railway has been carried from Quetta to Nushki, it seems probable that a further increase of trade and traffic will result.

The chief exports are wool and assafœtida; and imports wheat, dates and silk.

Products.

The staple products of the country are wool in the rough, *ghi* and assafœtida. The wool finds a ready sale and is of fairly good fibre. It is in some demand now in the Karachi market for export home. The *ghi*, especially that made round Chagai, has a good reputation.

A very large amount of assafœtida is collected during a good harvest and exported to Hindustan and elsewhere where it fetches a good price.

People come from great distances, Hari Pal and Babars from the Takht i-Suliman, and men from Kabul and Kandahar, to collect the plant during harvest time in April.

Manufactures.

There are no manufactures of any importance, and the small amount of cotton and *numdah* fabrics manufactured are for home use entirely. The women-kind make a few carpets for their own use, which are of good texture and pattern, and the dyes are fast.

Camels.

The indigenous camels are not to be compared in size and strength with camels bred in Sind and the Punjab, and three maunds (240 lbs.) are as much as they can be calculated to carry. The riding camels of the country are slow and of inferior staying powers. Camels are used for agricultural purposes, and milch camels are kept on account of their milk, from which also *ghi* is manufactured. Nushki, Chagai, Dalbandin and Mirui are the best centres for purchasing camels. But the owners are easily intimidated and would, on the slightest provocation, drive their animals across the border.

Some years a disease called "*ghur*" commits great ravages amongst the camels. In the summer of 1898 many thousand were said to have died of it. The first symptoms are mange, the camel losing all its hair, the skin becoming very hard to the touch. This is followed by extreme debility which generally ends in the death of the animal. No native remedy seems to do any good. This disease makes its appearance after a succession of dry seasons, and is highly contagious. The natives say that it is due to the accumulation of sand and salt on the *tagaz* bushes, on which the camels graze, during these dry years.

A few horses are owned by the *Sirdars* and used for their private riding; there are practically no other horses or ponies in these districts and horse-breeding does not promise to be successful. There are no donkeys or mules, but the wild ass is found near the Hamun-i-Mashkel. **The equine race.**

It is difficult to estimate the numbers of the flocks of sheep and goats, which, with the camels, are the chief source of livelihood of the inhabitants, because, owing to the nomadic habits of the owners, the grazing grounds are constantly changed according to the season of the year. Probably 40,000 head might be found after good spring rains in the Chagai Sarlat, and reports place the numbers grazing in the Registan at about 30,000 sheep. **Sheep and goats.**

The best centres for purchasing sheep and goats would be the Dak, the Kacha Koh range, Sarhad, Southern Seistan, and, most especially, the Chagai Sarlat or Malik Naru range. In the Kacha Koh sheep and goats would be obtainable only in the spring of good years, *i. e.*, when grazing is plentiful.

Bullocks and cows are very scarce throughout the country. Fowls too are scarce, and, beyond Nushki bazar, are seldom kept by the Baluch. **Cattle, etc.**

In the hills the ibex and wild sheep, or *gud*, abound, and leopard may occasionally be met with. **Wild beasts.**

In the plains chinkara and the Persian gazelle are generally found, and the wild ass, or *gor*, is to be seen in some numbers near the Hamun-i-Mashkel and the country between the Kacha Koh and the Gaud-i-Zirreh. It grazes on the adjoining plains, and retires to the *hamuns* during the day. These animals are frequently shot as they come to drink at the springs on the outskirts of the hilly tract north-west of Jalk; their flesh is esteemed a delicacy by the Baluchis. Hyenas, jackals, wolves and foxes are not uncommon.

Vultures, kites, hawks and ravens are common; sandgrouse are plentiful and breed in this country; chikor and sisi may occasionally be found in the Chagai Sarlat. When the *hamuns* and larger *nawars* hold water, duck and water-fowl of all descriptions collect on them in vast numbers **Wild birds.**

Venomous snakes are common, and lizards of many varieties, including the *regmahi*, which looks half snake and half lizard, and is found in the sand-hills. Flies, mosquitoes and sand-flies exist in enormous numbers, and the white-ant is found everywhere. Locusts breed in large numbers in the sandy desert north of Amir Chah. **Reptiles.** **Insects.**

There are several localities from which salt is obtained, the most extensive deposit lying in the eastern portion of the Hamun-i-Mashkel; here the salt is two feet thick over an area of several square miles. **Minerals.**

The principal localities in which metals may be found are at Saindak, Koh-i-Robat, Lar Koh and Drana Koh. Alum, saltpetre and sulphur are found in very considerable quantities, the Koh-i-Sultan being the chief place of deposit. Here also is found red and yellow ochre which is used by the inhabitants for dyeing purposes. Oriental alabaster is found at Malmal Ghisir, a few miles north of Juli, and at a place just south of the Koh-i-Dalil.

CHAPTER VI.

Ethnography.

Nushki.

Nushki originally belonged to the Mandai tribe, who were, many generations ago, superseded by the Rakshanis from Kharan. The Rakshanis were in turn overcome by the Mengals who also appear to have come from Kharan; but the latter, being a pastoral tribe, did not annex much of the land which remains for the most part in the hands of the Rakshani cultivators.

Mengals.

The Mengals are divided into two great branches, *viz.*, the Badini and the Nozai.

The Badini Mengals are subdivided as follows:—

(*a*) Bajezai, with sub-sections or *tomans* the Paindzai, Mirzazai, Somari, Kamarzai and Chandiazai.

(*b*) Tarasizai, with sub-sections the Mazarzai, Ahmadzai, Saifuddini, Ghewari, Muridzai, Gazozai, Zagarzai and Totazai.

(*c*) Amirzai, with sub-sections the Pindokzai, Muradzai, Shahozai, Zangizai, Barfizai, Mengalzai, Moghalzai, Changozai and Malikzai.

The Nozai branch is divided into the Mahmudzai, Mandai, Ahmadwani, Baranzai, Muhammadzai, Daizai and Muhammad Shahi.

All the Nozai branch of Mengals and the Tarasizai division of the Badini branch are migratory, that is to say, that, while owning extensive lands in the *dak* on the southern side of the frontier, they pass the greater part of the year, and in years of drought the entire year, pasturing their flocks in Afghan Registan.

The Mengal number in all about 700 men. The Sardar of the Mengals is Muhammad Ali Khan, Bajezai Mengal.

Rakshanis.

The Rakshanis are also divided into two branches, *viz.*, the Badini, the senior branch, and the Jamaldini who have amalgamated with the Mandai, the original inhabitants.

The Badini are divided into the Balazai, Isazai, Yalanzai, Fakirzai, Sor Rakshani, Ghabarzai, Kamarzai, Gurgej, Izatzai, Jahindzai, and another division known as the Makki who emigrated many generations ago to Seistan, where its members now reside. They continue, however, to acknowledge the Sardarship of the Badini Rakshani chief, and are subdivided into the Rahmanzai, Shakarzai, Jogezai and Mir Khanzai.

The Jamaldini, amalgamated with the Mandai, who are not of Rakshani descent, are divided into the Karamzai, Shakarzai, Ramdani, Pehlwanzai and Amirzai, and number in all about 450 fighting-men.

Miscellaneous tribes.

In addition to the Zagar Mengals, Rakshani and Mandai tribes, some *tomans* of the following tribes also reside in or around Nushki:—

(*a*) Sayad, under the leadership of a peculiarly sacred Sahibzada, named Pir Muhammad Shah, numbering about 12 families.

(*b*) Mamasani.
(*c*) Samalani.
(*d*) Barech.
(*e*) Lango.

The various factions of Mengals and Rakshanis have been constantly at feud for many years past and the feeling between them is the reverse of friendly.

Chagai.

The Chagai district is inhabited, irrespective of miscellaneous *tomans*, by three important clans, *viz.*:—

I.—Sayads.
II.—Sinjarani.
III.—Mamasani.

Sayads.

The Sayads were the original inhabitants of Chagai, but they were driven out by Sinjaranis from the Helmand after a sanguinary battle, and retired to the Malik Naru hills; they now number about thirty families only.

Sinjaranis.

The Sinjaranis having conquered Chagai took possession of the rich lands south and south-west of the Lora Hamun.

They seem never to have been very numerous, but, by the aid of a small standing force, they quickly made their influence felt throughout the large stretch of country now known as Chagai, raiding occasionally as far afield as the trans-frontier Persian province of Sarhad.

Memasanis.

By far the most important tribe, as regards numbers, now inhabiting the district is the Mamasani, branches of which are to be found all over the district from the Ras Koh-Kambaran range to Seistan. Those inhabiting British territory are divided into the following nine sections:—Mandozai, Kairai, Kyazai, Yagazai, Hajizai, Kalagani, Darakzai, Sihzai, Shahezai, Sihezai.

They have the reputation amongst their neighbours of being bad friends and bitter enemies.

Miscellaneous tribes.

The miscellaneous *tomans* inhabiting the district may be divided into two classes:—

(*a*) Permanent residents.
(*b*) Migratory tribes, who come for pasturage for their flocks and herds.

Of the permanent residents there are 28 classes, mostly Taokis and Sayads, and of the migratory inhabitants there are 21 classes, who are chiefly Mamasanis and Rakshanis.

Western Sinjarani.

The Western Sinjarani country is very sparsely inhabited; there are few herds, and no cultivation of importance, except at Mirjawa, where a few hundred acres of land are cultivated by Rekis.

The inhabitants belong for the most part to the Mamasani tribe, nominally subject to Sardar Shah Gul Khan who lives in Koh-i-Pusht, but in reality uncontrolled.

A few date groves in the Mashkel district of Western Sinjarani are cultivated by the Damani tribe, whose head-quarters lie within Persian territory.

Rekis.

Reki is the term applied to that section of the Rind tribes who took possession of the low country north of the Koh-i-Sianeh range in the sandy desert.

The limits of the Reki tribe are clearly defined. Taking the fort of Chigird in Jalk as the starting point, the base of the Siahan range forms the southern limit; the Bibi Lori river and Javen Kaur on the east; Rek-i-Wakap, a high sand ridge, and the wells of Kalandi and Kondi on the north; the Rek-i-Malik, a sand-hill near Ladis, the Koh-i-Duran and the Chah-i-Jango on the west.

Within these limits are the palm groves of Deghwar, the delta of the Mashkel, a part of Jalk, and, besides, a great area of waterless and unprofitable tracts. The Reki chief, Sardar Muhammad Raza Khan, also owns property in the Dizak valley, and Kuhak originally belonged to the Rekis. The history of this tribe is a record of constant feuds with their neighbours. They were formerly subjects of the Khan of Kalat, and to this day they bear bitter enmity towards the Kharanis. They pay tribute to the Kharan Sardar and complain that he treats them with harshness.

Damanis.

The Damani inhabit the country between the Rinds and the Kurds and are said to be of neither race.

They are divided into four clans, the Yar Muhammadzai, the Gumshadzai, the Surazai and the Gungozai, and they all own allegiance to Jahind Khan who resides with his fellow clansmen in the rocky fastnesses of the Safed Koh. The Gumshadzai are divided into three sub-sections, *viz.*, the Dandazai inhabiting the country round Safed Koh and towards Gusht; the Yarmazai who are again subdivided into Surabzai and Husenzai and inhabit that part of Sarhad which lies south of the Koh-i-Taftan volcano; and the Charizai, who inhabit the country round the Koh-i-Birik, west and north-west of Sib.

These are the greater Baluch tribes inhabiting Sarhad, and the Damanis are allied by an ancient treaty with the Rekis of Jalk and Mashkel, or Deghwar. The agreement between them is said by Mr. G. P. Tate of the Survey Department to be as follows:—"These tribesmen are to assist the Rekis with an armed force in all their feuds; in return, the date groves of Maksotag are given to the Dandazai tribe.

"Gaze, another grove of date palms, is given to the Charizais on the same terms. The date groves of Gorani and Rindi are made over to the Yarmazais on the same conditions. These tribes regularly migrate from their mountain fastnesses to the plains of Deghwar in which the above groves are situated (west of and close to Ladgasht) when the dates commence to ripen. They encamp among the palm-trees until all the fruit has ripened and been gathered in, after which they return to their abodes in the hills."

Miscellaneous.

Between Chagai and Dalbandin, and up to these places over the great waste between them and the Helmand, the

Koh-i-Safed and Paniham, roam indiscriminately, Naoshirwanis, Sinjaranis, Mamasanis, Taokis and various other Baluch tribes.

Although Seistan is not within the limits of this report, it is so closely connected with the Sinjarani country that the Baluchis of Seistan may well find a place for mention here. The Baluchis of Seistan and the Afghan-Perso border are fine men; their clansmen extend south through the ill-defined portion of country known as Sarhad to the south of the Nushki route, and to that part of the country known as Persian Baluchistan. Their sympathies are entirely towards the Indian Government and they look with contempt on the rule of the Persians. Sardar Sayad Khan, Narui Baluch, is the leading Baluch Sardar of the Afghan-Baluch-Seistan border. He has been expelled at different times from both Afghanistan and Seistan owing partly to personal quarrels, and partly to the intrigues and corruption of Persian officials. Sardar Khan Jahan Khan, who has thrown in his lot with Sardar Sayad Khan, may be regarded as the next leading Sardar of the Seistan Baluchis.

Habits.

The Baluchis are very unclean in their habits, and seldom wash themselves or their clothes. They always move about armed with a various assortment of cutlery in their waistbands, and a matchlock, whose effective range is about 100 yards, slung over the shoulder. From youth up the Baluchis are accustomed to bear the burden of a formidable and weighty armament so that they are inured to it. Their lives are spent in petty skirmishes; their only amusement is quarrelling with their neighbours. Sometimes organised raiding parties proceed to clean out a certain tract of country. Some of these consist of as many as 500 or 600 men, mostly mounted on camels, the chiefs and their personal followers may be on horses, and there is a small proportion of footmen, for the Baluch is a splendid walker and can cover long distances, and the *shikaris* or hunters are fine cragsmen and second to none.

Language.

In the Nushki-Chagai-Sinjarani country and also in Sarhad the language of the country is Baluchi, but in Western Sinjarani and in Sarhad the Persian language is thoroughly understood.

Character.

The people are very hospitable, and amongst themselves practice a reckless generosity. It is not considered good manners to allow a stranger ever to be alone, and they come in squads in turn to keep him constant company.

To retail news and to transmit it is a conspicuous trait in their character, and it is, therefore, easy to collect information, but not so easy, though most necessary, to verify it.

The Baluchis display none of the dense and unreasoning fanaticism so common among the Afghans.

CHAPTER VII.

History.

The Nushki-Chagai-Sinjarani country has little history to boast of, either past or present.

Not very much is known of its ancient history. The terraced fields met with in the villages round the base of the slopes of the

Ras Koh mountain, and in Jallawan and lower Baluchistan are known all over Baluchistan as *Gaur-bastas*, and are attributed to the ancient infidel inhabitants, or Gaurs. These infidels appear to have been an industrious race more highly civilised than the present Muhammadan population. In the footnote on page 66, Gazetteer of Central Asia, part III, treating of Baluchistan, it is said that these *gaur-bastas* are the handiwork of the ancient people known as Pelasgi, or the wall-builders of Europe; and the date 1800 B. C. is assigned to them.

The next trace of the ancient history of the country is found in the square-shaped tombs, whose interiors still show traces of the original colours and designs of the glazing, and whose architecture is somewhat elaborate. The Baluchis say that these are the graves of a people whom they style Kai-ani, and who were not Musalmans. From an examination of bones found in these it appears that they were a well-grown race, averaging nearly 6 feet in height. The outside of these buildings are adorned with rude figures in low relief, representing horses, camels, bullocks, giraffes, peacocks, tigers or panthers, men on horseback armed with spear and sword, a representation of a ship, and another of a man on foot stalking an antelope with bow and arrows on his back and a weapon like an arquebus held in both hands. The local Baluch traditions assert that their ancestors found the country depopulated and a wilderness, and colonised it. It seems possible that these tomb people are they who worked the copper mines, and, from the immense deposits of slack found, it appears that there must, in former days, have been a large supply of fuel. It is possible that the now barren hills may then have been well wooded. Traditions of invasions from the north and north-west still exist; but these are very vague, and the invaders are always said to have been Moghals. Mengal, indeed, is probably but a corruption of Moghal. However this may be, the country being, from its configuration, exposed to inroads from the north, and rendered very unsafe, it was deserted by its former inhabitants, and colonised, first by the Rinds at the end of the 16th or early in the 17th century, and, at a later date, by tribes of nomads, who found in it pasturage for their flocks, and who were the ancestors of the present tribes of Baluchistan.

In later times parts of the country have been under the rule of the Khan of Kalat, the Sardar of Kharan, and the Amir of Afghanistan. The Boundary Commission of 1896 defined the limits of the control of the latter, and in June 1899 an agreement was entered into between the Government of India and His Highness the Khan of Kalat under which His Highness the Khan ceded all rights in Nushki to Government in consideration of a quit-rent. Previous to this Nushki was in a state of lawlessness and anarchy, and subject to raids from all directions.

The Boundary Commission of 1896 under Colonel Holdich fixed the Perso-Baluch boundary, but the frontier north of Ladgasht was never demarcated on the spot, and this will now be done by joint British and Persian Commissioners.

The history of the Nushki-Chagai-Sinjarani country since the appointment of the Political Assistant, Chagai, on the 15th November 1896 has been one of steady and consistent progress.

The country which was then unsafe for travellers may now be traversed in any direction: trade is increasing yearly, wells and *karezes* are being opened up, and cultivators are being encouraged. Occasional raids are still committed by Damanis and trans-frontier tribes, who are ill-controlled by the Persian Government, but the number of these raids is decreasing, and internecine feuds are becoming more and more rare.

In December 1901, owing to disturbances caused by the outlaw Muhammad Umar Khan and the Damanis under Jiand Khan, the Political Agent in Kalat, Lieutenant-Colonel H. L. Showers, left Turbat for a tour along the Perso-Baluch frontier, and with a view to combined operations with the Persian authorities for the punishment of the delinquents. A full account of Muhammad Umar will be found in the military report of Makran.

500 sabres, Sindh horse.
2 guns, Murree M. B.
300 rifles, 1st Baluchis.
20 men, Bombay Sappers and Miners.

In addition to seven Baluch Sardars and one duffadar with 15 levy sowars the Political Agent was escorted by the troops marginally noted who were under the command of Major M. J. Tighe, D.S.O., 1st Baluchis.

The whole party, including troops, sardars, and followers, numbered 1,200 persons, when all together. The country from Gwadur northwards to the trade route was traversed by this party without the occurrence of a single hitch or mishap, a period of two months and seventeen days from the 17th January to the 2nd April 1902 being passed in Persian territory.

The principal results of this tour are thus summarised by Lieutenant-Colonel Showers:—

(*i*) The capture of Nodiz fort, resulting in the death of two of Muhammad Umar's brothers and of either the death or capture of a large number of his followers and border miscreants.

(*ii*) A useful settlement with the Rind tribe regarding the payment of revenue for lands held outside Naud.

(*iii*) The punishment by the demolition of his fort in Mand of Mir Fateh Muhammad, Rind, who had been proved guilty of secretly assisting Muhammad Umar and his people.

(*iv*) The demolition of Sardar Shah Jehan's fort at Magas probably the strongest fort in all Persian-Baluchistan.

(*v*) Obtaining from Shah Jehan compensation to the amount of Rs. 17,966, of which Rs. 9,983-11-5 has been actually made over to the Nazim, while of the balance of Rs. 7,982-4-7, a sum of Rs. 2,982-4-7 is to be paid within two months, *i.e.*, by the 24th May 1902, under the responsibilities of Sirtip Nawab Khan, and the remaining Rs. 5,000 will be discharged by eight annual instalments, the Deputy Governor of Bampur being responsible for the payments.

(*vi*) The obtaining from Sardar Jiand Khan, Damani, of compensation to the amount of Rs. 17,472-3-11, of which Rs. 5,296-12-2 has actually been delivered over, while the balance of Rs. 12,175-7-9 is to be paid by ten annual instalments, the Persian authorities being responsible for the payment.

(*vii*) The obtaining from Mir Ali Muhammad and Bairam Khan, Baranzais, of compensation to the amount of Rs. 5,704-6-2, the whole of which has been delivered over.

(*viii*) The surprise and capture by our troops of Irafshan fort after an all-night march. Such an event must have been a great blow to the people who pride themselves on the excellence of their information and think they can always outdo the authorities in this respect.

(*ix*) The occupation by Persian troops of the Irafshan fort.

(*x*) The capture and demolition of the forts of Ashar and Afshan in the Irafshan valley.

(*xi*) The cattle raid from Magas on the 8th January 1902, when Havildar Sobha Khan, 1st Baluchis, with eighteen men, captured nearly 400 head of cattle, killing five and wounding four of Shah Jehan's men who resisted the capture.

(*xii*) The cattle raids sent out by Major Tighe round Irafshan when 184 head of cattle were captured and two of the owners killed and two wounded.

(*xiii*) The capture of Mir Alam Khan at Irafshan which gives us a complete hold over his brother Azam Khan.

(*xiv*) The demolition of the forts of old Sarjo, old Shastun and Gusht in Dizak, Hoshaf in Jalk, and Gazo and two others in Sarhad. These added to the Irafshan and Magas fort make up a total of 10.

(*xv*) The occupation of two forts by Persian troops, *viz.*, Irafshan and Bampusht.

(*xvi*) A satisfactory settlement with Mir Ghulam Muhammad, Naushirwani, of Kuhak, whereby it may be hoped he will not for the present give further trouble either to the Persian authorities or ourselves.

(*xvii*) A useful arrangement with the Governor-General with a view to checking the importation of breech-loading rifles into Persian Baluchistan.

(*xviii*) Arrangements by which the Nazim can cross the border and act with the Persian officials in the pursuit of Muhammad Umar.

(*xix*) An arrangement with the Governor-General by which Muhammad Umar's wife will be expelled from Persian territory.

(*xx*) Measures taken by the Governor-General that should result in Persian territory being closed in future to Muhammad Umar or other outlaw from British territory.

(*xxi*) An important agreement under which the Nazim of Makran and the Deputy Governor of Bampur will meet annually on the border and dispose of current border cases.

(*xxii*) Arrangements for the Bampur-Gwadur *dâk* service in connection with which the Governor-General has made Sardar Ghulam Rasul responsible for the safe *dâk* through Persian territory.

(*xxiii*) I have now seen almost every bit of this border from Kej to near Malik Siah Koh.

(*xxiv*) I have gained a personal knowledge of the Mashkel country; and the rights of the questions (*a*) between Nauroz Khan and the Damanis, (*b*) between Nauroz Khan and the Rekis, have been ascertained.

(*xxv*) The new trade route has been traversed without the least inconvenience by some 300 troops; strong evidence of the excellence of the arrangements along the road.

CHAPTER VIII.

Administration.

In November 1896 Lieutenant F. C. Webb-Ware was appointed as the first Political Assistant, Chagai, to administer the Nushki-Chagai-Sinjarani country under the orders of the Agent to the Governor-General in Baluchistan. His special duty being to arrange for the safeguarding of the trade route and the protection of caravans.

At this time Nushki was ruled by the Khan of Kalat through a Naib.

This Naib appears to have absented himself from Nushki frequently, to have made no attempt to consolidate his master's rule, but to have been satisfied to view it year by year gradually slipping from his grasp, and to have confined himself to collecting an ever dwindling revenue.

The Khan's authority thus yearly was becoming more shadowy, and the various factions of Mengal and Rakshani quarrelled and fought, and were torn by dissensions to the detriment of all peaceful avocations.

The Political Assistant set to work to settle a large number of outstanding land and blood claims, and his action was so much appreciated that the inhabitants flocked to refer the most trivial cases for his decision. But after a year's experience he reported his opinion that "under the present *régime*, Nushki can neither be pacified nor can it prosper. The district is inhabited by so many lawless characters that the withdrawal of a single levy sowar injuriously affects the peace of the country."

In order to safeguard the trade route the Political Assistant had, to commence with, a staff of 4 thanadars, 22 sowars and 28 khassadar guides, and his first step was to establish four thanas

and five chaukis. He also commenced engaging the services of local Sardars, on the principle of allotting them pay for their services and holding them personally responsible for the repression of raids. Muhammad Ali Khan, the Zagar-Mengal Sardar, and Ido, the tomandar of Saindak, a former freebooter, were engaged under these conditions in 1897, and have since fulfilled their duties well.

Prior to the appointment of the Political Assistant, Nushki bore the reputation of being the mart in Baluchistan where slaves could be procured of the best quality, and at the cheapest rates. This trade has now died out.

During the year 1898-99 the necessity for introducing a reform into the prevailing administrative system was emphasized by no less than 12 frontier outrages, and by the attitude of the Mengals who threatened to throw off all restraint and raid into Shorawak to exact compensation for injuries done them. The Khan neglected to maintain any Kalat troops in the district and persistently ignored his responsibilities.

In the spring of 1898 he approached the Agent to the Governor General with an offer to surrender Nushki to the British on an annual quit-rent, and in June 1899 an agreement was entered into between the Government of India and His Highness the Khan of Kalat under which all rights in Nushki were ceded to Government in consideration of a quit-rent of Rs. 9,000 per annum. Since that time the decrease in the number of frontier outrages has been steadily maintained.

No sooner was this transfer effected than the entire administration of the country under report devolved on the Political Assistant, under the orders of the Agent to the Governor General in Baluchistan. Government erected at Nushki a dispensary, a sub-treasury, and a rest-house bungalow and serai for caravans; a police station was added to the Nushki tahsil, and improvements made in the thana. The dispensary was at once freely made use of by patients who came in from such distant places as Shorawak, the Registan, and the valley of the Helmand.

The Nushki trading bazar which in 1897 comprised 25 to 30 struggling shops had, in 1900, become a small town with 133 shops and 109 houses. During this period the Chagai levy establishment had been gradually increased, and posts erected at several places along the trade route (see Appendix I), and post offices were opened at Nushki, Dalbandin, Merui, Saindak and Robat.

CHAPTER IX.

Military.

From youth up the inhabitants of the Nushki-Chagai-Sinjarani country are accustomed to the use of arms. Their firearm, however, carries only about 100 yards, and they have no training in long range shooting or in the tactics required in using or opposing long range rifles. They are a hardy race, and have great mobility, being able to cover long distances; they are also very independent and accustomed to subsist in a desert country, but, owing to their strong objection to discipline, they cannot be made into good soldiers, nor will they take service in any regular corps. They are incapable of combination in large numbers and can therefore never be a formidable foe.

There are probably not more than 10,000 fighting-men in the whole of this vast country.

The levies entertained for the maintenance of internal peace, and for the protection of the trade route under the orders of the Political Assistant, Chagai, number 122 men and are distributed as shown in Appendix I. The numbers and distribution are subject to frequent changes.

PART II.

Gazetteer of Topographical and Ethnographical (including Personal) Information.

AB-I-FARANG.—

A small pool of water midway between Dozana and Chagai in the latter district. (*MacGregor.*)

AHMAD KHAN WELLS.—Lat. 28° 55′ ; Long. 63° 33′; Elev.

About 6 miles south-west of Malik Gat on the Kharan-Amirchah road.

AHMADWAL—

A *karez*, taking its rise on northern slopes of Koh-i-Jorakian and irrigating Baghak plain. (*Roome.*)

AHMADWAL.—Lat. 29° 25′ ; Long. 65° 59′ ; Elev.

A Mengal village, about 11½ miles from Nushki, on the road to Kharan. The halting-place lies about a mile beyond the village near a *karez* and tamarisk grove. Colonel Bell estimates that this village could supply about one hundred camels and two hundred sheep.

Fifteen huts. Headman—Muhammad Shah Khan ; inhabited by Mohammedzais, a sub-section of the Mengals. (*Bell—Roome.*)

AHMADZAIS—

Inhabitants of Northern Baluchistan about Band. They are a section of the Badini division, Zagar Mengals. (*q.v.*)

They do very little cultivation, but possess large numbers of camels ; also some sheep and goats, but not very many of the latter. (*Maitland.*)

AILSI RIVER—

A small watercourse rising in the Pushtiwan spring in the southern spurs of Malik Teznan.

AKHTAR CHAH—

A well containing plenty of good sweet water on the road from Bandigai to Bakal-i-Chah. This well is situated about 1,000 yards from the N. E. foot of Koh-i-Kambaran, and is a favourite resort of flock-owners. There is unlimited camping-ground, abundant fuel and *barshon* grass. (*Webb-Ware.*)

ALAICHAH.—Lat. 28° 22′ ; Long. 63° 31′ 30″ ; Elev.

A tract of country 10 miles from Galichah on the road to Zaian, belonging to the Jogizais. They were driven away by Sir Nauroz Khan of Kharan and retreated to the Helmand, but are beginning to come back again.

Sir Nauroz Khan filled in a great many of the wells of the country ; but some wells still remain, and the following are passed on the road at the distances from Galichah given below :—

At 10th mile a well close to the track, water 25 feet from surface, 2½ feet deep, 2½ feet in diameter, slightly brackish.

At 11½ miles, ¼ mile to the north of the track, a well, water 25 feet from surface, 2½ feet deep, 2½ feet in diameter, slightly brackish.

Between 12 and 13 miles, four more wells that have been filled in.

At 12 miles, 300 yards south of the track, one well, just under a low sand-hill and between it and the track, water 25 feet from surface, 2½ feet deep, 2½ feet in diameter, good. (*Roome.*)

ALAM KHAN WELL.—Lat. 28° 52′ ; Long. 64° 45′ ; Elev.

A halting-place on the Nushki-Ekmach road about 14 miles west by south of Dalbandin post.

ALANGI PAT.—Lat. ; Long. ; Elev. 2,957′.

A large depression among sand-hills, 13½ miles north of Galur on the road to the Helmand at Landi. It appears a likely spot to sink a well, and, in years of rainfall, it is probable that a considerable body of water collects here, but in January 1903 it was dry. (*Wanliss.*)

ALANJAN—

A plot of cultivation round a ruined fort, with a few nomad inhabitants in the vicinity, situated within a few miles of Ladis (*q. v.*). (*Benn.*)

ALICHA.—Lat. 27° 21′ ; Long. 63° 6′; Elev.

A spring of good water, 3½ miles south of Meshodi, on the road from Jalk to Kharan ; Meshodi being the tenth stage on that route as given by the sub-surveyor. (*Ahmad Ali Khan.*)

ALI SHAK PASS—

A pass in the Raskoh range between the Chagai and Kharan district. The road leading up this pass from Chasi is not difficult, but is narrow and stony till the top of the pass is reached. There is water just below the crest of the hill.

From the summit of the pass is seen a *hamun* called Wad-i-Sultan which covers the whole ground between the Raskoh range and the low Pulchota ridge.

The descent towards Padag-i-Pokdan is very difficult indeed, the path winding among huge rocks for 2 miles. This part is nearly impracticable for camels. (*MacGregor—Roome.*)

AMALAF.—Lat. 29° 14′; Long. 61° 42′ ; Elev.

A halting-place in North-West Baluchistan, situated in a dry river-bed to the east of Saindak Koh and 9 miles from Saindak. The first halting-place on the southern route from Saindak to Amirchah.

The springs are marked by some thick low jungle of tamarisk bushes. A small graveyard on a low mound is also close to them.

The bed of the *nala* is composed of coarse shingle and the water is within 1½ feet of the surface. Any amount of good water is quickly obtainable. It is best to dig fresh pits, as the water in the old pits is bad and tainted from standing. The country around is divided into a series of long valleys by parallel ridges of hills that run north-west and south-east, starting from the hills to the north-west and gradually diminishing in height as they approach the south-east.

This is a favourite halting-place of *kafilas* and their traces are numerous. Close to the springs on the left bank are the ruined remains of an old copper smelting furnace with a good deal of slag still lying about. Mosquitoes and midges very numerous.

Three miles up the Amalaf *nala* is a well six feet deep containing drinkable water known by the name of Idochah.

Camping-ground.—Unlimited.

Supplies.—Nil.

Fodder.—No grass.

Camel grazing.—Good ; abundant.

Fuel.—Abundant, *tamarisk.* (*Roome.*) (See also Appendix V.)

AMALAF RIVER—

Rising in the hills about 7 miles south of Saindak the *nala*, generally dry, flows north-eastward past the north end of the Koh-i-Amalaf and is lost in the desert. In its bed are the Ido well and Amalaf spring.

AMBAR.—Lat. 29° 33′ ; Long. 65° 39′ ; Elev.

If the march from Sinduri on the Nushki-Shah Ismail road to Umar Shah Nawar, 27 miles, is considered too long, a halt can be made at Ambar about 16 miles from Sinduri and 2 miles south of the main track. Here there is good water, but no forage or wood. (*Ahmad Ali Khan.*)

AMBAR.—Lat. 29° 26′ ; Long. 65° 57′ ; Elev.

One of the Baghak villages of the Nushki district.

AMIRCHAH.—Lat. 29° 13′; Long. 62° 31′; Elev. 3,508′.

Was formerly a halting-place on the Nushki-Seistan trade route, and owing to its important situation dominating the entire Koh-i-Sultan range and at the junction of roads from Zirreh, Chahar Burjak, Ladis, Kharan, Nushki and Robat a levy post of a duffadar and four sowars is still maintained here. The wells are 30 feet deep, with a plentiful supply of good water, and any amount of water obtainable by digging more wells. The camping-ground near the wells is restricted and surrounded by hills except to the east, but ¾ mile up the *nala* to the east on the Manzil road is space for a large camp. Flocks of sheep are grazed on the surrounding hills, and grass, camel grazing and fuel are abundant. In order to cross the desert from this place to Zirreh a march of 85 miles without water is entailed, and to Chahar Burjak is 80 miles without water except at one place named Chafok.

The elevation of Amirchah above the surrounding plain gives it a climate by no means unbearable, even during the hottest month. (*Webb-Ware—Roome.*)

AMIR-KHAN CHAH.—Lat. 28° 49′ ; Long. 64° 41′ ; Elev.

A well in a clump of *jhow* bushes in the Amir-Khan Rod. Four miles from Gat on the road to Mirui and ¾ mile north of the track. Water 8 feet from surface, 2 feet deep, 3 feet diameter. The water is good. (*Roome.*)

AMIR-KHAN ROD—

A shallow *nala*-bed crossed at 4th mile on the road to Mirui from Gat. An abundance of *barshok* grass, *lana* and *misk* growing in it. Water probably to be found anywhere in it at a depth of 8 feet. (*Roome.*)

AMIR PASS.—Lat. 29° 11′ ; Long. 62° 32′ ; Elev. 4,535′.

A pass over the northern spur of Damodim about 2 miles south-east of Amirchah, passable for laden camels.

AMURI.—Elev. 3,780′.

Belongs to 30 or 40 Hussainzai Taokis, under Malik Shah Sowar, who have made an excellent water channel containing an apparently unlimited supply of splendid water, and who cultivate a lot of the neighbouring land which is of a *pat*-like nature. The camping-ground is on *pat* close to the *karez*, and is surrounded by low granite hills. There is abundance of camel-grazing and grass, and, when the Taokis are present, sheep and goats can be obtained at low prices in small quantities. The magnetic bearing from Amuri to Malik Naru is 300. By following up the Amuri *nala* one comes into the Kadui pass, reported to be a rough stony pass leading to Robat. (*Webb-Ware.*)

AMURIDAF—

The name of the camping-ground on the road between Paniham and Sukaluk (*q. v.*) in North-Western Baluchistan, and 8 miles from Amuri Kaur (*q. v.*). There is abundance of water, fuel and forage. This road reaches the Helmand at Pullaluk, but from Sukaluk there is a march of 50 miles over sand with no water on the way. (*MacGregor.*)

AMURI-KAUR—

A *nala*, draining the southern slopes of the Malik Naro range, flows into the Hamun-i-Mashkel After heavy rain in the hills flows in a torrent and is impassable for a few hours. In this *nala* are Paniham and Chah Sandan.

It is probable that good water could be obtained anywhere in this Kaur bed by digging wells. (*Roome.*)

ANAM.—Lat. 29° 28′; Long. 65° 18′; Elev.

Sand ridges running east and west about one mile south of Husen Nawar in the Chagai district east of the Lora Hamun.

ANDAI.—Lat. 28° 45′; Long. 61° 29′; Elev. 3,500′.

A halting-place about 8 miles from Ladis on the road to Mashkel. A little over half a mile south of Andai the Ragzan river is crossed. It is about 10 feet deep and 200 feet wide. A permanent supply of good water exists, which takes its rise about one mile up the river. There are about 600 acres of ground under wheat cultivation close to this encampment. (*Ahmad Ali Khan.*)

ARABAN CHAH OR CHAH ARABAN—

A halting-place on road from Paniham to Sukaluk in North-West Baluchistan, and 40 miles distant from the former (no water between). Here there is water, fuel and forage, but for the intervening ground-water would have to be carried. (*MacGregor.*)

ARBU.—Lat. 29° 46′; Long. 64° 2′; Elev 4,377′.

A halting-place and hill in the Baluch desert on the route from Nushki to Khwaja Ali on the Helmand.

It is 25½ miles from Safia, and is situated at the foot of the northern end of the Arbu hill. There are two large water-holes here close to the rock. There is another watering-place about 1¾ miles from the camping-ground called Arbu Kani. The Arbu hill is a line of rocks not more than 100 to 200 feet high, except at the south end, where the hill may be 400 or 500 feet high. The material is a crystallised pudding stone. As the rocks stand on high ground they appear much higher from a distance.

The water at the northern end is known as Chagul or Chukul, a word signifying a waterfall or spring. The other water, which is 1¾ miles on, is situated on the eastern side of the northern end of the hill, and is known as Arbu Kani; *Kani* also meaning a water-hole. Here there is a big hole 8 or 10 feet in diameter, with a channel running from it for several hundred yards, but dry when the Boundary Commission passed in September 1884. The water is only a foot or two deep and is said to be a spring. In 1903 it was found that Arbu wells are situated under the south side of the hill, the main supply being a pool about 5 feet long by

3 feet wide, and an average depth of one foot. The water is good and sweet and the pool refills in 15 minutes after being emptied. The water-holes at Chugul are about 8 feet in diameter and the water is 3 feet deep in the upper one. The water is good, and was sufficient for the Boundary Commission. Both the wells are said to have been dug by Nasir Khan's army when it passed this way. By using both watering places and having wells cleaned out and dug beforehand a considerable force could be watered at Arbu, certainly up to 2,000 camels.

From Arbu Kani the head of Samuli bears due south; it is a fine hill looking like limestone and bears a resemblance to Chihiltan. According to MacGregor and Lockwood the distance from Arbu to Samuli is 24 miles, which Maitland considers correct. Trushpap is a hill somewhere to the west of Arbu and perhaps sometimes visible.

The country between Arbu and Samuli is as desolate as the rest, but is not a flat plain. There is sand on the road between Mamu and Galla Chah. *Kafilas* from Galla Chah come by Mamu to Arbu. To the north and north-east of Arbu there are low flat undulations and hills. The camping-grounds at Chukul and Arbu Kani are both good. The elevation of Arbu is about 800 feet above Nushki. (*Maitland—Douglas.*)

ARBU KANI.—Lat. 29° 34′; Long. 65° 6′; Elev.

A camping-ground on the road between Nushki and Galla Chah (route traversed by the Boundary Commission). *Kani* signifies a water-hole and this is situated under low rocks in front, that is, east of the high southern end of Arbu (*q.v.*). There is one big hole 8 or 10 feet in diameter, with a channel running from it for several hundred yards, but now dry, though showing signs of moisture. The water is only about 1 foot deep, but the place appears to be a spring. The guide declared that if 3 feet of mud were taken from it, the water would then flow. There is good ground for camping here. (*Maitland.*)

ASHKINAK—

A Sinjarani Baluch village on the right bank of the Helmand, 13 miles above Chahar Burjak. It consisted in 1903 of about 100 huts and 480 inhabitants. The village possesses 350 cattle, 300 sheep and goats, 20 camels and 40 ploughs, each plough producing on an average some 40 kharwars. There are said to be two fords across the river. The Khan is Shagul Khan, Baluch, head of the nomads of this district of Western Registan. (*Wanliss.*)

ASSAD-CHAH—Lat. 29° 49′; Long. 63° 45′; Elev.

Four miles north of Galla Chah.

The wells here have been filled in by order of Sir Nauroz Khan, K.C.I.E., of Kharan. As they are reported to be 60 feet deep, some difficulty would be experienced in clearing them out. The water here is said to be better than at Galla Chah. (*Roome.*) One well has been re-opened in 1901. (*Webb-Ware.*)

ASSAK-CHAH—

A grove of date-palm trees about 6 miles up the *nala* bed from Isatahir. Some signs of former cultivation and an old *karez* said to have been made by the Arabs. (*Roome.*)

AZNI RIVER—

Rising in the northern slopes of the Saruma mountain, flows into the Robat *nala* about 3 miles west of Barabchah.

BADAL KHAN KAREZ—

A *karez* that takes its rise in the Bagh-ke-Chashma and irrigates a portion of the Nushki and Baghak plains. (*Roome.*)

BADGAI PASS—

About 11 miles north-west of Kacha Koh.

BADID CHAH.—Lat. 29° 1′; Long. 65° 1′; Elev.

A halting-place, 73½ miles from Nushki, on the road to Dalbandin.

P. C. bearings—

To Mekh Rustam ... ... 333°
„ Raskoh ... ... 180°

One well. Water 20 feet from surface; 3 feet deep; 3 feet diameter. Flows in freely. In 1903 this water is described as "horrible, with overpowering stench, and filthy."

Camping-ground.—Unlimited.

Supplies.—Cereals *nil*. Sheep and goats might be obtainable at certain seasons of the year.

Fodder.—Grass very scarce.

Camel grazing.—Very abundant, consisting of *tagaz*.

Fuel.—Very abundant.

There is a large quantity of iron in the sand around here. Three or four handfuls of sand poured over a common magnet were sufficient to encrust it with a thick deposit of small particles of iron. The iron gives the sand a dark colour in many places. (*Roome—Scudamore.*)

BAGAT—

Two adjoining villages about 400 yards apart situated 3 miles south of Landi Muhammad Amin, consisting of about 500 Popalzais. The villages possessed 150 camels, 50 bullocks and cows and 100 sheep and goats, and the Khan was Ghulam Khan in February 1903. (*Wanliss.*)

BAGH.—Lat. 28° 52′; Long. 64° 25′; Elev.

A halting-place on the Kharan-Mamu road about 4 miles south-west of Dalbandin post.

BAGHAK.—Lat. 29° 29′; Long. 65° 59′; Elev.

A small village and plain of the same name, 7 miles from Nushki on the road from Nushki to Robat (Koh-i-Malik Siah). The inhabitants are Rakshanis (Kanderzai), the chief man being Baluch Khan.

There are two other small villages on this plain.

It is also a halting-place on the Nimarg road from Kalat to Nushki, 19 miles from Gorbarat. The direct road from Nushki to Kharan by the Tafui Kotal also passes through this place.

The plain is well irrigated by eight *kareses*, namely, Ahmadwal, Haruni, Shakkarp, Sirdarwal, Soro, which take their rise in the northern slopes of Koh-i-Jorakian; the Baghakwah, Nokju, and Badal Khan which take their rise in Bagh-ke-Chashma.

The flood overflow from the Kaisar stream irrigates the adjacent land. The soil of the plain is fertile, and the principal crops grown are wheat and barley with occasional patches of *jowari*. The people are entirely agricultural, and possess some hundreds of sheep, goats and cattle.

A small levy post has been built, approximately, 1 mile west of the village. There is ample space for a camping-ground near here and any amount of water can be obtained by turning on the Baghak *karez* and

filling a natural indentation of the ground close to the post. There is good camel grazing around and any amount of fuel in the vicinity. The levy post itself is a small one built of mud bricks and has two rooms; it is the first stage for the dâk between Nushki and Robat. (*Roome.*)

BAGHAKWAH—

A *karez* that takes its rise in the Bagh-ke-Chashma and irrigates a portion of the Nushki and Baghak plain. (*Roome.*)

BAGH-KE-CHASHMA—

A place in the southern part of Nushki plain in a gap in the line of hills through which the Dose *nala* runs. Here three *karezes* take their rise within a few yards of one another, *viz.*, Badalkhan, Nokju, Bagh-akwah. (*Roome.*)

BAGI REG—

A sand-hill, one mile from Arbu, on the Nushki-Helmand route. (*Boundary Commission.*)

BAGO RIVER—

A small tributary of the Tahlab rising in the Koh-i-Rihi and joining the Tahlab river about 10 miles below Mirjawa.

BAIATIR.—Lat. 28° 4′; Long. 63° 14′; Elev.

A place south of the Hamun-i-Mashkel about 10 miles south-west of Wad-i-Sultan marked in the survey map as a trigonometrical height.

BAKHAL-I-CHAH.—Lat. 28° 54′; Long. 64° 55′; Elev.

About 9 miles south-west of Yadgar Chah. It is about 40′ deep, and contains plenty of good water. Said to have been built by a Hindu trader, hence the name Bakhal (*Bania*), and is faced at the top with burnt brick. (*Webb-Ware.*)

BALANOSH ZIARAT.—Lat. 22° 24′; Long. 64° 38′; Elev.

About 8 miles north-west of Chagai.

BALAR RIVER—

A *nala* draining into the west of the southern portion of the Lora Hamun.

BALLUK WELL.—Lat. 28° 46; Long. 64° 43′; Elev.

A halting-place about 2 miles north-west of Pirpuchi pass on the Dalbandin-Kharan road.

BALUCHIR—

A peak in a narrow ridge which is an outlier of the main Kanuk range in North-West Baluchistan passed on the road from Nushki to Shah Ismail between the stages Kani and Umbai. At the foot of this peak, about 3 miles north of the road, there is a well named Khwarreh, containing 2 feet of water, good, and 20 feet below the surface. Three hundred sheep and fifty camels, which graze in the neighbourhood, are daily watered here. There is a second well, at present partly choked with drift-sand, about a mile nearer to the road. (*Roome.*)

BAMBAKAN.—Lat. 28° 52′; Long. 64° 37′; Elev.

A *nawar* in western Dalbandin fed by the Kanian *nala*.

BAND.—Elev. 3,122′.

A halting-place on the Nushki-Helmand route and 28 miles from the former place. It is so named on account of a dam thrown across the main channel of the Lora river, which is here 10 or 12 feet deep. The water is about 7 feet deep, and extends back a considerable distance. Low sand-hills on the right bank, behind which high sand shows the true edge of the Registan. It is in a corner of the desert close to which the Lora runs, and appears to be as nearly as possible due west of Charasiaf. Shekh Husen and Raskoh (*q. v.*) stand up high on the south. The Mekh-i-Rustum is just visible over outlying sand-hills. To the west a distant range just shows over the sand. It appears to terminate on the right in a double-headed peak which is said to be the Kani hill. There is abundant ground for camping all about, and water is plentiful. Kirbi and *bhusa* procurable. Camel grazing and firewood abundant. The people here are Nozai-Mingals, the local Wahdera being one Muhammad Khan. (*Maitland.*)

This place is also known by the name of Chandun-khan-ki-band. Walters describes it as an immense sheet of water covered with wild-fowls of every description. It usually contains water for 6 months in the year. It has been dry throughout the winter 1901-02. (*Webb-Ware.*)

BANDAR OR BAND-I-KAMAL-KHAN—

A village on the left bank of the Helmand, 13 miles below Chahar Burjak, and situated at the point where the river takes a sharp turn northwards and the delta begins. The village consists of 100 houses and some 480 inhabitants, most of whom are Sinjarani Baluchis. There is a considerable amount of cultivation in the neighbourhood, and there were some 1,000 acres under wheat and barley. The village possesses 390 cattle, 5,000 sheep and goats, 20 horses and 30 camels. In 1903 the Khan was Mahomed Umar Khan who was still detained in Kabul. The village is *muaf*, *i.e.*, pays no *maliyat*. There are two fords. (*Wanliss.*)

BANDIGAI—

The name of a well-known *nala* in the hills, south of Chahsir (*q. v.*). There is plenty of good running water in the bed of this *nala*, with a little *barshon* grass close by. For a distance of about 5 miles above the halting-place there are pools of clear water some 15 feet to 20 feet deep, fringed with reed and maidenhair. (*Webb-Ware.*)

BAND-I-TOP NAWAR.—Lat. 29° 31′; Long. 65° 57′; Elev.

On the direct Nushki-Chagai road about 4 miles north-north-west of Baghak.

BANGAN—

A plot of cultivation round a ruined fort, with a few nomad inhabitants in the vicinity, within a few miles of Ladis (*q. v.*). The cultivation is irrigated from the Mirjawa river (*q. v.*). (*Benn.*)

BARABCHAH.—Lat. 29° 26′; Long. 64° 6′; Elev.

The ninth stage on the road from Nushki (*vid* Chagai) to Sukaluk and the Helmand, 134 miles from Nushki. Water is to be found in three places in wells in the bed of the Barabchah *nala*; the largest a hole 5 feet diameter with 4 feet of water; the others shallow pits about 3 feet

square, scooped in its bed, containing a depth of one foot of water. Water is good and clear about one foot below surface. Judging from the large area drained by this *nala*, and that water is found in it so close to the surface, doubtless a large supply could be procured here by digging extra pits in the *nala* west of the Mazari *kotal* (*q. v.*) to Samuli. No grass is to be met with, but fuel and camel grazing are abundant. (*Peacocke.*)

Barabchah.—Water here was plentiful. There was plenty lying on the *nala*-bed, but this was rather salt. By digging a few small wells about 3 feet deep close to the *nala* we got abundance of good, sweet water. On the ¼" map to the south of Barabchah is a dark range of hills. The frontier line runs along these hills. South again of these there is a dotted *nala* marked. This, in March 1896, contained an abundant supply of water; in fact, it was then a strong running stream all the way to Samuli: the water is pure and sweet. There are numerous deep pools, but the total absence of any signs of fish in these leads one to assume that at times the stream dries up. The *nala*-bed for the whole way contains a thick tamarisk jungle and also abundance of good grass. (*Walters.*)

BARANCHAH.—Lat. 29° 13′; Long. 63° 21′; Elev.

About 4 miles north of Shandak on the road to Patkok.

BARBOJ RIVER.—Lat. 28° 44′; Long. 62° 59′; Elev.

One of the numerous *nalas* running towards the Hamun-i-Mashkel from the north, and disappearing in the sand some miles before reaching the Hamun.

BARECHI—

The Barech who inhabit Shorawak claim to be descended from the celebrated Arab warrior Walid. They say that Walid's great grandson, Barech, had three sons, called, respectively, Badal, Zako and Mando; and they allege that each of these three sons has given his name to a section of the tribe which, in honor of the father, is known collectively as Barech. The Barech population of Shorawak numbers some 5,000 fighting-men, divided as follows:—

(*a*) The Mandozai, who are subdivided into the Samazai, Kiasinzai, Salarzai and Zangizai sections, all under the Sardarship of Muhammad Sharif Khan, number 1,600 men. The Mandozai have the reputation of being treacherous and quarrelsome, but of little account when it comes to actual fighting.

(*b*) The Zakozai, who are subdivided into the Tarazai, Baderzai, and Abozai sections, under the Sardarship of one Bakho Khan. The Zakozai number about 1,500 men. Like the Mandozai, the reputation enjoyed by this section of the Barech is not good; their constant quarrels are a source of much trouble to the authorities of Kandahar.

(*c*) The Badalzai, subdivided into the Sheikhzai and Amunzai. The tribe numbers about 1,000 men and their headman is one Yusaf Khan.

(*d*) Next in order of importance comes the Sherani, the best, it is said, among a bad lot. The Sherani number 400 men and own allegiance to one Habibulla Khan.

(*e*) Last on the list come the Alizai and Shamozai, two small tribes, who number collectively 500 men, under the leadership of Ibrahim Khan and Wazir Khan, respectively.

A glance at the map will show that the position occupied by the district of Shorawak is a peculiar one, being cut off from the rest of Afghanistan by the Registan desert enclosing it on the north and from British Baluchistan by the Sarlat hills which bounds it on the east and south. It is no doubt largely owing to the geographical position which their country occupies that the Barech inhabiting the district are inclined to be unruly, and not infrequently treat the authority of the Governor of Kandahar with something closely resembling contempt. Shorawak is governed by a Deputy Governor deputed by the Governor of Kandahar. There appears to be nothing laid down as to the length of time the Deputy Governor holds office, but it is quite exceptional for any Deputy Governor to do so for more than a year. (*Webb-Ware.*)

The Barechis, or rather more particularly the Mandozai section, are at enmity with the Zagar Mengals and Rakshanis of the Nushki plain. The way the quarrel arose is briefly as follows. The Khan of Kalat had deposed Rahman Khan (Zagar Mengal) from the Sardarship of Nushki and gave it to Alam Khan (Rakshani) instead. Rahman Khan, who had fled to the Nozai Mengals in the Registan, shortly returned with a large *lashkar* to retake possession of the Sardarship. Alam Khan, on hearing this, asked the Mandozai section especially and the Barechis generally to help him, promising them certain lands in payment for their services. The Barechis consented and joined in with the Rakshanis. The Khan of Kalat, however, in the meantime, made terms with Rahman Khan and reinstated him in the Sardarship of Nushki.

The Barechis having settled on the land Alam Khan had given them began claiming and appropriating more. The Rakshanis objected to this and a fight ensued in which two Barechis were killed. Now commenced a blood feud. The Barechis constantly raid into Nushki territory and up to date (January 1897) have lifted about 6,000 head of cattle. As the Barechis do not discriminate, during a raid, between the property of the Mengals and Rakshanis, it leads to reprisals by the Nushki people, and up to date a few lives have been lost on both sides. This quarrel may prove a little difficult to settle.

An attempt has been made to enlist Barechis in the Baluch regiments but without much success so far. A havildar of this tribe lately deserted from Chaman, taking some three or four Martini-Henry rifles with him.

The Barechis must have a large amount of breech-loading rifles amongst them. Ammunition for these can easily be obtained through agents in the Quetta bazar. (*Roome, 1897.*)

BARZIAR—

A plot of cultivation round a ruined fort with a few nomad inhabitants in the vicinity, irrigated by the Mirjawa river (*q. v.*). (*Benn.*)

BASOWAL.—Lat. 28° 28′; Long. 66° 0′; Elev. 3,630′.

One of the Baghak villages of the Nushki district.

BASTANI RIVER—

Rising north of the Kodla pass flows south towards the Thok *nala.*

BAZGAZ—

A halting-place on the road from Kharan to Chagai (*q. v.*) and about 66 miles from the former place. There are a few *ghedans* here and a

little cultivation. Water from wells good and fairly plentiful. A little forage is also procurable. (*Native information.*)

BAZGAZ—

A halting-place on the road from Nushki to Dalbandin. The word Bazgaz is applied to a sand-hill that lies to the west of some wells that are called Nokchah (*q. v.*). The place is generally referred to by the natives by the latter name.

The above are most probably one and the same place. (*Roome.*)

BED—

A halting-place on the road between Tahlab in North-Western Baluchistan and Seistan, about 60 miles from the former place. Bed is situated at the head of the Mirjawa ravine. Good water is abundant from wells in the river-bed and fuel and forage are plentiful. (*Mac-Gregor.*)

BEDI.—Lat. 29° 46′; Long. 60° 55; Elev.

A small spring passed at the 15th mile on the road from Saindak to Kirtaka. The spring lies just on the northern edge of a promontory that juts out into the *daman* and is marked by a few small tamarisk bushes. The water is brackish and aperient but drinkable on an emergency. The track passes 200 yards to the north of the spring, and a small track leads up to it. (*Roome.*)

BED PASS.—Lat. 29° 10′; Long 61° 4′; Elev. 6,560′.

A pass over the Koh-i-Bibi Mah range crossed by the road from Ladis to Seistan, about 24 miles south of Duzdap. The *kotal* is about 1¼ miles north of Bed spring; it has an easy ascent of about 200 feet. Five miles further on the road enters a *tangi*, 60 feet wide. The Khaur-i-Khar takes its rise in the Bed *kotal*, and the road follows its course. (*Ahmad Ali Khan.*)

BED SPRINGS.—Lat. 29° 9′; Long. 61° 5′; Elev. 5,826′.

Two small springs in the Dar-i-Giaban *nala*, 1¼ miles to the south-east of the Bed *kotal*. The springs are very small, the most southern one has been opened out and honoured by the name of Bed *karez*, trickles for 20 yards and then dries up. It is used as a camping-ground by caravans marching along the Kachi-Seistan route and is the third march from Kila Robat to Ladis. The hills around the springs tower up some 3,000 feet and there is scanty room for a camp near the springs: a quarter of a mile to the north there is ample space for a large camp (brigade). Fuel is scarce but could be collected and brought in from surrounding *nalas*; camel-grazing also is indifferent, whilst there is no grass and no supplies to be obtained. (*Roome.*)

BEDUK NALA—

This *nala* issues from the hills west of milestone 327½ on trade route, *i.e.*, 3½ miles on the Saindak side of Kirtaka. Good and plentiful water is found at a point about 1¾ miles from the mouth of the *nala*, 3 feet to 4 feet below the surface. (*Rose-Price.*)

BEGARI ROD.—Lat. 29° 17′; Long. 62° 48′; Elev.

There are two *nalas* of this name (the eastern one I have also heard called the Egari) that take their rise in and drain the northern slopes of

the Koh-i-Sultan. They are dry *nalas* of no great length and shortly after leaving the hills they are lost amidst the sand-dunes of the Registan. A track leads up the bed of the eastern *nala* to Sher Khan Chakul and Gami Chah. It is also possible to get to Amir Chah by this route from Manzil, but this route has little or no advantages over the usual one *viâ* Girdi Reg. (*Roome.*)

BELARI.—Lat. 28° 41′; Long. 64° 20; Elev. 5,600′.

A hill of the Shekh Hussen range west of Doki and south of Dalbandin.

BELUKAND—

The name of an open shallow *nala* and also of a hill between Chagai and Mamu (*q. v.*) on the Nushki-Helmand route. The road from Samuli leads over a small rise close to the extreme point of Samuli Koh, and then passing down a rough stony hollow again meets the Barabchah *nala* (*q. v.*), which it crosses at its junction with the Belukand *nala*. There is no water at this point. Ascending the shallow open Belukand *nala*, at 7 miles the road forks, the left branch continues up the Belukand *nala* and under the north foot of Mashkani Koh to Robat, 18 miles from Samuli, and is a good road, with no sand and with abundant water at Robat. The right branch leads up a smooth slope and through a broad gap between the Belukand Koh and the Koh Mamu Malik. (*Peacocke.*)

BHEJI PASS—

Leaving Iltaz *karez* follow the road leading to the Wali pass for about 2 miles. Having crossed over a wide *nala* and proceeded for about ½ mile the path leads up a small narrow *nala*. At this spot it forks, the path in the *nala* itself leading to the Wali pass. For the Bheji take the path leading up out of the *nala* to the left. At 2½ miles the gradient becomes very steep for 50 yards, but this could be very soon and very easily rectified by any small working party. A little blasting might perhaps be necessary. At 2¾ miles the summit is reached and for a mile the path leads over undulating ground of capital going on the top of the Sarlat range. At 3¾ miles the crest of the range is reached. The descent into the Bheji *nala* is a long zigzag path running down a spur which juts out due south. The gradient is easy for half a mile, after which it becomes rather steep, but we all rode down it with ease. It presents no difficulties at all for mules and many of our camels fully laden also descended without any difficulty. At 4½ miles arrive at the foot of the zigzag and turning west journey down the easy shaly bed of the Bheji *nala*. The hills on either side could be surmounted anywhere from out the *nala*. At 5¼ miles arrive at a good spring of sweet water which provides a watering place for the nomads' flocks of goats and sheep. This water disappears in the sand after running for about 150 yards. At 5½ miles arrive at some black hills of igneous rocks. At this spot the line of earthquake-crack running north to south crosses the *nala* at right angles. These low black hills completely command the whole of the *nala*, and in the event of hostilities would probably be crowned with *sangars* which would be impossible to take by frontal attack owing to the precipitous nature of the eastern face. They could, however, be turned by a flanking movement southwards where other igneous hills

could be occupied commanding the line of retreat from the *sangars*. At 6 miles the *nala* opens out and thence onward over the stony *daman* towards Sahibzada which lies about 9 miles to the west. (*Walters.*)

BIBI KE-POKH—

A tomb on right hand side of the track 13 miles from Badinchah on the road to Yadgar Chah.

It is similar to those at Chah Sir (*q. v.*) and has a few modern graves round it.

The people come from very long distances to bury their dead here. (*Roome.*)

BIBI-MAH CHAH.—Lat. 29° 9′; Long. 60° 59′; Elev.

A spring in a *nala* on the south-western foot of the highest peak of the Koh-i-Bibi Mah. The spring is amongst the roots of a large *gwan* tree and the peak towers above it. The *nala* here is very narrow, but 300 yards lower down opens out somewhat and has several large *gwan* trees in its bed. The water in the spring, of which there was a large quantity, was of the colour of very strong tea and had a most offensive smell; the guide assured me however that after it had been cleaned out the water was very good, and had only got into that state from not having been used for a long time. Clearing out the spring would be a matter of some difficulty, as the surface of the water is six feet down and the water has a depth of three feet.

Near the spring is a *ziarat* dedicated to Bibi Mah, the sister of Pir Sultan, who is the patron saint of camelmen. The camping-ground near the spring is commanded by hills, and is small. Fuel is abundant, but camel-grazing scarce and there is no grass, or other supplies. (*Roome.*)

BIJAR CHAH.—Elev. 2,252′.

A well on the west edge of the *nawar* shewn on the map to the north-east of Dranakoh, and is the second stage between Amir Chah and Saindak. The well is over 60 feet deep and was dug by Ido Khan in 1898; the water in it is very brackish, though animals will drink it, and there is sufficient water for 50 camels, the well refilling again in four hours.

Camping-ground.—Good on *pat*, but commanded by sand-hills to the east some 100 feet high, which are very steep on the camping-ground side.

Supplies.—Nil.

Camel-grazing—Good and abundant, chiefly *tag* and *bana*.

Fodder.—Grass *nil*.

Fuel.—Abundant. (*Roome.*)

BILAU-I-CHAR SAR.—Lat. 29° 12′; Long. 65° 25′; Elev. 3,113′.

A sand-hill and trigonometrical point and height, about 8 miles west by south of Thal.

BILAU-I-SEWA.—Lat. 29° 20′; Long. 65° 43′; Elev. 2,836′.

A desert portion of the Nushki district west-south-west of Baghak.

BININDI—

A camping-ground on the Ghori *nala*, 8½ miles above its junction with the Kaisar, and about 10 miles from Iltaz *karez* camp. The road from

taz *karez* to Nuskhi follows the Ghori for its entire length, and Binindi might be made the first halting-place. The water-supply is, however, uncertain. In winter, if there has been an average amount of rain and snow, it is often abundant; but in summer it is rarely found on the surface, though some might always be obtained by digging a couple of feet in the bed of the *nala*. Below Binindi the channel of the Ghori begins to be a regular defile, and the average width does not much exceed 100 yards. On the east are small rocky ranges enclosing narrow parallel valleys or ravines. On the west are more lofty hills, part of the great Sarlat range. There are few paths across this range south of the Wali pass, and none are good. The camping-ground at Binindi is a flat on the left (east) bank of the *nala*. It would accommodate a native battalion pretty comfortably, and there is more ground below on the opposite side. Both are commanded by the heights bordering the pass; but the country is Brahui and ordinarily quite safe. From Nushki up to this point it is all the territory of Alam Khan Rakshani Sirdar of Nushki, but Sarpara, Sasuli, and other Brahuis pasture in it during the spring and autumn. Tamarisk is abundant, so that there is no lack of firewood, and camel-grazing is tolerable in summer. No permanent habitations anywhere near and all supplies must be carried. As a general rule, troops and travellers taking this route would prefer to halt at Bara Khan *karez* (*vide* "Pishin Gazetteer") instead of Iltaz *karez*, and from thence make one march of 16 miles to the Kaisar. (*Maitland.*)

BISHRI WELL.—Lat. 29° 23′; Long. 64′ 48; Elev.

About six miles north by east of Chagai.

BOG, BUG, OR BOGAR.—Lat. 29° 11′; Long. 61° 33′; Elev.

A halting-place on the southern route between Robat and Saindak and 10 miles from Saindak on the road to Mirjawa. It is 27 miles from Robat and is on the Persian side of the Perso-Baluch boundary. Here water issues from a few small springs on the northern side of a sandy patch of ground. The water is good, but liable to dry up if there is no rain.

Camping-ground.—Unlimited; good.
Supplies.—Nil.

Fodder.—"Drubh" grass in large quantities.
Camel-grazing.—Good and abundant.
Fuel.—Scarce, small bushes. (*Roome.*)

BORGARH—*See* BOR KUH.

BORIDA REG, OR REG BORIDA.—Lat. 27° 49′; Long. 63° 40′; Elev.

A spot on the river Mashkel, a few miles to the north of Mianrud, where the sand has encroached on the river-bed and obliterated all trace of the road to Shandak. MacGregor traversed this road in 1876, and at this point left the river-bed and took to the sand-hills on the left, the reason of this being that the river-bed where wet forms dangerous quicksands. (*MacGregor.*)

BOR KUH, OR BORGHAR—

A conical hill on the desert Mushki Chah, Duzghi, Amalaf road, about 18 miles east of the last named place. (*Webb-Ware.*)

ROUGH SKETCH SHOWING

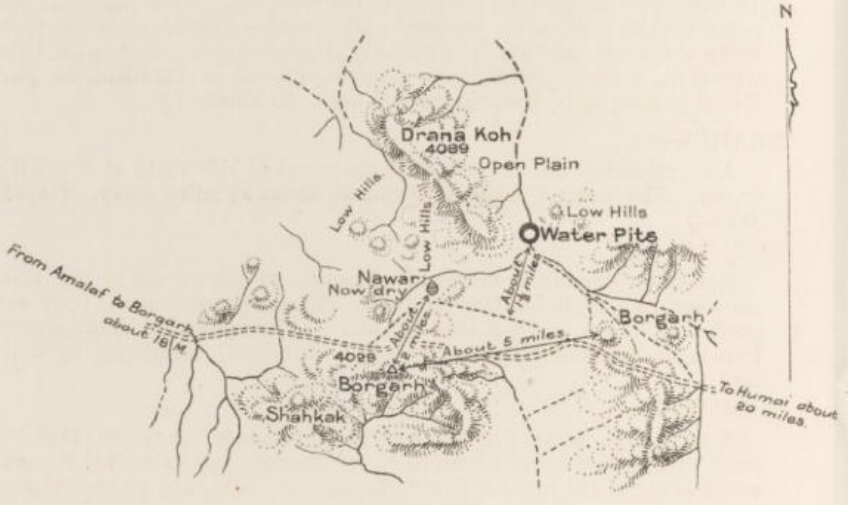
PRESENT WATER BETWEEN

AMALAF AND HUMAI.

O Is point where there are 3 small pits of good sweet water, about 18" diameter and 1' of water close to surface, more to be got by digging. Grazing and fuel in abundance close at hand.

Signed T. Rose Price.

4th June 1903.



Scale: 1 inch = 4 miles.

5 4 3 2 1 0 5 10 Miles

I. B., Topo. Dy. No. 4,840.
Exd. C. J. A., July 1903

No. 2,051-I., 1903

The rough sketch facing this page shows the water supply in June 1903 between Amalaf and Humai (*q. v.*). The *nawar* was quite dry. There is a small dry *nawar* just to the south of the water pits, and the rain water seems to have sunk into the ground and percolated along close to the surface. I do not know for how long one could get water there; at present it is just below the surface and has been a Godsend to our little parties going across. The two Borghars are very puzzling, one marked on map, a trigonometrical station, 4,029 feet, a black prominent hill just to the south of the track, the other about 5 miles further east just to the north of the track, a solitary brown hill and sworn to by Ido as the "Borghor." (*Rose-Price.*)

BOR KUH, OR BORGHAR NAWAR—

A *nawar* about 2 miles north-east of Bor Kuh to north of camel track from Mushki Chah to Saindak, on which it forms a temporary stage. The *nawar* holds water only for a short time after rain. (*Webb-Ware—Rose-Price.*)

BOT-I-CHAH—

This is a halting-place and a small settlement of Siahpads (Bizanjo), 18 miles from Kharan, on the road to the Helmand. This place is also called Gwash. Wells are numerous all over this district, some of them being of considerable depth and nearly all of them are fitted with light wheels for raising the water. Camping-ground is excellent on *put.* Camel-grazing to be had, but no supplies. (*O'Donnell.*)

BRAHUK—

A small conical hill at the foot of the range of hills south of Chah Sir (*q. v.*). The nearest water is at Shund, about 2½ miles away. (*Webb-Ware.*)

BUBAND—

A camping-ground mentioned by Hughes, 12 miles south of the Kaisar river, on the Quetta-Nushki road. The camping-ground is open and good, with forage in the neighbourhood. This is probably identical with Piundagari, a summer camping-ground of Rakshanis, mentioned by Maitland.

BUDU REG—

A sand ridge some 6 miles north of Mianrud (*q. v.*) on the Mashkel river. From this point a road runs to Kharan and also to Panjgur which is about 100 miles distant. This route would not be practicable except after rain, as from this point to Bibi Lahori Ziarat (*q. v.*), a distance of about 55 miles, there is absolutely no water. (*Maitland.*)

BUG, OR BOG RIVER—

A tributary from the east of the Duzdap or Dar-i-Giaban river which it joins about 12 miles above Mirjawa.

BUGSAR.—Lat. 28° 43'; Long. 61° 36; Elev. 5,500'.

A range of hills commencing at Andai (3,500'), about 8 miles south of Mirjawa and south-east of Ladis and running parallel to the Tahlab river for about 14 miles.

BUJAIR KUSHTA.—Lat. ; Long. ; Elev.

On the left bank of the Helmand, 15½ miles below Chahar Burjak. The ordinary route to Band-i-Seistan crosses and leaves the river at Chahar Burjak. By keeping to the left bank, the river can be more thoroughly examined, especially the Tarakhun canal, where are wonderful old ruins, and possibilities of extensive cultivation by re-opening the ancient canal. (*McMahon.*)

BULANDWAI TOWER.—Lat. 29° 44′; Long. 65° 51′; Elev.

On the Lora river near Afghan-Baluch boundary pillar No. 152.

BULO—

A *nala* and halting-place on the Nushki-Helmand road *viâ* Chagai, and about 28 miles from Chagai towards Barabchah (*q. v.*). The bed of this *nala*, or, more properly speaking, ravine, varies in breadth from a quarter of a mile to 50 yards, and is lined at the sides with precipitous rocks. The gradient is easy and the surface fairly level and free from rocks with a scanty covering of grass and tamarisk bushes. Five miles from the spot where the road enters the ravine there is a bend where grass and tamarisk are more than usually abundant called "Tumpagaz." From it the ravine commences to wind a good deal, and rapidly contracts between high walls of trap rock, which continue to halting-place. At 6½ miles Gurgarok, a pit of water in the bed of the ravine, is reached. The bed is 3½ feet by 4½ feet with 1 foot depth of water. Water is good and lies 4½ feet below the surface. It is doubtful if water could be procured at any but this one point, where a rock ledge projecting across the *nala* favours the interception of any moisture draining down the bed. The bed of the ravine is only 50 yards wide here, and too contracted for camping-grounds. The site is a practicable halting-ground only for small parties of travellers. Fuel is plentiful, but camel-grazing scanty. From this point the road is somewhat stony up to a *kotal* which is reached at ¼th mile from Gurgarok. Both this *kotal* and the mile before it would require some preparation before guns could be brought along. At 1 mile, at a bend in the ravine named Kushtigan, a road branches to the left, and is an alternative road to Barabchah. It is said to be not difficult with an easy *kotal* and spring half-way, but to be inferior to the main road followed for baggage animals. The Bulo ravine now gradually opens out, and the hills on both sides become relatively lower and their slopes easier. At 6½ miles the road forks, the right branch continues up the main Bulo ravine and passes over a low *kotal* to Shorakin and thence gains Mamu *viâ* Kuchen; it is said to be inferior to the road followed there, being less water and more sand in it. The left branch leads up a rough ravine into the Barabchah plain. (*Peacocke.*)

The Bulo defile through which one journeys before reaching Gurgarok is about 4½ miles long: the heights on each side are very steep and the hills disjointed and very serrated. Accordingly, if a force were moving through this defile in the presence of an enemy, it would be necessary to occupy the principal heights previous to marching through the defile, as it would be impossible for the advance guard to traverse the heights without greatly delaying the main body. Gurgarok appears to be wrongly placed on the ¼″ map. It should be 2 miles further west at the point where the *nala* turns sharply to north-east immediately north of point 6,080. (*Walters.*)

BUNDI PASS.—Lat. 29° 33′ ; Long. 61° 0′ ; Elev.

In the Mirjawa hills about 14 miles south of Robat.

BURBUR RIVER—

A tributary of the Piran river joining it near Piran *ziarat* ; the *nala*-bed is generally dry.

BUTEHCHAH—

P. C. bearing from Chahsandan 181° and 6 miles distant. Position of wells marked by trees.

Two wells, with good and sweet water. Good camel-grazing in vicinity, also a small quantity of grass and tamarisk. (*Roome.*)

BUTIG OR BUTAK.—Lat. 29° 8′ ; Long. 63° 20′ ; Elev. 3,400′.

A halting-place on the road from Amir Chah to Dalbandin *viâ* Mirui, and 60 miles distant from Amir Chah. A track from Kharan to Amir Chah also passes through here.

There are two wells in the *nala*-bed ; water 11 feet from surface, 2½ feet deep, 3 feet diameter. Refill in one hour. The water is sometimes particularly good and sweet, but was found by the signalling party in 1903 to be very dirty, of a red colour and with a bitter taste. More wells could be dug in *nala*-bed and an abundant supply obtained. The wells are in a wide stony *nala*-bed, the Butak *nala*, with large clumps of *jhow* (tamarisk) growing in it. It is the rendezvous of numerous herds of camels.

Quite an industry is carried on here by the nomad Baluch in the making of medicine for the cure of camel mange. The ashes of the *jhow* tree are put in an earthenware pot with some water and hermetically sealed with wet mud. The pots are then placed in specially constructed ovens and fires lighted all round and on top of them. The pots are left to stew for forty-eight hours, when they are taken out of the ovens and left to cool gradually. The result is a black sticky mass, smelling strongly of tar, which, when mixed with oil and smeared over the camel, is said to cure its mange.

Camping-ground.—Unlimited and good.

Supplies.—Nil.

Grazing.—Camel-grazing very abundant: *tagaz* and *gaz*.

Fodder.—Barshok and vega grass in large quantities in vicinity.

Fuel.—Abundant : *tagaz* and *gaz*.

This would be a good district to collect camels in. (*Roome—Gordon.*)

A halting-place on the road from Kharan to Amir Chah *viâ* Regin. It is the eleventh stage. Water from six or eight good wells close by. Wood plentiful ; grass scarce. This locality has a bad reputation for thieves. A good road strikes due west to the Kondi wells, 43 miles distant ; waterless the whole way, with the exception of a well called Trangaran, 19 miles from Butig. Water is rather brackish. (*Ahmad Ali Khan, Sub-Surveyor.*)

BUTTAHMIR.—Lat. 29° 40′ ; Long. 60° 55′ ; Elev.

A patch of highly coloured shales and clays varying from rusty reds to light greys on the western *daman* of Larkoh. It forms a good landmark when making for the Kassur Rah, a track that leads over the

shoulder of Lar Koh to Kila Robat. There is fair water here in most years, but when I visited the spot there had been no rain for five years and the springs were dry. Close to the track which leads up a *nala* are several piles of stones that are said to be old smelting furnaces, but they have more the appearance of being once lamb pens made to guard the lambs from wolves. (*Roome.*)

BUZANI—

A range of hills close to Nalap and some 50 miles from Nushki on the road to the Helmand *viâ* Shah Ismail. This appears to be a double range and lofty, the highest peaks, probably 2,000 feet above the plain. (*Maitland.*)

BUZHAI RIVER—

Rising near the Mazâri pass flows past Gurgarok into the Bulo river.

BUZIRGZADA—

Hudroshahzai, or Buzirgzadagan, are the descendants of an adventurer from Northern India (from Peshawar or Kashmir) said to have been a Sayad, hence the name Buzirgzadagan. Tradition asserts that, when Jalk was destroyed by Nadir Shah's general, Pir Muhammad, between 1730 and 1740, only one member of the ruling family, a girl, escaped. This girl, when grown up, married the adventurer alluded to, and in this way the Buzirgzadagan obtained possession of Jalk.

Hudroshah was one of the sons of the above. There were two other sons, Ashraf and Murad, who have given their names to subdivisions of their family. The Muradzai are said to be found about Sib.

Mir Dilawar Khan is, at present (1890), chief of this clan. He has three sons, Mir Abdulla, Madat Khan, and Durr Khan.

Mir Abdulla, the eldest son, is a man about 40 years of age, and possesses most agreeable manners.

Mir Dilawar is said to be 70 years of age, and is now almost too old to transact any business.

His father, Mir Alam, being worsted in his quarrels with the neighbouring tribes fled to Kirman, and having made a formal submission to that government was enabled to re-establish himself in his country with the help of his new masters. From this time the Persians have obtained the ascendancy in Western Baluchistan that they now possess, and having seized Bampur by force, they established a governor there who is subject to the ruler of Kirman.

Dilawar Khan has great influence over his neighbours owing to his being the descendant of a Sayad. The Baluchis regard any one claiming to be a Sayad with great respect, and there is no doubt that as Dilawar Khan is an able man, he has taken advantage of every opportunity to increase his influence over the other chiefs. Until now it is commonly said by the people that there are only two Mirs in Western Baluchistan, Mir Nauroz Khan, Naushirwani, and Mir Dilawar Khan, Buzirgzada, and this notwithstanding the fact that the latter tribe is numerically very weak.

Dilawar Khan looks on Kadir Baksh, the Dehwar chief, as his principal adherent and has given him the title of Chief Minister. He never

engages in any undertaking without his advice and consent. For if Dilawar Khan were to lose the support of the latter and the clan of which he is chief, the strength of the Buzirgzadagan would be insufficient to maintain the prestige its chief now possesses.

The neighbouring chiefs from Bampusht and Sarhad assemble at Dizak to consult together before taking action in any matter, and there seems an indication that there is a confederacy among these chiefs.

It is owing to this and his semi-sacred character as a Sayad, and the hatred that would be called forth by such an act, that the Persians hesitate to punish him summarily, for both Dilawar Khan and his son, Mir Abdulla, have been imprisoned in Kirman.

Mir Dilawar Khan is responsible to the Persians for the revenue, but this is first collected by the Dehwar chief. At least so it appeared from the information received. (*Tate.*)

BUZURG GAZ—

A ravine and halting-place on the Mashkel river in Western Baluchistan, 50 miles north of Dashtak, on the road to the Helmand. Water, fuel, forage and grass are very abundant. (*MacGregor.*)

CHAB—

This word means *chabar, i.e.,* the short grass that grows in damp places. It is the Brahui name for Singbur Chaman, which see. (*Maitland.*)

CHAH ARABAN—*See* ARABAN CHAH.

CHAHAR-ASIAB, OR ASIAF.—Lat. 29° 33′ ; Long. 66° 5′ ; Elev.

Four water-mills on a canal drawn from the waters of the Kaisar stream. Each mill has four or five large *kadag* trees growing near it. There is a little cultivation near each mill. The road from Kishingi to the camping-ground near the Mengal village Nushki passed close to the upper mill. (*Roome.*)

CHAGAI—

Chagai is the centre of three districts of Western Baluchistan, Nushki being on the east and Western Sinjarani on the west. It has an area of about 10,500 square miles.

The Chagai district consists of two fertile portions, *viz.*, the alluvial plains surrounding Chagai fort and Dalbandin. The latter is an extensive plain of an average breadth of about 9 miles, confined on the north and south by the Chapar and Raskoh hills, and extending east and west 20 miles until it is lost in heavy sand-hills. The south of the Chagai district is marked by the watershed of the Raskoh range. Its western boundary line starts from Gaukok hill, near Galichah wells and runs north-west to Manzil Chauki, and thence north to the Baluch-Afghan boundary opposite Gidan Koh.

Colonel Bell, who visited this district in July 1888, writes as follows concerning its importance :—

"The value of this part of Baluchistan is not to be underrated. It is a stock-rearing country. Camels, donkeys, sheep, and goats thrive on its thorny bushes, grasses, and shrubs. Its climate, its sticks, its sand and stones seem to suit them and the inhabitants, who are quite contented with their lot. If markets were opened, more corn could be grown and other winter crops ; more stock reared. Its summer crops

must always depend on irrigation. It is therefore of value to us as a stock-rearing country and one producing all the varieties of milk-born goods (*ghi*, curds, cheese, etc.), and raw material, wool, camel's hair, hides, etc. Such districts, when opened out, should be to India what the less fertile parts of Central Asia are to Russia.

"The revenue of Chagai is derived from a tax on land (two *karezes*), on live-stock and customs on goods passing by this route to Quetta, Kalat, etc. The Amir thus blocks another trade route and goes out of his way to ruin his own country."

Chagai proper consists of a square mud fort of 50 yards wide, situated in a plain, with some twenty or thirty permanent inhabitants, Sinjaranis, and some one hundred and fifty to two hundred Brahui squatters.

They are mostly pastoral, and herd sheep and goats, of which they possess some fifteen hundred, which graze in the hills to the west and north-west, and cultivate a few acres around the fort after rains. The water-supply is to be had from eight wells, each about 4 feet diameter with 1½ feet of water lying 25 feet below surface: one well also at Suliman Chah, distant 1½ miles to the south-east. The quality is good and the quantity would only be limited by time and means available for well sinking. The surrounding country is covered with *tagaz*, *kareh* and *trat* which are excellent grazing for camels. Besides this there is abundance of good grass here and along the margin of the Hamun towards Gaza Chah. Fuel is abundant. There are several lines of large tamarisk trees close to the fort.

In 1896-97 there were only four *karezes* in the Chagai district. In 1899 this number had risen to 14, which enumerated in order of importance are named as follows:—(1) Dalbandin, (2) Lijji, (3) Pishak, (4) Sargeha, (5) Duganan, (6) Charsar, (7) Padagi, I, (8) Padag, (9) Nasiri, (10) Padagi, II, (11) Dramin, (12) Padgiaban, (13) Killa Kurd, (14) Zarala.

The inhabitants of Chagai do not understand the art of underground *karez* construction, and are too poor to employ professional Afghan *karez* diggers. Therefore, with the exception of the two first named, the *karezes* excavated take the form of mere open surface irrigation channels ranging from 5 to 10 feet in depth.

The nomads of the district are characterized, collectively, by an utter want of enterprise and initiative, are lazy, and have little or no aspiration to better their condition. They have so marked a predilection to a nomadic life that they cannot be expected to remould their habits, or to settle down to an agricultural life. They are content with the barest existence from the soil, and when induced to start *karezes* are disinclined to persevere.

It is the custom, in Baluchistan, for the inhabitants of the more mountainous regions to move down, in winter, to the plains of Kachi, to save their flocks and herds from the effects of the severe cold of the highlands. The inhabitants of the mountain districts bordering on Nushki are fully alive to the advantages offered them by the pastures of Chagai. These Baluchis, in whom the spirit of enterprise is more marked, may, in the future, be expected to move down to Chagai and open *karezes* there, thus ameliorating their own condition and assisting in the development of the country.

Peaceful travellers can now travel through Chagai district without fear of being attacked. But it is true that raids, sometimes on a large scale, do still (1899) occur, usually in the vicinity of the frontier. This

state of things is due to the position of Chagai, which lies in immediate contiguity to some of the most lawless parts of Afghanistan. (*Bell—Webb-Ware.*)

CHAHAR BURJAK—

A village in the immediate neighbourhood of the mud fort of the same name, situated on the right bank of the Helmand, directly under the scarp of the Dasht-i-Margo. The village consists of about 200 houses, containing about 900 inhabitants and possesses 800 cattle, 1,700 sheep and goats, 60 horses and 110 camels. It is irrigated by a canal that takes off 16 miles higher up the river and which has 15 branches. There is a very considerable amount of cultivation in the neighbourhood, and we found some 2,400 acres under wheat and barley. There are two gardens in the village in which pomegranates and grapes are grown. The present Khan is Ata Mahomed Khan. There are two fords across the river, which here runs in three channels. (*Wanliss, February 1903.*)

CHAHAR SAR.—Lat. 29° 17′; Long. 65° 46′; Elev.

About 4 miles north of Jabar and 3 miles north-west of Zangi Nawar.

CHAH-I-BIBI WELL.—Lat. 29° 10′; Long. 65° 41′; Elev.

About 3 miles south-west of Mall on the trade route. In 1903 the water was found to be bad, with a horrible stench and undrinkable. (*Scudamore.*)

CHAH-I-KALAK—

A well near the sources of the Mendo river south-east of Siah Koh.

CHAH-I-KARODAK—*See* KARODAK.

CHAH-I-MALIK—

A well in the Mendo river about 2 miles south of Chah-i-Kalak.

CHAH-I-MARAK.—Lat. 29° 28′; Long. 63° 31′; Elev. 4,025′.

Is a small watering-place close to Baluch-Afghan pillar No. 175. There are a few wells here, the water of which is, however, very foul owing to pollution of the ground by large numbers of goats which daily water here. Good water is procurable from the *nala*-bed. Distance from Robat 14 miles; easy going for 12 miles, then over heavy loose sand. (*Walters.*)

CHAH-I-THAL—

The second stage (37 miles) from Nushki on the road to Kharan. Good water is to be had from a well, 12 feet from surface of ground, with a depth of 3 feet of water. Camel forage obtainable from tamarisk bushes in the neighbourhood. Between this stage and the preceding one (Ahmedwal) is the only *kotal* on the road between Nushki and Kharan. Arpasir, the third stage, is 20 miles distant. (*Bell.*)

CHAH MUHAMMAD RAZA—*See* MUHAMMAD RAZA CHAH and Appendix V.

CHAHOK.—Lat. 28° 29′; Long. 63° 58′ Elev.

A halting-place near Sorap springs on the Nushki-Ladgasht road about 10 miles north-north-east of Gaukok hill.

CHAH-SANDAN.—Lat. 28° 59′; Long. 63° 29′; Elev.

A halting-place on the Amuri-Kaur on the road from Amir Chah to Dalbandin *viâ* Merui. It is 75 miles distant from Amir Chah. A track from Amir Chah to Kharan also passes through here. It is 166 miles from Kharan.

There are 15 wells amidst clumps of *jhow* trees close to the *thana*. Water is 24 feet from the surface, 3 feet to 5 feet deep, 3 feet diameter. The water is good, but these pits require cleaning out. There are several clumps of small round green rushes growing in different places in the bed, so water is probably near the surface and more water could easily be obtained by digging pits.

Camping-ground.—Unlimited; good.

Grazing for camels.—Good and abundant: *gaz, tagaz, jowassi, terrkh*.

Grass.—*Barshok* grows in some quantities in the vicinity.

In this Kaur bed also lies Paniham. (*Roome*.)

A halting-place on the road from Kharan to Amir Chah *viâ* Regin. It is 166 miles, ten stages from Kharan, and Butig, the next stage towards Amir Chah, is about 15½ miles. There is both well and river-water, but the former alone is fit for drinking, the latter being very brackish. Wood plentiful; grass very scarce. In 1903 the water was found to be sweet but very dirty. As no precautions are taken to prevent animals with *kafilas* contaminating the water in the wells on the trade route, it is not easy to find clean water at any of the halting-places. (*Ahmad Ali Khan, Sub-Surveyor—Scudamore.*)

CHAHSHAKKAR.—Lat. 29° 10′; Long. 65° 45′; Elev.

Thirty-six miles from Nushki on the road to Dalbandin at the northern foot of Koh-i-Sheikh Hussein near Mekh Mall. Water 15 feet from surface, 2½ feet deep; well 3 feet in diameter.

Camping-ground.—Good on *pat*.

Supplies.—One hundred and fifty sheep and goats, otherwise *nil*.

Camel-grazing.—Good: *lana* and *gaz*.

Grass.—Abundant on Sheikh Hussein.

Fuel.—Plentiful; tamarisk trees. (*Roome.*)

CHAHSIR.—Lat. 29° 27′; Long. 65° 46′; Elev. 3,080′.

P. C. bearings—

Raskoh	125°
Mekh-i-Rustam	13°

On the road from Nushki to Dalbandin, 84½ miles from former.

Here the water issues from the ground, and, in some cases, runs over the edges of the pits. The water is tainted by the *defecta* of camels, etc. Any amount of good water could be obtained by digging fresh pits to the south.

Half a mile to the east and 400 yards to the north of the track is another well. The water is close to the surface and is over 12 feet deep; well 3 feet diameter. The water in it is bad from standing so long, but the natives say, after the well has been emptied, the water comes in good and potable. All around the well the water is near the surface, and was running in a small *nala* 300 yards to the east; 700 yards to the north

of the well are the ruins of some very ancient tombs, two of which are still in a very fair state of preservation. They are built of burnt bricks and mortar and consist of two stories with three chambers in each. Total height 12 feet, length north and south 15 feet, width 12 feet.

On north and south sides about 8 feet from the ground are five plaques of stones; on east and west sides three plaques.

These plaques were ornamented with a pattern of either squares or circles. The pattern being raised about ½ inch from the surface.

There were still some skulls, bones and pieces of cloth lying in the tombs which had the appearance of having been broken into and looted. Judging from the bones, etc., more than one corpse was laid in each chamber, and the women were buried separately from the men. These tombs were apparently built to raise the corpse from the wet, water being close to the surface. These tombs are similar to those near Bokhara and Samarkand. The art of brick-making has long since been forgotten by the Baluchis if ever they knew it. There are abundant signs of a former cultivation around here. *Karezes* are being opened here, and it is expected that supplies for the trade route will eventually be obtainable in large quantities. (*Roome—Webb-Ware.*)

CHAH SULIMAN.—Lat. 29° 40′; Long. 64° 20′; Elev.

A halting-place on the road from Nushki to the Helmand *viâ* Shah Ismail. It is 11 miles from the latter place, and is situated near the foot of a rather high steep rock, on the east side of which is a sort of valley running for a short distance south. The well is a very large one, 6 feet in diameter, and something like 40 feet deep. This was visited by Colonel Maitland in September 1884, and he states that there were only a few inches of water in the well, and it was apparently filled up to some depth, not so much from the sides falling in as from the accumulation of sand blown into it. Splendid ground for camping and good camel-grazing here. (*Maitland.*)

CHAKOL.—Lat. 30° 27′; Long. 67° 5′; Elev.

A halting-place in North-Western Baluchistan on the road from the Mashkel river to Zirreh. It is situated in the heart of the Sultan Koh, the principal peak of which bears 125°. The halting-places of Gamichah and Washuf are a few miles south of this. There is one pool of sweet water here, but no forage and scarcely any fuel. (*MacGregor.*)

CHAKUL.—Lat. 29° 11′; Long. 62° 47′; Elev.

The name of two water-holes close to the Arbu rocks on the route from Shah Ismail to Bagat on the Helmand river. The holes are about 8 feet in diameter, and the water is 3 feet deep in the upper one. They can also be cleared out to some extent. The water is good, though slightly foul when visited. Colonel Maitland estimated the supply afforded by these two springs, and also by a third some few hundred yards off, called Arbu Kani, to be sufficient for the supply of the Afghan Boundary Commission. (*Maitland.*)

CHAKUL.—Lat. 28° 55′; Long. 64° 10′; Elev.

The eighth stage on the trade route, 133¼ miles from Nushki and 18 miles west of Dalbandin. A small serai was built here in 1899. This stage is not considered satisfactory. Endeavours were made to find good

water at two stages so as to divide the distance between Dalbandin and Sotag into two marches of equal or nearly equal length, but were unsuccessful. There are no local supplies at Chakul, but fuel and camel-grazing are abundant. Water good and plentiful is found 2 feet below the surface. There is one good well, of which the water requires to be filtered. (*Webb-Ware—Scudamore.*)

CHAKUL HILLS—*See* DURRAK ZAND.

CHAKUL OR TANGI—

A small spring and camping-ground on the Quetta-Nushki road *vid* Panjpai, and about 27 miles from the latter place. The spring is to be found on the right of the road under some rocky hills; the water is not very abundant, but is good and sufficient for a small detachment. There is ground for encampment not far from the spring on flats adjacent to the water-course. This spot is the first reliable halting-place from Singbur Chaman. (*Maitland.*)

CHAMAG—

A halting-place, second stage on the road from Kila Robat to Ladis. Here the water runs in a small stream amidst the thick tamarisk jungle; there is also a small quantity of grass. It would be better to go on to Duzdap where there is a *karez* and a small quantity of *bhusa* is obtainable; wood however should be taken on from here. Chamag is on the edge of the Duzdap plain and is at the source of the Chamag *nala*.

Supplies.—Nil.
Camel-grazing.—Good and abundant
Grass.—A small quantity, principally *drubh.*
Fuel.—Abundant.
Water.—Abundant; a small stream that is said to be perennial.
Camping-ground—Unlimited, good. (*Roome.*)

CHANDAN KHAN BAND OR BAND.—Lat. 29° 34′; Long. 65° 39′; Elev.

26 miles from Nushki on the road to Shah Ismail. A large pond formed by damming the bed of the Robah Wal, a *nala* which was formerly the channel of the Lora river. The pond is 400 yards long by from 50 to 100 yards wide, with a branch pond 500 by 40 yards, the whole 9 feet deep. The water is good, and is a collection of rain and drainage water, and easily accessible for horses and camels. If rain falls in July, this pond does not dry up all the year round, otherwise it dries about September until refilled by winter rain. There are many temporary Brahui settlers, and four or five families of permanent inhabitants who cultivate. (*Maitland.*)

CHANDRAN.—Lat. 28° 59′; Long. 65° 18′; Elev.

A well and halting-place on the road from the Dalbandin district to Meski, about 7 miles from Meski (*q. v.*). (*MacGregor.*)

CHAPPAR KOH—

A range of hills running east and west and dividing Dalbandin plain from Chagai. The range is divided into two portions by the Bulo river

running north and south between them. The Karodak *nala* takes its rise on the east end of these hills The whole range is not more than 15 miles long. The southern slopes are bare and precipitous. (*Roome.*)

CHAPRI—

A belt of sand-hills to the west of Alam Khan's village Nushki. In it are fertile patches of *pat* on which *khushkawa* cultivation is carried on. These patches of *pat* are occasionally irrigated by the Kaisar stream. (*Roome.*)

CHARGIR WELL.—Lat. 29° 21′; Long. 64° 46′; Elev.

About 2 miles north by east of Chagai.

CHARIAN KOH OR KOH-I-CHARIAN.—Lat. 28° 44′; Long. 64° 53′; Elev. 7,069′.

A peak in the range which bounds the western portion of the Kharan district. It is in reality a continuation south westwards of the Ras Koh range. A road runs from Kharan town to Dalbandin between this peak and another one to the north of it called Kambaran. (*MacGregor.*)

The name of the pass is the Raloi. Preparation required to make it fit for the passage of laden camels. (*Roome.*)

CHARSAR WELL.—Lat. 28° 57′; Long. 65° 4′; Elev.

About 5 miles east of Yadgar on the Nushki road. The water was tainted with the *defecta* of camels, etc., in 1903. (*Scudamore.*)

CHEDAGI.—Lat. 28° 34′; Long. 64° 2′; Elev.

The district west of Sorap Gar.

CHIHALGAZI—

A halting place on the road from Robat to Dalband'n in North-Western Baluchistan, about 14½ miles east of Ria Chah. There is water here and probably fuel, if there be anything in the name. (*Lockwood.*)

CHIHALGAZI OR CHILGAZI—Lat. 29° 9′; Long. 64° 15′; Elev.

A graveyard and halting-place on the Kalat-Nushki road, situated in a small valley on the left bank of the Kaisar stream, a short distance above the Ghori junction (Ghori-na-Bah), and about 11 miles from Rahman Khan's fort in Nushki. The camping-ground is somewhat cramped and inconvenient for troops. A better might be found higher up the Kaisar, near the head of the water. Wood and water are abundant; also camel-grazing in summer. No supplies, except a little mutton, and not even that in winter, when the country is deserted. From Chilgazi the path ascends to a low *kotal* beneath a peculiar peak called *kotal* Buti. Beyond is a long valley or plain, about a mile wide, running north-east and south-west. This is Kishingi. The next halting-place on the Kalat road lies away to the east, 12 miles or thereabout from Chilgazi. The Singbur route to Panjpai leaves Chilgazi on the right, and goes on up the Kaisar. Chilgazi is so called from a legend that a certain holy man here descended 40 yards (*chihalgaz*) into the earth, where he still is. This saint is in some way connected with another local celebrity, Haibat Shah. (*Maitland.*)

CHILDUKHTURAN.—Lat. 29° 45′; Long. 65° 55′; Elev.

Seven miles west of Papring. There is a large graveyard here with a small *ziarat* of sticks and rags close on the edge of the Registan.

From this graveyard ½ mile to the west a large pistachio is conspicuous. Close by this, and just over a ridge of sand, is a large long *nawar* of good water, which is the watering-place of flocks and camels of nomads. Papring natives state that there is always plenty of water here at all times. When we visited it, it was stated that there had been no rainfall in this country for two years. We seem to have brought better luck with us, for we had a very heavy thunderstorm with heavy rain a few days afterwards (March 5th, 1896). (*Walters.*)

CHITAR—

A tract of country immediately south-west of the Mashkel Hamun in North-West Baluchistan. The soil of this tract is light and sandy, but quite arable in places, and water being close to the surface there seems no reason why this land should not be cultivated. That the country has a value may be gathered from the fact that Azad Khan (late Sirdar of Kharan) built a fort called Galugah on the Ragab and raised crops off the same sort of ground; but Dilawar Khan of Jalk, not liking his proximity, sent a force to destroy it. The country between here and Jalk is described as all cultivable, except where there are patches of sand. It is worthy of note that Azad Khan claimed the tract as belonging to Kandahar, stating that the Afghan boundary in the palmy days of Ahmad Shah reached to Jalk. Dilawar Khan, however, also claims it for the Kajars, but it seems doubtful on what they rest their right, as no boundary in this direction has ever actually been laid down. Whosesoever the left bank of the Mashkel and Ragab may be, there can be no doubt that beyond to the east is not Persian. This tract might be populated and cultivated, and thus form a convenient half-way to the Helmand. At present the whole region is exposed to the raids of Kharanis, Naruis and Sarhadis whose roads to each other's territories all lie through it. But if we aided the Khan to control the two first, and put pressure on Persia to curb the latter, there is no reason why it should not soon be as safe as any other part of Baluchistan. (*MacGregor.*)

CHUTOK.—Lat. 29° 14′; Long. 65° 17′; Elev.

A camping-ground on the road from Nushki to Chagai, three stages, about 55 miles, from the former place. Camping-ground on *pat*, good in dry, but bad in wet weather. Water plentiful but brackish from six wells, about 3 feet in diameter, and varying from 10 to 20 feet in depth. They fill rapidly after use. Plenty of fuel, but no grass. Camel-grazing is procurable. (*Lieut. H. Purvis.*)

CHOTO RIVER—

Rising in the Dramin mountain flows into the Lolangi river.

DADAR RIVER—

A small affluent of the Morjin rising near Ziarat Malik Chil Gazi and flowing south.

DAD KARIM—

A place mentioned by Maitland, 2¾ miles from Nushki, on the road to Band; probably a hamlet. (*Roome.*)

DAD SHAHI KARD RIVER—

One of the water-courses into which the Maskhel river divides as it approaches the Hamun.

DAHNA KAUR—

A *nala* rising in Koh Malik Naru in North-Western Baluchistan, it is traversed for a short distance on the march between Lal Khan Chah and Chah Araban. There is a good deal of water in its bed in pools, but it is brackish, though not so much as to be undrinkable. There is also plenty of fuel, camel forage, and some grass, so it is well suited for a camp. A few miles further on this *nala* unites with the Amuri Kaur. In 1903 water was found to be very plentiful here both in springs and in wells. Dahna spring is slightly brackish and the water in the *Kani* very much so. About 5 miles north of Dahna spring and about 1 mile north-north-east of the eastern end of Kardak range is a spring of pure sweet water, rising out of three holes in the rock, the supply is plentiful, and fuel and camel-grazing are very abundant. There are no other supplies and space for camping is not large. The signalling station was established in 1903 on Kardak hill at one hour's walk from the spring. (*MacGregor—Gordon.*)

DAK—

This word is no doubt the Brahui form of Dag; it corresponds to the word *pat*, so commonly used on the southern part of our frontier. It is applied particularly to the clear open plain to the south of Shorawak, stretching for an indefinite distance to the south-west along the course of the Lora. The average width of the Dak appears to be about 15 miles. Its western boundary is well defined by the sand-hills of the Registan, from Saiad Bus in Shorawak to the Zaru pool, 50 miles south-west of Rahman Khan's fort in Nushki. Its eastern boundary is the detached sandy tract or "half desert" (*nim-chol*) lying between Shorawak and the small plain of Nushki proper. On the north, or rather north-east, it has an irregular termination in the cultivated fields of Shorawak, which would itself be "Dak" were it not for the fertilizing water of the Lora. South-westwards the Dak stretches far, and appears to be terminated at Chagai, or Chageh, by the *hamun* of the Lora. Its total length is probably not far short of 100 miles.

The whole plain has a steady fall to the southwards and westwards, and the Lora runs through it from north-east to south-west. As in the case of the Indus valley, and all other fluviatile plains, there is a decided slope downwards from the river on either side; and the latter, raised on its own silt, runs through the highest part of the country which it has created. The desert edge appears to run tolerably parallel to the river and about 10 or 12 miles from it. Where it meets with the plain there is a long string of pools, formed by the drainage of the Dak intercepted by the sand-hills. There are said to be nine of these at various distances apart, the first two, Lal Khan and Purtos, being respectively 22 and 25 miles south-west of Saiad Bus, and the last, Zaru, about 62 miles from the same place, and 52 miles from Rahman Khan Kala in Nushki. Along this line of pools or tanks (called *nawar*) runs the south road from Shorawak to the Garmsel; it joins a road from Nushk at Zaru. There are also a few similar but smaller tanks on the eastern edge of the Dak. The latter are said to be almost always dry in summer, while the former contain water all the year round, except after a succession of unusually dry winters.

The Lora is almost always dry, its ordinary stream being entirely subtracted for the irrigation of Shorawak. When in flood, however, it may be a foaming torrent for several days, and portions of the Dak are then flooded. But this does not happen every year. There was no flood in 1879-80 or 1880-81, although the river was bank full for four or five days in the February of the latter year. The floods almost invariably take place in winter. A summer flood is a very rare occurrence.

Portions of the Dak are perfectly bare of vegetation, but large tracts are covered with coarse grass and scrub. The tamarisk grows thickly along old channels of the Lora, and spill *nalas*, which are generally very shallow. The thick grass near the river is only fit for camels and bullocks. It is called *gomal* and springs in bunches, but is quite dry and sapless by April.

Vega grass, which is good for goats and sheep, grows thinly after rain or floods, especially in springs and near the sand-hills. *Mul* grass is only found in the Reg.

The soil of the plain is a deep light loam, like that of the Punjab and Sind, and is naturally very fertile. There is generally some *khushkawa* cultivation on the banks of the river, and at the foot of the sand-hills, but it is very uncertain.

A scheme for damming the Lora and thus irrigating the *Dak* is now (1901) under consideration and will in all probability shortly be taken in hand. Various plans for decreasing the leakage and evaporation of the Lora waters, such as planting trees along the banks, are also being tried.

The Dak can be easily traversed by troops in all directions. Even the channel of the Lora can be crossed without difficulty, unless wet, when caution is necessary, as the bottom is soft and abounds in quicksands. Firewood is abundant in many parts of the Dak, and camel-grazing excellent. Grass also can often be procured, but water is scanty. There are no settled inhabitants, and none at all in the winter months. The climate in summer is hot, but from October to April very pleasant. The general elevation of the plain is about 2,800 feet, perhaps rather less.

Almost the whole of the Dak is in Baluchistan. The boundary runs from Chihaldukhtaran, a *ziarat* on the desert edge, 16 miles south-west of Saiad Bus, in an easterly direction, to Siah Sung, a well-known landmark.

At 4½ miles from Charasiaf, on the road to Band, a well-marked road diverges to the left. It leads to Jistak (or Jishtak) where there is *jowari* cultivation. It is in the Dak. At about 10½ miles the sand-hills are cleared and the road enters the Dak. There are several wells outside the sand-hills. They are all dry, but could easily be dug out, as the water is close to the surface.

Surgeon-Major Duke writes of this region that in favourable years, when the Lora comes down well, immense quantities of forage and grain are grown in the Dak near Nushki. This crop is harvested in the late autumn. So large are supplies of *jowar* that they admit of the exportation of considerable quantities. Many miles of land are sown with this seed ; a rough plough is fixed to a camel and a shallow furrow is scratched in the rich alluvial soil ; into this the seed is dropped, and no more trouble is needed. (*Duke—Maitland.*)

DAKDELA—

A small Baluch village on the left bank of the Helmand about midway between Bandar and Kala-i-Fath. The population is about 190, and the village possesses 180 cattle, 200 sheep and goats and 12 camels. There were about 700 acres of wheat and barley under cultivation. The Khan is Rustam Khan. (*Wanliss, February 1903.*)

DALBANDIN—

A plain in Western Baluchistan, north of the Kharan district and separated from it by a range of hills, the highest peaks of which are Ras Koh and Koh-i-Shekh Husein. This plain, together with the subdivisions Koh-i-Pusht, Koh-i-Sant, and Chagai proper, form the district of Chagai. MacGregor noticed that there were frequent depressions in the plain, evidently subject to inundation, and from this circumstance and from the greenness of the grass round about he supposed that water could not be far off, and that the cultivation of the tract might be extended to any limit if irrigated from wells. With a little management this whole plain, he states, might support from twenty to thirty times its present population, and there might be several large villages, each with its cultivation, the waste bits being kept for the sheep and goats and the sandy bits for camel-grazing. The sand, though appeared to be encroaching, and the soil, though good, seemed to be losing its uniform character.

At present the plain is watered by a small open *karez* and the Bulo river. During March and April 1903 the *karez* was found dry and filled with sand. In these two months there was water in the *karez* only after very heavy rain, and then only for two or three days. The water-supply of Dalbandin is in the Bulo river. The latter is slightly brackish owing to its passing over a patch of *shora* land just before it issues from the hills on to the plain. About 4 miles up stream (from the Post) the river-bed is from 2 to 3 miles wide, the water lying in long deep pools and lagoons. The water is sufficiently fresh for frogs to live in it. Here there is a dense growth of tamarisk, and *drubh* and *mal* grass grow in profusion, sufficient to feed a cavalry regiment for months.

On the hills around is land in abundance for camel-grazing. For about 8 miles up stream there are remains of deserted fields which were surrounded by brushwood fences, and other abundant signs of a large population.

The number of inhabitants has, lately, greatly increased, but is always liable to variation.

Dalbandin is now the 7th stage on the trade route, 116 miles from Nushki, and a levy post is stationed here, with a *thana* near which a flour-mill has been erected. The comfort of travellers has been secured by the erection of a spacious *chapar-khana* consisting of five rooms, 18 × 16 feet, each having its own bath room attached, a cook house, servants' quarters, and stabling for several horses. Caravans frequently halt at Dalbandin to rest their animals; for the convenience of these there is a *serai* near the *chapar-khana* containing three good sized rooms, and a courtyard in front sufficiently large to accommodate about 50 camels at a time. A signalling heliographic station was established in 1903 on a hill 3½ miles north-west of the *thana*. A telegraph office was opened here in 1903 (*see* Appendix V). (*Roome—Webb-Ware—Gordon.*)

DALIL KOH—*see* KOH-I-DALIL.

DAMANI—

In point of numbers the strongest tribe inhabiting Sarhad. They are a pastoral Baluch tribe possessing marked predatory habits and closely allied in appearance, manners and customs to the Marris of Baluchistan, with whom they claim affinity. The Damani acknowledge as chief one Mir Jahind Khan, Yar Muhammadzai, and they are divided into the eight following sections, *viz.*, the Yar Muhammadzai, the Rahmanzai, the Mir Begzai, the Sohrabzai, the Surizai, the Mir Gulzai, the Hussainzai and the Umarzai. Tribal tradition has it that, many generations ago, a branch of the Marris left the parent stock and settled in the highlands of Sarhad tempted by the close resemblance which that country bears to the land of their birth. In course of time the branch which took root in Sarhad gradually extended its authority until most of the petty clans inhabiting Sarhad came under its sway, with the result that eventually all combined to form one tribe which became known amongst their neighbours as Damanis, *viz.*, dwellers on the mountain slopes.

The Damanis number in all some 800 families and inhabit the Safed Koh, Hadgali, Bunderan, Tahlab, Reg-i-Malik, Rod-i-Gazo, Shakbund, Muhammadabad, Nakokabad and Gurjan. Like the Marris of British Baluchistan, the Damani are essentially a race of hardy mountaineers, devoted to their highlands, which they only leave once a year, in July, to collect their date harvest in Mashkel, or to raid—a practice to which they are much addicted. One-third of the total yield of Mashkel belongs to this tribe, who pay no revenue either to the Persian Government or to Kharan. They are regarded by their neighbours as a nest of hornets with whom it is best not to interfere. Summed up in a few words the Damani are a set of wild, barbarous, semi-independent mountaineers on whom the Persian yoke presses but lightly. There is no doubt that the Persians could impress their authority on the Damani if they made a determined effort to do so; but hitherto the Damani have successfully opposed the various feeble attempts the Persians have made against them from time to time. (*Webb-Ware.*)

DAMODIM—6,333 feet.

An extinct volcano to the south of Amir Chah and west of Koh-i-Sultan. The track from Kondi to Amir Chah passes round the east of it. There is an abundant growth of assafœtida on its lower slopes.—(*Roome.*)

DAMB WELL.—Lat. 29° 30′; Long. 64° 49′; Elev.

About 3 miles south south-west of Galla Chah at the north-west extremity of the Lora Hamun on the road to Chagai.

DAMODIM RIVER—

Rising in Damodim is dry except on the rare occasions when it is in flood, when it flows south towards the Tahlab river.

DARBAND WELL.—Lat. 29° 20′; Long. 63° 7′; Elev. 3,415′.

About 15 miles from Jilejil on the road to Amir Chah; it lies about 5 miles north of Manzil.

DAREGWAN NALA—

A small affluent of the Gat-i-Barote generally dry.

DAR-I-GIABAN OR DAR-I-GUMBAZ—

A *nala* rising near the Bed pass, in which the waters of the Bed spring run for a short distance before disappearing from view.

From the Bed spring there is a camel-track down the Dar-i-Giaban *nala* to its junction at New Mirjawa with the Mirjawa river. The Dar-i-Giaban was formerly shown on the maps as the Mirjawa river, hence some confusion arose. It is, however, merely an insignificant depression in the ground—a dry, shallow bed of sand with a strip of scorched tamarisk jungle to mark its course.

There is an abundant supply of very good water issuing from the springs and running down the *nala* in a north-east direction for 3 miles. The water spreads over the bed of the *nala*, which averages 30 yards in width, to a depth of 4 or 5 inches, flowing through a very thick growth of grass, which here attains a height of about 5 feet. At the head of the spring there is a small thick jungle of tamarisk and there are occasional tamarisk bushes down stream. At the spring there is a sheltered spot for a small camp, but it is commanded by a hill rising to 275 feet above it.

Dar-i-Giaban halting-place is 12 miles from Ladis on the road to Duzdap on a large gravelly plain. It is just within the Reki country, which here marches with the lands of the Ismailzai or Shamalzai tribe. To the north rises the Hinjardar range.

When the grass becomes green a good many Rekis graze their flocks here. Fuel and camel-grazing are plentiful. (*Benn—Roome.*)

DAR-I-GUMBAZ PASS.—Lat. 29° 0′; Long. 61° 11′; Elev. 6,500′.

Also called Dar-i-Giaban pass, crossed by the Ladis-Seistan road, about 16 miles north-west of Ladis. The *kotal* is rather difficult for laden camels. The water at the halting-place a few miles north of the *kotal* is from a spring and is brackish. Wood and camel-grazing rather scarce and no forage for horses whatever. (*Ahmad Ali Khan.*)

DARZI WELL.—Lat. 29° 39′; Long. 65° 42′; Elev.

About 12 miles north-east of Umar Shah Nawar near the road to Papring.

DASHT-I-DIGAR CHAPRI—

A small plain traversed on the road from Amalaf to Amir Chah in North-West Baluchistan. It is about 15 miles distant from Amalaf and about 50 miles due south of God-i-Zirreh. A peculiar isolated hill called Trashta Kurik is passed on the south of this plain, and from this another ridge called Koh-i-Dalil, said to mark the boundary of the Khan of Kalat's dominions, bears 106°. This latter ridge forms an excellent landmark. (*MacGregor.*)

DASHTIGAR—

A shrine or *ziarat* on the south-western portion of Nushki Plain. (*Roome.*)

DASHT-I-GULAB—

A small sandy plain in North-West Baluchistan. It is a continuation south-westwards of the Dalbandin plain (*q. v.*). Heavy ridges of sand, which are, however, practicable between the hillocks, separate this valley from the Koh-i-Suraf range. (*MacGregor.*)

DASHT-I-GULAMAN—

A plain passed on the road from Amalaf to Amir Chah, in North-West Baluchistan, about 8 miles to the east of the former place. (*MacGregor.*)

DASHT-I-PADAG—

A marshy plain covered with coarse grass at the north-east end of the Dalbandin district. The Koh-i-Shekh Hussain peak bears at an angle of 70° from this. Five miles south-west of this plain is a deep well called Chandran, with plenty of fuel and forage round about. (*MacGregor.*)

DASHT-I-TAHLAB.—Lat. 28° 45′; Long. 62° 5′; Elev.

The desert on the western frontier lying north-east of the Tahlab river and extending north-west from the Hamun-i-Mashkel for over 100 miles.

DEDAR.—Lat 29° 17′; Long. 65° 53′; Elev.

A well 3 miles south of the road midway between Nushki and Mall; the first stage on the trade route west of Nushki. A *karez* is being dug here. (*Webb-Ware.*)

DEHGWAR—*see* MASHKEL.

DEH-I-DOST MUHAMMAD—

A village on the right bank of the Helmand nearly opposite Band-i-Kamal Khan, consisting of 90 huts and 350 Sinjarani Baluch inhabitants. The village possesses 280 cattle, 300 sheep and goats, 25 horses and 34 ploughs, each plough producing an average of 25 *kharwars*. The Khan is Dost Mahomed Khan. There is said to be a ford opposite the village. (*Wanliss, February 1903.*)

DEH-I-MIRAK—

A Baluch village on the right bank of the Helmand, about 7 miles above the Band-i-Seistan. It contains about 25 houses and 110 inhabitants. The village possesses 60 cattle, 140 sheep and goats and 12 ploughs, each plough producing an average of 24 *kharwars*. (*Wanliss, February 1903.*)

DEHWAR—

A tribe of Rind Baluchis. The inhabitants of Bampusht, Kuhak, Isfandak, Dehak, Dizak, Sib, Magas, Bampur and Jalk are, with a few insignificant exceptions, a part of the great horde of Rinds who emigrated through Persia and settled in Dalgan and the surrounding country, and thence spread over into Baluchistan.

From here again, a few years afterwards, another part of this horde, under the leadership of Rustam Khan Chakar, emigrated eastwards and settled at the foot of the Kalat plateau on the east, in the Kachhi, and the hilly tracts to the north of it. Some of these migrated back to their former possessions, leaving a number of their tribe in the hills north-east of Kalat, in Shoran. This tribe is called the Dehwar and is to be found in the above-mentioned tract, as also about Dizak and in Suran and Sib; south of the former is Western Baluchistan. Although now considered a subject of Persia, the chief of the whole of the Dehwar clan, Sardar Kadir Baksh of Dizak, keeps up his relations with the representative of the

Ahmedzais, who once owned the whole of the country inhabited by the Baluch tribes even up to Sarhad, and letters are said to pass between Sardar Kadir Baksh of Dizak and His Highness Khodadad Khan, K.C.S.I., of Kalat, twice or three times during the year.

One of his confidential servants stated that his master fully intends, if ever hard pressed by the Persians, to emigrate back to Shoran in Kalat territory, and seek the protection of the Khan of Kalat. Sardar Kadir Baksh is undoubtedly the most powerful chief in Western Baluchistan, as his clan is numerous and he personally is greatly respected for the rectitude and integrity of his private character. His influence is said to be always used for good, and at the last pacification of this country he used his interest to restore to Mahmud Khan of Isfandak, Sherdil Khan of Kallagan, and Mahmud Khan of Sib, their villages and property in the country.

It is also said that the revenue is first collected by Kadir Baksh Khan and then made over to Dilawar Khan who, in turn, remits it to the Persian Governor in Bampur. Kadir Baksh is the only chief in this part of the country whom the Persians have not been able to oppress. He is said never to trust them and is too powerful for them to attempt to seize him openly.

It is said that the fighting strength of the Western Dehwar clan is 3,000 men, when all the tribes contribute their quotas. In three or four days it is estimated that 1,000 men can be assembled if necessary from those tribes within easy reach of Dizak.

The Western Dehwars are divided into the following tribes :—

(1) Bahorzai. In Suran.
(2) Dashtki. In Dizak.
(3) Dekhani. In Sib.
(4) Haibazai. In Suran.
(5) Haligdazai.
(6) Hetki
(7) Khan Karram Shahi. In Suran.
(8) Khan Maliki Shahi. Do.
(9) Kalpur Kani. In Kalpurkan.
(10) Kulwi.
(11) Mandozai Shahi. In Suran.
(12) Mustafazai.
(13) Nagani. In Kallagan.
(14) Rahim Dazai.
(15) Samzai.
(16) Sardar. In Dizak. (Tribe of Kadir Baksh, chief of the Dehwars.)
(17) Shahzada. In Dizak. (*Tate.*)

DESHU—

A village on the left bank of the Helmand about midway between Landi Muhammad Amin and lower Khwaja Ali, with a population of 500 Sadozais and Mamusani Baluchis. The left bank of the river between Landi Muhammad and Doshu is high and the country very much broken up by *nalas* and no irrigation is possible.

A canal, however, takes off near Deshu Numa, where there is a small deserted mud fort and irrigates the village below, and there are altogether about 1,000 acres of wheat under cultivation. The village possesses some 300 cattle, 700 sheep and goats, 12 horses and 30 camels. The present Khan is Khan Muhammad. (*Wanliss, February 1903.*)

DHOLI—Lat. 29° 10′; Long. 63° 9′; Elev.

A solitary conical-shaped hill lying between Manzil and the Koh-i-Sultan. Its southern slopes are gradually being covered with drifted sand. From its formation (tuff) it appears to belong to the hills round Manzil. (*Roome.*)

DIHAK OR DEHAK—

A large village on the road from Panjgur to Kirman. A half share of the village belongs to Mahmud Khan, the Sardar of Sib, the other half is the property of a Naoshirwani who resides in the village, which occupies a strong position, about 15 miles slightly north of west from Isfandak. There is plenty of water and a good deal more cultivation than at either Kuhak or Isfandak. There is a good extent of fairly level ground between this village and the Mashkel, which lies about 4 miles to the south. There are two forts, and the houses in the village are built of mud.

A road goes north to Jalk *viâ* the Brinjnan pass. (*Tate.*)

DIRANG KALAT HILL.—Lat. 29° 27′; Long. 64° 37′; Elev.

A hill of the Chagai Sarlat, about 10 miles north-west of Chagai.

DIWANAK OR NARI—*see* LAL KHAN CHAH.

DIWANAK KAUR—

A ravine in North-West Baluchistan, which, rising in the Koh Diwanak, takes a southerly course and drains towards the east of the Koh-i-Sultan, and beyond that forms a *hamun* in the desert.

A road from Lal Khan Chah to Robat traverses the bed of this ravine for some miles. The following description of the road is taken from Lockwood's report:—

"The road goes for two miles in a north-east direction over a stony plain, and up the left bank of the Diwanak Kaur, to where it divides into two branches; the road follows the northern one to the halting-place. For two miles from Lal Khan Chah the track follows the stony bed of the *nala*, ascending almost imperceptibly. The valley of the *nala* varies from 50 to 400 yards in breadth, shut in by bare black hills from 50 to 150 feet high, on the western edge of the Naru gorge. Two miles from the halting-place the road reaches the western edge of the hills, and the country to the left is clear of hills, the view being shut in by sand ridges. There is good water in several places on the *nala*-bed, and some wells about five feet deep: the road by clearing and a little opening out could be made practicable for artillery, though the last four miles are over heavy sand. Patkok, about four miles on, is the proper halting-place. From this camp the road follows the sandy bed of the ravine for one mile and here reaches its head, and thence goes over a broken-up country to Robat, which is distant from the last camp 17 miles. (*Lockwood.*)

DIZAK—Lat. 27° 20'; Long. 62° 20'; Elev. 4,000'.

Is the name of a grove of date palms, about 6 miles in length from east to west and about 1 mile in width. It is situated on the right bank of one of the tributaries of the Mashkel river. This stream rises near Washt and drains the valley between the Siahan range and another range south of it. The average width of this valley is about 12 miles, the stream alluded to flowing along the base of the range of hills which forms the southern limit of the valley. There are several villages inside the grove, one of which is inhabited by Sayads. The most easterly village is called Nagan, and the fort of Dilawar Khan, the Sardar of the Buzirgzadagan, is at the western end in one of these villages; and about 1 mile east of Dilawar Khan's fort is the residence of the Dehwar chief, a large mud fort There are numerous *karezes* full of water now in use, as well as the remains of several more ancient, which might perhaps be cleared out and utilized for irrigation purposes. These take their rise in the talus of the Siahan range.

At present the number of *karezes* in working order supplies more water than is necessary for the area under cultivation, as the soil is saturated with moisture, while, in addition, there are several springs forming small marshy places where rice is cultivated. The soil of this valley is good, and free of stones; and if there were a feeling of security in the place, it is very probable that this would become a very fertile tract of country. At present only the land between the date palms is cultivated, but good crops are raised. *Jowari* is the principal crop, and grows to a height of about 8 feet. Cotton, to a small extent, is grown here, as well as rice, and a bean, called by the Baluchis *Bankalkuk*.

Dates are plentiful and good, being of the variety known as *rabi* which is that most esteemed, there are besides about 14 or 15 varieties.

Vineyards and orchards are also numerous, and a description of orange is very plentiful.

Notwithstanding the unsettled state of the country, Dizak is a flourishing spot.

The elevation of Dizak is about 4,000 feet above sea-level. The climate is good, and, although the heat in summer is great, it is said to be a healthy country.

There are numerous other groves of palms, so close to one another as to appear nearly continuous, and the whole tract is very fertile. The name of Takht-i-Makran is given to it, as being the most fertile part of Makran.

About 1 mile west of Dizak are two large forts belonging to the Taoki Sardars, Mirza Khan and Rustam Khan. The son of the latter is an intelligent young man. These two chiefs are allied by marriage to the Kharan Sardar, and call themselves Naoshirwanis. When Azad Khan harried this country, he made the residence of these chiefs his head-quarters, and their property was carefully respected by his followers.

The residence of Mir Dilawar Khan is a mud fort enclosing a large extent of ground. Although a very imposing fort, it bears the marks of having been frequently besieged by the Persians, and on closer inspection appears to be in rather a ruinous condition. Part of the fort consists of a large pile of buildings about three or four stories high.

The route connecting Panjgur with Sarhad is that known as the Tauran Rah and is the only line of communication between Panjgur and Dizak. It presents no difficulties, as the valley of the Mashkel river, along which it leads, lies between the great Siahan range and the mass of hills known as Bampusht. At present (1890) this road is unsafe for purposes of trade owing to the unsettled state of this country, and is used by the raiding parties which harry the country east of Kuhak. From the village of Kalpurkan (*q. v.*) a good road branches off, and, passing through the towns of Sib and Magas, south and south-west of Dizak, goes on to Bampur and thence to Kirman. This is the route followed by Pottinger in 1810. The hills on the south flank of this route are inhabited by the Rinds of Bampusht, who have the reputation of being great thieves and warlike. Another road, which might be utilized, starts from Dizak and follows the course of one of the large tributaries of the Mashkel. This tributary rises near the town of Washt (Kwash) in Sarhad, and drains the valley in which the towns of Dizak and Shastun are situated. The cost of constructing a road would be small, and it could be easily kept in order. From Jalk another road leads to Gusht, and it is probably a good one, the country traversed by it is full of hills, and it would therefore not be capable of much improvement.

There is no doubt that a road could be easily kept up between Panjgur and Kirman, either by Bampur, or by Dizak, Gusht and Washt, and it would also draw what trade there is from Jalk. The country along the upper routes presents no great difficulties, and is capable of improvement. The inhabitants are intelligent, and are extremely easy to deal with, and would be very glad if their country became more settled.

It is quite a common occurrence to hear it said that, if an European officer were to be stationed even at Panjgur, the frequent raids, which keep the country disturbed, would be checked, and the country become quiet. Also that, as Baluchistan is now under British influence, and as the country as far west as Bampur is, undoubtedly, a part of Baluchistan, the English ought to extend their influence over it.

This is the common and openly expressed opinion of the lower orders of the people. The inhabitants of Jalk and Nauk (or Nahu) went so far as to propose getting a petition signed and presented to the Agent to the Governor General in Baluchistan, praying that their country might be incorporated with that portion of Baluchistan already under our influence.

There are, no doubt, others in the country who would be averse to a power which is able to check their depredations. But there seems to be very little doubt that the great majority of the people of this country would be glad of any change that would rid them of their present masters, the Persians. The latter are cordially hated throughout the country, both on account of their being Shiah Muhammadans, and also for the oppressive character of their Government.

At Dizak the two powerful chiefs, Mir Dilawar Khan, chief of the Buzirgzada tribe, and Sardar Kadir Baksh Khan, the head of the Dehwar clan, have great influence in the country; the first on account of his ancestry, and the latter owing to the strength of his following and his high personal character. They are, unfortunately, both very advanced in years (1890) and cannot live much longer.

Both these chiefs are well disposed towards us; the latter especially so. Mir Lalla, the Reki chief, also is, as he said, a well-wisher of the English.

Though, as far as could be judged, the general feeling in the country is greatly in our favour, yet there seems to be an impression in the minds of the inhabitants that our power lies chiefly in the fabulous wealth we are credited with possessing, while the Russians are spoken of as having a very large and powerful army at their disposal. There are several Afghan refugees from Ayub Khan's army in Dizak, which may perhaps account for this.

In the summer of 1888 Dilawar Khan of Dizak attacked and burnt a portion of the town of Bampur. (*Tate.*)

DOGANAN OR DOZANAN.—Lat. 29° 19′; Long. 64° 29′; Elev.

A stony plain, 16 miles west of Chagai, traversed by the road from Chagai to the Helmand *viâ* Sukaluk. There is a good camping-ground on the plain close to a gorge, through which the road from Chagai passes; it is sandy and covered with good grass. Fuel and camel-grazing are abundant, and water can be procured from a spring which yields 600 gallons in an hour, the water forming a large clean pool in the bed of the *nala*, which drains out over the plain south-west of Chagai into the head of the road from Lora Hamun. (*Peacocke.*)

DOKI HILL.—Elev. 5,900′.

One of the hills of the Shekh Hussen range bounding the Dalbandin plain on the south.

DOKI RIVER—

Rising north of Doki mountain flows north and then west into Yali *nawar* in the Dalbandin plain.

DORI NALA—

Crossed over at 6 miles from Siah Sung on the road to Papring. It was here about 50 yards wide with perpendicular banks, 40 feet high, bed dry and filled with tamarisk jungle. (*Walters.*)

DOSE NALA.—Lat. 29° 32′; Long. 66° 7′; Elev.

A *nala* rising in the hills to the south-east of Nushki plain and flowing west into the Bagh-ke-Chashma. It is generally dry, except after heavy rain in the hills. (*Roome.*)

DRAMIN HILL.—Lat. 29° 15′; Long. 64° 23′; Elev. 5,215′.

About 4 miles south-west of Duganan hill in the Chagai district, a peak of the Chagai Sarlat.

DRANA KOH.—Lat. 29° 15′; Long. 61° 57′; Elev. 4,089′.

A mountain on the road from Amir Chah to Saindak, 36½ miles from former. As a little water may sometimes be found in its ravines, it is used as a halting-place. A well dug close to its north-east base resulted in finding very bad water at a depth of 7 feet.

Camping-ground.—Unlimited.

Supplies.—Nil.

Grass.—Some *vega* and *barshok.*

Camel-grazing.—Abundant *tagaz.*

Fuel.—Abundant: *tagaz.* (*Roome—Webb-Ware.*)

DRUMILTIN—

A prominent conical peak in the mass of abrupt hills which lie to the west of Chagai in North-West Baluchistan. In making for Chagai from Thal (the fourth stage from Nushki), across the Hamun, a course half-way between this peak and the conical peak of Maharani should be taken. (*Peacocke.*)

DUGAI WELL.—Lat. 29° 5′; Long. 63° 37′; Elev.

Situated in the Ailsi river-bed, about 12 miles east of Jhuli (*q. v.*).

DUGANAN HILL.—Lat. 29° 17′; Long. 64° 27′; Elev. 4,412′.

About 15 miles west of Chagai fort.

DURBUN CHAH—

A well of perennial water, about 100 feet deep, situated on the road from Bakhal-i-Chah (*q. v.*) to Khargosh Khan (*q. v.*). It is the only water on the road between these two places unless a detour south is made to the hills. It is provided with a Baluch windlass for raising water. (*Webb-Ware.*)

DUREG—

Are most curious sand-hills that move slowly across the *dasht* in the same direction as the prevailing wind. The natives say they are always found in pairs, and certainly the ones I saw were in pairs arranged in *echelon.*

Hence their name Dureg. (*Roome.*)

DURGAN CHAH—

A well passed at the 5th mile on the road from Gat to Mirui, on the left bank, in a clump of *jhow* bushes, of the Durgan Rod.

Water 8 feet from surface, 2 feet deep. Well 2½ feet diameter. The water is good. (*Roome.*)

DURGAN ROD—

A shallow *nala*-bed crossed at 5th mile on the road from Gat to Mirui, an abundance of *barshok* grass and *lana* growing in it. It joins the Amir Khan Rod 1½ miles south of the track. (*Roome.*)

DURIGAN—

A small halting-place, 13 miles from Huki Kalat, where a plentiful supply of running water was obtainable in a *nala* of that name. (*Walters.*)

DUROKAN RIVER—

A small affluent of the Tahlab river from the west, about 50 miles north-west of its junction with the Hamun-i-Mashkel.

DURRAK ZAND.—Lat. 29° 52′; Long. 64° 8′; Elev. 2,990′.

A hilly district about 8 miles south-east of Gati Hamun used as a signalling station in 1903.

The levies in 1903 called this range the Chukul hills, and the name Durrak Zand was unknown. (*Scudamore.*)

DUSHAI WELL.—Lat. 29° 9′; Long. 65° 39′; Elev.

East of Laghar Koh and about 5 miles north-west of Kuchakki Post near the trade route.

DUZDAP.—Lat. 29° 30′; Long. 60° 55′; Elev. 4,319′.

Here there is a strip of cultivation watered by three *karezes*, the property of one Sayad Khan, a Gurgej Rakshani, who appears to have settled here about 35 years ago. Duzdap supplies the Robat *thana* regularly with forage; in 1899 about 40 maunds were supplied.

In 1899 Sayad Khan was sent for by the Sartip of Nar Mashir and warned against having dealings with the British Government. In lieu of sending one-third of his produce as tribute to the Sartip he gives him his younger brother and two nephews for service. In this way he is enabled to keep up his supply of forage to the Robat *thana*.

Besides the three *karezes* mentioned, there are several more half opened up in the vicinity; they are all situated towards the northern edge of the Duzdap plain, in the portion of country known as Sarzangal. East of the *karezes* there are some small streams of good water running eastwards, and several small lagoons amidst the *nal* grass. North of the cultivation there is a fringe of tall grass and reeds about 1½ miles in depth extending for about 5 miles along the northern edge of the plain, which here forms the left bank of the Ziarat Rod. A Persian customs post is under construction here.

Duzdap camping-ground is the third stage from Robat on the road to Ladis, and is good and open. Camel-grazing, coarse grass and firewood are abundant in the vicinity, but the only other supplies obtainable locally are a small amount of corn and *bhusa* and a few goats.

A colony of Mamasani Baluch settled at Duzdap in 1899, and are industriously engaged in adding to the number of *karezes*. The Duzdap cultivation will shortly more than suffice to meet the requirements in grain and forage of the Robat *thana*. (*Benn—Roome—Webb-Ware.*)

DUZDAP NALA (a halting-place 2 miles from the junction of Duzdap with Mian Bazar *nala*).—Elev. 3,858′.

Here there is a small quantity of brackish water issuing from the *nala*-bed amidst a thick copse of tamarisk bushes. There is good camel-grazing around, and there is a small amount of *nal* grass close to the water. Camping-ground on the left bank of the *nala* is on an open plain; there are no supplies. From the marks amongst the tamarisk bushes, water must run freely here some years, and then probably it would lose a great deal of its brackishness. (*Roome.*)

DUZDAP PLAIN.—Lat. 29° 28′; Long. 60° 54′; Elev.

This plain extends for several miles.

The Bed mountain bounds it on the east; Koh-i-Khwaja-i-Misk and Koh-i-Raughani on the south; K. Md. Kushta on the west, and on the north the Ziarat Rod separates it from the lower hills of the Kachakoh range. The plain is almost level, but has a slight slope down towards the north, where there are some *karezes* and a little cultivation. The surface soil towards the west is sand and fine gravel, and towards the east and south coarse shingle. The northern edge known as Sarzungle is fringed with a belt of coarse *nal* grass and camel thorn for about one and a half miles in depth and extending for about five miles. In this belt are several streams of good water and some lagoons where a few duck and teal may be shot; the streams

flow eastward. To the south of this fringe the plain is thickly covered with a belt of *tagaz* which gradually disappears towards the south. The northern edge ends abruptly in a steep bank some 20 feet high under which the Ziarat Rod flows west. (*Roome.*)

DUZGHI OR TUZGI.—Lat. 29° 5 ; Long. 62° 21′ · Elev.

A halting-place on the road from Saindak to Amir Chah *viâ* Amalaf, 54 miles from Saindak.

From here two tracks lead to Amir Chah, both about 16 miles, and another track leads to Amir Chah *viâ* Mushki Chah, 35 miles. The bed of the small *nala* is about 3 yards wide and is full of sand that has drifted into it. This *nala* runs between hills 200 feet to 300 feet high.

The water is close to the surface and a little lower down issues out of the sand in dampness. By digging 2 feet the water enters freely into pits. Any amount of pits could be dug, but I am doubtful if the supply is great, as I do not think it comes from springs, but is simply rain water retained in the sand. The natives say that water does dry up after a drought. The water even in a fresh dug pit has a strong smell, and is slightly brackish.

Camping-ground.—Small, and commanded on all sides by hills, only sufficient for three companies.

Supplies.—Nil.

A small amount of camel-grazing.

Fuel.—Scarce.

This place is a favourite watering place for the Damani Baluchis and other raiders after crossing the desert. My guide informed me that if this place was held by a strong post, it would effectually stop all raiding from the Koh-i-Taftan side.

The nearest water towards Saindak is Amalaf, 45 miles distant. (*Roome.*)

EKMACH.—Lat. 28° 44′ 40″; Long. 63° 55′ 30″; Elev.

P. C. bearing from a low ridge of mounds 1,000 yards north-west of the wells—

Kazan Nuhli	
Malik Naru	321°
„ Teznan	325°
„ Pachinan	330°
	345°

Lies in a sandy *nala*-bed (the Morjen *nala* according to the guide), which is covered with a thick growth of *pish*. There are six pits near two small date palm trees. The water is 2½ feet from surface, 2 feet deep, and the pits are 3 feet in diameter. The water is good and sweet. Thirty camels were watered at one pit, and the water flowed in as soon as taken out. There are marks of many old wells around, but it would be advisable to dig fresh wells rather than clear these out, as they are filled in with sand, goat and camel dung. Soil stiff shingle almost conglomerate under 1 foot of sand. One mile up stream the water issues from under the right bank for a few yards, and then disappears.

Native information.—Some years the water runs with a good stream (constant) at Ekmach. It disappears again about a mile down stream.

Camping-ground.—Unlimited, good.

Supplies.—Nil.

Fodder.—Camel-grazing good, and abundant *lana* on the plain.

Grass.—Some quantity of *lana* could be collected in the neighbourhood.

Fuel.—Abundant: *pish.*

The ground around Ekmach is saturated with water to such a degree that there is probably sufficient water for several *karezes.* In the spring of 1899 a party of Brahuis emigrated from Kharan and settled at Ekmach. They were assisted with the loan of tools to start work on a *karez* there, and have worked remarkably well. The *karez* here, from its position in the immediate neighbourhood of the trade-route, should play an important part in furnishing supplies to the Mirui thana. (*Roome—Webb-Ware.*)

FAKIR MUHAMMAD WELL.—Lat. 29° 40′; Long. 65° 42′; Elev.

About 15 miles north-east of Umar Shah Nawar on the road to Papring.

FARANGI REG—

A halting-place on the river Mashkel, about 32 miles north of Mianrud and 106 miles from Dashtak, west of the Panjgur valley (*q. v.*). Amir Chah on the road to the Helmand is about 172 miles distant. There is plenty of water in pools in the river-bed, but the supply is precarious, though in all probability abundance would be obtained by digging were the pools to run dry.

There is abundance of grass, fuel, and camel forage, and on the sand-hills near grows a species of tamarisk called *tagaz* which camels eat greedily, and even horses do not disdain. (*MacGregor.*)

FISHUK.—Lat. 29° 22′; Long. 64° 41′; Elev.

About 5 miles north by west of Chagai.

GADAI KUSHTA—

The junction of the Kandak and Shemidar *nalas,* so called because a Reki Baluch called Gadai has been murdered and buried there. Here there are the ruined remains of three stone built houses, attributed to the Arabs. Near here water issues from a spring under a natural archway on the left bank of the Kandak *nala.* This was dry when I saw it in 1899, but my guide informed me that after rains in the hills there was good water for months here.

Supplies.—Nil.

Camel-grazing.—Indifferent.

Grass.—Nil.

Fuel.—Abundant, small bushes.

Camping-ground.—Contracted, commanded by high hill. (*Roome.*)

GADANI.—Lat. 28° 49′; Long. 64° 41′; Elev.

East of Kotran and north of Pir Puchi pass. (*q. v.*).

GADINIKOH.—3,100 feet approximate.

A small hill passed on the road from Nushki to Dalbandin, 64 miles from former. Is of some local importance, as it marks the boundary between the Nushki and Chagai districts.

P. C. bearings—

To Mekh-i-Rustam . . . . . 305°
" Laghar Koh . . . . . 60°

A *kares* is being opened just under the northernmost edge of this hill. This *kares* shows promise of a plentiful supply of water and will irrigate a considerable area of ground 1 mile to the north. (*Roome.*)

GALLA CHAH.—Lat. 28° 20′; Long. 63° 42′ 40″; Elev. 4,133′.

The last halting-place on the Nushki-Helmand route before the waterless strip (the Lut) which intervenes is reached. It is about 165 miles distant from Nushki and 50 from Khwaja Ali on the Helmand.

There is a good ground for encamping here and abundance of camel-grazing; also a fair supply of firewood.

Owing to the waterless nature of the country between this and the Helmand the water-supply here is a matter of the greatest consideration, for, in the event of a force marching to the Helmand by this route, it would be necessary to water both men and animals before starting. There is a spot called Garmashki (*q. v.*) about half-way across the Lut, where the force might halt, and by previous arrangement they might be supplied with water sent in camel *masaks* from the Helmand.

This was the arrangement made by the Afghan Boundary Commission in the autumn of 1884, when they proceeded to Herat by this road.

The following extracts are taken from the report of Colonel Maitland, in charge of the Intelligence Department, which accompanied the Mission:—

As regard the water-supply in Galla Chah he states—

"The wells are to west of the *ziarat.*

"They are small cisterns sunk in a rocky formation, resembling indurated clay. As a rule, the mouths of the wells are small, and there is a very large amount of undercut—an arrangement no doubt intended to check evaporation. The water is near the surface and of fair quality.

"Altogether we found fourteen wells of different sizes now open. Five of these have recently been cleared by the Pathans who brought the Amir's supplies from the Helmand. There are said to be four more, of which the clearance has been ordered.

"The total amount of water found standing was 2,738 gallons. But 400 camels had been watered during the morning, and, allowing them six gallons a piece, that would amount to 2,400 gallons. The rise of the water, so far as it could be determined by a single experiment, is only 3 inches in 5 hours, or 1 foot in 20 hours. At this rate the wells would take nearly 36 hours to re-fill after they had been emptied, as the average depth of water in them, when full, appears to be somewhat less than 2 feet.

"The total contents of the wells, if untouched for 36 hours, would probably amount to about 5,000 gallons. The clearance of the four wells now choked might add 500 gallons to the supply. Total 5,500 gallons.

"It was proposed to try and sink 16 new wells, but I doubt their being very successful, as we have no entrenching tools. Besides, the rock, which is the water-bearing stratum, seems hard enough to require dynamite. However, allowing them to hold 150 gallons a piece, these wells might increase the supply by about 2,500 gallons, giving a possible total of 8,000 gallons, which should be ample for any echelon of the Mission.

"Have recommended there should be at least 36 hours' interval between each echelon.

"The Amir has sent 400 *masaks* (four on a camel) to carry water to our halting-place in the Lut, which will probably be Garmashki. Obviously we cannot take water from here for use at that place, so Merk sends back the whole to the Helmand, where they are to be filled and brought to Garmashki in time to meet the first echelon. They will have to be emptied as rapidly as possible by the latter, and started off again to the river, where they will be re-filled and brought back for the second echelon, and so for the others.

"The distance from Garmashki to Khwaja Ali is supposed to be 20 or 25 miles. Consequently 12 hours must be allowed for the journey, or 24 there and back. Adding the time of detention at Garmashki and at the Helmand, it will not be safe to calculate on the camels reaching Garmashki a second time in less than 48 hours, which will consequently have to be the interval between the arrival of echelons at that place. Therefore, there need be no difficulty about their succeeding each other at Galla Chah at the same interval.

"There are said to be three mines here, 2 or 3 miles off, near the base of Ainak, which by the way completely shuts out Dokand from the camping place. One is a salt mine, one a sulphur mine, and the third of rock crystal or marble. The Amir has been conveying a quantity of the latter to Kabul. Many specimens of a semi-transparent fine crystalline stone are lying about near the *ziarat*, and some of marble with red veins.

"Sukaluk is nearly due west from here, beyond a low black range. It appears to be about 10 miles distant, and is among hills. To its north is a rather conspicuous light-coloured hill, called Masiskap.

"The direction of Khwaja Ali is pointed out as being about north-west. There are two tracks from the *ziarat*, one over low hills, the other more to the left, towards the water-course. The latter passes a very conspicuous little red hill a mile or two off. They are said to meet at no great distance.

"On account of the precarious nature of the water-supply in the stages from Quetta to the Helmand the Boundary Commission, including of course the escort and followers, was divided into three echelons or parties.

"The total of the party moving across the desert amounted to—

33 Europeans.		514 Horses.
1,549 Natives, with		369 Mules and ponies.

1,601 Camels.

"One hundred and five pairs of camel *pakhals* were made for the Mission in Karachi. There are also some thirty pairs of mule *pakhals*. Every sowar of the cavalry detachment has also a small *masak* to be carried under the horse's belly, like the frontier cavalry. They contain about

1 gallon each. The camel *pakhals* are estimated to contain about 20 gallons a pair, and the mule *pakhals* 14 gallons a pair. There are also 120 *masaks* supposed to contain 4 gallons each.

"Loss by leakage is calculated at 1 gallon for each pair of *pakhals*, whether mule or camel.

"The baggage was started as soon as possible after 6 P.M. and the cavalry marching at 2 A.M. was timed to reach Garmashki at 11 A.M. The *masaks* from the Helmand were to be emptied and returned to the Amir's people by 12 noon at latest, to allow of their being re-filled and brought back for the second party.

"Three day's cooked rations were issued at Galla Chah, and two days' rations for horses and baggage animals.

"A third day's supply for the animals was carried by Afghan camels, who started in advance of the baggage. On the following day the baggage was to leave Garmashki for the Helmand, distant about 30 miles, as soon as possible after 6 P.M., and the cavalry to march at 8 P.M., reaching the Helmand at 5 A.M. on the 14th October 1884.

"As many of the infantry escort and followers as possible were mounted on camels; and the second and third echelons were requested to water their camels and fill *pakhals* at Mamu before leaving, as it was desirable that water should not be drawn at Galla Chah during the night following the arrival of each party at that place.

"Water at Garmashki was distributed at the rate of one gallon per man (European or Native), 4 gallons per horse, 2 gallons per pony or mule. Camels were to receive no water.

"These arrangements were, as the results proved, very satisfactory. The guides attached to the first echelon, on their arrival at Garmashki, pointed out a small hollow a little way from the halting-place, where they said water could certainly be obtained by digging. This, if true, is worth recording, for in future years, should a column proceed by this route, tanks might be constructed, which would obviate the necessity of the above recorded arrangements for a water-supply." (*Maitland.*)

Wells in solid rock with good water sufficient for 1,000 men and camels, 14 miles north-west of Mamu on the road to Khwaja Ali on the Helmand. The water lies in shallow wells under a stratum about 6 inches thick of sandstone which has to be broken through. If required numerous wells could be easily sunk. Galla Chah means "shepherd's well" and is wrongly spelt Galichah on the map. (*McMahon.*)

GALLA CHAH—

A halting-place on the road from Kharan to Jalk *viâ* Gulugah, seven stages, 118 miles, from the former place. It is 19 miles from Regin, the 6th stage, and 27 to Rah-rau or Rah-i-Rah. Wood and grass plentiful.

A road branches off from this point to Amir Chah. There is here a well 12 feet deep. (*O'Donnell—Ahmed Ali Khan.*)

A halting-place on the southern road between Dalbandin and Amir Chah and 61½ miles from the former, marked by a *ziarat* built of logs of wood and dedicated to Pir Sultan, the patron saint of camelmen. Two wells, one south, the other east of the *ziarat*. Both are built up with *tagas* inside, which gives an unpleasant taste and smell to the water. The

water smells strongly of sulphurated hydrogen and has a decided aperient effect. On being filtered and tested with nitrate of silver there was a considerable deposit.

South well. Water 12 feet from surface, 10 feet deep. A working party, working the whole of one morning, failed to empty it. The natives say there is a large spring at the bottom of it.

East well. Water 12 feet from surface, 4 feet deep, 2½ feet diameter, refills in one hour.

Camping-ground.—Unlimited.

Supplies.—Nil.

Grass.—*Barshok* in small quantities. Abundance of this grass in neighbourhood that could be collected and brought in.

Camel-grazing.—In great abundance, consisting chiefly of *tagaz*.

Fuel.—Abundant.

This is a great camel-grazing district: several hundreds should be obtainable here at short notice.

This is about the most northern limit to which the Damani Baluch raid. (*Roome.*)

GALUGAH.—*See* GULUGAH.

GALUR—

A camping-ground, 13½ miles from Umbai (Humai) on the Kani-Shah Ismail road. The road is very easy, except at a steep *kotal*, 240 feet high, 2¾ miles from Humai. Ample water for a brigade at Galur, 2 feet below surface; any number of wells easily sunk in clay soil. A little water sufficient for watering camels comes to the surface and flows for a few yards about ¼ mile north-east of camp.

The thermometer on the night of the 25th January 1903 registered 10 degrees of frost. (*McMahon.*)

GALUR REG—

The name given to low sand-hills passed on the road from Shah Ismail to Umbai on the Nushki-Helmand route. They begin about 13 miles from Shah Ismail. (*Maitland.*)

GAMI CHAH.—Lat. 29° 10′; Long. 62° 43′; Elev.

A camping-ground, among the north-western defiles of the Koh-i-Sultan. Here there are two wells with one and a half feet of water in them; water twelve feet from surface. The water is brackish and unpalatable, though animals will drink it. The camping-ground is in the bed of the *nala* and is commanded by high hills. There are no supplies obtainable and camel-grazing is scarce; grass none in vicinity.

The wells are situated in the middle of the *nala*-bed, and 800 yards south of a narrow gorge through which the road from Manzil runs. This gorge is 1,150 paces long and its narrowest part, 720 paces from the northern mouth, is only 7 paces wide; its general width varies from 20 to 50 paces with inaccessible precipices as banks—the track along the bottom is very sinuous. The bottom of the gorge is composed of fine shingle. As might be expected from being situated near the centre of an extinct volcano the scenery is remarkably bold, fantastic and picturesque; the volcanic ash of which the neighbouring hills are composed giving all the colour necessary. (*Roome.*)

GANDARAU WELL.—Lat. 29° 12′ ; Long. 64° 44′ ; Elev.

About 6 miles south by west of Chagai.

GAO KOH OR KOH-I-GAO—

A low stony hill south of the Lora Hamun in North-West Baluchistan. It lies also due north of the Dalbandin district. The road from Nushki to Chagai goes at the foot of this hill, so as to avoid the Hamun swamp, but it is said to be impracticable during the winter rain.

There is no water here, but it could be obtained in numerous places by digging. There is abundance of camel-grazing and grass all round, and also a little fuel. (*MacGregor.*)

GARAN RIVER—

A tributary joining the Lora river about 10 miles east of its debouchure into the Lora Hamun.

GARMAN—

A prolongation of the Gat-i-Hamun in an easterly direction.

Native information.—A *hamun* and a *karez* with some cultivation said to be at its foot. (*Roome.*)

GARMAP RIVER—

A small affluent of the Fishuk *nala*, rising south-east of Kasanen Chapar.

GARMASHKI—

A halting-place on the *lut*, between Galla Chah and Khwaja Ali on the Helmund, 32 miles from the former and 25 from the latter place.

Though no water was apparent here when the Boundary Commission halted in 1884, the guides with the party were of opinion that water could certainly be obtained by digging, and Colonel Maitland endorsing this opinion adds—

"This is very important and I am inclined to believe that water could also be obtained in the neighbourhood of the line of march, perhaps at more than one place. The Godari and other water-courses run out into the desert and are lost there, perhaps stopped by the sand. At any rate it is said that no drainage from the hills south of the desert ever reaches the Helmand ; and it would seem probable that water might be got at no very great depth in the channels of some of these water-courses." (*Maitland.*)

See also GALLA CHAH—

GARMSEL—

An Afghan district, inhabited by such a conglomeration of petty Baluch and Brahui tribes, *tomans*, and families who have settled in the country attracted by the favourable rates of grain which rule there, that a description of the tribes of the Helmand valley resolves itself into nothing more or less than a wearisome enumeration of the names of a number of petty clans, not a few of which are represented in Garmsel by only a few individuals. The meaning of the word Garmsel is from *garm* "hot" and *sel* "flood", the country where a flood comes down in the hot weather.

A large proportion of the grain supplies consumed by the inhabitants of the Nushki-Chagai-Sinjarani country comes from Garmsel. In 1903 there

appeared to be great difficulty in getting any supplies from Garmsel, and it was said that the country was suffering from the worst famine experienced for a century. (*Webb-Ware—Scudamore.*)

GARRI RIVER—

A water-course rising in the southern spurs of Malik Teznan and flowing southwards till lost in the desert.

GARUK-I-GORI.—Lat. 29° 28′; Long. 61° 48′; Elev. 2,387′.

A sand-hill and trigonometrical point about 14 miles north-east of Saindak.

GASHTO RIVER—

Rising north of Malik Naru flows in a westerly direction past Jilejil and is lost in the desert.

GAT—*see* KOH-I-MALIK-GAT.

A halting-place on the northern road between Dalbandin and Amir Chah, 82¾ miles from Amir Chah.

P. C. bearings—

To Malik Siahkoh	. . . . .	50°
„ Naru	. . . . .	340°
„ Pachinan	. . . . .	343°
„ Teznan	. . . . .	10°

A grove of date palm trees, numbering perhaps 150, that lie to the north-west, and about 1 mile distant, of Malik Gat. Water runs in a small stream, appearing and disappearing for some yards, to the east of the palm grove, and to the west and to the foot of some low bluffs that run north and south. The water is in any quantity, though the pools should be avoided as they are impregnated with the *effluvia* of camels. Three wells have been sunk, 100 yards, west of the *nala*-bed whence drinking water may be obtained. The water is never more than 1 foot below the surface. There is a very thick undergrowth of *pish* and *jhow* between the date trees. The date trees are said to have been planted by the Arabs when they were in possession of the country. They are not cultivated now, and apparently sow themselves, as there are many young trees springing up.

There are some *sisi* about, and black partridge were said to have been seen in the *pish*. Sand grouse, common and coronetted, came down in some numbers to the water.

A large number of camels are grazed in the vicinity when the season is favourable.

Camping-ground.—Good and unlimited to south and west of grove of palm trees.

Supplies.—Nil.

Fuel.—Very abundant: *jhow*, *pish* and date trees.

Fodder.—Camel-grazing. Abundant *gaz* and *tagaz*.

Grass.—*Barshok*, *drubh* in large quantities. *Dub* in small quantities. *Kandar* abundant. (*Roome.*)

GAT-I-BAROTE.—Lat. 28° 51′; Long 63° 32′ 30″; Elev.

A hill in North-West Baluchistan, lying north-east of Paniham. It is an isolated rock, after the manner of the Droogs in India, and rises

abruptly out of the plains, forming an excellent landmark. It probably was once connected with the Nuhli range, which runs not far to the south of it, but now it stands quite apart.

From Paniham or from Meski roads go to this hill over a sandy waste covered with stones of all colours and sprinkled with camel scrub, similar to that between Paniham and Shandak. The distance is not under 40 miles, and there is no water, though some camel-forage is procurable.

At the Gat there is water from a spring, but fuel and forage are scarce. According to Ahmed Ali Khan this place is the 9th stage on the road from Kharan to Amir Chah *vid* Regin, and is 13½ miles from Nuhli.

Chah Sandan (Amuri Kaur) is 12 miles distant.

There are large date groves here, but no village.

Wood and grass plentiful, and good water from bed of the stream. (*MacGregor.*)

This hill and Koh-i-Malik-gat (*q. v.*) are undoubtedly the same hill. The proper name is Koh-i-Malik-gat. Gat and Barote are the names of two springs some five to seven miles apart. The natives call the hill Malik-gat. (*Roome.*)

GAT-I-HAMUN.—Lat. 28° 57′; Long. 63° 58′; Elev. 3,230′.

A low red hill rising with precipitous slopes on its southern face.

P. C. bearing from Ismail to it 335°.

Native information.—Said to be a large pond of deep fresh water at its southern foot. Also a *karez* and cultivation. (*Roome.*)

GAUD-I-ZIRREH—

Is a vast *hamun* in Afghan territory west of Koh-i-Malik Siah and north of Amir Chah. The altitude of this *hamun* is 1,510 feet, and most of the *nalas* that drain towards it have their sources at an altitude of 3,000 feet; it is therefore probable that their underground drainage affects its waters. The Shela river is the only visible source of water in the Gaud-i-Zirreh; this stream is the channel by which the overflow water in the Seistan *hamun* is drained off.

At Godar-i-Shah, about a mile up the bed of the Shela, there is brackish water about 2 feet deep. Formerly, when the Helmand came down, water could have been procured in the Zirreh depression under 70 miles from Amir Chah; but if this river is not permitted to flow to Zirreh, even the water now found may dry up altogether, as it has done lower down, and then by this line from Amir Chah, there would be no water for a distance of 140 miles. At present at Shah Godar there is a plentiful supply of brackish yet quite drinkable water, and fuel and forage are abundant. (*Roome—MacGregor.*)

The Gaud-i-Zirreh was dry when passed by Captain Webb-Ware in 1901-02. From enquiry he found that the Gaud-i-Zirreh is filled when a flood comes down the Helmand river and fills the Naizar and Hamun Seistan depressions, and when the water of the latter is driven south by a gale from the north finding its way *vid* the Shela river which terminates in the Gaud-i-Zirreh. (*Webb-Ware.*)

GAUKOK.—Lat. 23° 19′ 0″; Long. 63° 51′ 30″; Elev.

A hill that terminates the Raskoh range in a westerly direction. The track from Regin to Sorap passes just north of it. (*Roome.*)

GAUKOK HAMUN—Lat. 28° 19′; Long. 63° 54′; Elev.

There are two wells on Gaukok Hamun close under the hill on the north-east side near the Regin track. They are between a low hill of rock and the hill itself. Water 30 feet from surface, 6 feet deep, 3 feet diameter. The water is said to be good.

There are three more wells close by, which had partially fallen in, and several more marks where wells once had been. Also the remains of the walls of huts. The walls had been built of large stones. The guide attributed them to the Arabs. The southern portion of the Hamun was for about 400 yards square under water for a depth of 6 inches. The rest of it was hard *pat*. The country enclosing it consisting of sand-hills.

Native information.—Stated to be a large amount of *barshok* grass in this neighbourhood, but I failed to see any signs of grass beyond a little *vega* springing up on the sand-hills. (*Roome.*)

GAURGAND—

A high jagged hill in North-West Baluchistan. It is passed on the road from Gazachah to Kanuk, 6 miles from the former, about half-way between the two places. (*Maitland.*)

GAWAG—*see* ZAWAG.

GAZ—

A camping-ground in Western Baluchistan, in the district of Dehgwar, west of the Mashkel river. A track leaves the Mashkel river some miles below Buzurg Gaz, and in six long stages reaches Gaz, whence it goes on to the district of Zirreh, in the extreme north-west corner of Baluchistan. At Gaz there is water in a well and fuel and forage. According to Colonel Bell this place is only two marches (27 miles) from Camp Mashkel. (*Native information—Bell.*)

GAZACHAH.—Lat. 29° 32′; Long. 64° 51′; Elev.

A camping-ground lies about 1 mile west of Kungai hill, a very conspicuous black hill of igneous rock with three round tops to it. Water abundant anywhere 4 feet below the surface; nine wells now exist, all containing good water. *Drubh* grass abundant all over the surrounding country. From Kani the Baluch-Afghan Boundary Mission left Route III, Helmand Series, and moved across by Chagai fort to Route II, Helmand Series. This became necessary, in order to follow along the line of boundary for demarcation and pillar building.

Up to this point camel-grazing had been exceedingly poor, and one might almost describe it as *nil*. This was not so much due to the absence of bushes as to the fact that up to this date (9th March 1896) the sap had not risen into the twigs of the bushes. The Mission camels were accordingly fed with cakes of atta and barley. After leaving Kani the tamarisk bushes began to shew signs of life.

This absence of grazing is a matter which would require serious consideration in the event of a force moving along this route during the winter months.

From Gazachah to Tahlab is 12 miles easy going all the way. Tahlab is conspicuous from a distance on account of a very large tamarisk tree under which there is a large and well-kept grave. The camping-ground is close to a tall round pillar: here there is a plentiful supply of excellent water running down in an open channel from the hills, near the entrance to the Shibian pass. Chagal fort lies five miles to the south The land around Talab is well cultivated. *Drubh* and *mulla* grass plentiful. (*Walters.*)

GAZACHAH.—Lat. 29° 32′; Long. 64° 52′; Elev. 2,454′.

A halting-place on the Shah Ismail route from Nushki to the Helmand. It is distant from Nushki about 78 miles, and 32 miles to Shah Ismail.

This place is named from the water-course the Gaz *nala*, which here issues from the hills and along which the road lies. There are two wells here, and it is said that there are others. The water in these is 3 feet from the surface and 5½ feet deep. Wood and camel-grazing are to be found in the sand-hills half a mile both to west and north. There is abundance of *barshon* grass in the plain through which the *nala* flows, and also *kandar*.

The amount of water found here by Captain Peacocke in September 1885 was 8,500 gallons, and the depth of water in the wells from 5 to 2 feet, the water level being about 4 feet below the surface. Colonel Maitland remarks on the supply that—

"These wells may be relied on to fill three times in 12 hours, but the water is absolutely undrinkable if more than three or four days old.

"Nalaf is the proper halting-place on this road. It is nearer Kani, and no further from the entrance of the Kanuk pass (*q. v.*) than Gazachah. The water there is better, and no doubt abundance might be obtained by digging.

"But the best place would be a mile or two further on, at the edge of the *daman* of the hills.

"Here is excellent ground; fine gravel, with just sufficient slope to carry off the drainage. The people say, and I see no reason to doubt it, that water if dug for might be obtained as plentifully as at Nalaf, while the probability is it would be of better quality and decidedly superior to that of Gazachah. A halting-place here would also divide the distance better, being, say, 15 miles from Kani and 17 from Safia.

"It seems there has been seven years' drought in this country. About April or May it rained a little, but before that there had been absolutely no rain for at least six years. Naib Dost Mahomed, a man of 45 or 50 years, says he remembers three or four dry years, in succession, but not six years. Old men, however, say that once there was no rain for nine years. Ordinarily there are not often three years in succession without rain. The rain this spring, little as it was, has sensibly increased the water-supply, and we might have had some difficulty without it. Here of course, and all around, the water is Lora water, which sinks in the

hamun and percolates through till it is stopped by the hills. Personally I am disposed to consider Gazachah, Nalaf, etc., a part of the *hamun*, which is a very ill defined tract to all appearance." (*Maitland.*)

GAZAI KAUR—

A small affluent on the west of the Hamun-i-Mashkel about 25 miles north-north-west of Ladgasht.

GAZAI WELL.—Lat. 28° 11'; Long. 62° 40'; Elev.

On the Ladgasht-Mirjawa road about 30 miles north-west of Ladgasht.

GAZAIN—

The second stage on the road from Kharan to Chagai by the Seh Saman pass. It is about 30 miles distant from Kharan. Water can be obtained from a *nala*, and there is a small supply of grass and fuel. (*Native information.*)

GAZENO RIVER—

A small affluent of the Morjin river from the north.

GAZ-I-DAURAN—

A low sand ridge in North-West Baluchistan, about 8 miles east of the Hamun-i-Mashkel. The road from Dashtak west of the Panjgur valley crosses it about 14 miles north of Godar. It is here covered with *tagaz*, a species of tamarisk. There is fuel and camel forage here, but no water, though it is probable that tanks might be constructed. (*MacGregor.*)

GAZI PASS—Elev. 3,200'.

Over the most northern spurs of the Malik Surinda, traversed by the Nushki-Ladgasht road.

GAZI RIVER—

Rising north of the Malik Surinda flows by the Gazi pass towards the Morjin river

GAZI RIVER—

A small affluent of the Doki river draining north from the Shekh Hussen range into the Dalbandin plain.

GAZ NALA—

A water-course north of the Lora Hamun in North-West Baluchistan. *See* Gazachah. (*Maitland.*)

GAZIN NAWAR—

A depression which retains the water collected after rain 45¼ miles from Galur on the road to Landi on the Helmand, about ¾ of a mile to the east of the track. In January 1903 the rain that put water into the *nawar* fell in December and there was about 40,000 gallons. A well sunk near here would probably produce water within 20 feet of the surface. Fuel and grazing are scarce, and there are no supplies. (*Wanliss.*)

GAZO RIVER.—Lat. 28° 37'; Long. 61° 38'; Elev.

A tributary of the Tahlab river rising between the Bugsar and Morpish ranges on the west, and flowing into the Tahlab about 20 miles south of Mirjawa.

GEDAN NALA—

Rising in Raskoh flows north into the plain at Hushki Nali about 13 miles east of Yadgar. This is generally a dry *nala*. (*Scudamore.*)

GHARIBO.—Lat. 29° 20′; Long. 63° 1′; Elev. 3,948′.

A hill in the sand desert about 5 miles west of Darband (*q. v.*).

GHARIBO—

The track from Manzil to Amir Chah at the 10th mile passes about 4 miles to the south of this hill. As viewed from certain points it has very much the appearance of a pyramid that has turned perfectly black As is usual with the hills to the south of the Registan, its southern slopes are being enveloped in drifts of sand. (*Roome.*)

HAZAL—

A watering-place in a ravine in the north-east corner of the Dalbandin plain in North-West Baluchistan.

It is between Konarak and Padag, about 6 miles from the former place. The Seh Saman hill is here almost due south, over which a road goes to Besimar. (*MacGregor.*)

GHEDAN PASTI—*see* GIDAN PATKI ROD.

A ravine in North-West Baluchistan, about 20 miles east of Gat-i-Barote (*q. v.*). This ravine is very narrow and stony, and has plenty of water, which, though very salt, is potable for camels and horses. (*MacGregor.*)

GHORI NA BAH.—Lat. 29° 38′; Long. 66° 8′; Elev.

The Ghori mouth. A halting-place at the point where the Ghori joins the Kaisar. It is 10½ miles from Rahman Khan Kala in Nushki, and 16 from Bara *karez*, or 18½ from Iltaz *karez*. The Binindi camping-ground in the Ghori is about half-way to Bara *karez*. There is unfortunately no good place for encampment at Ghorina Bah. In case of a large force the bed of the *nala* would have to be used. It is flat and tolerably smooth, though of course rather stony, and there is always some danger of flood, except in perfectly settled weather. Wood and water the latter from the Kaisar, are most abundant. Camel-grazing in summer excellent. Mutton can be procured in small quantities from March to August, but all other supplies must be carried or sent up from Nushki. The best ground for a detachment is a small flat on the right bank partially overgrown with tamarisk jungle. If cleared, it would accommodate a battalion. (*Maitland.*)

GIDAN PATKI ROD—

A *nala* entered at 1½ miles on the road from Mirui to Ekmach. The track leads down this *nala* for 6 miles. Average width, 300 yards. Banks on either side, 15 feet to 20 feet high and precipitous. Country on either side undulating *dasht*. The bed is stony and rough, and there is a quantity of *pish* and tamarisk growing in clumps. (*Roome.*)

GIRDEN BILAU.—Lat. 29° 24′; Long 65° 53′; Elev. 3,209′.

Sand-hills west of and close to Baghak.

GIRDI-REG.—Lat. 29° 18'; Long 62° 50'; Elev.

A large sand-hill standing well up amidst a surrounding plain of small sand-hills.

The track from Amir Chah to Mizzil passes, 1 mile to the south of it at 21 miles. A well dug in the Egari Rod, 1 mile to the west, produced no water at 90 feet, and was abandoned. (*Roome—Webb-Ware.*)

GIRD NALA.—Lat. 29° 16'; Long. 64° 30'; Elev.

A water-course in North-West Baluchistan, 2½ miles from Doganan, on the road to Gurgarok and Barabchah. The road after crossing the Doganan plain for 2½ miles enters this *nala*. Here a little ramping for guns would be necessary. The road then ascends the *nala*, the bed of which is filled with tamarisk jungle, and in places is very rough and rocky. Perpendicular granite cliffs line the *nala* on either side, the bedding of the rocks being in places vertical with occasional veins of trap or lava intruding among them. The road lies in this *nala* for another 2½ miles and then emerges on to the Persongi plain, and at a total distance of 18 miles reaches Gurgarok. (*Peacocke.*)

GIRD-PUSHT—

The name of a low flat-topped hill, 26 miles from Arbu and 30½ from Landi on the Helmand.

GIROM OR GIRIM KAUR—

A water-course and halting-place in North-West Baluchistan, north of the Gat-i-Barote (*q. v.*). It is about 108 miles from Meski on the Mashkel river, and 41 from Shandak (*q. v.*). Water is abundant and good from wells in the bed of the *nala*. Fuel and camel forage are scarce, and no grass is procurable. (*MacGregor.*)

GIRUA REG.—Lat. 28° 37'; Long. 63° 58'; Elev.

The desert north of Sorap springs and west of Radoi-Zonk (*q. v.*).

GODAR—

A halting-place, 149 miles from Dashtak, the starting-point from Panjgur of the Mashkel route to the Helmand and 19 miles from Meski. There is here a fine deep pool of water, which, however, might dry up. Fuel, camel forage, and grass are very abundant. This is an important site; from it roads go to Chagai, Jalk, Naru, Tahlab, and Kharan. It would be a suitable place for a depôt, being the point where the river has to be left (Mashkel river), and possessing soil which might be cultivated; stores might be collected and sheep maintained here. (*MacGregor.*)

GODAR—*see* SHAH GODAR.

GODARI OR GWADARI.—Lat. 29° 35'; Long. 63° 45'; Elev.

A well between Samuli and Mamu, in North-West Baluchistan, and 3 miles from the former place. It is situated in a hollow with a depth of 4 feet of water; area of well 3 feet by 2. The water is slightly saline, but fit to drink, and lies 3 feet below the surface. A considerable amount of vegetation in this hollow, consisting of rank grass, tamarisk bushes, and camel scrub, which would seem to betoken abundance of water. (*Peacocke.*)

GOD-I-MORJIN.—Lat. 28° 22′; Long. 63° 26′; Elev.

A depression or lake-bed in the north-east corner of the Hamun Mashkel (*q. v.*) and about half a mile from Meski (*q. v.*). This depression is at times filled with flood-water from ravines coming from the direction of a hill called Gat-i-Barot, which bears from this place 31°. Fuel and forage are abundant about here, but there is no water except after rain. This depression is connected with the Hamun Mashkel, and as it receives all the surplus water of the Noli range, and a very considerable amount of drainage from the East Naru hills, there would certainly be water found here if wells were dug. There is a halting-place on the northern edge of this Hamun called Zaian, the 9th stage from Kharan, on the road to Amir Chah *viâ* Regin (*q. v.*). (*MacGregor.*)

GOD-I-ZIRREH—*see* ZIRREH.

GOKHAI CHIL—

One of the water-courses into which the Mashkel river divides as it approaches the Hamun.

GOMAZGI.—Lat. 29° 19′; Long. 65° 53′; Elev.

A portion of Nushki district south-west of Baghak through which the trade route passes.

GONSHERO PASS—

Fourteen miles south-west of Jilejil on the road to Mirui. After leaving Dashtak the road goes for 4 miles along the bed of a stream. After crossing the Gonshero pass, the road again enters the bed of a stream for a few miles when a low *kotal* is crossed, at the foot of which is an old ruined fort called Surkalat. (*Sheik Mohiuddin.*)

GONSHERO RIVER—

A tributary of the Madhwan river which it joins about 2 miles before the junction of the latter with the Amuri river. It rises in the Mahik hill, about 5 miles north-north-east of the Malik Naru peak.

GORAKGORI.—Lat. 29° 27′; Long. 61° 47′; Elev. 2,392′.

A halting-place in North-West Baluchistan, on the road from Shah Godar to Amalaf, 20 miles north of Saindak. There is no water here and but a very scanty amount of fuel and camel forage, and there is no grass whatever. (*MacGregor.*)

It is a small rocky hill standing up in the plain. No other hills are near it, and it is plainly visible for miles if there is not a sandstorm blowing, which is generally the case. (*Roome.*)

GORANI.—Lat. 28° 12′ 10″; Long. 62° 37′; Elev.

A village of about 100 houses in a considerable grove of palm trees, 23½ miles from Ladgasht on the road to Hurmak. It belongs to Yar-Muhammadzai Damanis. The water here is good, and forage plentiful, and there is abundance of dry date wood for fuel. At the time of the Baluch-Persian Boundary Commission the Persians attached so much importance to the possession of the Damani date groves of Maksotag, Kindi and Gorani that when the Persian Commissioner learnt that,

under the Tehran agreement, these groves fell on the Baluch side of the border, he declared that he could not continue the work of demarcating the boundary until he had referred this matter to his Government for their decision. After some little demur the British Commissioner yielded, and the boundary line was demarcated so as to include, as it was supposed, all the Damani tribal date groves within Persian territory. Actually upwards of one-third of the Damani date trees still remained without the Persian frontier. Our position as regards these Damani is at present most anomalous, and, if not rectified, is one likely to result in considerable trouble. It is obvious that we can hardly hold the Persian Government responsible for the acts of a tribe which owns property within our frontiers.

The Damani date groves in Mashkel may be enumerated as follows:—

Within Persian territory—
- Sortagan.
- Maksotag.
- Kindi.
- Gorani.

Within British territory—
- ½ Ladgasht.
- Sorgaz.
- Akichay.
- Wadian.
- Gwalistan.
- ½ Analo.
- ½ Rodo.
- Bedi.
- ½ Gawag.

These groves might well be handed over to the Persians in exchange for compensating concessions at Duzdap and Ladis. (*Holdich—Webb-Ware—Ahmad Ali Khan.*)

GRAVES—

A halting-place on the Nushki-Shah Ismail route, about 3 miles east of Umar Shah Nawar.

GUDDEH KASSUR—Elev. 4,166'.

Some small springs in a *nala* which joins the Kassur *nala* on its left bank some 7 miles from Kila Robat. The springs are 200 yards up the *nala*, which is blocked by a mass of rock some 10 feet high, forming a waterfall over which a small stream trickles. Beyond this waterfall is a narrow gorge, not more than 4 feet wide, with precipitous cliffs on either hand, some 150 feet high. The amount of water here is very small and entirely dependent on the rainfall. There are two small caves in the right bank close to the mouth of the *nala*; their entrances are 2½ feet high, and inside they measure 12 feet by 8 feet and 4½ feet high. A silver mine is reported to be situated near, but I think these caves have given rise to the report. Around here there is an inferior kind of moonstone to be found in great abundance.

There is no grass or camel-grazing near, but there are a few bushes growing in the Kassur *nala* close by. Camp would be pitched in the main *nala* or upon one of the banks. (*Roome.*)

GUDDEH KASSUR KOTAL.—Lat. 29° 43′; Long. 60° 53′; Elev. 4,740′.

A *kotal* crossed at 10th mile on one of the tracks from Kila Robat to Ladis, 25 miles from Duzdap locally known as the Kassur Rah. The summit of the *kotal* lies due west of Larkoh; the ascent on the northern side, which is up a *nala*-bed, is rough, large boulders lying about, but laden camels can ascend; the slope for the last 600 yards of ascent is 4°, below that it is 2°. The descent on the southern side is good going, the slope being 2° down a *nala* bed. The summit of the *kotal* is marked by a couple of large piles of stones, and in the vicinity a large quantity of inferior moonstones are to be found. Not far from the summit on the northern side a small *nala* joins in on the right bank, up which there are a few small springs of water, and this spot is evidently used as a camping-ground by small *kafilas*. (*Roome.*)

GULAB.—Lat. 29° 29′; Long. 65° 36′; Elev.

About 20 miles due west of Baghak in the Nushki district.

GULABI RIVER—

A tributary of the Kanian river rising west of Rasani pass.

GULUGAH.—Lat. 27° 56′; Long. 63° 6′; Elev. 1,676′.

A ruined fort south of the Mashkel Hamun, built by Azad Khan, the late Sirdar of Kharan, to overawe the Mashkel Rekis. It is situated on a plain which stretches, on the one hand, to the foot of the glacis of the Persian mountains, and on the other—but broken by sand-hills—to the Mashkel river. There are two small mounds about 30 feet in height: one the site of an ancient fort which has totally disappeared, the other is a ruined mud building, 100 feet square inside, with towers at the four corners and an entrance on the north-western tower, which has a guarded approach. The walls have recently (February 1883) been cut down by the Persians to the loopholes, and a breach admitting a man has been dug in each face. The walls originally built by Azad Khan are about 3 feet thick at half height; they had evidently been cut down to 6 feet years ago. Azim Khan, younger son of Azad Khan, rebuilt them; they were about 14 feet in height when complete. There was a well in the fort 20 feet deep, but this had been destroyed by the Persians. The marks of the Persian cannon balls were apparent on the western face; they had done but little injury; there are sand-hills on all sides except to the west; these extend in a sort of semi-circle at a distance varying from 600 to 800 yards, the highest point of them being to the north. To the west, at a distance varying from 3 to 4 miles, are the Dehgwar date groves, the lower of which are called Ladgasht, etc. This fort was built chiefly with the view to protecting the crops produced in the vicinity from the raids of Sarhadis, and also to bring into subjection a frontier tribe called Rekis. Jalk is about 30 miles distant from this place, and the bed of the Mashkel river about 17 miles. (*MacGregor—Duke—Webb-Ware.*)

GUMBAZ-I-SHAH—

A heap of ruins in North-West Baluchistan, a few miles north-west of the God-i-Zirreh. It consists of six buildings built in a line north-west and south-east along the top of the ridge, and about 50 yards apart, facing south-west. Each had been a square-domed building, about 40 feet square, and the same height, all but the dome being of unburnt brick. They have no pretensions to any quaintness or beauty and are of the commonest kind of structure. Apparently they must have been tombs, as there are other graves scattered about on the ridge. (*MacGregor.*)

GUND I-GAUR—

A halting-place in the Amuri Kaur, the 3rd stage from Gat-i-Barot to Sukaluk, some 30 to 35 miles from the former place. Water, fuel and forage are said to be procurable. (*Native information.*)

GURGARAK OR GURGAROK —Lat. 29° 21′; Long. 64° 16′; Elev.

A halting-place about 90 miles from Chagai and 55 from Sukaluk on the route to the Helmand from Nushki. There is here a pit of water in the bed of a ravine about 3½ feet by 41 feet with 1 foot depth of water. The water is good and lies 4½ feet below the surface. It is doubtful if water could be procured at any but this one point, where a rock ledge projecting across the *nala* favours the interception of any moisture draining down the bed. The bed of the ravine is only 50 yards wide here, and too contracted for camping-grounds. It is only practicable for small parties of travellers. Fuel is plentiful, but camel-grazing scanty. (*Peacocke*)

GUZEN ROD.—Lat. 28° 50′; Long 63° 38′; Elev.

A *nala*-bed crossed at 7th mile on the road from Gat to Mirni. Here its banks are 15 feet high and it is 600 yards broad. Its bed is full of *pish* jungle.

It drains the southern slopes of Malik Naru. (*Roome.*)

GWANI REG—

A sand-hill in North-West Baluchistan, about a mile from Shah Ismail, on the route from Nushki to Arbu. (*Maitland.*)

GWASH KOH—

A mountain north of the Kharan district. It is a continuation northwards of the Raskoh range and is connected with the Koh-i-Shekh Husain by a ridge called Daras or Draskoh. (*MacGregor.*)

HABASH KUSHTA.—Lat. 29° 49′; Long. 60° 52′; Elev. 3 525′.

A spring at the mouth of a small gorge that issues from the northern slopes of the Shemidar range of hills. The mouth of the gorge is nearly one and-a-half miles west of the Shemidar *nala*, where it turns north (*i.e.*, 7 miles south of Kila Robat). The gorge runs for some distance into the hills, is very narrow, and has precipitous hills on either bank; for a distance of four hundred yards from its mouth there are a chain of small springs forming a small stream which finally disappears over a waterfall some 30 feet in height. In spite of the ground all around being thickly encrusted with *shora* the water is perfectly sweet.

Supplies.—Nil.
Grass.—Nil.
Camel-grazing.—Good on the Malikaf plain to the north.
Fuel.—In the shape of small bushes plentiful.
Camping-ground.—On the plain to the north good and open. (*Roome.*)

HABLAK KAUR—

A water-course in North-West Baluchistan, which is traversed by the Pirpuchi road from Kharan to the Helmand, a few miles distant from the Pirpuchi *kotal*, about 6¾ from Zard and 14¼ from Nokinawara. (*O'Donnell.*)

HAIBAT ZIARAT OR ZIARAT-I-MIR HAIBAT—

A shrine formed of stones between Charasiaf in Nushki and Singbur Chaman, about 27 miles from the latter place. (*Maitland.*)

HAJI KUCHI—

A halting-place on the road from Kharan to Gulugah and Jalk. It is the fourth stage (74 miles) from Kharan and 83 miles from Gulugah (*q. v.*). (*Native information.*)

HAKDAD KANI WELL.—Lat. 28° 45′; Long. 64° 28′; Elev.

At the junction of the Doki and Gazi *nalas* south of Dalbandin plain.

HAKIM WAL RIVER—

Runs about 3 miles west of and parallel to the Lora river from Papring to the Hamun.

HALA (OR BRAHUIK) RANGE—

The great mountain system of Baluchistan extending from its secondary root, the Suliman, by the curved Bugti and Mari chain to the north of Quetta and thence in a generally south-south-west direction towards the Indian Ocean, which it reaches at Ras Mawari (Cape Monze), *i.e*, from about north latitude 30° 30′ to 14° 46′. In breadth it extends in the north from the plains of Kachi to Nushki on the borders of the Seistan desert; in the centre to the Persian mountain system; whilst at its southern extremity it is only a few miles across. The height of this elevated region varies in a similar manner. The greatest altitude of its 'floor' is at Kalat (about 7 000 feet), where the climate is European; southward it decreases rapidly until, in the province of Las, it is but a trifling degree greater than that of Sind. It decreases also northward, the height of Quetta being 5,600 feet or thereabouts. Though this extensive mountain mass may well pass under the general name of the Brahuik plateau, it has locally other names in the several districts through which its chains extend. Thus that portion which separates the highland of Sarawan from the low country of Kach Gandava is known as the Takari; further south and down to the twenty-sixth parallel of latitude, this same chain is called the Kirthar, and thence to the ocean it obtains the name of the Pabb hills. Similarly other offshoots west of these are known as the Harbui, the Dauwaru, and the Hara mountains. These last form a line of demarcation between the Las and Makran provinces.

Thus this system is composed of a succession of mountain ranges which, rising from the plains of Kachi and the Indus valley, tower one above the other in successive steps until, having gained their maximum, they subside in lesser and lesser ranges westward.

Their general direction is from north-north-east to south-south-west, and this uniformity of strike is wonderfully preserved throughout.

The mass is broken through at two points, *viz.*, by the Bolan pass at its northern extremity, and by the Mulla pass near Gandava. Here the ranges are twisted out of their original direction, and run towards the north-north-west. Through these two great channels the principal drainage of the country is effected, producing the Bolan and Mulla rivers.

The highest portion of the system is the range bounding the Quetta valley on the east. This is called Zarghun, and on the west towers one of the loftiest mountains in Baluchistan—the Chihiltan—which is estimated to rise to the height of 10,860 feet.

Lying in the bosom of the mountains are numerous valleys and plains. They have naturally a like direction to the ranges between which they lie, and vary in height according to their position, so that almost any desired temperature and climate may be obtained from the sub-tropical of Sind to the temperate of Kalat.

The highest ranges are clothed with juniper-trees called *apurs* which yield excellent firewood and durable timber. They are inhabited by foxes, jackals, hyænas, wolves, and panthers. In winter the wolves become so ravenous and bold that they descend into the valleys and attack the flocks, killing goats and sheep close to human habitations.

The Brahuik and Suliman ranges are connected by the Mari and Bugti hills, a large off-set extending eastward from about north latitude 29° 30′ and joining the Sulimans in the neighbourhood of Harand Dajil. (*Pottinger—Thornton—Cook, etc.*)

HALIDI HILL.—Lat. 29° 20′; Long. 63° 33′; Elev.

A hill about 4 miles east of Malik Naru peak.

HAMUN-I-KAISAR OR WAD-I-SULTAN—

A desert *hamun* north-east of the Dalbandin plain. MacGregor writes of this place that "it receives the drainage of the Meshki river, but at the time—March 1877—it was nearly dry and covered with thick salt efflorescence; only to the south on the Dasht-i-Padag there was a quantity of coarse grass and reeds and a little water.

"In the dry season this tract dries up and the surface is often covered with a salt incrustation, and at times takes the form of a swamp.

"In the rainy season it is generally impassable. (*MacGregor.*)"

HAMUN-I-LORA OR LORA HAMUN—

This *hamun* lies about 3 miles due east of Chagai (*q. v.*) and extends south-west to the Koh-i-gao, some 13 miles and north-west to the Khurae hill, about 22 miles. Its breadth is at its greatest about 9 miles, but from Gazachah northwards decreases to between 4 and 5 miles. It is separated from the Dalbandin plain on the south by a ridge from 50 to 100 feet high. Peacocke describes it as follows:—

"The Hamun is a bare plain, destitute of shrub of any kind; its surface is a hard baked clay, on which horses' hoofs leave no impression, cracked

into thousands of minute fissures. Parts of it are somewhat softer, being covered with a hollow crust impregnated with salts, but even this is much harder than the *shora* ordinarily met with. A horse's foot just cuts into it above the shoe with a cracking noise. The soil, it is said, does not absorb water, and that the Lora flood water lodges on it until dried by evaporation. Water is said to lie over the Hamun for the three winter months, and for one month subsequently the Hamun is impassable. During the remaining eight months the direct road across it is the road generally used, which is as good going almost as any macadamized road.

"The Lora water is salt, judging from the appearance of the surface of the Hamun any water which might be got by digging would be salt. In crossing the Hamun some landmark is essential for steering a straight course, as Chagai is not visible at any great distance, and there is no regular track. In making Chagai from Thal a course half-way between the conical peaks of Maharani and Drumiltin in the hills west of Chagai will fetch it. Distance 30 miles. A strip of good grass, 2 miles wide, lines the western edge of the Hamun before reaching Chagai.

"Two roads lead from Nushki to Chagai over this *hamun*, one as above described, *viz.*, from Thal to Chagai, a second road branches off one mile from Thal to Yagi at the foot of Mekh-i-Rustam, where there is one well (but blocked up in October 1885) and thence also leads across the Hamun to Chagai. Another alternative road skirts to the edge of the Hamun to Chagai by Koh-i-gao (no water) and Zarala (three wells with four feet depth of water). This latter road was followed by Lockwood in March, who naturally after winter rains found abundant water in roadside pools. All these three roads are said to be impracticable for animals during winter rains, that *viâ* Zarala skirting the *hamun* becoming again practicable the soonest. In dry weather, except for the camel grazing to be found along the Zarala road, there is apparently no inducement to adopt it in preference to the direct road across the Hamun, unless water were to be found by digging along the skirt of Hamun, which, judging by Thal and Chagai, would seem to be extremely probable." (*Peacocke—Lockwood.*)

HAMUN-I-MASHKEL OR MASHKEL HAMUN.—Lat. 28° 15′; Long. 63.°

A large lake swamp on the western frontier of Baluchistan, east of Sarhad and north of Jalk, lying between the 28th and 29th degrees of latitude and extending from about Long. 61° 35′ E. to Long. 63° 45′ E.

The Mashkel district, of which the Hamun is practically the northern boundary, belongs to the Rekis, and they have for many generations yielded military service to the Sirdar of Kharan.

The Hamun covers an area of about 3,500 square miles and receives drainage from all sides. From the north several streams come down from the Koh-i-Sultan, Koh-i-Amir, Koh-i-Malik Naru, Malik Teznan and others; from the east the flood waters of the Bulo or Morjin stream; from the south the northern slopes of the Siahan Koh drain into it, and from the west streams from the Koh-i-Safed. In spite, however, of the large drainage area, there is very little water in it, except perhaps for a short time after heavy rain.

What water there is is very salt and undrinkable. The greater part of the Hamun is covered with a white efflorescence, which is almost blinding to the naked eye.

Not a tree or even a shrub exists to break the monotony; and, strange as it may appear, herds of wild asses (locally called by the Persian *gorkhar* and by the Baluch *gor*) roam the Hamun, living apparently on the stunted grass which grows in ruts. The animals are extremely shy, and cannot be approached even within rifle shot; the only method which proves occasionally successful is to run them down on horseback. About 24 miles north-east of Galugah, in Mashkel and in the Hamun, an exhaustible supply of good, hard salt exists, locally called *Wad-i-Sultan, Wad* in Baluchi signifying 'salt.' It is spread over an area of about 2 square miles, and, free of all payment, is utilised by all tribes within a radius of 150 miles. (*Duke—Ahmad Ali Khan.*)

HAMUN KAUR—

A ravine and halting-place on the road from Meski on the Mashkel river to Shandak, distant 91 miles from the former and 58 from the latter place. Abundance of good water is to be obtained by scraping a few inches anywhere in the bed, and there is also plenty of fuel and a poor quality of camel forage, but no grass. (*MacGregor.*)

HAODAKAN—

A halting-place on the Kharan-Chagai road, about 4 miles north-east of Dalbandin post.

HAOLAK.—Lat. 28° 47′; Long. 64° 59′; Elev.

A halting-place, about 6 miles west of Raloi pass, in the Shekh Hussen range on the road from Kharan to Chagai.

HARUNI.—Lat. 29° 28′; Long. 65° 59′; Elev.

A small village on a *karez* of the same name that takes its rise on northern slopes of Koh-i-Jorakian and irrigates Baghak plain. (*Roome.*)

HAZARGUNI.—Lat. 29° 32′; Long. 64° 18′; Elev.

On the Afghan-Baluch boundary line between boundary pillars Nos. 161 and 162.

HELMAND RIVER—

The portion of the Helmand valley between Landi Muhammad Amin and the Band-i-Seistan was traversed by the Seistan Arbitration Commission in January 1903, and the following report is compiled, to a great extent, from notes furnished by the following members of the Commission, *viz.*: Mr. G. R. Ward, Public Works Department, Mr. G. R. Tate, Survey of India, Major Walters, 24th Baluchistan Infantry, and Captain Webb-Ware, Political Department.

General description of the river.

In describing the actual river between Landi Muhammad Amin and the Band-i-Seistan, it is perhaps advisable to treat it in two separate parts, *viz.*:—

(1) from Landi Muhammad Amin to Kala-i-Fath,
(2) from Kala-i-Fath to the Band-i-Seistan,

as both these portions present widely different characteristics.

The portion from Landi Muhammad Amin to Kala-i-Fath is a swift flowing river, with an average velocity of nearly 3 miles an hour, an average width of from 250 to 300 yards, and a depth of from 3½ to 4 feet. The distance from one permanent bank to the other is about 1,000 yards, and between these banks the river winds about and is constantly broken up into three or four channels, separated by islands, many of which are overgrown with tamarisk. This portion of the river can be forded almost anywhere except when the river is in flood, *i.e.*, from about the middle of March till the end of June.

The course of the main stream is very tortuous, and consequently the distance by water from one place to another is very much greater than by land. The banks are generally low-lying and covered with thick tamarisk jungle varying from 8 to 10 feet in height. In places, however, mostly on the right bank, the river flows under stretches of soft sandstone cliffs, 60 to 80 feet high, close under which the water is from 7 to 10 feet deep.

Between Landi Barechi and Rudbar the river flows directly under the right bank, and the whole of this distance the bare cliffs rise up sheer from the water's edge.

At a point about 15 miles below Rudbar the road or track along the left bank meets the river, a branch of which taking a bold curve to the south meets the track which here forms a tangent to its curve. At this point a discovery was made in the shape of an ancient bed of the Helmand which had formerly made a loop to the south. This old bed proves conclusively that at one time the river flowed fully 25 feet above its present level.

Frequent bars occur in this portion of the river, but it is not till beyond Mirabad that any of them would present any obstacle to a light draught boat, as all of them have at least 18 inches of water passing over them. Occasional stretches of water, from a quarter to half a mile in length, where the river flows in one channel about 200 yards wide and 5 to 6 feet deep are met with, but they are exceptional.

Opposite Chahar Burjak there is a sudden drop in the river-bed and the river contracts to a width of about 80 yards, and for a distance of about a quarter of a mile there is from 8 to 10 feet of water and a very swift current. The river then widens out rapidly and the depth decreases until the Chahar Burjak ford is reached about three quarters of a mile lower down.

Between Mirabad and Kala-i-Fath the river broadens out immensely and in places is quite half a mile wide and only about 6 inches deep, except in the main channel where there is about 18 inches of water. The main channel is here very tortuous and winds from one side of the river to the other. There are also numerous sand banks for a distance of about 2 miles which make the navigation of even a small boat very difficult.

From Kala-i-Fath to the Band-i-Se'stan.

The portion of the Helmand between Kala-i-Fath and the Band-i-Seistan differs in many respects widely to that already described. It is much less rapid; the velocity of the current, even in the swifter runs, is not more than 2½ miles an hour and in the majority it is less than 2 miles an hour. It is, moreover, narrower and deeper and for the greater part of the distance is

confined to one channel, with, as a rule, a soft sandy bottom. The fords are very much less frequent and owing to the nature of the bottom would probably rapidly scour out under much traffic.

When the Commission came down the river in February 1903, the average width of the main channel of this portion of the river was about 200 yards and the depth 10 feet, and there was not a single bar to prevent the passage down stream of even a fairly large boat. The river winds about considerably, but not to the same extent as in the upper portion. Steep cliffs are frequently met with on both banks, but more especially so on the left one. There is comparatively little tamarisk jungle on the left bank below Kala-i-Fath, but on the right bank it is thick and abundant.

Floods.

From observations taken of the water marks on the cliffs it would appear that the ordinary flood level of the river in the most confined and narrowest parts was 3 to 4 feet higher than the level of the water at the time. A high flood would be 4 to 5 feet, and an extraordinary flood 8 to 9 feet.

In the present year (1903) the flood water consequent on the melting of the snow in the Hazarajat commenced to reach the Helmand at Band-i-Seistan about the middle of March and shortly after that up till the present (June) the river has remained in flood. There are no boats, and the river has to be crossed either by means of *tutins*, or, where reeds are not obtainable, by rafts made out of inflated *mashks*.

Fords.

There is a ford in the vicinity of nearly every village on the Helmand between Landi Muhammad Amin and Kala-i-Fath, except when the river is in flood and then the river is not fordable anywhere. A great number of the fords shift their positions after every flood season and very few, if any, can be called permanent.

It must be borne in mind that a number of the so-called fords are very deep and may be anything from 2′ 6″ to 5′ in depth.

The following were the principal fords between Landi Muhammad Amin and the Band-i-Seistan in February 1903 :—

Landi Muhammad Amin.—Three feet deep and 200 yards long, shingle bottom.

Khan Nashin.—Opposite the ruined fort.

Khwaja Ali (*Lower*).—Depth 2′ 6″ to 3′, 200 yards long, bottom shingle and sand.

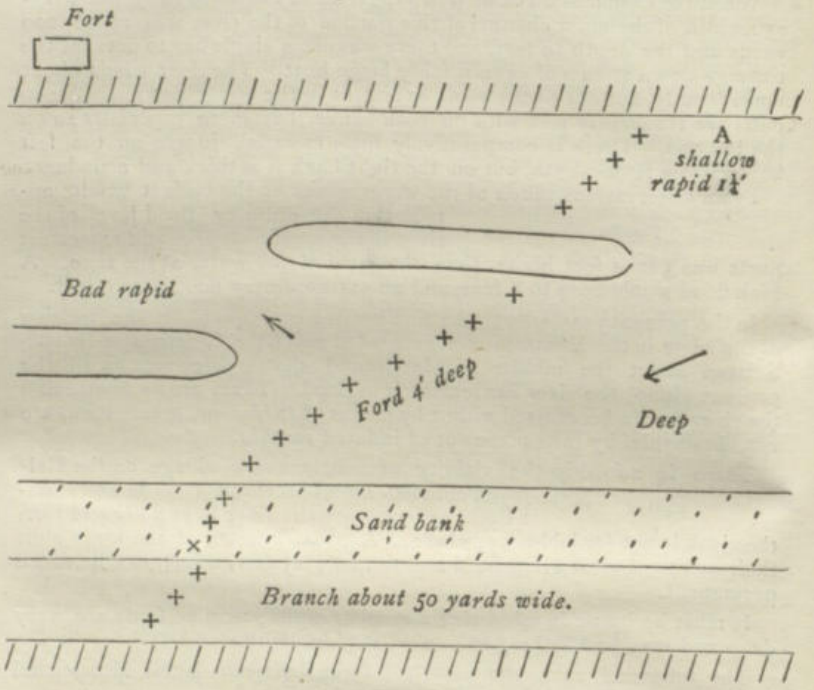
Landi Barechi.—Two fords.

Rudbar.—Two fords, depth 2 feet.

Ashkinak or Chilmarez.—This ford was used by Mr. Johns in March 1903, and the following is his description of it:—"This ford is situated about a quarter of a mile above an old ruined fort and is admirably suited for crossing from right to left. Impossible on the day I crossed for the

return journey, except for big, strong horses : men could not do it and were carried into a deep rapid and obliged to swim.

Rough sketch of Ashkin-Chilmares Ford.



"Bed shingle, depth very uniform throughout. A mark for the ford is that if the depth at the little rapid marked A does not exceed 1¼ feet or 1½ feet, then the ford will not be over 4 feet and the passage will be practicable. Landing very good on the left bank, but requires to be improved on the right."

Manai.—One ford.

Chahar Burjak.—Two fords.

Bandar-i-Kamal Khan.—Mr. Johns says :—"The ford is about half a mile above Deh-i-Dost Muhammad and opposite the village of Bandar-i-Kamal Khan. It is most suitable for a crossing from left bank to right, as the slope of the ford is in the direction of the current which crosses from left to right.

"Bottom shingle, except possibly immediately under the left bank where the river was deepest. The deepest portion is under the village

just at the landing, which is too steep to be good for pack animals, but would easily be ramped. Ford not practicable for baggage animals or non-swimmers when I arrived (March), nor the next ford 2 miles below Chahar Burjak, which has a hard shingle bed."

Puz Mashi.—The Seistan Boundary Commission made use of this ford in crossing over to the right bank on February 20th, 1903. Some 2,300 animals and 1,450 men crossed during the day without a single casualty. The bottom was shingle and sand and scoured considerably after several hours, but the depth at no time exceeded 5 feet.

Description of the valley.

Between Landi Muhammad Amin and Bandar-i-Kamal Khan the average width of the valley is about 2 miles. The cliffs on either side rise to a height of about 100 feet, and between these cliffs is enclosed the strip of alluvial soil bordering both sides of the river-bed.

Immediately west of Landi Muhammad Amin rises the prominent mass of short ranges called the Koh-i-Khan Nashin. This is the only hill in the country and rises to an altitude of a little over 2,000 feet above the plain and is composed apparently of black igneous rock. Two streams take their rise from this range ; one flows into the Landi valley plain and the other to the west where it empties its waters into the Helmand to the north-west of the hills. To the north the ridges of this group of hills subside into a mass of broken ground, much cut up by the drainage, which, rising in the hills, finds its way into the Helmand. These vary in character, the majority being shallow and only one being deeply cut.

The left bank of the river between Landi Muhammad Amin and Deshu is high and the slopes of the Koh i-Khan, running down to the river edge, make irrigation impossible, and consequently there is no cultivation.

The average width of the alluvial strip on the right bank between Khan Nashin and Mala Khan is about 1½ miles, but here the right bank hugs the bluffs and continues to do so as far as opposite Deshu.

Two miles below the ruined fort of Lower Khwaja Ali the valley on the left bank widens out into a wide bay, and for nearly the whole of the rest of the way to Bandar-i-Kamal Khan the valley on this side of the river consists of a series of these bays varying from 6 to 12 miles in length. Between Kala Madar-i-Padshah and Chahar Burjak there is practically no cultivation on either side of the river, yet many old forts, large mausoleums and mud built minarets of considerable size are met with and bear witness to the prosperity that once existed on the present gravel strewn plain.

A little above Bandar-i-Kamal Khan, where the river suddenly bends round to the north, the Helmand delta may be said to begin. Here the valley on both sides of the river begins to gradually open out and the cliffs to recede, and the country as far as Band-i-Seistan has all the characteristics of the remainder of the Seistan plains.

Resources.

Cultivation is entirely dependent upon irrigation, but although a great number of new canals have been constructed of late years and a larger area of the valley brought under cultivation, still, under a better form of government and consequent improved system of irrigation, there is no doubt that the production might be enormously increased.

The gross cultivable area in the Helmand valley between Landi Muhammad Amin and the Band-i-Seistan has been estimated by Mr. Ward, the Irrigation Officer with the Seistan Commission, at approximately 120,000 acres; the area under wheat and barley was roughly 20,000 acres and another 20,000 acres under other crops, so that only one-third of the cultivable land is utilised.

The yield of wheat and barley may be assumed to be 10 maunds per acre, so that under existing conditions the annual production of wheat and barley may be put down at 200,000 maunds, or 7,150 tons, and of this amount probably 4,000 tons are surplus.

The chief crops are wheat and barley and a small proportion of *jowar*, pulse, Indian-corn, cotton and melons. Wheat and barley is grown as a mixed crop in the proportion of two-thirds of wheat to one-third of barley. The straw of the wheat and barley crops is not utilised and is allowed to stand in the fields after the heads of the crop have been cut and it is sometimes even burnt.

The land is allowed to lie fallow one year and is cultivated the next. Sowing-time for wheat and barley is from the beginning of October to the end of December; in January the crop is grazed in order to prevent it growing up too thick. Harvest begins in May and extends into June.

The soil is a light loam and is of a yellowish colour, with patches of *kalas*, interspersed with occasional wastes of sand and on the whole is very rich.

The Seistan Boundary Commission travelled down the Helmand during a period of great scarcity. During the previous year the river was dry as far up as Chahar Burjak from July 17th to September 23rd, and a great number of cattle and sheep perished from lack of water and fodder. Under these circumstances it was difficult to estimate with any degree of accuracy what would be the number of domestic animals in a normal year. It is estimated that in February 1903 there were 8,000 cattle, 14,000 sheep and goats, 400 horses and 1,500 camels. In years of prosperity there would probably be at least twice this number, if not more.

System of land administration and irrigation.

The irrigation system consists of large irrigation canals which take off from 7 to 14 miles above the lands they irrigate. Each canal taking off from the Helmand is under the control of a *hakim*, who appoints an official termed the *mirabi* as his deputy, under whom is a *kotwal*.

Each main canal is divided up into a certain number of subsidiary canals or water-cuts which again are each under the control of a *katkhuda* nominated by the Khan. The *katkhuda*, in consultation with the Khan, appoints a certain number of *zamindars* or *kashtgirs*, each with an allotted portion of the subsidiary canal under his control. The *kashtgirs* do not actually cultivate the land themselves, but hand it over to *bozgars*. The *kashtgir* supplies the grain seed, plough and all the necessary agricultural implements and also pays the *bozgar* an annual sum of 20 krans, termed *kafshi*, in return for which he has to clean out the canals and keep them in repair generally.

When the harvest is reaped, the produce is divided up into seven equal portions, of which the Government *tahsildar* takes one seventh, termed

the *haft koti*, and in addition 70 Garmsel maunds* from the remaining six portions, termed *haft tad*. The following amounts are also taken from the remaining six portions and allotted as follows :—

	Maunds.
Mirabī	15
Lohar	12
Mistri	7
Hajam	5
Kotwal	2

The man who supplies the oxen for ploughing and grinding out the grain receives 2 maunds *per diem* for each pair of bullocks whilst so employed. The remainder of the grain is again divided up into six equal portions of which the *bozgar* receives one and the *kashtgir* five shares.

The Khan has the privilege of annually selecting one of the subsidiary canals as his own personal property and of retaining the Government revenue accruing from it.

The above system is in vogue down the Helmand valley as far as Khwaja Ali; from Khwaja Ali down to Kala-i-Fath the majority of villages are *muaf*, *i.e.*, pay no Government revenue.

The Helmand valley is for administrative purposes under the Akhunzada of Chukunsur as far up as Khwaja Ali, but as regards revenue his jurisdiction extends only to Kala-i-Fath. He is said to take one-fourth of the produce as Government revenue.

Population.

I am inclined to think that previous estimates of the population of this portion of the Helmand valley have been very much exaggerated. The present settled population cannot amount to very much more than 15,000 souls; the nomad population probably amounts to a few thousands, so that a fair estimate of the total population in favourable years may be put down at about 20,000.

Concluding remarks.

Although the valley everywhere bears marks of its former populousness and prosperity as witnessed by the ruins that are met with on every side, still its present aspect gives rise to a feeling of disappointment at the prevailing poverty visible on every side.

It must be borne in mind that the Seistan Commission travelled down the valley during an unusually bad season and under very unfavourable conditions. For nearly 2½ months during the previous autumn the river was completely dry as far up as Chahar Burjak, and consequently thousands of sheep and cattle died owing to the scarcity of water and fodder. Seed grain, most of which comes from Seistan, had also been scarce, and this, combined with the failure of the water-supply, resulted in a very much less area being put under cultivation than in a normal year. The presence of the Afghan cavalry escort tended to render an accurate estimate of the resources of the country a matter of extreme difficulty, as the inhabitants hid their flocks and buried a quantity of their grain through fear of being looted. The valley was thus seen under the most unfavourable circumstances and in consequence its resources have been probably considerably under-estimated. (*C. Wanliss.*)

* 1 Garmsel maund = 4 lbs.

HIRANI-THAL OR IRANI THAL GAR.—Lat. 28° 40′; Long. 64° 6′; Elev. 4,990′.

A long range of mountains passed on the road to Sorap from Khargoshkan. These and the Hirani Thal Reg, a parallel range of sand-hills, some 200′ to 250′ high, form a funnel-shaped defile. (*Roome.*)

HOMKI ROD.—Lat. 29° 2′; Long. 62° 37′; Elev.

A *nala* rising on the western slopes of the Koh-i-Sultan, about 1 mile to the east of Gami Chah; it flows in a south-easterly direction and loses itself in the *dasht*. It is crossed on the track from Kondi to Amir Chah and is generally quite dry. (*Roome.*)

HUAK—

The name of some water in a *nala*-bed just inside the north-east foot of the Koh Kambaran range. It is good, sweet, and there is a very fair quantity. (*Webb-Ware.*)

HUKI-KALAT AND HUKI KALAT NALA.—Lat. 29° 15′; Long. 63° 56′; Elev. 4,725′.

Forms a very nice little camping-ground for a small party. Water is obtained from a small open water channel on the left bank of the *nala* just under the ruins of the ancient Huki Fort, which occupy a position on a small knoll on the left bank of the *nala*. There are several large pistachio trees on the camping-ground, close to which there is also a small *ziarat* of the Taoki Baluchis, who had a small encampment close by at the time of my visit here. Huki Kalat is surrounded by high precipitous hills with serrated peaks. My Taoki guides told me that the Huki *nala* passes close to Nuhli. In this, if the maps are correct, they appear to be mistaken. The ordinary time taken by the Taokis journeying from Nuhli to Huki Kalat is three days They encamp in numerous spots along the Huki *nala*, water being nearly always abundant along nearly the whole route. Leaving Huki Kalat the *nala* still continues its course south-east for 1½ miles. Water begins to flow freely in the *nala* ½ mile from Huki Kalat. At 1½ miles the *nala* turns very abruptly to the south-west. The going is very rough and stony for 3 miles from this point, and for 2 miles the *nala* is narrow and shut in by high precipitous hills. The general course of the *nala*, which is very winding, is south-west. At 4½ miles a pathway on left of *nala* passing over low hills leads to Dalbandin. At 5½ miles one reaches a range of whitish yellow hills called Shpate. Height of *nala* at this point 4,500 feet, descent gradual. There are numerous pools of clear fine water which are said to contain water always. From my experience of the water, however, I consider that it must very quickly decompose when left standing. After passing Shpate the *nala* considerably widens, and the hills on either side, splaying outwards, gradually become quite low and of a round down-like nature. At 5½ miles one reaches a solitary date palm tree. At 7 miles I left the *nala* and journeyed by a well-marked track to the Amuri *nala*, passing on the way the Pushtiwan *nala*, which is a dry waterless *nala*. (*Walters.*)

HUMAI WELLS—

Are situated 13 miles from Mushki Chah amongst some low sand-dunes, bearing 120° from Koh-i-Dalil and about 5½ miles in a straight

line from that hill. Water is good and plentiful from 5 feet to 10 feet below the surface. There are 10 wells and more could be made. Fuel and camel-grazing are plentiful and space for camping extensive. (*See* also Appendix V.) (*Plunkett.*)

HURMAK.—Lat. 29° 58′; Long. 60° 54′; Elev.

A halting-place on the road from Robat to Seistan, and 18½ miles from Robat.

The Nushki-Seistan trade-route here debouches from the Koh-i-Malik Siah defile into a small sandy plain about 1 mile long and ½ mile broad. A rest-bungalow, *serai* and *thana* have been erected, and the Persian authorities have stationed their customs post here to levy dues on all merchandise crossing the frontier.

Water.—An abundance of good water rising from springs, two in one place, six in another. The water was slightly warm.

Camping-ground.—Surrounded by hills which are difficult to climb from the camp side.

Supplies.—*Nil*, but from the frequent tracks of sheep and goats, they must be procurable sometimes.

Fodder.—Grass can be obtained on the hills around.

Camel-grazing.—Not much around the camp, but lower down the *nala* on the plain any amount of *lana*, and 10 miles from the camp great quantities of *tagaz*.

Fuel.—There are several thickets of tamarisk growing in river-bed. (*Roome.*)

HUSAIN NAWAR.—Lat. 29° 30′; Long. 65° 17′; Elev.

On the Nushki-Sheik Ismail road in the Chagai district, about 15 miles east of the Lora Hamun.

HUSEN GHUNDI.—Lat. 29° 30′; Long. 65° 18′; Elev.

A hill about ¾ mile south of Husen Nawar. (*Roome.*)

HUSEN REG—

A sand-hill in North-West Baluchistan on the Nushki-Shah Ismail route between Zaru and Kani, 4½ miles from the former and 13½ from the latter place. (*Maitland.*)

HUSHKI OR WASHKI NALI WELL.—Elev. 2,880′.

About 13 miles east of Yadgar on the Nushki road at the junction with it of the road from Kharan by the Pahrod pass. The water is undrinkable. (*Scudamore.*)

IBRAHIM OR BRAHAM WELL.—Lat. 29° 34′; Long. 65° 17′; Elev.

In the Chagai district east of the Lora Hamun and about 3½ miles north of Husain Nawar.

IDOCHAH.—Lat. 29° 12′; Long. 61° 40′; Elev.

A well or spring in the Amalaf *nala*, about 4 miles south of Amalaf. The water is good and plentiful. Camel-grazing scarce. No supplies. There are several other wells of the same name in the vicinity. One is about 5 miles west of Mukak (*q. v.*) (*Roome—Webb-Ware.*)

INJIRDAN RIVER—

Rising near Gurgarok flows into the Zarala river.

IRANI THAL GAR.—Lat. 28° 40′; Long. 64° 5′; Elev. 4,960′.

A range about 5 miles long north-north-west of Malik Surinda and west of the Nushki-Ladgasht road.

IRANI THAL REG.—Lat. 28° 39′; Long. 64° 5′; Elev.

The desert west of Irani Thal Gar. (*See* Hirani Thal Gar.)

IRKAFT—Lat. ; Long. ; Elev.

A waterless halting-place, 44½ north by east of Kirtaka, on the elevated *dasht* plain, on the road thence to the Helmand. (*Webb-Ware.*)

ISATAHIR.—Lat. 28° 35′ 20″; Long 63° 5′ 20″; Elev. 1,800′.

A halting-place a little to the north of the Mashkel Hamun on a route from Paniham to Amir Chah and Chahar Burjak on the Helmand. It lies in a *nala* which drains into the Hamun. According to the map this *nala* is also called Isatahir, and the camping-ground is one of the few places in Mahomedani country where wells exist.

There is good camping-ground here and abundance of wood and grass, but the latter is of a thorny species.

Paniham is 10¼ miles distant by a good road, and Kondi or Nihri, the next stage towards Amir Chah, is 24 miles. Amir Chah is one long stage from Kondi, 35 miles, but the road is good the whole way. (*MacGregor—Ahmad Ali Khan.*)

Also a halting-place on the Dalbandin-Amir Chah road, southern route, and 113½ miles from former.

The water is in a spring on the left bank which is marked by two or three date palm trees, ¼ mile to the north.

P. C. bearing—

To Koh-i-Sultan	338°
,, Malik Naru	21°

It is perfectly sweet and potable. The water forms a small pond, about four yards square and two feet deep in deepest part. The water flows in as fast as it is bailed out.

In the *nala*-bed there is plenty of water, but it is brackish and not potable. It appears in places in the bed of the *nala* for a mile up-stream, and 2 miles down-stream.

The bed of the *nala* is thickly wooded with tamarisk and *tagaz* trees; also a very few date palm trees.

Camping-ground.—Unlimited and open.

Supplies.—Nil. (From the signs in the *nala*-bed, occasionally flocks of sheep and goats may be met with.)

Fodder.—A small amount of *dhub* and *vega* in the *nala*-bed and some thorny grass called *kandar*.

Camel-grazing.—Very abundant and good, consisting of *lana*, *tagaz*, and *gaz*.

This district is noted for the amount of *chinkara*, and in the *nala* there were many fresh tracks of sheep, goats, *chinkara*, and the *gor* or wild ass. In the cold weather there are generally a few ducks in the reaches of salt water in the *nala*-bed. Snakes are very common.

The country around has the appearance of being one enormous depression with parterres of plateaux. Has every appearance of once having been the bottom of the sea. The strata on the banks of the plateaux being well marked. Could find no fossils. (*Roome.*)

ISE WELLS.—Lat. 29° 35′ 25″ ; Long. 65° 32′ 50″; Elev.

About 7 miles north-east of Umar Shah Nawar on the road to Papring. There are 3 wells 28 feet deep with three feet of brackish water.

ISFANDAK.—Lat. 27° 6′ ; Long. 62 °53′ ; Elev. 3,580′.

Is a small village about 30 miles west of Kuhak, and about 2 or 3 miles north of the Mashkel. The country intervening between these two villages is raviny, but there is evidently a good deal of water in these ravines, as several groves of date palms were visible to the north of the road from the Melgindar hills.

Of these groves, that known as Konar-Bast, about 10 miles north-east of Isfandak, is the largest. Here there are a few huts. In this country every grove of date palms is inhabited, and is called a *kalag*.

The chief of Isfandak, Mahmud Khan, is a Naoshirwani, or Taoki, and is married to a sister of Sir Naoroz Khan of Kharan.

From Isfandak a road *viâ* the Sherindor pass leads northwards to Jalk and is a great caravan route, connecting that place with Panjgur.

There are two very fertile spots close to Isfandak—the date palm groves of Murt and Deri Dhar—and there are numerous other springs in the country. At Deri Dhar there is a good supply of flowing water.

Westwards from Isfandak the character of the country changes for the better, and is capable of improvement. (*Tate.*)

ISMAIL.—Lat. 28° 47′ ; Long. 64° 1′ ; Elev.

P. C. bearings—

To Malik Naru	315°
„ Pachinan	320°
„ Gat-i-Hamun	335°
„ Garman	10°
„ Kambaran	85°
„ Siah-Sung	92°

These bearings are taken from a low hill to the east of the well.

A halting-place on the northern road from Amir Chah to Dalbandin, 122 miles from former.

One well.—Water 25 feet from surface, 4 feet deep, 6 feet diameter. Water good and sweet. The well has a wooden windlass over it.

Camping-ground.—Good, but on the east side is commanded by low hills, some 150 feet high.

Supplies.—Nil.

Fodder.—Any amount of *barshok* grass in the neighbouring *nalas*.

Camel-grazing—Good *lana*.

Fuel.—Scanty, but there is a good jungle of *jhow* growing in the Juzak *nala* 3 miles distant.

The *nala*-bed that Ismail is in is a tributary of the Morjin *nala* which it joins 4 miles to the south. (*Rvome.*)

ISMAILZAI—

A tribe of Brahuis connected with the Sinjaranis of Chagai. They inhabit the country around Galugah, south of Neh, on the border between the Persian provinces of Khorassan and Kirman. They are a pastoral tribe, numbering, it is said, about 200 fighting-men, and they are believed to be an offshoot of the Samalani of Shorarud. Sardar Nabi

Baksh, Samalani Sardar, corroborates this, but adds that he possesses no influence whatever over these Ismailzai, and that his tribe keeps up no communication with the Persian branch. It is interesting to note how very close is the relationship between the Baluch tribes of Sarhad and the tribes of British Baluchistan.

The chief of the Ismailzai, named Jahil, bears an evil reputation in Southern Seistan and around Koh-i-Malik Siah owing to his notorious raiding propensities. (*Webb-Ware.*)

IZHOK RIVER.—

A small *nala* rising in the Shekh Hussen range, north of Raloi pass flows north into the plain about 3 miles east of Yadgar.

JABAR—Lat. 29° 24′; Long 65° 40′; Elev.

Eighteen miles from Nushki on the direct road from Chagai; a large pond of rain and drainage water in a depression among the sand-hills. Water bitter but fairly clean and potable. Pond is about 300 yards in diameter, and over 10 feet deep in the centre. It is said to dry up in September in absence of July rain, but wells are then sunk in its bottom, and water may be calculated on being always got here. About Jabar there are signs of the lodgment of surface water (probably Lora flood water) over considerable areas. Fuel and camel-grazing abundant, and some traces of cultivation. (*Peacocke.*)

JAHAN BEG RUINS.—Lat. 29° 19′; Long. 64° 45′; Elev.

About ½ mile north of Chagai.

JAJBAD—

A place mentioned in "Hughes' Ba'uchistan" as being half-way between Manu Chakul and the Kaisar river in North-West Baluchistan, that is, about 7½ miles from either. There is here a small spring of water. Two other springs further on are met with at intervals, the last being 4 miles from the Kaisar river. (*Hughes.*)

JALAI-CHAH—

A halting-place on the road between Kharan and Washuk, three stages (67½ miles) from the former and one of 27 miles from the latter place. There is one well here. (*Bell.*)

JALEJAL OR JILEJIL—Lat. 29° 28′; Long. 63° 22′; Elev.

A halting-place on the route from Shandak, in North-West Baluchistan, to Rudbar on the Helmand, 44 miles from the former and 5 from the latter place. Water is procurable from wells in a ravine; fuel and camel forage abundant; no grass.

Captain Peacocke mentions this place as being "a bluff point surmounted by a pillar-like stone, almost due west of Robat, but some distance off." (*MacGregor.*)

JALK—Lat. 27° 36′; Long. 62° 45′; Elev. 2,900′.

Is situated between the Siahan and Jujak hills in the open country. The main road from Gwadur to Jalk *viâ* Panjgur and Isfandak passes through the Siahan range by the Sherindor pass to Kallagan and on to Jalk. The latter is the great centre of trade in this country, and is a grove of date palms, about 4 miles long and about 2 miles wide, situated in a hollow between low hills on either side. This place is well supplied with water from two very fine *karezes* on either side. At the head of

each of these *karezes* is a fine spring of good water which gushes out of the ground. There is also another spring just east of and close to the fort of Chigird. The spaces between the palm trees are highly cultivated, and rice could be grown in the swamp east of Chigird. There is a good supply of water in the Jalk river below the palm groves which is not utilized at present. There are several forts here. The principal, Chigird, the residence of the Reki Sardar; Kohkan, the residence of Kumal Khan; the Miri where the Governor lives, and another called Kohsar. The governor is Madat Khan, younger son of Dilawar Khan of Dizak. Jalk is capable of great improvement, but at present owing to the unsettled state of the country nothing approaching to the full extent of its capabilities is turned to account. Trade is carried on with Garmsel, Rodbar, Chagai, and Nushki towards the north, and Panjgur and Dizak towards the south. The exports consist of dates, for which Jalk is celebrated, and salt from the salt deposits of Wad-i-Sultan. This is free of duty.

Grain and wool are imported. A duty of Re. 1 is levied on each camel-load entering Jalk; this is collected by the Reki Sardar, who, however, remits a portion to the Dizak chief, the Reki Sardar having the privilege of exempting the caravans belonging to those tribes who are allied to him either by marriage or treaty, from this tax Tradition relates that the ancient name of Jalk was Gulshan, but after its destruction by a force detached by Nadir Shah for the purpose of punishing the Baluch tribes in 1736 or 1738, the name of Gulshan was discontinued, and the present name given to it, as only a vestige of its former splendour now remains.

The following is a list of some of the tribes who inhabit the forts within the limits of the palm grove known as Jalk:—

1. *Rai-ees*—subdivided into the Jangianzai, Kohizai and Lashkozai.
2. *Shai Mahomedzai*—subdivided into Jangizai, Shahanzai.
3. *Shahanzai*—said to be of Rind descent from Kupa.
4. *Sipáhi*—a division of this is called Muridzai.
5. *Arbab*—the former chief of Jalk was the Arbab Sardar of that time.
6. *Shahabzai.*
7. *Kashani*—a portion emigrated to Panjgur and are still to be found there.
8. *Kohkahni*—inhabit fort of Kohkahn, a portion emigrated to Seistan.
9. *Shaihan.*

These tribes can muster 600 fighting-men. They are reputed as being very brave and also greatly addicted to fighting among themselves, and generally as being quarrelsome.

Owing to this and also because there is no one sufficiently powerful to assume the leadership, their levies cannot be kept together for any length of time. The leading men of Jalk are—Mir Lalla, Reki of Chigird, and Mir Kamal Khan of Kohkahn. (*Tate.*)

JALK RIVER—

Is formed by the junction of the Pahra and Dash Kaurs. Rising near Gusht the river turns north at Jalk and waters it and Dehgwar; any overflow that may find its way through the desert flows into the Hamun-i-Mashkel.

JAMALDIN KAREZ.—Lat. 29° 24′; Long. 64° 5′; Elev.

About 1 mile south-west of Afghan-Baluch boundary pillar No. 164.

JAORI CHAH—

A well and halting-place on the road from Amir Chah to Dalbandin in North-West Baluchistan. It lies between the Girom and Ghedan Pasti ravines. (*MacGregor.*)

JAURAKIN WELL.—Lat. 29° 18′ 55″; Long 65° 57′; Elev.

In the Nushki district about 8 miles south-south-west of Baghak on the Nushki-Kharan road. There are two wells 11 feet deep, with 4 feet of brackish water A *karez* is being excavated here. (*Webb-Ware*)

JAWANMUDI—Lat. 28° 5′; Long. 62° 47′; Elev.

A date grove near Maksotag well (*q. v.*).

JELAL KHAN NAWAR—

A depression of cup-shape, where a pool of rain water had collected in February 1903, 25 miles from Galla Chah and 23½ miles south-east of Khwaja Ali on the Helmand, the supply was not sufficient for 988 men, but useful for *dâk*-runners. (*McMahon.*)

JERRI-REG—Lat. 29° 3′; Long. 63° 20′; Elev.

A range of sand-hills passed between Manzil and Butak. The track crosses over a spit of sand running south into the plain at 11th mile. (*Roome.*)

JHAND GUNDI.—Lat. 28° 23′; Long. 63° 21′; Elev.

A low hill in the strip of desert between Galla Chah and Garmashki, 24½ miles from the former and 7½ from the latter place. (*Maitland.*)

JIAND WELL.—Lat. 28° 28′; Long. 62° 6′; Elev.

Situated on the east side of the Tahlab river, about 28 miles below Mirjawa. There is another well of the same name midway between Mirjawa and Duzdap.

JIAND WELL.—Lat. 28° 28′; Long. 62° 6′; Elev.

In the Durokan *nala* on the road from Ladgasht to Mirjawa, about 45 miles north-west of Gorani well.

JILEJIL—*see* JALEJAL.

JISTAK OR JISHTAK.—Lat. 29° 36′; Long. 65° 58′; Elev.

A strip of cultivation in the Dak (*q. v.*). At about 4½ miles from Nushki on the road to Band, a well-marked road diverges to the left, and leads to this place. (*Maitland.*)

JOGI—

A strip of alluvial plain between Charasiaf in Nushki and Band, beginning about 7 miles from the former place. It is about 600 yards across, and stretches a long way in a south-westerly direction. (*Maitland.*)

JOLUSHAH OR JOLUSHAN—

A halting-place in a ravine on the north side of the Siahan Koh (*q. v.*) at the foot of a steep and difficult pass over a low dip in the range. The pass is described as barely practicable for camels.

Jolushah is the fifth stage on the direct route from Panjgur to Seistan. The halting-place on the Mashkel near Tump (fourth stage) appears to be about 16 miles over the pass. Nokchah, the sixth stage, is about 12 miles, over a good open road. There is abundance of water here, but no fuel or camel forage.

It is just possible Jolushah may be on the road from Jalk to Washuk. According to MacGregor and Lockwood's reconnaissance, it is about 50 miles east of Jalk, and 20 west of the Mashkel, where it debouches from the hills through Tank Zorati. (*MacGregor.*)

JUFTAK WATER.—Lat. 29° 26′; Long. 64° 50′; Elev.

About 9 miles north by east of Chagai on the western edge of the Lora Hamun.

JUHLI—

A *ziarat* and two wells passed on the road from Butak to Chah-Sandan in the Juhli Kaur, 6 miles from Butak. Originally water was found here 11 feet from surface, 2 feet deep, wells 3 feet in diameter, but in 1903 it was found that the water had dried up and the wells were full of sand, and the local people said there had been no water here for some years. There are a few graves round the *ziarat*.

An encampment of six *ghidans* was pitched close by and about 30 camels and 20 goats were grazing.

In the bed of the Kaur there were a few clumps of *jhow* and a fair quantity of *barshok* and *vega* grass, and the *lana* grows in profusion.

Supplies.—Nil.
Fuel.—Scarce.
Camel-grazing.—In abundance. Grass in some quantity.
Camping-ground.—Unlimited, good. (*Roome.*)

JUJAKKI.—Lat. 28° 52′; Long. 64° 4′; Elev.

A halting-place on the northern road from Dalbandin to Mirui and reached at the 30th mile.

There is a small spring of brackish water, which is also purgative, just under the left bank of the *nala* close to the road. The *nala*-bed here is 300 yards wide with a certain amount of tamarisk, *lana*, and *pish* growing in its bed which is stony. (*Roome.*)

IUJAKKI NALA—

Takes its rise to the north of Gat-i-Hamun and is one of the tributaries of the Morjin river. The water in its bed 2 feet below the surface is salt. No water runs except after very heavy rain. There is a large quantity of tamarisk in its bed. (*Roome.*)

JULI—

A halting-place on the road from the Mulla pass to Shandak and the Helmand. It is 107 miles distant from Pishak in Dalbandin and 9 from Shandak. The camping-ground is in a ravine of the same name in which there is a large pool of brackish water, said never to dry entirely. Fuel and camel forage are scarce, and there is no grass. (*MacGregor.*)

JUZ—

A well of good water, 7½ miles from Tattagarh water, on the road between Kharan and Dalbandin. There is here a solitary date tree which gives this name to the place. (*O'Donnell.*)

JUZHAK.—Lat. 29° 1′; Long. 61° 42′; Elev. 3,840′.

A camping-ground, 10 miles east of Mirjawa, on the road to Amir Chah.

Here there are two wells in the bed of the Juzhak *nala*, each of capacity of 300 gallons: the water is slightly brackish but potable.

A small quantity of *nal* grass, a few small tamarisk bushes and stunted date palm trees grow on a low sand mound near the wells. One mile down stream there is a large patch of *shora* extending for some hundreds of yards and whence the inhabitants of Mirjawa obtain salt.

Camping-ground.—Unlimited on a level *dasht* plain, good.

Supplies.—Nil.

Firewood.—Only sufficient for a small camp and would be quickly exhausted.

Fodder.—*Lana* grass in abundance close to the camp. (*Roome.*)

KABUL WELL.—Lat. 29° 21′ 55″; Long. 63° 39′ 50″; Elev.

In the Reg-i-Kabul, about 3 miles south-west of Jabar, on the direct Nushki-Chagai road. The well is 11 feet deep with 3 feet of brackish water.

KACHA KOH.—Lat. 29° 32′; Long. 61° 16′; Elev. 7,629′.

One of the principal hills in the range of the same name. The mountain rises abruptly from amidst the surrounding hills with precipitous slopes. It is a rugged and bare hill and is composed mainly of black igneous rock with patches of green rock running through it. (*Roome.*)

KACHA-KOH CAMP.—Lat. 29° 29′; Long. 61° 18′; Elev. 3,390′.

A halting-place on the northern road from Saindak to Robat (Koh-i-Malik Siah), 34 miles from Saindak.

It is situated in the Kacha *nala* and lies at the eastern foot of Kacha Koh. The water here is of a most excellent quality and is sufficient for a large force.

Camping-ground.—In the bed of the Kacha *nala*, stony and commanded by hills. For a small force there is a small camping-ground in the tributary in which the water is.

Supplies.—Nil.

Fodder.—*Barshok* grass, fair supply; more could be collected from neighbouring *nalas*.

Camel-grazing.—Good and in considerable quantities.

Fuel.—Scarce close to camp, but any amount in surrounding *nalas*. Following the *nala* up for 2 miles there is quite a jungle of *nal* grass that grows to an unusual size here. It is quite famed among the Baluchis who come here to collect it and make stems for their *hookahs* and reed musical instruments. (*Roome.*)

KACHA NAWAR—

A pool of rain water, 17½ miles north by east of Kirtaka (*q. v.*), found in February 1903 at the terminus of the Kacha river, evidently the remains of a freshet which had come down from the hills. The grazing at

this *nawar* was exceptionally good, and fuel abundant. At this *nawar* the Ladis-Kacha-Zirreh and the Saindak-Kirtaka-Zirreh roads join one another. (*Webb-Ware.*)

KACHA PASS.—Lat. 29° 30′; Long. 61° 10′; Elev.

West of Kacha Koh, about 9 miles south-east of Bogar spring crossed by the road from Robat *viâ* the Shamidar pass to Kirtaka.

KACHA RIVER—

Rising west of the Kacha Koh flows round the south of that hill and turning north-east flows towards the Gaud-i-Zirreh until lost in the sand desert.

KADUI PASS—And halting-place. Lat. 29° 49′; Long. 60° 53′; Elev.

A pass in the hills south of Koh-i-Malik Siah; the main path for the Kadui pass is some 300 yards west of the water. This path is well defined; ½ mile beyond the water it enters the *nala*-bed which it follows up until the pass itself is reached at about 6 miles. The pass is a very low and easy one, practicable even in its present condition for the free passage of all arms. On quitting the pass the path turns slightly north-east, and leaving the hills behind follows a well-worn track over a gently sloping, stony plain in an almost due north direction till it meets one of the numerous *nalas* feeding the main Robat *nala*, which it follows till the main *nala* is reached about 5 miles from Robat. The rest of the journey to Robat is down the easy bed of the main *nala*. There is no water on the road between Kadui halting-place and Robat.

Sabah and *mulla* grass abundant in the pass: likewise camel-grazing and wood.

Flocks of sheep and goats grazing on the hills.

At Kadui halting-place.—There is one pool of semi-stagnant water, but abundance of fine water can be obtained by digging 3½ feet below the surface. Without a guide it would be difficult to find the water here, as it is hidden by *tagas* jungle, and the road for the Kadui pass leaves the water some 300 yards to the east. The water is close to an over-hanging cliff in a narrow gorge. Wood abundant; also camel-grazing and *sabar* grass. Numerous flocks of sheep and goats seen grazing in the neighbourhood. (*Webb-Ware.*)

KADUKI WELL.—Lat. 29° 27′; Long. 65° 50′; Elev.

About 2 miles south of Shah-i-Diwana well and 8 miles west by south from Baghak and about 2 miles north-east of Zangi Nawar.

KAFTARI.—Lat. 29° 10′; Long. 64° 48′; Elev.

Rising ground in the south-western extremity of the Lora Hamun.

KAHNI RIVER—

One of the head affluents of the Morjin river.

KAIM WELL.—Lat. 29° 13′; Long. 64° 43′; Elev.

About 5 miles south by west of Chagai on the Chagai-Kharan road.

KAISAR KHAN BHUT—

A few detached hills in North-Western Baluchistan, 11 miles from Chutok, on the road to Chagai. There is a rain-water pool at the foot of, or somewhere near, these hills where, after rain, a sufficient supply of water is to be obtained for a small party. Chagai is about 24 miles distant. (*Purvis.*)

KAISAR PIR—*see* PIR KAISAR OR SULTAN PIR KAISAR.

KAISAR STREAM.—Lat. 29° 38′; Long. 66° 10′; Elev.

A great water-course which collects the drainage of South-Western Sharod and also of Kishingi, etc. In winter the width of this stream is about 15 to 20 feet and depth 6 inches to 1 foot. In summer it is considerably diminished. The bottom is firm slaty gravel. In winter floods sometimes fill the whole bed and the road is then impassable, but seldom, it is said, for more than 24 hours. At the point where the road from Panjpai enters this stream (*i.e.*, 22 miles from Singbur) the bed is covered with tamarisk jungle, 12 to 15 feet high. The Kaisar runs at first northwards through Kishingi till it meets the Bala, or Big, Singbur (*see* Gazetteer of Afghanistan, Part III). The perennial stream commences about the junction. A few miles lower down the Ghori *nala* comes in from the Iltaz *karez* country. The Kaisar then runs in a general south-westerly direction through a very narrow and winding valley, or succession of defiles in places densely wooded with tamarisk, and emerges into the Nushki plain a few miles south of Rahman Khan Kala. Its further course is south-west, and it appears to terminate in a *hamun* at no great distance. The water of the Kaisar is abundant and good. It irrigates a certain amount of land in Nushki (*q. v.*), and turns several watermills near its debouchure from the hills. Roads from Panjpai, and Iltaz *karez* in Sharod, come down the Singbur and Ghori *nalas*, uniting about Ghorina-Bah (*q. v.*), and proceed to Nushki by the Kaisar. (*Maitland.*)

KALA-I-FATH—

The village contains 250 houses with a population of about 1,240. There is a very considerable amount of cultivation in the neighbourhood, there being some 4,140 acres under wheat and barley. The village possesses 900 cattle, 1,500 sheep and goats, 25 horses and 80 camels. Kala-i-Fath is one of the places where the Government fodder is stored. The present garrison of the fort is 100 Khassadars. There is a ford. The present Khan is Muhammad Ayoub Khan. (*Wanliss, February 1903.*)

KALA-I-KOHNA—

A small village on the left bank of the Helmand, a few miles east of Rudbar. It consists of some 15 mud huts, containing about 70 Sinjarani Baluchis. Close to the village are the ruins of an old fort called Karbasak (*vide* Gazetteer of Afghanistan, Part V, p. 397.) The village is irrigated by the Pulalak and Rudbar canals and possesses 30 cattle, 100 sheep and goats, 30 camels and 4 ploughs, each plough producing an average of 18 *kharwars* of grain. (*Wanliss, February 1903.*)

KALA-I-NAO.

A village on the right bank of the Helmand, about 2 miles west of Khan Nashin (*q. v.*). It has a population of 900 Misri Khel Saduzais. There is a fair amount of cultivation and the land is irrigated by the same canal as that at Khan Nashin. Supplies are fairly plentiful; 500 cows and bullocks, 300 sheep and goats and 150 camels. The present Khan is Muhammad Afzal Khan. There is a ford opposite the village. (*Wanliss.*)

KALA-JEHAN BEG—*see* KILA JEHAN BEG.

KALANCHI NAWAR.—Lat. 29° 14′; Long. 63° 10′; Elev.

A *nawar* some 3 miles distant from Manzil on the road to Butak. It is circular in shape, being approximately a mile in diameter and is surrounded on all sides by high peaks of granite and tuff. The granite here appears to be intrusive and the line between it and the tuff is very clearly defined. After rain the *nawar* is occasionally cultivated to a small extent. (*Roome.*)

KALANDARI—

A place where there is water in the bed of a *nala* just inside the north-east foot of the Koh Kambaran (*q. v.*). This water is scanty and dries up in the hot weather. (*Webb-Ware.*)

KALANDI AND KALANDI KAUR.—Lat. 28° 31′ 30″; Long. 63° 14′ 30″; Elev.

A ravine in North-West Baluchistan between Meski on the Mashkel and Shandak. It is broad, but of no great length. The road from the Mashkel river enters this ravine about 6 miles from Meski, and continues along its bed for 5 miles to Paniham, where there are a few date trees and an abundant supply of good water from wells in the bed. Kalandi camp is 3 miles lower down, and is a spot similar to Paniham. It is probable that water could be obtained anywhere in this ravine by digging. (*MacGregor.*)

KALAT-I-LOP NALA—

A precipitous torrent bed, flowing down the southern face of Lal Koh. After passing Buttahmir to the east it joins the Mianbazar *nala* on its left bank a short distance before the junction of the Duzab and Mianbazar *nalas*. There is sometimes water to be found in its lower course in the shape of small springs. (*Roome.*)

KALI RIVER—

A small affluent of the Mendo *nala* rising in the spurs of Malik Teznan and flowing south.

KALLAGAN.—Lat. 27° 29′; Long. 61° 51′; Elev. 3,097′.

A collection of forts built in a grove of date palms which fringe the left bank of a stream, with steep and fairly high hills on either side. There is a very large supply of water, and some of the side valleys could also, no doubt, be cultivated. The southernmost fort is the residence of Sherdil Khan, Naoshirwani, an ally of the Kharan Sardar, and is called Haibik.

The most northerly fort is that of Kaladam, "the advanced or furthest fort," situated in the open 7 miles from Jalk. (*Tate.*)

KALPURKAN.—Lat. 27° 14′; Long. 62° 35′; Elev.

A small fort, about 6 miles west of Dihak, is situated in open ground. There is a good stream of water flowing in an irrigation channel. At present the area cultivated is very small, but could be greatly increased. There is a grove of date palms about 2 miles north where there is more water. This grove is situated at the base of a rock, about 50 feet high, which is called Gwan Koh, or the "hill of sound" from a very distinct echo. From Kalpurkan the road to Kirman *vid* Bampur branches off to the south-west towards Sib. The road to Gusht and Dizak continues

westwards. South-east of Kalpurkan is the village of Pirabad inhabited by Sayads. This is a sanctuary and on reaching it a fugitive is safe from the vengeance of his pursuers. (*Tate.*)

KAMBARAN.—Lat. 28° 47′; Long. 46° 57′; Elev.

A halting-place at the foot of the Kambaran Koh (*q. v.*) on the road from Kharan to Dalbandin by the Seh Saman pass. It is distant from Kharan fort 34 miles. There is a little water close to the halting-place in a side *nala*. (*O'Donnell.*)

KAMBARAN KOH.—Lat. 28° 50′; Long. 64° 59′; Elev. 8,518′.

A conspicuous peak in the range forming the main watershed of the Dalbandin and Kharan districts. It lies south-west of the Ras Koh peak in the same range. A pass called the Rahio leads from Namrekh in the Dalbandin plain between this hill and the Koh-i-Charian to the west to Kharan, three stages, but it is not practicable for camels. Another pass pierces this high range called Seh Shaman or Saman. Dharan is three stages distant. (*MacGregor.*)

KAMERA.—Elev. 1,900′.

A halting-place on the Ladgasht-Mirjawa road, about 14 miles north-west of Gorani well.

KANDAK NALA—

A tributary joining the Shemidar *nala* on the left bank, about 10 miles above Kila Robat. Close to its junction with the Shemidar *nala*, and under the left bank, a small stream issues from under a natural archway. This was dry in 1899, but my guide informs me there is a plentiful supply of water here, which is said to be good after rain in the hills. The name of the place where the two *nalas* join is known as Gadai Kushta (*q. v.*).

Supplies.—Nil.
Camel-grazing.—Indifferent.
Grass.—Nil.
Fuel.—Abundant, small bushes.
Camping-ground.—Contracted and commanded by high hills. (*Roome.*)

KANDALI RIVER—

A tributary of the Robat river, rising in Malik Teznan and flowing north.

KANI.—Lat. 29° 34′; Long. 65° 6′; Elev. 2,996′.

A halting-place on the Shah Ismail route between Charasiaf in Nush-ki and Galla Chah, 63 miles from the former and 110 from the latter place. Zaru, in the direction of Nushki, is 18 miles, and Gazachah, the next stage towards Shah Ismail, is 16 miles distant. The main road makes a detour round the northern end of the Lora Hamun to Gazachah and thence to Shah Ismail, 50 miles, and an alternative route, shorter and more direct, leads through the Kanuk hills *viâ* Umbai to Shah Ismail, 41 miles.

There is, however, less water, and sand drifts render it heavier. In addition there is a long heavy gradient on it. This road *viâ* Umbai is that generally taken by caravans, who consider good grazing and short distance preferable to water-supply.

A railway could easily be constructed along the line of this route, the Kanuk defile presenting little difficulty. The Umbai defile would be less suitable for a railway, as the drift sand there encountered would be a source of constant trouble after construction.

Another road branches from this place and goes in a south-westerly direction to Chagai, two long marches distant.

The following is an account given by Major Peacocke of the Afghan Boundary Commission of the water-supply in and near this place.

There are eight wells distributed as follows :—

(I) At Kani—four wells of 3 to 5 feet diameter, containing a depth of water of 2½ to 3 feet. Water 25 feet below surface. Are said to refill every twelve hours. Any individual well actually does refill in six hours. At date, one of these wells is tainted by a new tamarisk lining, and could only be used for animals. It is, however, included in total.

Total, 4 wells—1,092 gallons.

(II) At a point three-quarter mile to north, three wells varying from 2 to 4 feet square, with a depth of water 4½ feet. Water 40 feet below surface.

Total, 3 wells—750 gallons.

(III) At a point three-quarter mile to west, one well 3½ feet in diameter, with depth of water 10 feet.
Water 2′ 8″ below surface.

Total, 1 well—576 gallons.

Total supply—2,418 gallons.

Four additional wells have been sunk, which if the same as the first four would make the total supply 3,510 gallons.

The existence of several ruined wells close by would show that the water-supply of Kani is capable of further development, and the dip of the strata of the neighbouring Kani hill towards north and east would favour a natural collection of water there.

A succession of high ridges of drift sand, heaped up about the foot of Kani hill, renders the road heavy for 1 mile. Considerable portions also of the last 6 miles before reaching Kani, and of the first 3 miles after leaving it, are rendered heavy by the hollow crust (*shora*) with which the ground is covered.

There are four or five families of permanent inhabitants who cultivate a few acres of cereals after the rain, and also a few temporary settlements of nomad Mengal Brahuis possessed of a few flocks of sheep, goats, and camels. In this place there are about three hundred sheep. These Brahuis import their grain from Rudbar or Nushki and frequent the neighbourhood of this route from June to December. The soil, setting aside the danger from drift sand, is well suited for agriculture. (*Peacocke.*)

On our arrival (1896) found one well only open. This was about 20 feet deep, containing 5 feet of good water, two other wells open but purposely choked by nomads with logs of wood and tamarisk bushes; both these are about 25 feet deep with 2½ feet water. These we cleared out and completely emptied of the foul water they contained. Six hours afterwards they contained 2 feet sweet water. All other wells had become completely filled up and no trace of them now exists. A little *mulla* grass obtainable in the direction of the hills (west). (*Walters.*)

KANI.—Lat. 28° 44′; Long. 64° 18′; Elev.

A halting-place on the Dalbandin plain, 13 miles from Band-i-Khan Jahan and 16 miles from Sorgil. Water, fuel, and camel forage abundant and a little grass is procurable. (*MacGregor.*)

KANIAN.—Lat. 28° 44′; Long. 64° 35′; Elev.

A halting-place about 7 miles north of Rasani pass on the road from Dalbandin south to Hurmagai.

KANIAN RIVER—

Rises east of Rasani pass and flows north to Bambakan in the Dalbandin plain.

The Dalbandin-Hurmagai road follows its course as far as the pass.

KANI HILLS—Also called ZARD KOH.

A short isolated range north-west of the Lora Hamun in North-West Baluchistan, high at each end, but low in the centre, and through this it is said that the Umbai route to Shah Ismail goes. These hills appear to rise fully 1,000 feet above the plain. They are bare and precipitous, of a greenish black colour (whence no doubt the name) distinctly stratified, and showing greyish and reddish bands. The whole of the tract to the east of these hills is undulating sand, tolerably firm and thickly grown with *tagaz* bushes. A long plain, evidently a branch of the great *dasht*, runs up between this range and the Mughal Kand. (*Maitland.*)

Although the year 1902-03 was a bad one for water, by clearing out old wells and digging new ones an ample supply for about 1,500 men and 2,200 camels was found here in six wells, 20 to 25 feet deep. Of these wells, four of the best were new since the Baluch-Afghan Boundary Commission came here in 1896. There is good grazing here for camels. The thermometer on January 23rd registered 12° of frost. (*McMahon.*)

KANUK—

A spring and halting-place on the Shah Ismail route between Nushki and Galla Chah. Gazachah, the next stage towards Nushki, is 12 miles, and Safia, the first stage towards Shah Ismail, is 5 miles distant. The spring lies in the bed of a ravine just before reaching a *kotal*. It is said to have formerly been very copious, but to have been choked by the fall of a portion of the cliff. At date (1885) it is not very strong, but native arrangements in the shape of several deep troughs and small wells exist for storing its water, the total amount of water so stored being 540 gallons; there is in addition a large pool of 160 gallons. The defile at this point is too contracted for a halting-place for any numbers.

Additional troughs might readily be constructed and an attempt made to re-open the spring.

The road emerges from Kanuk defile, and bends to west, skirting the northern face of the Kanuk hills, which latter, beyond Safia, gradually trend away in west-south-west direction. (*Peacocke.*)

KANUK HILLS AND DEFILE—

A range of hills in North-West Baluchistan and north-west of Gazachah. They have a general direction of north-east and south-west and are

metamorphic showing traces of volcanic action. The general dip of the strata in the main range is to the north and west, and that of the outlying hills of Kani and Mughal Kand to the north and east.

Their sides, especially the northern and western, are covered with sand drifts which reach high up. The road runs through the Kanuk defiles, and is easy for all arms, the ravine being wide with a gentle gradient. At the 13th mile from Gazachah there is a low *kotal* covered by a sand drift, easily rendered practicable for guns. The defile winds considerably, but has a general direction of north-west. It is about 9 miles long. (*Maitland.*)

KANUK PASS OR GAZ—

A pass through the Kanuk range of hills (*q. v.*).

The following is Colonel Maitland's description of this pass:—

The entrance to this pass is 4 miles north-west of Gazachah, and on entering the hills the pass is 150 to 200 yards wide. The road following the water-course inclines slightly to the left. The hills are bare and rocky, but not generally inaccessible. They are not very high: the highest is on the right, beyond smaller ones. Bottom of the valley gravel sprinkled with sand. The water-course is shallow, and it is evident from the look of the hills that the rainfall in this region is very slight.

The road passes to the right of an isolated rock, and afterwards bends somewhat to the right, to get round the end of a spur from the hills on the left.

Having passed this it bends to the left at 6 miles. Here, on the right, is the high jagged hill visible from the entrance, and in fact from the neighbourhood of the camping-ground. It is said to be called Gaurgund. Khuda-na-Langar is beyond it; and there is a foot path known as the Khuda-na-Langar road leading to the head of the Umbai valley.

Elevation 350 feet above camp.

The pass bending round to the left, the road now runs nearly due west. A *ziarat*, passed at about 7 miles, is that of Saiad Muhammad, the same as that of Zaru. From here there is another foot path to Khuda-na-Langar.

The pass now narrows to about 50 yards, and widens again directly. Its breadth here is irregular, but the average is 80 to 100 yards. It winds to some extent, but at about 9½ miles begins to turn to the right, that is, north-west. After this the hills are lower, and on the left lie somewhat back from the road, which is good all the way, the ascent being slight.

At about 11 miles pass Nasir Khan's *masjid*. A rude open-air praying place, said to have been made for Nasir Khan, 1st, of Kalat, when he marched by this route to join the Afghan army. From here the track, still following the water-course which has become quite small, turns again to the right and now runs northwards. On the left a high craggy hill, some miles distant, is Machi. It is visible from Gazachah, and beyond it is the valley south-west of Safia. It is of course conspicuous from Safia gap.

The low hills on either side converging now diminish the pass to a breadth of 40 yards, and very soon it becomes a defile not more than 15 yards across, enclosed by hills which are steep though low. They are, however, quite accessible.

At about 12 miles the gorge bends to the right, but 100 yards before reaching Kanuk spring, which is at the end of it, is narrowed at one spot by projecting rocks till only a passage 5 yards wide is left.

Afterwards it is wider, and the road leads up a sandy ascent, leaving the spring to the left. At the foot of the *lak* the height is 700 feet above camp at Gazachah, the distance being 12¼ miles.

The steep sandy part of the ascent, which is perhaps quarter of a mile in length, rises about 200 feet. The path, bending to the left, rises about another 20 feet by a very easy gradient before the actual top of this little pass is reached. It is as well to note that it is known as Kanuk-na-Sham.

Aneroid at actual top:—26·24 at 9-30 A.M. Ditto at Kanuk spring, 9-5 A.M., 26·45. At 3 P.M. 26·34.

This road appears to be known pretty generally as the Karawan rah. The pass would be known as the Gaz or Kanuk pass. The road is said to have been, up till not many years ago, the ordinary route used by the people of Chagai and Kharan going to the Helmand. There was a well, known as that of Nawab Khan, somewhere in the *reg*, and the road went by that. Now the well has fallen in or the sand has buried it, and people go by Bulo. Why the Nawab Khan route should have been preferred to that *viâ* Shah Ismail and Arbu I cannot make out, though it was no doubt a shorter line to places above the Koh Khan Nashin. (*Maitland.*)

KAN WELL.—Lat. 29° 7′; Long. 64° 40′; Elev.

Near the Zarala river about 11 miles south by west of Chagai.

KARBASAK—

A small village on the left bank of the Helmand, 2 miles east of Rudbar. It consists of 12 huts containing some 40 Sinjarani Baluchis. The inhabitants speak both Baluchi and Pushtu. The village possesses some 30 cattle, 80 sheep and goats, 18 camels, and 2 ploughs, each plough producing an average of 18 *kharwars*. The present Khan is Azam Khan. There are the ruins of an old fort close to the village. *(Wanliss, February 1903.)*

KARDAK HILL.—Lat. 29° 10′; Long. 63° 28′; Elev. 5,060′.

A hill in the southern spurs of the Malik Naru range, about 7 miles east of Butig halting-place on the road from Kharan to Amir Chah. In 1903 a good spring was discovered for the signalling party, situated as shown on the signalling map, north-north-west of the hill. (*Scudamore.*)

KAREZ—

A village in Baluchistan, about 8 miles south-west of Nushki.

When Pottinger saw it it was deserted, but there was a well of very good water close by, whence he carried on his supply for the next ground. He saw numerous herds of camels turned loose here to graze on the *Gaz* and *Shinz* with which the plain abounds. (*Pottinger.*)

KAREZ-I-KHAN.—Lat. 29° 31′; Long. 65° 59′; Elev.

About 2½ miles north of Bhagak in the Nushki district.

KARODAK.—Lat. 28° 57′; Long. 64° 44′; Elev.

A *nala* that takes its rise in the Chapar mountains and flows south to the east of the Pishak plain. It is liable to heavy floods, rendering it

impassable for a few hours. The banks on its southern portion have a fine growth of large tamarisk trees and *barshok* grass grows in its bed.

This *nala* is crossed on the road from Yadgar to Dalbandin. Near the crossing there is a small levy post and good camping with some wells in the bed of the *nala* (22 in all). These wells, however, are filled up after every freshet and vary constantly in number: the water is about 8 feet below the surface and is good.

Supplies.—A good many sheep and goats are watered here in the spring of a favourable year, but no other supplies are locally obtainable.

Grass.—Abundant (*barshok*) in vicinity.

Fuel.—Abundant, principally *tagaz* and there is a good many large tamarisk trees growing along the banks of the *nala*.

The sixth stage of the trade-route is called Karodak. It is situated 2 miles west of the *nala*. Here there is a *sarai*, unlimited camping-ground, water, grass, camel-grazing and fuel abundant. The wells are fitted with facilities for drawing water and watering animals. (*Roome—Webb-Ware.*)

KARZAK KAUR—

A water-course in North-West Baluchistan between Amuri Kaur and Shandak. The road from Amuri Kaur crosses it 11 miles west of that place and about 14 east of Shandak. At this point is a well of good but scanty water called Chah Nilagan. (*MacGregor.*)

KATOR PASS.—Lat. 29° 24′; Long. 63° 48′; Elev.

Is situated about 3 miles south-west of Koh-i-Palez and is crossed by a road from Dalbandin *viâ* Huki Kalat to Jilejil.

KAURI KHAN RIVER—

Rising at the Bed pass is followed for some distance by the Ladis-Seistan road northwards. It finally turns east and joins the Duzdap river.

KAVIR—

A plain covered with a salt efflorescence. This is not a local, but a generic term for all such places. There is one mentioned by MacGregor as existing in North-West Baluchistan to the east of the Hamun of the Mashkel, some 14 miles in length.

To the east this plain is continuous with the salt-bed called Wad-i-Sultan and stretches beyond it further than the eye can reach. To the west it is limited by the Mairum ravine, which runs parallel to the road from the river Mashkel to Paniham, to its junction with the Hamun of the Mashkel. (*MacGregor.*)

KAZAN-NUHLI.—Lat. 28″ 48′ 40°; Long. 63° 50′; Elev.

A small open plain of *pat* on the left bank of the Gidan Patki road, 7¾ miles from Mirui: 1¼ miles from east to west, 1¾ miles from north to south. The eastern portion of it has a thick efflorescence of *shora* on its surface. *Pish* and tamarisk in some quantities. There are many springs of bright clear water, but the greater portion of them do not seem to be perennial. The water in most is good. (*Roome.*)

KAZAN-NUHLI ROD.—Lat. 28° 49′; Long. 63° 50′; Elev.

Crossed at 9th mile from Mirui on the road to Ekmach. A shallow *nala*-bed with banks some four to six inches high. (*Roome.*)

KHAIRABAD—

A village on the right bank of the Helmand opposite the Koh-i-Khan Nashin. The population consists of some 120 Misri Khel Sadozais. The village possesses about 80 cattle, 300 sheep and goats, 5 horses and 5 ploughs, each plough producing on an average about 18 *kharwars*. (*Wanliss, February 1903.*)

KHAISON LOK.—Lat. 29° 26′; Long. 63° 15′; Elev. 4,245′.

A hill on the Afghan-Baluch frontier about 5 miles west of Jilejil.

KHAJO—

A Sinjarani Baluch village, 20 miles below Rudbar, containing about 280 inhabitants. The village possesses 170 cattle, 200 sheep and goats, 30 camels and 18 ploughs, each plough producing on an average 18 *kharwars*. There are said to be three fords across the river. The present Khan is Fateh Khan, Sinjarani Baluch. (*Wanliss, February 1903.*)

KHALBUT.—Lat. 29° 13′; Long. 64° 53′; Elev. 3,330′.

A hill in the Lora Hamun, about 8 miles south-east of Chagai.

KHANA-I-ABDAR.—Lat. 29° 15′; Long. 65° 15′; Elev.

Near Thal in the Chagai district on the Nushki-Chagai road, about 25 miles east of Chagai.

KHAN JEHAN BAND OR BAND-I-KHAN JEHAN—Lat. 28° 53′; Long. 64° 28′; Elev.

A halting-place on the route from the Mulla pass to Shandak in North-West Baluchistan.

It is about 176 miles from Anjira and lies in the western corner of the Dalbandin plain between Pishuk and Kani. Water, fuel, and camel forage abundant, and a little grass is procurable. There is a tank here, also a *karez* made by Sarfaraz Khan Sinjarani. Camping-ground unlimited. (*See* Dalbandin.) (*MacGregor.*)

KHAN MAHOMED KUSHTA PASS.—Lat. 29° 37′; Long. 60° 52′; Elev. 4,260′.

Five miles south of Shamidar pass on the Robat-Duzdap road; 8½ miles north of Duzdap spring Mian Bazar or Khan Muhammad Kushta *kotal* is crossed. The ascent from the Duzdap side is about 450 feet, but not difficult for laden animals. (*Ahmad Ali Khan.*)

KHAN NASHIN—

Three villages bearing the same name and adjoining one another, situated on the right bank of the Helmand opposite Landi Muhammad Amin, containing 1,200 Misri Khels.

The most westerly of the three villages contains the ruined fort of Khan Nashin. There is a ford across the river opposite the fort. The present Khan is Muhammad Manik Khan. (*Wanliss, February 1903.*)

KHARGOSHKHAN—Height 3,100′ approximate.

A halting-place, 22 miles from Dalbandin on the southern road to Amir Chah.

The well lies 1 mile to the west of a curious red hill and 700 yards east of a spit of sand running into the plain.

P. C. bearings—

To Chapar Koh	...	...	...	34°
" " "	...	...	...	76½°

There is a small *ziarat* close by and the well has a rough windlass over it for drawing up the water. Water 40 feet from surface and good. Depth of water 7 feet ; well 3 feet in diameter.

The well is faced with stone for some distance down and is stated to have been built by a Hindu "Shiva" centuries ago.

Camping-ground.—Unlimited.

Supplies.—Nil.

Fodder—Grass, *nil.*

Camel-grazing.—*Lana*, good.

Fuel.—Scarce : would have to be brought from the sand-hills. (*Roome*)

KHORAI—

A bare plain in North-West Baluchistan between Umbai and Kani. It is evidently flooded after rain, and is of considerable extent. To the right (south) are sand-hills, under which was formerly a well ; also called Khorai, but it is now buried in sand. The road here is only a few miles from the Nalaf Kunzagi rocks, and Lashkar Ab is plainly visible. (*Maitland.*)

KHWAJA ALI (LOWER)—

A village on the left bank of the Helmand, with a population of some 350 Baluchis. There is a considerable amount of cultivation in the neighbourhood and we found some 1,500 acres under wheat and barley. This portion of the valley is irrigated by a canal which takes off a short distance below Upper Khwaja Ali and was built 13 years ago. The valley is here between 3 and 4 miles wide and is hemmed in by cliffs rising to a height of about 250 feet. The river runs in a single channel and is about 200 yards wide and from 4 to 6 feet deep ; the width from permanent bank to permanent bank being nearly a thousand yards and both sides of the river are overgrown with a thick growth of tamarisk. There are three fords across the river, with a depth of 2½ to 3 feet and a bottom of shingle and sand. The inhabitants speak both Baluch and Pushtu. The Khans are Ata Muhammad Khan, Muhammad Raza Khan and Gul Muhammad Khan, all of whom reside at Chahar Burjak. The village possesses some 80 cattle, 200 sheep and goats, 300 camels and 15 horses. (*Wanliss, February 1903.*)

KHWAJA ALI (UPPER)—

A Sinjarani Baluch village of about 30 houses, under Taj Muhammad, 1 mile from the south bank of the Helmand, and 49 miles from Galla Chah.

The Helmand valley is here a broad tract of alluvial plain between low ridges of hills. Lower Khwaja Ali is 11½ miles further down the river. (*McMahon, 1903.*)

KIACHAH—

A halting-place in North-West Baluchistan on the road from Chagai and Barabchah to Robat, about midway between the latter two places (19 miles). The water here is obtained from wells in the bed of a water-course. They are about 2 feet deep and slightly brackish. Camel-grazing moderate and a plentiful supply of fuel. Between Samuli and Robat, 7 miles from the former place, the road which lies in a *nala*,

forks. This point appears to be the Kiachah of Lockwood, though the name was unknown by his guides. There is no well, though water could be obtained by digging. (*Lockwood—Peacocke.*)

KILA AFZAL—Lat. ; Long. ; Elev.

Cultivation and a few huts, 67½ miles north by east of Kirtaka, a few miles south-west of Band-i-Kamal Khan on the Helmand. The objective of all routes running north in this part of the country is Kila Afzal and the Helmand. (*Webb-Ware.*)

KILA JEHAN BEG—

25 miles from Rudbar and 11 from Chahar Burjak on the Helmand. (*McMahon*)

KILA KURD.—Lat. 29° 18′; Long. 64° 23′; Elev.

A halting-place on the road from Chagai to the Helmand, 25 miles from the former place and 9 miles from the Doganan. The water-supply is obtained from a weak spring a quarter mile to the left of the road. It yields about 40 gallons an hour, and the waste water is stored in six shallow troughs, about 8 feet in diameter and a few inches deep, for the use of the sheep which are generally to be found grazing here. This water is good and close to it is some grass. (*Peacocke—MacGregor.*)

KILA ROBAT—*See* ROBAT.

KIMLI REG—

A halting-place on the route from Panjgur to Budu Reg on the Mashkel by the Bibi Lori Kaur. It is about 75 miles from Panjgur and 25 from Budu Reg. The Bibi Lori Kaur (*q. v.*) is said to empty itself in the sand here. After a heavy rain a small lake is formed, and when this is exceptionally high some of the water finds its way to the Mashkel above Budu by a channel called Hardan. From Bibi Lori *ziarat* to Kimli Reg is said to be nearly 30 miles, and from thence to Budu Reg 25 miles. The whole of this distance is at present without water. However, after rain, the road would be practicable, and then it possesses some advantages over that by Tank-i-Zorati, etc. Distance from Panjgur to Budu Reg, apparently nearly 100 miles. It is not necessary to go to Kimli Reg; after passing the last hills, about 15 miles below Bibi Lori, a line may be taken north-west to Mian Rud, about 20 miles. (*Maitland—MacGregor.*)

KIRTAKA.—Lat. 29° 28′; Long 61° 27′; Elev. 2,760′.

A halting-place on the trade-route, 18 miles west of Saindak. The place where the springs are is a small spur of earth and sand jutting north into the plain from the Kacha Koh range. The spur looks rather as if it had once been liquid mud that had oozed out of the mountains and, drying up quickly, formed a series of terraces. The crest of the northern slope is 40 feet above the plain. This mass of sandy earth extends west as far as the mouth of the Kacha *nala* and is thickly covered with a growth of *drubh* grass and a few scattered tamarisk bushes.

Water is plentiful and good, though sometimes aperient from several small springs; there is extensive camping-ground, and abundant grass and camel-grazing, but fuel is scarce. A *thana* and rest-house have been

erected here, and there is a small detachment of levy sowars. In 1903 a signalling station was fixed on the high ridge bearing 155° from the *thana* situated to south of Beduk *nala* (*q. v.*). (*Roome—Rose Price.*) (*See* also Appendix V.)

KISAN CHAPAR.—Lat. 29° 4′; Long. 61° 26′; Elev. 4,170′.

The westernmost portion of the Chapar range in the Chagai district, about 10 miles west of Mazan Chapar.

KISAN NOHLI RIVER—

An affluent of the Morjin river from the north.

KISHKUN WATER.—Lat. 29° 27′; Long. 64° 50′; Elev.

About 11 miles north by east of Chagai on the edge of the Lora Hamun at the mouth of the Shai Musa river.

KODLA PASS.—Lat. 29° 16′; Long. 64° 6′; Elev. 5,625′.

A pass crossed by the road from Dalbandin to Jilejil near Ziarat-i-Malik Bastani at the head of the Chilgazi *nala*.

KOGANCHAH RIVER—

Rising near Gurgarok flows south into the Bulo river.

KOH-I-BALUK—

A mass of low hills to the south-east of the Malik Naru range, but separated from it by a plain. (*Roome.*)

KOH-I-BED.—Lat. 29° 10′; Long. 61° 5′; Elev. 8,220′.

A peak of the Koh-i-Bibimah range lying east of the well known Bed pass on the Ladis-Seistan road.

KOH-I-BIBI MAH.—Lat. 29° 9′; Long. 61° 1′; Elev. 9,229′.

A range of hills on the Persian side of the western border, about 25 miles south of Duzdap and west of Mirjawa. The main road from Ladis to Seistan crosses them by the Bed pass.

KOH-I-DALIL—Height 4,624′.

A solitary dark red-coloured hill in North-West Baluchistan, about 35 miles east of Amalaf and 40 miles south of the Gaud-i-Zirreh. It rises abruptly out of the plain with bare precipitous slopes and is something approaching the conical in form.

It makes an excellent land mark and can be seen for miles from most directions, but is easily blotted out by haze. The summit is accessible only from west-north-west by a steep and arduous climb. Here a signalling station was established in 1903. A small spring on the north side of a low hill, about 1½ miles to the south-west, yields water for a short period after a rainfall, when the supply is sufficient for a signalling party and escort. (*Roome—Rose Price—Scudamore.*)

KOH-I-GAU.—Lat. 29° 8′; Long. 64° 52′; Elev. 3,560′.

A hill at the southern extremity of the Lora Hamun.

KOH-I-HASAN SUST.—Lat. 29° 33′; Long. 63° 34′; Elev. 5,575′.

A hill in North-West Baluchistan, apparently a spur of the Samuli Koh (*q. v.*). The road from Samuli to Mamu goes over a small rise close to the extreme point of this spur. (*Peacocke*)

KOH-I-HUMAI.—Lat. 29° 6′; Long. 62° 22′; Elev. 4,479′.

A red-coloured hill, table topped, about 3 miles north of Duzghi on the road to Amir Chah. The track passes just to the south of it. In 1903 three wells were dug in the sand-hills, about a mile to the west of its base; of these two produced very red, muddy, but sweet water, and in the third the water was brackish. (*Roome—Scudamore.*)

KOH-I-KANSURI.—Lat. 29° 13′; Long. 62° 46′; Elev. 6,395′.

A prominent peak on the northern slopes of the Koh-i-Sultan. As viewed from the direction of Manzil, it has rather the appearance of an unfinished sphinx. It really is composed of two hills with a wide gap between. It is composed of a mass of lava some 100 feet thick, resting on a bed of volcanic ash. (*Roome.*)

KOH-I-KAHI —Lat. 29° 33′; Long. 64° 28′; Elev.

A peak of the Malik Naru range situated on the Afghan-Baluch frontier, about 10 miles west of the Shibian pass.

KOH-I-MALIK GAT.—Lat. 28° 57′; Long. 63° 38′; Elev.

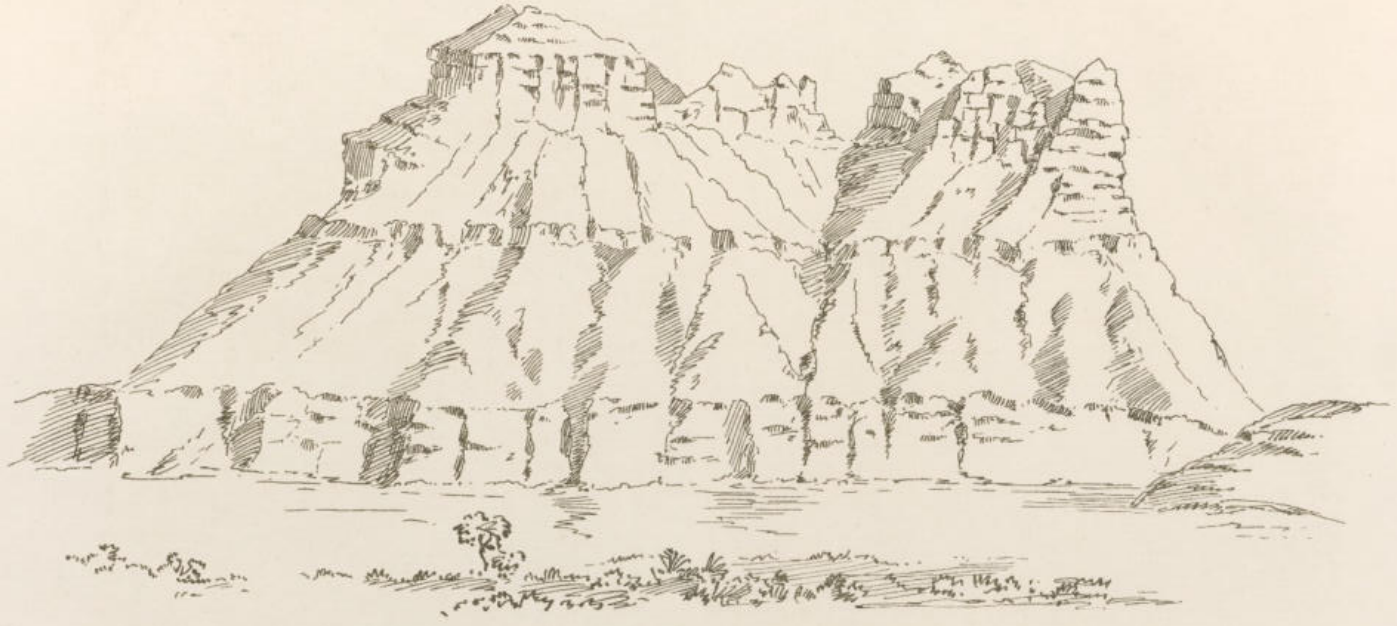
A solitary hill rising abruptly out of the plain, some 1,200 to 1,500 feet high. The lower slopes are steep surmounted by sheer precipices. Bare, with the exception of a few scanty tufts of grass. It was reported to be unclimbable, and the guide said a certain *shikari* had once climbed it and found an Arab town on the summit and had brought down some iron arrow heads. It can be ascended from west side, and the ascent is more laborious than difficult. A magnificent view is obtained from its summit, and it would make an excellent signalling station. On the top are marks of an old encampment, places where stones had been cleared for pitching *ghidans*. An old *masjid*, holes scooped in the sides of the rocks, pieces of broken pottery and a small *band* made across a little ravine evidently for the storage of water: this was all said to be the work of the Arabs. Probably used as a retreat by robbers who once on the top would be safe, the position being impregnable. The only way of ascent being on the west side and that for its last few hundred feet, would be under fire of even Baluch guns.

The base of the hill is *not* surrounded by groves of palm trees as stated in the Gazetteer. There is one grove at Gat, another at Barote: those are the only palm trees. (*Roome.*)

KOH-I-MALIK SIAH.—Lat. 29° 52′; Long. 60° 55′; Elev. 5,632′.

A hill on which the boundary-pillar stands that marks the junction of the three boundary lines, *viz.*, Afghan-Baluch, Persia-Baluch, Afghan-Persia.

The trade-route connects Nushki with this hill which is the western-most point of British Baluchistan, 372 miles from Nushki by the trade-route. The name of the halting-place situated at the southern foot of the hill is Robat (*q. v.*). The trade-route follows the Shamidar *nala* between Koh-i-Malik Siah and Lar Koh until clear of the western slopes of the former when it turns north to Hurmak. The Mamasani nomads, who spend the summer months pasturing their flocks and herds on the plains south of cultivated Seistan, spend the winter months in the Kacha Koh, Lar Koh and Koh-i-Malik Siah hills. The chief man of these nomads is Sayad Khan whose influence is great, not only over them,



KOH-I-MALIK GAT

From the west

(Sd.) R. E Roome, *Lieut.*,
1897.

I. B. Topo. Dy. No. 5,060.
Exd. W. P., March 1904.

but also over the nomads who inhabit the valley of the Helmand as far east as Rudbar. This Chief has been placed in charge of the section of the trade-route between Koh-i-Malik Siah and Seistan, and has also been made responsible for the *dák* arrangements between Seistan and Birjand—a work which he has carried out most creditably. (*Webb-Ware*)

KOH-I-MALIK SIAH ZIARAT—

A *ziarat* in the *nala*-bed to the west of Koh-i-Malik Siah. It is an unusually large one for this part of the world, and is consequently held in great repute. Every true believer on passing it must dismount, and, after giving a small offering and paying his respects to the shrine, must fire a shot at a stone on the opposite bank. If he hits this mark, it foretells good luck in *shikar*. If he omits any of these ceremonies, bad luck will follow him. (*Roome.*)

KOH-I-MALIK SURINDAG.—Elev. 4,700′.

A reddish coloured hill near Sorap. One of the western hills of the Ras Koh range. (*Roome.*)

KOH-I-PACHINAN.—Lat. 29° 16′; Long. 61° 53′; Elev. 3,542′.

A long red-coloured hill to the west of Dranakoh. Passed on the road to Saindak from Amir Chah. (*Roome.*)

KOH-I-PUSHT—

The name of the trans-frontier Afghan district which lies north of Chagai. This district is celebrated for its good grazing. (*Webb-Ware.*)

KOH-I-REZAI—

A mass of hills to the north of the track between Duzgi and Mushki Chah. A few miles to the south-west of Damodim. (*Roome.*)

KOH-I-RIHI—Lat. 28° 48′; Long. 61° 45′; Elev. 5,060′.

A range of hills, about 10 miles in length, running parallel to the Tahlab river on the east and separating it from the Dasht-i-Tahlab. Its most northerly peak (4,200′) is about 8 miles south-west of Mirjawa.

KOH-I-SULTAN (PIR KAISAR)—

A conspicuous hill in North-West Baluchistan, south-west of Zirreh, and about 50 miles north of the Hamun Mashkel. MacGregor gives the following description of it:—

"The Koh-i-Sultan was certainly one of the oddest looking mountain masses I had ever seen. It gives you the idea that long ago it may have been a rather good looking mountain, but the wind and the rain, the sand and the sun, have all been doing their best to disfigure it, and what they have left undone has been effected by earthquakes. So now it seems to bear but a quaint resemblance to its former outline; all the earth that no doubt once gave a symmetrical roundness to its contours has been washed off it, and now forms a long glacis at its foot; its face has been disfigured by the heaps of sand which now rest high upon it, while it is broken up by its spasms into a number of separate peaks and masses, whose only recommendation is that they are fantastic in shape.

However, like very many plain people, the Koh-i-Sultan has more than good qualities enough to make up for its ugliness. It produces, so Mirza, the new guide, told us, sulphur, with which they make gunpowder for the destruction of their enemies; and *mak*, an earth with which they

dye the trousers of their loved ones a beautiful red ; assafœtida, which they use for a relish and as a medicine ; and, lastly, there are many springs of water in its recesses.

It is much frequented by Babars and Kakars, who come from Kandahar to take away the assafœtida ; after going about 12 miles we came across the road by which they arrive from the Malik Dokand direction, carefully marked by heaps of stones. They come in parties of twenty and thirty, about the end of March, and stay for three months or so, sending away the proceeds of their labour on camels. This fact is interesting and noteworthy, both as showing that there is a supply of water in these months, and that the heat, though doubtless very great, is not so bad, but that these people can work and travel in it. The names of the principal places where there is water in the Koh-i-Sultan ridge are Washab, Kundi, Chakul, Padagi, Soru, and Gamichah.

The whole ground on the march was strewed with stone something like a pumice stone, and called Sang-i-Purpok. It is used, so Mirza informed me, for washing, and is very effective in removing dirt. One of the peaks of the Sultan range is very remarkable as seen from the east, about 12 miles off. It is called Koh-i-Kansuri, and bears a resemblance to the sphinx, at least close enough to seem as though a very little chiselling and touching up would make it exact. On approaching it, however, this illusion disappears, as we found the figure of the sphinx was formed of two different hills of totally opposite shape, which from a distance seemed to be one. There is another really wonderful peak in the same range, which came into view on the road, consisting of what looked exactly like a huge pillar erected on the west of one of its spurs; we passed it about 10 miles off, and so of course had not sufficient opportunity for giving a very exact description of it, but I had scanned it very carefully through a powerful telescope and it looked as if it were the ruin of one of the towers which are seen in various parts of Persia. Yet of course it could not be one of these, as it was of too enormous dimensions to be the work of man. It is connected in the traditions of the wild inhabitants with the wonderful Pir Kaisar and is called Niza-i-Sultan. A ravine, called the Diwana Kaur, runs close under the east end of the Koh-i-Sultan and forms a *hamun* in the desert." In 1903 it was found that, in all the springs mentioned, the water was undrinkable except in the Washab, in which it is only salt. In the other springs the water is impregnated with a kind of dye.

The Koh-i-Sultan and Kacha ranges appear for generations to have owned no master ; they are a no man's land of ill repute, and the favoured retreat of bands of *badmashes*, whose crimes and ill-deeds have driven them from the society of their fellows. Though but sparsely inhabited the district is subjected to continual raids. The chief, but by no means the only, offenders are the Damanis of the Koh-i-Safed, whose name is feared like that of Hari Singh on the Peshawar frontier. The assurance of these raiders is truly astonishing. Bands of from 5 to 25 raid with impunity, coming from beyond the Persian frontier over an area bounded by Mirui on the north, Galachah on the south and Dalbandin on the east, carrying off all they can lay hands on ; if overpowered, such is the terror their name inspires, their captors dare not chastise them and let them go. Besides assafœtida the same barren range has

large deposits of sulphur, alum, two kinds of ochre (much sought after for dyeing), copper and antimony.

To the west of Koh-i-Sultan the hills are seamed with out-crops and veins of ore, some exceedingly rich. The presence of ancient copper and lead smelting furnaces testifies to these deposits having been known, and having been in use, for ages; while excavations of quite recent date show that the workings are not disused. The following tracks lead over the Koh-i-Sultan:—

(1) From Mizzil to Mushki Chah by Washab (*q v.*).—Passable for laden camels and could be made passable for wheeled transport with very little work and trouble.

(2) From Mizzil to Amir Chah by Washab.—Passable for laden camels.

(3) From Mizzil to Kondi by Washab.—Passable for laden camels and could be made passable for wheeled transport. (*MacGregor—Webb-Ware—Gordon—Scudamore.*)

KOH-I-SUNT—

In the Chagai district; the meaning of the term is "end of the hills." (*MacGregor.*)

KOH-I-TRASHTA KURIK—*see* TRASHTA KURIK KOH.

KOH MALIK TEZNAN—*see* also TEZNAN. Lat. 29° 25′; Long. 63° 43′; Elev. 7,686′.

A hill in North-West Baluchistan, some 25 or 30 miles south of Mamu. An alternative road from Nushki through the Dalbandin plain to Robat and Sukaluk passes round the north of this hill and joins the main road at Robat. (*Peacocke.*)

KOH NOLI—*see* NOLI KOH.

KOI RIVER—

Rising in the Pir Puchi pass flows north towards Bambakan in Western Dalbandin.

KOJARA WELL.—Lat. 28° 13′; Long. 62° 35′; Elev.

On the Ladgasht-Mirjawa road, about 2 miles north-west of Gorani well.

KONARAK.—Lat. 28° 57′; Long. 64° 59′; Elev.

Is a *Nawar* lying about 2 miles south of Yadgar and in a direct line between this place and Kambaran Koh. There are two wells on it, both about 40 feet deep and a small amount of *khushkawa* cultivation is carried on. There is no deep pond there now as stated by MacGregor. (*Roome.*)

KONDI, NOK KUNDI, OR NIHRI.—Lat. 28° 49′; Long. 62° 48′; Elev. 2,700′.

A halting-place in North-West Baluchistan in the Mohammadani country on the road from Kharan to Amir Chah, 24 miles from Isa Tahir and 35 miles to Amir Chah. It is one of the few places in Muhammadani country where wells exist and is dreaded by travellers on account of being an abode of thieves who come here from Seistan for the purpose of raiding. (*Ahmed Ali Khan.*)

The thirteenth stage on the trade-route, 110½ miles from Dalbandin and 225½ miles from Nushki. Here there is a levy post and two-roomed travellers' serai. There are three wells close to a small *ziarat* consisting of one dead tree with a few rags and gewgaws hung on it, erected to Pir Sultan; water 9 feet from surface, 1 foot deep, 3 feet diameter. The water is very abundant but slightly brackish and purgative. This means that water has to be carried from Isatahir to Amir Chah, 60 miles. The wells on being emptied fill up again in fifteen minutes. But see Nok Kundi.

Camping-ground.—Unlimited, open.

Supplies.—Nil.

Fodder.—Grass, *nil.*

Camel-grazing.—Good and abundant *lana.*

Fuel.—Scarce; some small tamarisk trees in a *nala* 1 mile to the north.

There were a few pieces of sulphur lying about in a sufficiently pure state to burn readily when lighted with a match. (*Roome.*)

KONDI CHAH.—Lat. 28° 28′ 40″; Long. 62° 48′ 40″; Elev.

A spring or well, situated amongst the northern defiles of the Koh-i-Sultan. P. C. bearing from Nildik 180° and 8 miles distant. A track from Nildik leads to it and showed signs of being used by many head of sheep and goats; is narrow and rough; would not be passable by wheels. The water is not good, nor is it sweet, and there is no fuel or grass.

Many families that come to the Koh-i-Sultan to collect assafœtida live near. No supplies, but sheep and goats could be obtained there sometimes. (*Roome—MacGregor—Scudamore.*)

KOTORI WELL.—Lat. 29° 31′; Long. 64° 40′; Elev.

About 2 miles south-south-west of Gazechah on the road to Chagai.

KOTRAN—

The south-east portion of Dalbandin plain.

KUCHAKI CHAH.—Lat. 29° 5′; Long. 65° 33′; Elev.

The third stage on the trade-route, 47¼ miles from Nushki. There is here a levy post with accommodation for caravans and space inside the post to park about 10 camels. It is situated at the foot of the Kharan hills which rise in their rocky barrenness to the south, while to the north the plain is broken by rocky heaps which rise in fantastic shapes from the black gravel soil. Good water is obtained in abundance from wells, one of which is fitted with windlass and watering trough. The water in the wells is dirty but sweet. (*Webb-Ware—Scudamore.*)

KUCHAL.—Lat. 29° 12′; Long. 65° 45′; Elev.

A well on the northern slopes of Koh-i-Sheikh Hussein lying about 1 mile to the east of Chah Shakkar. The water in it is good and 30 feet from the surface, capacity 150 gallons, refilling in an hour. (*Roome.*)

KUCHAN—

A halting-place in the desert of Northern Baluchistan on the road followed by Captain Christie in 1810 from Nushki to the Helmand river,

and about 150 miles from the former. Christie says here "fine water is abundant."

There is a more direct route parallel to that *viâ* Kuchan and to the north of it, which Christie had to avoid owing to a mountain pass occurring in it being occupied by Afghan robbers. (*Christie.*)

KUHLIAN—

A well in the bed of the Sortak *nala*. Water in it is reported to be abundant and good. (*Roome.*)

KUHNADOR—

The name given to the main channel of the Mashkel river just before it enters the Mashkel Hamun. It is the only one of the many channels in which water was seen by Ahmed Ali Khan in February 1889.

KUHAK—Lat. 27° 8′; Long. 63° 18′; Elev. 3,328′.

Lies about 7 miles north of the Mashkel. Kuhak is garrisoned by a few men, placed in it by Dilawar Khan of Dizak, who hold it for the Persians. Originally in the possession of the Zahrozais, a branch of the Reki tribe; it was conquered by the Naoshirwanis, who exterminated the original possessors, of whom only two or three families are existing at the present time. About 1875 A.D., the Persians attacked Mir Murad, the Naoshirwani Sardar, and having driven him out of it, annexed the country up to the Mashkel. The fort is said to be one of the strongest in Baluchistan, as the garrison can supply themselves with water from an underground spring within it. It is commanded on the north by a scarp of conglomerate hills. There is a very good spring close to the fort, which rises in a stream to the north-east. There is a fairly extensive grove of date palms, and the ground close to the fort on the east is cultivated to a small extent. But, as water seems plentiful, perhaps it might be possible to extend the area of cultivation. There are a few mat huts about the fort. (*Tate.*)

KULAWO RIVER—

Rising in the southern slopes of Shekh Shakar flows east by south passing about 3 miles south of Ziarat-i-Sayad Mahmud towards the Lora Hamun.

KUMB-I-MURID—

A small plain east of Nushki, about 2 miles broad and draining to the Kaisar river. The road from Nushki to Galangur enters this plain about 10 miles from Nushki, and up to this point is very rough and would require a good deal of labour to make it practicable for wheels. The plain stretches for some 3 or 4 miles on both sides of the road. (*MacGregor.*)

KUNDI—*See* KONDI.

KUNROD—

A plot of cultivation round a ruined fort with a few nomad inhabitants in the vicinity, on the main road to Seistan from the south *viâ* Duzdap and the Bed pass. Here there is a spring situated in the midst of a patch of dense tamarisk jungle with a vigorous flow of water which is the source of the Mirjawa river (*q. v.*). (*Benn.*)

KUNZAI HILL.—Lat. 29° 31′; Long. 64° 53′; Elev.

About 2 miles east-south-east of Gazechah at the north-western extremity of the Lora Hamun.

KURDS—

After the Damanis the Kurds are the tribe next in importance in Sarhad. They are said to have originally come from Persian Kurdistan. Up to a comparatively recent date the Kurd Sardars administered Sarhad on behalf of the Persian Government, and in return for this privilege they were permitted to levy a light grazing tax and a land tax at the rate of ⅛ the gross returns, but only on condition that they kept a force of 200 sowars ready for instant service, and remitted to Bampur, annually, 100 maunds Koh-i-Taftan sulphur. Owing to treachery and internal feuds the Kurds are now reduced in numbers and to a state of poverty. The Kurds, who did not quit the country subsequent to the execution of their late Sardar Sayad Khan's four sons, may be divided into two sections, *viz.*, the Mir Balozai whose "Motbirs" are Murad Khan and Adul Karim since murdered and the Ismailzai whose "Motbirs" are Mohim Khan and Allah Rassan. Collectively the Kurds are agriculturists. They possess *karezes* at Nazil, Dehpa, Bed, Kwash, Dehbala, Kasimabad, Mirabad, Sangun, Timin, Karezalin Jan, and Gosharod Khana. The total strength of the clan, left in Sarhad, probably amounts to not more than 200 families. (*Webb-Ware.*)

KUTIKOH—

The highest peak in the hills east of Nushki plain.

The range in which it is bears the same name. (*Roome.*)

KUSHTAGAN PASS—Lat. 29° 23′; Long. 64° 10′; Elev. 6,390′.

A pass over the Chagai Sarlat situated on the Afghan-Baluch frontier between boundary pillars Nos. 162 and 163.

KUSHTAGAN RIVER—

An affluent of the Bulo river rising in Kushtagan pass.

KUMI CHIL—

One of the water-courses into which the Mashkel river divides as it approaches the Hamun.

LADGASHT—.Lat. 27° 53′; Long. 62° 59′; Elev.

A village, 24 miles north-north-east of Jalk, situated on the British side of the Perso-Baluch border. There are about 200 houses. Supplies, with the exception of *ghi*, are scarce, and the water is rather brackish. (*Ahmad Ali Khan.*)

LADIS.—Lat. 28° 56′; Long. 61° 22′; Elev.

A strip of cultivated ground with a single grass hut lying on the right bank of the Mirjawa stream, 12 miles west of Mirjawa. Above are the ancient ruins of the Ladis fort said to have been built by Rustam, a curious pile of ruins, built on the summit and sides of a long, narrow bluff of rock which overlooks the river-bed. (*Benn.*)

LAGAR MACHI—

A small hill in the Registan near Arbu. (*Maitland.*)

LAGDAND—

A strip of cultivation in the Dasht-i-Golab, west of the Dalbandin plain. (*MacGregor.*)

LAGHAP NALA—

Crossed on the road between Karodak and Dalbandin. There are two wells in the *nala*-bed, 40 yards north of the track. They were dry in December 1898, and were about 8 feet deep. (*Roome.*

LAGHAR KOH.—Lat. 29° 7′; Long. 65° 33′; Elev. 4,056′.

An outlying hill of the Shekh-Hussen range, about 2 miles north-east of Kuchaki halting-place.

LAGUJGARH—

A halting-place in the Ghedanpasti ravine, north-west of the Dalbandin district. The ravine here is very narrow and stony. There is plenty of water in it, but it is very salt, though horses and camels can drink it. There is abundance of *pish* for fuel, but very little forage. (*MacGregor.*)

LAIGAL RIVER—

A water-course tributary of the Shingiro river rising in the eastern spurs of the Koh-i-Sultan.

LAIPSHAUKI—

The fifth stage (65 miles) from Nushki on the road to Kharan. Not far from this the Choringhi and Badu rivers unite. Flowing south-west to Kharan they take the name of the Bel river, running parallel to the road. (*Hughes.*)

LAKI HILLS.—Lat. 28° 50′; Long. 63° 53′; Elev.

Three conical low hills of a reddish-yellow colour. The track from Mirui to Ekmach keeps well to the south of these and passes them at the 12th mile. These hills contain many fossils, chiefly of coral. (*Roome—Webb-Ware.*)

LAKI ROD—

A tributary of the Morjin Rod rises in the Laki hills. Crossed at 14½ miles on the road from Mirui to Ekmach. A wide shallow *nala*-bed. (*Roome.*)

LAKSHAK—Lat. 29° 34′; Long. 64° 11′; Elev. 5,700′.

One of the northern spurs of the Malik Surindag mountain.

LALA.—Lat. 29° 19′; Long. 65° 39′; Elev.

A pool of water on the road from Chagai to Nushki. It lies about 30 miles south-west of the latter place and between two halting-places, called Jandum and Jabba.

This pool is about 50 yards in diameter and lies by the side of a sand ridge close to the road. (*MacGregor.*)

Barshok grass and camel-grazing also plentiful, but nothing else in the way of forage. The Nushki-Chagai boundary line passes through Lala. (*Roome.*)

Lala is 11½ miles from Zangi Nawar, 29 miles from Nushki and 19 miles from Zahro. After cleaning out old wells and digging fresh

ones an ample supply of good though dirty water was found in January 1903 for 1,464 men, 156 horses, 49 riding and 2,200 baggage camels. (*McMahon.*)

LALA KHAN WELL.—Lat. 29° 18′; Long. 64° 43′; Elev.

About ½ mile west of Chagai.

LALA KHAN WELL.—Lat. 29° 19′; Long. 64° 44′; Elev.

About 1 mile north by west of Chagai.

LALA RUINS.—Lat. 29° 17′; Long. 64° 45′; Elev.

About ½ mile south by east of Chagai.

LAL KHAN WELL.—Lat. 29° 16′; Long. 63° 17′; Elev. 3,765′.

A well on the southern road from Patkok to Amir Chah, about 8 miles east of Manzil.

LANDI—

The second stage on the road from Nushki to the Helmand by Shah Ismail. It is 22 miles distant from Nushki and 28 from Zaru. This name belongs to some cultivation on the right bank of the Lora river. The only water-supply is from the river-bed and this sometimes fails. When this is the case, the people of the country say that they sometimes go to Zangi Nawar or Jabar tank on the Chagai road, and thence strike north-west across the desert for Zahro or Kani. The distance is considerable, 30 to 35 miles, and *kafilas* halt without water at a spot called Sangur, about half-way to Zahro. The crossing of the Lora at Landi and other places is easy when the channel is dry, but difficult on account of the soft muddy bottom when the river is running.

This place apparently has now (1887) been superseded as a halting-ground by Band, which lies about 8 miles to the north-west. (*Maitland.*)

LANDI BARECHI.—*See* LUNDI BARECHI.

LANDI MUHAMMAD AMIN—Elev. 1,962′.

This place shown on the map as Landi is now known as Landi Muhammad Amin and the district across the river is called Khan Nashin. The Helmand at this point turns north-east, the actual bend being about half a mile above the village. The actual bed of the river is about 1 mile wide; there are several branches of the stream, in only two of which there was water; there are also several islands. In the main channel the water was about 100 yards wide, about 6 feet deep and the surface velocity about 2½ miles an hour. Near the bend, practically at it, there was a ford about 3 feet deep, 200 yards long, with a bottom of shingle. When the river is in flood, *i.e.*, in the months of March, April and May, the river is crossed by means of inflated *masaks*. The Helmand changes its course at Landi Muhammad Amin, turning west. The regular banks are about a mile apart, the deep water channel at the bend lying under the left of the southern bank. The bed is composed of shingle; just below the bend there is a bar or rapid which extends in a V-shape across the main stream. The apex of the V points down stream and the depth of water on the bar is about 3 feet. Nearly all the fords on the river are situated at those points where such rapids or bars exist. The banks of the Helmand must not be confounded with the cliffs that line the strip of alluvial soil in which it flows. This portion of the

valley is irrigated by a canal and numerous water-cuts; the wheat stood as thick as grass. Supplies are fairly plentiful; 200 cows and bullocks, 300 sheep and goats. The population consists of 900 Misri Khel Masarzais and the present Khan is Muhammad Amin. (*Tate—Wanliss, February 1903.*)

LAR-KOH—Lat. 29° 44′; Long. 60° 55′; Elev. 7,766′.

A mountain in the Kacha Koh range to the south of Koh-i-Malik Siah. In the *nalas* running from this mountain, especially on the northern side, are to be found many Arab remains. Also there are ancient mines of copper and lead. Turquoises, it is reported, are to be found.

Ibex and *gud* are to be found in large numbers.

Water is frequently met with, and in a few of the *nalas* there are small patches of cultivation.

Assafœtida and wild rhubarb grow in profusion; also a kind of sorrel that is excellent eating. (*Roome.*)

LARKOH PASS—Elev. 5,200′.

A *kotal* on the southern route from Robat to Saindak, 10 miles from Robat. Up a small tributary to the east of the summit is a small spring of good water and a little grass and camel-grazing and fuel. This spot is evidently used as a camping-ground by *kafilas.* (*Roome.*)

LAR NALA—

Is formed by the junction of the Mian Bazar and Duzdap *nalas.* It flows along the south-east foot of Larkoh and issues on to the *daman,* south of boundary pillar No. 181 of the Afghan-Baluch boundary. The water in it is good, and there is plenty of wood in its bed. In the cold season of 1902-03 it was found to be dry. (*Roome—Scudamore.*)

LASKAR ALI—

A range of hills in North-West Baluchistan in the mountainous tract of country between Gazechah and Chegai. It appears to lie somewhat to the north-west of Chagai. (*Maitland.*)

LASHKARI-AB—

A halting-place on the northern road from Saindak to Robat (Koh-i-Malik Siah): 54 miles from Saindak on the northern foot of the Kacha Koh range. The camping-ground is at the mouth of the Lashkari *nala,* which is dry. There are five springs issuing from the side of the hill, about 30 feet up which have a very small flow. The spot is marked by the hills, being light coloured and composed of a shaly clay. In January 1903 the water was found to be bad and aperient.

Supplies.—Nil.

Fodder.—Grass scarce.

Camel-grazing.—Good and abundant (*nal*) on the plain.

Fuel.—Scarce, but could be brought in from the Lar *nala.* (*Roome—Scudamore.*)

LIJEH OR LIJI—

A section of the Sinjarani Baluchis. (*Maitland.*)

LIJI KAREZ—Lat. 29° 23′; Long. 64° 47′; Elev.

About 8 miles north of Chagai, and the *karez* second in importance in the Chagai district. It was improved in 1898 by carrying the head workings further up into the hills, but the limit of water obtainable has not been nearly reached. (*Webb-Ware.*)

LOLANGI RIVER—

An affluent of the Zarala *nala* rising in the Dramin mountain.

LORA—

The term *Lora* signifies a river, and is applied to many streams, thus there is the Shal Lora, the Kakar Lora, the Pishin or Barshor Lora, etc. All these, however, unite and form a river always called the Lora and by no other name.

The catchment basin of the Lora is large; it carries off the drainage of the whole country between the Khwaja Amran (including its continuation, the Sarlat range) and the watershed of the Indus, as far south as some 20 miles beyond Kalat. The three streams abovementioned, together with the Surkhab, the Badezai Chur, and the Dori *nala*, all meet in the neighbourhood of Shadizai in the plain of Pishin. They will be found described under their respective headings (*see* Pishin Gazetteer), and it will suffice here to mention that the furthest sources of some of them, as the Pishin Lora and the Surkhab, are fully 50 miles distant from the point where all the affluents converge to form one Lora. The size of the river thus formed, if measured by the capacity of its bed, would be considered large in any country; but, as usually happens in dry regions, the amount of water ordinarily flowing is absurdly disproportionate to the immense channel which contains it. From where the tributary streams enter the soft alluvial soil of the Pishin plain they each and all excavate for themselves beds 150 to 300 yards wide, and 20 to 30 feet deep. When these, however, are united into one Lora, the single channel is not equal to the sum of the affluents, as would be the case with rivers that not unfrequently run bank full. Immediately below the confluence of the streams abovementioned, the width of the Lora is about 200 yards, and the height of its scarped banks 20 feet. These dimensions, large as they are, do not exceed those of some of its tributaries. It is evident, however, that this channel, from its size, the perpendicularity of its banks, and the somewhat treacherous nature of its sandy bottom, is a sufficiently formidable obstacle, and there are few places where it can be crossed by horsemen. The running stream is ordinarily about 30 yards wide, and from one to one and a half feet deep. It is of course easily fordable anywhere, but caution should be exercised, as dangerous quicksands are not uncommon. It is probable that even in the highest floods—and they can only occur in the winter months—the stream of the Lora barely touches the high banks of its bed in the plain of Pishin; nor, it is said, is the river ever unfordable for more than 24 hours at a time.

The Lora is crossed by the main road to Kandahar at Segi, the third stage from Quetta. Here excellent ramps lead down to the floor of the channel, and the crossing is easy for artillery and wheeled carriages of every description. With this exception, and where the road from

Abdulla Khan Kala to New Bazar (Kach-Harnai-Sibi route) crosses the Pishin-Lora, neither the Lora proper, nor any of its tributaries within the plain of Pishin, can be passed by artillery.

From Segi the Lora runs nearly south for about 5 miles to Rahim Kakar, a village on the left bank. Here there is another crossing. A little lower down the river receives a small affluent from the west. It is the Tirkha (or Tarkhar) salt stream, which collects the drainage of the whole south and west of the Pishin valley. From Samad to this point the character of the Lora remains unaltered. The width of the channel is from 200 to 250 yards, and its depth 20 to 25 feet. The banks are scarped, and the bottom is an expanse of sand and clay, almost bare of vegetation, over which a shallow stream flows in several channels, as above described. From Rahim Kakar downwards the left bank shows bluffs of some height, which are repeated here and there as far as Burj. They are the ends of narrow elevated plateaux, rising between *nalas* which descend from the Mashalak range. The actual banks, however, diminish rapidly in height as the river quits the deep alluvial soil of the plain and enters gravelly deposits, so that below the confluence of the Tirkha there are many places where a horseman can ride across. At Burj the banks are but 3 to 4 feet high, and from 100 to 150 yards apart, the stream flowing rapidly over shingle and coarse gravel. Above Burj the *kafila* route to Kalat crosses the Lora by an easy ford. Below, the river bends decidedly to the south-west, and at a mile from the village enters the hills, assuming henceforth a totally different character. The portion of the course of the river between this point and the Shorawak plain may be conveniently termed the *Middle Lora*. The channel of the river is now diminished to a width of 50 or 60 yards, and winds in an extraordinary manner among the spurs of the enclosing ranges. The first 5 or 6 miles are difficult to follow, there being no sort of path, and the river having to be crossed and re-crossed continually. This bit is impracticable for horses. At about 8 miles in a straight line from Burj the Lora receives the Shora Rud (*q. v.*), its only considerable affluent. This river rises far to the south and brings with it the whole drainage of Kalat, Mungachar, Mastung, Gurgina, Kardagap, etc.; in fact, most of the water of the northern part of the Kalat highland runs into this channel. From here the Lora valley is wider and can be easily followed. In many places there are large flats of alluvial soil convenient for camping on, and which might without difficulty be cultivated. Tamarisk and other shrubs are not scarce, and the high hills are dotted with *shne* or *gwan* trees (*Pistacia cabulica*?), whose harvest of berries ripens in August, and is a source of subsistence to the nomadic inhabitants of the country. About 1½ miles below the junction of the Shora Rud are two conspicuous isolated rocks on the left bank. They are called Janguri, a name also applied to a *nala* which enters by them, and more or less to the whole neighbourhood. The river here makes a sharp, but short, turn to the north, resuming its course immediately afterwards in a south-westerly direction. The Lora valley is now several miles wide: on the left are spurs, and a confusion of low hills coming down from the plateau known as Batu Dasht; on the right a high range, which is the termination of that bounding the Pinake plain on the east, and called Kargar. About 6 miles from Janguri (16 or 17

miles marching from Burj) is the Aliabu gorge, so called from an isolated pinnacle of rock of great size, somehow connected with the saint, Pir Aliabu, whose *ziarat* is on the right bank not far beyond the gorge. This picturesque defile averages about 300 yards in width and is perhaps a mile long. The bed of the river is gravel and small shingle, and presents no difficulties. Into the Aliabu gorge, on the left, comes the Sokhta *nala*. It is of considerable size, though dry, and descends from a small plain known as the Bala Dasht (*q. v.*), near Iltaz *karez*. There is a road by it to that place. Sweeping round the Aliabu end of Kargar, the Lora now makes an abrupt turn to the north, as if bent on finding its way back to the plain of Pishin ; but this is obviously caused by its meeting with the spurs of the great Sarlat range, round the northern end of which it is forced to pass. Beyond the Aliabu gorge the valley is again wide and open, and presents several spots fit for encampment. Kargar is separated from the next range, called Sharin, by a large water-course, known as the Great Sharin *nala*, to distinguish it from the little Sharin, which runs on the other side of the Sharin range. Both these descend from the south end of Pinake. From the confluence of the big Sharin, the glen of the Lora becomes narrowed, and for the next 10 or 12 miles varies from 500 to 800 yards in width. Through this defile it pursues its way steadily northwards, although making many short loops and turns. On the left is the edge of a sort of lofty plateau which is interposed between the highest ridge, or backbone, of Sarlat and the numerous spurs which descend to the river. On the right lies a somewhat intricate mass of high hills, sometimes of strange form, which are all connected, either with the Sharin range, or with the high ground between Pinake and the Tang stream. Fifteen miles from the Aliabu gorge the extreme north end of Sarlat is reached, round which the river twists sharply and resumes its general south-westerly course. At this bend the Lora is joined by the Tang stream (down which is the shortest route from Pishin to Shorawak), and from here the river, shut in between the Khwaja Amran and Sarlat ranges, runs for fully 16 miles through an extremely narrow and tortuous defile. In this gorge the Lora only averages 100 yards in width, while on either hand the numerous and lofty spurs of the two great ranges present a labyrinthine mass of hills, glens and ravines, impassable except by the very few to whom the country is familiar. Lashkar Kach, Mirza Kach, and a rough plateau above the mouth of the Guldara ravine are about the only spots in this portion of the Lora, where it is possible for troops to encamp. Marching is trying for baggage animals, principally owing to the constant crossing of the stream. This gorge is succeeded by a somewhat more open *dara*, or glen, which gradually widens for 7 or 8 miles until the ruined fort of Mir Alam, and the hamlet of Pir Muhammad *karez*, are passed and the river fairly debouches on to the plain of Shorawak.

In the middle Lora the average width of the stream during the dry season, that is, from April till October (inclusive), is about 30 feet, and at the shallows it is generally but a few inches deep. There are, however, constant deep pools, which must be avoided. During the winter months when rain falls, or when snow is melting, the river will average from 1 to 1½ feet in depth at the fords. Its course is then somewhat difficult to follow owing to the immense number of times the swift

running water has to be crossed in each march. At this season, also, spates or freshets occur, and probably at such times the whole bed of the river is filled with a raging torrent, 100 to 200 yards in width and 12 to 15 feet deep. All progress is then of course impossible.

About 4½ miles above Mir Alam Kala the main stream of the Lora is bounded, and its water entirely diverted into canals which fertilize the lands of the Barechis in the Shorawak plain. Somewhat lower down, on the left bank, is another smaller *bund*, which turns the remainder of the water into a canal irrigating the land on the east side of the river. These *bunds* are but slight constructions carried away by every flood.

Immediately the river gets out of the hills into the soft alluvial soil of the plain, it cuts for itself an enormous bed very much like that which characterizes its course in Pishin. But before this bed has reached its full dimensions there is a noteworthy channel on the right bank, resembling, where it is given off by the river, an extensive spill. This is the Dori or Lora *nala* (*q. v.*), and was no doubt at a former period the actual Lora. The debouchure of the river is at the north-east corner of Shorawak, and it runs diagonally across the plain in a south-westerly direction for about 15 miles. In this portion of its course it has a width of from 300 to 150 yards, with perpendicular banks 25 feet high as in Pishin. There is a little scattered jungle of tamarisk and other shrubs in the bed, but no running water, except in floods, as it is all drawn off by the irrigation canals mentioned above. There is a crossing to Pir Muhammad *karez* near the debouchure, and others opposite the villages of Jhiai (Putla Khan), Zabardast, and Miru Khan. All these are good camel tracks, but would require labour to make them fit for the passage of artillery.

After passing Mandozai the Lora bends to the south, and appears to gradually contract its channel, for where crossed by the Nushki road, 3 miles south of Saiad Bus, it is only 60 yards wide and about 15 feet deep. The banks are alternately scarped and shelving. When dry, artillery can cross without difficulty; but if there is any water running, the ford is an awkward one on account of the softness of the bottom which approaches to a quicksand. Travellers are sometimes delayed for days together when there has been a considerable flood. From about here the Lora resumes its south-westerly course, and traverses the Dak (*q. v.*), a long, flat, alluvial plain bounded by sand ridges to east and west, and without cultivation or permanent inhabitants. The Dori, after various meanderings among the sand-hills west of the Shorawak plain, emerges into the Dak, and rejoins the river near the boundary line of Baluchistan, some 8 miles south-south-west of Saiad Bus. Notwithstanding this, the channel of the Lora is henceforward much smaller than in Shorawak, and its course is not unfrequently changed after heavy floods. The great amount of silt brought down by the river, when full, naturally accounts for the filling up of existing channels and the consequent formation of new ones. It is on account of these changes that the river is unable to excavate for itself the enormous bed which it possesses higher up, and in big floods the water not only completely fills the channel but overflows the Dak. Mr. Duke remarks that at Bulandwala, where the Lora enters Kalat territory, the banks come low, "and here its waters," to use the country people's phrase,

" begin to ride over the country (' sowar meshœnd ') when in floods, instead of being confined in a channel. Courses are pointed out, but they are narrow and small, and the names New and Old Lora show that these channels change ; indeed, the water which formerly flowed over the Mengal lands at Nushki now flows over the Rakshani lands ; in short the Barechis retained the permanent Lora water, none of which reaches Nushki, it being drawn off at the point where the Lora comes out of the hills, whilst the earlier Khans of Kalat got possession of the Lora flood waters, and the Brahuis and Baluchi tribes utilize them to the present day."

The various channels of the Lora, old and new, are pretty thickly grown with tamarisk, while brushwood and coarse grass cover some parts of the Dak. The main channel in 1881 appeared to be nowhere larger than where crossed by the Nushki road, that is, about 60 yards across and 15 feet deep. The nearest point of its course to Rahman Khan's fort in Nushki is 12 miles west of that place. Here it makes a westerly bend of several miles before resuming its south-westerly direction. At Landi, about 22 miles west-south-west of Rahman Khan Kala, it is crossed by the *kafila* track to the Garmsel. From here we know little of its further course, except that it goes south of west and terminates in a *hamun*, immediately to the east of Chagai, or Chageh, which is 107½ miles by road from Rahman Khan Kala. Regarding the size of the Hamun, MacGregor and Lockwood's reconnaissance of 1877 showed that its southern edge is about 30 miles long, and this is probably its greatest breadth. Its area would seem to be about 350 square miles. The Hamun is not a marshy lake like the celebrated Hamun of the Helmand in Seistan. It is a saline plain, more or less covered with water after floods, but sometimes quite dry. The configuration of the country, so far as it is yet understood, is opposed to the idea that the Lora ever flowed further to the westward than is now the case.

It is not every year that the Dak is flooded. It was not so, for instance, in 1879-80. Floods almost invariably occur in the winter months, that is, between October and April. It is very rare for the river to fill in summer. When there is the least water in it, the Lora below Shorawak is difficult to cross on account of its soft and muddy bottom, but in the Shorawak plain, as in Pishin, the height and steepness of the scarped banks form the chief obstacle. Floods run down as rapidly as they rise, and can seldom stop the passage of the troops at regular crossing places, since the bottoms of the fords are certain to be firm and stable. In the Lora defiles, however, a moderate flood would impede, if not altogether prevent, movement. The people of the country do not consider it safe to take laden animals into these defiles if the weather be at all unsettled, since the floods often descend with great rapidity and violence. In all cases it must be remembered that the area drained by the Lora and its tributaries is so large that local weather cannot be depended on to indicate the likelihood or otherwise of floods.

At Band, a halting-place, 20 miles from Nushki, on the road to Shah Ismail, is a large pond which is formed by damming the bed of a *nala* which was formerly the channel of the river Lora. The pond is 400 yards long by from 50 to 100 yards wide, with a branch pond 500 yards long by

40 yards wide, the whole 8 feet to 9 feet deep. Water is good, and is a collection of rain and drainage water.

Water is easily accessible for horses and camels. If rain falls in July, this pond does not dry up all the year round ; but in the absence of July rain it dries about September, until refilled by winter rain. There is a temporary settlement of about one hundred and fifty Brahui families, and four or five families of permanent inhabitants, who cultivate a few acres of cereal crops.

The length of the Lora, from the confluence of the streams to the Hamun, is about 220 miles. If the Surkhab be added, the total length of the river amounts to about 270 miles. Its fall appears to be about 20 feet a mile in the plains, and 25 feet a mile in the Middle Lora defiles.

The water of the Lora, in contrast with that of the generality of streams in Khurasan, is invariably muddy. Even when quite low it is far from clear. It deposits considerable quantities of red clay and salts. The former is brought down in such quantity that after any flood all the stones covered by the water for a few hours are found when dry to have a coating of clay as thick as writing paper. This is of a bright red colour, and contrasts sharply with the white salt left wherever there has been evaporation. The clay comes from the banks of the Toghai near the furthest sources of the river. The water of the Lora is sligthly saline to the taste, but quite drinkable, and not unwholesome for a few days. The river contains very few fish, and those of small size. Numbers of them are affected with a species of tapeworm. (*Maitland.*)

LUKMAN NAWAR—

A depression in the sandy tract, west of Nushki, a few miles north-west of Band. An old camel track from Landi to this place crosses the Nushki-Gazachah route, about 3 miles west of Band. (*Maitland.*)

LUNDI BARECHI OR LANDI BARECHI—

A village on the left bank of the Helmand, about 18 miles below Khwaja Ali, with a population of some 700 Barechis. It is irrigated by two canals and has about 450 acres of wheat and barley under cultivation. The valley is here very narrow, and the cultivable area very restricted. The village is the head-quarters of a colony of Barech Afghans from Shorawak, who have been settled here for a considerable number of years. The village possesses some 80 cattle and 270 sheep and goats. The Khan is Muhammad Raza Khan. (*Wanliss, February 1903.*)

LURS—

A Persian tribe (*see* "Gazetteer of Persia") of which the Mamasanis and Naosherwanis of Baluchistan are said to be off-shoots. (*St. John.*)

LUSAI PASS—

Over one of the western spurs of the Malik Surinda.

LUSAI RIVER—

Rising in Mangahi Zonk (*q. v.*), flows towards the Morjin river.

LYADA—

A halting-place in the western corner of the Dalbandin plain, some 12 miles south-west of Pishak. (*MacGregor.*)

MACH—

A grove of date palm trees in the Sorap *nala*. The second stage (44 miles) from Dalbandin on the southern road to Amir Chah.

Here there is good water running in a tributary that joins in on the left bank. The water in the Sorap *nala* was slightly brackish and a decided aperient. The water was running in February. Later on in the year wells have to be dug.

Camping-ground.—Unlimited, good.
Supplies.—Nil.
Grass.—A small quantity of *barshok* and *vega*.
Camel-grazing.—Good and abundant: *tagaz* and *lana*.
Fuel.—Scarce; *tagaz* could easily be collected. (*Roome.*)

MACHI—

A high craggy hill in the country north-west of the Lora Hamun and Gazachah. It is visible from Gazachah and beyond it lies the valley south-west of Safia. (*Maitland.*)

MADANO—

The third stage on the road from Amalaf in North-West Baluchistan to Seistan. It is a long stage (40 miles) from Kuchawar, the preceding stage. Good water can be procured from wells in the bed of a ravine which leads to the Shela. Fuel and forage are scarce. (*MacGregor.*)

MADAWAN—

A camping-ground in the Chagai district is situated on the east side of a broad valley with high hills on either side. The camping-ground is at the junction of the two *nalas* which go to make up the Madawan river. Wood plentiful. At Madawan there is the most lavish abundance of most beautiful *sabah* grass. Camel-grazing abundant. Numerous flocks of goats were grazing on the hills all round. The inhabitants obtain all their salt from a stream south-east of Madawan, but no outcrop of salt was discovered.

From Madawan there is a stony and difficult path leading to Malik Naru; another path leads through the gorge down the Madawan river to Nuhli. This path is the one taken by caravans journeying from Lal Khan to Nushki *viâ* Madawan. (*Webb-Ware.*)

MAHABAT.—Lat. 29° 15′; Long. 65° 30′.

A halting-place on the road from Nushki to Chagai, 16 miles from Jabar and 14 from Thal.

Water is obtained from four wells, each about 3 feet square with 1½ foot depth of water lying 18 feet below the surface, in a small basin among sand drifts, which is evidently a pool in the rains. This supply of water is capable of being increased by extra wells in this and several similar adjacent basins. The water is good and fuel and camel-grazing abundant, and there are several large tamarisk trees. The camping-ground is good, but difficult of access from the north. West of this is the boundary between the Sinjaranis and the Rakshanis. Grass is procurable with notice, though it is difficult to know where it grows. The open desert alluvial plain stretches away to the north from this. (*Peacocke.*)

MAHAKAKI.—Lat. 29° 11′; Long. 65° 38′; Elev. 2,800′.

A ruined fort on a small mound, about 41 miles from Nushki, on the road to Padag.

Some of the walls and a central tower are still standing. Close under the walls to the west is a well, 25 feet deep; no water in it, but the bottom is quite moist. To the east are some shallow pits that hold water after rain.

There are abundant signs of a former cultivation around.

The fort is attributed to either the Arabs or Moghals by the natives. It is apparently built to command the pass leading to Kharan.

There is a small *karez* of good water running along the north-west edge of a circular plain 1,000 yards in diameter. The plain is surrounded by low hills some fifty feet high, the summit of each hill being marked with a small cairn of stones. On the plain are numerous sheep pens and many sheep tracks show that it is extensively used as a camping-ground by the nomad Baluch principally during the spring months when there is grazing to be found on the hills in the vicinity. A few small tamarisk bushes and stunted date palm trees grow near the water. (*Roome.*)

MAHAMAD—*see* MUHAMMAD.

MAHARANI—

A conical peak in the hills, west of Chagai.

It is a good landmark from the flat country to the east of the Lora Hamun, and Peacocke remarks that in making for Chagai from Thal, a halting-place to the east, a course half-way between this peak and that of Drumiltin (*q. v.*) will fetch it. (*Peacocke.*)

MAHIAN NALA—

A dry *nala* crossed at the 5th mile on the road from Chagai to Duganan. (*Walters.*)

MAHIK HILL.—Lat. 29° 26′; Long. 63° 32′; Elev. 6,581′.

A peak of the Malik Naru range about 5 miles north-north-east of Malik Naru peak.

MAHMADI, OR MAHMUDI, CHAH—

A halting-place 12 miles from Mashkel on the route to Sehkoha in Seistan. Water from a well. (*Bell.*)

MAIRUM KAUR—

A branch *nala* of the Mashkel river At a point in the lower portion of the Mashkel, a few miles north of Rekh Farang, the river divides, one branch running in a direction of 280°, called the Ragab, and another in a direction of 335°, known as the Mairum. Both these go on for some miles separately, but they are eventually lost in the Mashkel Hamun to the west. Some parts of the bed of this latter water-course present a curious appearance, just as smooth, hard, and black as a regular road, and it is difficult to imagine how this could have been formed. Between these two branches of the Mashkel lies the sandy but arable tracts called Chitar (*q.v.*). About 15 miles from the bifurcation of these two streams is a halting-place called Godar, where there is a deep pool of water in the bed of the *nala*, though it is liable to dry up. Fuel, camel forage, and grass are

very abundant, and the site is an important one, for from it branch off roads to Chagai, Jalk, Naru, Tahlab, and Kharan. It would be a suitable point for a depôt, being the point where the river has to be left, and possessing soil which might be cultivated ; stores might be collected and sheep maintained here. (*MacGregor.*)

MAKAK OR MUKAK.—Lat. 29° 6′; Long. 61° 41′; Elev.

A stage on the trade-route, 23½ miles west of Sahib Chah and 13½ miles east of Saindak. There is a levy post garrisoned by levy troops.

Water is abundant from springs but slightly brackish. Camel-grazing is good in the vicinity of the post, but firewood is scarce.

MAKI CHAH OR MUHAMMAD RAZA CHAH.—Lat. 29° 37′ ; Long. 61° 15′; Elev.

About 18 miles south-south-east of Robat at the foot of the Mirjawa range. Water bad and aperient. (*See* also Appendix V.) (*Scudamore.*)

MAKSOTAG WELL.—Lat. 28° 5 ; Long. 62° 45′; Elev.

About 20 miles north-west of Ladgasht on the road to Mirjawa. The village consists of a few mud houses in a considerable grove of palm trees. Water brackish, wood and camel forage scarce. (*See* Gorani.) (*Ahmad Ali Khan.*)

MALIKAF—Elev. 3,300′.

The name of a small spring at the base of Koh-i-Malik Siah ; also the name of the plain lying between the western portion of the Shemidar range and the Koh-i-Malik Siah. (*Roome.*)

MALIK GAT—*see* KOH-I-MALIK GAT.

MALIK IBRAHAM OR DOKAND—

The conspicuous two-peaked hill, an ordinary march, west (or west-north-west) of Galla Chah in North-West Baluchistan. Its extraordinary shape and great height make it a most unmistakeable landmark. It is also very light in colour, resembling in that respect Arbu and Samuli.

A road from Sukaluk to Galla Chah passes close under the foot of this hill and Ainak (*q. v.*), and a *nala* called the Robat drains out between these same two hills in a north-north-west direction to the *Lut.* (*Maitland.*)

MALIK MAMMU—*see* MAMMU.

MALIK NARU RANGE—

Also called the Chagai Sarlat.

A mass of hills west of Chagai which form the watershed between the Helmand and the Gaud-i-Zirreh to the north and the Mashkel Hamun to the south. To the north-east the range is quite impassable between the Shibian and Mazari passes, except by mountaineers. To the west lie the lofty peaks of Malik Teznan (7,686′), Malik Naru (7,915′), Nilgan (8,355′) and several other summits over 6,000 feet. This part of the range is traversed by three roads converging on Sukaluk. In this range water is good and abundant and grass plentiful. (*MacMahon.*)

MALIK SIAH CHASHMA—Lat. 29° 53′; Long. 60° 51′; Elev.

A small spring at the southern foot of the peak Koh-i-Malik Siah on which the boundary pillar No. 186 has been built. There is some grass, but the water is scarce and brackish. There is no camping-ground. (*Roome.*)

MALIK SURINDAG.—Lat. 28° 29′; Long. 64° 11′; Elev. 6,532′.

The south-western peak of the Shekh Hussen or Raskoh Kambaran range.

MALIK TEZNAN—*see* TEZNAN.

MALL.—Lat. 29° 12′; Long. 65° 45′; Elev.

A stage on the trade-route, 34 miles south-west of Nushki. The village of Mall consists of a few huts of Mengals and Rakshani who graze flocks on the slopes of Shekh Hussen, and use camels for ploughing their land. The soil is very fertile and there are many large stretches of *khushkawa* land, portions of which are yearly brought under cultivation; thus, both forage and grain are usually procurable here. Mall lies in the great plain which extends from Baghak to Padag, but south-east of the village Mekh Mall hill stands well up of the plain and is a good landmark.

There is here a levy post building with several rooms and a tower; also a *bania's* shop and *dâk* bungalow and *serai* for travellers. In 1903 the levy post building was a tumble-down, mud-walled enclosure, and the tower in no way defensive.

The water generally lies 45 feet below the surface, but in 1900 a new well, 38 feet deep, yielded water, and is fitted with a windlass and iron trough for watering animals. About 150 sheep and goats are procurable here, the camel-grazing and fuel are plentiful, and grass in abundance can be brought in from the slopes of Shekh Hussen. (*Webb-Ware—Roome—Scudamore.*)

MALL MEKH HILL.—Lat. 29° 14′; Long. 65° 44′; Elev. 2,920′.

An outlying hill of the Shekh Hussen range in the Nushki district, about 2 miles north of Mall post and near the trade-route.

MAMASANI—

The most important tribe now inhabiting the Chagai district. Branches of this tribe are to be met with scattered all over the Nushki-Chagai-Sinjarani country from the Raskoh Kambaran range to Seistan. The sub-sections of this tribe are as follows:—

Living within British territory.

1. Mandozai.
2. Kairai.
3. Kyazai.
4. Yagezai.
5. Hajizai.
6. Kalagani.
7. Darakzai.
8. Shahezai.
9. Siahezai.

Inhabiting country lying beyond the borders.

10. Jangezai.
11. Yalanzai.
12. Parkini.
13. Shakzai.

The tribe is nominally subject to the control of Sardar Shahbaz Khan of Jebri ; but, as a matter of fact, he has no influence whatever over any Mamasani *toman* north of Kharan. The Mamasani *tomandar*, who appears to exercise most power over these wild tribes, is one Shah Gul Khan, Siahezai Mamasani, resident of Koh-i-Pusht, but even he has little influence, except over his direct followers. Sardar Shah Gul Khan's followers are divided into the following sub-sections, *viz.*: Shah Gulazai, Loharzai, and Idozai.

The Mamasani have the reputation amongst their neighbours of being bad friends and bitter enemies. (*Webb-Ware*)

The Mamasanis also go by the name of Muhammad Hasanis ; they inhabit Seistan, the hills of Luristan, and the valley of Mashkai in Baluchistan. They extend throughout the whole of Western Baluchistan from Sharod southwards to Malar, and south-west to Panjgur These three branches all acknowledge a common origin The name is classical, being that of a powerful tribe encountered by Alexander in Upper Bactriana. They are said to be connected with the Naosherwanis of Kharan, both claiming descent from the Mamasanis of Lur. Their nominal muster is eighteen thousand, but the tribe is very widely dispersed. Their chief resides at Jebri. The following divisions of this tribe are to be found here :—

1. Kalmanizai.	3. Haruni.
2. Mazarzai.	4. Shadadzai.

The whole of Mashkai is under this chief, and the Sumalaris of Kodak and Koras send him a contingent in the event of war.

The pastoral tribes extending northwards from Zik to Kharan are mostly Mamasanis, and the inhabitants of Rakshan mostly belong to this tribe, but beyond Nagh are Narui Baluch. Goldsmith remarks that the Mamasanis of Nal, frequently combined with the Naosherwanis and raided in the Seistan country. They have the name of being the bravest and most savage of the Baluch tribes. The Mamasanis are now on anything but good terms with the Naosherwans. The most important man of the tribe at present in Southern (uncultivated) Seistan is Sardar Savad Khan, Mamasani. He owes allegiance to Sardar Purdil Khan, Sarbandi, of Seistan. (*Masson—Ferrier—Goldsmith—Maitland—Webb-Ware.*)

MAMMAD SANI WELL.—Lat. 29° 17′ ; Long. 64° 45′ ; Elev.

About 1 mile south of Chagai.

MAMMU OR MAMU OR MALIK MAMU.—Lat. 29° 36′ ; Long. 63° 49′ ; Elev. 4,563′.

A halting-place in the northern desert of Baluchistan, to the north-west of Chagai, on the road from Nushki to Rudbar on the Helmand. It derives its name from the Pir or Saint Malik Mamu who was buried on this spot.

The two roads from Nushki, the one by Shah Ismail and the other by Chagai, unite here. Muzhdan, the first stage on the former route, is 13½ miles distant ; Samuli, on the latter route, is 12 miles distant. Galla Chah north-west of this is 12½ miles and Robat west. The halting-place lies at the edge of a wide plain at the foot of some low hills. There is excellent ground for an encampment, abundance of water and very good camel-grazing. *Nal* grass is also abundant. On the occasion

of the Afghan Boundary Commission passing through this place to the Helmand, some ninety-nine small wells were dug, and the whole water-supply available daily was about thirteen thousand gallons, but this amount could be indefinitely increased, as water is abundant near the surface over a considerable area. The quality of the water is in general fair, being slightly saline but quite drinkable; but, as in other places, it becomes utterly bad if left standing many days in the wells. Troops wishing to join the Shah Ismail-Mamu-Galla Chah route from Samuli should march straight from Samuli to Robat, as the road from Samuli to Mamu is quite impracticable for guns, and is very heavy for horses and camels. From Robat a good track leads over hard soil to Galla Chah on the other route. This appears to be the best site for an encampment on the whole route from Nushki to the Helmand, the chief drawback being scarcity of fuel.

The *ziarat* of Malik Mamu is half a mile or more west-south-west of the wells. The way to it lies across low sand-hills, and the *ziarat*, which has no attendant *fakirs*, is on a stony knoll on the right hand (north) side of a sandy hollow, grown with *nal* grass and tamarisk. There is great abundance of camel-grazing here, tamarisk (*tagaz*) (*jowassa*) or camel thorn. Unfortunately it all dies in the winter. A week or two of cold, and there will be barely subsistence for twenty camels, where two thousand might now thrive. (*Maitland—Peacocke.*)

MANDAI—

Nushki originally belonged to the Mandai tribe of Baluch. Many generations ago these Mandai were decimated by inter-tribal quarrels, and found themselves unable to hold their own against the Barech. They therefore enlisted the assistance of the Badini Rakhshani, a tribe which at that time was residing in Kharan. The Badini, nothing loth, accepted the invitation of the Mandai, and the two clans, combining their forces, quickly drove the raiders across the border into Shorawak. The Badini then proceeded to establish themselves in Nushki, quite regardless of the feelings of their hosts.

The Mandai, though now amalgamated with the Jamaldini tribe of Rakhshanis, are not of Rakhshani descent. The Mandai connection with Nushki dates back to the time of the Moghals, with whom, according to tradition, the tribe was engaged in continual conflict. (*Webb-Ware.*)

MANGAHI ZONK.—Lat. 28° 36′; Long. 64° 9′; Elev.

A pass in the northern spurs of the Malik Surindag mountain. The Nushki-Ladgasht road passes over it.

MANU CHAKUL—

A small spring on the road from Panjpai to Nushki by the Singbur *nala*. It is about 14½ miles from Panjpai and 3½ from Singbur Chaman, and lies to the left of the road among low hills. The water-supply is now said to be very small, and apparently it is not a reliable halting-place. The people in this neighbourhood are nomad Brahuis and quite friendly. (*Maitland.*)

MANZIL—*see* MIZZIL.

MANZILGARH.—Lat. 29° 15′; Long. 63° 11′; Elev. 4,396′.
A hill in the sandy desert, about 2 miles east of Manzil halting-place, between Butig and Amir Chah.

MARAK KAUR—
A water-course in the desert country in North-West Baluchistan south of Robat, some 6 miles north of the Sorgaz ravine, and about 7 miles from Robat. In the bed of this *kaur* is a well 4 feet deep with slightly brackish water. (*Lockwood.*)

MARIN.—Lat. 29° 29′; Long. 64° 31′; Elev. 7,309′.
A peak of the Chagai-Sarlat, about 17 miles north-west of Chagai.

MARJAN RIVER—
Shown on the survey sheet as one of the water-courses into which the Mashkel river divides as it approaches the Hamun.

MASITI NALA—
Rises west of Robat Koh and flows north past the west of Koh-i-Malik Siah. It is generally a dry *nala*-bed.

MASHKANI—
A hill in the desert country of North-West Baluchistan, south-west of Mamu. The road from Samuli to Mamu by the Belukand *nala* goes to the north-east of this hill. (*Peacocke*)

MASHKEL OR MASHKID RIVER—

A large river rising in the vicinity of the Koh-i-Taftan in Persian Baluchistan. Its main tributary in the upper part of its course is called the Simish as far as Dizak, thence onwards it goes by the name of Mashkid or Mashkel; the former appears to be the Persian, the latter the Baluch pronunciation of the name.

Some miles below Dizak it begins to flow in a south-east direction, thence flowing through a gravel valley between Isfandak and the Hiduch band it enters Baluch territory. Here again it makes a considerable bend and flows almost due north, piercing first the Sabz Koh range by a defile called the Tank-i-Grawag, and then, after flowing in a north-east direction through a fairly broad valley, some 9 miles wide, it again forces its way through the Siahan and Kunaren ranges by a defile similar to the first, called the Tank-i-Zorati.

On entering the sandy Mashkel plain it flows almost due north, meeting the Bibi Lori Kaur at about 28½ miles from Zorati, and continuing in the same direction for about 8½ miles up to a point called Nalap or Nalaf, it bends towards the north-west, and here just before it enters the great Mashkel Hamun the whole bed of the stream has a width of some 13 miles, but this is divided into several smaller surface channels, the largest of which is called Kuhnador and was the only one in which Ahmad Ali Khan saw any water in January 1890. The Mashkel Hamun, into which this river empties itself, is almost due east of its source.

So remarkable is the course of this river that Pottinger was entirely deceived as to the direction of its drainage. In the account of his travels he calls this river the "Boodoor," and when crossing the desert from Sarawan to Kalagan in 1810 he states:—"We camp on the bank of a dry river 500 yards in width, running south-south-east towards the west." His error is inexplicable, as he followed its bed for 5 miles by

daylight to the site of a ruined village called Regan. In the second part of his book he states that he was informed that the "Boodoor" extended to the Garmsel, as the valley of the Helmand is termed in the great bend it takes to the south. The improbability of a torrent 500 yards wide, having its origin on the banks of a great river, in an almost waterless desert, presumably led to Pottinger's supposition that the "Boodoor" was an old outlet of the Helmand to the ocean. Of course a knowledge of the altitude of the Kharan desert would at once have disposed of this theory, but Pottinger had no instruments for measuring heights.

The Zamran range is the watershed separating the drainage of this river from that of the Dasht; in other words, the dividing line of the northern and southern river systems of Western Makran.

This river is of some military importance, for it cuts in two the greater part of a large tract of desert country, which has hitherto been regarded as absolutely impassable. It is, in fact, the highway from Panjgur to Seistan or to the Helmand; and there appears to be at all times an abundant supply of water in its bed, and both the bed and the banks are in many places well covered with fuel and camel-grazing.

The principal affluent in Baluch territory is the Rakhshan; draining the Panjgur valley, the confluence takes place immediately south of the Tank-i-Grawag. Here the bed of the Mashkel is 300 yards broad, with a pebbly bottom, scantily covered with tamarisk. Its northern bank is formed of a broken conglomerate cliff, but the southern one is low and sandy. It has a stream of running water 50 yards broad and under a foot deep. Fuel, grass, and camel forage are very plentiful. From this point the river enters the Tank-i-Grawag defile (*see* Military Report of Makran). During a flood this would be impassable for some hours owing to the deepness and swiftness of the river crossing. About 35 miles from the northern end of this defile the Mashkel flows through another and a similar one, called the Tank-i-Zorati, about 8 miles in length, and from this point it enters the desert, and after a course of about 80 miles from last defile it reaches the Hamun or swamp. The country on both sides of this stream throughout its course in Baluch territory is bare and desolate in the extreme. The Rekis, a small nomadic Baluch tribe, are the principal inhabitants of this region. (*See* Mashkel District.)

For further information regarding this river (*see* "Persian Gazetteer," Part IV.) *(MacGregor—St. John—Jennings.)*

MASHKEL DISTRICT—

A district in Western Baluchistan, east of Jalk and north of Panjgur, inhabited by the Reki Baluchis.

On the south this district is bounded by the Siahan range as far as the Bibi Lori torrent bed. On the east by the Bibi Lori and a line from its junction with the Mashkel to the Reki Wakab on the north.

The Hamun Mashkel is, in the northern portion, of a more or less undefined border. On the west Mashkel extends to the foot of the skirt of the Koh-i-Safed range and the limits of the village of Jalk. It thus includes the whole of the Mashkel river after it quits the Siahan range

and the larger portion at any rate of the date groves of Dehgwar, *viz.*, Ladgasht, Kalag, Askan, etc.

Formerly, the Rekis possessed the whole of the date groves along the foot of the Koh-i-Safed and their territories extended doubtless as far up as Tahlab, but for some generations the Damanis have owned the more northerly of the date groves, Gaza, Maksotag, Kindi, and Gorani. As, however, the Rekis and Damanis are continually fighting, it is as well not to accept any statement of their northern border as definite.

Galugah, a ruined fort, which was being rebuilt in 1883 by Azim Khan, son of the late Azad Khan, is the principal stronghold in Mashkel and lies to the north-west of the centre of this district.

There are numerous wells in the district of slightly brackish water, and in the neighbourhood water is always procurable at a depth of 6 feet. The population consists of about five hundred families, comprising one thousand and five hundred adults.

The following is taken almost *verbatim* from a Memorandum by Dr. O. T. Duke, who was sent in January 1884, to inspect this tract of country and to report on the exact state of affairs, especially with regard to the ownership of this district, as it was believed that the Persians were putting forward claims to Mashkel with a view to encroaching on Kharan territory:—

The boundaries of this district correspond generally with those of the Reki tribe * * * * In addition to Mashkel the Rekis own two villages in Jalk and numerous sections of them are stated to be scattered over lower Persia Indeed, the segregation of tribes in this part of the world is a very difficult matter; the shepherds recognize no limits; they wander wherever grass is to be found for their flocks; one day they are in recognized Persian territory, the next day they are beyond it. As far as I could make out, the government of these districts is still of the crudest form. On the Persian side the chiefs who have been put down by Ibrahim, Governor of Bampur (since dead), fret under his restraint and are intriguing on all sides against one another, their neighbours and their Governors and occasionally fighting on their own account just as their fathers did centuries ago.

They understand nothing of Imperial interests or a homogeneous Persian empire. To them the Persian Government is Kajar and alien, and they are not Kajars; their politics are confined to the ascertainment as to which of their neighbours has the weakest side, or the most open hand; that this is the case can, I think, be sufficiently made plain by the following account of the Rekis and of what has passed in Mashkel of late.

The Rekis are stated to be a tribe of Rakhshani Baluch, and the present clan has from ancient days lived in Mashkel and Dehgwar. They have never paid tribute to any one, but have from many generations yielded military service to the Naosherwanis. From Kadi Shah's sanad it would seem that in his days their forces formed part of the Jalk contingent. Be this as it may, there can be no doubt that during his long lifetime they have been subject in a military sense to Azad Khan of Kharan, who has, therefore, been paramount in Mashkel.

The frontier between Mashkel and Persia was defined by the Boundary Commission under Colonel Sir T. H. Holdich in 1896; the greater part of Mashkel exclusive of Jalk and some date-groves is now included in British Baluchistan.

MASHKEL OR DEHGWAR.—Lat 27° 55′; Long. 62° 55′; Elev.

Is a very remarkable strip of date palm groves, which, with intervals, fringe the southern shore of the Hamun-i-Mashkel for about 30 miles. Water is close to the surface and good, but the soil in parts is extremely poor. The principal places in this basin are Ladgasht, the residence of Mirkia, the Reki Chief of Mashkel, Maksotag, Gaza, Gorani, and Kindi. The produce of these palm groves is given by the Reki (*q. v.*) inhabitants to several of the tribes of Sarhad, each of whom in return undertakes to furnish its contingent of fighting-men whenever necessity arises. (*Tate.*)

MASHKEL HAMUN—*see* HAMUN MASHKEL.

MASISKAP—
A somewhat conspicuous light-coloured hill north of Sukaluk in the desert country of North-West Baluchistan. (*Maitland.*)

MAZAN CHAH—
A well containing good sweet water, situated about 8 miles west of Bakhal-i-Chah (*q. v.*). It is 21 feet deep and contains plenty of water. There is grass, firewood and good camel-grazing in the vicinity. (*Webb-Ware.*)

MAZAN CHAPAR.—Lat. 29° 4′; Long. 64° 36′; Elev.
The easternmost portion of the Chapar range in the Chagai district, about 8 miles south-west of the Lora Hamun.

MAZANGI WELL—
About 3 miles east of Yadgar (*q. v.*). In 1903 the water was bad. (*Scudamore.*)

MAZAN NOHLI RIVER—
Rising in the southern slopes of Malik Teznan flows south and is lost in the sand before reaching Zaian Hamun. The halting-places of Mirui and Nohli are in the bed of this *nala*. A camel track runs down this *nala* from Mirui to the Morjin river and thence by the west of the Hamun-i-Mashkel to Ladgasht. (*Roome.*)

MAZAN ROD—
One of the water-courses into which the Mashkel river divides as it approaches the Hamun.

MAZAR—
A halting-place in the Registan on a not-much-used route from Shah Ismail to Kani. Here is a well near the edge of the sand, the water of which is near the surface and is much frequented by shepherds. This route is not much used on account of the sand. (*Maitland.*)

MAZARI HILLS—
A range of hills in North-West Baluchistan, lying a little to the north-west of Gurgarok. The Bulo ravine is apparently the main drainage channel for this range, and it is said to carry its waters to Dalbandin. (*Peacocke.*)

MAZARI KOTAL.—Lat. 29° 26′; Long. 64° 12′; Elev. 5,585′.
From the *kotal* a path leads over the low hills immediately on the left-hand side (south) into the plain of Barabchah. Our camels (riding) travelling over with the greatest ease. The path, leading straight on north-west from the Mazari *kotal* towards Mamu from the heights near the *kotal*, appeared to be very easy going indeed. (*Walters.*)

MAZARI WAD—
A very narrow and rough ravine between Gurgarok and Barabchah in North-West Baluchistan. This ravine is entered 6½ miles from Gurgarok; at this point the Bulo ravine, along which the road runs, forks, the right branch going up the main ravine passes over a low *kotal* to Shorakin and thence gains Mamu *vid* Kuchan; it is said to be inferior to the Mazari Wad road, there being more sand and less water on it. The left

branch bends up a rough and rocky ravine called Mazari Wad, reaches a low *kotal* at 7½ miles. There is a good camel track, but the road would require preparation for the march of any but small bodies of troops, or for guns, for quite 1 mile. The general gradient however is easy. On the west side of the *kotal* an easy descent of 100 feet leads into the Barabchah plain. West of the Mazari *kotal*, as far as Samuli, there is no grass. (*Peacocke*)

MEKH-I-RUSTAM OR PULCHOTA.—Lat. 29° 12′; Long. 65° 11′; Elev. 4,232′.

An abrupt conical peak, 300 or 400 feet high, with lofty sand mounds on its southern side lying some 3 or 4 miles south-west of the Lora Hamun. At a place called Yagi, at the foot of this peak, is a well, but in 1885 this was blocked up. This peak and a line of sand-hills enclose a tract called the Wad-i-Sultan on the north. (*Lockewood—MacGregor—Peacocke.*)

MEKHMALL—*see* MALL.

MENDO RIVER—

Rises in the south-eastern spurs of Malik Teznan and flows south into the Gat-i-Barote, but is generally dry. (*Sculamore.*)

MENGALS—

Up to a comparatively recent date, the Brahui tribe of Mengals—the most numerous tribe now populating Nushki—resided in Kalat. During the reign of Mir Mehrab Khan, for various reasons, a feud broke out between the Mengals and the Badini branch of the Rakhshani Baluch. In the desultory fighting that ensued, the Mengals lost heavily. After the conflict had continued several years, the Khan stepped in and adjusted the feud by compelling the Badini to surrender to the Mengals two *shabanaroses* of water in the Kaisar stream. The Mengals took advantage of the opening thus offered them to emigrate to Nushki where they built their village on land which, up to the present, remains Rakhshani property. The Mengal Sardar soon found the inconvenience of having his tribal property divided, and so requested the Khan to exchange the water which his tribe owned in Kalat for water of equivalent value in Nushki. In this the Khan acquiesced, and gave the Mengals, in lieu of their Kalat property, 5 *shabanaroses* in the Kaisar river, exempt from all revenue charges. The Mengals from time to time added to their possession, not only by purchase and mortgage and sometimes by marriage, but largely by forcibly exacting compensation for bloodshed in the frequent quarrels which followed their arrival. The *dak* lands which this tribe claims come under the latter category. The Mengal possessions in Nushki are, however, still very limited. The tribe is, by inclination, a pastoral one: had it not been so, there was nothing to prevent the Mengals following the example originally set them by the Badini Rakhshani and gradually absorbing all Nushki, as, man for man, they outnumber the Rakhshani in the proportion of seven to one. The Mengals considering their numbers appear to have acted with singular moderation. Finding their water more than sufficed to irrigate the 683 acres of land they possessed, they annually lease from their more favoured Badini neighbours whatever additional lands they may require. In 1897 no less than 300 acres of



MEKH MALL.

(Sd.) R. E. ROOME, *Lieut.*,
1897.

I. B., Topo. Dy. No. 2,228.
Exd. C. J. A., April 1898.



Rakhshani lands were being cultivated by Mengals. The Mengals are divided into two great branches, *viz.*, the Badini and the Nozai. These are subdivided as follows :—

The Badini into—

(1) Bajezai, whose sub-sections are the Paindzai, Mirzazai, Somari, Kemarzai, Chandiazai.

(2) Tarasizai, with sub-sections the Mazarzai, Ahmadzai, Saifuddini Ghewari, Muridzai, Gazozai, Zagarzai, Totazai.

(3) Amirzai, with sub-sections the Pindokzai, Muradzai, Shahozai Zangizai, Barfizai, Mengalzai, Moghalzai, Changozai, Malikzai.

The Nozai are sub-divided as follows :—

Mahmudzai, Mandai, Ahmedwari, Baranzai, Muhammadzai, Baizai, Muhammad Shahzai. Inquiry has failed to elicit the names of the Nozai sub-sections. This is mainly due to the fact that the Nozai rarely, if ever, leave Afghan Registan.

All the Nozai branches and the Tarasizai sub-division of the Badini branch are migratory, that is to say, that, while owning extensive lands in the *dak* on the southern side of the frontier, they pass the major portion of the year, and in years of drought the entire year, pasturing their flocks in Afghan Registan. The Mengals number in all about 7,000 men. (*Webb-Ware.*)

MERUI OR MIRUI KAUR—

A considerable ravine in North-West Baluchistan rising in the Malik Siah hill and draining into the Morjin depression. The road from Amir Chah to Dalbandin crosses it between the Gat-i-Hamun. (*MacGregor.*)

MERU REG—*see also* MIRO NAWAR.

A line of sand-hills in North-West Baluchistan between Umar Shah and Zahro, about 4 miles from the former. There is a *nawar* inside, but quite dry now. (*Maitland.*)

MESHODI—

A spring of good water, 13 miles from Nokchah, the tenth stage on the route from Kharan to Jalk *vid* Washuk. It lies some 3½ miles south of the road. (*Ahmad Ali Khan.*)

MESKI—

A halting-place near the north-east corner of the Mashkel Hamun.

It is 19 miles north of Godar on the Mairum Kaur and 11 miles south of Paniham. A few yards from this spot is a depression or lake bed called the God-i-Morjin, which is at times filled with floods. Water is obtained from ravines coming from the direction of the Gat-i-Barote. When MacGregor visited this spot in 1876 there was no water, but he was of opinion that it could be reached at no great distance by digging wells. Fuel and camel forage are procurable, but no forage for horses. From this place roads lead to Amir Chah, one going north by Lal Khan Chah which was the route taken by MacGregor in 1876, and the other going north-west by Kondi and Mushki Chah.

The latter route is the more direct, the trade-route being struck at Kondi.

Another route in a north-easterly direction leads from this place over a sandy plain to the Gat-i-Barote and hence to Sukaluk, but this too is

under the same difficulties as the above for want of water. The first 40 or 50 miles are over a waterless tract. (*MacGregor.*)

MHAKAKI DARMAN.—Lat. 29° 12′; Long. 65° 41′; Elev.

A halting-place about 7 miles north-north-west of Mall post on the road to Chandan Khan Band.

MIANBAZAR RIVER—

Rising in Khan Muhammad Kushta pass flows eastward and after passing south of Lar Koh becomes known as the Lar river.

MIANRUD—

An island in the Mashkel river about 92 miles from its junction with the Dashtak Kaur.

It is formed by the bifurcation of the river. There is no running water here; this ceases at a spot called Chekulu, 6 miles up the river, but there are some good pools. Fuel and camel forage are scarce, and there is no grass. This is the fifth stage on the Mashkel route from Panjgur to the Helmand. Another route, which is more direct, but more waterless, strikes through the range north of Panjgur and follows the Tank *nala* to within 15 miles of Bibi Lori *ziarat*, and it then takes a straight north-westerly course to Mianrud. (*MacGregor.*)

MIRABAD—

A Sinjarani Baluch village on the right bank of the Helmand, about 6 miles below Bandar (*q. v.*). There are about 50 huts containing 280 inhabitants. The village possesses 250 cattle, 300 sheep and goats, 15 horses and 10 camels. The area under wheat was 250 acres, but many of the cultivators were unable to do any cultivation, partly for want of water and partly for want of seed. Last year (1902) the river was dry as far up as Chahar Burjak from July 17th till September 23rd. This village pays *maliyat*, whereas all the villages from Khwaja Ali down to Deh Dost Muhammad are *muaf*. (*Wanliss, February 1903.*)

MIR AHMAD NAWAR—

A depression in the sandy track 10 miles from Nushki on the road to Band in North-West Baluchistan. Water sometimes collects here, but when Captain Maitland visited it in August 1885 it was quite dry, as were also the shallow wells in its bed, but water could be obtained by digging. (*Maitland.*)

MIRAKA WELL.—Lat. 28° 31′; Long. 61° 57′; Elev.

About 32 miles south-east of Mirjawa on the road to Mashkel.

MIRAN BARAM NAWAR.—Lat. 29°5′; Long. 65° 18′; Elev.

About 7 miles north by west of Padag north of the trade-route.

MIRI HILL.—Lat. 29° 7′; Long. 62° 51′; Elev. 7,656′.

The highest peak of the Koh-i-Sultan range, south-west of the *nawar*, or former centre of volcanic activity.

MIRJAWA.—Lat. 28° 59′ 30″; Long. 61° 30′ 20″; Eelv. 2,857′.

The Mirjawa cultivation lies on the left bank of the Mirjawa stream in the angle formed by the junction of the latter with the Dar-i-Giaban *nala*. For the sake of clearness this may be called New Mirjawa.

Old Mirjawa with its ruined fort, built some seven generations back, lies 2 miles to the south-west.

The place is deserted, and the ground is at present (1900) uncultivated, the nomad inhabitants having apparently transferred their residence to new Mirjawa.

The Mirjawa water on emerging from the hills to the west, a little below Ladis, bifurcates into two channels, one-third of the water going in the original channel to old Mirjawa and two-thirds in a recently made channel to new Mirjawa. (*Benn.*)

MIRJAWA PASS.—Lat. 29° 6′; Long. 61° 30′; Elev.

A pass through the Mirjawa hills about 10 miles from Saindak on the road from that place to Mirjawa.

The pass is in places extremely difficult for laden animals; it is about 8 miles in length, and from the summit the descent to the Mirjawa plain is rapid. At 18 miles from Saindak the western entrance to the pass is reached and the track, turning south, runs across a stony *daman* or glacis at the foot of which lies the Mirjawa cultivation. (*Benn.*)

MIRJAWA RIVER—

Has its source in the Kunrod spring, about 2 miles north of Ladis. From its source until it reaches a point about 20 miles south-east of Mirjawa, when it becomes the Reg-i-Malik, it is known generally as the Mirjawa river, though it changes its name according to the locality through which it passes. Thus from Kunrod to Bangan (1½ miles) it is called "the Bangan"; from Bangan *vid* Ladis to Padaha (6 miles) it is called the Ladis river; at Padaha for a few hundred yards it is the Padaha; below Padaha the river is known for a short distance as Roshnik, and a little further down as Damin, and from this point it emerges from the Ladis hills to the place its water finds its way into the Dar-i-Giaban throughout as the Mirjawa river.

It has a powerful flow throughout which seems capable of considerable development. At present it irrigates a few scanty plots of cultivation at Barziar, Bangan, Ladis, Padaha and Mirjawa after which it runs to waste in the sandy *nala*-bed a little below new Mirjawa. Before reaching the plain, about 8 miles below Ladis, it runs between precipitous banks 50 to 100 feet high, and the river-bed is often 50 yards wide. The track from Mirjawa to Ladis crosses the Mirjawa river diagonally about 4 miles from the former running along the river-bed which is here 50 yards wide. It then skirts the right bank passing the Padaha cultivation at 8 miles and reaching Ladis at 12 miles.

The spring at Kunrod which forms the head of the Mirjawa river is in the midst of a patch of dense tamarisk jungle, and the flow of water from the outset is a vigorous one. (*Benn—Webb-Ware.*)

MIRKOH.—Lat. 28° 54′; Long. 61° 23′; Elev.

A village containing 30 or 40 families who live in blanket tents. This village is the head-quarters of Sardar Muhammad Raza Khan, the head of the Reki tribe, who has recently built himself a new fort here.

Mirkoh is about 12 miles south-west of Mirjawa and 2½ miles from Ladis. (*Benn.*)

MIRO NAWAR—

About 1 mile north-east of Zahro, contains beautifully clear water, but it is salter than sea water and no animal will touch it.

MIRUI OR MERUI—

The tenth stage on the trade-route, 160 miles from Nushki.

It is in the Mazan Nuhli Rod, and is marked by a grove of large *padag* trees, some 12 in number in the midst of a thick jungle of *jhow* and willow trees. Here the water issues from the ground in many places and runs through the jungle in numerous rills. Half a mile down-stream an old open *karez* cut in the side of the hill carries water to a patch of cultivable soil. This *karez* is said to have been the work of Arabs, but has not been used for a very long period. This would make an excellent place for a depôt. In 1903 no water was found running in streams, but one well supplied fairly clean water; in the remainder it was discoloured and dirty.

Wood sufficient in quantity and size to hut 1,000 men. A levy *thana* post is placed here.

Camping-ground.—½ mile up-stream in *nala*-bed, commanded by hills either side of *nala*. These are easily accessible from *nala* side.

Water—Good and abundant.

Fodder.—*Barshok* grass abundant. *Dubh* in small quantities.

Camel-grazing.—Very abundant; *tagaz* and *gaz*; in the spring *kandar* grass.

Fuel.—Very abundant.

There is a *thana* with mud walls and four double-storeyed mud towers and a levy post. A mud tower crowns the summit of the hill overlooking the *thana*. There is also a flour-mill here. In 1903 a signalling heliographic station was established on the hill south of and overlooking the *thana* at about 1 mile distant. (*See* Appendix V.) (*Roome—Webb-Ware—Gordon—Scudamore.*)

MITKOH.—Lat. 29° 17′; Long. 62° 27′; Elev. 3,934′.

A solitary conical hill standing in the midst of sand-hills about 5 miles north of Amir Chah on the road to Rudbar on the Helmand.

There are several *nawars* close to it that sometimes hold water. (*Roome.*)

MIZZIL OR MANZIL—

More generally known by the natives as Mizzil.

A halting-place on the northern road between Amir Chah and Dalbandin, 43 miles from former. A depression or *nawar* lying amidst low sand-dunes 1,000 yards long by 200 wide and running north-west to south-east.

The water in it is absolutely unfit to drink owing to the soil being saturated with the *defecta* of goats and camels. Some of the pools being of a dark blood colour and coagulated with a filthy slime. A fetid stench arises and there are myriads of flies. This water dried up after a heavy sand-storm on the 8th April 1903.

Some drinkable water is obtainable by digging a small pit 3 feet deep at north-west corner of *nawar* close under the sand-hills where the surface

of the soil appears cleaner. Doubtless more water could be obtained in this direction. The best water is to be found by digging pits to the east of the *nawar* from 3 feet to 4 feet deep, and the water in these remains sweet for three days, after which fresh pits should be dug. These pits should be protected by building *sangars* round them, otherwise they become silted up in a few hours by the action of the sand.

A good many sandgrouse water here, but their flesh is tainted by the water.

A fine view is obtained of the northern slopes and precipices of the Koh-i-Sultan.

Nomad Baluch encamp round the water, grazing camels.

The heat here in May is 115° F. in tents.

The best place for camping is to the east of the *nawar*.

A few sheep and goats might be obtainable here during the spring months. There are no other supplies.

Camel-grazing.—Very abundant: *tagaz*.

Fodder.—A large amount of *barshok* and *vega* grass could be collected in the vicinity and brought in.

Fuel.—Abundant: *tagaz*.

A good district to collect camels in. In 1903 a signalling station was established on the grey hill, east of the *nawar*, at a distance of one hour's walk. (*See* Appendix V.) (*Roome—Gordon.*)

MOHARGI RIVER—

Joining the Pangaki flows into the Chilgazi *nala*.

MORJIN DANN OR HAMUN—*see* GOD-I-MORJIN.

MORJIN KAUR—

A water-course in North-West Baluchistan rising in the Dalbandin district. In the upper part of its course it is called the Bulo Kaur, and after receiving the drainage of numerous small water-courses from the Gat-i-Barote and hills to the north, it empties itself into a small *hamun*. (*Ahmad Ali Khan.*)

MUGHAL KAND—

A small defile through a high but narrow ridge of rock which is an outlier of the main Kanuk range (*q.v.*) in North-West Baluchistan. This defile is about 2 miles long and is practicable for all arms, there being only one short and fairly easy gradient worth notice. The most northerly peak of this ridge is named Baluchir, and at its foot and lying about 3 miles north of the road there is a well named Khwarreh containing 2 feet of good water at 20 feet below the surface. Three hundred sheep and fifty camels, which graze in the neighbourhood, are daily watered here. There is a second well at present (1885) partly choked with sand, about 1 mile nearer to the road. This pass lies between Kani and Umbai on an alternative route from Nushki to Shah Ismail by Umbai, Galur, the main route going from Kani to Gazachah and thence to Safia and Shah Ismail. Maitland remarks that the real name of the Mughal Kand ridge to the north of the pass is Washaf, and the lower ridge to the south is Nalaf. According to Peacocke, the Kanuk range of hills, of which this ridge is a spur, are metamorphic and show signs of volcanic action. They

are a tumbled mass of low peaks, with outlying rocks and peaks projecting abruptly above the plain. The general dip of the strata in the main range is to the north and west, and that of the outlying hills Kani and Mughal Kand to north and east. Their sides, especially the northern and western, are covered with sand drifts which reach high up. (*Maitland—Peacocke.*)

MUHAMMAD KHAN CHAH—

A halting-place in a narrow ravine, 25 miles, in a northerly direction, from Mirjawa. There are no supplies and it is necessary to dig a well for water. The weather in February is intensely cold with hard frost at night. (*Benn.*)

MUHAMMAD KHAN RIVER—

A tributary of the Duzdap river from the east, joining it about 10 miles south of Said Langar.

MUHAMMAD RAHIM CHAH—

A well said to be about 60 feet deep and to contain plenty of good water, situated at the foot of the Kambaran Koh where the *daman* joins the sand-hills. It is a favourite summer resort of flock owners. (*Webb-Ware*)

MUHAMMAD RAZA CHAH OR MAKI—

The 19th stage on the trade-route, 347¾ miles from Nushki, 18¾ miles north-west of Kirtaka and 24½ miles south-east of Robat. Here is a small *serai*, three wells, and the usual facilities for drawing water and watering animals. Camel-grazing is plentiful in the vicinity. A rest-house was built here in 1903. The water-supply is aperient. (*See* also Appendix V.) (*Webb-Ware—Scudamore.*)

MUKAK—*see* MAKAK.

MUKAKAF SPRING.—Lat. 29° 6′; Long. 61° 41′; Elev.

About 4 miles north of Juzhak spring, about 14 miles east-north-east of Mirjawa, at the junction of the track thence with those to Saindak and Duzghi.

MULLA MUSTAM KHAN ZIARAT.—Lat. 29° 40′; Long 65° 41′; Elev.

About ½ mile west of Darzi well and about 14 miles north-east of Umar Shah Nawar on the road to Papring.

MURAD KHAN WELL.—Lat. 29° 16′; Long. 64° 45′; Elev.

About 2 miles south of Chagai.

MURGANI—

A high detached hill north of the road between Umbai and Shah Ismail, North-West Baluchistan.

MURGHI KANI—

A water-hole, 2 miles from Singbur Chaman, on the road to Nushki. It lies to the right of the path in a small side ravine. (*Maitland.*)

MUSA NAWAR.—Lat. 29° 31°; Long. 65° 18′; Elev.

On the Nushki-Bagat road about a mile north of the Husain Nawar.

MUSHKI-CHAH.—Lat. 29° 1′; Long. 62° 30′; Elev.

A halting-place on the trade-route between Kondi and Saindak. 21¾ miles from the former and 65½ miles from the latter.

The place is marked by two groves of palm trees which are on the bank of a wide, very shallow *nala*-bed. The water-supply here (1903) is as follows:—

Three wells fit for camels only, in small palm grove, about ¼ mile south-east of *thana*.

Four wells in shallow *nala* in small palm grove, about ¼ mile north-east of *thana*. Water is close to surface, but is aperient.

One well, 15 feet deep, between *thana* and bungalow. Water good, but the supply at present is very small.

Four wells in shallow *nala*, about ¾ mile east-north-east of *thana*. Water here about 5 feet from surface, very good and plentiful. More wells are being sunk at this spot.

A small amount of coarse grass is to be found between the groves of palm trees and to the north of them. Camel-grazing and fuel are plentiful, about 5 or 6 miles north-north-east of the *thana* towards Damodim.

At Mushki Chah a levy post building has been erected, a rectangular enclosure, with mud walls, about 12 feet high, flanked by four towers. The post is planned to contain quarters for the levies which man it, a small traveller's *serai* and accommodation for a shop. There is also a Chappar-khana here. A signalling station was established in 1903 on the hill bearing 320° from the bungalow. (*See* Appendix V.) (*Roome—Webb-Ware—Rose-Price.*)

MUSTIAN DONI—

The fifth stage on the road from Meski on the Mashkel Hamun to Sukaluk *viâ* Gat-i-Barote. Here good water is to be had from a well, and fuel and forage are plentiful. (*MacGregor.*)

MUZHDAN—

A halting-place in North-West Baluchistan on the road from Shah Ismail to Mamu. It is 10 miles from the former and 18 from the latter place. There are[1] six to ten water-holes with about 18 inches of water in each, where one or two hundred camels can water. There is no grass here, and very little firewood or camel-grazing in the immediate neighbourhood. (*Maitland.*)

NALAF—

A halting-place on the Mashkel river, the sixth stage from Dashtak (Panjgur). It is 14½ miles from Mianrud to the south and 17 miles from Rek-i-Farang to the north. This place is also passed on the road from Washuk to the Mashkel river, and is four stages (84½ miles) from the former place and 13 miles to the nearest point on the Mashkel. There is here a pool of water, but this is uncertain, but wells would produce any amount. Fuel, camel forage, and grass are abundant. (*MacGregor—Bell.*)

[1] Arrangements were made by the Afghan Boundary Commission to increase the number of wells to twenty, and their total contents amounted to 7,800 gallons. The rate of filling up the wells was not ascertained, but it was said to be tolerably rapid, and since the water lies not far from the surface, this is probably the case. The water is brackish but quite drinkable, and if necessary, no doubt the supply might be largely increased.

NALAF OR NALAP—

A halting-place on the Shah Ismail route from Nushki to Galla Chah between Kani and Safia, 14 miles from the former place and about 3 miles north of Gazachah. There is one well here, the water of which is 5 feet from the surface and 3 feet deep, sweet and good. Camel-grazing and fuel are to be obtained in the sand-hills near at hand. A great deal of bright green *drug* grass grows in tufts, but it is worthless. There is also the short prickly *kandar* grass, which is good forage.

The Afghan Boundary Commission in 1885 halted at Gazachah about 3 miles south of this, but Maitland remarks that—

> Nalaf is the proper halting-place on this road. It is nearer than Kani, and no further from the entrance of the Kanuk pass than Gazachah; the water there is better, and no doubt abundance might be obtained by digging, but the best place would be a mile or two further on at the edge of the *daman* of the hills.
>
> Here is excellent ground; fine gravel, with just sufficient slope to carry off the drainage. The people say—and I see no reason to doubt it—that water if dug for might be obtained as plentifully as at Nalaf, while the probability is it would be of better quality and decidedly superior to that of Gazachah. A halting-place here would also divide the distance better, being, say, 15 miles from Kani and 17 from Safia.

The same authority considers that both Nalaf and Gazachah are part of the Lora Hamun, which to all appearance is a very ill-defined track.

NALAP—

A *nawar*, 1 mile north-east of Mizzil with water close to the surface. A favourite watering-place for the camels of the nomad Baluch; 500 camels said to be grazed in vicinity; also 150 sheep and goats. The camels would be *jambazis*. (*Roome.*)

NALI WELL.—Lat. 29° 12′; Long. 64° 46′; Elev.

About 7 miles south of Chagai.

NAMREKH OR NAMREG—

A halting-place in the Dalbandin district (*q. v.*) between Konarak on the east and Pishuk on the west, 11 miles from the former and 12 from the latter place. Here is a large pool, about 100 yards long, filled with rain water. Fuel, camel forage, and grass are procurable. From this place a road goes over the range to the south between Kambaran and Charian peaks by the Rahio pass. Kharan is three stages distant by this route, but the road is very difficult, and is impracticable for camels. (*MacGregor.*)

NAOJUI—

Two villages on the right bank of the Helmand, a few miles below Kala-i-Fath, consisting of 200 huts and containing 900 inhabitants. They possess 780 cattle, 800 sheep and goats, 30 horses, 70 camels and 60 ploughs, each plough producing on an average 40 *kharwars*. These two villages only came into existence about 12 years ago, when a canal was brought here from Kala-i-Fath. The present Khan is Arbab Dost Muhammad Khan. (*Wanliss, February 1903.*)

NAOSHERWANIS—

Are to be found all over the vast sandy desert south-west of Kharan, and at one time had overspread the whole of the Mashkel and Reki country, and even found their way to Sarhad. They are possessors of immense droves of camels and sheep and goats in almost unlimited numbers. This tribe is classed among the Rind Baluchis by Pottinger, but as Brahui by Ross. Masson says they claim a Persian descent,

which view is supported by Dr. Duke, who says of them that the Naosherwanis claim to be descended from the ancient Kaianian dynasty, but they can trace their origin to only three generations beyond Ibrahim Khan, who commenced to serve Sultan Shah Hussein of Persia in 1697 A.D. His grandfather's name was Naosherwan, and from this ancestor the tribe doubtless takes its designation. The Naosherwanis state that they came under Abbas to Garmsel, where they were well treated by the Afghans, but having many flocks and herds they advanced to Kharan, which place they have ever since held. It is certain, however, that their wanderings were by no means limited to the Kharan deserts, and considerable portions of the tribe remained on the Helmand, since Malcolm speaks of their presence there even at the time of Nadir Shah's death. The Baluch tribe, which is considered as especially belonging to the Naosherwanis, who are a few in number, is the Rakhshani, but it is extremely improbable that the Naosherwanis are Rakhshanis. They are described by various titles in the *sanads* given to them. It is almost the rule to find in the tribes in Baluchistan that (as in the case of our own royal family) the chief is not of the same clan as that over which he presides; and as there are many Rakhshanis who are not under Azad Khan, and as, moreover, his followers consist of many other tribes than the Naosherwanis, it is evident that the power which he holds came to his family under the operation of the laws which have always regulated the growth of tribal communities.

The Naosherwanis have evidently always been, as they are at the present day, a race of strong-willed, strong-minded, bold, adventurous, able men, adhering firmly to the traditions and customs which are common to the Jewish and Muhammadan religions, bitter opponents of every kind of despotism, staunch upholders of the rude justice which claims the admiration of tribal bodies, but, according to modern western ideas, insatiable freebooters.

Their strong character attached to them many followers, and thus they gradually established the now existing tribal community of Kharan.

Besides Kharan the Naosherwanis have settlements in Kolwah and Nal.

The present Sirdar is Naoroz Khan, the eldest son of the late Azad Khan. He appears to be on bad terms with his two brothers Amir Khan and Azim Khan. In 1881 the former was staying at Kalat with the Khan, while the latter went to his father-in-law, Hussain Khan, in the Garmsel.

The actual number of Naosherwanis is very small, not more than two hundred or two hundred and fifty. Fourteen men are landowners of more or less consequence. The remainder are mostly in Azad Khan's service. The total disposable force of Kharan is about two thousand men. The greater number of these can be mounted on camels, consequently their movements are extremely rapid.

In August 1884 Azad Khan supplied two hundred and fifty riding camels for the Afghan Boundary Commission, which proceeded to the Helmand in charge of the Sirdar's second son, Amir Khan. For one hundred and fifty of these, the Sirdar's own property, he refused to accept any remuneration as hire. Out of these, thirty-eight were lost or died in the desert. The advantage of being able to mount so many soldiers and followers in the desert marches was very great. For these services a reward of Rs. 5,000 was recommended and sanctioned. For the bestowal of this *khillat*, and in order to arrange for the grant of service to the extent of Rs. 6,000, the Sirdar was invited to Quetta, and on 17th May he arrived at that place. It was then agreed that the Sirdar should appoint one of his sons as Ressaldar on Rs. 100 per mensem and twenty sowars of his tribe on Rs. 20 each, to protect the trade-routes passing through Kharan, to maintain peace, and provide for the safety of traders and British officers when passing through Kharan territory, as well as on the route from Nushki to the Helmand. It was arranged that the Ressaldar and sowars should, if required, attend British officers within Kharan limits. The order of K. C. S. I. was conferred on Naoroz Khan.

The following is an outline of the history of this tribe given by Dr. Duke :—

"The first of the chiefs, whose existence rests on documentary evidence, is Ibrahim Khan. In his days Kandahar was subject to Persia, the Moghal dynasty in India was falling to pieces, the Naosherwanis had no temptation to withdraw themselves from a willingly paid, and paid for, allegiance to Persia, and in the year 1712 Sultan Shah Hussein largely increased to the sons of Purdil Khan, the son of Ibrahim, grants from certain villages which the family had enjoyed from early times (the villages are unfortunately not named in the *sanad*). This increase was made at the expense of their brothers, Amir Beg and Khodadad. Purdil is the great hero of Western Baluchistan, and he it was, or his immediate followers, who captured and killed at Chagai the Afghan Prince Ashraf, who was endeavouring to escape to Kandahar after the expulsion of the Afghans from Persia by Nadir Shah and Shah Tamasp in 1730. Azad Khan states that Purdil Khan took from Ashraf Khan the celebrated Koh-i-Nur diamond which he afterwards sold in Sind. Purdil Khan seems to have been a wandering freebooter, and he especially affected the province of Karman in his raids, hence he soon came into collision with Nadir Shah; the latter when on his way to subjugate Afghanistan summoned Purdil to join him; he informed him that he was fully aware of his mischievous deeds, but was willing to pardon them if he made a proper submission. This Purdil declined to do.

"In 1734 Nadir Shah had despatched Pir Muhammad Khan, [1] Governor of Kerman, and Elmas Khan, Governor of Seistan, from Ispahan, with a fully equipped force and artillery to chastise the rioters of Kharan and Dizak; they humbled and crushed the rebels in the latter district, and after slaying a number of them took the fort of Dizak. Nadir Shah next despatched from Kandahar in 1736 under Muhammad Ali Beg (Sæwhloo), *naib* of Ishac and chief of the Agas, a force to punish the Sher Khan [2] tribe of Baluchis and those of Shorabec (in Kharan) [3] who were committing outrages.

"The Baluchis engaged Muhammad Ali and were defeated with great slaughter.

"Azad Khan states that Purdil, alarmed at the state of affairs, took with him four hundred families of Barechis, with whom the Naosherwanis have always been closely connected, and three hundred families of his own followers, and proceeded to Jalk. He left at Kharan his sons and grandsons, Shaho, Rahmat, Jehangir and Jelal Khan, and Mir Abbas. These refused the proffered mediation of Abdulla Khan, the Khan of Kalat, who was a great friend of Nadir Shah, and in a pitched battle with the Persians

[1] Nadir Shah's strategy is evident. His main line of advance on India was by Kandahar, and he probably intended to have used the Bolan route to Sind. After reaching Kandahar he found it necessary to protect his left flank by a march on Kabul and by bribing the Khyber tribes, but he protected his right flank by the despatch of small divisions from the bend of the Helmand in Seistan and from Kerman, *vid* Bampur, these divisions being of sufficient strength to keep down Baluchistan, but not to invade India. I cannot find the statement at the present moment, but I know that he issued orders for the collection of a large force which was to proceed to Sind along the coast, though his intentions were frustrated by local difficulties; he did not need to attack Kalat, as the chief of that place was his sworn ally.

[2] Probably the Sheranis now incorporated with the Barechis.

[3] The old name of Shorawak (Shora-ab-ak).

were disastrously defeated. Jehangir and Jelal Khan were slain and Abbas surrendered to Nadir Shah, who eventually took him with him to Tehran. Muhammad Ali had been next directed to join the Baluchistan Commander at Jalk-Kharan,[1] and on the conclusion of their operations to return to Shorabec and reduce all the forts in the vicinity. Jalk was captured, but Pir Muhammad, the chief Sirdar, being a man of little wisdom, conceited and quarrelsome, separated from Elmas Khan on account of some trifling dispute, and neglecting to advance on Kharan by leading his troops into desert and mountainous districts exposed them to dreadful perils, and lost his cattle and baggage. The general result of the operations of Nadir Shah's generals was, however, that Purdil became an outlaw wandering in Kalat and Sind. At length he decided to throw himself on Nadir Shah's mercy and seems to have been not only pardoned but to have been taken into high favour, and in the year 1740 Nadir Shah, in consultation with Mirza Kuli Beg and Muhammad Takki of Turkestan, gave Amir Abbas and Purdil a list of forces to be collected by them from different tribes to consist of one thousand and two hundred matchlockmen, strong and young; and under their own responsible leaders, they were to consist of—

Rakshani	150
Jalk, Dizak, Reki and Bamari	350
Sarbaz	150
Bampoor	150
Kej and Tump	150
Kolwah	50
Jalkot	50
Nasarkan	50
Ghe	50
Safhal	100

"One baggage camel to each two or three soldiers and one extra man to look after it; each tribal leader to have two personal orderlies; Mir Safi, the leader of the Jalk band, is especially exhorted to follow with his band and to render his services more worthy of recognition than those of his brothers. In a separate *sanad* of the same date, Nadir Shah, after consultation with the Sirdar of Karman, directs a yearly subsidy of one thousand and five hundred *tomans* to be paid for the support of those troops—this sum to be chargeable to the Karman revenues; and in yet another *sanad* of the same date he directs Amir Divar (Gitchki of Makran) to hand over to Purdil Khan the districts of Baiduk and Kolwah, whilst in a fourth *sanad* of the same date he grants to Mir Abbas and Rahmat the districts of Rakhshan, Kharan, and Mashkai; the latter to remain in the abovementioned districts, whilst the former was to attend on Nadir Shah.

"These grants and settlements were made by Nadir Shah when he was on his return march after his invasion of India. Purdil Khan appears to have been unable to long enjoy his altered fortunes; he was a very old man, and it is stated that he died on his way back to take up his estates (1740?). Thus, then, at this time Kharan, as it exists in the present day, was established as a feudal district of Persia by Nadir Shah. Although

[1] *Sic* in original.

[2] This force was evidently intended to join a large army which Nadir Shah was collecting for a campaign against Khiva and Bokhara, and which he successfully carried out.

Abbas Khan was detained in Persia, his young son, Jehangir, was left at Kharan. He received secret aid from his father, and in time he came to hold the chieftainship and to found the family which Naoroz Khan now represents. But during all the period preceding the abovementioned events, the Kharan chiefs had recognised the military superiority of the warlike Abdulla Khan, ruler of Kalat, the friend and ally of Nadir Shah. They had frequently aided him in his raids into Katchi and Sind, and had lost much blood in his cause. In 1739, on his way back from India, Nadir Shah took Katchi from the Amir of Sind and gave it to Muhabbat Khan as compensation for the blood of Abdulla Khan, who had been killed whilst fighting against the Sind Amirs in 1735-36. The great Nasir Khan, who succeeded his brother Muhabbat Khan, son of Abdulla Khan, divided a portion of Katchi amongst the Brahui chiefs. Azad Khan, at the opening Darbar at Kharan in December 1883, taunted the Brahui Sirdars with this fact, and stated that his ancestors, though they had rendered equal services to the Khan of Kalat with the Brahuis, had declined any portion of Katchi, because an acceptance of such share would have made them the Khan of Kalat's *naukars*. It was evident, therefore, that their conquest by Nadir Shah had compelled a complete acceptance of the supremacy of Persia by the Naosherwanis, and their action in declining a share of Katchi could not but excite the anger and suspicion of the Khan of Kalat. In 1747 Nadir Shah was assassinated, the great tribal empire which he had formed fell to pieces, and a compact and powerful empire was founded in Afghanistan by Ahmad Shah Durani. Ahmad Shah claimed the districts now known as Persian Baluchistan with Seistan as part of his dominions. But Nasir Khan at Kalat had then established himself. He conquered the whole of Makran, Jalk, Dizak, etc., which had been conferred on him by Nadir Shah on his accession to the Kalat *masnad* with the title of Begler Begi, and also Kharan; he also for a time declined to recognize the feudal supremacy of the Kandahar King. Ahmad Shah attacked him in 1758, besieged Kalat, and called upon Mir Shahdad Baluch, *Hakim* of Kharan, to punish and plunder all the followers of the disloyal Nasir Khan, and to bring him in supplies of corn, dates, and other eatables to be duly paid for after fair bargaining. In 1759 it would appear that some of the Kharan tribes had rebelled from Shahdad and had gone over to Nasir Khan. The Kharan chief appealed to Ahmad Shah, who promised to help him, and as Nasir Khan had also made a counter-complaint against Shahdad, it would seem that during the preceding twenty years Kharan had transferred its allegiance from Persia to Kandahar and was independent of Kalat.

"By 1764 Shahdad had died and Ahmad Shah appointed his nephew, Daulat Khan, Rakhshani Baluch, in his place as a Governor of Kharan, and to collect the revenue of that place, as also of the Dizak, Bampur, Sarhad, Mazar Khan, Rudbar, and Jalk, and he confirmed as his wage the half of the revenues of Jalk—the other half to be taken by Mir Abdulla Khan, Buzurgzada, Malik Dinar, the *Hakim* of Dizak, and the chiefs of Sarhad, Rudbar, and Bampur were to recognize Mir Daulat Khan as the collector of revenue, and should not depart from his reasonable advice. This is the foundation of Azad Khan's claim as regards Jalk. He has maintained that it is Afghan property, and has always

anticipated Afghan aid in proving his assertion: so long as Madad Khan held Jalk, he made certain payments to Azad Khan. Since his removal, Azad Khan has regularly once or twice a year, either in person or by deputy, raided Jalk and Kalagan. In 1773 Ahmad Shah died, and from that time the countries of Seistan, Baluchistan, and Mekran granted no more than a nominal obedience to the kings of Kandahar. Persia was distracted by the struggles between the feeble princes who succeeded to Nadir Shah, and it would seem that during this period the great Nadir Khan was able to reassert the supremacy of Kalat over the Kharanis and to establish the close connection which has since that time existed between the Brahui and the Kharan chiefs. It was during this period that Jehangir, Abbas' son, became chief of Kharan. Jehangir allied himself by marriage with the Gitchki, with the Kurds and the Halakzais. His sons by the Gitchki mother, and their descendants, have all been stamped with the characteristics of the Naosherwanis; Abbas and his descendants have held Kharan; Lallah Khan was grandfather of the marauder, Baluch Khan. Muhim Khan was apparently the most energetic of the three brothers."

He seized Kuhak and held it for fifty years, and his son, Murad Khan, succeeded him. In 1872 Mir Ibrahim Khan, Bampuri, having demanded tribute in vain from Murad Khan, besieged and took Kuhak. The fighting is said to have been desultory the Persians taking what Sir Oliver St. John considered one of the strongest forts in Persia in three days; they managed to fire one of the doors and thus got in. Murad Khan lost a large quantity of arms, etc. Mir Murad Khan owns a good deal of hereditary land in Panjgur, and Azad Khan allowed him to occupy the fort at Khudabadan. Here he resided until Mir Mahmud approached Panjgur with the Khan's forces in 1882; he then took to the hills, and although invited to return to his possessions, declined to do so. The Khan's Mastaufi razed Khudabadan to the ground, and Mir Mahmud Khan attached all Murad Khan's possessions.

"Jehangir's son by the Kurdish mother was a thorn in the side of his successor, Abbas Khan, and of his son Azad Khan.

"Abbas Khan following the prudent example of his father strengthened himself by various alliances; he married a Barechi woman and thus connected himself with the powerful Shorawak tribe; by her he had two sons, Azad Khan and Fatteh Khan; he also married a daughter of Shah Pasand, the celebrated chief of his northern neighbours, the Sinjaranis. He took to himself a daughter of the Buzurgzadas of Jalk, and he further strengthened his connection with the Baluchis by bringing to his home a woman of the Mamasani tribe, which large clan wanders over both Persia and Kalat." (*Pottinger—Ross—Duke.*)

NARANO WELL.—Lat. 27° 59′; Long. 62° 56′; Elev.

About 2 miles west of Baluch-Perso boundary pillar 8, and 10 miles north-west of Ladgasht.

NARUIS—

Referring to the Naruis of Seistan, Bellew writes thus:—

"This tribe was brought into Seistan and located at Burj-i-Alam and Kimak by Malik Bahram, Kaiani, in the beginning of this century

under their Chief Alam Khan. His family and followers, in the time of his father, Mirza Khan, were nomads roving on the Koh Naru, north of Bampur. In the time of Alam Khan they used to frequent the southern tracts of Seistan and the Helmand bank for the sake of pasture for their camels and flocks.

"Malik Bahram attached them to himself as military mercenaries, and to protect himself from the encroachments of the Sarbandi, planted them at Burj Alam, Kala Nao, Kimak, etc. The Narui, however, soon established themselves on an independent footing on the lands given to them and maintained their position by marriage alliances with their neighbours. With the Kaiani and Shahreki they were dependents of Herat; but on Kohandil's return from Persia they joined him, and on Ali Khan's establishment at Sekoha threw in their lot with him. Alam Khan, Narui, left four sons, *viz.*, Dost Muhammad, Sharif, Sherdil and Azim. Dost Muhammad succeeded his father at Burj Alam, and on his death in 1857 left a son, Darwesh Ali; he did not succeed his father, but his uncle Sharif Khan, who had, since his return from service with Mir Afzal Khan at Kandahar, become a staunch partizan of Persia now assumed the Chiefship. On the invasion of the country by the Persians a few years later he was the first to join them, and has since been raised by them to the position of Chief of Seistan. Some years ago he sent his son, Muhammad Ali, as a hostage to Tehran; he returned to his father completely Persianized shortly before our arrival in Seistan in 1872. But on our departure he deserted his family and went over to the Amir Sher Ali Khan at Kabul. Darwesh Khan, the son of Dost Muhammad, resides in Burj Alam, and though dissatisfied with the course of events, takes no part in the politics of his country; his brother Sherdil resides in Kimak, and has joined the Persian interest. Previous to the Persian invasion the Narui were Sunni Muhammadans, but, following the lead of their Chief Sharif Khan, they now profess to be Shiahs. Sharif Khan resides in Kala Nao, and his three other sons live in Sharifabad.

"Owing to the Persian support, the Narui are the most powerful tribe in Seistan as regards influence, though numerically they are the weakest. The whole tribe hardly exceeds 400 families, and their subjects or *dikhans* probably amount to 1,200 more."

During the rebellion in Seistan, against the Persians in 1873-74 or thereabouts, Sharif Khan did good service to the latter, but was not rewarded as he expected. The ill-will thus engendered widened at last into a regular breach, and in 1877-78 Sharif Khan moved over to the Afghan side of the boundary, and applied to the Amir for lands on which to live. The Amir (Sher Ali) granted him Kala-i-Fath, then unoccupied and uncultivated, whereupon there was some dispute between the Sinjaranis and Naruis, as Ibrahim Khan, Sinjarani, considered Kala-i-Fath to be in his own territory (*see* Sinjarani). However, there was no quarrel between the Chiefs themselves, and the matter seems to have dropped for the time being; but when Amir Abdur Rahman came down on Ibrahim Khan at the end of 1881 or the beginning of 1882, and turned him out of Chakansur, Muhammad Sharif made his submission, and was confirmed in the possession of the Kala-i-Fath lands. The Sinjaranis considered his conduct mean and ungrateful, and the enmity between the two tribes renewed in consequence.

In 1884 Sharif Khan was lord of the country on both banks of the Helmand from Dakdela and Tirkoh downwards to the Band-i-Seistan, and thence down to the right bank to Deh Kamran. He and Ibrahim Khan married each other's sister, according to Merk,—*but see Sinjarani.* "One of his daughters is married to Ali Akbar Khan, Governor of Seistan, and eldest son of the late Amir of Ghain, while another is married to Saiad Khan, Kurd of Sarhad. His sons were—Saiad Khan, son of Ibrahim Khan's sister, Sultan Ali Khan and Muhammad Ali Khan, all living (1884) at Kala-i-Fath, as also his brothers Ali Khan and Sultan Ali Khan. Sharif Khan himself was in Kabul, where he remained in honourable detention till his death about six years ago. Merk says :—

"He (Sharif Khan) and his immediate relatives are lukewarm Shiahs, or rather professed that faith whilst under Persian influence, and since he came over to the Afghan is openly a Sunni. Like most Baluchis the Shiranzais are probably careless of religious forms and incline to whichever sect of Islam has power over them. The Naruis generally, however, are Sunnis in Afghan territory. Of the cultivators and tenants of Sharif Khan, at least one-third are Seistani Shiahs. The tract possessed by Sharif Khan probably holds about 1,200 families, of whom 200 or 250 are Narui Baluchis." After the death of Sharif Khan his sons were summoned to Kabul, and were afterwards sent by the Amir to Turkistan, but escaped on the road. One, Saiad Khan, made his way to Peshawar and thence to Seistan *viâ* Quetta. Another, Muhammad Ali Khan, came down the Helmand to Seistan, and since then has lived mostly in Sarhad with the Baluchis there, and with them has paid no revenue to any Government. Of the other son, Sultan Ali Khan, Colonel Yate's informant, Ali Akbar Khan, Chief of Seistan, apparently made no mention, but Lieutenant Napier states that after Sharif Khan's death his sons returned to Seistan, and Alam Khan, the then Persian Governor, gave them the village of Khwaja Muhammad. That and the Persian village of Malik were the only Narui villages in Persian Seistan at the time of Lieutenant Napier's visit in 1893. They are divided into the following sections :—

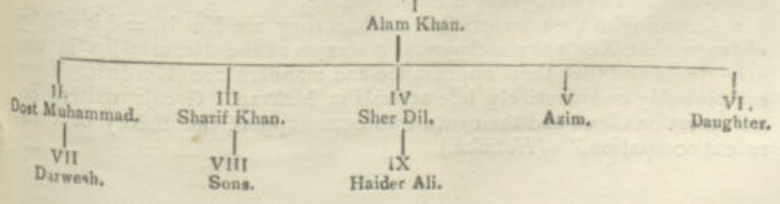
1st.—Rakhinanis.
2nd.—Sajadis.
3rd.—Kasojis.
4th—Kurds (*or Shahedis*).
5th.—Mings (*or Minds*).
6th.—Arbabis.
7th.—Malikahs.

The true derivation of this name "Narui" appears to be that given by Maitland, *i.e.*, that their home was originally at or near Koh Naru.

Appended is a genealogical tree of the Narui chiefs.

(*Pottinger—Masson—Ross—St John—MacGregor—Maitland.*)

BALUCHIS (NARUI).



BALUCHIS (NARUI).

I.—ALAM KHAN.—Said to be first cousin of Shah Mirab Khan of Bampur in Pottinger's time. Settled in Seistan, under the auspices of Malik Bahram Kaiyani, on the borders of the little Hamun in the lands called "Sabz Kim."

II.—DOST MUHAMMAD.—A powerful chief, died 1857. Leech, writing probably in about 1838-39, mentions that he married the sister of Riza Khan, and gave his own sister to Ali Khan, Baluch, adding:—"He is under Kamran." His tomb is shown close to Kala-i-Nau, or, as sometimes called "Kala-i-Dost Muhammad Khan," near Burj-i-Alam Khan, the capital town of the Narui Baluchis in Seistan.

III.—SHARIF KHAN.—The principal Baluch chief in Seistan, whose devotion to Persian interests, whether assumed or real, has no doubt greatly tended to consolidate the power of the Amir of Kain. The son of the latter is, it is believed, married to Sharif Khan's daughter. Sharif Khan had many sons, of whom one expressed openly allegiance to the Amir Sher Ali Khan of Afghanistan. Others are in Persian pay or service.

IV.—SHER DIL KHAN, of Kamik and Burj-i-Alam. Has local influence, but is ostensibly in Persian interests.

V.—AZIM KHAN, of Deh Sharif Khan.

VI.—Needs no separate mention.

VII.—DARWISH, passed over in the succession to his father's chiefdom in favour of his uncle Sharif Khan.

VIII.—One of them is in charge of Nad Ali, the recently-acquired Persian fort on the right bank of the Helmand.

IX.—HAIDAR ALI.—A well mannered youth educated at Tehran, but now at Burj-i-Alam Khan. (*Roome—Webb-Ware.*)

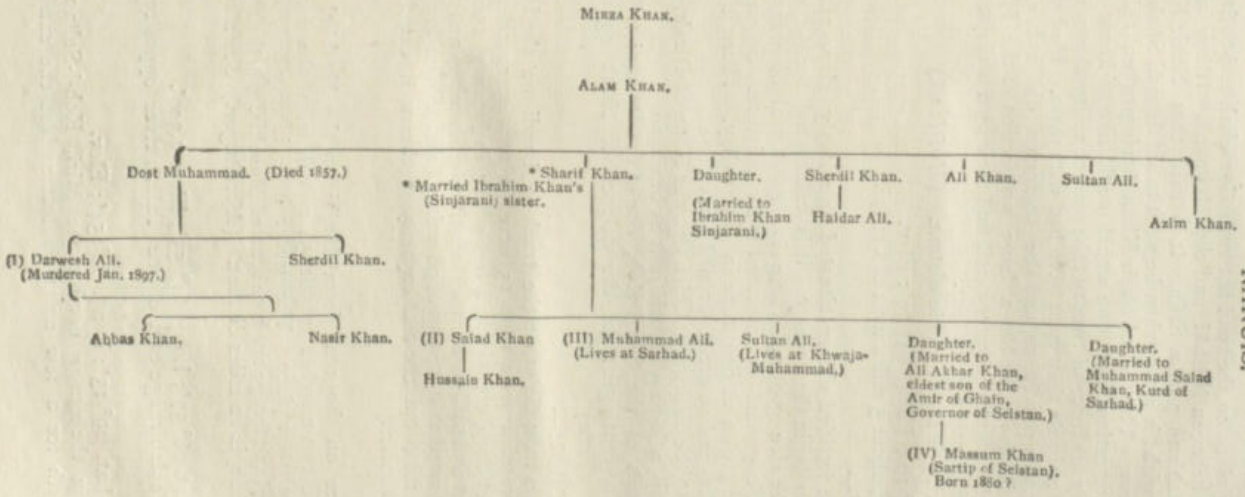
Colonel T. H. Holdich in 1892 writes:—

"Certainly the great Narui tribe does not include all the minor *khels* with which it is credited in the official Gazetteer" (that is by Pottinger), "(the Sajadi, for instance), and certainly they do not represent one original horde of immigrants into Baluchistan, but successive waves of a human sea overlapping the northern borders of Makran, and spreading further and further southwards with the lapse of time. I hardly think that the term Narui is to be traced to Na-Rohi, *i.e.*, "*not* men of the hills" or, in other words, 'men of the plains.' This negative form of nomenclature is, to say the least of it, uncommon. The tradition amongst some of the Narui tribes is to the effect that they spread into Dizak and its neighbourhood from the Naru hills. This seems to point to a Seistani origin, and as we now know that the wide plains of Sarhad to the south and west of Sekoha are occupied by Naruis, and that they extend north to Kala-Fath on the Helmand, it is at least probable that the Makrani Narui is but the result of a natural overflow from the north-west. Their language is early Persian.

"According to the ethnographer Latham they are Kurds, and it will be observed that Kurds are included as a section of the Narui tribe in the Gazetteers and that their appearance and manners are Kurdish. They are probably comparatively late arrivals in Makran. Greek writers do not mention them, and their own traditions support the theory of their recent occupation." (*Holdich.*)

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NARUI-BALUCH.



(I) Darwesh Ali Khan passed over in the succession to his father's chiefdom in favour of his uncle Sharif Khan. After wandering about for some years, and visiting Quetta in 1892, he asked the Shah of Persia for some lands to enable him to live. The Shah of Persia granted him five villages in Seistan in 1895 or 1896. Salad Khan refused to give them over, and on Darwesh Ali's return journey, January 1897, to complain about it to the Shah, he was shot at the instigation of Salad Khan.

(II) Salad Khan is the Sardar of the Naruis. Acts as guardian to his nephew Mir Massum Khan. Is a man of considerable power in Seistan.

(III) Muhammad Ali is on terms of enmity with Salad Khan, and resides principally at Mirjawa, Sarhad.

(IV) Massum Khan, a youth of 16 years (1897), is completely under the thumb of his uncle Salad Khan (1897.)

(Roome—Webb-Ware.)

NASIR KHAN MASID OR MASJID—

A small praying place on the road between Gazachah and Safia on the Shah Ismail route between Nushki and the Helmand. It lies about 8 miles from Gazachah and 7 from Safia. It is said that Nasir Khan of Kalat halted here with his army when he went to aid Ahmad Shah Durani against the Persians. The fact of Nasir Khan having taken this route is valuable and interesting, and one would much like to know how he contrived to supply his force of twenty thousand or thirty thousand men, and the numerous animals they must have had with them. Probably the men carried their own provisions, and the horsemen did not exceed a few hundred. It is also probable a large proportion of the force was mounted on camels, which can pretty well find their own subsistence in the country. Still it was a great feat.

The Kanuk spring is about 1 mile distant. (*Maitland.*)

NASRIN—Lat. 29° 20′; Long. 64° 39′; Elev.

A small village, about 5 miles west of Chagai.

NAUK OR NAHU—

Is a fairly large fortified village, situated in a lovely glen, and is one of the prettiest spots in the country. It is celebrated for the superior description of the rice grown. There is a great deal of water which never fails, and the ground is saturated with moisture. Sugarcane is said to have been grown at one time in this valley. There is a large grove of date palms and an orchard round the village.

Nauk belongs to the Buzirgzada Chief, Dilawar Khan of Dizak, who has placed Sardar Gaji, a Jadizai Baluch, in it as headman.

The Gumshadzais of the Safed Koh, one of the Damani tribes, are bound to furnish a contingent for the defence of Nauk against any foreign invader. (*Tate.*)

NAWAB KHAN CHAH—

A well, 26 miles from Galur, on the track to Landi on the Helmand, situated in a depression from 10 to 15 acres in area surrounded by low sand-hills, 56 feet deep, containing 4 feet water in January 1903. The water is excellent and said to be inexhaustible. Evening and morning measurements showed that a camp of 98 animals and 76 men lowered the surface by one foot, but the real capacity of the well could not be ascertained. (*Wanliss.*)

NEHRI—

A halting-place on the road from Meski on the Mashkel river to Amir Chah. It is two marches (about 54 miles) from the former and 25 miles from the latter place. The water here is very bad, only just drinkable, and fuel and forage are both scarce. Mushki Chah, the next stage towards Amir Chah, is 12 miles distant. (*MacGregor.*) *See* also KONDI or NIHRI.

NIDAMI GAR—Lat. 28° 37′; Long. 61° 55′; Elev. 4,300′.

A hill in the Tahlab range east of the Tahlab river opposite Sang-i-Ach (*q. v.*).

NIHANG ROD—Lat. 29° 13′; Long. 62° 54′; Elev.

A *nala* rising in the *nawar* north of the Miri, Koh-i-Sultan, which, after flowing north for a few miles, is lost amidst the sand-hills of

Registan. It is a dry *nala*-bed, except after heavy rain on the Koh-i-Sultan, when the water rushes down in a torrent and it quickly dries again. (*Roome.*)

NILAGAN.—

A well of fairly good water in the bed of a ravine from the Karzak Kaur It lies on the road from Meski on the Mashkel to Shandak, between the Amuri and Juli ravines, 11 miles from the former and 5 from the latter place. (*MacGregor.*)

NILDIK KOH—Lat. 29° 16′; Long. 62° 40′; Elev. 4,500′.

The track from Amir Chah to Dalbandin passes ½ mile to the north of it at 10¼ miles. A solitary conical hill, standing up in the plain, well away from the main range of Koh-i-Sultan.

The ground around its base is slightly undulating.

NIMIK PASS—

Between Koh-i-Sheikh Hussen and Lagharkoh. The ascent is very easy, the gradient being approximately $\frac{1}{150}$. The highest point is only 150 feet above the level of the plain, and here the pass narrows to about 1,000 feet. The ground is stony with scattered small bushes.

This pass could be avoided by going to the north of Lagharkoh, but the soil is soft with an efflorescence of *shora* which would prove very heavy going after wet weather. (*Roome.*)

NIZA-I-SULTAN—Lat. 29° 10′; Long. 62° 47′; Elev. 5,800′.

A peak of the Koh-i-Sultan, north of the *nawar*.

NODO—Lat. 28° 27′; Long. 62° 8′; Elev.

A halting-place on the road from the Mashkel river to Amalaf in Western Baluchistan. It is the eighth stage from Jolushan and four stages from Amalaf. There is some good well water here, and fuel and forage. The Tahlab river rises here. (*Webb-Ware.*)

NOKCHAH—Lat. 29° 6′; Long. 63° 10′; Elev.

A well about 6 miles south of Dholi and 10 miles south-west of Butak. The water in it is said to be brackish and small in quantity. Liable to be filled in with drifting sand. (*Roome.*)

NOKCHAH.—Lat. 29° 33′; Long. 63° 33′; Elev. 3,069′.

A halting-place on the road from Nushki to Dalbandin, and 98½ miles from former.

P. C. bearings—

To Mekh-i-Rustam . . . . . 43°
„ Kambaran . . . . . 142°

There are nine wells (four in disuse); water 25 feet to 30 feet from surface, 2 feet of water, and 3 feet diameter. The water is good.

The wells lie to the east and close to the sand-hill locally known as Bazgaz and are marked by a couple of tamarisk trees.

There is an abundance of *tagaz* around serving for camel-grazing and fuel. The camping-ground is unlimited.

There are signs of a former cultivation around here.

A track leads from here to Khargoshkhan, but it is difficult owing to sand-hills.

A track from Chagai to Kharan *vid* the Raloi Pass and Erikalag passes through here. (*Roome.*)

NOK CHAH—

A well 2½ miles west of Nawab Khan Chah, the westernmost of a line of wells extending eastward in an almost unbroken line for 60 miles or more marking the junction of the Registan and Lut. (*Webb-Ware.*)

NOKJU—

A *karez* that takes its rise in the Bagh-ke-Chashma, and irrigates a portion of the Nushki and Baghak plains. (*Roome.*)

NOKINAWAR OR NOKINAWARA.—Elev. 2,875′.

A halting-place between Zard and Band-i-Khan Jahan, 21 miles from the former and 8¼ from the latter. It lies on the Pirpuchi route from Kharan to Chagai and the Helmand. The place takes its name from a new tank which has been constructed here (Noki = *new*, Nawar = *a tank* or *depression in the ground*). The tank is of an irregular shape and in length is about 180 yards. It dries up only after a long drought. The country around is open and partly under cultivation, and has a fair sprinkling of tamarisk trees. The drainage of several sand-hills accumulates, and the soil being alluvial and firm, percolation is slow, and thus the ground is naturally fitted for the construction of a tank. Fuel and camel-grazing are very plentiful; the water though is somewhat muddy. (*O'Donnell.*)

NOK KUNDI, KONDI, OR NIHRI—

A halting-place on the Merui-Saindak trade-route about ¾ mile west of Kundi. There are three wells at this stage each thirty feet deep. Camel-grazing good, fuel abundant, water, of fairly good quality, abundant. No grass. (*Webb-Ware.*) (*See* also Appendix V.)

NOLI KOH—

A range of hills in North-West Baluchistan south of the Gat-i-Barote. It appears to have been formerly connected with the latter hill. (*MacGregor.*)

NOZAI MENGALS—*see* MENGALS.

NUHLI—

The eighth stage from Kharan (140½ miles) on the road to Amir Chah *viâ* Regin and Butig. The camping-ground here is good; wood and grass very plentiful; sweet water in bed of the stream. At this point a road branches off to the Helmand *viâ* the Amuri Pass. This pass is 48 miles distant. It is a *kafila* road and largely used. (*Ahmad Ali Khan.*)

NUR MUHAMMAD CHAH—

A well situated midway between Akhtar Chah and Bakhal-i-Chah (*q. v.*). This well is 36 feet deep and contains plenty of good sweet water. *Barshon* grass is obtainable in the vicinity. Camel-grazing luxuriant. (*Webb-Ware.*)

NUSHKI BAZAR—Lat. 28° 22′ 30″; Long. 63° 13′ 30″; Elev. 2,900′.

Consists of about 250 shops and houses laid out on a modern plan with broad streets intersected at intervals by gullies. Following on the transfer of Nushki to Government in June 1899 several new buildings were erected. First in importance comes the Nushki dispensary which comprises a small building set apart for female in-patients and quarters for the hospital assistant in charge and his family. The dispensary is freely

made use of by patients who come from so far afield as Shorawak, the Registan and the valley of the Helmand to take advantage of the medical treatment afforded. The other buildings consist of a sub-treasury built of brick, a six-roomed travellers' bungalow with the usual offices and out-houses annexed, and a new *serai* for caravans, two rooms in which have been set apart for the sole use of Shiah pilgrims. The Nushki tahsil was further improved by additions consisting of a new police wing, four double-storeyed towers built one at each corner of the *thana* and many minor structural additions to accommodate the tahsil establishment and levies. There is also a post office in charge of a sub-postmaster and a telegraph office.

During the Amirship of the late Abdur Rahman of Afghanistan many of the Nushki traders dealing with Shorawak, Registan and Garmsel owing to increased competition and the stringency of the Afghan preventive measures were compelled to close their shops in the Nushki bazaar. But since Habibulla came to the throne these measures have either been neglected or relaxed, and these shops have already been re-opened. It is hoped that, if a more generous commercial policy be adopted by the present Amir, a large Afghan trade will spring up in the Nushki bazaar. The trade with Seistan and Eastern Persia is increasing annually, and if not crushed by Persian customs dues is likely to go on increasing. In 1903, after the famine year of 1902, only 30 shops remained open.

The distance from Nushki to Quetta is 91 miles by the main road which owing to the inclines is not a very good camel road and, being unmetalled, is unfit for wheeled traffic. A railway is now being constructed on this line, which when opened will add greatly to the importance of Nushki as a trade centre.

Nushki is the natural starting point and terminus for caravans crossing the deserted area between it and the Persian frontier. The distance from Nushki to Robat, the westernmost point of the trade-route within British territory, is 372 miles.

Around Nushki is a vast plain on which the camel-grazing is good. The Kaisar river with a plentiful supply of water runs through the plain within 1½ miles of the Bazar. Supplies, forage and fuel are abundant Nushki, from its position, even from the earliest times, has enjoyed a reputation as a trade mart of considerable importance laying claim to a commerce which has increased and diminished in proportion, as the surrounding districts from which trade is drawn either enjoyed a brief repose or were torn with inter-tribal feuds.

Trade converges on Nushki from five different sources :—

(*a*) From Jalk *viâ* Galla Chah and Dalbandin, chiefly dates.
(*b*) From Seistan *viâ* the trade-route, sheep, goats, local Seistan products, including *ghi*, wool, namdahs, carpets.
(*c*) From Garmsel *viâ* Khwaja Ali, Robat (Malik Dokand), *ghi*, wool, grain.
(*d*) From Eastern Helmand *viâ* the Purdil Khan road, wool, *ghi*, grain, dried fruits.
(*e*) From Shorawak, by numerous routes across the frontier, *ghi*, wool, grain. (*Webb-Ware.*)

NUSHKI DISTRICT—

The Nushki district has an area of about 2,000 square miles, and comprises the plain country south of the Baluch-Afghan boundary line, with the Sarlat range on the east, and on the south the Kharan border which is marked by the watershed of the Ras-Koh range; the western line runs from Koh-i-Sheik Hussen northwards through Lala and Ziarat-i-Sayad Mahmud to the Baluch-Afghan boundary about half-way between pillars Nos. 156 and 157. There are several small villages scattered over the Nushki plain, the largest of which has about 250 shops, and bears the same name as the district.

Nushki is watered by the Kaisar stream, which issues behind the hills to the east and irrigates a considerable extent of land.

The plain is not more than a mile broad, but it is well cultivated and irrigated. The cultivation extends westward nearly through the sand-hills, which are a labyrinth of low ridges enclosing patches of flat alluvial soil. There are no fruit trees, but they are being imported.

The inhabitants are Zagar Mengal Brahuis and Rakshani Baluch, numbering in all about ten thousand inhabitants, of which, perhaps, two thousand are available for fighting purposes. Formerly all Nushki belonged to the latter, but they have been partially dispossessed by the stronger Mengals.

The inhabitants do not migrate in the winter season. It is asserted that it would be inconvenient to do so from the great numbers of their live-stock, camels and sheep. At any rate they are not compelled, like the tribes of the bleaker regions of Sarawan, to shift their quarters from severity of climate. Situated at the foot of the hill range supporting the plateau, and on the skirt of the great desert of Seistan, the climate of Nushki is somewhat warmer than that of adjacent districts. Snow very rarely falls, and when it does, only to melt and disappear.

Packs of wolves are said to roam over this district and commit great havoc among the sheep. Hares are numerous, and antelope are to be found especially in the *Dashts* of this district.

PADAG.—Lat. 29° 19′; Long. 65° 19′; Elev.

P. C. bearings—

To Mekh-i-Rustam	
„ Laghar Koh	312°
„ Ras Koh	67°
	205°

The fourth levy post on the trade-route from Nushki to Robat, 60¾ miles from Nushki. The post is substantially built of mud bricks with a small tower to the south, and is situated on a small *pat* plain surrounded on three sides, north, east and west, by low sand-hills and on the south side it is commanded by a low rocky hill. There is also a *dák* bungalow for the use of travellers. On the sand-hills there is an abundant growth of *tagaz* and on the plain to the east beyond the sand-hills there is a profuse growth of *drubh* grass. The soil of this plain is covered with a crust of *shora* showing brilliantly white between the sprouts of grass. After rain this plain becomes more or less a morass and is then impassable for camels which have to make a long detour on the *daman* of the hills to the south to avoid it and reach Pokhdan. In dry seasons the march between these two places can be shortened considerably by cutting

straight across the plain. In spring time a good many animals, cattles, sheep and goats are grazed on this plain, and, even if the grass appears to be dry and parched up, appear to extract some nourishment from it.

There is a well called Gazachah a few paces to the south of the *thana*, and the water in it is good. The water is 15 feet from the surface, 2½ feet in depth. The supply of water is not sufficient for many animals, but there is plenty of water fit for animals to drink at Padag proper, which is about a mile to the south, and on the plain to the east there are occasional pools of water. The water of this plain seems to be generally at a depth of 4 feet. Two new wells were dug in 1900, one of which has a diameter of 10 feet and is furnished with a windlass and watering trough. A telegraph office was opened here in February 1903.

Supplies.—Nil.

Fuel.—Abundant; *tagaz* in abundance.

Camping-ground.—On the *pat* plain near the post is contracted and commanded by sand-hills. From Padag a road leads north-west to Chagai, a distance of 50 miles; the first 30 miles over low sand-hills; a detour to the west is necessary when the Lora Hamun is in flood. (*Roome—Scudamore.*)

PADAGI SPRING—

A spring in the bed of a *nala* about 600 yards on the Robat side of Maki (Muhammad Raza Chah). The spring is in the hills about 4½ miles from the mouth of the *nala*, and its position is marked by a grove of about 20 *padag* trees. A supply of water sufficient for a party but somewhat aperient issues from the bed. (*Rose-Price*)

PADAHA.—Lat. 28° 56′; Long. 61° 23′; Elev.

There are two Padahas on the Perso-Baluch frontier. One is situated in the river-bed where the Ladis river debouches into the Mirjawa plain and thenceforth becomes known as the Mirjawa river (*q. v.*). The other is situated at the northern junction of the Mirjawa and the Dar-i-Giaban river. The word Padaha is a generic term meaning Digar, *i.e.*, cultivable alluvial land in the bed of a river. (*Webb-Ware.*)

PADGIABAN—

Thirteen and-a-half miles from Chagai on the road to Duganan. In 1896 there were some small quantities of surface water, and plenty of tamarisk. In 1898 a *karez* was opened out. This is a mere surface working, but capable of considerable development. (*Walters—Webb-Ware.*)

PAHALWAN LABUZAI.—Lat. 29° 40′; Long. 65° 44′; Elev.

East of Fakir Muhammad well and about 2 miles south of Afghan-Baluch boundary pillar No. 155.

PAHLAWANZAI.—Lat. 29° 27′; Long. 65° 56′; Elev.

One of the Baghak villages of the Nushki district.

PAHROD PASS.—Lat. 28° 56′; Long. 65° 23′; Elev.

A pass over the Shekh Hussen range north of Kharan, traversed by the Kharan-Nushki road.

PALANG KOH—

A conspicuous hill north-west of Koh-i-Malik Siah.

PALEZ—

A halting-place in the Palez *nala*, south of Duzdap, on the track to Ladis that leads west of Koh-i-Bibi Mah. Here there are some dry wells or pits in a patch of sand in the *nala*-bed which is covered with a thick growth of tamarisk bushes and *nal* grass. There were 10 or 12 shallow pits about 3 feet deep, but all were dry with the exception of one which had a little water in it. From the numerous marks of camp fires this is evidently a favourite halting-place, and water in favourable seasons should be obtainable.

A track from the Kali springs joins in on the left bank 1,000 yards lower down the *nala*.

Camping-ground.—Contracted and commanded by hills in the *nala*-bed.

Supplies.—Nil.

Camel-grazing.—Abundant in vicinity.

Grass.—Only *nal*.

Water.—Supply uncertain and dependent on the rainfall.

Fuel.—Abundant.

P. C. bearings.—Juhli-Koh, 151°. Lar Koh, 22°. Kacha Koh, 50°. Palez Koh, 75°. (*Roome.*)

PANGAKI RIVER—

A small affluent of the Chilgazi *nala*.

PANIHAM—Elev. 2,472′.

A halting-place on the road from Galur to Landi on the Helmand, 19½ miles south-east of Landi. In January 1903 the pool of water in the bed of the *nala* had been 2½ feet deep, but was only one foot deep and contained about 15,000 gallons. More water could probably be obtained near the surface by digging in the *nala*-bed. Fuel and camel-grazing, but no supplies are found here. (*Wanliss.*)

PANIHAM—Lat. 28° 34′ 10″; Long. 63° 16′ 10″; Elev.

A camping-ground a few miles north of the Mashkel Hamun in Western Baluchistan, in the bed of the Amuri ravine, where there are some date trees and a good supply of water in the bed of the ravine. There is very little camel forage here, but a fair supply of grass and abundance of good water. This plenteous supply of water in a tract which is surrounded by desert makes it a frequent resort of *kafilas* and travellers, and, not unfrequently, of raiding parties. (*MacGregor.*)

The country around here and on to Isatahir is of a peculiar formation. A series of low level plateaus arranged in low wide steps, the soil being *gravel*.

Wells have to be dug in the bed of the *nala*; water found 4 feet from surface in apparently any quantity.

Camping-ground.—Unlimited, open.

Supplies.—Nil.

Fodder.—A small quantity of grass can be obtained in the *kaur* bed.

Camel-grazing.—*Lana* in considerable quantities.

Fuel.—Scarce.

In this *kaur* bed a kind of weed grows in some quantities. The natives call it *sirgandoi* or *shutorbai*. They say it is a very good vegetable. (*Roome.*)

It is on the track from Dalbandin to Amir Chah, 102½ miles from former.

It also lies on the Mashkel route from Panjgur to the Helmand, 179 miles (eleven stages) from Dashtak (in Panjgur), and is situated at the junction of three roads, one north-west to Seistan *viâ* Nihri and Amalaf, one north-east to Gat i-Parote and Dalbandin, and one due north to the Shandak Kaur and the Helmand *viâ* Galla Chah. Meski on the Mashkel is 11 miles south, and the Shandak Kaur 40 miles north over a waterless tract. (*MacGregor.*)

PANIHAM NAWAR—

A spot a short distance from Paniham up the same ravine; abundance of grass, camel forage, and fuel can be obtained and water by digging. (*MacGregor.*)

PASHTROD—

Twelve and a half miles from Chagai on the road to Duganan. In 1896 there was some surface water lying about. (*Walters.*)

PATKIN—Lat. 29° 3′; Long. 65° 49′; Elev.

The third stage (37 miles) on the road from Nushki to Kharan. It is only a camping-ground with but little forage. Water from pools in the bed of the stream. (*Wahab.*)

PATKOI OR PATKOK—

A halting-place in North-West Baluchistan on the road from Shandak to the Helmand by the Diwanak road. It is 32 miles from Shandak and 12 from Jalejal (*q. v.*). There is water here from wells in a ravine and abundance of fuel and camel forage, but no grass. (*MacGregor.*)

PERINGAP—

On the road from Chagai to Duganan, about 11 miles from Chagai. The springs lie about 40 yards to the left of the road. Captain Walters states:—"Here we found at the surface abundance of water in big pools."

This was early in 1896.

PESHBAND RIVER—

A small affluent of the Mazan-i-Nohli from the north-west.

PHULLEN NAWAR—

A *nawar* 300 yards long by 50 broad, holding, in February 1903, an abundant supply of fresh water, the result of recent rain. The surrounding plain is the eastern extremity of the Gaud-i-Zirreh. This *nawar* is 58½ miles north of Amir Chah on the road to Rudbar (*q. v.*). (*Webb-Ware.*)

PHULLEN REG—

A desert halting-place for *kafilas*, 27 miles north of Amir Chah (*q. v.*). Phullen signifies in Baluchi "scattered," and the halting-place situated as it is in a small basin surrounded on all sides by detached sand-hills, fully justifies its name. (*Webb-Ware.*)

PIRAN RIVER—

Rising west of Kacha Koh flows north-north-west past Bogar spring, and then turns north-north-east past Piran Ziarat through the hills and is lost in the sand desert towards the Gaud-i-Zirreh. There is sufficient water in this river for the regiments of a division. In 1903 in the vicinity of the trade-route this river was found to be a dry *nala*. (*Roome—Scudamore.*)

PIRDAD RIVER—

Rising about 6 miles west of the Mazari pass flows east-south-east into the Lora Hamun, about 6 miles south of Chagai; it is known in its lower course as the Padgiaban (*q. v.*).

PIR KAISAR—

A *ziarat* on the eastern edge of the Sultan *shora* plain north-west of Kani on the Shah Ismail route to the Helmand. (*Maitland.*)

PIR KAISAR OR SULTAN PIR KAISAR—

A shrine in the desert country of North-West Baluchistan on the road from Meski on the Mashkel river to Amalaf, three stages (67 miles) from the former place and 43 miles (waterless) from Amir Chah (*q. v.*). It is close to the stage called Manzil by MacGregor. There is water in the bed of a ravine, but it is bad if left standing for any time, and here fuel and forage are plentiful. Fresh wells would produce good water; if not abundance of excellent water can be obtained by scraping holes in the sand, 1 mile to the north-west over a ridge of sand. (*MacGregor.*)

PIR KAISAR OR SULTAN PIR KAISAR KOH—*see* KOH-I-SULTAN.

PIRPUCHI PASS—Lat. 28° 43'; Long. 64° 48'; Elev.

A pass in the lesser range of hills bounding Kharan territory on the west. It lies to the south of the Koh-i-Charian and is on one of the routes leading from Kharan to Chagai. It lies between Zard and Nokinawar, and commences about 1½ miles from the former place. It is practicable for baggage animals and could be made so for wheels with a little labour. The crest is about 200 feet above Zard, and from it a good view of the Dalbandin plain can be obtained. The Pirpuchi Ziarat is passed at 2¼ miles from Zard. (*O'Donnel.*)

PISHAK—

A plain on the road from Nushki to Dalbandin, 113 miles from Nushki, 11½ from Dalbandin. There is no particular halting-place here. The water-supply being entirely dependent on rain that collects in hollows and pools in the plain, and at its best the supply is sufficient for 100 camels for one day.

Camping-ground.—Unlimited.
Fodder.—*Barshok* grass in abundance.
Camel-grazing.—*Tagaz*, abundant.

Fuel.—Abundant.

Supplies.—Nil.

A little *kushkawa* cultivation is carried on on the plain, but the crops were miserably poor.

P. C. bearing from rain water pool—

To Mekh-i-Rustam . . . . . 60°

A track passes through here from Anjira (distant 163 miles) to Shandak (distant 115 miles). (*Roome.*)

PISHI RIVER—

Rising north of Doki mountain runs north into the Dalbandin plain.

POKHDAN.—Lat. 29° 4′; Long. 65° 32′; Elev.

The third stage of the *dâk* sowars on the Nushki-Robat trade-route.

P. C. bearings—

To Laghar Koh . . . . . 27°
„ Mekh-i-Rustam . . . . . 286°
„ Chappar Koh . . . . . 270°

There is a small levy post here built of mud bricks, consisting of two rooms and a small courtyard. It is situated to the south of the most westerly edge of Laghar Koh, where the *daman* joins Padag plain.

The well (capacity 150 gallons, refilling in 2 hours, water 15 feet from the surface) is a few paces to the north of the post. After heavy rain on the hills to the south, this well is filled up with sand and débris brought down with the rush of water from the hills.

There is another small well 2 miles from the post and between it and Laghar Koh.

Supplies.—A few sheep, goats and bullocks grazing on the plain to the north.

Forage.—*Drubh* grass in abundance on the plain to the north.

Firewood.—Practically *nil*. A few small bushes.

N.B.—This place is also known by the name of Kuchakki, the real Kuchakki is 3 miles on in the direction of Padag. (*Roome.*)

PORCHAH—

A well half-way between Dalbandin and Chagai. Water plentiful and good. Good camping-ground near. Camel-grazing and fuel plentiful. No supplies. (*Roome—from native information.*)

PRAHDAB WELL.—Lat. 28° 54′; Long. 64° 58′; Elev.

About 2½ miles south of Yadgar.

PRAHROT RIVER—

One of the numerous *nalas* which drains from the north towards the Hamun-i-Mashkel, but disappear in the sand before reaching it.

PRAJI HILL—Lat. 29° 24′; Long. 64° 19′; Elev. 7,320′.

A peak of the Chagai Sarlat, situated about 3 miles north-north-east of Gurgarok.

PULALAK—

A village on the left bank of the Helmand, situated nearly midway between Khwaja Ali and Lundi Barechi, with a population of some 370 Barechis. There is a certain amount of cultivation in the neighbourhood

and there were altogether some 250 acres under wheat and barley. The village possesses 70 cattle and 200 sheep and goats. The present Khan is Ibrahim Khan. (*Wanliss, February 1903.*)

PULCHOTA ZIARAT—Lat. 29° 11′; Long. 65° 9′; Elev.

At the eastern foot of Mekh-i-Rustam hill and south of the Thal-Zarala road.

PURTUS—

A halting-place on the road from Sayad Bus in Shorawak to Zahro on the Nushki-Shah Ismail route to the Helmand. It is 24 miles from Sayad Bus and the same from Zahro. There is a large tank here which is a much-used watering place for the flocks of nomadic Mengals and Rakshani Baluch, the chiefs of which tribes reside in Nushki. Firewood and grass are abundant.

It is said to be about 18 miles from Band and bears 26° mag. from that place. (*Maitland—from native information.*)

Purtos Nawar.—A splendid horseshoe-shaped tank of beautiful water surrounded all round by high sand-hills; water reported to be deep in the centre. It looked like it. (*Walters.*)

PUSHT-I-KOH OR PUSHT KOH—*see* KOH-I-PUSHT.

PUSHTIWAN—

The name of a dry *nala* in the Chagai district. It is shown on the map as the name of a place, which is wrong. (*Roome.*)

RADOI ZONK—Lat. 28° 35′; Long. 64° 6′; Elev. 3,200′.

An easy *tangi* 300 yards long north-north-west of the Malik Surindag through which the Nushki-Ladgasht road passes and in which the Sorap river has its source, a beautiful spring of good water.

Fuel and camel-grazing are plentiful, and grass in summer. Sheep and *ghi* are procurable in the neighbourhood. The camping-ground here is restricted. (*Ahmad Ali Khan.*)

RAHAT—Lat. 29° 25′; Long 65° 16′; Elev.

On the Kulawo river about 16 miles east of Lora Hamun.

RAHIHO WELL—Lat. 29° 11′; Long. 64° 44′; Elev.

About 8 miles south by west of Chagai.

RAHIMDAD WELL—Lat. 29° 16′; Long. 64° 44′; Elev.

About 1½ miles south by west of Chagai.

RAHIO PASS—Lat. 28° 7′ 40″; Long. 63° 15′ 20″; Elev.

A pass leading from Namreg in Dalbandin through the range to the south to Kharan. It passes between two high peaks in that range called Koh Charian and Koh Kambaran (*q. v.*). The distance is three stages. (*MacGregor.*)

RAH-I-RAH OR RAH RAU—

A halting-place on the bed of the Mashkel, the eighth stage from Kharan on the road to Galugah and Jalk *viâ* Regin. It is 12 miles distant from Zaman Kushta (the next stage towards Kharan) and 19 miles from Galugah. There are shallow wells and pools in the bed of the stream, but the supply of water is precarious. Tamarisk jungle is abundant. (*O'Donnell.*)

RAKHSHANI—

This tribe is divided into two branches—the Badini, the senior branch and the Jamaldini.

The Badini are sub-divided into Balazai, Isazai, Yalanzai, Fakirzai, Sor Rakhshani, Ghabarzai, Kamarzai, Gurgej, Izatzai, Jahindzai and another sub-section known as the Makki.

These Makki emigrated many generations ago to Seistan, where they now reside. The tribe which is sub-divided into the Rahmanzai, Shakarzai, Jogezai, and Mir Khanzai continues to acknowledge the Sardarship of the Badini Rakhshani chief.

The Jamaldini compelled the original inhabitants of Nushki, the Mandai, to amalgamate with them and own to several sub-sections. These, enumerated in their order of importance, are the Karamzai, Shakazrai, Ramdani, Pehlwanzai, and Amirzai.

The tribe numbers in all about 450 fighting-men.

The Rakhshanis many generations ago came from the direction of Kalat to assist the Mandais to eject the Barechis from Nushki, and after successfully accomplishing this task they established themselves in Nushki. They are the largest owners of land in the Nushki district, although they are, in authority and numbers, superseded by the Mengals (*see* MENGALS). (*Webb-Ware.*)

RANGAZAN RIVER—

Rises west of the Bugsar range and flowing past its northern extremity through Andai joins the Mirjawa river about 6 miles below Mirjawa.

RASANI PASS—Lat. 28° 38′; Long. 64° 37′; Elev. 3,870′.

A pass through the Shekh Hussen range south-south-east of Dalbandin from which a road runs by the pass to Hurmagai in Kharan territory.

RAS KOH OR RASH KOH.—Lat. 28° 50′; Long. 64° 15′; Elev. 9,899′.

The highest peak in the rocky range of mountains bounding the Kharan district on the north-west.

The Koh-i-Shekh Hussen is the most northern prominent peak of this range, and the Kambaran and Charian peaks the most southern.

From the latter this range appears to decline gradually into the sandy desert of Western Baluchistan. (*MacGregor—O'Donnell.*)

RAUDEN—

A Sinjarani Baluch village of 30 huts, situated on the left bank of the Helmand near the ruined fort of the same name. The village has 120 inhabitants, 90 cattle, 180 sheep and goats. There is said to be a ford across the river. (*Wanliss—February 1903.*)

RAZAI—

A halting-place on a direct but comparatively waterless route from Nihri to Amalaf, about 25 miles west of Nihri. There is a well of good water here in a ravine, but little fuel or forage.

A road from the north-east joins in here from Mushki Chah (*q. v.*), whence to Amalaf by this route the distance is 54 miles. (*MacGregor.*)

RAZAP ROD—

A tributary of Laki Rod rises west of the Laki hills. Crossed at 13th mile on the road from Mirui to Ekmach. A wide shallow *nala*-bed. (*Roome.*)

REG OR REGISTAN—

This word means "country of sand," and is applied to the great desert which stretches in one continuous line eastward from Palang Koh in Seistan to a little west of the line Nushki-Kandahar and forms the south-western boundary of Afghanistan and the north-western boundary of Baluchistan. In common parlance it is spoken of merely as the *reg*. It is a vast expanse of ridges and hillocks of loose red sand, and is of considerably greater elevation than the adjacent alluvial plains. It abuts on Shorawak in a long line of sand bluffs, touches the end of the Khwaja Amran to the north of that district, and, sweeping round north-westwards across the end of the Kadanai valley, follows the line of the Dori, and then of the Tarnak, until the latter falls into the Helmand. The ranges, or spurs, which run south-westwards from the watershed of the Indus all terminate at the edge of the desert, leaving only a few scattered outliers, rising like islands from the sea of sand. Of these the most remarkable are the black rocks called Sarang ("robber"), which are far out, and apparently equi-distant from the Khwaja Amran and the Khwaja Biland Baba hill near Kandahar.

Although from a distance the Registan appears a dreary waste of sand, a closer examination shows that, at all events near its border, the sand-hills are pretty thickly sprinkled with bushes and vegetation, and even with grass after rain. The hollows often hold patches of alluvial soil, which can be and are cultivated in favourable seasons. The whole desert is often called Chol, and this region, said to stretch from 5 to 10 miles inwards, is the Nim Chol, or "half desert." It affords pasturage to numerous flocks of sheep and herds of camels, and is, therefore, of great value to the tribes whose country is contiguous to it, and for whom it is a general winter resort. The desert also affords harbourage to broken clans and wild robbers, who have no other home. Among these are numerous Baluch and Brahui nomads.

The desert itself is somewhat of a geological puzzle, and well worthy of closer and more scientific study than has yet been devoted to it. Mr. C. L. Griesbach, F.G S., of the Geological Survey of India, writes as follows :—

Of especial interest seem to me the vast deposits of aerial origin, now covering extensive tracts of country, not only in the great deserts of Registan, of Seistan, etc., but which also encroach rapidly on the more fertile plains of Southern Afghanistan—the valleys of the Helmand (Arghandab, the lower Khakrez, and the great tracts lying between Kandahar and Quetta). These deposits may be well studied along the banks of the Dori and lower Arghandab. Time and opportunity were too limited to admit of my devoting much attention to these interesting deposits Suffice it to say that the great desert tracts lying south and south-west of Kandahar are formed of huge accumulations of blown sand and blown material of all kinds, amongst which a fine, densely red clay is conspicuous. This latter is derived, I believe, solely from the gypseous red clays of the Gaj group, which gradually, under the influence of sun-heat and storms, waste away as fine silt, or powder, to be redeposited further on. Such deposits may be studied all along the course, and south of the Dori and Argandab rivers, where a succession of waves is made up of this material. The wide course of these rivers and their ever-acting force have to a certain extent arrested

the progress of these huge moving aerial masses, but already the finer material, carried by the currents of air, reach the opposite banks, and descend in sandstorms on the open tracts between the Helmand and Quetta, resting in shifting patches, and, in sheltered places, in thick deposits, on the post pliocene gravels. The isolated hill ranges south of Kandahar show this feature well. The loose material, constantly changing its position, is seen to surround and creep up into the hollows, creeks, and fissures of the jagged cliffs of limestone and trap. Every season material is thus added, and the time must come when the whole valley of Kandahar will be covered by this deposit and merged into the endless desert tracts lying at present south of it. Slow though this change may be, and though it may require many centuries, nevertheless it is certain that it must come about.

From recent observation and enquiry it would appear that the rate of advance of the sand in the direction of the prevailing wind, that is, towards the north-east, where it is unchecked by rivers or other obstructions, is about two feet in the year. At this rate it would take at least two thousand and five hundred years to advance a mile, and it is not likely that the average progress of the desert along its whole border would be more than 50 or 60 yards in a century. It is, therefore, evident that the question of any particular district being swallowed up by the sand is one of speculative interest merely, and that its advance may for all practical purposes be disregarded.

The outermost bluffs of the *reg* are often 100 feet in height above the level of the plain. A few miles within the desert the sand-hills rise to 200 feet, and beyond the well of Mulla Mirdad, 17 miles from Jat Poti in Shorawak, Captain Hennell reports a ridge 500 feet high. The sand ridges run parallel to one another in broken billows, with an apparent general direction of north-north-west to south-south-east. The north-east or leeside of the sand-hills slopes at a natural angle of 45°, or rather more, towards the crest, which is often sharp. The slopes on the windward side are comparatively gentle. The loose red sand of which the desert is mainly composed, and which gives it its peculiar glowing colour, is mixed with a considerable proportion of fine clay or loam, identical with that of which the alluvial plains are composed. It is probably owing to the presence of this element that the desert owes its abundance of shrubs and grasses. With regard to these, and especially the latter, some notes will be found in the article SHORAWAK in the Pishin Gazetteer, with which district the Registan is more intimately connected than with any other portion of Afghanistan. The routes across the desert are also connected with the same place.

It is worthy of note that the Registan bears a very close resemblance to the *Nefud* or sand deserts of Central Arabia, as described by Blunt and other travellers.

Captain Maitland gives the following additional information regarding this tract:—

There is no doubt that wells are fairly numerous though often at long distances apart. They are inexhaustible, and it is said that several hundred families, with all their flocks and herds, are sometimes dependent on a single well. These dwellers in the Registan, mostly Mengals in the southern part, only leave the sand desert for the three hottest months in the year, and then go no further than its edge. Taraki Ghilzais sometimes come down into the Registan. The Mingals sell them water. The Sinjaranis say—and I have heard much the same from the Mengals and Barechis—that one thousand camel sowars can go where they like in the *reg*. Such a body, carrying their own supplies, can cross the sand desert in any direction, and remain in it as long as they can get flour for themselves. The camels, unless ridden hard every day, do very well on the *tagaz* and other shrubs which flourish in the sand. Owing to the depth of the wells, and the possibility of not finding people near them, it would be necessary to provide a party going into the desert with large cow-skin *dhols* made on purpose, and raw hide ropes 150 feet in length.

Colonel Bell was informed that this district feeds upwards of ten thousand camels and thirty thousand sheep by means of the various ponds, wells, and oases scattered over it. (*Maitland—Bell.*)

REG-I-BEZAD.—Lat. 28° 8′; Long. 63° 25′; Elev.

The name of the desert at south-east end of the Hamun-i-Mashkel.

REG-I-KABUL.—Lat. 29° 22′; Long. 65° 40′; Elev.

A desert portion of the Nushki district in which Jabar is situated, and traversed by the Nushki-Chagai direct road.

REG-I-KATU—

A strip of sand-hills about three miles north-east of Galichah and to the west of Gaukok.

There are two wells among the sand-hills—

No. I.—3 miles from Galichah in a north-east direction.

P. C. bearing to Koh-i-Malik Surindag . 68°
" " to Gaukok . . . . 100°

Water 20′ from surface, 4′ of water, 3′ diameter, good and sweet. Has a wooden windlass over it.

No. II.—6 miles from Galichah in an easterly direction.

P. C. bearing to Koh-i-Malik Surindag . 65°
" " to Gaukok . . . . 100°

Water 40′ from surface, 6′ of water, 3′ diameter, good and sweet. Has a wooden windlass over it. (*Roome.*)

REG-I-MALIK.—Lat. 28° 45′; Long. 61° 43′; Elev.

An isolated ridge of sand-hills over 4 miles long and varying from 30 to 50 feet in height passed at the eighteenth mile from Mirjawa on the road to Ladgasht. These sand-hills run north-west and south-east. The waters of the Gaza Rod after a heavy flood reach as far as these sand-hills when advantage is taken to cultivate a few acres of arable land on the western side of the hills. (*Roome.*)

REG-I-MURTI.—Lat. 29° 21′; Long. 65° 36′; Elev.

A desert portion of the Nushki district in which Lala well is situated and traversed by the Lora river.

REG-I-WAKAB.—Lat. 28° 20′; Long. 63° 29′; Elev.

The desert east of the Hamun-i-Mashkel. The place is marked by a big ridge of sand. (*Tate.*)

REGIN.—Lat. 28° 20′; Long. 63° 59′; Elev.

The sixth stage (99 miles) from Kharan fort on the road to Galugah and Jalk. From this place the road branches, one going in a north-west direction for Amir Chah and Ladis, and the other to Galugah, 62 miles distant, passing close by the Gaukok and Behzad ridge. Wood and grass plentiful, and water from a well 12 feet deep. (*Ahmad Ali Khan.*)

REKIS—

As their name signifies are "dwellers in sand" or in the lowlands. They may be divided into three divisions, *viz.*, the Rekis of Mirjawa, the Rekis of Mashkel, and the Rekis of Jalk.

All three divisions are said to have sprung from a common ancestor, but whlie all acknowledge Muhammad Raza Khan of Mirjawa as their Sardar, yet each section pays *Sardari* to its own immediate chief, who, in the case of the Rekis of Mashkel, is Mir Kia Khan, and in the case of the Rekis of Jalk, Mir Lalla. The Rekis of Mashkel mostly belong to the Nathozai sub-section; and they own allegiance to Sardar Sir Nacroz Khan of Kharan, to whom they pay tribute.

For many years the Rekis and Damanis were at feud with each other, but about 1896 the two tribes patched up their quarrels to their mutual satisfaction.

The Rekis number in all about 650 families, and, while their tastes incline towards agriculture, yet they own numerous flocks. The tribal property of the Mashkel Rekis comprises fairly extensive date groves in addition to lands and flocks.

The limits of the Reki clan are clearly defined, and it is the only one of the Baluch tribes of this country, the exact limits of whose territory could be ascertained.

Taking the fort of Chigird in Jalk as the starting point, the base of the Siahan range forms the southern limit. The Bibi Lori stream and Javen Kaur (the latter not identified) on the east.

Rek-i-Wakap (a high ridge of sand), the wells of Kalandi and Nihri on the north. The Reki-Malik (a sand-hill) near Ladis,—the Koh-i-Duran and the Chah-i-Janko on the west.

Their neighbours to the east are the Kharanis. To the north-east the Yaghizais, a small tribe.

To the north and north-west the Sinjaranis and on the west are the Baluch and Kurd tribes who inhabit the upland valleys and glens of Sarhad.

Within these limits are the palm groves of Dehwar, the delta of the Mashkel (called the Rod-i-Mashkel), a part of Jalk, with a great area of waterless and unprofitable tracts. The Reki chief also owns property in the Dizak valley, and Kuhak originally belonged to them.

Owing to their tribes being scattered over an open and extensive area, the Rekis seemed to have been aware of the necessity of securing as many allies as was possible. To this end Hussen Khan, one of the ancestors of the present chief, Mir Lalla, gave the produce on the palm groves of Gaza, Maksotag, Gorani and Kindi to several of the tribes of Sarhad, each of whom in return undertaking to furnish its contingent of fighting-men whenever the necessity arises.

Besides the undermentioned sub-division, the Rekis are connected with numerous clans in Sarhad, with the Sinjaranis of Seistan and Chagai and the Rakshanis of Nushki.

Mir Kia, Rashid Khan, and Sultan Mahmud, in order to live in peace, have recognised Sir Nauroz Khan's claims to revenue, and are now installed in their possessions in Dehgwar.

The Rekis are divided into the following tribes:—

1. Adozai residing at Khushak north-west of Dizak.
2. Ashurzai residing at or near Mirjawa.
3. Bangarzai residing at Dehgwar.

4. Brahimzai residing at Mashkel or Dehgwar. Originally emigrated from Seistan and, having intermarried with the Rekis, were adopted into the tribe and form a sub-division of it.

5. Bulakizai residing in Sarhad, Ladis, and Mirjawa, mixed with the Kurds.

6. Ganguzai, residing north of Jalk, are sub-divided into the Lashkar Khanzais and Alayarzais.

7. Ghwaramzais.

8. Jadizais, residing in Sarhad, and at or near Mirjawa.

9. Hussenzai sub-divided into Mir Khanzai, Isazai, and Jangizai. The chiefs of the Rekis are Hussenzais. The Jangizais inhabit Khushak.

10. Ishzai reside at or near Mirjawa.

11. Jadizai reside in Sarhad and at or near Mirjawa.

12. Kalagi reside at Kalag in Mashkel or Dehgwar.

13. Mirakzai reside at or near Mirjawa.

14. Mulazai.

15. Muradzai reside at Jalk and Dehgwar.

16. Nasroi, emigrated to Seistan, a few yet in Dehgwar.

17. Natuzai reside at or near Mirjawa; sub-divided into Bolanzai, Ahmadzai and Surmazai.

18. Nuhodzai reside south of Gusht.

19. Sanadzai reside at or near Mirjawa.

20. Shambezai reside at or near Mirjawa.

21. Talkoi reside at Jalk. (*Webb-Ware—Tate.*)

RESADIK.—Lat. 29° 17′; Long. 62° 55′; Elev. 3,718′.

The tract from Manzil to Amir Chah at the 13th mile passes about a quarter of a mile to the south of this. The last point of a string of low black hills that project north-west into the Registan from the main range near Manzil. A view is obtained of Malik Dokand faintly looming above the horizon as well as of the tip of Khaisonlok a little to the south. There are several small *bands* for the collection of rain water found about here, and there is grass and *tagaz* in abundance. (*Roome.*)

RIHI RIVER—

Rising in the Rihi and Tahlab ranges flows into the Tahlab river. It is dry except when in flood.

RIHI SPRING.—Lat. 28° 45′; Long. 61° 51′; Elev.

The source of the Rihi river situate between the Kok-i-Rihi and the Tahlab ranges.

ROBAH WAL RIVER—

One of the branches into which the Lora is divided shortly before entering the Nushki district.

ROBAT—

A halting-place on the Chagai route to the Helmand. It is the eleventh stage (162 miles) from Nushki and 13 miles from Sukaluk and 10 from Mamu. There is here a broad shallow *nala*, 100 to 150 yards wide, said to drain from Malik Naru.

The entire bed of the *nala* is filled with coarse green grass and odd tamarisk bushes. Abundant water in a number of large pools, each

about 30 to 50 feet long, by 5 yards wide, by 6 to 9 inches deep, and in a few shallow pits scooped in bed of *nala*, in which the water lies 1 foot below the surface.

Water is good, though very slightly saline, and seems procurable anywhere in bed of *nala* by scooping a hole 1 foot deep. The Robat *nala* drains out between Malik Dokand and Malik Ainak in a north-north-west direction to the "Lut". In its lower portions large quantities of water in pools, trickling each into the next lower, lie in its bed, but the water there is a strong brine (salter than sea water) and the bed of the *nala* covered with an incrustation of salt 1 inch to 2 inches thick. Mines of rock-salt are said to exist in and about Malik Dokand, though none were seen, and the sudden increase in the saltness of the water in this *nala* tends to support the statement.

At Robat, a road joins from Dalbandin, three days' distant, said to be good going, with but little sand and water at every stage. A good track over hard ground also leads by east end of Malik Dokand and Malik Ainak to Galla Chah, 11 miles. The low peak, lying some 4 miles west of Robat, is called Toganak, and in a line a little to its north Jalejal is visible, a low bluff surmounted by a pillar-like stone.

A good road leads from this place to Samuli, distant 18 miles. Robat is the name for a *serai*, but there is no trace of one here. (*Peacocke.*)

ROBAT (KOH-I-MALIK SIAH).—Lat. 29° 50′; Long. 61° 0′; Elev. 2,600′.

The 20th and most westerly stage of the trade-route within British territory, situated at the southern foot of Koh-i-Malik Siah. Here there is a *thana*, post office, *serai*, flourmill, *bania's* shop, and a *chapar khana* with four rooms, bathrooms, servants' quarters, cook-house and stabling. Water is obtained from the Shamidar *nala* from a spring called Sir Robat on the left bank of the *nala* near the *thana*; the supply is good and abundant. Two miles north, in Afghan territory, is another spring called Pain Robat, which waters a few fields. Some forage for the Robat post is obtained from Duzdap in Persian territory; camel-grazing and firewood are very scarce in this locality. Fuel can, however, be brought from the Lar *nala*, where is also very plentiful camel-grazing. The signalling station here is on a black precipitous hill to the north of and overlooking the *thana*. (*See* Appendix V.) (*Webb-Ware—Rose-Price.*)

ROBAT KOH.—Lat. 29° 49′; Long. 61° 56′; Elev. 5,264′.

About 2½ miles west of Robat post and 3 miles south-south-east of Koh-i-Malik Siah.

RODGAZCHAH.—Elev. 2,900′.

P. C. bearing to Mekh-i-Rustam 293°. A halting-place on the road from Nushki to Dalbandin, 58½ miles from Nushki. There is a well 3 feet in diameter with 2½ feet water, 12 feet from surface. Water good and sweet.

Camping-ground.—Unlimited.

Supplies.—Cattle, goat and sheep obtainable in the vicinity. The supply of these would vary according to the seasons of the year.

Forage.—An immense quantity of *drubh* grass could be collected here.

Fuel.—Rather scanty; *tagaz* and *gaz*. (*Roome.*)

RUDBAR—

The name given to a group of three villages on the left bank of the Helmand about 30 miles west of Khwaja Ali. Rudbar has a more prosperous and substantial appearance than the generality of villages on the Helmand. The name Rudbar is generally applied to the fort and the village surrounding it, the other two villages being known as Azim Khan and Muhammad Mirza Khan, these being the names of their respective Khans. There are altogether some 1,100 inhabitants, Sinjarani Baluchis, and they possess 500 cattle, 600 sheep and goats, 200 camels and 20 horses. Rudbar pays no *maliyat*, but furnishes instead a certain number of men for military service. There is a considerable amount of cultivation in the neighbourhood and we found some 1,400 acres under wheat and barley. The river here flows directly under the cliffs of the right bank and there are two fords with about 2 feet of water. (*Wanliss, February 1903.*)

The Helmand valley from Bolan below Girishk to and including Landi Barechi is the Garmsel district, and is under the Governor of Girishk. From Rudbar onwards the country is under the Hakims of Rudbar, Chahar Burjak and Kala-i-Fath, who are all subordinate to the Hakim of Chakansur. The valley of the Helmand and especially Rudbar is extensively cultivated. The population seems very scanty, however, and only a few villages of low mud huts are seen. No use appears to be made of the very numerous and extensive old ruins which are scattered about everywhere. The country abounds with black partridge.

Below Rudbar the valley is a mass of old ruins, some rather imposing in appearance. All are of sun-dried bricks of mud, but we found some large, wide, shallow burnt bricks in the foundations of a small mud ruin close to camp. The nature of the Helmand soil seems particularly adopted for brick-making, and it would be difficult to find harder walls than the sun-dried or mud walls which compose these ruins. The whole Helmand valley is carpetted, with broken bits of pottery, in the most astonishing manner. These are of all colours glazed and unglazed. (*McMahon.*)

RUHTAK RIVER—

A small affluent of the Hamun-i-Mashkel on the south-west.

SAHIB-CHAH—

The 15th stage on the trade route, 28½ miles from Mushki Chah, and 23¾ miles from Mukak. A small levy shelter has been built and two wells dug, 3 feet in diameter, and fitted with windlasses and iron watering troughs.

Water, 20 feet from surface and 3′ deep, very bad. Camel-grazing is very scarce here, and there is no firewood. (*Webb-Ware—Scudamore.*)

SAHIBZADA—

One of the villages of the Nushki plain. It derives its name from the fact that the Sahibzada resides in the village throughout the year. (*Webb-Ware.*)

SAID LANGAR.—Lat. 29° 29′; Long. 61° 18′; Elev. 3,450′.

The second stage on the Robat-Saindak southern route, 45¾ miles from Robat. It is situated in the Kacha *nala* to the south-east of Kacha Koh and just on the Persian side of the Perso-Baluch boundary.

There is an abundance of good water here running in a small stream through a tamarisk jungle. I was informed that this is a favourite summer camping-ground of the Baluchis from the Helmand, who bring their flocks to graze on the slopes of Kacha Koh. Last year there were some 2,000 families of Muhammad Sunnis encamped in the vicinity.

Camping-ground.—Unlimited.

Supplies.—Uncertain. At certain seasons of the year many head of sheep and goats to be obtained.

Fodder.—Plenty of coarse grass in the *nala*-bed. In the spring and summer plenty of grass to be obtained on hill-sides.

Camel-grazing.—Good and abundant (*jhow* and *lana*) in neighbouring *nalas*.

Fuel.—Abundant; tamarisk trees. (*Roome.*)

SAIFUDDIN NAWAR—

A halting-place on the road from Amalaf in North-West Baluchistan to Seistan. MacGregor, from native information, makes it the fifth stage (114 miles) from Amalaf. The preceding stage, Hurmak, is 35 miles distant, and Kundur, the next forward, is 20 miles distant. It lies on the Shela or Shelag plain. Water from well brackish. Fuel and forage abundant. (*MacGregor.*)

SAINDAK.—Lat. 29° 16′; Long. 61° 37′; Elev. 2,907′.

The 17th stage on the trade-route, 312¾ miles west of Nushki, and 18½ miles south-south-east of Kirtaka situated at the northern foot of Saindak Koh. There is a *thana* with accommodation for a *thanadar*, munshi, and sowars; also a flour-mill, post office, *bania's* shop, and commodious godown and *chapar khana*. There is a distilling apparatus to purify the water which is abundant but bitter. But in 1903 this apparatus was out of order and the water was found to possess marked aperient qualities. (*See* also Appendix V.) Here the old route *viâ* Amir Chah joins in, and another track goes west, 22 miles, to Mirjawa. Grass and camel-grazing is fairly abundant in the vicinity, and flocks are grazed near. (*Webb-Ware—Scudamore.*)

SAINDAK KOH,—Lat. 29° 17′; Long. 61° 38′; Elev. 3,981′.

The most easterly hill of any size in the Kacha Koh range. This and the surrounding hills are rich in minerals, lead, antimony, bismuth, copper and ochre being the most valuable. Lead is found mostly in packets. The natives come here to collect lead and antimony. In former times these mines were worked extensively by the Arabs. An old village of theirs is still in existence. The hills around are of many varied hues and colours. They abound in *gud* and ibex, and in the ravines are many chinkara (or the Persian gazelle, as they carry very large heads). The "*Gor*" or wild ass frequents these ravines; game birds are scarce; only a few sisi. (*Roome.*)

SAINDAK RIVER—

Rising in the Mirjawa range flows east for about 8 miles and then turns north-east and crossing the trade-route at Saindak, passes north of Saindak Koh.

SALIHAN—

A halting-place on the Shah Ismail and Mamu route from Nushki to Khwaja Ali on the Helmand. It lies between Shah Ismail and Mamu, 17 miles from the former and 24½ from the latter place. The direct road from Shah Ismail to Arbu lies to the north of this, but to avoid the long march people sometimes go by this road. It is just under the outer range of hills (Pusht Koh in map) and on the borders of the Dasht-i-Arbu-Lut. Muzhdan, a stage between this and Mamu, is 10 miles distant. There is abundant water here sufficient for a division, plenty of camel-grazing, and also some *barshon* grass. (*Maitland—Ramsay, 1903.*)

SALMAN WELL.—Lat. 29° 16′; Long. 64° 46′; Elev.

About 2½ miles south by east of Chagai.

SAMAD WELL.—Lat. 29° 17′; Long. 64° 44′; Elev.

About ¾ mile south by west of Chagai.

SAM KOH.—Lat. 29° 20′; Long. 62° 26′; Elev. 3,245′.

In the desert about 8 miles north-north-west of Amir Chah.

SAM RIVER—

Rising in Sam Koh flows into the desert towards the Gaud-i-Zirreh.

SAMULI—

A halting-place on the Chagai-Mamu route from Nushki to the Helmand. It is 7½ miles from Barabchah, 13 from Mamu, and 18 from Robat. There is a good camping-ground here, much tamarisk jungle and grass, with good camel-grazing at the halting-place. There is water in two shallow pits scooped in the bed of the water-course. Water good, lying one foot below surface, and a large supply probably procurable by digging extra pits. (*Maitland—Peacocke.*)

SAMULI KOH—Lat. 29° 30′; Long. 64° 0′; Elev. 7,351′.

A conspicuous hill in the Naru district, North-Western Baluchistan, about 24 miles due south of the Arbu peak.

It is a very fine hill, apparently of limestone, and bears a certain resemblance to Chihaltan.

The route from Chagai to Mamu passes over a small rise close to the extreme point of Samuli Koh, named Koh Hasan Sust. The country between Arbu and Samuli is very desolate, but not altogether flat. Towards Samuli there appear to be great swells and undulations and much sand. (*Maitland.*)

SANDURI OR SINDURI—

The first stage from Nushki on the Shah Ismail route to the Helmand 10½ miles from the former place and 15½ to Band.

The road from Nushki is obstructed here and there with heavy sand drifts which make marching difficult for all arms. The hillocks of sand recede to the south-west.

There are six wells here 3 to 4 feet in diameter. Water 2½ to 3 feet deep and 30 feet below surface: total contents about 1,000 gallons.

The water is good and the wells refill at a fair rate. Four hundred camels of the Khan of Kalat are known to have watered here in one day. This was formerly a Brahui settlement. (*Maitland—Peacocke.*)

SANG-I-ACH—Lat. 28° 37′; Long. 61° 50′; Elev.

A hill passed about 25 miles from Mirjawa on the road to Mashkel.

SANGIN.—Lat. 29° 32′; Long. 65° 36′; Elev.

About 6 miles east of Umar Shah Nawar in the Nushki district.

SANJARWAI WELL.—Lat. 29° 33′; Long. 65° 16′; Elev.

In the Chagai district, east of the Lora Hamun, about 3 miles north of Husain Nawar.

SARDARAWAN.—Lat. 29° 28′; Long. 64° 9′; Elev.

A halting-place on the road from Gurgarok to Mamu, north-east of the Mazari pass and about 2 miles on the Afghan side of the border.

SARUMA HILL.—Lat. 29° 22′; Long. 64° 8′; Elev. 6,360′.

A peak of the Chagai Sarlat, about 2 miles south by west of the Afghan-Baluch boundary pillar No. 163 and situated between the Rahibo and Kushtagan passes.

SAYADS—

Descendants of the Prophet. The first inhabitants of Chagai district of whom we have no authentic record. It is not known whence they came. They remained in peaceful enjoyment of the district until they were disturbed by an incursion of a branch of the Helmand Sinjarani, who appear to have been tempted to Chagai by the rich camel-grazing which that district afforded. The men in possession, however, did not surrender their rights until worsted in a sanguinary conflict in which they are said to have fought bravely and to have lost half their fighting-men, and then, driven from the district, the Sayads took refuge in the Chagai Sarlat, where remnants of the former masters of Chagai are still to be found under the rule of a Sayad named Lashkar Shah. These Sayads depend chiefly for their livelihood on a small tax which they levy on Afghans and others who visit their hills to collect assafœtida. They eventually appear to have come to an agreement with the Sinjaranis under which each party bound itself to remain in its own district. This settlement remains in force to the present day. At the period of the Sinjarani incursion, the Sayads appear to have been a fairly numerous tribe, but they have steadily dwindled, and are represented by only thirty families. (*Webb-Ware.*)

SHAH GODAR—

A halting-place north-east of the Gaud-i-Zirreh on the route from North-West Baluchistan to Seistan *viâ* Amir Chah. It lies in the bed of the Shela (Shelag) or drainage between Seistan and Zirreh.

There is brackish water in the bed about 2 feet deep. MacGregor in 1876 remarked of the water-supply that "formerly when the Helmand came down water could have been procured in the Zirreh depression under 70 miles from Amir Chah; but if this river is not permitted, as has been the case for the last ten years, to flow to Zirreh, even the water now found may dry up altogether, as it has done lower down, and then by this line there would be no water for 140 miles. At present at Shah Godar there is a plentiful supply of brackish yet quite drinkable water, and fuel and forage are abundant, yet even this last must in time cease if the water which aids its renovation is cut off altogether." (*MacGregor.*)

SHAHI-CHAH—

A halting-place on the road from the Mashkel to Sehkoha in Seistan. It is six stages (87 miles) from Camp Mashkel, and three stages (44 miles) to Ladis. Water from a well. (*Bell.*)

SHAHID DAND.—Lat. 29° 37′; Long. 65° 36′; Elev.

East of and close to Zendin Nawar west of the road from Umar Shah to Papring and about 8 miles north east of the former.

SHAHIDI RIVER—

A tributary of the Piran river (*q. v.*).

SHAH-I-DIWANA WELL.—Lat. 29° 28′ 25″; Long. 65° 50′ 0″; Elev.

About 8 miles slightly north of west from Baghak in the Nushki district. There are four wells of brackish water 33 feet deep with 7 feet of water.

SHAH-I-MARDAN—

A *ziarat* 1½ miles from Baghak on the road to Jabar, North-West Baluchistan. (*Peacocke.*)

SHAH ISMAIL—Elev. 3,871.′

A halting-place on the Nushki-Helmand route *viâ* Gazachah and Safia. This route, which is termed the Shah Ismail route, lies north of the Lora Hamun, while the alternative route *viâ* Chagai lies south of the same. The former was the road taken by the Afghan Boundary Commission in 1884 and 1885. The halting-place is the 10th stage (111 miles) from Nushki and 54½ miles or four stages from Galachah (*q. v.*). There is here nothing more than a *ziarat* with a few scattered brushwood huts of *fakirs*. Just beyond this are three wells, or rather holes, in the bed of a water-course, so shallow as to be at first sight hardly perceptible. Near by are two melon patches. The water is very near the surface and appears to run a little beneath the stones. There are also other wells in the vicinity, and once there was a *chashma* or spring, but it has been completely closed the last few years by a sand drift, and the site almost obliterated.

The following account of the water-supply is furnished by Major Peacocke of the Afghan Commission—

Water in wells	546	gallons.
In large deep pool	1,080	„
In short *karez*	360	„
Total	1,986	„

There is, in addition, water in fifty-three shallow pools which, after making a deduction of one-third on account of difficulty in utilising the last few inches in each pool, would give 100 gallons more: total at Shah Ismail 3,186 gallons. The wells all refill very rapidly, at least twice if not thrice in 24 hours. The subsoil is a coarse hard gravel. With proper tools much deeper wells could be sunk. The natural supply of water appears large and lies 2 to 3 feet below the surface.

There is a quadrangular mound east of the wells, which was once a fort, and from it a good view of the surrounding country can be obtained.

Arbu hill bears a little north of west and does not appear to be far off. On a clear day the well-defined edge of the Registan can be seen about 10 miles off. To the south the hills are about 5 miles distant. The plain between the Registan and the hills stretches westward as far as can be seen. There is firewood here, and some camel-grazing. *Barshon* grass to be had some distance to the south, and *karaz* grass in the opposite direction. (*Peacocke.*)

SHAH NAWAZ KHAN—

The fourth stage (53 miles) from Kharan on the road to Chagai through the Seh Saman pass. Water is procurable from wells, and there is considerable *khushkawah* cultivation.—(*O'Donnell.*)

SHAI MUSA RIVER—

Rising about 4 miles south-east of the Shibian pass flows south-east into the Lora Hamun.

SHAKAI HILL.—Lat. 29° 33′; Long. 64° 21′; Elev.

In Afghanistan about a mile north of boundary line between pillars Nos. 161 and 162.

SHAKAR NALI.—Lat. 29° 23′, Long. 65° 56′; Elev.

About 8 miles south-west of Baghak on the trade-route.

SHAKKARAB—

A *karez* that takes its rise on the northern slopes of Koh-i-Jorakian and irrigates Baghak plain. (*Roome.*)

SHAMIDAR NALA—

Rising in the Shamidar pass is generally a dry *nala* running north for 5 miles to the Shamidar spring, and flows south of Robat Koh past Robat post, until lost in the desert. The road from Robat to Duzdap follows the course of this *nala*. The water from Shamidar spring is very good. Wood, grass and camel-grazing are scarce. (*Ahmad Ali Khan.*)

SHAMIDAR PASS—Lat. 29° 43′; Long. 60° 51′; Elev. 5,030′.

About 15 miles north of Duzdap, and 10 miles south of Koh-i-Malik Siah. It is crossed by the Ladis-Robat road. The ascent is about 800 feet, but the road has an easy gradient on both sides. A mile further on there exists a spring of very good water called Kamdak. (*Ahmad Ali Khan.*)

SHAMIDAR SPRINGS.—Lat. 29° 48′; Long. 60° 51′; Elev. 4,500′.

Three small springs, under the left bank of the Shamidar *nala*, some miles up stream from Kila Robat. Here the *nala* is only some 100 yards wide, with hills 300 to 400 feet high on both banks. The spot is marked by a patch of *shora*, and is apparently used by *kafilas* as a halting-ground. The water is good but only sufficient for twenty camels.

Supplies.—Nil.
Camel-grazing.—Scarce.
Grass.—Nil.
Fuel.—Scarce.
Camping-ground.—Very contracted and commanded by high hills. (*Roome.*)

SHAMSHER ALI—

A water-hole in the bed of the Shelag river about 10 miles below the point where the Hurmak-Nawar Chah road crosses the river. The water is good, sweet and abundant, although it is within 3 feet of a pool of intensely saline water. The halting-place is so surrounded by high sand-hills that it is difficult to find without a guide. Grazing good, fuel abundant, grass and supplies none. (*Webb-Ware.*)

SHANDAK—

A ravine and halting-place on the Mashkel route from Dashtak to Seistan. It is about 40 miles north of Paniham, the intervening tract being waterless. Manzil, the next stage towards Seistan, is 16 miles distant. Water can be procured in any quantity in this ravine by digging wells. It is not very palatable, though quite drinkable. Fuel and forage are both plentiful. In the neighbouring hills are some nomads who could supply a few sheep, and a good road goes from this to the Helmand, from which it is possible some grain could be brought and stored. MacGregor's route from Dalbandin to Seistan joins in here. (*MacGregor.*)

SHANI WELL.—Lat. 29° 1′; Long. 64° 16′ ; Elev.

A well about 8 miles south of Ziarat Malik Chilgazi in the bed of the Dadar *nala.*

SHARAROD RIVER—

A tributary of the Duzdap river rising in the Lakshak hill.

SHEIK SHAKAR.—Lat. 29° 35′; Long. 65° 37′; Elev. 2,974′.

A hill north of the Nushki-Shah Ismail route about 10 miles east of Umar Shah Nawar.

SHEIK WELL.—Lat. 29° 35′; Long. 65° 23′; Elev.

In the Chagai district near the Afghan-Baluch frontier about 5 miles north of Zahro Nawar.

SHEKH HUSSEN KOH.—Lat. 29°; Long. 65° 48′; Elev. 6,875′.

A peak in the high range of hills, some 30 miles south of Nushki, forming the south-eastern boundary of the Dalbandin valley. It is the most northerly peak of the long range Ras Koh and Kambaran, which terminates towards the south-west in the Baluch desert. The southern slopes of this range are much cut up by deep water-courses which drain towards the Bado river. Round the eastern end of this hill a road leads from Nushki to Kharan.

SHER KHAN CHAKUL.—Lat. 29° 11′; Long. 62° 47′; Elev.

A small spring situated in a north-western defile of the Koh-i-Sultan. The spring is very small, but is used by the people who come here in the spring months to collect assafœtida. There is no camping-ground near, and from what I could see no grazing for camels; but apparently grass is found in sufficient quantities for the flocks of the nomads. In February and March 1903 no water was found here even after heavy rain, so that it is evident that water here is only occasional. (*Roome—Gordon.*)

SHER SHAH NAWAR.—Lat. 29° 38′; Long. 65° 37′; Elev.

About 30 miles from Nushki on the road to Mamu.

SHIBIAN PASS.—Lat. 29° 35′; Long. 64° 37′; Elev. 4,780′.

A pass over the Western Malik Naru range on the Afghan-Baluch frontier at boundary pillar No. 161. It is crossed by the road from Chagai to Shah Ismail, being about 12 miles south-east of the latter place.

SHIKAR RIVER—

One of the numerous *nalas* which drain from the north towards Hamun-i-Mashkel and are lost in the sand before reaching the Hamun. It joins the Amuri *nala* about 4 miles north of Paniham.

SHINGRO.—Lat. 29° 12′; Long. 62° 57′; Elev.

A *nala* that takes its rise in the ancient crater of Koh-i-Sultan, flows north for 6 miles, then bends east and finishes in the desert by flowing south-east, draining the eastern slopes of the Koh-i-Sultan. It is generally a dry *nala*; but in the summer of 1898 after a heavy fall of rain on the Koh-i-Sultan, the torrent rushed down it sweeping away a man with his family, who had pitched their camp in its bed. The torrent also carried away their huts, 100 sheep and goats and a few camels along with their owners. (*Roome.*)

SHORAKIN.—Lat. 29° 30′; Long. 64° 5′; Elev.

A halting-place about 3 miles west of Samuli mountain in Afghanistan on the road from Gurgarok to Mamu.

SHORO—

A halting-place in the Palez *nala*, 1 mile up stream from where it enters the Duzdap plain. Here there is an old well 8 feet deep, but partly fallen in; there were some dead sheep and a camel in it. The well is close to a *ziarat* erected to Pir Sultan. A little lower down the *nala*-bed there is every appearance of water being close to the surface, and there is some tamarisk and *nal* grass growing here. There are a couple of small cairns on the low hills to the west, erected apparently to mark the spot.

P. C bearings—

To Kachakoh . . . 59°
„ Larkoh . . . 2°

Camping-ground.—Ample space near.

Supplies.—Nil.

Camel-grazing.—Abundant on Duzdap plain.

Grass.—Nil.

Water.—Could be obtained by digging shallow pits in the *nala*-bed, but uncertain and dependent on the rainfall.

Fuel.—*Tagaz* abundant on Duzdap plain. (*Roome.*)

SHORO—

A well which lies about 2½ miles west of Nawab Khan Chah, and near Nok Chah well on the route from Galur to Landi. It is one of a line of wells extending eastward in an almost unbroken line of 60 miles or more, most of them near one another, and from each group of two or three wells tracks take off to the Helmand. (*Webb-Ware.*)

SHUND—

Two shallow wells, containing good water, in the bed of a *nala* nearly due south of Chah Sir (*q. v.*). (*Webb-Ware.*)

SIAH CHANG—

A high peak in the Ras Koh range, north-west of the Kharan plain. It lies to the south of the Koh-i-Charian. (*Peacocke.*)

SIAH DIK HILL.—Elev. 4,400′.

An outlying hill of the Shekh Hussen range south-west of the Dalbandin plain.

SIAH DIRANG HILL.—Lat. 29° 26′; Long. 64° 36′; Elev.

A hill of the Malik Naru range about 12 miles west-north-west of Chagai.

SIAH KOH—Lat. 29° 13′; Long. 63° 58′; Elev 6,220′.

A peak in the south-eastern spurs of Malik Teznan from which it is about 12 miles distant.

SIAH KUMB (VALLEY AND HILL)—

Lies about 25 miles north-north-west of Sohrab. In the centre of the valley is a patch of cultivation belonging to the Mamasanis. MacGregor's route from Dalbandin and Teznan to Sohrab crosses a ridge running down from this hill, and descends into a ravine called Dragi, where a small amount of water and grass and abundance of fuel are procurable. (*MacGregor.*)

SIAH-O-ZARD RIVER—

Rising east of the Koh-i-Palez flows for about 4 miles into the Nalap river.

SIAH SHER—Elev. 5,600′.

Five wells at the source of the Palez *nala*, 18 miles from Duzdap on the Bibi Mah road to Ladis. The wells are nearly in the centre of three sides of an amphitheatre formed by the Mish Koh to the north, Siah Sher to the east, and Borchar to the south, all being approximately 1 mile distant; a large plain covered with *jirr*, a small aromatic bush, stretches to Mor Koh on the west. The five wells, one of which only had water in it, were connected by a small channel which led 200 yards to some former cultivation.

The water in the well was sufficient for 15 camels and showed no signs of diminution after they had drank, and it is probable the other wells would give the same amount of water if cleared out.

Close to the wells are some small blocks of diorite, the hills around being composed of granite.

Camping-ground.—Good, unlimited.

Supplies.—Nil.

Camel-grazing.—In the winter months.

Grass.—Nil.

Firewood.—Only small bushes.

Supplies.—In spring there may be some flocks grazed here, as there were several sheep pens in the vicinity. (*Roome.*)

SIAH-SUNG.—Lat. 29° 48′ ; Long. 65° 59′ ; Elev. 3,229

Seventeen miles north of Rahman Khan Kala in Nushki and the first halting-place between Nushki and Kandahar. The name is applied to a few isolated low hills consisting of black igneous rocks which, standing boldly out in the midst of the red sand of the Registan, are very conspicuous from a long distance. Mirab Nawar lies immediately under Siah Sung on the north side. (*Walters.*)

SIAH REG—

A heavy sand ridge in North-West Baluchistan north of Amalaf, and south-west of the Gaud-i-Zirreh. It is so called from the sand being sprinkled with black gravel. MacGregor's route from Amalaf to Zirreh goes over this ridge for 5 miles. (*MacGregor.*)

SIAH REG NAWAR—

A depression on the western side of the Siah Reg. Water may probably be found here at times, especially after rain. The long plain between the Gaud-i-Zirreh and the Kachaband Koh all drains into this depression. Wells dug here would probably produce water, if not tanks could be very easily constructed for the storage of the drainage from the near hills. Fuel and forage are plentiful at no great distance. (*MacGregor.*)

SINJARANI BALUCH—

A tribe of Baluchis inhabiting the desert country extending from Muhabat to the valley of the Helmand At Chagai there are some twenty or thirty families. Those in Afghan territory are to be found at Deshu, Rudbar, Chahar Burjak, and other places in the Helmand valley. At the time of the visit of the Afghan Boundary Commission in 1884, there were three chiefs belonging to the Helmand Sinjaranis—Imam Khan of Chahar Burjak, Kamal Khan, and Ibrahim Khan of Chakansar.

For further information regarding these, see *Gazetteer of Afghanistan.*

The Chagai Sinjaranis are said to have six sections—

Notizai.	Hasanzai.
Momundzai.	Burhanzai.
Liji or Lijeh.	Shahi Kardag.

The latter are Pirs and Fakirs. Another section of Sinjaranis, called the Karakin, is to be found in the Helmand valley, Chagai, and Kharan. These are much scattered and very poor.

Under the name Sinjarani are also numerous small tribes of Taokis who are subject to the Chagai Sinjarani Chief. These occupy the country from Chagai westwards to Persia. The origin of the Taoki tribe is not known. It is possible that they are the descendants of earlier members of the Sinjarani family prior to Jan Beg.

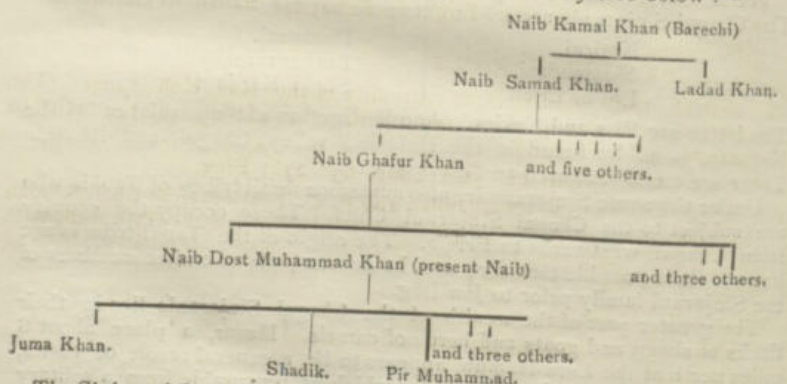
The greater part of the wealth of the Chagai Sinjaranis lies in their flocks of sheep and goats and herds of camels. Mazar, a place about 8 miles north of the Lora Hamun, appears to be a general resort of theirs, chiefly on account of the good water which is procurable from a solitary well. From the pedigree attached, it will be seen that this tribe is connected with the Persian, Afghan and Kalat Governments, and from those settled on the Helmand the Amir of Kabul takes revenue.

The Sinjaranis claim to be Rind Baluchis. The founder of the tribe migrated from the rest of the Rinds owing to family quarrels and came to Chagai seventeen generations ago. The genealogical table of the tribe commences, it will be seen, from Jan Beg, 1st. The second Jan Beg was a man of enterprise. He coveted the rich valley of the Helmand, and set out from Chagai, accompanied by three of his sons.

The remaining son, Shah Pasand, was left in charge of Chagai, where his descendants still reside. The expedition was a successful one and Jan Beg succeeded in ousting the Sarbandis and others, then in possession, from their settlements on the Helmand as far west as Seistan. Dividing the Helmand Valley among the three sons who had accompanied him, he died at Khwaja Ali, where his grave still exists. His eldest son, Khan Jan Khan, who settled at Chakansur, obtained possession of the greater portion of Seistan, and his (Khan Jan Khan's) son Ibrahim Khan later on abandoned Afghanistan and took up his permanent abode in Persian Seistan. Khan Jan Khan and his descendants are therefore no longer taken into calculation in the division of Helmand lands among the other descendants of Jan Beg.

Of the descendants of the other three sons of Jan Beg, those of Shah Pasand own Chagai; Nawab Khan's descendants own Bandar-i-Kamal Khan, and those of Islam Khan hold Chahar Burjak. Rudbar belongs in equal shares to the Bandar-i-Kamal Khan and Chahar Burjak branches of the family while Khwaja Ali has hitherto been owned in three equal shares by the Chagai, Bandar i-Kamal Khan and Chahar Burjak Sinjaranis.

Jan Beg married his sister to one Kamal Khan, a Barechi, and gave her a large dowry. Kamal Khan was about to return to Shorawak with her, but was persuaded by Jan Beg to stay and remain as Naib of the Chagai Sinjaranis. A fifth share of the tribal revenue was allotted to the Naib. His descendants have ever since held the post. The present Naib, Dost Muhammad Khan, is the working man of the tribe, the foremost in council and the foremost in fight. I give his family tree below :—



The Sinjarani Sardar, Muhammad Ali Khan, who had fled from the Afghans, was reinstated as the Sardar of the Chagai district after the Afghan-Baluch Boundary was fixed by Captain McMahon in 1896, but with diminished powers. His powers were to be those of an ordinary Baluch Sardar.

He is as feeble and contemptible in his character as he is in his appearance, which closely resembles a *khansama*. During his absence from Chagai his favourite wife hears the cases and settles disputes. The real man of power in the Chagai district was the hereditary Naib, Dost Muhammad Khan (Barech), whose family intermarried with the Sinjaranis three generations back and remained here ever since. (*Bellew—McMahon—Roome.*)

SINUKAN.—Lat. 27°38′; Long. 62° 35′; Elev.

A small fortified village about 12 miles west of Jalk. The post is said to have been built by Mir Alam, the father of Dilawar Khan of Dizak. Here there is a very fine *karez* rising in the plain north of the village; only a small extent of ground is at present cultivated by means of this water. There is a grove of date palms south of the village, and a great deal more ground is capable of being utilized for cultivation. Dilawar Khan placed Taj Muhammad, a Kalkali Rind, in this village as headman. This man owns land at Magas.

One road passes through from Jalk to Gusht round the southern end of the Safed Koh *viâ* the Nuk-o-Dar plain. (*Tate.*)

SIPILI—

A camping-ground on the north side of the Seh Saman pass. It is three stages (about 46 miles) distant from Kharan, and lies on the Seh Saman route to Chagai. (*O'Donnell—from native information.*)

SIRDARWAL—

A *karez* that takes its rise on the northern slopes of Koh-i-Jorakian and irrigates Baghak plain. (*Roome.*)

SOGNAK KAUR—

A watercourse south of Robat in the north-western desert of Baluchistan. It lies on Lockwood's route from Lal Khan Chah to Barab Chah, about 10 miles from Marak Chah. There is nothing here but a pool of green water. About 1½ miles from this, in the direction of Barab Chah, is a well-marked track leading from Robat *viâ* Salian to Dalbandin. (*Lockwood.*)

SOHRAF, OR SOHRAB, KOH—

A peak in the south-western extremity of the Ras Koh range. The western foot is said to form one of the boundaries of the Kharan district. (*MacGregor.*)

SOLGAZ-CHAH—Lat. 28° 54′; Long. 63° 27′; Elev.

About 5 miles from Chahsundan and P. C. bearing from Chah Sandan 195°. Position of wells marked by trees plainly visible. Two wells with good water; good camel-grazing close by. Some *barshok* grass and tamarisk for fuel. (*Roome.*)

SORAN RIVER—

Rises east of the Gati Hamun and is one of the head affluents of the Morjin river.

SORAP.—Lat. 28° 28′ 10″; Long. 63° 57′ 30″; Elev.

A few pools of dirty putrid smelling water in the Sorap *nala*, 40 miles from Dalbandin, on the southern road to Amir Chah. The water is quite

unfit to drink, being impregnated with the soilings of camels. Fair water could be obtained by digging wells in the bed of the *nala*, but it would be advisable to go on to Mach (*q. v.*), 4 miles further on down-stream. A track leads from here to Kharan (114 miles) *viâ* Regin. (*Roome.*)

The seventh stage from Kharan (114 miles) on the road to Amir Chah *viâ* Regin. Wood and grass scarce; water plentiful, but very brackish. Regin, the sixth stage, is 15 miles distant, and Nuhli, the eighth stage, is 26½ miles distant. (*Ahmed Ali Khan.*)

SORAP GAR.—Lat. 28° 31′; Long. 64° 3′; Elev. 4,850′.

A solitary hill about 5 miles west of the Malik Surindag (*q. v.*).

SORGIL OR SHORGIL—

A halting-place in the western part of Dalbandin on the road from Sohrab to Shandak. It is 16 miles from Kani, the next stage eastwards, and 15 to the Hamun Kaur. The water here is precarious and brackish, but any amount can be collected. Fuel and camel forage procurable: also a little grass. After recent rain the water becomes quite sweet. (*MacGregor.*)

SORKOH OR SORKOWAK—

A conical hill in continuation westwards of Damodim. The track from Mushki Chah to Amir Chah passes to the east of it and to the west of Damodim.

An abundant growth of assafœtida on its lower slopes. (*Roome.*)

SORO—

A *karez* that takes its rise on the northern slopes of Koh-i-Jorakian and irrigates Baghak plain. (*Roome.*)

SOR-REG—

A high red sand-hill in the North-West Baluch desert, about 14½ miles from Galla Chah on the road to Garmashki. The road to this latter place inclines slightly to the left on arriving at this hill. (*Maitland.*)

Every, or nearly every, conspicuous sand-hill of a reddish colour is known under this name. Sir Reg is another common name, and the meaning it conveys to the mind of a Baluchi is "a high sand-hill." Girdan Reg is another common name applied to a mass of sand of uneven contour. (*Webb-Ware.*)

SORO WELL.—Lat. 29° 19′; Long. 64° 46′; Elev.

About ¾ mile north by east of Chagai.

SORO WELL.—Lat. 29° 28′; Long. 63° 24′; Elev.

A well about 2 miles east of Jilejil on the road from Robat (south of Sukaluk).

SOTAG.—Lat. 28° 51′; Long. 63° 59′; Elev.

The 9th stage on the trade-route, 15½ miles from Nuhki and 41½ miles east of Merui. A *serai* here meets the requirements of traveller. There are a few wells close to the track about 4 feet deep. The water in them is brackish but potable. There is a profuse growth of *pish*, tamarisk, *lana* and *barshok* in the *nala*-bed. About a mile upstream is the well of Kulian, the water in which is reported to be abundant and good.

One of the wells has been fitted with a windlass and watering trough. (*Roome*)

The following is a report on the water-supply of Sotag in June 1903:—

One well immediately south of the *thana*, 4 feet diameter and 4 feet of water about 15 feet below the ground surface, quite unfit for use, and so bad that camels refused to drink it.

Two wide *nalas*, running from north to south, are on either side of Sotag. In that to the west under the left bank, close to the *thana*, there were three pits, about 4 feet in diameter, with 1 foot of water close to the surface. Water from this *nala* is drinkable, but slightly brackish, and unpleasant to taste, though fit for camels. Plentiful supply may be obtained by digging pits in this *nala*.

In the *nala* to the east, under the left bank and to the south of the trade-route, there were four pits of about 3 feet diameter with 1 foot of water close to the surface. This is rain water, sunk into the bed of the *nala*, and is good and sweet.

Grazing and fuel is plentiful in the vicinity of the *thana*. (*Rose-Price.*)

SUKALUK—

A camping-ground on the Nushki-Chagai route to Rudbar on the Helmand. It is 13 miles from Robat and two stages (probably about 60 miles) to Rudbar. Galla Chah, on the Khwaja Ali route, lies some 10 miles to the east.

There is a good camping-ground here on gravel and sand soil close to the mouth of the Sukaluk ravine. No grass or fuel, and camel-grazing scanty.

Water abundant in three wells, about 4 feet square, with a depth of 1½ feet of water, and in several large pools, all in the bed of the *nala*. It appears that this supply could be largely increased by digging in the bed of the *nala*. A few hundred yards below the halting-place the ravine debouches into the *lut*.

The road from Robat to this place is good with the exception of 1 mile in the Sukaluk ravine, which is very contracted and rocky and would need some preparation to make it practicable for guns or a large column. To the north-west of the hill Malik Dokand are some detached low peaks called Sukaluk-i-Garrish, at the foot of which on the left lies the road from Robat. Near this a road joins in from the left, from a district called "*Ziyah*" said to be a *hamun* probably identical with MacGregor's God-i-Zirreh. Sukaluk is important for the same reason that Galla Chah is, *viz.*, that it lies on the skirts of the desert, and is the last point where fresh water can be obtained for the journey to the Helmand. (*Peacocke.*)

SUMAILI NAWAR.—Lat. 28° 46′; Long. 64° 20′; Elev.

A pond after rain fed by *nalas* from Siah Dik hill. It lies in the south-west corner of Dalbandin plain.

SURAJ.—Lat. 29° 9′; Long. 64° 59′; Elev.

A halting-place on the Thal-Zarala road about 8 miles west-south-west of Mekh-i-Rustam and south-east of Lora Hamun.

SURKHAB WELL.—Lat 29° 24′; Long. 65° 59′; Elev.

About 5 miles south by west of Baghak on the Nushki-Kharan road.

SUTO—Elev. 4,290′.

Is situated at the junction of Duzdap *nala*, which flows along the western edge of the Duzdap plain with the Ziarat Rod which flows along the northern edge of this plain. Here there is good and sweet water in abundance, running both in the Duzdap *nala* and the Ziarat Rod; there is also good water issuing from small springs about a quarter of a mile up the Duzdap *nala*. There is a thick growth of tamarisk bushes and there is coarse *dab* grass in abundance. Judging by the marks on the ground this spot is used as a spring and summer settlement by nomad Baluchis. A good camping-ground would be found in the Ziarat Rod and a small quantity of supplies such as goats, sheep, wheat and *bhusa* could be obtained from Duzdap, about 3 miles distant. The camel-grazing around is good and abundant. (*Roome.*)

TAFUI—Lat. 29° 14′; Long 65° 56′; Elev. 4,877′.

A halting-place on the road from Nushki to Kharan, 16 miles from Baghak, 24 from Nushki, and 13 to Patkin. Water-supply from shallow wells (7 feet to the water) in the bed of a *nala*. Here is a camping-ground only. Forage scanty. (*Wahab.*)

TA GAZ KAND RIVER—

One of the water-courses into which the Mashkel river divides as it approaches the Hamun.

TAGHAZ—

A village on the right bank of the Helmand opposite the Koh-i-Khan Nashin, consisting of some 900 Sadozais. It possesses some 600 cattle, 1,200 sheep and goats, 30 horses, 30 camels and 30 ploughs, each plough producing on an average 25 *kharwars*. The present Khan is Umar Khan (*Wanliss, February 1903.*)

TAHLAB RIVER—

Is a continuation south-eastwards of the Mirjawa river (*q. v.*).

The latter changes its name to Tahlab after passing Nodo, 41 miles south of Mirjawa, and is known as such until it enters the Hamun-i-Mashkel.

This river flows into the *hamun* through a wide delta which is usually dry, but the water is close to the surface and at times there is a good deal of water in the Tahlab river, but it is unfit for use.

The Tahlab marks the Perso-Baluch boundary of 1896. The country passed through by this river is not particularly sandy and is certainly not a desert. Along its banks there is an extensive tamarisk jungle.

The road from Jalk *vid* Ladgasht to Mirjawa lies parallel to the Tahlab river on its west bank; it is easy, but drinking water is scarce. At Nodo there is a spring of which the water is distinctly brackish. Between Nodo and Mirjawa, 41 miles, there is no water, but a well sunk at Reg-i-Malik, an intermediary locality, might produce water. In the hills west of the road there is abundance of good water. (*Showers—Webb-Ware.*)

TAHLAB SPRING.—Lat. 28° 35′; Long. 61° 56′; Elev.

A spring near the Tahlab river about 30 miles south-east of Mirjawa on the road to Mashkel.

TAHLAB WELL.—Lat. 29° 4′; Long. 63° 41′; Elev.

A well in the Tahlab *nala* which is an affluent of the Gat-i Barote.

TALAB.—Lat. 29° 23′; Long. 64° 46′; Elev.

About 5 miles north of Chagai.

TALARAN RIVER—

Rising south of Koh-i-Kahi mountain flows south-east into the Lora Hamun passing about 2 miles south of Chagai.

TALOK—

A village about 5 miles west by north of Chagai.

TANIA.—Lat. 29° 31′; Long. 65° 32′; Elev.

About 3 miles east of Umar Shah Nawar in the Nushki district.

TAOKIS—

A sub-section of the Sinjaranis (*q. v.*) who are a section of the Rind tribe of Baluchis. They are scattered over the Chagai and Western Sinjarani districts. The origin of the Taoki tribe is not known. It is possible that they are the descendants of earlier members of the Sinjarani family prior to Jan Beg. (*McMahon.*)

There are about four hundred families of Taoki scattered over Dalbandin, Koh Pusht, etc.; they mostly cultivate their rain watered lands, and though they possess some bullocks they principally plough with camels, of which they possess of all kinds about one thousand; they have between five thousand and six thousand sheep, and give the chief one sheep per flock, besides military service. (*Duke.*)

TASOK—Elev. 3,400′.

A few very small springs in the Shemidar *nala* 7 miles upstream from Kila Robat; here the *nala*, which has been flowing east, bends with a sharp turn to the north, and a well-marked caravan track from Hurmak, distant 10 miles, to Ladis, enters the *nala* down the left bank. The spot is marked by a large patch of *shora* on the right bank and a patch of lesser extent on the left bank. Little water was exuding from the springs in 1899, but the natives say that sometimes there is an abundant supply here.

Supplies.—Nil.
Camel-grazing.—Good.
Grass.—Nil.
Fuel.—Plentiful; small bushes.
Camping-ground.—Good, open plain. (*Roome.*)

TEZNAN.—Lat. 29° 25′; Long. 63° 44′; Elev. 7,686′.

A tall conical-shaped hill in North-West Baluchistan in the Malik Naru range.

THAL—

A halting-place on the road from Nushki to Chagai, 14 miles from Mahabat and 30 to Chagai.

Water in nineteen small wells in bed of a dry *nala*. Wells about 2′ by 3′ by 1½′ deep. Water good and lying 10 feet below surface, and would probably be procurable by digging anywhere in *nala*. Fuel and camel-grazing abundant.

From Thal three roads lead to Chagai—

(1) The most direct across the Lora Hamun.
(2) A second less direct by Vaji.
(3) A third, the most circuitous, by Gaokoh and Zarala.

The first lies altogether over the Hamun for 27 miles with no water or camel-grazing; the second skirts the Hamun for some 7 miles to Vaji at north foot of Pul Chattan, passing through camel scrub, and then also strikes across the Hamun. Water would be procurable on it at Vaji [at present date (1885) the one well existing there has fallen in]. The third mostly avoids the Hamun by skirting it. On it there is no water at Gao Koh, but there are three wells with a depth of 4 feet of water at Zarala.

All three roads are said to be impracticable for any animals during the winter rains, that by Zarala soonest becoming practicable, when, for some time subsequently, water is found along it in pools.

In dry weather the distance from Thal to Zarala being as great as to Chagai, there is no advantage to be gained by making the detour by the former place, unless (as, judging from Thal, would seem probable) water were to be found along it by digging round the edge of the Hamun. (*Peacocke.*)

THOK RIVER—

A small affluent of the Morjin river.

TJK WATER—Lat. 29° 25′; Long. 64° 50′: Elev.

About 8½ miles north by east of Chagai on the western edge of the Lora Hamun.

TOKIA CHILLAKASH.—Lat. 29° 14; Long. 65° 47′: Elev.

A village in the Dedar portion of Nushki district east of the trade-route.

TOZGI OR TOZHGI—*see* DUZGI.

TRANGARAN—

A locality in the desert north of the Mashkel Hamun and about 19 miles south-south-west of Butig.

There is one well here of rather brackish water. (*Ahmad Ali Khan.*)

TRASHTA KURIK KOH—

A peculiar isolated hill in North-West Baluchistan on the road from Amir Chah to Amalaf, about 25 miles west of the former place. (*MacGregor.*)

TRASIZAI—

One of the three sections of the Badini division of the Mengal (*q. v.*).

TRATOH—Lat. 28° 54′ ; Long. 63° 7′ ; Elev.

The 12th stage on the trade-route, 24 miles west of Chah Sandan and east of Kondi. The accommodation provided for travellers at Tratoh consists of a *serai* of four rooms with a small courtyard in front, the whole being encircled by an eight-foot wall. There is also a *chappar khana*. Two wells at this halting-place have been provided with watering troughs and windlasses for drawing water ; the water in each well is about 15 feet from the ground surface. It is very salt, but endeavours are being made to find better water in the vicinity.

Camel-grazing and firewood are scarce here. In 1903 a new well dug about a mile east of the *thana* produced water less salt than in the remainder, but the water from this also acts as a powerful purgative. (*See* also Appendix V) (*Webb-Ware—Scudamore.*)

TRUSHPAP—

A hill somewhere away to the west of Arbu in the north-west desert of Baluchistan.

TUMPA GAR—Elev. 4,833′.

A peak of the Malik Naru range about 8 miles west of Chagai fort.

TUMPA GAZ—

A halting-place on Lockwood's route from Barabchah to Chagai, 23 miles south-west of the former place. There is neither grass nor water here, but fuel and camel-grazing in the shape of tamarisk are plentiful. A road joins in here from Lal Khan Chah. (*Lockwood.*)

UMAR SHAH—Lat. 29° 34′ ; Long. 65° 29′ ; Elev.

A halting-place on the Shah Ismail route from Nushki to the Helmand. It is four stages (37 miles) from Nushki and six stages (74 miles) to Shah Ismail. There is here a large pond lying among sand-hills, half a mile to the right of the road. This pond is about 180 yards long by 70 yards wide, with a continuation 200 yards long by 40 yards wide, the whole of a depth varying from 5 feet to 3feet. The water is rain and drainage water, naturally good, but so tainted at present date (1885) by the thousand and one camels which daily enter it to drink as to be unpalatable. Small worms also are found in the water, and the natives drink it through a cloth. The water is potable, but as abundance of good water exists at the next stage, Zahro, distant 7 miles from here and 17 from Band, Zahro would seem to be preferable to Umar Shah as a halting-place for any troops, except cavalry and train animals. For these latter, however, Umar Shah would be preferable, as compared with Zahro, there are greater facilities for watering animals. This place would also be suitable for a commissariat depôt.

If rain falls in July, this pond does not dry up all the year round ; but in the absence of July rain it dries about September, until refilled by winter rain.

There is a temporary settlement of Brahuis who possess over one thousand camels. There are several large trees. Hillocks of drift sand here approach on the right, and the road skirts them till within some 5 miles of Kani.

There is abundant space outside the sand-hills for encamping a large force. Abundant *tagaz* for camel-grazing and fuel are procurable. The inhabitants are Ahmadzai Mengals. Headman or Wahdera in 1885, Muhammad Shah. (*Maitland—Peacocke.*)

Captain Walters, 24th Baluchistan Regiment, reports that in 1896 there was "very little water, quite unfit for the Afghan Camp who came on to Zahro."

UMBAI (HALTING-PLACE AND KAND)—Lat. 29° 38′; Long. 64° 48′; Elev.

Elevation of Kand, about 3,523 feet. Elevation of halting-place, 3,281 feet. The halting-place lies on an alternative route from Nushki to Shah Ismail. The main route is left at Kani, and this halting-place is about 13 miles distant. Shah Ismail is 28 miles, the intermediate stage being Galur, 14 miles distant. The defile or Kand lies to the north of the camping-ground and gradually contracts to a width of some 50 yards and ends in a steep sand slope which the road ascends in heavy gradient of $\frac{1}{8}$ for 300 yards on to a stony plateau which sinks gradually to the west.

The camping-ground is contracted. Water from a well in the bed of the defile at a point about 2 miles inside its eastern entrance. The well, which holds about 530 gallons, is 3 feet in diameter and has a depth of 4½ feet of water. Water is 3 feet below the surface.

Maitland remarks that caravans invariably use this road in preference to that *viâ* Gazachah or Nalaf. (*Peacocke—Maitland.*)

Umbai (should correctly be spelt Humai) is 15 miles from Kani. Found ample water at the camping place in wells, of which any number could be easily dug, at 2 feet below the surface. On the night of the 24th January 1903 the thermometer registered 12 degrees of frost. (*McMahon.*)

USHKANALI—Lat. 29° 4′; Long. 65° 14′; Elev.

About 7 miles north-west of Padag, *see* Washki *nala*. The water here is bad. (*Scudamore.*)

USHKI BUTAK—

A well in the Butak *nala*. It is from 3 to 4 miles upstream from the levy post. If the rain has been favourable, a little cultivation is carried on, melons being the chief plant grown. (*Roome.*)

WAD KUDDU—

A halting-place on the Gat-i-Barote route from Paniham to Sukaluk. It is the fourth stage from Gat-i-Barote. This name belongs to a pass over the main range, and at its northern foot is some water in a ravine which drains towards Robat. Fuel and forage abundant. (*MacGregor.*)

WADI NALA—

A small ravine in North-West Baluchistan, east of the Amuri Kaur, draining southwards. The route from Paniham to Sukaluk *viâ* Gat-i-Barote crosses it between the latter place and the Amuri Kaur. (*MacGregor.*)

WAD-I-SULTAN-PIR-KAISAR—Lat. 28° 11′; Long. 63° 24′; Elev.

A large salt bed in North-West Baluchistan, about 24 miles north-east of Galugah in the eastern portion of the Mashkel Hamun. There

is an inexhaustible supply of good hard salt, spread over an area of 2 square miles. It is free of payment, and is used by all tribes within a radius of 150 miles. It is on the road to Chagai, and the place is resorted to by people from Garmsel, Nushki and Jalk. The salt is described as lying in a layer, a foot or more thick, and it is dug out into blocks and carried off. (*MacGregor.*)

WAKAR WELL.—Lat. 29° 6′; Long. 61° 36′; Elev. 3,155′.

About 1½ miles north of Mazan Chapar in a tributary *nala* of the Zarala river.

WALI WELL.—Lat. 29° 33′; Long. 65° 13′; Elev.

In the Chagai district east of the Lora Hamun on the Nushki-Bagat road, about 5 miles north-west of Husain Nawar.

WASHAB.—Lat. 29° 9′; Long. 62° 47′; Elev. 4,370′.

A spring amidst the defiles of the Koh-i-Sultan. E. Vredenburg, Esq., of the Geological Survey, who visited it in 1899, says of it:—"It is about 6 miles from Gamichah, the road to it which I followed being impracticable for laden camels. It was a *nala*-bed and there was water running in a small stream for over a mile in length; the water was very brackish and unpalatable There was a collection of *ghidans* there and a few camels, sheep, goats and cattle. The track, which leads to it from Gamichah and which passes among hills composed mainly of lavas and volcanic ash of every variety of hue, could only be made practicable for laden camels with the greatest difficulty." During February and March 1903 the water in the spring was slightly salt; but quite potable. Early in April the water changed, and instead of being bright and clear it commenced flowing a slight yellow colour and became aperient. The signalling party were unable to drink it without distilling. The signalling station was on a hill 1½ hours' walk to the east of the spring. (*Vredenburg—Gordon*)

WASHAB.—Lat. 28° 46′; Long. 61° 46′; Elev.

A water-course running from the Rihi range into the Tahlab river, about 24 miles below Mirjawa.

WASHAB WELL.—Lat. 28° 45′; Long. 61° 49′; Elev.

At the south-western extremity of the Koh-i-Rihi (*q. v.*).

WASHKI NALI.—Lat. 29° 4′; Long. 65° 14′; Elev.

Lands to which Sir Naoroz Khan, of Kharan, layed claim, situated about 2 miles south of the trade-route between Padag and Yadgar. These lands cover an area of about 1¼ square miles and are all *khushkaba*, dependent on the floods which come down from Ras Koh in winter, for their irrigation water. It is said that 200 maunds of wheat have been taken off the Washki Nali lands in favourable years, but owing to the severe drought from which the district has suffered so severely, they had not been cultivated for several years in 1900. Sir Naoroz Khan's claims to possess any lands north of the Ras Koh range have not been substantiated. (*Webb-Ware.*)

WESTERN SINJARANI—

A district of Baluchistan lying west of the Chagai district.

The south of Western Sinjarani district has not yet been demarcated, but for the present it may be understood that Western Sinjarani includes the Mashkel district, and has an area about double that of the Chagai district. It consists for the most part of a barren desert of alluvial soil divided by sand-belts, and studded with extinct volcanic peaks. Its eastern boundary line runs due south from Gaukok hill to the Sianeh Koh range, thence the southern line runs along the watershed of the Sianeh Koh till it meets the Perso-Baluch frontier line which it follows to Koh-i-Malik Siah.

YADGAR.—Lat. 28° 58′; Long. 64° 58′; Elev. 2,900′.

P. C. bearings—

To Mekh-i Rustam	
„ Kambaran	32°
„ Chappar	185°
„ Ras Koh	288°
	111°

A halting-place on the trade-route from Nushki to Dalbandin, 83½ miles from former and 32 from the latter. There is a *chapar khana* here (1903).

The water-supply is from five wells situated in the midst of a plain 2,000 yards long and 1,500 yards wide, surrounded by sand-hills. Three of these wells are of 4 feet diameter, and two, which were sunk in 1900, of 10 feet diameter, and the water lies from 15 to 20 feet below the surface. The two latter are fitted with Persian-wheels and aroused for irrigation purposes.

About a mile to the south of the wells is a *nawar* in which water lies for two or three weeks after rain. It is about 1,000 feet long and 800 feet broad, and is surrounded by sand-hills. On the north edge of the *nawar* is a levy-post, substantially built of mud bricks with two defensive towers; this building is commanded from the sand-hills in its vicinity.

The country is suitable for a camping-ground anywhere in dry weather, but in wet weather it would be advisable to pitch camp on the lower slopes of the sand-hills as the plain becomes inches deep in mud. The plain is surrounded by sand-hills, the highest of which are to the south, about 50 feet high, and easily accessible.

Camel-grazing and fuel are abundant. After heavy rain a few nomad Baluch encamp here to graze their camels, sheep and goats. The grass lasts only a few weeks after rain and then gets parched up. Near here are some very ancient tombs and signs of former cultivation. The tombs are somewhat similar to those found in Bokhara and Samarkand.

A specially sacred ancient tomb is that called Bibi-ke-Pokh, which has some modern graves round it. The people come from great distances to bury their dead here. (*Roome—Webb-Ware.*)

The name of the district in which Yadgar is situated is Chah-Sir-i-Zalor.

YALI NAWAR.—Lat 28° 47′; Long. 64° 20′; Elev.

A depression which retains water after rain situated in the south-west of Dalbandin plain. It is fed by the Doki *nala*.

YELUL KHAN NAWAR—*see* JELAL KHAN NAWAR.

ZAGAR MENGALS—*see* MENGALS.

ZAHRO NAWAR.—Lat. 29° 30′; Long. 65° 24′; Elev.

About one mile north of the Ziarat-i-Sayad Mahmud on the western boundary line between the Nushki and Chagai districts, about 6 miles south of the Afghan-Baluch frontier line, and north of the road from Nushki to Chagai. It contains excellent water 50 feet deep, and 2 miles in length. (*Ahmad Ali Khan.*)

Zahro is 19 miles from Lala and 19½ from Kani. There is ample water in shallow wells of which as many can be dug as required with no trouble. (*McMahon.*)

ZAI—

The fifth stage (about 86 miles) from Kharan on the road to Chagai. There are a few *ghidans* about here, and a little cultivation. Water-supply both good and abundant. (*O'Donnell—from native information.*)

ZAIAN.—Lat. 28° 23′ 10″; Long. 63° 24′ 10″; Elev.

A halting-place on the northern edge of the Morjin, a small *hamun* lying about 10 miles to the north-east of the Mashkel Hamun and receiving the drainage of the Morjin Kaur. Zaian is on the route from Kharan to Amir Chah *viâ* Regin and Galachah, and is 17½ miles from the latter place. The camping-ground is good; wood and grass are plentiful, and good water is to be had from wells. The next stage towards Amir Chah is Paniham, 13 miles distant. (*Ahmad Ali Khan.*)

It is 82 miles from Dalbandin, and is a small plain surrounded by sand-hills.

There are two wells on this plain:—

First well.—Water 7 feet from surface, 2 feet deep, 3 feet in diameter. Water runs in as soon as taken out. Watered over 100 camels without making any appreciable difference. The water is slightly brackish but quite potable; is a strong purgative.

Second well.—Water 8 feet from surface, 2½ feet diameter. Water brackish, also purgative. There is also a well on the track just at the edge of the sand-hills on the God-i-Morjin close to the track. Water 20 feet from surface, 6 feet deep, 2½ feet diameter. Water stated to be good.

Camping-ground.—For a large force at 20th mile in the *hamun* or *dann*.

The plain on the sand-hills is only suitable for a small force. But there are flood water marks in the Dann 3 feet high.

Supplies.—Nil.

Fodder.—Grass said to be abundant (*barshok*).

Camel-grazing.—Good and abundant. 200 camels were being grazed in the Dann.

Fuel.—Very abundant. (*Roome.*)

ZALI WELL.—Lat. 29° 22′; Long. 64° 46′; Elev.

About 4 miles north of Chagai on the Gazechah road.

ZAMAN KUSHTA—

A halting-place on the road from Kharan to Galugah, 127 miles (seven marches) from the former and 30 miles (two stages) from the latter. The name Zaman Kushta commemorates the slaughter here of one Zaman Khan, Mengal. This place appears to be in a sandy desert, and no mention is made of any water, though possibly a well exists, as at the previous camp called Galchi. The bed of the Mashkel is 11 miles from here. (*O'Donnell.*)

ZANDIROK ROD—

A *nala* draining the southern slopes of the Malik Naru range. It is crossed on the road between Chah Sandan and Gat, 4¼ miles from the former. Here it is wide and shallow with indefinite banks. Plenty of *barshok* grass and tamarisk bushes grow in it. (*Roome.*)

ZANGI NAWAR.—Lat. 29° 26′; Long. 65° 49′; Elev.

A large *nawar* about 10 miles west of Baghak in the Nushki district, 17½ miles from Nushki on the road to Kani. It is usual to take a more northerly route to Kani *viâ* Chandan Khan Band, but in 1903 there was little or no water there. An ample supply of good though dirty water was found in 15 shallow wells. (*McMahon.*)

ZARALA RIVER—

Drains the southern slopes of the Malik Naru range and flows into the Lora Hamun at its south-western extremity.

Sardar Ali Khan, Sinjarani, in making the Zarala *karez*, in the year 1900, struck rock at a depth of 4½ feet, and found it necessary to send for skilled Ghilzai workmen. (*Webb-Ware.*)

ZARALA WELL.—Lat. 29° 9′; Long. 64° 46′; Elev.

In the Zarala *nala* about 3 miles west of the Lora Hamun on the southern Thal-Chagai road, about 11 miles from Chagai.

ZARU—*see* ZAHRO NAWAR.

ZAWAG—

Also termed Gawag. A date grove situated about 3 miles from Ladgasht in Mashkel. Sardar Naoroz Khan erected a small fort here in 1902. (*Webb-Ware.*)

ZENDIN NAWAR.—Lat. 29° 37′; Long 65° 35′; Elev.

About 8 miles north-east of Umar Shah Nawar in the Nushki district.

ZIARAT-I-MALIK BASTANI.—Lat. 29° 17′; Long. 64° 5′; Elev.

A *ziarat* north-west of the Kodla pass near the source of the Bastani *nala*.

ZIARAT-I-SAYAD MAHMUD.—Lat. 29° 28′; Long. 65° 24′; Elev.

A *ziarat* between Hussen Nawar and Umar Shah Nawar about 1 mile south of Zahro Nawar on the Nushki Shah Ismail road. Two *fakirs* reside here, and the spot is considered a most sacred one by all the Baluchis of Registan. (*Ahmad Ali Khan.*)

ZIRREH—*see* GAUD-I-ZIRREH.

ZIRREH—.

The halting-place Zirreh is situated in the bed of the furthest north of the two branches into which the Shelag divides, 28¼ miles north by east of Kirtaka. Caravans obtain their water from shallow pits, of which there are three, all near one another. The water was saline in March 1903, but produced no bad effects, but in June of the same year it was very foul and unwholesome. Better water might be found by digging pits higher up the Shelag. (*Webb-Ware—McPherson.*)

ZONG RIVER—

A tributary of the Shingiro river, dry except when in flood, rising in the eastern spurs of the Koh-i-Sultan.

Appendix I.

Statement showing the distribution and scale of the Levy Establishment of the Political Assistant, Chagai, in December 1901.

Name of post.	Jamadar.	Daffadar.	Sowars.	Footmen.	Total number of men.
Kohat Killa	1	1	7	5	14
Chh Muhammad Raza Chowki ...	...	1	4	...	5
Kirtaka Chowki	1	...	4	...	5
Sohdak Post	1	1	7	5	14
Nakak Karez Chowki	...	1	5	...	6
Nushki Chah Chowki	...	1	3	...	4
Tratoh Chowki	...	...	3	...	3
Amir Chah Chowki	...	1	4	...	5
Chah Sandan Chowki	...	1	...	4	5
Mirui Post	1	1	8	5	15
Sotag Chowki	...	...	...	1	1
Chakal Chowki	...	...	...	1	1
Dalbandin Post	1	1	7	6	15
Karodak Chowki	...	...	...	1	1
Padag Chowki	...	1	4	...	5
Kuchaki Chah Chowki	...	...	...	1	1
Nushki Post	1	1	10	...	12
Chandan Khan Band Chowki ...	...	1	4	...	5
Kishingi Chowki	...	1	4	...	5
Total ...	...	...	...	...	122

F. WEBB-WARE, *Captain,*
Political Assistant, Chagai.

Appendix II.

List of wells in Nushki district and the adjacent Registan, compiled by Sub-Surveyor Ahmad Ali Khan, previous to 1891.

Number.	Names of wells.	Latitude.	Longitude.	Depth of well in feet.	Depth of water in feet.	Remarks.
		° ′ ″	° ′ ″			
1	Abdunnabi	29 48 0	65 45 20	138	11	Good water; one well.
2	Ali Sheo	29 48 0	65 45 20	77	8	3 wells; brackish water.
3	Arab	30 5 50	65 30 40	105	6	1 well; good water.
4	Bahadur Khan	29 41 20	65 25 30	50	3	Ditto.
5	Bahman	30 12 30	64 55 0	121	0	
6	Bai Khan Wal	29 44 35	65 19 10	66	3	1 well; good water.
7	Baluch Khan	29 45 35	65 26 55	55	6	Ditto.
8	Barabchah	30 15 45	65 18 0	127	0	
9	Bibi	29 10 5	65 41 40	88	10	2 wells; brackish water.
10	Bujer	29 36 5	65 16 30	50	6	1 well; good water.
11	Buland Wal	29 44 5	65 50 50	110	0	
12	Chango	29 45 55	65 35 10	55	0	4 wells; good water.
13	Churok	30 17 10	65 6 0	231	50	1 well; good water.
14	Dad-i-Khuda	29 39 5	65 27 30	50	6	Ditto.
15	Daria Khan	29 44 10	65 11 15	50	6	Ditto.
16	Daru	29 36 25	65 9 45	50	3	Ditto.
17	Doshai	29 8 15	65 37 40	88	10	2 wells; brackish water.
18	Fakir Chah	30 23 0	65 6 50	275	11	1 well; good water.
19	Gatlok	29 53 2	65 16 50	50	3	Ditto
20	Guaran	29 42 20	65 34 50	28	5	Ditto.
21	Gurgej	29 38 50	65 9 5	55	6	Ditto.
22	Husain Khan	29 40 20	65 29 0	55	11	Ditto.
23	Ibrahim	29 34 40	65 17 20	55	6	1 well; brackish.
24	Iso	29 35 25	65 32 50	28	3	3 wells; brackish.
25	Janju	29 31 45	65 33 20	33	5	1 well; good water.
26	Jasu Khan	30 13 45	65 3 30	148	16	Ditto.
27	Jaurakin	29 18 55	65 57 0	11	4	2 wells; brackish.
28	Juli	29 56 20	65 7 45	50	6	1 well; brackish.
29	Kabul	29 21 55	63 39 50	11	3	Ditto.
30	Kakaki	29 26 35	65 19 40	38	6	4 wells; brackish.
31	Kani, I	29 17 30	65 39 40	12	6	4 wells; good water.
32	Kani, II	30 13 10	64 38 34	3	5	3 Ditto.

Number.	Names of wells.	Latitude.	Longitude.	Depth of well in feet.	Depth of water in feet.	Remarks.
		° ′ ″	° ′ ″			
33	Kani, III	29 34 30	65 5 35	44	6	6 wells; good water.
34	Kaim Khan	30 11 55	65 3 10	110	11	1 well; brackish.
35	Kochal	29 11 55	65 45 30	77	10	1 ditto.
36	Kohi	29 49 15	65 36 55	66	11	1 well; good water.
37	Lalla	29 29 40	65 37 10	...	...	1 well; brackish.
38	Lash Kari	29 40 35	65 11 28	10	3	Ditto.
39	Mard Khuar	29 47 54	65 17 55	94	...	Ditto.
40	Mazar	29 35 20	65 26 0	44	6	Ditto.
41	Muhim Khan	30 7 47	65 54 0	...	...	Ditto.
42	Murmasi, I	30 21 13	65 8 0	148	11	1 well; good water.
43	Murmasi, II	29 48 18	65 2 50	46	6	Ditto.
44	Nawab Khan	30 5 15	64 28 20	44	6	Ditto.
45	Nokchah	30 6 55	65 10 15	121	...	2 wells; good water.
46	Purdil Khan	29 52 40	65 30 55	88	27	1 well; brackish.
47	Rustam Khan, I	29 38 55	65 36 10	50	6	2 wells; good water.
48	Rustam Khan, I	30 1 10	65 29 30	110	22	Ditto.
49	Rodeu	30 17 10	65 5 15	203	11	Ditto.
50	Safar	30 29 25	65 34 12	132	...	2 wells; brackish.
51	Sanjar Wal	29 38 44	65 20 5	...	...	1 well; brackish.
52	Shah-i-Diwana	29 28 25	65 19 50	33	7	4 wells; brackish.
53	Shaikh ...	...	...	44	6	1 well; good water.
54	Shoki	...	...	...	...	Ditto.
55	Sikhsar	...	...	...	...	Ditto.
56	Sirrak	...	...	72	38	2 wells; brackish.
57	Soro	...	...	38	11	1 well; brackish.
58	Wali	29 33 40	65 12 45	60	6	Ditto.
59	Well ...	29 24 15	65 44 30	10	3	Ditto.
60	Zangi	29 54 10	65 40 30	...	...	Ditto.
61	Zardkok	...	...	55	6	1 well; good water.

Appendix III.

Abstract of the canals on the Helmand from Landi Muhammad Amin to Band-i-Seistan.

Name of canal.	Bank of river.	Cultivable area in acres commanded by the river.	Actual area in acres under wheat and barley in 1903.	Remarks.
Landi Muhammad Amin ...	Left ...	8,000	800	
Right Bank	Right ...	25,000	2,000	
Deshu	Left ...	14,000	1,000	
New Khwaja Ali	,, ...	2,500	1,000	
Old Khwaja Ali	,, ...	3,500	1,500	
Pulalak	,, ...	4,000	250	
Landi Barechi	,, ...	4,000	450	
Rudbar	,, ...	4,000	1,400	
Chahar Burjak	Right ...	7,000	2,400	
Bandar-i-Kamal Khan ...	Left ...	1,300	1,000	
Trakun	,, ...	5,000	1,800	
Dakdela	,, ...	2,000	700	
Puz Mashi	,, ...	1,500	15	
Mirabad	Right ...	2,000	250	
Kala-i-Fath, No. 1	,, ...	11,000	1,940	
Kala-i-Fath, No. 2	,, ...	12,000	2,200	
Sabz Ghari	,, ...	1,500	200	
Khogah	,, ...	2,000	900	
TOTAL ...	...	120,300	19,805	

APPENDIX IV.

Meteorological observations in the Helmand Valley between Landi Muhammad Amin and Band-i-Seistan.

Place.	Date.	Hour.	Barometer.	Attached thermometer.	Dry bulb thermometer.	Wet bulb thermometer.	Maximum thermometer.	Minimum dry thermometer.	REMARKS.
Landi Muhammad Amin.	February 2nd	8 A.M.	25·59	25·60	33·00	29·50	56·40	27·00	
		4·30 P.M.	28·69	25·67	47·70	40·50	57·20	47·50	
Deshu	,, 3rd	7·30 P.M.	26·85	26·82	40·50	38·80	40·50	38·00	
Khwaja Ali	,, 4th	6·30 A.M.	26·78	26·73	39·70	22·30	41·00	23·00	
Ditto ...	,, 5th	10 A.M.	28·02	27·94	35·0	30·2	37·0	33·0	Light clouds.
		4·30 P.M.	27·92	27·95	58·50	44·50	59·0	57·0	Cloudy.
Ditto ...	,, 6th	8·30 A.M.	28·05	28·00	33·00	30·50	58·80	24·00	Cold and clear.
		4·30 P.M.	28·04	27·97	49·00	48·00	63·80	53·00	,, ,,
Ditto ...	,, 7th	8 A.M.	28·00	27·93	36·40	32·00	63·80	29·40	Cold and hazy.
		4·15 P.M.	27·93	27·84	63·80	49·00	70·50	29·40	Hazy.
Ditto ...	,, 8th	8 A.M.	27·85	27·80	44·40	38·00	70·30	29·00	Cloudless.
		4 P.M.	27·87	27·80	71·80	54·70	75·00	53·40	,,

Meteorological observations in the Helmand Valley between Landi Muhammad Amin and Band-i-Seistan—contd.

Place.	Date.	Hour.	Barometer.	Attached thermometer.	Dry bulb thermometer.	Wet bulb thermometer.	Maximum thermometer.	Minimum dry thermometer.	Remarks.
Khwaja Ali ...	Feb. 9th	8 A.M.	27·94	27·87	45·60	39·50	75·50	39·30	Clear.
		4 P.M.	28·05	27·97	62·60	53·60	75·70	39·30	"
Ditto ...	" 10th	6-30 A.M.	28·01	27·95	39·50	38·00	76·00	35·00	Cloudy.
Landi Barechi ...		5-45 P.M.	27·92	27·82	53·50	49·00	59·00	56·00	Cloudy, heavy rain during night.
Ditto ...	" 11th	7 A.M.	28·02	27·92	43·00	42·00	59·00	42·00	Misty.
Rudbar ...		4 P.M.	28·10	28·02	57·50	51·00	62·60	57·00	
Do. ...	" 12th	7 A.M.	28·04	27·97	35·00	34·70	62·50	33·50	Misty.
Jahan Beg ...		9-15 P.M.	28·00	28·04	48·40	43·00	57·30	50·00	
Ditto ...	" 13th	8 A.M.	28·06	28·05	37·30	36·00	57·20	38·40	Clear
Chahar Burjak ...	" 14th	8-30 A.M.	27·97	27·93	50·00	42·50	68·30	37·30	
		4 P.M.	27·96	27·90	73·40	53·60	74·50	37·30	
Ditto ...	" 15th	7 A.M.	27·96	27·92	48·50	44·50	74·30	48·00	

Ditto	...	,,	16th	8 A.M.	28·15	27·99	53·30	53·00	72·80	42·50	
				4 P.M.	28·06	28·02	70·50	70·50	72·80	71·50	
?	...	,,	17th	7 A.M.	27·97	29·92	47·30	41·50	72·50	45·00	Hazy and slight clouds.
Mashi	...	...	,, 18th	8 A.M.	28·15	28·10	56·20	42·50	65·80	42·00	
				4 P.M.	28·22	28·15	71·50	51·50	80·50	71·00	
Do.	...	...	,, 19th	8 A.M.	28·36	28·31	58·50	47·30	81·50	43·00	
Do.	...	...	,, 20th	7·30 A.M.	28·33	28·24	51·50	45·20	75·60	44·50	
Band-i-Seistan	...	,,	21st	8 A.M.	28·38	28·34	59·60	46·80	80·50	46·00	
				4 P.M.	28·35	28·30	80·50	57·80	84·80	81·00	
Ditto	...	,,	22nd	8 A.M.	28·23	28·19	57·20	48·60	85·00	51·00	
				4 P.M.	28·15	28·09	75·20	56·80	85·50	75·50	
Ditto	...	,,	23rd	8 A.M.	28·03	27·95	57·80	49·60	85·50	54·00	Hazy and cloudy, light wind.
				4 P.M.	27·97	27·92	73·30	57·40	84·20	73·50	
Ditto	...	,,	24th	8 A.M.	28·13	28·05	55·50	49·40	83·80	52·50	Hazy and cloudy, light wind.
				4 P.M.	28·18	28·05	71·60	57·00	84·20	71·50	
Ditto	...	,,	25th	8 A.M.	28·23	28·15	58·20	51·60	84·00	58·00	High wind.
				4 P.M.	28·14	28·06	68·20	57·00	70·80	68·00	
Ditto	...	,,	26th	8 A.M.	27·98	27·93	56·60	54·50	71·50	52·80	
				4 P.M.	28·10	28·02	66·60	56·00	89·00	65·00	
Ditto	...	,,	27th	8 A.M.	28·03	27·97	45·51	46·50	67·00	50·00	
Ditto	...	,,	28th	4 P.M.	28·38	28·32	51·3	40·00	59·00	50·00	

APPENDIX V.

DETAILED REPORT ON SIGNALLING STATIONS, DALBANDIN-ROBAT LINE.

No. 1 Dalbandin.

(*a*) *Actual position of station.*—On highest point of the low hills 3 miles north-west of Dalbandin. Bearing from north-west corner of *bangalow*—287°

(*b*) *Compass bearings.*—

(1) To Chakul station, 272°.

(2) To Dalbandin *bangalow*, 107°.

(*c*) *Crowfly distances.*—

To Chakul station, 18 miles.

(*d*) Signallers can live in Dalbandin *thana*, whence the distance to the station is about 3½ miles, or 1½ hours' marching and easy climbing.

(*e*) *Water-supply.*—From a spring in the bed of the Bulo river, 2½ miles north of the *thana*. In the winter months and also in the hot weather for 2 or 3 days after heavy rain, water is brought right up to the *thana* in an open *karez*, but this supply cannot be depended upon. The permanent supply is from the spring, and is good, sweet and plentiful, but full of sand.

(*f*) *Fuel.*—Plentiful in the *nalas* and open country round Dalbandin, but none in the immediate vicinity. Has to be brought in on camels, but there is no difficulty in obtaining it.

(*g*) *Grazing*—Very plentiful; *kharas* and *drubh* for horses, *tagaz* and *gaz* for camels.

(*h*) *Rations.*—*Ata, ghi, dhal, gur*, and salt can be drawn from the Dalbandin *bania* by previous arrangement.

(*i*) *Strength.*—Six signallers, 38th Dogras.

No. 2 Chakul.

(*a*) *Actual position.*—On highest point of the Durrak Zand hills; bearing from Chakul *bangalow* 210.°

(*b*) *Compass bearings.*—

(1) To Dalbandin station, 92°.

(2) To Merui station, 277°.

(3) To Chakul *bangalow*, 30°.

(*c*) *Crowfly distances.*—

(1) To Dalbandin station, 18 miles.

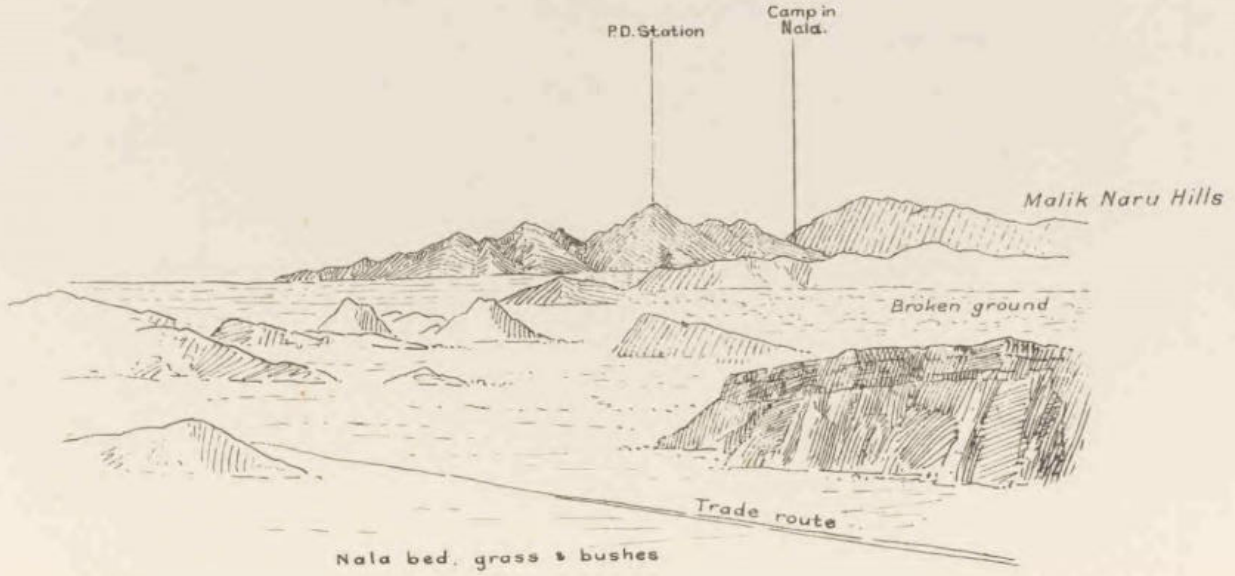
(2) To Merui station, 21 miles.

(*d*) Signallers encamp at the foot of the hill on which the station is; five minutes climb from camp to station.

(*e*) *Water-supply.*—In *nala*-bed, ¼ mile north-east of Chakul *bangalow*, whence it must be carried on camels to the camp about 5½ miles. Supply in June, 1903, 2 pools camel water about 18 feet diameter, 2 feet deep; 1 pool drinking water about 18 feet diameter, 3 feet deep, 2 pools drinking water about 9 feet diameter, 2 feet deep and 1 pool drinking water 12 feet by 4 feet, 2 feet deep.

Sketch No 1

P.D. DAHANA STATION FROM MERUI STATION, BEARING 310°



I. B. Topo. Dy. No. 4.868
Exd. C. J. A., August 1903.

No. 2,075-I., 1903.

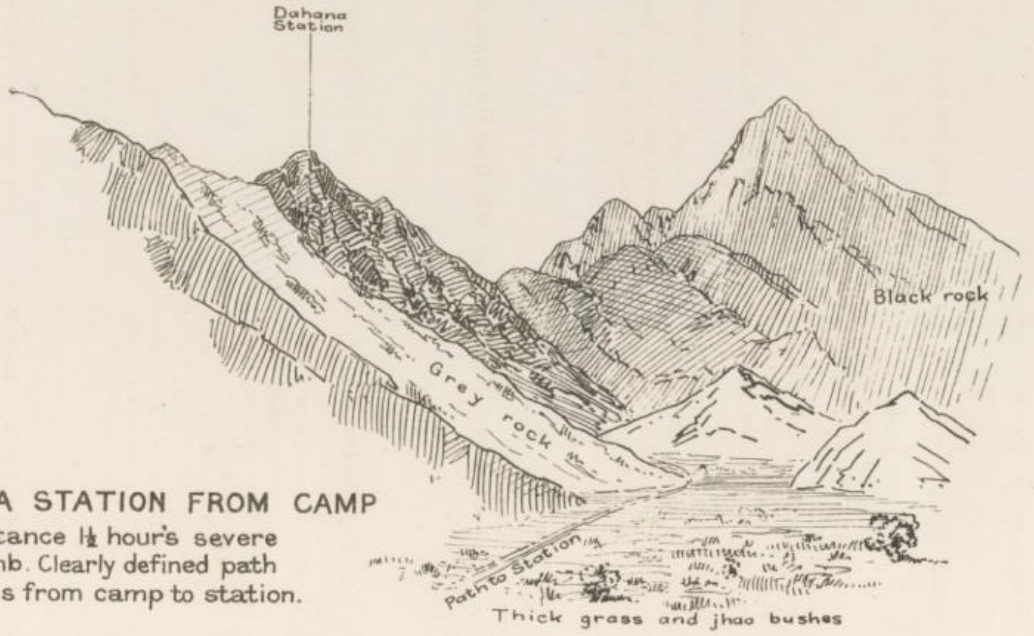
Nala bed, grass & bushes

I. B. Topo. Dy. No. 4,868.
Rec'd. U. J. A., August 1903.

No. 2,075-I., 1903.



Sketch No. 2



DAHANA STATION FROM CAMP

Distance ½ hour's severe climb. Clearly defined path runs from camp to station.

I. B. Topo. Dy. No. 4,869
Exd. C. J. A., August 1903.

Water here is about 2 feet below the surface, and more may be obtainable by digging in the *nala*-bed.

(*f*) *Fuel.*—Plentiful round camp and *thana*.

(*g*) *Grazing.*—Very plentiful; *drubh*, *tagaz* and *gaz*.

(*h*) *Rations.*—As for No. 1 station.

(*i*) *Strength.*—Six signallers, 35th Sikhs.

No. 3 Merui.

(*a*) *Actual position.*—On the top of a hill just south of and overlooking the *thana*.

(*b*) *Compass bearings.*—

(1) To Chakul station, 97°.

(2 To Dahana station, 310° (Sketch No. 1).

(*c*) *Crowfly distances.*—

(1) To Chakul station, 21 miles.

(2) To Dahana station, 24½ miles.

(*d*) Signallers quartered in the *thana*, whence it is 15 minutes easy climb to the station.

(*e*) *Water-supply.*—In June was from 15 wells in the bed of Merui *nala*, close to the *thana*. Wells about 10 feet to surface of water, 4 feet in diameter, with 3 to 6 feet of water. There were also three other wells, joined underground, forming a *karez* 6 yards long, about 3 feet of water, 4 feet wide. Water here is good and sweet and should be obtainable in any quantity by digging in the *nala*-bed.

(*f*) *Fuel.*—Very plentiful in the vicinity of the *thana*.

(*g*) *Grazing.*—Very plentiful; *drubh*, *tagaz* and *gaz*. There is also dwarf-palm for thatching.

(*h*) *Rations.*—*Ata*, *gur*, *ghi*, *dhal*, and salt from the *bania* at Merui by previous arrangement.

(*i*) *Strength.*—Six signallers, 38th Dogras.

No. 4 Dahana.

(*a*) *Actual position.*—On the highest point of the Kardak range west-south-west from position of camp.

(*b*) *Compass bearings.*—

(1) To Merui station, 130°.

(2) To Mizzil station, 285°.

(*c*) *Crowfly distances.*—

(1) To Merui station, 24½ miles.

(2) To Mizzil station, 30½ miles.

(*d*) Signallers encamp at water-supply (Sketch No. 2).

(*e*) *Water-supply.*—In two springs in the bed of the *nala*, 4 miles north of Dahana spring and 2½ miles east-north-east of the eastern end of Kardak range. Water can be obtained by digging pits 2 feet deep in the bed of the *nala* and is plentiful and good.

(*f*) *Fuel.*—Very plentiful in vicinity of camp and in *nalas* round. Several fairly large trees and a thick jungle of *jhau* bushes are near the camp.

(*g*) *Grazing.*—Very plentiful; *drubh* and *tagaz*.

(*h*) *Rations.*—As for Merui station.

(*i*) *Strength.*—Six signallers, 35th Sikhs.

No. 2,070-L., 1903.

Exd. C. J. A., August 1903.

No. 5 Mizzil.

(*a*) *Actual position.*—On low black hill south of and overlooking the camp. The site is marked by a large cairn, which can be seen by climbing up the small mound of rock immediately north of the *thana*.

(*b*) *Compass bearings.*—

(1) To Dahana station, 105°.

(2) To Washab station, 256° (Sketch No. 3).

(*c*) *Crowfly distances*—

(1) To Dahana station, 20½ miles.

(2) To Washab station, 20 miles.

(*d*) Signallers encamp near *thana*, whence it is 15 minutes easy climb to station.

(*e*) *Water-supply.*—Fairly plentiful, but very bad. Water is found in the *nawar* just to north of the *thana*, where it runs over the surface of the ground for 800 yards and finally collects in a pool about 20 yards across. This water is quite unfit to drink. The best water is to be obtained by digging pits near the south-east corner of the *nawar*, about 3 feet deep. They should be dug fresh every three days, and should be protected by *sangars* or *tagaz* hurdles to prevent their getting filled up with sand. Water at this place should be distilled for drinking purposes, otherwise, after drinking, a scum is left on the lips, and the men complained that it did not quench thirst and caused pain in the chest.

(*f*) *Fuel.*—Plentiful all round the *thana*.

(*g*) *Grazing.*—Very plentiful; *tagaz* and *gaz* for camels; but no grazing for horses.

(*h*) *Rations.*—As for Merui station.

(*i*) *Strength.*—Six signallers, 37th Dogras.

No. 6 Washab.

(*a*) *Actual position.*—On the eastern rim of the *nawar*, or crater, of Koh-i-Sultan, just at the foot of a black precipitous hill, whence the bearing of the station is 36°.

The track from the camp to the station leads over a *kotal* into the bed of a large *nala* flowing west and along this *nala* to the watershed. Then it takes a turn south-east and leads out into the *nawar*, across the eastern rim, across a spur of this rim and along the crest line to the foot of the precipice. (Sketch No. 5.)

(*b*) *Compass bearings*—

(1) To Mizzil station, 76°.

(2) To Mushki Chah station, 264° (Sketch No. 4).

(*c*) *Crowfly distances.*—

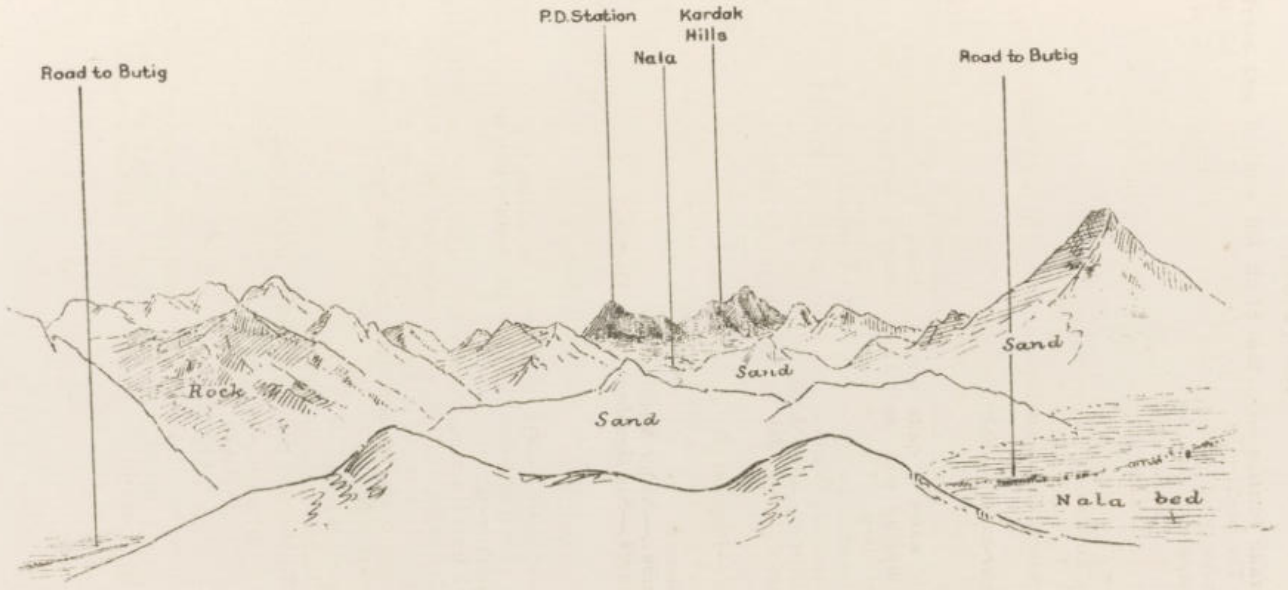
(1) To Mizzil station, 20 miles.

(2) To Mushki Chah station, 26 miles.

(*d*) Signallers encamp near Washab spring, where water is not plentiful and is a strong aperient. The water here should be distilled and owing to the large quantity of ochre deposited, the distillers must be cleaned out constantly.

Sketch No. 3

Sketch No. 3



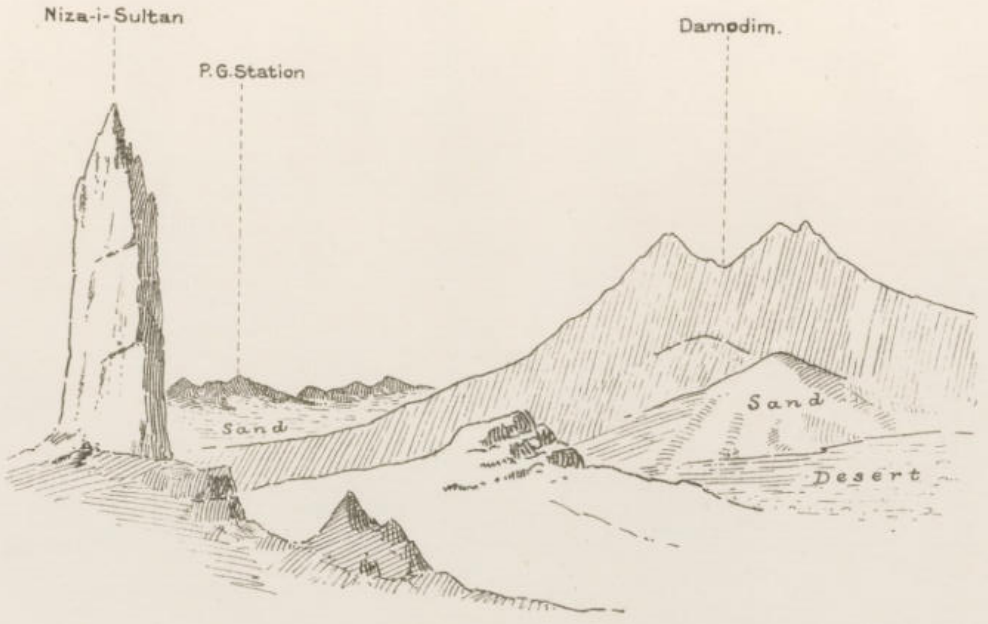
P. D. DAHANA STATION FROM MIZZIL, BEARING 105°

I. B. Topo. Dy. No. 4.870.
Exd. C. J. A., August 1903.

No. 2,077-I., 1903.

Sketch No 4

Sketch No. 4

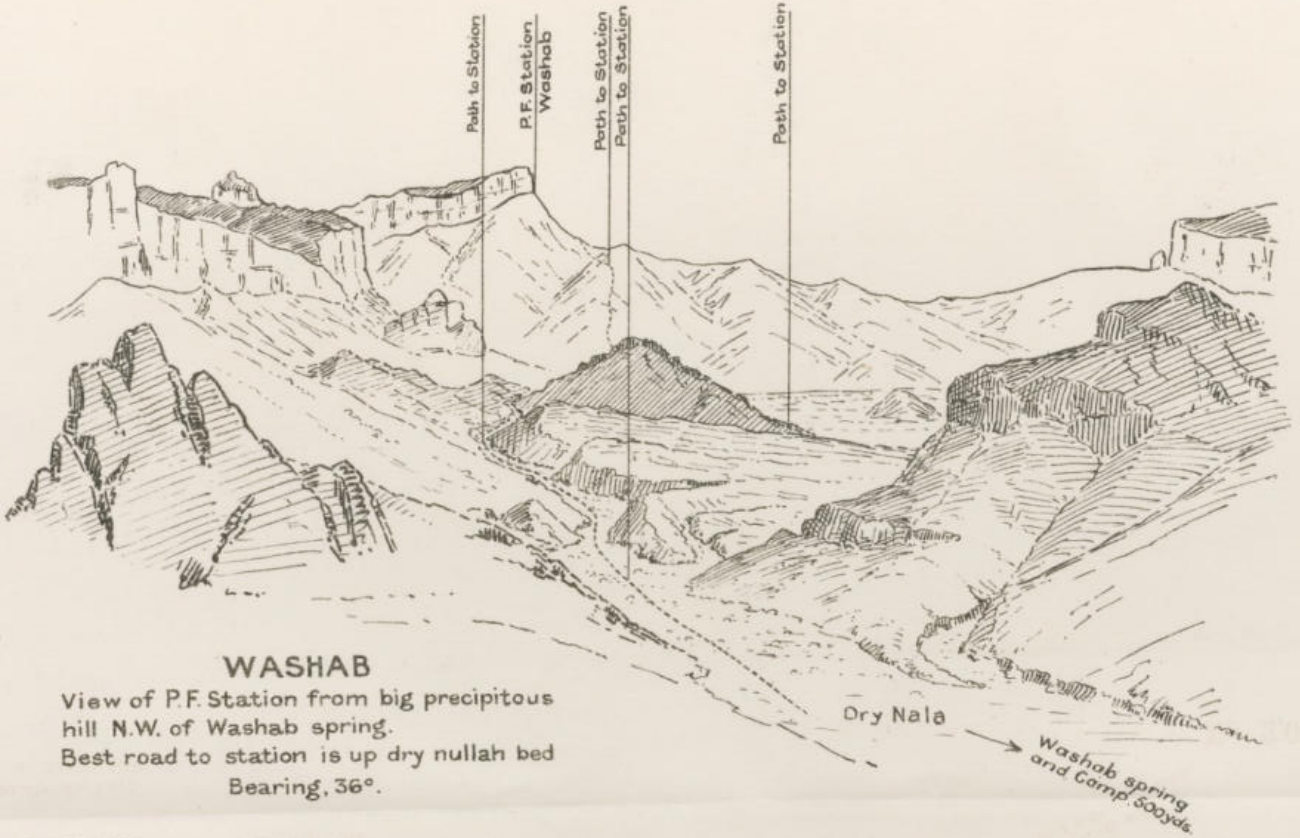


P.G. MUSHKI CHAH STATION FROM WASHAB STATION, BEARING 264°.

I. B. Topo. Dy. No. 4,871.
Exd. C. J. A., August 1903.

No. 2,078-I., 1903.

Sketch No 5



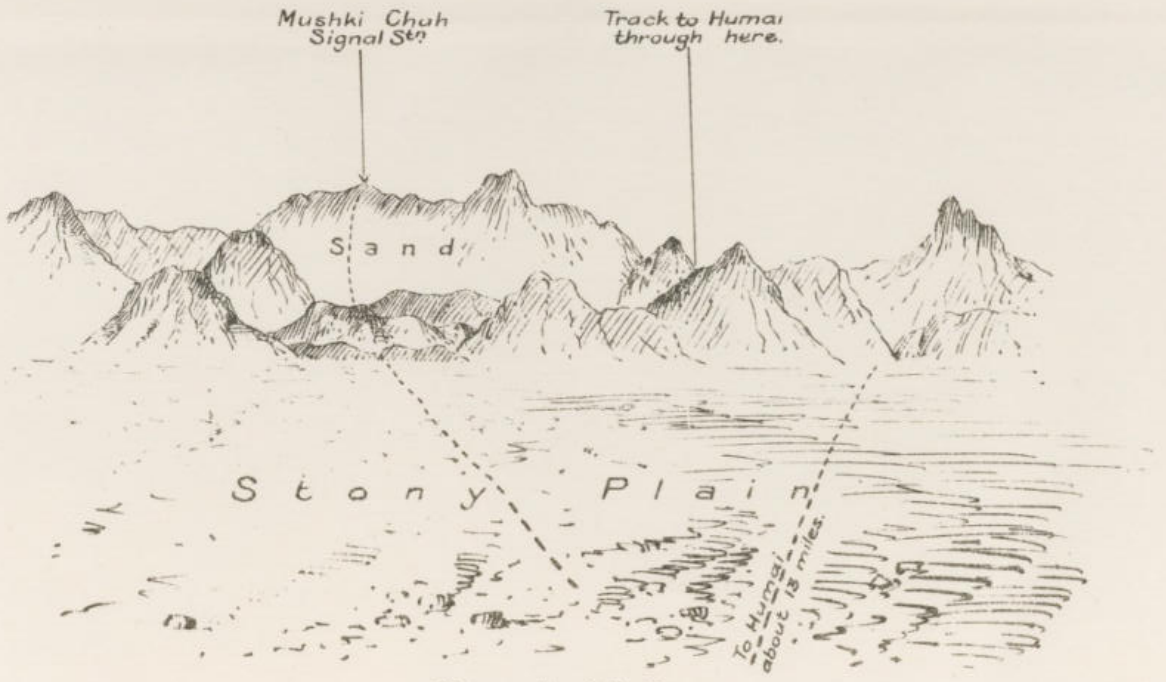
WASHAB

View of P.F. Station from big precipitous hill N.W. of Washab spring.
Best road to station is up dry nullah bed
Bearing, 36°.

I. B. Topo. Dy. No. 4.872.
Exd. C. J. A., August 1903.

No. 2,079-I., 1903.


Dry Nala



Sketch No 6.
Looking N.W. From
Mushki Chah Bungalow

I. B. Topo. Dy. No. 4,873.
Exd. C. J. A., August 1903.

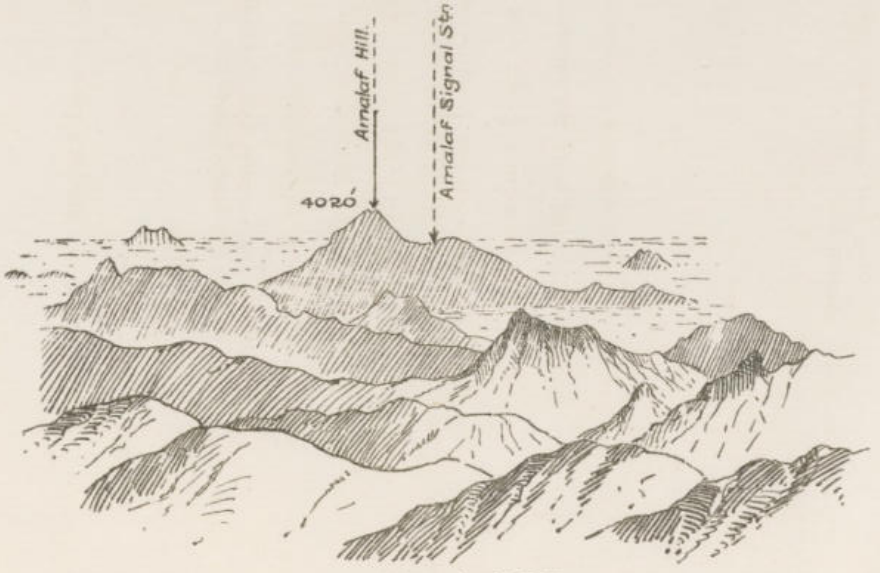
No. 2,080-I., 1903.

Mushki Chah Bungalow

I. B. Topo. Dy. No. 4,875.
Ext. C. J. A., August 1903.

No. 2,080-I., 1903.

(154)



Sketch No. 7.
Looking S.E. from
Kirtaka Signal Station.

I. B. Topo. Dy. No. 4.874.
Exd. C. J. A., August 1903.

No. 2,081-I., 1903.

(*e*) *Fuel.*—Plentiful in *nalas* round camp.

(*f*) *Grazing.*—*Tagas*, sufficient for only a small number of camels, exists round camp.

(*g*) *Rations.*—*Ata*, *gur*, *ghi*, *dhal*, and salt from the *bania* at Mushki Chah.

(*h*) *Strength.*—Six signallers, 37th Dogras.

No. 7 Mushki Chah.

(*a*) *Actual position.*—On a black rocky ridge, half covered with wind-blown sand, bearing 320° from *bangalow* (Sketch No. 6).

(*b*) *Compass bearings.*—

(1) To Washab station, 84°.
(2) To Koh-i-Dalil station, 285°.
(3) To Mushki Chah bangalow, 140°.
(4) To Niza-i-Sultan, 85°.

(*c*) *Crowfly distances.*—

(1) To Washab station, 26 miles.
(2) To Koh-i-Dalil station, 13 miles.

(*d*) Signallers live in the *thana*, whence the distance to the station is nearly 5 miles, or two hours' walk and climb.

(*e*) *Water-supply.*—In June 1903 the following were the number of wells, etc.—

3 wells, fit for camels only, in a small palm-grove ½ mile east of the *thana*.

4 wells in a shallow *nala* at a small palm-grove ½ mile north-east of the *thana*; water close to the surface and drinkable, but should be distilled.

4 wells in a *nala*, about ¾ mile east-north-east of the *thana*; water plentiful and sweet, and from 2 to 5 feet from the surface, about 4 feet of water (in one about 8 feet). More water could be obtained by digging in this locality.

1 well between the *thana* and *bangalow*, 15 feet from surface to water, which is aperient.

(*f*) *Fuel* and (*g*) *grazing.*—Scarce in the vicinity, but plentiful in *nalas* about 6 to 7 miles north-east of the *thana* towards Damodim.

(*h*) *Rations.*—As for Washab station.

(*i*) *Strength.*—Twelve signallers, 36th Sikhs.

No. 8 Koh-i-Dalil.

(*a*) *Actual position.*—On the summit of the southern peak of Koh-i-Dalil.

(*b*) *Compass bearings.*—

(1) To Mushki Chah station, 105°.
(2) To Amalaf station, 280°.
(3) To Humai wells, 120° (Sketch No. 7).

(*c*) *Crowfly distances.*—

(1) To Mushki Chah station, 13 miles.
(2) To Amalaf station, 32 miles.

No. 2,081-1., 1903.

(*d*) Signallers encamp at the base of Koh-i-Dalil, on the west-north-west, whence the climb to the station is about ¾ hour, very steep and arduous. The descent is also difficult owing to loose rocks and stones.

(*e*) *Water-supply.*—From two sources:

(1) Humai wells, whence water must be carried on camels, the best way to camp being round the north of Koh-i-Dalil, nearly 7 miles. The wells are amongst low sand-dunes and, in June numbered 18. The water is sweet and plentiful and is found from 5 to 10 feet below the surface and is about 3 to 4 feet deep. More water may be obtained by digging in this locality.

(2) For a short period after rainfall water breaks out in a small spring on the north-east side of a conical light-coloured hill, about 1 mile south-west of Koh-i-Dalil. It is sweet, and, while it lasts, is sufficient for the signalling party, escort and *sarwans*.

(*f*) *Fuel* and (*g*) *grazing*—Are plentiful in the vicinity of camp and of Humai wells.

(*h*) *Rations.*—As for Mushki Chah station.

(*i*) *Strength.*—Twelve signallers, 26th Punjab Infantry.

No. 9 Amalaf.

(*a*) *Actual position.*—On Amalaf hill, which bears 70° from the wells.

(*b*) *Compass bearings.*—

(1) To Koh-i-Dalil station, 100°.

(2) To Kirtaka station, 305.°

(*c*) *Crowfly distances*:—

(1) To Koh-i-Dalil, 32 miles.

(2) To Kirtaka station, 32 miles.

(*a*) Signallers encamp at Amalaf wells, whence the distance to the station is about 1¼ hours' climb.

(*e*) *Water-supply.*—In June 1903 the number of wells in Amalaf *nala* was as follows:—9 pits in the bed of the *nala*, 5 feet in diameter, water 1 to 3 feet deep, 3 to 5 feet below the surface. Also a pool of water about 15 by 5 yards, 2 feet deep, fed by a *karez* from one of these wells. By sinking pits in this *nala*, water continually percolates into them, and any amount can be obtained. The water being somewhat aperient should, for long continued use, be distilled.

(*f*) *Fuel.*—Very plentiful in Amalaf *nala*, close to the wells.

(*g*) *Grazing.*—A small amount in the surrounding hills and *nalas*.

(*h*) *Rations.*—*Ata, gur, ghi, dhal,* and salt from the *bania* at Saindak.

(*i*) *Strength.*—Twelve signallers, 25th and 26th Punjab Infantry.

No. 10 Kirtaka.

(*a*) *Actual position.*—On high precipitous ridge bearing 155° from the *bangalow*, on the south of Bedak *nala*.





Sketch No 8.

Looking from mouth of

Bedak Nala.

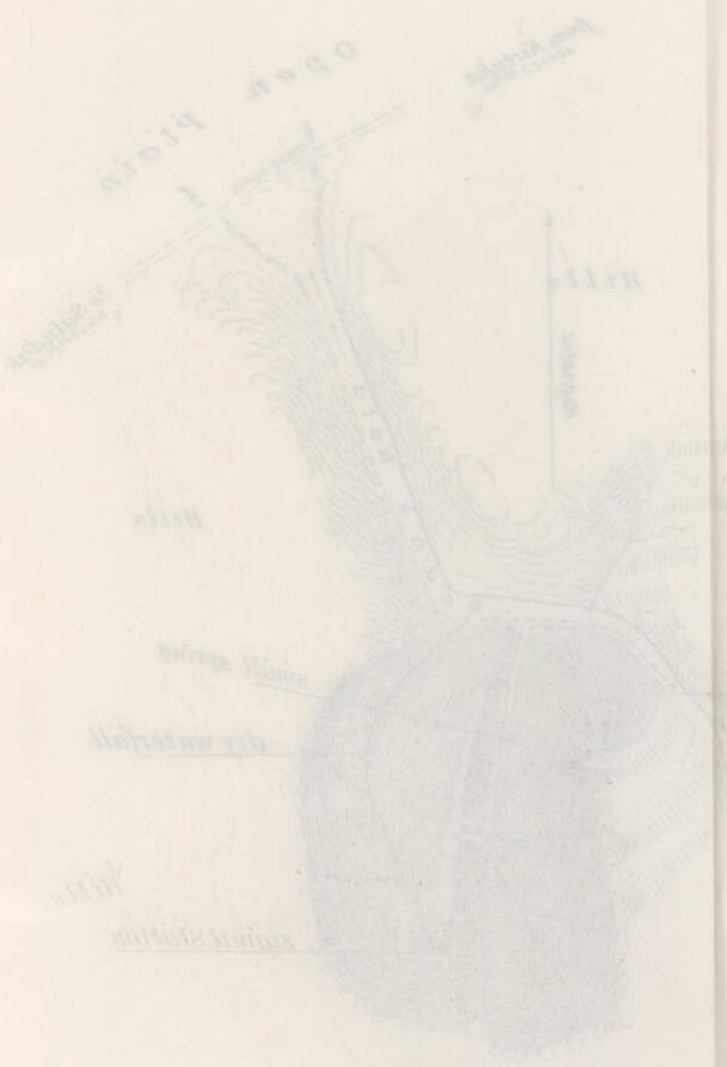
3 miles S.E. of Kirtaka.

I. B. Topo. Dy. No. 4,875
Exd. C. J. A., August 1903.

No. 2,082-I., 1903.

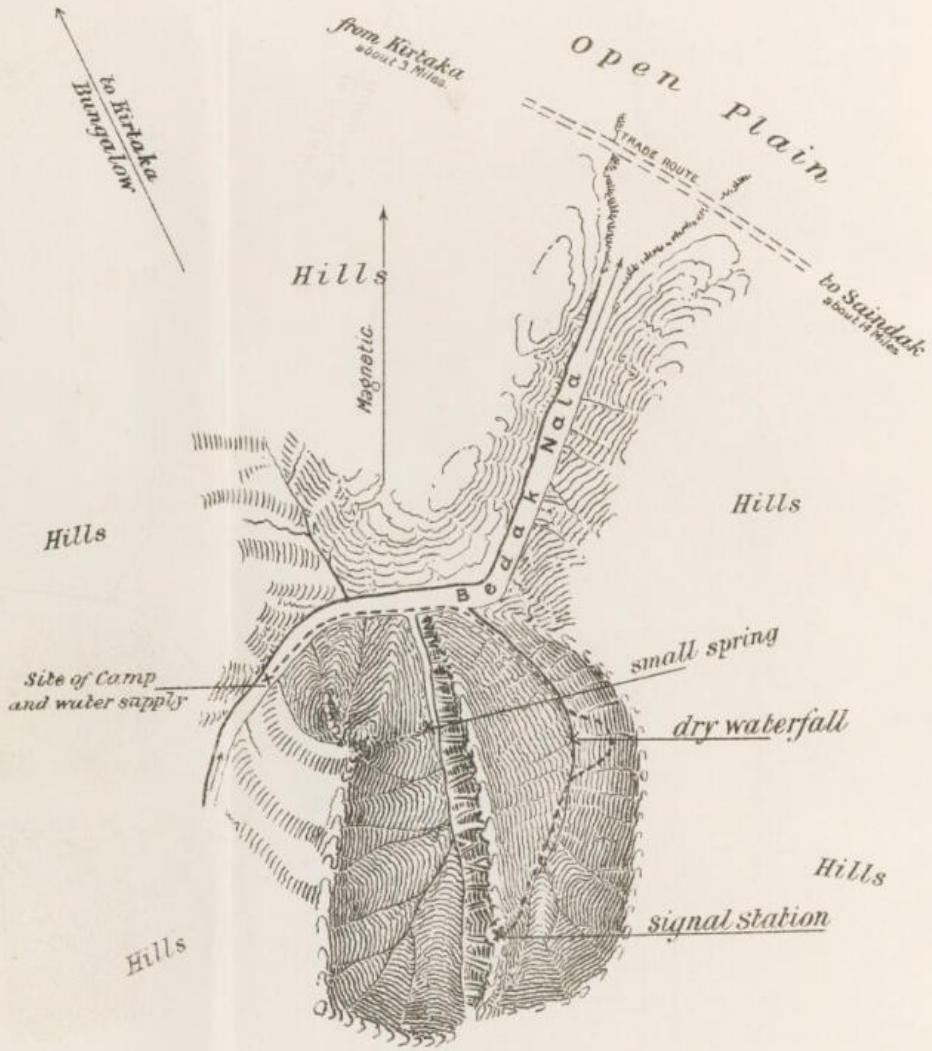
(142)

Looking from mouth of
Bedak Nala.
3 miles S.E. of Kirtaka



No. 2,082-I. 1903.

I.S. Topo. Dy. No. 4,875.
Ed. C. J. A. August 1903.



KIRTAKA STATION.

Sketch No 9.

Scale 2" = 1 Mile.

Path to Station- - - - - - -

Direct access from W steep and difficult.

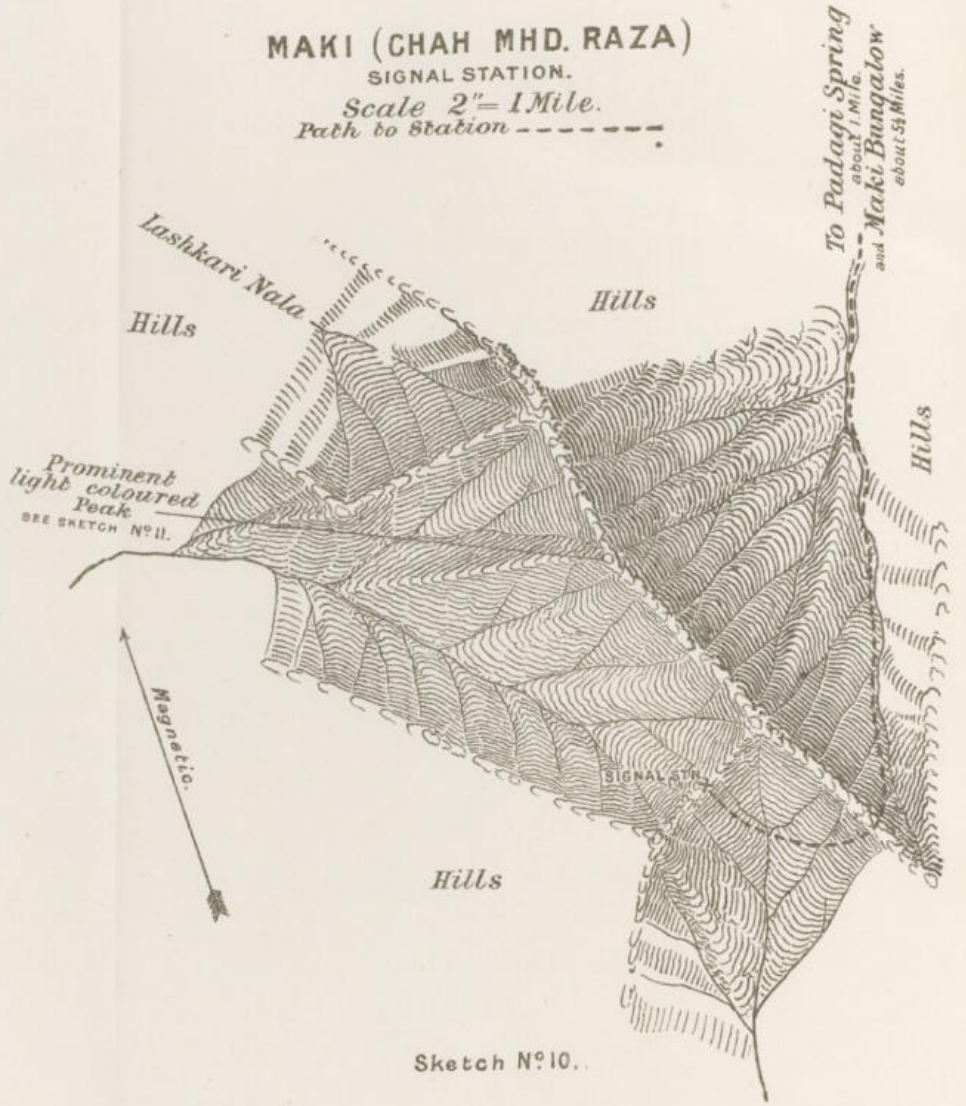
I. B. Topo. Dy. No. 4,876.
Exd. C. J. A., August 1903.

No. 2,083-I., 1903.

MAKI (CHAH MHD. RAZA)
SIGNAL STATION.

Scale 2"= 1 Mile.

Path to Station - - - - - - - -



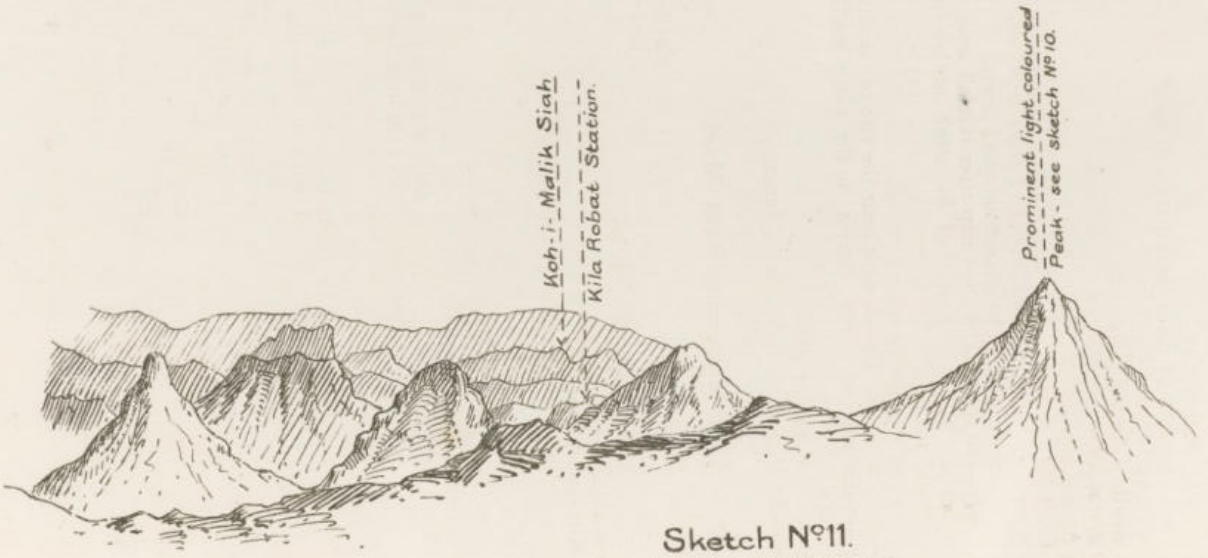
Sketch No 10.

I. B. Topo. Dy. No. 4,877
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No. 2,084-I., 1903


Hills
To Paddagh Spring
about 1 Mile
and Maki Bungalow
about 5½ Miles.

(144)



Sketch No 11.
Looking N. W. from
Maki (Chah Mhd: Raza) Stn

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No. 2,085-I., 1903.

(*b*) *Compass bearings.*—
(1) To Amalaf station 125.°
(2) To Chah Muhammad Raza (Maki) station, 306.°
(3) To Kirtaka *bangalow*, 335.°
(4) To mouth of Bedak *nala*, 10.°

(*c*) *Crowfly distances.*—
(1) To Amalaf station, 23 miles.
(2) To Chah Muhammad Raza (Maki) station, 19 miles.

(*d*) Signallers encamp in Bedak *nala*, about 1¾ miles from the mouth (Sketches 8 and 9). Time from camp to station about 1¼ hours.

(*e*) *Water-supply.*—At the site of the camp after rainfall water issues from the bed of the *nala*. The spot is marked by scrub of low bushes, and the water is plentiful and good. In dry seasons pits must be sunk in the bed of the *nala*, when water is found 4 feet below the surface.

(*f*) *Fuel.*—Plentiful in the Bedak *nala* near the site of the camp.

(*g*) *Grazing.*—Sufficient for a few camels on the plain north and east of the trade route.

(*h*) *Rations.*—As for Amalaf station.

(*i*) *Strength.*—Six signallers, 25th Punjab Infantry.

No. 11 Chah Muhammad Raza (Maki).

(*a*) *Actual position.*—On a ridge in the heart of the Kacha Koh range, about 4½ miles distant as the crow flies from, and south-west of, Chah Muhammad Raza (Maki). (Sketch No. 10.)

(*b*) *Compass bearings.*—
(1) To Kirtaka station, 126.°
(2) To Kila Robat station, 320° (Sketch No. 11).

(*d*) Signallers encamp at Padagi spring, distant from the station about 1¼ hours (Sketch No. 10.)

(*e*) *Water-supply.*—About 600 yards north-west of Maki *bangalow*. Padagi spring, situated in the main *nala*, issues from the hills and crosses the trade route. The general direction up the *nala* for about 2 miles from the mouth is 220.° Thence, for about 200 yards, 140,° and then winds through a short narrow gorge. The direction from the upper end of the gorge is 210° for about 600 yards, thence the general direction is 170,° till Padagi spring is reached, at about 2½ miles from the short narrow gorge above mentioned, or about 4½ miles in all from the mouth. The *nala* gradually narrows, till at the spring it is not more than about 20 yards wide. The spring issues from the bed of the *nala* and is marked by a grove of *padag* trees. The water is plentiful and at first sight appears good, but requires, for long use, to be distilled. To reach the station continue up the bed of the same *nala*. (Sketch No. 10.)

(*f*) *Fuel.*—Plentiful close to the site of the camp.

(*g*) *Grazing.*—Fairly plentiful in the open plain to north and east of the trade route. Camels should be kept at the *thana*, as grazing is scarce round camp.

(*h*) *Rations.*—*Ata, gur, ghi,* salt, and *dhal* from the *bania* at Kila Robat.

(*i*) Six signallers, 15th Sikhs.

Exd. C. J. A., August

No. 12 Kila Robat.

(*a*) *Actual position.*—On the rocky, precipitous hill just to the north-west of and overlooking the *thana* and *bangalow*.

(*b*) *Compass bearings.*—

(1) To Chah Muhammad Raza (Maki) station, 140.°

(*c*) *Crowfly distances.*—

(1) To Chah Muhammad Raza (Maki), 21 miles.

(*d*) Signallers live in the *thana*, whence the distance to the station is about ½ hour; or, to the top station, one hour; the latter is a severe climb in places.

(*e*) *Water-supply.*—From two *kareses* close to the *thana*, abundant and good.

(*f*) *Fuel.*—Has to be brought in from the Lar *nala*, about 10 miles distant.

(*g*) *Grazing.*—Sufficient in the vicinity for a small number of camels. The nearest plentiful grazing within British territory is in the Lar *nala*. Across the Afghan boundary, at Pain Robat, there are several acres of rough grass and also plentiful fuel.

(*i*) *Strength.*—Six signallers, 15th Sikhs.

T. ROSE PRICE, *Lieutenant,*
1st Punjab Cavalry,
Assistant Superintendent, Army Signalling,
Seistan Arbitration Commission.

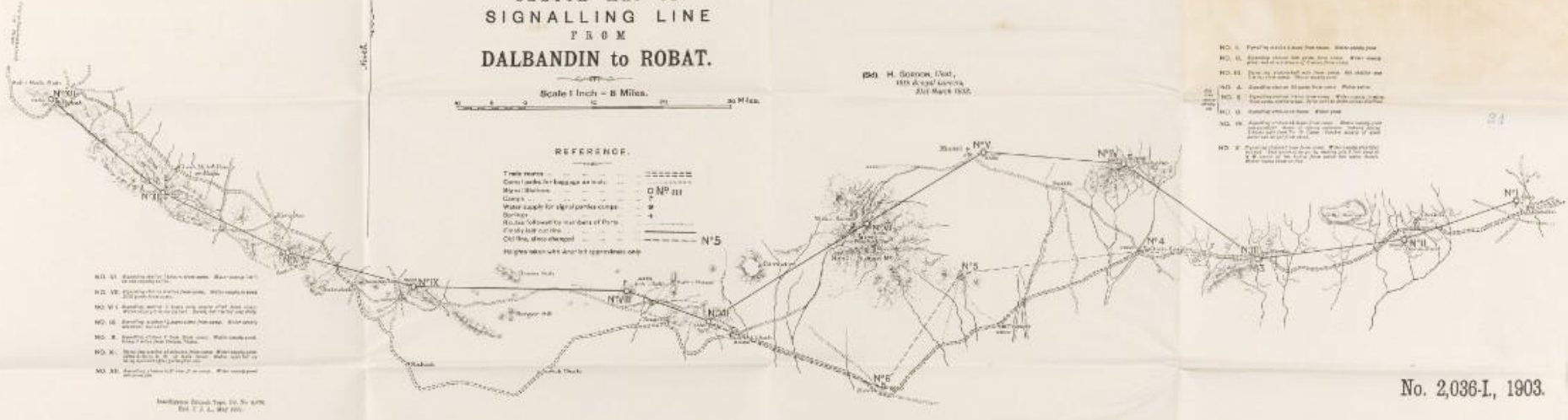
DATED QUETTA;
The 4th July 1903.

G. C. Press Simla.—No. C. 164 Q. M. G., I. B.—31-3 04.—250 —H. A. W.

SKETCH MAP OF SIGNALLING LINE FROM DALBANDIN to ROBAT.

Scale 1 Inch = 8 Miles.

REFERENCE.



No. 2,036-I., 1903.

To Accompany H.F.O./S.A. No

PERSIAN SEISTAN - CULTIVATED AREA

Scale ½ Inch - 1 Mile.



Signed E. A. PLUNKET, Capt.
17th July, 1902.

No. 2,046-I., 1903.