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A HANDBOOK OF MESOPOTAMIA

VOLUME III

CENTRAL MESOPOTAMIA
WITH SOUTHERN KURDISTAN AND THE
SYRIAN DESERT

1917

*Prepared on behalf of the Admiralty and
the War Office*

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NOTE

Mesopotamia is treated in four volumes. The first volume contains matter of a general nature. The other volumes are devoted to the detailed description of the river and land routes. The second volume covers the regions of the Shatt el-'Arab and Kārūn, and of the Tigris and Euphrates up to Baghdad and Fellūjeh. To the third volume are assigned the Tigris and Euphrates from Baghdad and Fellūjeh to Mosul and Meskeneh, the Lesser Zāb, the country East of the Tigris towards the Persian frontier, and the routes running westward from the Euphrates valley across the Syrian Desert. The fourth volume treats of the country North of the line joining Rowanduz, Mosul, Meskeneh, and Aleppo up to Van, Bitlis, Diarbekr, and Marash.

All estimates of mileage must be considered as approximate only. In most cases they are based on the rough calculations of travellers, or on the times given by travellers, or on sketch-maps or incomplete surveys. The question-marks placed beside some of the figures indicate that these are peculiarly doubtful: it is not implied that other figures may be regarded as exact.

It is necessary to emphasize the fact that in the circumstances the information given cannot be complete, and that conditions are constantly undergoing change. The Admiralty will be glad to receive corrections and additions.

Maps to accompany these volumes will be issued separately.

ABBREVIATIONS

IN the itineraries the following abbreviations and conventional signs may be noted :—

r. = right. l. = left.

h.w. = high water. l.w. = low water.

I. = Island.

T.L. = telegraph line.

T.O. = telegraph office.

P.O. = post office.

m. = miles.

The following signs are used to distinguish distance :—* by river ; † by road or track ; †† crow-fly.

Distances are given throughout in statute miles.

Alt. = altitude, which is given in feet above sea-level unless otherwise stated.

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INTRODUCTION

THE ROUTE SYSTEM OF CENTRAL MESOPOTAMIA, WITH SOUTHERN KURDISTAN AND THE SYRIAN DESERT.

General Remarks. (a) *The Plains.*—The conditions of movement and transport in the country N. of Baghdad are on the whole very different from those prevailing in Lower Mesopotamia. The Tigris and the Euphrates are still important as affording main lines of advance, but as waterways they are far less useful, at least for up-stream navigation, than in Irak, owing to the more rapid current, shallower depths, and numerous rocks and small rapids which characterize their middle courses. On the other hand, the surface of the plains which extend from Syria on the W. to the hills of Kurdistan on the E. is much better suited to movement by land than that of the alluvial desert and marsh of Irak and Arabistan. There had indeed been hardly any road-making in these plains before the present war: a short stretch of the Baghdad—Aleppo caravan-route north of Deir ez-Zor seems to have been the only metalled carriage-road. But, in dry weather at least, tracks that need little or no improvement to make them passable for wheels can generally be found. In wet weather the region where the tracks suffer most is the alluvial plain N. and NE. of Baghdad. The clay that predominates in the plains E. of the Tigris and N. of Samarra also makes bad going after rain. The Southern Jezireh between the Euphrates and the Tigris, and the Syrian Desert W. of the Euphrates, consist for the most part of hard ground which is comparatively little affected by rain: though even here soft going may be found in patches of deep sand, or along streams like the Belikh and Khabūr and the brooks that water the plain under the Sinjar Hills. In the valleys of the Euphrates and Tigris are strips of alluvium.

The chief obstacles in the plains are, first, the two great rivers and their large tributaries (Diyāleh, 'Adheim, the two Zābs, Khabūr, and Belikh), and, secondly, the numerous wadis. These latter appear

to be generally passable for wheels or easily made so by a little ramping, &c. In winter and spring, however, some of them at times contain considerable torrents. Irrigation-cuts are not common except in the cultivated areas of the alluvial plain N. and NE. of Baghdad, where a good deal of bridging and ramping might be necessary here and there. South of the Sinjar the only important line of hills is the low but rugged *Jebel Hamrîn*. Broken hilly ground is also found along the edges of the desert-plateau overlooking the Tigris and Euphrates.

The principal and very serious difficulty attending movement in the plains is the prevailing lack of water and supplies. The effect of this on the direction of main routes, &c., will be discussed below.

(b) *The Kurdish Hills*.—The hill-country of Kurdistan S. of Rowanduz may be divided roughly into two zones which gradually merge into each other: the zone of the foot-hills and down-country, and the zone of the higher ranges.

In the first, movement is generally fairly easy. Open rolling downs, low ridges, and wide valleys of clay, gravel, sandstone, &c., form its principal features. Most of the tracks as far as *Salāhiyeh*, *Suleimāniyeh*, *Raniyeh*, and *Rowanduz*, where not already passable for wheels, could be improved fairly easily. The chief obstacles are the Greater and Lesser *Zāb* (both fordable here and there in the low-water season), and their principal affluents, which are for the most part easily fordable except when in spate from rain or melted snow. A certain amount of work may be needed to make the banks of some of the stream-beds and wadis passable for wheels. Water in this region is generally plentiful, there is good grazing in spring, and the country, though much under-cultivated, is sufficiently tilled and populated to support a number of small towns.

Eastwards the ranges become gradually higher and more rugged; the tracks through the hills more stony, steep, and narrow. The mountains enclose small fertile plains, but these are often damp and muddy. The higher passes are blocked with snow in winter. Stretches of road passable for wheeled transport become more and more rare, until by the time the Persian frontier is reached only mule-tracks ranging in quality from fair to bad may be found. Supplies are scanty, but water and fuel are plentiful, and there is a good deal of grazing.

The Main Routes from Baghdad into Upper Mesopotamia.—The desert character of most of the plain country has the effect of limiting to three the main lines of movement between Baghdad and Upper Mesopotamia: (a) the line of the Euphrates, towards Aleppo, &c.;

(b) the line of the Tigris to Mosul ; and (c) through the foot-hills of the Kurdish ranges *via* Salāhiyeh (Kufri), Kirkuk, and Altun Köprü to Mosul.

(a) *The Line of the Euphrates.*—The Baghdad—Aleppo caravan-route runs from Baghdad westward to the Euphrates at Fellūjeh, with a Decauville railway to Ridhwāniyeh to S. of it. It then follows the r. (western) side of the river to Meskeneh, where it turns W. to Aleppo. This road is passable for vehicles in all weathers, though before the war it was unmetalled except for a few miles N. of Deir ez-Zor, and was therefore liable after rain to become soft and heavy for wheeled vehicles. A good many wadis, some of which are rather difficult, have to be crossed. There was a fair amount of wheeled traffic passing over it at all seasons, and the journey between Baghdad and Aleppo had been occasionally made by motors before 1914. Water is plentiful, chiefly from the river. Supplies are limited, though there is some cultivation along the valley. There is good grazing in the neighbourhood of the river during spring. Fuel is very scarce in some parts ; in others it is supplied by tamarisk, &c. Whether transport could be obtained would depend on the attitude of the neighbouring nomads and semi-nomads. (See further, *Route 46.*)

On the l. bank there is no regular route, but from the reports of the few travellers who have ridden over parts of this side of the Euphrates the country appears to be generally open and easy, with the usual wadis, patches of soft sand and alluvium, &c. The Belikh and Khabūr tributaries are the chief obstacles on the E. side of the river. (See *Route 47.*)

As a water-way, the middle Euphrates has been much used for down-stream traffic. Above Hit it cannot be ascended by sailing-craft owing to the rapidity of the current. It has been occasionally navigated up-stream by steamers and motor-boats ; but even for these it would be very difficult if not impossible to ascend the river when it was at its highest or lowest. Blasting, &c., might improve some of the places where rocks have formed rapids. (See further, *Routes IV F, G, H.*)

(b) *The Line of the Tigris.*—The section of the Baghdad Railway between Baghdad and Mosul will follow the r. (western) side of the Tigris Valley. At present only the part of the line between Baghdad and Samarra appears to have been completed.

From Samarra to Tekrit and from Tekrit to Mosul the land route on the r. bank goes through very sparsely inhabited country where

supplies are almost wholly lacking. Moreover, where the Tigris breaks through the Jebel Hamrîn, the route has to turn aside from the river and runs some 38 m. through desert very scantily supplied with water. There is grazing on the route in spring, but fuel is very scarce. The Jebel Hamrîn, which is crossed SE. of Qal'ah Sherghat, is broken and rugged, and there are stretches of broken ground elsewhere, e. g. near Tekrit. Nevertheless, before the war the route had been traversed by light wheeled vehicles occasionally, and once even by a motor. On the l. bank there was no regular route over the whole distance from Baghdad to Mosul, though caravans travelled sometimes on that side of the river between Baghdad and Samarra, between Samarra and Dür, and between the Great Zab near its mouth and Mosul. The chief disadvantage of the l. bank as a line for a through route from Baghdad to Mosul appears to be the necessity of crossing near their mouths the three large tributaries of the Tigris, the 'Adheim, and the two Zabs. The Tigris was bridged before the war at Baghdad, Samarra, and Mosul.

There was much down-stream raft-traffic on the Middle Tigris before the war, but sailing vessels did not as a rule go up-stream to Samarra. The possibilities of steamer navigation between Samarra and Mosul are very uncertain. The conditions appear to be more unfavourable than those on the Euphrates above Hit. (See *Route III E.*)

(c) *The Salāhiyeh—Kirkuk Line.*—The disadvantages of the Tigris line mentioned above, and also the former insecurity of the Tigris Valley, have brought into existence a caravan-route from Baghdad to Mosul along the foot-hills of the Kurdish mountains, where there are a few towns (Salāhiyeh, Kirkuk, Altun Köprü, Erbil, besides a number of large villages) and a certain amount of cultivation, so that sufficient supplies are generally obtainable in normal times for fair-sized parties of troops or travellers. Before the present war this road apparently needed only slight improvements here and there, and some bridging (particularly at the Great Zab) to make it passable throughout for guns and carts. In spring, troops might be held up by floods on a number of streams which at other times would be easily fordable. Water is apparently abundant in spring and sufficient at other seasons. There is good grazing on the route in spring. (See *Route 25 a.*)

Lateral Communications between the main routes from Baghdad into Upper Mesopotamia may be summarized as follows :—

(a) *Communications across Lower Jezireh.*—These include the routes

between the Middle Euphrates and the Tigris valleys. In general it may be said that the difficulties of communication across the Jezireh are due not to the ground but to lack of water and supplies. North of the Baghdad—Fellūjeh line which is traversed by the Baghdad—Aleppo caravan-route the southern part of the Lower Jezireh is a very arid desert, hardly passable except by camel-caravans, small parties of horsemen, or motor-cars. The going seems to be firm and easy except at occasional wadis. Very little is known of the tracks across this region used by the Arabs. For a desert route from Anah to Baghdad, see *Route 48*. It is possible that the line of the Wādi Tartar would be found useful in traversing the Lower Jezireh from SW. to NE. or *vice versa* (e.g. between Hit and Qal'ah Sherghat or Mosul). There seems to be water (brackish?) even in the lower (southern) part of the Wādi Tartar for at least most of the year.

Nearer the Sinjar Hills conditions improve, and a number of fairly well frequented routes over open easy country connect Mosul with Deir ez-Zor. The chief obstacle is the River Khabūr, which seems, however, to be fordable here and there in the low-water season. Water is less scarce than in the southern part of Lower Jezireh. It is always to be found in abundance in the Khabūr River, and a number of small streams run down from the Sinjar Hills into the plain, but these may dry up in summer. There are also a fair number of springs in the desert. The water in some of the streams and springs is rather brackish or sulphurous, though usually drinkable. Good grazing may be found in this region in spring. Fuel is obtainable in the Sinjar Hills. The lines preferred by guides in crossing this country vary with the season, the condition of wells, &c. The route from Mosul to Deir *via* 'Ain el-Ghazal and Tel es-Sawwār is certainly passable for wheels, but it is reported that infantry would not be able to use the route in summer owing to scarcity of water. (See *Route 49 a.*) The more northerly route (*49 b*) lies under the Sinjar Hills, passing through Beled Sinjar and Sekenik. This appears to be passable for vehicles, though the track may become heavy after rain and would perhaps need improvement at wadis. The direct routes between Sekenik and the Khabūr at Shedādi or Tel 'Arabān (see *Routes 49 c, d*) appear to suffer from lack of water. A circuitous way from Sekenik to the Khabūr which crosses between the Jebel Sinjar and the Jebel Jereibeh by the Shillo Pass and then turns W. along the northern side of the hills, may be better provided with water, but the quality of the supply seems to be poor. The Shillo Pass is the main passage across the hills, and, though stony, seems to need little improvement for wheels. There are other tracks over the Sinjar range, but they are said to be difficult. The Sinjar Mountains

are fairly well populated : the inhabitants (Yezidis) are said to have been raiding the Deir—Mosul route since the outbreak of the war. The direct lines across the desert from Tel es-Sawwār or Shedādi on the Khabūr to Deir ez-Zor seem to be poorly supplied with water, and it might therefore be preferable to make a détour to the S., descending the Khabūr to its junction with the Euphrates, and thence ascending the Euphrates Valley.

(b) *Communication between the Tigris Valley and the Baghdad—Kirkuk—Mosul Route.*—North of the partially cultivated area that lies between the Tigris and the Lower Diyāleh, there stretches between the Tigris and the hills an open plain of clay and gravel traversed successively by the 'Adheim, the Hamrīn Hills, the Lesser Zāb, and the Great Zāb.

As far as the Lesser Zāb this plain is apparently inhabited only by a very sparse nomadic population, who may practise a little desultory cultivation here and there on the banks of the rivers or where there are rain-water wells and springs. There is grazing in this region in spring, but in summer both water and grass are probably very scarce. The road between Salāhiyeh (Kufri) and Kirkuk might perhaps be reached by following the 'Adheim towards the point where it emerges from the hills and then striking NW. or W. across the Jebel Hamrīn : but there is no evidence as to this as a possible route. For a slight account of a route from Tekrit to Kirkuk, see *Route 26*.

Probably the easiest line would be along the course of the Lesser Zāb from the neighbourhood of Qal'ah Sherghat to Altun Köprü. Here water could always be obtained from the river and the country on both banks appears to be open and easy. There is a down-stream raft traffic on the Lower Zāb, but whether steamers could ascend the river to Altun Köprü even in fairly high water seems very doubtful. (See *Route III F*.)

North of the Lesser Zāb the population, though at first semi-nomadic, seems to become more numerous. Thus in 1903 Sykes saw numerous villages on the plain between Qal'ah Sherghat and Makhmūr, though these were then (temporarily?) deserted owing to drought and locusts. For the route from Qal'ah Sherghat to Altun Köprü *via* Makhmūr, see *Route 27*.

The plain S. and SW. of Erbil appears to be fairly well cultivated (grain is exported thence to Baghdad) and between the Great Zāb and Mosul there are numerous villages, Moslem, Christian, and Yezidi. Here over the open country are numerous tracks, and communication between the Tigris and the Erbil—Mosul road should be easy.

Routes towards Persian Frontier.—North-east of Baghdad, in the neighbourhood of Khanikin and Qasr-i-Shīrīn, lies the main depression in the mountain system which divides the plateau of Iran (Persia) from the Mesopotamian plains. Through this depression runs the Baghdad—Kirmanshah caravan-route by Bāqūbeh,¹ Qizil Ribat, Khanikin, and Qasr-i-Shīrīn. This before the war was the only route passable for wheeled transport between Mesopotamia and Persia, and even this was not easy for vehicles beyond the Persian frontier. In the plain between Baghdad and Khanikin the going was good except after rain. (See *Route* 28 a.) A much more difficult alternative route (28 b) to Kirmanshah runs by Beledrūz and Mandali to join the main road at Khorāsābād. This is liable to become very bad in the plains in wet weather, and is merely a mule-track in the hills. For connexions between these routes, see *Routes* 29 and 28 b, m. 122 $\frac{1}{4}$, 147 $\frac{3}{4}$, 156 $\frac{3}{4}$.

Khanikin and Qasr-i-Shīrīn on the main Baghdad—Kirmanshah road are connected by easy though unmade tracks with Salāhiyeh (Kufri) on the Baghdad—Mosul road. The only serious obstacle on this set of tracks is the Diyāleh River. (See *Routes* 32 a, b; 33.)

There is a made road passable for wheels from Qasr-i-Shīrīn to the Anglo-Persian Oil Company's wells at Chiaḥ Surkh: and there is a fairly easy line over the Zohāb Plain between Qasr-i-Shīrīn and the Suleimāniyeh—Kirmanshah route mentioned below.

To the N. of Qasr-i-Shīrīn the first principal route-centre of Kurdistan is Suleimāniyeh, a considerable town lying in a fertile though under-cultivated plain some 60–70 m. E. of Kirkuk. The easiest approach to Suleimāniyeh from the W. is from Kirkuk over stony rolling hills through Chemchemal and the Baziyan Pass. Between Kirkuk and Chemchemal and between the Baziyan Pass and Suleimāniyeh there appears to be a number of possible tracks; and there seems to have been before the war at least one route from Kirkuk to Suleimāniyeh which was just passable for wheels throughout though in need of improvement. (See *Route* 37.) From the SW. Suleimāniyeh can be approached from Salāhiyeh (Kufri) by mule-tracks which are bad in parts. From the NW. mule-tracks over a more mountainous country under the Pīr 'Omar Gudrun Dagh lead to Suleimāniyeh from Kōi Sanjaq and Raniyeh: these cross the Lesser Zāb by ferries at Dukhan or Khānābi. (See *Routes* 39, 38.)

South-east from Suleimāniyeh a route leads by Halehjuh across the Persian frontier to Kirmanshah: this is fairly easy for pack-

¹ As far as Bāqūbeh (where it crosses the Diyāleh by a bridge) it is identical with the better road from Baghdad to Delli 'Abbās on the Baghdad—Kirkuk—Mosul route. See *Route* 25 a.

animals until the mountains overlooking the Ab-i-Shirwān (Upper Diyāleh) are reached. Difficult paths lead through these hills : but beyond them comparatively easy mule-roads run to Kirmanshah. (See *Route 35.*) Lastly, eastwards from Suleimāniyeh, a route which in parts is practicable for led animals only leads by Penjevin over the frontier to Senna. (See *Route 36 a.*)

It has been stated that the best line for a military road or railway from the Tigris Valley into the Urmia district and NW. Persia would run by the Lesser Zāb Valley from Altun Köprü to Kōi Sanjaq, thence to Raniyeh, and on by Pishder Plain to the Wazneh Pass, from there to El-Watan and the Lahjān Plain, and so to Ushnu and Urmia. In the present volume this line is described as far as Raniyeh. Before the war the road from Altun Köprü to Kōi Sanjaq and Raniyeh does not seem to have been passable for wheels throughout, but it appears to have been capable of being easily improved into a carriage-road. It traverses down-country and fairly low ridges, running over clay and gravel. (See *Route 40.*) Beyond Raniyeh the route to Urmia is described in vol. iv : it may be mentioned here that at any rate in 1905 the road was not practicable throughout for all arms, and it was reported that much labour and expense would be needed to make it passable for large forces : the passes beyond Raniyeh are blocked by snow in winter.

From Kōi Sanjaq and Raniyeh roads for pack-animals lead, as has been said, to Suleimāniyeh, and mule-tracks which are difficult in parts and are mostly blocked by snow in winter connect these places with Rowanduz to the N. (See *Routes 44 a-c.*) From Raniyeh a route runs by Ser Desht to Banah. (See *Route 41.*) A difficult mule-track connects Ser Desht with Penjevin on the Suleimāniyeh—Senna road. (See *Route 36 c.*)

The last road-centre in the area here in question is Rowanduz. This place lies, shut in among high steep hills, on the Rowanduz Chai, which here flows in a narrow, deep valley. The approaches to it before the present war were difficult even for pack-animals, but from Harīr (below) a cart-road has been made. In the present volume are described routes to Rowanduz from Mosul. One goes by 'Aqreh and across the Great Zāb by the Qandīl ferry, the other crosses the Zāb by the Girdamamik ferry farther south, and then turns NE. to join the northern route near Harīr, not far from Qandīl. Thence hilly country is crossed to the Khalifān gorge, by which the difficult valley of the Rowanduz Chai is reached. The southern route, if not already passable for wheels as far as Girdamamik, could probably be made so with a few improvements. (See *Routes 45 a, b.*)

From Erbil one route runs to join the Mosul—Rowanduz route in

the neighbourhood of Harîr, another leads over the hills to Shakhlawā and thence to the Khalifan gorge, where it too connects with the Mosul—Rowanduz route. These roads from Erbil are impassable for wheels except perhaps in the Erbil Plain.

For the routes leading from Rowanduz NW. to Amadiyah, north to Neri, and NE. towards El-Watan and Urmia, see vol. iv.

The Syrian Desert. West of the Euphrates stretches the northern part of the Hamād, a bare stony desert which slopes gradually from Syria and Arabia NE. to the Euphrates Valley. The ground is almost flat, broken only here and there by wadis, easy undulations, or low ranges of hills. The surface is generally sand or shingle with occasional outcrops of volcanic rock. In the north, however, beyond the line Raqqah—Hama, the nature of the soil changes and becomes more capable of cultivation, and the country between Meskeneh and Aleppo is already fairly well populated and tilled.

In the desert the pools or wells, which occur at long intervals, contain water that is frequently bad and infested with leeches, &c., and generally brackish. Conditions for travel are best during a few weeks in spring. At that season there is much pasture in the hollows of the Hamād, and water-holes (known to the Bedouin) are available then which are dry later in the year. Most of the grass is shrivelled up by the middle of April.

The direction of routes across the desert is generally determined by the position of water. The tracks are often badly defined or quite indistinguishable, as, owing to the easy nature of the ground, there is usually no need to follow a definite path. Towards Tadmor and Damascus the country becomes hillier, and directions are here determined to some extent by the trend of the valleys, but the chief factor is still the water-supply.

Owing to the scarcity of water, Syria cannot be approached from the Euphrates Valley south of the line Meskeneh—Aleppo except by small parties or by the aid of camel-transport on a large scale. Of the routes described in this volume those which run almost due W. from Hīt to Damascus (*Route 52*) and from Abu Kemāl to Tadmor (*Route 53*) are difficult even for small parties. Nothing is known of the route by the Wādi-Haurān from Jibbeh; but in 1907 it was said that Damascus could be reached in six days from the Euphrates by this route. *Route 52* is important only as a route for the camel-post. The main desert-route is that from Deir ez-Zor to Damascus which is part of a regular caravan-route between Damascus and Baghdad. (See *Route 54*.)

On the route from Raqqah to Hama it might be possible to

improve the water-supply. It has been stated that there is probably an underground stream flowing N. from Rusafeh to the Euphrates, and that water might be obtained from it by boring. This water, if found, would probably be brackish. Beyond Seriyeh the country seems to have been formerly well populated; water might be obtained by clearing old wells or sinking new ones.

Notes on old routes between Basra and Damascus or Aleppo, which are very little used at the present day, will be found in vol. ii.

RIVER ROUTES

THE TIGRIS AND LESSER ZĀB

ROUTE III D

BAGHDAD—SAMARRA (89 $\frac{1}{4}$ M.)

Authorities :—*Military Report on E.T.A.*, vol. iii, 1904 (report of 1892); Lorimer, *Report on a Tour in Turkish Arabia and Kurdistan*, April–May 1910; and other sources of information.

Between Baghdad and Samarra (*89 $\frac{1}{4}$ m., †74 m.) the course of the Tigris leads first in a general N. direction (as far as Ahmad el-Fayyadh m. 56) and thence generally WNW.

The River.—In this section of its course the width of the river varies very considerably. Where it flows in one channel its breadth seems to be about 300–500 yds. It is broadest from bank to bank where it breaks up into several channels passing between the numerous islands which occur in successive groups above the tract of Ba'rūreh on the l. bank (see m. 68 $\frac{3}{4}$ and foll.). The rate of the current past these islands is said to be about 4 $\frac{1}{2}$ –3 $\frac{3}{4}$ m.p.h. From Baghdad to the islands the bed of the Tigris is mud; at the islands it is shingle with outcrops of conglomerate at El-Qanātir (m. 77 $\frac{1}{4}$); between the neighbourhood of El-Hāwiyeh on the l. bank (m. 78) and Samarra the bed is generally of shingle, sand, or clay, with occasional outcrops of conglomerate forming small rapids in the current. While islands are especially numerous between Ba'rūreh and El-Hāwiyeh, they occur also between El-Hāwiyeh and Samarra at various points near the r. bank. They undergo frequent alteration by the floods in the annual h.w. season. At Baheirdeh I. and Ba'rūreh (m. 69), Darāwīsh I. (m. 74 $\frac{1}{2}$), and at Tīneh (m. 85 $\frac{1}{4}$), fords passable in the l.w. season were reported in 1910, but their situation is probably liable to be changed by the annual floods.

Navigation.—The navigation of the river seems to present no special difficulties between Baghdad and Ba'rūreh (m. 69) for boats of draught not exceeding 4 ft. From Ba'rūreh to the neighbourhood of

El-Hāwiyeh it is troublesome owing to the islands above mentioned. The rapids, already referred to, between El-Qanātr and Samarra are apparently not considerable enough to hinder vessels of small draught even in the l.w. season. A small steam-launch, owned by a Baghdad merchant named Astrabadi, has been plying on the river between Baghdad and Samarra since 1902 with fair regularity throughout the year. $1\frac{1}{2}$ days were allowed for the up-stream, and 1 day for the down-stream voyage. Sailing boats (*safinehs*), carrying 8 tons, can ascend to Samarra during the greater part of the year, but it is reported that at the height of the flood season they would find it difficult or impossible to make head against the current in the channel past the islands (between m. 67 and m. 80). Traffic on the river is principally down-stream, being mainly carried on by the rafts (*keleks*, see vol. i, p. 166) which come from Tekrit and Mosul. The strong winds from the S. and SW. which are fairly frequent in the Baghdad region, especially in spring, may make the raft journey between the mouth of the 'Adheim River and Baghdad very slow (4 days or perhaps more): in the highest spring floods without an adverse wind the journey may take only 13-14 hrs. In fair weather the rafts travel all night. *Quffehs* (large coracles, see vol. i, p. 166) are used locally for short journeys. For regular ferries see under m. $43\frac{3}{4}$ and m. $78\frac{3}{4}$.

The country between Baghdad and the line Beled—Sindiyyeh.—From Baghdad to the neighbourhood of Beled and the islands of Darāwīsh (m. $74\frac{1}{2}$) and Barqeh (m. 76) the Tigris flows through the most northerly part of its alluvial plain. Here the banks are of firm alluvial soil, are generally fairly high, and at places (e.g. m. 32) are protected by dykes. Nevertheless in the neighbourhood of Baghdad the flood water in spring inundates the country on either side, finding its way chiefly by the numerous irrigation-cuts.

On the r. bank date-groves are almost continuous to Ferhād (m. 11), above which they occur only at three or four places on the river (a few miles inland they are to be found at Sumeikeh and Beled). N. of Beled there are no more date-groves, only isolated palm-trees. Date-groves are frequent on the l. bank as far as the neighbourhood of Nahr el-Pasha (m. 17) and thence they occur at intervals up to Sindiyyeh (m. $45\frac{1}{2}$). On both sides of the river up to the neighbourhood of Darāwīsh I. there are numerous water-lifts (*cherrads*) which irrigate areas of wheat and green barley (the latter crop being used for fodder).

Between Baghdad and Beled the country W. of the immediate neighbourhood of the r. bank is a plain of alluvial soil stretching to the edge of the desert plateau. From the river to the plateau the

distance varies from about 15 to about 20 m., with one noticeable ridge near the river between Husāi tract (m. 49) and Qubbat Shawālī (m. 60). This plain contains at its S. end the large lake-area known as 'Aqarqūf, extending from a point about 5 m. W. of Kazimain in a NNW. direction for about 11 m. with an average width of about $4\frac{1}{2}$ m. The plain is much cut up by canals, generally dry, or, as in the case of the upper reaches of the Dujeil, carrying some water in the flood season. These canals are specially numerous N. of the Tarmīyeh (m. 38 $\frac{1}{4}$): here are the numerous branches of the Dujeil, and an old bed of the Tigris running in a general NW. and SE. direction. The ground is covered with large and small ruin-mounds marking the site of ancient settlements. Cultivation occurs in patches where canals still carry water for part of the year. In wet weather the going is very heavy, but in the dry season the plain is said to be passable almost everywhere for wheeled traffic, though the canal-beds would at times compel vehicles to make détours. Across the plain runs the route from Baghdad to Samarra and Mosul, traversed by the Samarra—Baghdad pilgrim wagons, and accompanied by the line of the Baghdad—Samarra railway. For further details with regard to the country see notes on the above-mentioned route (25 b).

From the l. bank of the river, as far as the neighbourhood of Sindiyyeh (above which the up-stream course begins to take a general NW. direction towards the 'Adheim), a flat alluvial plain stretches towards the Diyāleh river (distant 11–16 m.). In the neighbourhood of Baghdad the plain is liable to inundation during the spring floods. For the swamps of Reshīdiyyeh and Jedeideh see under m. 19 $\frac{3}{4}$. This country between the Tigris and the Diyāleh is still more intersected by canals than the plain on the opposite bank, and a far greater proportion of the cuts on this side carry water, for most of them belong to the system of the Nahr Khālis, which brings the water of the Diyāleh from the neighbourhood of Mansūriyyeh (see m. 38 $\frac{1}{4}$). The Khālis, near Deltāweh, divides into two principal branches, a westerly, the Murādiyyeh, and an easterly, the Tahwīleh, which flow in a general southerly direction to the neighbourhood of Baghdad. But the Khālis and its two great arms also throw off a multitude of smaller irrigation-cuts which are interlaced by cross-cuttings. The whole system waters large areas of wheat and barley and supports a large number of villages between the Tigris and the Diyāleh. Across the plain run the Baghdad—Salāhiyyeh—Mosul route, throwing off a branch to Samarra near Deltāweh, and the Baghdad—Bāqūbeh route. For further details with regard to the country see notes on these routes (25 a, 31).

The country between the line Beled—Sindiyyeh and Samarra.—From the neighbourhood of Beled up to Samarra the Tigris cuts a trench through undulating plains of clay, shingle, and sand with scattered outcrops of limestone. These plains stretch away from the l. bank to the Hamrīn Hills some 40 m. to the NE., and extend from the r. bank to the edge of the desert plateau. On the r. bank the most noticeable feature is the complicated network of canals (mostly dry or almost dry) which stretch W. and NW. of Beled to the mouth of the Dujeil, above which an old canal-bed (Nahr Shaqi?) runs parallel with the river (see m. 81 $\frac{1}{4}$). On the l. bank are the beds of the large ancient canals of the Nahrawān system (Nahr er-Rasāsi, Nahr el-Qā'im, and Nahr Talsiyeh) with the remains of numerous cross-cuttings: and in the neighbourhood of Samarra (see m. 83 $\frac{1}{4}$) appear the numerous ruins which for the most part date from the ninth century A.D., during which that city was the capital of the Caliphate. The banks are sparsely inhabited, but there are patches of cultivation near them mostly dependent on rain, and in the plain between Samarra and the 'Adheim winter crops are raised by the Arabs with the aid of ancient wells. Sheep and cattle are fairly numerous.

Inhabitants.—The inhabitants of both banks are settled Arabs of various tribes, though some of their communities still live in tents for the whole of the year or during the summer. Near Baghdad the land is held by various wealthy landowners: on the Dujeil and round Samarra it is mostly Turkish Government property. On the

Right Bank	Total distance
	Miles
Baghdad.	0
Date plantations.	2
Kazimain (see under Baghdad in <i>Gazetteer of Towns</i> , vol. ii).	4 $\frac{1}{2}$
	5 $\frac{1}{4}$
River bends NNE. Baghdad—Samarra road touches bank, and W. of it is the line of the railway. Beyond railway begins course of ancient canal, which runs parallel to railway for some miles to neighbourhood of Beit Nawāb, then NW. (So I. D. Map, Sheet C 2.)	7 $\frac{1}{4}$
	8 $\frac{1}{4}$
Hibneh village.	9
	9 $\frac{1}{2}$

r. bank as far as the neighbourhood of Bābi tract the villages are inhabited by Hashāhideh : N. of Bābi are found communities of various tribes, as Beni Tamīm, the Al Bū Hayyāzeh, and 'Azzeh, sections of the 'Obeid, Abu Handhal, and Mujammeh (the last tribal name implies a miscellaneous origin). The desert W. of the southern part of this route is usually occupied by Dilaim ; but the Shammār are the predominant tribe in the interior in this region. The Shammār were apparently in recent years somewhat more under the control of the Turkish administration than that part of the tribe living farther to the N. which acknowledged the sons of Faris. Their sheikhs (the family of Ferhan Pasha) had been reduced to the position of protégés of the Turkish Government, and the fact that so much of the land in the Dujel district and in the neighbourhood of Samarra is Government property seems to have given protection to the settled Arabs against the levying of tribute or blackmail (*khubbah*) by the Shammār.

On the l. bank the inhabitants are chiefly Jebūr, with some Juheish, Beni Tamīm, Mujammeh, and fragments of other tribes. When the Kurds were giving trouble their raids sometimes penetrated as far south as this region.

It may be noticed that while the Arabs of the r. bank are mainly Sunnis, most of the inhabitants of the l. bank from Baghdad at least to Sindiyeḥ and Jeizāni (see m. 46 $\frac{3}{4}$) are Shiah. Almost all the Mohammedans of Samarra are Shiah.

Inter-
mediate
distance

Left Bank

Miles

0

Date plantations.

2

2 $\frac{1}{2}$

Mo'adhdam. Immediately above is Imām Abu Hanifah. See description of Baghdad, vol. ii.

$\frac{3}{4}$

Es-Saleikh.

2

.

1

Childāyeh village.

$\frac{3}{4}$

Chaldāri village.

$\frac{1}{2}$

Ferājāt village.

Right Bank	Total distance
	Miles
Ferhād village.	10 $\frac{1}{2}$
	11
Date plantations cease on r. bank.	11 $\frac{1}{2}$
	12 $\frac{1}{2}$
	13
Road runs close to bank about here.	13 $\frac{1}{2}$
Beit Nawāb on road : about $\frac{1}{4}$ m. from bank.	15 $\frac{1}{2}$
	16
	17
	17 $\frac{1}{2}$
Haseiweh hamlet, six houses of Meshāhidīyeh. 'Aweijeh tract begins.	17 $\frac{3}{4}$
'Aweijeh village : 30 houses of Meshāhidīyeh.	18 $\frac{3}{4}$
	19 $\frac{3}{4}$
	21 $\frac{1}{4}$
Meshāhidīyeh tract.	21 $\frac{1}{4}$
Shrine of Imām 'Ali , about 2 m. from river, near a mound called Tel Gosh.	22 $\frac{1}{4}$
Bābi tract begins.	23
3 m. W. of bank lies Khān Meshāhidīyeh , on the Baghdad—Samarra road (see <i>Route 25 b</i> , m. 23). Railway station.	23 $\frac{1}{4}$

Inter- mediate distance	Left Bank
Miles	
1	Abu 'Ali village.
$\frac{1}{2}$	Haji Ahmad village. Baghdad—Salāhiyeh road touches bank in this neighbourhood.
$\frac{1}{2}$	El-Mīmār village.
1	
$\frac{1}{2}$	Kādhim Pasha village: this is inhabited by mixed population from Jebūr and Juheish.
$\frac{1}{2}$	
2	
$\frac{1}{2}$	Abu Dāli village: about 20 earthen huts, with palm-groves.
1	Mouth of Nahr el-Pasha Canal (dry even in May 1910), which runs S. at the back of the date plantations as far as Childāyeh. It is about 5 yds. wide, and its bed is sunk several feet. It is spanned near its head by a brick bridge. About $\frac{1}{2}$ m. from its mouth it is joined by a canal which runs parallel with the river above this point as far as Yehūdiyeh.
	Continuous date plantations cease on l. bank. Small village (Qasr el-Pasha) at the head of the canal.
$\frac{1}{2}$	Small village. This and the village mentioned immediately above are <i>Waqf</i> (i. e. held in trust for spiritual or secular purposes). The inhabitants are Dilaim.
$\frac{1}{4}$	Dāūdiyeh tract. Poplar-trees on bank.
1	Walled enclosure.
1	Dāūdiyeh village (15 houses of Shiah Arabs) is apparently in this neighbourhood. NE. of this village lies the S. end of the Khōr Reshīdiyeh , a swampy area about $3\frac{1}{2}$ m. long and $1\frac{1}{2}$ m. broad. Road and T.L. run E. of this swamp, between it and another marsh called Khōr Jedeideh .
$1\frac{1}{2}$	Sawākin village: 10 houses of Shiah Arabs: two brick-kilns.
1	
$3\frac{1}{4}$	Reshīd Pasha or Reshīdiyeh village. A two-storied house, and a few cultivators' huts.

Right Bank	Total distance
River bends SE.	Miles
Mallūh tract begins a short way above Yehūdiyyeh.	24 $\frac{1}{4}$
Village ?	24 $\frac{1}{2}$
Mallūh tract ends in this neighbourhood.	25 $\frac{1}{4}$
	26 $\frac{1}{2}$
<i>General Note on the Old Bed of the Tigris.</i>	27 $\frac{1}{2}$
Between the river and Khan Meshāhidīyeh depressions W. of the l. bank may be the lower end of an old bed of the river. N. of Khōr Tarmīyeh this bed is better defined, and extends past 'Akbareh and Sumeikeh (<i>Route 25 b</i> , m. 35, 39). From near Sumeikeh one dry bed, fairly deep but narrow, can be traced N. to Baniyeh (m. 67 $\frac{1}{4}$, below); another, broader, runs NNW. to m. 76 $\frac{3}{4}$, below : its W. bank is higher than the E.	
Suweidiyeh tract begins.	28 $\frac{1}{2}$
	31
Has-Hūs tract begins. Numerous water-lifts on the bank in this tract.	31 $\frac{1}{2}$
	32
Numerous water-lifts.	34 $\frac{1}{4}$
Tarmīyeh tract. River becomes unusually broad. In May 1910 its width was about 600 yds.	35 $\frac{3}{4}$
Tarmīyeh Canal, running W. and SW. to the Khōr Tarmīyeh, $\sqrt{5}$ m. SSW. It is above the level of the river. Even in flood-time water very seldom passes into it. Width of the river here is 400-500 yds.	38 $\frac{1}{4}$
End of highly silted-up dry canal is seen on river bank. This landmark is called Īshān Tarmīyeh .	39 $\frac{1}{4}$
Shrine of Sheikh Jemīl .	40 $\frac{1}{2}$
	41 $\frac{1}{2}$

Inter- mediate distance Miles	Left Bank
1	Yehūdiyeh tract begins in this neighbourhood: date-groves.
$\frac{1}{4}$	
$\frac{3}{4}$	
$1\frac{1}{4}$	Yehūdiyeh tract ends about here.
1	Jedeideh posting-station on Baghdad—Salāhiyeh road. 200 houses (of Shiah Arabs) in date-groves, enclosed by mud walls. Two khans. The first khan about 80 yds. square, with stabling for 200 horses; well in centre, water 20 ft. below surface. The other khan near river, 60 yds. square; stabling for 100 horses.
	Southern end of a branch of the Nahr Khālis. See Introduction to this section.
1	
$2\frac{1}{2}$	Dokheileh village, on the Baghdad—Salāhiyeh road, some distance back from the river. The ground E. of the road is here very marshy.
$\frac{1}{2}$	El-Howeish village (300 houses of Shiah Arabs).
$\frac{1}{2}$	Qasirīn (100 houses of Shiah Arabs): date-groves. Road skirts river where the latter bends NW. and then leaves it, running N. The bank is protected by dykes 15 ft. wide at the top, 20 high, 40 ft. at base, revetted with breast-work.
$2\frac{1}{4}$	Raqqah district (no village).
$1\frac{1}{2}$	Mansūriyeh tract begins.
$2\frac{1}{2}$	Shrine of Imām Beni el-'Abbās . Mansūriyeh village: 260 to 300 mud houses, hidden from the river by date-groves: ferry. Branch of Nahr Khālis running N. and then NW.
1	
$1\frac{1}{4}$	Haji 'Omar irrigation pump.
1	Shrine of Imām Banāt el-Hasan below Sa'diyeh. Branch of Nahr Khālis, running N. and then NW. Sa'diyeh village (100 houses of Shiah Arabs): date-groves extending 2 m. (The Khanikin branch of the Baghdad Railway was intended to cross the river in this neighbourhood). Above this point the country is much intersected by offshoots of the Nahr Khālis.

Right Bank	Total distance
	Miles
Above Sa'diyeh is Tuweir reach.	43 $\frac{3}{4}$
Grove of Euphrates poplar (<i>gharab</i>). This is a halting-place for caravans from Baghdad that follow tracks along river bank.	45 $\frac{1}{2}$
	46 $\frac{3}{4}$
River was here about $\frac{1}{4}$ m. wide in May 1910. Above this point river banks on both sides become quite low for some distance.	
Husāi tract: water-lifts. Beni Tamim settlements.	49
Rising ground begins, running NW. about $1\frac{1}{4}$ m. from river for about 8 m.	
Along its SW. side runs the old bed of the 'Uqāb Canal and several <i>tels</i> lie SW. of the canal. Round them stretches a large ruin-field, believed to mark the site of the ancient city of Opis, in the fourth and fifth centuries B. C. accounted second only to Babylon among the cities of Mesopotamia. It is possible that the present bed of the Tigris cuts across the site of Opis, and that the ruins on Tel Mahasil on the l. bank (see m. 60 $\frac{1}{2}$) are also part of the same city.	
Zambūr : camping-place of the Beni Tamim.	52
Khadheireh tract.	54
Ahmad el-Fayyadh tract, 25-30 water-lifts. Above this tract is that of Sufeil .	56

Inter-
mediate
distance
Miles

Left Bank

2 $\frac{1}{4}$
1 $\frac{3}{4}$

Ferry of one *quffeh* in this neighbourhood.

Sindiyeh village: 100 houses of mixed Shiah Arabs. Some lands here belong to the Makkeh shrines, and in 1910 were held on lease by Anwar Bey, of the Haidarizadeh family of Baghdad. This place is included in the mudirate of **Deltāweh**, a large village with date-groves about 4 m. from river bank (a little E. of SE. from Sindiye)h). Near Deltāweh the Salāhiye)h road diverges to NE., while a track to Samarra follows the line of the l. bank of the Tigris.

Date-groves extend for some distance above Sindiye)h village.

1 $\frac{1}{4}$

Jeizāni date-groves. Village lies a little way inland, and consists of 50–100 houses of Shiah Arabs.

Dighāreh reach is above Jeizāni date-groves.

2 $\frac{1}{4}$

The course of the ancient **Nahrawān** Canal is here marked as running close to bank for about 6 m.: the Samarra road apparently lies on the farther side of it.

3

Himmeh village, between river bank and Nahrawān Canal.

2

Dōjmeh tract, large settlement of the Jebūr and Āl Bu Hayyāzeh. Above Dōjmeh is **Quwār** tract. Brick-kilns.

2

Course of Nahrawān Canal touches river bank. On Samarra road, $\frac{1}{2}$ m. from river, **Khān es-Safīneh** (Government grain-store); road turns WNW.

Inter-
mediate
distance

Left Bank

Miles

 $1\frac{1}{4}$ $2\frac{1}{4}$

Mouth of **Shatt el-'Adheim**; near its confluence with the Tigris it has a trough some 45 yds. wide and 13 ft. deep. It flows in a valley from $\frac{1}{2}$ m. to $1\frac{1}{4}$ m. wide and 65 ft. deep. In December 1904 it was reported as having a depth of about 4 ft. and a current of 1 to $1\frac{1}{4}$ m. per hour; in h.w. both depth and velocity must be much greater; but in l.w. the river dries up altogether.

Followed up-stream its course runs NNE. to the foot of the Hamrīn Hills (≈ 40 m.), then N., and NNW. to near Kirkuk. The river leaves the hills by a broken dam and cuts its way through the flat plain to the Tigris. Large areas of wheat and barley are still cultivated in this plain if the rains are favourable, but since the bursting of the Hamrīn dam there has been no irrigation in the country-side, and the river near its mouth has broken through the dry course of the Nahrawān. The 'Adheim adds considerably to the volume of the Tigris.

 $\frac{1}{2}$ $\frac{1}{2}$

Report, 1892, mentions **Khān Dhulū'iyeh** (Khān Dhulei'ah?) as a large khan on l. bank 1 m. above the mouth of the 'Adheim. In this neighbourhood the dry course of the old Nahrawān Canal is resumed on the l. bank, here called Nahr er-Rasāsi. 1 m. WNW. of the khan the course of the main bed of the Nahrawān Canal turns NW., while a branch, called Nahr el-Qā'im, continues to follow the l. bank of the river. Between them lies a swampy area into which streams from the hills flow in h.w., breaking up the line of the Nahrawān Canal. At the same point another dry canal, the ancient Nahr el-Batt, enters the Nahrawān from the NNE., and in the angle so formed are the ruins of Tel Mahāsil (? part of the ruins of Opis. See m. 49.) The Nahr el-Batt is a relic of the ancient irrigation system of this region. Immediately above the Hamrīn dam (see under m. $59\frac{1}{2}$) two canals were taken off on either side, which carried the waters of the 'Adheim, blocked by the dam, into the Tigris at different points. Of these the westernmost was the Nahr el-Batt, the

Right Bank	Total distance
	Miles
'Ansajeh district.	62 $\frac{1}{4}$
Camp of 'Azzeh Arabs (May 1910).	64 $\frac{1}{4}$
El-Habbāb : walled camp of 'Azzeh or 'Obeid Arabs.	65
A tract occupied by Abu Handhal Arabs.	66 $\frac{1}{4}$
Es-Sefīneh : square enclosure where the Turkish authorities receive and store agricultural rents paid in kind.	
Baniyeh village ? S. of this point begin traces of ancient canal running SW. and SSE. for 4 $\frac{1}{2}$ m.	67 $\frac{1}{4}$
Upper entrance of old Tigris bed ? Other authorities place it opposite Khān Mizraqji (see m. 76 $\frac{3}{4}$). About 2 $\frac{1}{2}$ m. W. by S. of bend lies the mosque of Seyyid Mohammed, with large khan close to it, and 4-5 m. W. of bend is Beled village with date gardens, a flourishing place, the property of the <i>Dā'irat es-Saniyeh</i> . Its palm-groves are the most northerly that occur in the region of the Tigris. There is a railway station of Beled. The village is apparently visible from the river at a point somewhat higher up.	
In this neighbourhood Harbeh Canal takes off from the r. bank and runs SE. past Beled ; it is crossed by a bridge carrying the Baghdad—Samarra road, about 6 m. from river.	68 $\frac{3}{4}$
River above this point apparently broadens out and breaks into several channels enclosing and passing between numerous islands, which are liable to considerable alterations due to annual floods.	
Baheirdeh I., near r. bank.	69
There is a ford in this neighbourhood in l.w. leading across Baheirdeh Island (at its lower end ?) to the Ba'rūreh tract on l. bank. Pebbly bottom.	

Inter-
mediate
distance
Miles

Left Bank

course of which can still be traced, running to the hills, gradually nearing the Shatt el-'Adheim, which it meets at the dam, and along it are ruins of the settlements which it brought into existence. The other arm (Nahr Radhān?) ran to the E. of the present course of the 'Adheim, but does not seem to have been traced from the dam for more than 10 m.

General Note on the Nahrawān Canal.

The lower part of the dry Nahrawān Canal is traceable on the l. bank of the Tigris below Kut el-Amara and Azīziyeh. For its course thence to the Diyāleh see vol. ii. It reaches the l. bank of that river near Sifweh (Route 31, m. 23½) and follows it to Bāqūbeh (23 m.), crossing to r. bank below Bahriḥ. Above Bāqūbeh it turns NW. to the Tigris (15 m.), its bed being broken by branches of the Khālis Canal. Striking the l. bank a little above Sindiyyeh (m. 49, above) it follows it more or less closely as far as the 'Adheim and Khān Dhulū'iyeh as described in the preceding paragraphs. Its bed thus far is 100-140 yds. wide, and at the 'Adheim it is 20 ft. below the surface-level. Above the Khan the main canal, diverging from the river as described above (p. 31), is almost obliterated. Deep cuts interrupt its bed, which is on the level of the plain. About 10 m. below Samarra it begins to be better marked, through marl, though the banks are low and not abrupt. E. of Samarra soil becomes pebbly; banks about 30 yds. thick; canal approaches river. About 8 m. above Samarra compact conglomerate is reached, through which canal is cut with steep banks; galleries sloping up them from the bed to the surface for the removal of excavated material may be traced. The bed is below the general level, and banks 15 ft. above it and 15 yds. thick. Below Dūr traces of a head of the canal are seen (Route III E, m. 17½), but an upper branch (Nahr en-Neifeh) is traceable nearly to the Hamrīn Hills (Route III E, m. 56).

1½

¼

Ford across channels on both sides of island.

Right Bank	Total distance
	Miles
Ba'rūreh reach above island.	
Tuthah I.	73
Darāwīsh I. Cultivated by Sawākīneh. Small island on S. side.	74½
Beled village lies some miles S. of this point.	
Upper end of Darāwīsh I. Several water-lifts. Cultivators are Sawākīneh.	75½
Barqeh I. (possibly not surrounded by water except in the h.w. season).	76
Breadth of the river 300-250 yds.	
Upper end of old bed of Tigris?	76¾
Tel Tabbārat.	77¼
Upper end of Barqeh I.	77½
Camp of Mujammeh Arabs. Sidd Nimrūd , remains of an ancient rampart or dyke, with trench, running SSW. from the river bank, which has been identified with one end of the Median Wall, a fortification which in the fourth century B. C. stretched from the Euphrates to the Tigris in this neighbourhood. Possibly, however, the Sidd Nimrūd was merely an irrigation dam.	78
About ¾ m. above Sidd Nimrūd and El-Hāwiyeh is a ferry by which communication is possible between the Baghdad—Samarra routes on the r. and l. bank respectively. The normal service here is reported as being one of three boats, each capable of carrying 50-60 persons. A hut and two or three sheds on the r. bank.	78¾
At the ferry the Baghdad—Samarra T. L. crosses the river. It apparently leaves the line of the Baghdad—Samarra route and railway near Tel Husein (about 4 m. SSE. of the ferry) and traverses the Dujail Canal (see m. 81¼) and several of its branches, running NNW. to river, after crossing which it turns NW. to Samarra. 3 m. S. of the ferry, and for some distance from this point on the way to Samarra, the Baghdad—Samarra road and railway pass over a network of canals, mostly dry.	

Inter-
mediate
distance
Miles

Left Bank

4
1½

1 Camp of Abu Darrāj Arabs.

½

¾

Khān Mizraqji (apparently on the Samarra road N. of the Nahr el-Qā'im). Khān Sawiyeh was mentioned in 1892 as being in this neighbourhood, but latest information suggests that it no longer exists, the name, it is said, being now given to the locality in which Khān Mizraqji stands.

½

El-Qanātir, a locality so called from remains of ancient dam and sluices.

¼
½

El-Hāwiyeh, village of 25 houses of Sawāmireh and Abu Darrāj.

¾

From the banks of the Nahr el-Qā'im (see m. 60½), which continues to run close to the river, the spiral minaret (Malwiyeh) at Samarra is visible.

Right Bank	Total distance
	Miles 79
<p>About this point the banks are low. Rapids causing some difficulty to navigation in l.w. season are reported to be in this neighbourhood.</p>	79 $\frac{3}{4}$
<p>Qubbān : Arab camp ; no permanent village.</p>	81
<p>Mouth of Dujeil Canal. This was described in 1892 as a cutting 8-10 ft. wide at the bottom, with sides sloping 1 in 1, and is sunk some 12 ft. below the plain at its upper end. It has great mounds of excavated silt beside it (1910). It carries water in its upper reaches except when the river is low. The canal runs in a general SSE. and SE. direction to Sumeikeh, about 22 m. along the Baghdad—Samarra route. Beyond Sumeikeh it turns S., and loses itself about 7 m. to the W. of Tarmiyeh. Many smaller channels are taken off from it.</p> <p>At and above the head of Dujeil Canal the banks are higher.</p> <p>Line of Baghdad—Samarra railway apparently approaches the river above mouth of Dujeil Canal, and runs near it to Samarra.</p> <p>It is apparently possible either to follow a track between railway and river bank, or to pass W. of a dry canal (Nahr Shaqi ?) running parallel with the river.</p>	81 $\frac{1}{4}$
<p>Istablāt, a large ruin-field, situated on high ground, and surrounded by remains of city wall.</p> <p>Police post (in good repair, but unoccupied in 1910). Railway station.</p>	82 $\frac{1}{4}$
	83 $\frac{1}{4}$

Inter-
mediate
distance

Left Bank

Miles

 $\frac{1}{4}$

Route to Samarra from the ferry and T.L. are marked on map as crossing Nahr el-Qā'im and running direct (NW.) to Samarra, at a distance from the river varying from 1 m. to $2\frac{1}{2}$ m.

 $\frac{3}{4}$

Head of ancient canal, much silted up, with high earthen embankments. Called by authority 1910, **Nahr Talsiyeh.**

 $1\frac{1}{4}$
 $\frac{1}{4}$

Qādisiyeh: ruins of ancient city (reported to be known also as Et-Talsiyeh). These ruins begin above bend of river to NW., and extend for some distance along bank.

The ruins (which date from the Abbasid period) are a crumbling wall of sun-dried brick, enclosing an octagonal area (the sides varying in length between 565 and 725 paces). Three gates in each of six sides, four in the seventh, and two in the eighth (the northern wall, which has 10 small vaulted chambers on its interior face). Inside the wall, and about 13 paces from it, a shallow ditch, $12\frac{1}{2}$ ft. wide, runs round at least the greater part of the enclosure, with a low mound on its inner side, occupying a space about 22 ft. wide.

1

Ruins called **Sanāh.**

1

El-Qā'im, a ruined tower of pebbles and concrete. There is no chamber inside, and no means of climbing up it. Possibly of Sassanid origin (third-seventh century A. D.).

Right Bank	Total distance Miles
Tineh village: 10 houses of Āl Bū Nisan. Ford in low-water season.	85 $\frac{1}{4}$
	89 $\frac{1}{4}$

ROUTE III E

SAMARRA—MOSUL (185 M.)

Authorities :—*Military Report on E. T. A.*, vol. iii, 1904 (report of 1892); Lorimer, *Report on a Tour in Turkish Arabia and Kurdistan*, April–May 1910; Oppenheim, *Vom Mittelmeer zum Persischen Golf* (journey in 1893); authorities cited for *Route 25 b* and oral information relating to recent years.

The distances in this section of the river are very uncertain. They are based on the times given by various authorities who descended the river by raft, and as the speed at which a raft moves may vary greatly with changes in the rate of the current or the wind, it is impossible on such evidence to estimate mileage with any approach to precision.

For most of the way between Mosul and Samarra the Tigris flows in a shallow valley through rolling plain country. The western side of the valley, which seems to be more sharply defined than the eastern, is formed by a low plateau-edge or by small ridges 50–150 ft. high. The undulating plain is interrupted, at about 60 miles from

Inter- mediate distance Miles	Left Bank
	Some distance above the tower is an opening in the bank marking head of an ancient canal (Nahr Talsiyeh?).
	Ruin-fields extending up to Samarra. The river is here reported to contain several small rapids, probably due to outcrops of rock in the river-bed.
2	Ford in low-water season.
4	Samarra Boat-bridge. The river here varies in breadth from 370 to 460 yds., according to the season. Its current in mean water is 3 m. an hour. Its depth is considerable: reliable details on this point are lacking. The l. bank is high (60-80 ft. above the river in l.w.), and shuts off the view of the town from the Tigris. The r. bank is said to be about 30 ft. high and steep. The banks and river bottom are mainly firm earth, with some sand (mostly on r. bank) and a few stones.

Samarra and 120 miles from Mosul, by the Jebel Hamrin, a range of rugged heights rising to 300-500 ft., through which the river forces its way after running for some distance along the NW. side of the hills. The Tigris flows over a bed mainly of shingle, with outcrops of rock. The river frequently breaks up into two or more channels, enclosing low islands often overgrown with tamarisk and other scrub. These islands are specially numerous between Mosul and the mouth of the Great Zab. The rocks in the river-bed are often large, and stand up out of the water or are barely covered by it. Ledges of shingle, stretching across the channels between islands and the banks, and forming rapids, are common. Where it flows in a single channel, the river is in the flood season generally 400-550 yds. broad from Samarra up to the neighbourhood of the Great Zab, where it is said to narrow to 200-250 yds. In l.w. its breadth in places may decrease considerably (see, e.g., m. 31, under Tekrit). The current varies considerably according to the width and bed of the river, and the time of year. Depths also are very variable (see below under *Navigation*). For the two great tributaries, the

Lesser and Great Zābs, see *Route III F*, and this route under m. 150½.

Navigation.—Native sailing-craft do not usually go above Samarra, the current being too strong in h.w. In l.w. they could reach Tekrit by carrying half-cargoes. Practically all the river-traffic in this stretch is down-stream, and is carried on by means of the large rafts known as *keleks* (see vol. i, p. 166). Times taken by these rafts vary greatly according to the condition of the river, the wind, &c. A raft in May (h.w.) 1910 descended the river from Mosul to Samarra in about 30 hours' travelling (exclusive of stops). At the end of August (l.w.) the journey has taken 70 hours' travelling (exclusive of stops). The numerous rapids, rocks, and islands make night-travelling dangerous, at least when there is no moon.

In the l.w. season it might perhaps be possible for steamers of 3 ft. draught to navigate the river as far as the Hamrīn Hills. A German archaeologist at Qal'ah Sherghat said in 1910 that he had found a place below Qal'ah Sherghat where in the low season there was not more than half a metre (about 19 in.) of water anywhere in the river. This may have been due to shingle ledges forming rapids (see e. g. under m. 63).

Native raftmen asserted in 1910 that at each of the fords across the Tigris in this section there is always a part in which the water is breast high.

Steamers could probably go considerably higher than the Hamrīn Hills in a full river, except perhaps at the highest of the flood, when the current at rapids might be too strong for them. In 1839 one of Chesney's steamers, the *Euphrates* (3 ft. draught), ascended the river as far as Sultān 'Abdallah (m. 144).

Motor-launches could probably be used throughout this section even in low water.

The navigation of the river is apparently subject to fairly frequent modification, as the main volume of the water may shift from one channel to another, and shingle ledges may be altered as the result of the annual floods.

The rocks are the most serious danger to navigation, and rafts are not infrequently wrecked in the descent of the river. The rapids formed by shingle ledges are generally easy in the h.w. season. For rocks, see m. 19½, 20½, 21½, 24½, 69½, 97, 98, 131½, 149, 150, 152½. For rapids, see m. 47, 63, 66, 76½, 92½, 110½, 149½, 154½, 159½. See also m. 162½.

Fords and Ferries.—For fords see under m. 5¼, 21½, 36, 87, 88½, 113½, 165. These fords, which are passable in l.w. only, have pebbly bottoms.

Native ferries (boats or *keleks*) at Tekrit (m. 31), near Qal'ah Sherghat (m. 113½), at m. 150, 'Uneifeh (m. 161½), and probably elsewhere at the larger permanent villages. The natives, when crossing the Tigris singly, swim the river, supported on two inflated skins tied together.

The Banks and River Valley.—The banks are formed generally of sandstone or conglomerate, and sometimes of gypsum or (as above Tekrit) of sandy alluvium. They are generally fairly high, occasionally rising to bluffs or cliffs as the river approaches the side of the valley. From the Fet-hah gorge up to a few miles below Qal'ah Sherghat the steep and broken sides of the Jebel Hamrīn rise abruptly from the river, first on both banks (in the gorge above mentioned) and farther up on the r. bank only. The hill-ridges or plateau-edge on the W. side of the valley are usually ½–2 m. from the river. The banks are intersected at intervals by wadis.

Strips of flat ground, covered with alluvium, occur along the banks. A small alluvial plain of this kind is known locally as *hawi*. Patches of cultivation are found near the river: water-lifts (*cherrads*) are in use between Samarra and Tekrit. Cultivation in the valley is poor and sporadic throughout the greater part of the section, but becomes comparatively frequent on both banks from the confluence of the Great Zāb to Mosul. Where there is no cultivation, the valley is either bare or overgrown with tamarisk and camel-thorn. A few miles above Tekrit, and in a good many places N. of the Jebel Hamrīn, good pasture is found in spring. There are very few trees, and no date-palms occur between Tekrit and Mosul. Along the E. side of the valley, S. of the Jebel Hamrīn, run the large dry canal-beds of the Nahrawān (Nahr er-Rasāsi) and the Nahr en-Neifeh (see m. 17½ and m. 56).

The country E. and W. of the Tigris Valley.—Up to the Jebel Hamrīn the country is desert on both sides of the river valley. The Jezireh to the W. is bare and stony, with only a little poor vegetation in spring in its hollows and wadis. To the E. the plain is by nature less barren, but it is inhabited now only by a few nomads. N. of the Jebel Hamrīn the Jezireh has less of a desert character: there is good spring-grazing in the rolling country between the river and the Wādi Tartar. To the E. also cultivation gradually becomes less rare, though it is liable to suffer from droughts and plagues of locusts. A considerable amount of corn is produced in the plain between Erbil and the Tigris, and the country between the Great Zāb and Mosul is fairly well cultivated.

Inhabitants.—The only place between Samarra and Mosul that can be called a town is Tekrit (see m. 31). Up to the confluence

of the Tigris and the Great Zāb permanent villages are few, and, with the exception of Dūr (see m. $20\frac{1}{2}$) and Tel esh-Sha'ir (m. $145\frac{1}{2}$), insignificant. A number of nomad encampments are generally to be found near the river, especially in summer, and there are apparently settlements of semi-nomads, which after remaining for some years are liable to alter their position or to disappear altogether. The settled and semi-nomad inhabitants of the r. bank are for the most part Jebūr Arabs, who pay a tribute to the powerful nomad Shammār. The influence of the Shammār, who formerly controlled the r. bank of the Tigris from Mosul to Baghdad, has been lately declining. But acts of brigandage were still committed here

Right Bank	Total distance
	Miles
Samarra.	0
General direction above Samarra is N. by W. as far as Shereimiyeh (see m. $61\frac{1}{2}$ below). The Mosul road follows the river about 300 yds. from the bank. The edge of the desert plateau is seen from the road to W.	
Ābid , 20 houses of Sawāmireh (i. e. people of Samarra).	$1\frac{1}{4}$
	2
Qubbat es-Sulabriyeh , ruined octagonal building (60 ft. in length and breadth) on rising ground, \approx 1 m. W. of river.	$2\frac{1}{2}$
Qal'at el-Āshiq , ruined castle in bold situation above valley, $\frac{3}{4}$ m. from river, in form a rectangle 133 yds. N.-S. \times 93 yds. E.-W., consisting of wall with round bastions, from which ground falls abruptly to E. Below E. slope is a belt of low alluvial soil cultivated by water-lifts, here about $\frac{1}{2}$ m. wide, and broadening considerably farther on.	$3\frac{3}{4}$
	$4\frac{3}{4}$

from time to time by these and other nomads in the years before the war.

On the l. bank also Jebūr form the bulk of the scanty settled population. N. of the Hamrīn range, in the plains between the neighbourhood of the river and the mountains, are tribes of nomadic or semi-nomadic Kurds (see vol. i, p. 68, &c.), mostly well armed and given to brigandage. In the neighbourhood of Erbil and between the Great Zab and Mosul there are a number of Chaldaean Christian villages and Yezidi communities.

For the Baghdad—Mosul route, along the r. bank of the Tigris, see *Route 25 b.*

Inter- mediate distance Miles	Left Bank
0	
$1\frac{1}{4}$	Lower end of Kuweir I. Other islands occur in this neighbourhood, carrying small trees or bushes. Ruins are visible from the river lying at some distance inland.
$\frac{3}{4}$	Kuweir village is about $\frac{1}{4}$ m. farther up the island. In this neighbourhood are some small shrub-covered islands.
$\frac{1}{2}$	Beit el-Khalifeh , ruin of large vaulted hall, one of the palaces of old Samarra.
$1\frac{1}{4}$	Lower end of large island stretching N. for $\sim 2-3$ m. El-Ma'shūqah , ruin (? of castle), in the valley of the river. Little is left but the buttresses of the walls.
1	Lands of Bisāt village (see m. $5\frac{1}{4}$) begin in this neighbourhood. Tel 'Alīj ('Nose-bag Mound'), large artificial mound about 2 m. from river, surrounded by a moat, outside of which are

RIVER ROUTES

Right Bank	Total distance
	Miles
? Ford in l.w. season to Bisāt village on l. bank. Village of 30 houses (Samarra Arabs).	5 $\frac{1}{4}$
Large bend in river (in a westerly direction?) reported in 1910.	5 $\frac{3}{4}$
	7 $\frac{1}{2}$
Loweyyeh camp-ground is in this neighbourhood (see <i>Route 25 b, m. 86</i>).	11
	11 $\frac{1}{2}$

Inter-
mediate
distance
Miles

Left Bank

traces of a circular wall at about 110 paces distance. A raised causeway runs from this *tel*, a little E. of N. to a point about $\frac{1}{2}$ m. distant.

A short distance to the SE. of this *tel* is the dry bed of the **Nahr Nahrawān** (here called **Nahr er-Rasāsi**), which has run to this point in a general WNW. direction from Tel Mahāsil (see *Route III D*, m. $60\frac{1}{2}$), bends NNE., and seems to be traceable, running roughly parallel with the river, at a distance varying from 3 to $1\frac{1}{4}$ m. for some miles.

$\frac{1}{2}$

Hawā-i-Sullat settlement: 20 houses of Āl Bū 'Abbās.

Bisāt village in trees: 25 houses of Samarra Arabs.

Qafas Shinās: large tent-settlement of Āl Bū 'Abbās, a short way above Bisāt. Here is a large enclosure, surrounded by the remains of walls and towers of sun-dried brick, in a very ruinous condition.

A few hundred yards to the N. of this ruin lies another, of oblong shape, nearly $\frac{1}{3}$ m. across, with a walled triangle to the N., in which is a small square enclosure near the river.

$\frac{1}{2}$

$1\frac{3}{4}$

Mouth of **Wādi Abu'l Aswad**, a water-course from the Hamrīn Hills, lies in this neighbourhood. This wadi is dry in summer: at other times it brings water from the hills to the Tigris. There is said to be much spring pasturage in its neighbourhood.

Ruin-heaps of a quarter of old Samarra, marked on maps as **Eski Baghdad**. This name is apparently applied locally to the whole group of ruin-fields from modern Samarra to Abu Delef (see m. $11\frac{1}{2}$).

The l. bank here is of conglomerate and elevated, with numerous water-lifts.

$3\frac{1}{2}$

$\frac{1}{2}$

Sinn Yehūdiyeh, a bluff, intersected by a small ravine leading from the high plain to the river. There are several more similar ravines to the N.

Here also is a mouth of a minor arm of Tigris, with islands and shoals. This arm runs generally NNW. for about $3\frac{1}{2}$ m. from the point where it leaves main stream. Along its l. bank,

Right Bank	Total distance Miles
Cultivation by water-lifts on r. bank ends in this neighbourhood.	15
The distances here are very uncertain. An authority who descended the river in the high-water season (May 1910) reports that he took 28 minutes between the Haraqiyāt rocks and Nahr er-Rasāsi.	17½
Tel el-Mohaijir , Arab camping-ground on eminence, ½ m. from river. Continuous cultivation here, on both sides of the Baghdad—Mosul land route.	18¼ 19½
The breadth of the river is here about 400 yds.	20½
Above this point the river divides into several arms opposite Dūr. The channel apparently follows r. bank.	

Inter-
mediate
distance
Miles

Left Bank

as far as the Nahr er-Rasāsi (dry canal) the ground is covered with ruins. At the mouth of the arm is Qit'at Al Bū 'Īsa, a ruined enclosure. \approx 1,250 yds. NE. of this is Abu Delef, a large mosque, of which little remains except detached columns or arcades, and part of a spiral minaret to the N. About 600 yds. N. by W. of this minaret is a spring, surrounded by ruins. N. of Qit'at Al Bū 'Īsa, on the l. bank of the arm, at \approx 760 and \approx 1,500 yds., are walled enclosures.

Qasr el-Mutawakkil (palace of Caliph Mutawakkil, ninth century) lies near the point where the arm leaves the main stream, ruin-heaps extending over an area of about 1,400 yds. square.

The Nahr er-Rasāsi, bending from NNW. to NW., about 2,000 yds. NNE. of Abu Delef, skirts Qasr el-Mutawakkil on the E. From the bend the dry bed of Nahr en-Neifeh runs in a NNW. and N. direction.

From Sinn Yehūdiyeh the main stream bends WNW. for \approx 2 m.

$3\frac{1}{2}$ Upper entrance to arm of Tigris (see m. 11 $\frac{1}{2}$); ruins of **Qasr el-Mutawakkil**, about $\frac{3}{4}$ m. from bank. Low conglomerate cliffs.

$2\frac{1}{2}$ Head of Nahr er-Rasāsi (Nahrawān). This is marked by an opening in the conglomerate cliffs. The bottom of the canal was some 15 ft. above the level of the river in May 1910.

$\frac{3}{4}$ Conglomerate cliffs end.

$1\frac{1}{4}$ In this neighbourhood **Haraqiyāt** rocks near l. bank, submerged in flood season. They are said to project 5 ft. in low water.

1 **Dūr** village, of about 500 houses, situated on some mounds near the river-bank, between the Tigris and dry course of Nahr en-Neifeh. The inhabitants are all Mohammedans, for the most part raftmen and carriers. The place is the seat of a Mudir. (The site is an ancient one. In A. D. 363 the Roman army in its retreat from Ctesiphon, after the death of the Emperor Julian, found here the city of Dura.)

Right Bank	Total distance Miles
Some cultivated land on r. bank worked by temporary settlers from Samarra (1910).	21½
A ford, passable in the l. w. season, was reported in 1910 at a point described as being at ¼ hour's walk above Dahri rocks.	
Rocks in river in this neighbourhood. In May 1910 they were submerged, causing rough water. In l. w. they are said to stand out 'as high as a camel'. Rafts have been wrecked here.	24½
The hills gradually decrease in height and approach the river.	25
An encampment of Ba'jeh Arabs was reported hereabouts in 1910.	
Tekrit cliffs begin in this neighbourhood. The hills above this point come close to the bank. They are much cut up by ravines.	26½
Tekrit. The stream here has been estimated at 250 yds. wide in October (1903), and 500-600 yds. wide in May 1910. It is shallow on the Tekrit side. In May 1910 it was possible to wade 100 yds. from the r. bank. The current has been estimated at 2-3 m. an hour (l. w. season). Ferry.	31
Above Tekrit the cliffs (mud and conglomerate) continue on the r. bank. The district immediately above the town is called Qā'im.	
In this neighbourhood the cliffs cease, as the range of Jebel Selweh recedes from the river. A low strip of land	33½

Inter
mediate
distance
Miles

Left Bank

Imām Dūr, shrine of a Shiah saint, is a tower on an eminence, with a rounded top, between the river and the village; a high square building, built in diminishing stages. It is visible from the river above Dūr as far as Tekrit. About $1\frac{1}{2}$ m. E. of Dūr village is a large mound named Tel Benāt.

In the river opposite Dūr is a large island with water-lifts and cultivation. Between it and the r. bank is a smaller island. Main channel apparently follows r. bank.

At and above Dūr the l. bank is high.

In the river, extending about $\frac{3}{4}$ m. above Dūr, are the **Dūr** rocks. Some of these were visible in May 1910, others submerged. The latter are said to rise 6 ft. above the water in the low season, dividing the river into several channels.

1 **Dahri** rocks. The group of rocks first met with in proceeding up-stream are submerged in h. w., but are said to be uncovered to about $2\frac{1}{2}$ ft. in l. w. A short distance above them is a rock said to be submerged even in the low season. Broken water.

3

$\frac{1}{2}$

District called **Hatreh** begins in this neighbourhood.

$1\frac{1}{2}$

$4\frac{1}{2}$

The l. bank opposite Tekrit is low. Date-palms on the l. bank above Tekrit. There are no palms on the river bank above this point.

$2\frac{1}{2}$

Right Bank	Total distance
	Miles
now intervenes between these hills and the bank: it is called Hawi Mātarīdeh . Island.	
A little above the island is Tel es-Sūq : ruin mound. In the river are rocks said to be uncovered in l. w. season.	34½
The Hawi Mātarīdeh ends. The hills close in on the river, and the bank is lined by steep conglomerate cliffs rising to 80 ft. for about 2 m.	36
The name of the hills here changes from Jebel Selweh to Jebel Ajzān . See m. 33½.	
A ford passable in l. w. season was reported in 1910 at a point described as being at ½ hour's walk above the Jebel Selweh.	41
Qal'at Abu Riyāsh , ruined building on rocky cliffs above the river. In 1908 it had almost disappeared, the high ground on which it stands having been eroded by the river and fallen away. Above Qal'at Abu Riyāsh the cliffs recede somewhat from the r. bank.	47
A number of shingle banks lie above this point, and extend up to the Hamrīn Hills. Some of these banks form small rapids, but it seems probable that even in l. w. there would be 3½-6 ft. of water over most of them. They are liable to be much altered by the annual floods. The channel appears generally to follow the r. bank.	
A sandy plain begins along the l. bank. It is 6 m. long and 1½ m. broad, and bounded on the W. by low sand-hills 50 ft. high, which the Mosul road skirts.	56
A series of tamarisk-covered islands lying towards the r. bank hereabouts extends up as far as the Fet-hah gorge (see m. 63 below).	
Khān el-Kharnīneh , a Turkish military post for 40-50 men, situated on the Mosul-Samarra road at some distance inland among the ruins of a thirteenth-century building.	
Beiji village (15 houses of Jebūr) reported in 1910 on the river bank.	59
Shereimiyeh . Turkish military post and khan. The former, a whitish building, is visible from the river: the khan cannot be seen from a raft. Good camping-ground some hundred yards from the river. Between Shereimiyeh	61½

Inter- mediate distance Miles	Left Bank
1	
$1\frac{1}{2}$	
5	Encampments of Jebūr Arabs reported in this neighbourhood (1910).
6	Encampments of Abu 'Ali reported in 1910.
9	Head of the Nahr en-Neifeh (see above, m. $11\frac{1}{2}$), the northern end of the ancient canal system of Irak. It appears from the river as a hollow between two mounds (the ends of its banks).
3	Tel Khuwein , a short distance above the head of the Nahr en-Neifeh.
$2\frac{1}{2}$	Umm el-Laqlaq village (50 houses of 'Obeid Arabs in a walled enclosure): it is a short distance above Shereimiyeh, on the opposite bank.

Right Bank	Total distance Miles
and Umm el-Laqlaq is a broad island ¹ called Shereimiyeh. The river here is nearly 1 m. in width from bank to bank.	
Above Shereimiyeh the Jebel Hamrīn , here a low line of rocky hills approaching the l. bank from the SE., is traversed by the Tigris through the Fet-hah gorge, in which the hills rise sheer from the stream, leaving no space for a path. N. of the gorge the hills continue close along the r. bank to a point about 75 m. S. of Qal'ah Sherghat. The Mosul route therefore leaves the river at Shereimiyeh in a NW. direction, skirting the western side of the Hamrīn Hills, and does not rejoin the river until Qal'ah Sherghat.	
· The land in this neighbourhood is called Sofeiriye .	62 62½
 The Hamrīn Hills rise from the river bank, forming with their continuation on the l. bank the southern end of the Fet-hah gorge.	 63
N.B.—The position of rocks and rapids, which are frequent between this point and Qal'ah Sherghat, could not be determined with exactitude owing to discrepancies in the available evidence. Above the Suweir rapid (see opposite) extends for about 3 miles a group of islands called Khandida , lying towards r. bank.	
	66
	68
Hamrīn Hills continue close along river on r. bank, much cut up by ravines.	
Isolated rock in the stream 15 yds. from r. bank near this point (1892).	69½

Inter-
mediate
distance
Miles

Left Bank

$\frac{1}{2}$
 $\frac{1}{2}$

The land in this neighbourhood is called **Umm el-Leieh**. **Hamrīn** Hills approach close to l. bank.

In the l. bank of Fet-hah gorge there are at intervals stretches of calcareous rock, with threads of petroleum and bitumen oozing from them.

$\frac{1}{2}$

Suweir rapid, between l. bank and an island. It was reported that in the l. w. season of 1892 the current below this rapid set towards some low cliffs on the l. bank, under which there were two flat-topped ledges in the stream covered by $2\frac{1}{2}$ ft. of water, but forming an eddy dangerous to rafts. These could be avoided by a deep channel 40 yds. wide near the island. The Suweir rapid itself was at that time formed by a long diagonal shingle ledge, partly uncovered but with $2\frac{1}{2}$ –3 ft. of water in the channel next the island. The current was $4\frac{1}{2}$ – $5\frac{1}{2}$ m.p.h. (A report of May 1910 merely mentions broken water near the l. bank, caused by rocks called Suweir).

3

Another rapid in the channel between the l. bank and the upper end of the Khandida Islands, about 1 m. above the first. In l. w., 1892, a channel free of rocks, 60 yds. wide and over 6 ft. deep, with a current of about $5\frac{1}{2}$ m.p.h., led up to a shingle ledge extending for 20 yds. with 4 ft. of water.

2

Upper end of **Fet-hah** gorge. The bituminous cliffs of calcareous rock (see m. $62\frac{1}{2}$) are here about 20 ft. high.

Hamrīn Hills end on l. bank.

Fet-hah ruins, site of ancient city, at foot of NE. slope of **Hamrīn** Hills, about $\frac{1}{2}$ m. from river.

$1\frac{1}{2}$

Right Bank	Total distance
	Miles
	70½
	71½
Sharp change of direction from W. to NNE. Hills rise steeply from river on r. bank: low foreshore to left. Sulphur spring in this neighbourhood.	73½
Diagonal shingle ledge reported in l. w., 1892, as being covered by 2½ ft. of water. Channel near r. bank. Several small ravines and low cliffs on r. bank.	75
	76½
Qal'ah Jabbār , ruins of fort, on a hill about ¼ m. from river. Deep ravines to N. and S., of which the northern curves S. along part of the W. side. The hill is thus triangular, with its apex to W., where it is connected by a saddle with the hills on the landward side. Its plateau is 325 ft. at its lowest point, about 700 ft. at its highest (SE.), above the bottom of the ravines. The wall on the river side of the plateau still remains: it is about 13 ft. thick. It was reported in 1898 that there was a sulphurous spring below this ruin.	78½
Mounds. Broken water called Hamrah (authority 1910).	80½
Mouth of Wādi Jahannam , a water-course, usually dry. It lies in a ravine which runs from NW. to SE., roughly parallel with the course of the Tigris above the junction with the Lesser Zāb, at a distance from the r. bank of the Tigris varying between 1 and 3½ m. The gorge continues narrow for about 20 m. up, then it widens till it is several miles broad. Under the name of the Wādi Tālib it may apparently be traced across the desert, bearing more to the north, till its head is reached in the Kaiyara Hills, perhaps 20–30 m. WNW. of Kaiyara oil-springs.	83
Ford passable in autumn, called Esh-Shejereh, is reported hereabouts, but may be the same as that mentioned under m. 88½.	86
	87

Inter- mediate distance	Left Bank
Miles	
1	Slight rapid, with 4 ft. of water, between l. bank and island (so reported in l. w. season of 1892).
1	Tel ed-Dahab , ruin-mound about $\frac{1}{2}$ m. from river bank, where it bends W.
2	Shingle ledge in bed of stream next l. bank at or near angle of bend. (Apparently reported 1892: but course of river seems to have changed considerably here in recent years).
$1\frac{1}{2}$	
$1\frac{1}{2}$	Rapid between l. bank and large shingle island (August 1892). Channel followed l. bank in 1892. In l. w. season of that year it was reported that there were signs of a rise in flood of 18–20 ft.
2	Open level country.
2	
$2\frac{1}{2}$	Tel Marmūs , mound on l. bank, in this neighbourhood.
3	
1	

Right Bank	Total distance
	Miles 87½
? Ford in l. w. season (reported 1910). Rapid? See opposite page.	88½ 92½
The hills (here called Jebel el-Makhūl) close in on the river.	
Qal'at el-Bint (also called Qal'at Makhūl), an old partially ruined castle lying at the SE. end of the summit of a hill which runs SE. to NW. close to the river, rising about 200 ft. above the stream, and lying between two deep ravines (the larger on its N. and W. sides). These ravines isolate the hill except on its SW. corner, where it slopes to the neck which connects it with the ridge behind it, but across this neck is drawn a trench about 7½ ft. deep. The steepest sides are those to the SE. and NW. (i. e. those above the smaller ravine and the river). The walls of the castle are of unburnt brick strengthened by rubble, those which lie on the SE. and SW. being in a fairly good state of preservation. A curtain visible from the river is loopholed. The place was probably used as a base from which to plunder and blackmail the river-traffic. Its position commands two reaches of the river.	94
In this neighbourhood, Farrāj rock makes rough water near the r. bank, which is here high and broken.	95½ 97
Hills on r. bank (here called Jebel Khanūqah) rise abruptly from the river in rocky cliffs, which extend for about 5 m. The Jebel Khanūqah is a fairly narrow ridge. The bed of the Wādi Jahannam (see m. 86) runs parallel to the river on the other side of the ridge.	98
River bends sharply. Direction changes from NW. to ENE.	
From this point the ridge of the Jebel Khanūqah withdraws from the river and continues to run in a NW. direc-	102

Inter- mediate distance Miles	Left Bank
$\frac{1}{2}$	Junction of the Lesser Zāb with the Tigris, 250 yds. broad (see <i>Route III F</i>).
1	Hawi Dindi , reported to be a permanent camp of the Jebūr, extends up the Tigris for an hour's walk.
4	Esh-Shaqq : 90 huts of Jebūr.
4	Tureisheh rapid? It is reported that in May 1910 the sound of rushing water near the l. bank was heard from a raft: but the raftmen denied the existence of any ' <i>awāyeh</i> ' or real rapid.
$1\frac{1}{2}$	
$1\frac{1}{2}$	
$1\frac{1}{2}$	Shrine called Gumbet el-Hadidi .
1	Sagar en-Naml rocks (at or near this point) in river close to l. bank.
4	Low fertile strip called Shatt el-Jidr , on the l. bank.

Right Bank	Total distance
	Miles
<p>tion till it ends apparently about ^r10 m. away. The main ridge of the Jebel Hamrīn, which lies to SW. of the Jebel Khanūqah and is separated from that range by the valley of the Wādi Jahannam, apparently takes a WNW. direction from this point, the valley between the ranges gradually widening.</p> <p>About 2 m. W. of the river-bend the Samarra—Mosul road crosses the Wādi Jahannam, and, running NE., ascends diagonally to the summit of the Jebel Khanūqah (where the track becomes difficult for wheels), whence it runs in a general NE. direction down the northern slope and across the plain for about 3 m. to Qal'ah Sherghat.</p> <p>The plain, which begins on r. bank of river above the bend, is naturally fertile and contains cultivation (irrigated by cuts from river) and spring pasturage. The neighbourhood is the property of the <i>Da'irāt es-Sanīyeh</i>. The cliffs on the r. bank gradually decrease in height till they end as low bluffs a short distance below Qal'ah Sherghat.</p>	
<p>River bends N., and some way above this point breaks up into several channels enclosing a group of islands extending for some distance upstream. In 1898 the Tigris flowed in three main arms opposite Qal'ah Sherghat (see m. 109). Of these the middle arm apparently joined the western at its lower end a short distance below the southern extremity of the ruin-field, and the eastern arm met the rest of the stream somewhat still farther to the south.</p>	104½
<p>Qal'ah Sherghat. A large <i>tel</i>, about 150 ft. high, with a circumference of 4,685 yds. The sides are steep and much broken. On the east it rises abruptly from the river, and on the landward sides its base is marked off from the surrounding plain by a broad trench. The northern end is the highest point of the <i>tel</i>, where it is crowned by a conspicuous mound shaped like a truncated cone. Near this mound is a Turkish guard-house.</p> <p>The <i>tel</i> is the site of the citadel of the ancient Assyrian Asshur, and on it stood a royal palace and several temples. The mound at the N. end marks the site of the temple of the god Asshur. The hill is still covered with large frag-</p>	109

Inter-
mediate
distance
Miles

Left Bank

2½

Abu Shārib, rocks in midstream near this point. The l. bank is of mud and conglomerate and fairly high.

4½

Right Bank	Total distance
	Miles
mentary masses of masonry. The E. wall (of gypsum blocks) is still partially preserved, sloping steeply to the river. Large portions of the northern walls are also still standing. Excavations have been carried on here in recent years by German archaeologists, and as the result of their work the hill is scored by deep trenches containing fragments of masonry.	
The city of Asshur was the capital of the Assyrian kingdom before the rise of Calah (Nimrūd, see under m. 159 $\frac{1}{4}$) and Nineveh (opposite Mosul). Its position in a cultivable plain close to the Jebel Hamrīn, which commanded the approach to Assyria along the Tigris from Babylonia, made Asshur a convenient royal residence in the earlier period of Assyrian history. With the expansion of the Assyrian Empire to N., NW., and W. the place of Asshur as the political capital of the country was taken by Calah, but it continued to be a religious centre and a place of some importance as late as the Parthian Empire (first century B.C.—third century A.D.).	
Above Qal'ah Sherghat to about m. 144 the Qarachok Dagh is visible in the distance across the plain to the E. To NNE. the high mountains of Kurdistan appear on the horizon.	
Wādi esh-Shabābīk (see under m. 131 $\frac{1}{2}$), close to N. side of Qal'at Sherghat hill: apparently reported (Feb. 1903) as a nullah 20 ft. wide and 5 ft. deep containing a little rain-water.	110
Samarra—Mosul route follows general direction of river.	
Rapid reported in this neighbourhood (1893).	110 $\frac{1}{2}$ 112
Ford reported about here in August 1903: not mentioned 1910.	113 $\frac{1}{2}$
Jebel Matak , a low line of hills running near river: rocky bluffs, topped with conglomerate, on the bank.	114 $\frac{1}{2}$
Samarra—Mosul route near hills, about 1 m. from river. Some cultivation and spring pasturage in this neighbourhood for about 7 $\frac{1}{2}$ m.	
	116
Rocky bluffs end; hills recede from r. bank.	117

Inter- mediate distance	Left Bank
Miles	
1	
$1\frac{1}{2}$	Tukul Akir , mounds in this neighbourhood near river, probably marking the site of an ancient city.
$1\frac{1}{2}$	Mezār esh-Sherghat ferry (one crazy boat).
1	Tukul Akir village.
$1\frac{1}{2}$	Ford (l. w.) reported (1893) in this neighbourhood: but it is not included in list of fords between Mosul and Baghdad compiled in 1910 from raftsmen's information.
1	

Right Bank	Total distance
	Miles
	118
	123½
	124½
Village of Matuk and island. The bank is comparatively low. Tel er-Raguba, conglomerate mound about 50 ft. high.	129½
	131
Broken water due to rocks.	131½
Low conglomerate cliffs on r. bank. These appear to be the end of a line of low eminences running WNW. for about 20-30 m. At this end quite low, the chain is reported to rise to some 500 ft. at its western extremity. On the S. slope of these hills lie the heads of the Wādi Talib (or Jahannam) and esh-Shabābīk. N. of this rising ground lies Kaiyara valley.	
Conglomerate cliffs end. Wādi el-Massāl , carrying some water to river (May). It appears that it does not come from Qaiyariyeh (Kaiyara?) as might be supposed.	132½
	133¾
Mouth of oily stream flowing into the Tigris from the NW. Near this point large encampment of Jebūr (1910). Samarra—Mosul route passes near this point.	135½
Kaiyara bitumen springs and oil refinery. These lie about 2 m. inland near the oily stream, on the r. bank of which are the new oil-works. Shortly before these are reached from the Tigris an old fortified enclosure is passed. A report of 1910 says: 'The bitumen springs are situated in the beginning of some low hills, where they form an expanse of bitumen [which may be compared to a surface of inky water covered with jet black ice] irregularly shaped, with an average diameter of about 100 yds. The surface is all bitumen, in places hard, in places viscous, in places soft; and there are oozings here and there of sulphurous water. The bitumen is collected soft in the open watery spots and packed in skins; what is taken away during the day is replaced in the night. The crude bitumen sells at the springs for half a <i>beshlik</i> per skin of about 40 lb., or approximately 8 lb. for a penny.	

Inter- mediate distance	Left Bank
Miles	
1	El-Haichel camping-ground?
5½	Ganaus mound. Ganaus village, 5 houses of Jebūr, is a short distance above.
1	Cliffs called Chahala begin on the l. bank.
5	Chahala cliffs end just below Matuk village.
1½	Mound and village of Haji 'Ali : 25 houses of Jebūr, 1910. Considerable Arab encampment near Haji 'Ali (1910).
½	
1	
1¼	'Osajeh village. (25 houses of Juheish Arabs, 1910.) Hills close in on the l. bank.
1¾	

Right Bank	Total distance								
	Miles								
<p>'The oil produced here is distilled from crude bitumen of the consistency of stiff treacle. Twenty tins of bitumen yield ten tins of oil, of which two are of the first quality, two of the second, and six of the third. The first quality is colourless, the second yellow, the third black, and the third quality must be refined a second time before it is fit for any purpose except anointing camels against mange, but more bitumen is mixed with it before redistillation. The fuel used for distillation is crude bitumen, and the residue left in the retort is bitumen and is allowed to flow away. Some forty to fifty tins of oil are distilled at Kaiyara daily. The oil is sold at the distillery at the following rates:—</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: right;">Per gallon,</th> </tr> </thead> <tbody> <tr> <td>1st quality</td> <td style="text-align: right;">7½<i>d.</i></td> </tr> <tr> <td>2nd quality</td> <td style="text-align: right;">5<i>d.</i></td> </tr> <tr> <td>3rd quality</td> <td style="text-align: right;">3¼<i>d.</i></td> </tr> </tbody> </table> <p>'Even the best oil smells strongly of some impurity; the odour resembles that of benzine.</p> <p>'In the time of Abdul Hamid, Kaiyara belonged to the Sultan's Civil List, for which it was worked by Ibrāhim Pasha. A French expert was brought from Constantinople, and about £T5,000 was spent in experiments, probably borings, but without increasing the yield of the springs. In 1908 there were various competitors for a lease of the springs, including a European firm. The present plant is primitive and the buildings are of little value. There were about 200 tins of refined oil in the store in 1910, of which more than half was of the first quality.'</p> <p>Low gravel island in vicinity. 136½</p> <p>Low hills to W. Island in midstream. 139</p> <p>Zāwiyeh, settlement of 'Ajl Jebūr, 50 permanent houses, about 200 tents (1910). River water about here reported to have a sulphurous taste. 141</p> <p>Island with large Euphrates poplar trees. 141½</p> <p>Banks high and bold. Deserted site of Tammeh. 142½</p> <p>144</p>		Per gallon,	1st quality	7½ <i>d.</i>	2nd quality	5 <i>d.</i>	3rd quality	3¼ <i>d.</i>	
	Per gallon,								
1st quality	7½ <i>d.</i>								
2nd quality	5 <i>d.</i>								
3rd quality	3¼ <i>d.</i>								

Inter-
mediate
distance
Miles

Left Bank

1

2½

2

½

Cliffs on bank.

Khabbiteh village : 50 houses of Jebūr Arabs.

Makuk, 100 houses of Jebūr, about 2 m. inland.

1

1½

Sultān 'Abdallah village : 50 to 60 houses of Jebūr (1910). This is the farthest point reached by the small English steamer *Euphrates* in 1839 ; since then up to the present war

Right Bank	Total distance Miles
Cliffs within about $\frac{1}{2}$ m. of r. bank.	145 $\frac{1}{2}$
Manqabeh village: 25 houses of Jebūr.	146
An island about $\frac{1}{2}$ m. long lies a short way above Manqabeh. The channel follows l. bank.	146 $\frac{1}{2}$
River here is about 500 yds. broad.	147
Small island.	147 $\frac{1}{2}$
Tulūl esh-Shauk , mound and village: 30 houses of Jebūr (1910).	148
Above this point to Mosul river is much broken by numerous islands and narrows to an average width of 200-250 yds.	
Gravel island. Channel follows l. bank (1910).	149
	149 $\frac{1}{2}$
Makhlat village, about 20 houses of 'Ajl Jebūr, near upper end of the above-mentioned gravel island.	150
Ferry with small boat a short distance above Makhlat village.	
Broken water above the ferry.	150 $\frac{1}{2}$

Inter-
mediate
distance
Miles

Left Bank

no steamer seems to have penetrated to this part of the river.

1
 $\frac{1}{2}$

Tel esh-Sha'ir, important village. 200 houses of Jebūr Arabs and some 20 shops (1910). There is no Turkish official here, but an Arab sheikh is responsible for the safety of rafts, collecting a due of 1 to $1\frac{1}{2}$ *mejīdis* from each. The place is a river port, from which grain brought from Shemamlik, 20 m. ENE., is shipped. This grain is believed to come from the plain of Erbil, which extends about 20 m. between Shemamlik and Erbil town to NE. In an ordinary year about 1,000 rafts, carrying 12,000 tons of grain, leave Tel esh-Sha'ir for Baghdad. About $\frac{9}{10}$ is said to be wheat and $\frac{1}{10}$ barley.

$\frac{1}{2}$
 $\frac{1}{2}$

Hasan Tāsh village; 100 houses of Jebūr, about $\frac{3}{4}$ m. from river opposite island.

$\frac{1}{2}$
 $\frac{1}{2}$
 $\frac{1}{2}$
 $\frac{1}{2}$

Duweizeh village (50 houses of Jebūr, 1910). Low stone cliffs extending along bank about 1 m.

1

Sunken rocks near bank, making troubled water. Channel follows l. bank (1910).

$\frac{1}{2}$
 $\frac{1}{2}$
 $\frac{1}{2}$

Large rapid between l. bank and island.

$\frac{1}{2}$

Mouth of the **Great Zāb River (Zāb el-Kebīr)**. Its confluence with the Tigris is called the Makhlāt.

Just inside the mouth of the Zāb are islands. **Tel Keshāf**, a comparatively high eminence, appears to be situated on the l. bank some 2 or 3 m. up-stream. The Great Zāb, even in late summer, brings down a great volume of water, and its stream is much increased after rain or the melting of the snows. Its waters are very clear, almost bright green, and enter the Tigris with a rapid current.

RIVER ROUTES

Right Bank	Total distance
	Miles

Inter-
mediate
distance
Miles

Left Bank

The Zāb rises in the hills of Kurdistan in the region of Bāsh Qal'ah (about 150 m. N. by E.). On the course of the river through the mountains from Bāsh Qal'ah to the region of Amadiyah (about 85 m. to N.) see route from Mosul to Van.

Below the comparatively open valley of Amadiyah it flows in a SE. direction, through a fertile, well-wooded district bordered by rocky ridges, and the S. side of the valley is followed by the route from Amadiyah to Bireh Kafra (or Zibār). But below the junction of the Zāb with its tributary the Rūdbār-i-Shīn the valley narrows again, and is left by the above-mentioned route, which turns southward away from the river. Some 11 m. to the SE. of this point the Zāb passes by the small plain of Bireh Kafra or Zibār on its r., and then enters very difficult gorges. About 19 m., 28 m., below the plain of Zibār, some way above its junction with its tributary the Rowanduz Chai, it turns S., and shortly below Rowanduz takes a general SW. direction. Below the gorge near Berdīn (65 m. from the Tigris) it enters a broader valley, and flows between low hills on its r. bank and on its l. hills which steadily decline in height. About 2 m. above Girdamamik ferry (42 m. from the Tigris) the river bends in a general SSE. direction to the Tigris. The largest tributaries of the Zāb join its l. bank between Amadiyah and Berdīn, but in its lower course it receives many affluents on both banks, the most considerable of which on the r. bank are the 'Aqreh Su (about 54 m. above the mouth of the Zāb) and the larger stream of the Ghāzir Su (about 18 m. above the mouth of the Zāb): between these two rivers the Achair Dāgh hills run along the r. bank of the Zāb. The chief tributaries on the l. bank are, between Zibār and the mouth of the river, the Rukuchuk, the Rūdbār-i-Baras-gīr, the Rūdbār-i-Rowanduz, the Darabikush Chai, and the Bastoreh Chai. All these rivers are themselves fed by numerous smaller streams.

The Zāb between the Berdīn gorge and the Tigris flows in a broad shingly bed with outcrops of rock here and there, and enclosing a continuous network of islands which break up the river into many channels. Below the mouth of the Ghāzir Su this bed appears to be 2-3 m. wide, but its channels are not entirely covered except in the spring floods. The amount of water in the Zāb and its tributaries varies much according to the season: rain and the melting of the snow on the Kurdish hills in spring fill them with a torrential flood. But even in the l. w. season the Zāb contains much water, though the width of its bed in this lower part of its course makes it run shallow. Its current is always swift, so that apparently even in l. w. it is difficult to ford.

The Zāb between the Berdīn gorge and its mouth is crossed by four ferries. These are (i) at Quweir (described as 2 hrs. above the mouth of the Zāb); (ii) at Eski Kelek (about 25 m. from the mouth) where the Erbil—Mosul route crosses the Zāb; (iii) at Girdamamik (about 42 m. from the mouth) and at Qandil (raft ferry) (about 65 m. from the mouth).

Right Bank	Total distance
	Miles
Bold rocky cliffs, called Jebel Mishraq , about 150 ft. high. Sanādiq ('boxes') mounds extend NNW. for about 5 m. Channel followed r. bank in May 1910, past green island.	151
Sunken rocks near banks, making broken water.	152 152½ 153½
Gully with Umm el-'Asāfir , village of Wāwi Jebūr, on both sides.	154
Rock cliffs 20-30 ft. high. Island, dividing the river into two channels, each of which contains a rapid.	154½
Upper end of island mentioned above.	155½
Sanādiq village (10 houses of Jebūr). The village is called after a series of square-topped mounds (see above, m. 151). There may be other villages called after the Sanādiq mounds. Between this point and Hammām 'Ali the hills recede from the bank. The country to the N. of this point is described as gently undulating and easy, with good grazing-ground in spring. Much of the pasture in this region belongs to the <i>Dā'irat es-Saniyeh</i> .	157
	157½
	158
Wādi Jahannam . Small island of same name immediately above the wadi.	158¼
Rapid known as 'Awayeh Sakhr Munayyireh .	159¼
Camps of Wawī and Jehoni (1910). The Wāwi are a section of the Jebūr. Rocky hills, apparently some distance from the r. bank.	

Inter- mediate distance Miles	Left Bank
$\frac{1}{2}$	Lower end of green island. From this point Tel Keshaf is visible at a distance of about 2 m.
1	Upper end of island mentioned immediately above.
$\frac{1}{2}$	
1	Jā'ifeh , village of Jebūr. 10 houses near river. 100 more said to be less than 1 m. inland.
$\frac{1}{2}$	
$\frac{1}{2}$	Channel in 1910 followed l. bank past the island mentioned opposite. A rapid in this channel hardly reaches the l. bank in h. w.
1	
$1\frac{1}{2}$	
$\frac{1}{2}$	Hawi Jat el-Hisān Island. Navigation channel (in 1910) followed r. bank. Rapid believed to be formed by an ancient dam in the passage between the island and the l. bank.
$\frac{1}{2}$	Seyyid Hāmid village, 60 houses of 'Ajl Jebūr and Juheish.
$\frac{1}{4}$	
1	Nimrūd . This plain is undulating and barley is grown. Nimrūd Hill is about 2 m. from the river. $\frac{1}{2}$ m. from the river is Yeni Nimrūd village, 150 houses of Shammatteh and Jebūr. Nimrūd Hill forms the SW. corner of the site of the ancient Assyrian city of Calah. On it were the temples and palaces of several Assyrian kings. The hill is now a rectangular plateau running N. and S., the longer side extending nearly 750 yds., the shorter side about 325 yds. The surface of the plateau is uneven, being covered with ruined mounds. At the NW. corner is a conspicuous cone-shaped mound cut

Right Bank	Total distance Miles
	161½
<p>Rapid, which is reported as giving no trouble to rafts in h. w., and easily passed even in l. w. (This rapid would appear to be near the site of the dam called the Zikr el-'Awāz, which was formerly described as just above 'Uneifeh and 20 miles below Mosul. The most recent information available seems to indicate that this ancient dam no longer forms an obstacle, but no evidence could be obtained to show whether it had been destroyed or was now avoided by the present channel of the river. An authority of 1892 gives the following account of the dam:— 'The channel is 330 yds. wide, the dam being of square blocks of stone set in cement much worn away. It causes a drop of about 2 ft., which rafts can always get over, but with shaking to the skins. In April, however, the river was so full that there was not a trace of it to be felt. Another channel runs farther west, which avoids the obstruction, and at the low season forms a back-water, with</p>	162½

Inter-
mediate
distance
Miles

Left Bank

into by a deep trench, rising 110 ft. above the plain and about 70 ft. above the plateau. The mound is the ruin of a great tower of unburnt brick faced with stone. It was built by Assur-bani-pal. There are other mounds at the SW. and SE. corners of the plateau, the most noticeable being that at the SE. Besides the trenches dug by excavators several deep indentations mark the sides of the hill. These indicate the position of ascents or stairways. The largest of these is on the western side of the hill, about 70 yds. S. of the cone-shaped mound. It is about 20 to 30 yds. broad, and runs for about 150 yds. into the plateau. Other indentations occur in the centre of the southern face of the plateau and in the eastern side. The ground to the N. and NE. of the hill is covered with ruin-mounds.

In preference to Asshur (see m. 109 above) Çalah was chosen for the centre of the Assyrian Empire by kings who were engaged in war to the N. and NE. and in Northern Mesopotamia and Northern Syria. Eventually its place was taken by Nineveh "20 m. to the N.

2¼

'**Uneifeh** (50 houses of Juheish). Raft-ferry across Tigris. The bank is here low, shelving, and grassy, and rafts bringing visitors to Nimrūd from Mosul usually touch here.

1

Right Bank	Total distance Miles
6 ft. of water below, and dry at the head. To open a passage for steamers this might be deepened and the body of the water diverted down it, or else the dam removed by dynamite. The bed being loose shingle, the former, probably, would be the quickest if a sufficient number of men were at hand.) Hills close to the r. bank.	164
Juheineh village, 100 houses of Jebūr. Ford, passable in l. w. season.	165
Salāhiyeh village, 30 houses of Jebūr.	166
Hammām 'Ali baths and villages. One village lies W. by N. at 300 yds. from the landing-place; the other N. by W. at 500 yds. In the latter are seven or eight shops and 20 permanent houses. The place is famous for its hot springs and sulphur baths. The baths lie some way inland near a group of ruin mounds, one of which, called Tel es-Sābi, is about 100 ft. high. There are two sulphur springs, walled in and covered with cupolas; the temperature is said to be 47°-48° C. The water is of a dirty green colour, has a bituminous scum floating on the surface, and smells strongly of sulphur. From the middle of June to middle of September the baths are visited by about 10,000 patients, who come from as far as Zakho in the N., Kirkuk and Suleimāniyeh on the E., and Baghdad on the S. The visitors live in mud huts and temporary wooden shelters. Other springs in the neighbourhood yield petroleum and bitumen. The Baghdad—Mosul route passes through Hammām 'Ali.	167½
	168¼
Plain near river bank. It belongs to the <i>Dā'irat es-Saniyeh</i> and is crossed by the Baghdad—Mosul route. Islands on both sides of the channel.	169½
	171
Qabr el-'Abd village, 13 houses of Jebūr. Island near r. bank.	171½
Arej village, 70 houses of Jebūr, 1 m. inland. The hills	172½

Right Bank	Total distance
	Miles
on the r. bank were reported in 1910 to be limestone and nearly 2 m. inland at this point.	
Lazzaqeh (Lezadeh) village, 50 houses of Jebūr. Conspicuous fort belonging to the Begs of Mosul. The place contains a khan. Near the river is a small alluvial tract. Above this point the hills close in on river.	174½
Āl Bū Juwāri village, 50 houses of Jebūr, ½ m. inland. The adjoining hills are not more than 100 ft. high.	175½
Kunetera , village some distance from river on slope of some comparatively high hills, which from this point run close to the river.	177
Hawijeh Shemsiyat , island about ½ m. long.	178
	178¼
	178½
Hills recede from river. Seramūn Qasr . This is a walled enclosure 60 yds. by 50, walls 20 ft. high, with two towers and containing house and outbuildings belonging to the Jalīl Begs of Mosul. It commands the Baghdad—Mosul road, which here descends into the plain.	180¼
Āl Bū Seif , village W. of the <i>qasr</i> . 60 houses of Jebūr. To the N. of this point lies cultivation as far as Mosul.	182¼
Mosul .	185

ROUTE III F

THE LESSER ZĀB FROM ITS MOUTH TO TAKTAK (118 m.)

Authorities :—*Military Report on E. T. A.*, vol. iii, 1904 (report of 1892); E. B. Soane, *Through Mesopotamia and Kurdistan in Disguise* (journey in 1909).

The details regarding the channel, &c., are taken from an authority who descended the river by raft from Taktak in l. w. (October) 1892. It is probable that the channel has altered considerably and many of the rapids formed by shingle ledges have shifted their position since that date. It is to be remembered that the depths were taken in the season of lowest water.

The Lesser Zāb has been regarded as possibly navigable for

THE TIGRIS & LESSER ZĀB—ROUTES III E, III F 77

Inter- mediate distance	Left Bank
Miles	
2	limestone or sandstone hills near the l. bank. There is sulphur in this neighbourhood. Umm el-Quseir village, 100 houses of Bū Husein, Sunnis.
1	
1½	
1	
¼	Lower Shemsiyat village, opposite middle of island. About 100 houses of Jebūr.
¼	Upper Shemsiyat village, opposite upper end of island. About 100 houses of Jebūr.
1¾	
2	Yarimjeh village, 150 houses of Turkomans, Kurds, and Shiah Arabs.
2¾	

powerful light-draught steamers in the high-water season as far as Taktak ; but this appears very doubtful. In low water, where the numerous shingle or rock ledges obstruct the channel, depths of only 2 ft., 18 in., or even 1 ft. are found: elsewhere the river has 4-6 ft. of water in the low season. The increase in depth caused by the yearly floods is considerable, though much of the flood water spreads over the wide stretch of shingle, which in most places lies on one side or on both sides of the main channel. A raft, assisted by oars, moves 3-3½ m. an hour in l. w. ; but in this respect also the difference made by the flood is probably great. The breadth of the river in this part of its course is generally 200-100 yds. in low water,

where it flows in a single channel: in flood-time its breadth is generally much greater, and in places may be 1 m. or more.

Before the war the Lesser Zāb was navigated only down-stream by the large rafts called *keleks* (see vol. i, p. 166). A raft in August took three days from Altun Köprü to the River Tigris, this time including stops for the night. In low water it is impossible to run by night.

Above Taktak a sandstone ledge forming a fall of 2 ft., and other obstructions, are said to make navigation impossible.

From Taktak to its junction with the Tigris the river flows between banks of conglomerate or earth over a bed of shingle or sand. In the river-bed there are very numerous ledges consisting either of sandstone or, less commonly, of conglomerate, which form rapids. Rocks occur in the channel occasionally: these latter would probably be nearly or wholly submerged in high water. The river frequently divides into two or more channels, enclosing flat shingle islands, many of which are probably under water in flood time. Along the sides of the main channel there generally extend broad stretches of shingle which are covered by the floods. The banks frequently rise to bluffs 20-50 ft. in height, which occasionally come close to the edge of the low-water channel.

Between the mouth of the Zāb and the neighbourhood of Shamagheh (see m. 57 $\frac{3}{4}$) the country on either side of the river is a gently undulating plain with a few scattered *tels* rising from it. On the S.

Right Bank	Total distance
	Miles
Mouth of the Lesser Zāb (see Tigris, <i>Route III E</i> , m. 87 $\frac{1}{2}$). Width of stream here 250 yds. Several small rapids above the deep reach at the mouth. Up to Bisereriyeh (15 m.) scattered camps of Jebūr Arabs, who cultivate some millet.	0
Conglomerate cliffs 40 ft. high on both banks, where the river cuts through a low ridge. Channel 150 yds. wide.	3 $\frac{1}{2}$
Between m. 6 and m. 7 shingle ledges, with 18 in.-2 ft. of water.	6
Rapid, with 18 in. of water.	7 $\frac{1}{2}$
Diagonal rapid, with 2 ft. of water.	9
Shumeit , a halting-place for rafts.	10

the plain is bounded by the Jebel Hamrīn: to the N. the Qarachok Dāgh is visible from a great distance. The undulations gradually become more frequent as the river is followed up-stream, and between the neighbourhood of Shamagheh and Altun Kōprü (m. 74) the Zāb flows in an open valley between low, bare hill-ranges. Above Altun Kōprü as far as Taktak the valley remains fairly open, though the hills gradually increase in height.

In the plains below Altun Kōprü there are a number of scattered settlements on the banks, mostly small villages or encampments of semi-nomad Jebūr, who cultivate the soil here and there, chiefly for millet and melons; in places *cherrads* are used. In 1892 Jaif was said to be the first Kurdish village passed on the up-stream journey. From about that point onwards the inhabitants of the banks are Kurds and Turkomans. When the hills are reached the country becomes better watered, and the Zāb between the neighbourhood of Altun Kōprü and Taktak receives a number of tributaries, most of which, however, appear to be nearly or quite dry by the early autumn.

There appears to be no serious obstacles to movement along the banks of the Zāb up to Altun Kōprü, but no appreciable amount of supplies or fuel could be found, and grazing could be expected only in spring. Water is probably very scarce away from the river. (For the road from Altun Kōprü to Taktak, see *Route 40*.)

Inter- mediate distance	Left Bank
Miles	
0	
3½	
2½	
1½	
1½	
1	Low conglomerate cliffs.

Right Bank	Total distance
	Miles
Between m. 11 and m. 12 a deep reach and a long diagonal ledge with a passage in the centre 2 ft. deep.	11
Shingle island between this point and Bisereriyeh. The r. bank channel the better. It contains two ledges with 18 in.-1 ft. of water.	14
Bisereriyeh , 20 Arab huts.	15
Island. R. bank channel the better (4 ft. of water).	15½
Patches of millet.	17
Two small shingle islands. Central channel the best (2 ft. 6 in. of water).	18
	19
Some distance above Ismaniat, a deep reach, followed by a rapid reach about ½ m. long, which contains two small ledges of shingle. Then a shingle island, the better channel following the r. bank and containing a ledge with 18 in. of water. Millet fields on r. bank.	
Upper end of shingle island mentioned above.	21¾
Above this point a broad reach 2-3 ft. deep.	24
Upper end of broad reach.	25
Above this point the stream divides into three channels among shingle banks, the central channel being the deepest with 18 in.-2 ft. of water.	
About this point the stream is again in a single channel.	28
	30½
Long ledge with 2 ft. of water.	32
Below Rummāneh a diagonal rapid with 18 in. of water. Greatest depth near r. bank.	
	33
Arab huts. Millet cultivation in the neighbourhood.	35
	36
On either bank a stretch of shingle, ¾ m. wide, marking the flood width. Above this point a small rocky ledge in mid-stream just awash.	38
Redva , 10 houses.	
Above Redva, isolated rocks, by which a depth of 18 in.-2 ft. was found in October 1892; a slight rise would cover	38½

Inter- mediate distance	Left Bank
Miles	
1	
3	
1	
$\frac{1}{2}$	
$1\frac{1}{2}$	Dithakra , 30 mud huts, almost deserted in 1892. Patches of millet.
1	
1	Ismaniat ruins visible, 1 m. from river. They are extensive, and include the remains of a minaret.
$2\frac{3}{4}$	
$2\frac{1}{4}$	Millet fields $\frac{1}{2}$ m. from l. bank. Tel 'Ali , a flat-topped mound, 400 yds. in diameter, 80 ft. above the plain.
1	
3	Millet fields on l. bank, with reed huts of Arabs.
$2\frac{1}{2}$	Sadia , 30 huts.
$1\frac{1}{2}$	Low earth cliffs.
1	Rummāneh , 30 houses.
2	
1	'Areishah , 80 houses.
2	Tel el-Mahūd , 2 m. from l. bank. A flat-topped mound, 600 yds. in diameter, rising 100 ft. above the plain; probably the site of an ancient city.
$\frac{1}{2}$	

Right Bank	Total distance
	Miles
this obstruction. A passage between the rocks, about 30 ft. wide, could be found without difficulty.	
Above the rocks is the ledge mentioned opposite. Some other ledges of conglomerate in the channel, broken into isolated patches.	39
Millet fields with water-lifts (<i>cherrads</i>).	39 $\frac{1}{2}$ 41 $\frac{3}{4}$
Two long diagonal ledges with 18 in. of water.	43
Jaif (the first Kurd village to be found in an up-stream journey in 1892) lies 1 m. off among undulations. The reach here reported deep and easy. Earth cliffs 80 ft. high at a sharp turn of the river. Above the turn a rapid with 18 in. of water.	44 45 $\frac{1}{4}$
About this point the reaches were reported deep, with easy current.	47 49
Tel Huleileh , 40 houses, 2 m. from r. bank, near a flat-topped mound.	
Several small ledges with 18 in. of water.	50 51 $\frac{1}{2}$
Diagonal ledge with 1 ft. of water. Channel by l. bank.	52 $\frac{3}{4}$
Some firewood obtainable from shrubs by the bank.	
The Qarachok Dagh is seen about 10 m. to NW.	
Dircheh , 10 houses.	55 $\frac{1}{4}$
Above this point a shingle island. Deep channel by l. bank.	
Upper end of shingle island.	56 $\frac{1}{2}$
Shamagheh , 80 houses, on a spur. A rounded ridge is visible 2 m. from river, rising 100 ft. above the plain.	57 $\frac{3}{4}$
Above the ledge mentioned opposite is a long diagonal ledge, over which the deepest channel was found in the centre (18 in. of water).	59
Shingle marking the flood width is $\frac{1}{4}$ m. wide, and the channel 120 yds.	59 $\frac{3}{4}$
Above a slow reach 5 ft. deep is a sharp turn, the beginning	62

Inter- mediate distance Miles	Left Bank
$\frac{1}{2}$	Ledge (of conglomerate?) jutting out from l. bank, and reaching nearly half-way across stream.
$\frac{1}{2}$	Mahūd , small village.
$2\frac{1}{4}$	Millet fields with water-lifts.
$1\frac{1}{4}$	Botmal , 30 houses, $1\frac{1}{2}$ m. from l. bank.
1	Low cliffs.
$1\frac{1}{4}$	
$1\frac{3}{2}$	Mijenna (50 houses) with some undulations.
$\frac{1}{2}$	
1	
$1\frac{1}{2}$	Mella , 1 m. from river, 60 houses, the residence of a Mudir.
$1\frac{1}{4}$	Channel by l. bank.
$2\frac{1}{2}$	Numeil , 30 houses. Channel by l. bank past shingle island, above Numeil.
$1\frac{1}{4}$	
$1\frac{1}{4}$	
	Some distance above Shamagheh is a ledge with 18 in. of water off l. bank.
$1\frac{1}{4}$	Emrina , 60 houses, 1 m. from river. $\frac{3}{4}$ m. N. is a white domed shrine (<i>gumbet</i>), a prominent landmark.
$\frac{3}{4}$	Sheikh el-Abyadh , 80 houses, $\frac{1}{4}$ m. away.
$2\frac{1}{4}$	

Right Bank	Total distance
	Miles
of a loop to SE. Hills about 150 ft. high, broken by ravines, now begin to approach the river. To the E. is the Gurgur Dagh or Jebel Gurgur.	
Malhahwali , 15 houses on a cliff. A group of isolated rocks to be avoided, 10 yds. from r. bank.	63
Above the loop (see m. 62) a ledge with 2 ft. of water next r. bank.	64
Another sharp loop to SE., about $1\frac{1}{4}$ m. deep. Channel 5 ft. deep, current slow.	65 $\frac{1}{2}$
Saikun , 20 houses, on some mounds $\frac{1}{2}$ m. from river.	68
Stream running in three channels between shingle islands. Channel by l. bank.	
Stream again in a single channel, apparently flowing about ENE.-WSW.	69
Ledge with 2 ft. of water.	70
Ledge with 2-3 ft. of water. River-flat $\frac{1}{4}$ m. wide, channel 120 yds.	71
	71 $\frac{1}{2}$
Bend in river, above which it flows from the N. (or perhaps NNW.) Shingle ledge (2 ft. of water) at bend.	72
Sherbeh , 15 houses, on some low cliffs.	72 $\frac{3}{4}$
Sharp bend, above which river flows apparently from about NNE. past the island on which Altun Köprü stands. The western channel is dry in the low season ; it is spanned by a masonry bridge of three arches, each of about 20 ft. span.	73 $\frac{1}{2}$
Altun Köprü.	74
Ledge with rapid 2 ft. deep.	75
	76 $\frac{1}{2}$

Inter- mediate distance	Left Bank
Miles	
1	
1	
1½	
2½	Long diagonal ledge, with 2 ft. of water, next l. bank. Channel by l. bank. Ledge, with 18 in. of water, near the centre of the channel.
1	
1	Chair , 20 houses, 1 m. from river, in a small basin. Beyond Chair the Gurgur Dāgh rises gradually from the plain.
1	
½	Gurgur Su (or Mayar Dereh), a large stream, flows in from SE.
½	
¾	
¾	
½	In the eastern channel, about 100 yds. below the bridge, an outcrop of conglomerate rock was reported as narrowing the fairway to about 50 ft. in l. w.: it would be broader in a high river. The channel was reported deep, with a gentle current. A toll used to be levied here on passing <i>keleks</i> . The bridge over the E. channel is of brick and stone, and has one high, pointed arch of about 60 ft. span, with three minor arches at the side. The main arch gives 40 ft. clear space underneath at l. w.
1	
1½	Qārā Beg (also called Muterbeh by raftsmen). Altun Kōprū is visible up to this point.

Right Bank	Total distance
	Miles
Bend which drives stream against a cliff on the r., causing a rush of water at the turn, 3-4 ft. deep in low water. Shingle ledge at the bend. Raftsmen in October 1892 got on to the shingle and held the painter while the raft swung round.	78 $\frac{1}{2}$
Seba Gerani , 20 houses.	79
Chadcherin , 15 houses, $\frac{1}{4}$ m. away from river.	80
Above this point rapids are more numerous and reaches generally shallower than in the neighbourhood of Altun Köprü.	81
Valley-flat in this neighbourhood about $\frac{1}{4}$ m. broad, between conglomerate cliffs 30 ft. high. Higher up it broadens to about $\frac{3}{4}$ m. Hereabouts is an island past which the r. bank channel is the deeper (2 ft. of water).	82
Two small ledges (1 ft.-18 in. of water).	83 $\frac{1}{2}$
In 1892 there was here a village of Chōgha Hasan, a Girdi Kurd, about 1 m. from river. It consisted of 30 huts.	84
	85
Khurkhur village, 80 houses. River-flat of shingle $\frac{3}{4}$ m. broad, covered only in flood.	86 $\frac{3}{4}$
Sharp bend, at which is a ledge with 18 in. of water.	87
Between m. 89 and 90 stream divided into various smaller channels, besides the main channel, which had 2 ft. of water in the low season and was 50 yds. broad. Tamarisk and artemisia plentiful on the banks. Some distance above the point where these minor channels took off there was a large island. The r. bank channel was followed over some ledges having 18 in.-2 ft. of water.	89
Upper end of large island mentioned above.	91 $\frac{1}{2}$
	92
Sardik , 40 houses, on a knoll. Shallow ledges (18 in.-2 ft. of water extending for 400 yds.)	92 $\frac{3}{4}$
Channel narrowed to 50 yds. ; depth, 6 ft.	94 $\frac{1}{2}$
Channel broader again.	95
Shingle ledge with 1 ft. of water, and $\frac{1}{2}$ m. farther on another ledge with 18 in.	95 $\frac{1}{2}$
Sheitāneh , 20 houses, close to r. bank. Deep reach here. Shingly island. R. bank channel the deeper.	96 $\frac{3}{4}$
	97 $\frac{1}{2}$

Inter- mediate distance Miles	Left Bank
2	
$\frac{1}{2}$ 1 1	Shems Serdalū.
1	
$1\frac{1}{2}$ $\frac{1}{2}$	
1	Dermanau villages on rising ground on l. bank. One is at m. 85, the other about m. 86. The channel here formed an easy reach 6-8 ft. deep, 100 yds. broad.
$1\frac{3}{4}$	
$\frac{1}{4}$ 2	
$2\frac{1}{2}$ $\frac{1}{2}$ $\frac{3}{4}$	Qara Sālim , 80 houses. Gravelly ridges rise to 200 ft. 2 m. from river.
$1\frac{3}{4}$ $\frac{1}{2}$ $\frac{1}{2}$	
$1\frac{1}{4}$ $\frac{3}{4}$	

Right Bank	Total distance
	Miles
	98
Two long diagonal ledges (1 ft.-18 in. of water).	99 $\frac{1}{4}$
Shaughir (50 houses) on r. bank $\frac{1}{2}$ m. distant. (On l. bank according to W.O. Map 35). Country becomes more hilly, and ravines are more numerous above this point.	100
Shingle ledge, 20 yds. broad, with 1 ft. of water.	101 $\frac{1}{2}$
Ground about 100 ft. above river, with light gravelly soil, cut up by ravines. Sakrikan village, 1 m. from river, 80 huts thatched with reeds. Two ledges, with 15-18 in. of water, in the river opposite Sakrikan. Above the mouth of l. bank tributary the river made a sharp northerly loop. Gravelly undulations to N.	102
	103
Upper end of loop. Zazi Su and streams from Kōi Sanjaq join -on the r. bank. Above the mouth of the Zazi Su a long rapid with 18 in.-2 ft. of water.	104 $\frac{1}{2}$
Upper end of long rapid.	105
	106
A long diagonal ledge with 1 ft. 10 in. of water, deepest next r. bank.	106 $\frac{1}{2}$
Between this point and m. 107 $\frac{1}{2}$ two shingle ledges with 1 ft. 10 in.-2 ft. of water. Between these ledges were found broad, slow reaches, 4-5 ft. deep, and easy to navigate.	
Khān-i-Leileh , large Kurdish village among orchards and date gardens. Behind it rises the Khān-i-Leileh Dāgh, a bare line of hills, about 300 ft. above the river, running NW. Numerous springs and streams irrigate the gardens.	108
Sharp loop to SE. At the turn a short shingle ledge (18 in. of water).	108 $\frac{1}{2}$
Shingle island: channel by l. bank. From marks on banks a rise of 12-14 ft. appeared to take place in flood.	109 $\frac{1}{2}$
Shingle ledge, with 1 ft. 10 in.-2 ft. of water over it.	110
River bends NW.	111
Upper end of loop. Tamarisk and artemisia shrubs on the shingle.	112 $\frac{1}{2}$
In the next $1\frac{1}{2}$ m. the mouths of several ravines are passed. Khān-i-Leileh Dāgh still on r. bank.	
Above this point river apparently made a loop to SE.	114

Inter- mediate distance	Left Bank
Miles $\frac{1}{2}$ $1\frac{1}{4}$ $\frac{3}{4}$	Seikāni , 50 houses, $1\frac{1}{2}$ m. from river, in a basin among hills.
$1\frac{1}{2}$ $\frac{1}{2}$	Khāneh (Bel Khāneh), $1\frac{1}{2}$ m. to r., in a basin among low hills.
1	Mouth of large stream : bed nearly dry in October, 1892. Two m. up it is Hamdun , among a clump of trees. Kirkuk lies 26 m. away to SSW., and Chemchemal 31 m. to SE., across open and easy country. Shingle on l. bank in loop to N.
$1\frac{1}{2}$	
$\frac{1}{2}$ 1 $\frac{1}{2}$	Mouth of dry ravine. Mzaikkeh , $1\frac{1}{2}$ m. from river, in a cultivated basin among bare hills.
$1\frac{1}{2}$	
$\frac{1}{2}$	
1	Channel by l. bank, with 2 ft. of water, past island.
$\frac{1}{2}$ 1 $1\frac{1}{2}$	Zornasur , 30 houses. Earth cliffs, 50 ft. high, on bank.
$1\frac{1}{2}$	

Right Bank	Total distance
	Miles
	114 $\frac{1}{2}$
Sharp turn. Shingle ledge with 18 in. of water.	115
Gravelly cliffs on r. bank. Diagonal ledge of shingle, with a channel next r. bank, having 18 in. of water.	115 $\frac{3}{4}$
Small shingle island. Channel, 40 yds. wide, by r. bank.	117
Taktak.	118

Inter-
mediate
distance

Left Bank

Miles

 $\frac{1}{2}$
 $\frac{1}{2}$
 $\frac{1}{2}$
 $\frac{3}{4}$ **Jezīleh**, 20 Kurd houses on a cliff.
Cliffs on left. $1\frac{1}{4}$
1

THE EUPHRATES

Authorities:—Dobbs, *Report on the Navigation of the Euphrates from Birijik to Fellūjeh* (1903); Sarre and Herzfeld, *Archäologische Reise im Euphrat- und Tigris-Gebiet* (a journey of 1908); the authorities cited for Routes 46 and 47; other sources of information.

GENERAL INTRODUCTION ON THE RIVER BETWEEN FELLŪJEH AND MESKENEH

Details must be sought in the river itinerary. The evidence there given, however, does not represent the l. w. conditions, the journey on the report of which they are based (Dobbs) having been undertaken in January, when the Euphrates was swollen by unusually heavy winter rains, the effect of which was observable as far as Deir-ez-Zor. From there to Fellūjeh the conditions may be regarded as normal for the winter months (during Dobbs's journey the river in this section was somewhat below normal winter level). The narrowest part of the river is in the Halebi Chelebi defile (see *Route IV H*, m. 47).

The River.—The breadth of the river on this stretch is generally 200–500 yds. In Jan., 1903, when the river above Deir was higher than is usual at this time of year, depths were found ranging from 4 to 12 ft. The current varied from 2 m.p.h. to 12 m.p.h. (at Fātiḥat: *Route IV F*, m. 58½). In several places it ran at 7 m. an hour in two or more channels enclosing low islands. Above Hit the river contains a number of rapids caused by ledges of rock or broken masonry bridges. Banks of shingle or sand are also found. In the l. w. season there are probably fords at several places on this part of the river, but there is no recent information with regard to their position. The bed from Fellūjeh to Hit is alluvial soil. Above Hit it is shingle, sand, or mud, with outcrops of rock up to El-Qa'im.

Navigation.—It was reported in 1903 that in the months of April, May, June, and July, when the river is full, the descent of the river

would be easy for a light-draught steamer, and could be accomplished at a very great speed. The swiftness of the current at this time of the year would, however, make the upward journey very slow, and it would be necessary for the steamer to be capable of a continuous speed of not less than 12 knots per hour in order to make head against the rapid stretch between Hīt and Ānah. Steamer-navigation, it was stated, would be too risky to be profitable during the l.w. months of August, September, October, and November. The report adds that in the months of December, January, February, and March both the upward and downward journey of even a light-draught steamer would be attended with considerable risk unless engineering works were carried out in the stretches between Hadīseh (*Route IV F, m. 65*) and Alūs (*Route IV F, m. 55½*), in the passage from Kerableh Island (*Route IV G, m. 2*) to below Ānah (*Route IV F, m. 117*), in the shallow rapids at Abu Qubā'i or Funsā (*Route IV H, m. 120*), and below the islands of El-Hammām (*Route IV H, m. 130½*). In the first two of the above-mentioned places the artificial channel excavated by the Turkish authorities in 1870 was in 1903 still almost intact; and it was believed that very heavy expense would not be necessary. Some apparatus would, however, have to be erected for the purpose of warping the steamer up over the ledge at Fātihāt Khidhr Ilyās (*Route IV F, m. 58½*). From below Ānah to above Kerableh Island a tow-path would probably have to be constructed on the l. side of the river. In the neighbourhood of Abu Qubā'i and El-Hammām, the placing of four or five dams part of the way across the river-bed would sufficiently deepen the channel.

The report of 1903 says that the best boatmen of Ānah are so intimately acquainted with the bed of the river above Hīt that it would be advisable to secure the services of one of them as pilot for a steamer plying on the river.

On the upward journey it might be possible for a steamer to tow one or two flat-bottomed boats. On the journey down-stream towing would be dangerous, but a barge might be lashed to the side of a steamer.

Practically all the present traffic is down-stream, at least as far as Hīt, and is carried on chiefly by the flat-bottomed boats, known as *shakhtūrs* (see vol. i, p. 167), built only at Birijik. Even the attempt made in 1911 to establish a service of motor-boats (65 ft. long with about 2½ ft. draught) on the river above Fellūjeh had to be given up owing to difficulties in navigation. (See vol. i, p. 171.) There are ferries at the chief stopping-places on the river.

The river has been used in increasing degree for the transport of guns, ammunition, and stores, and small detachments of troops from

Jerablus to Fellūjeh during the present war. The Germans claim to have improved the navigation. There is reliable evidence that special craft have been constructed (compare p. 396).

Banks.—Between Fellūjeh and Hit (*Route IV E*) the l. bank appears to be stony desert, with little or no cultivation. On the r. bank there is cultivation by water-lifts (*cherrads*). Above Hit, as far as Nāhiyeh, *cherrads* are replaced by *naurs* (water-wheels), but the strip of cultivation is very narrow and no grain is available for export. Between Nāhiyeh and Abu Kemāl both banks are practically uninhabited, and either bare or covered only by tamarisk scrub. Between Abu Kemāl and Deir ez-Zor (*Route IV G*, m. 192) there is almost continuous cultivation by means of *cherrads*, but the cultivated strip in no case reaches more than $\frac{1}{4}$ m. from the bank. Between Deir ez-Zor and Sabkhah cultivation to $\frac{1}{4}$ m. from the river on either side is carried on intermittently by *cherrads*. In 1903 no grain available for export was produced in this region. Above Sabkhah to Abu Hureireh there is hardly any cultivation except in the delta of the Belikh on the l. bank in the neighbourhood of Raqqah. The low hills on the bank are of marl, and the valley is covered with a dense growth of tamarisk, bramble, and liquorice. Above Abu Hureireh there is a fertile belt 1–3 m. broad, bordered by marl or gypsum hills, which produces wheat and barley without irrigation. See also *Routes* 46, 47 for the river valley.

The terms Shāmiyeh (esh-Sham = Damascus) and Jezireh are used by the inhabitants for right and left bank respectively.

Inhabitants.—The permanent inhabitants of the Euphrates Valley are mainly either fellahin or semi-settled Arabs, who are more or less liable to be raided or blackmailed by the great nomadic tribes of the desert, the principal of which are the Anazeh, Dilaim, and Shammār.

The predominant tribe in the Syrian Desert W. of the river is that of the Anazeh, though some of the subdivisions of that tribe are also found on the l. bank. The Anazeh are large camel-breeders, and their sheikhs own a certain amount of land in the Euphrates Valley. They have a constant antagonism to the Shammār. The Amarat division of the Anazeh are found W. of the Euphrates between Kerbela and Hit, where their paramount chief, Ibn Hadhdhal, owns palm gardens. They are generally near the Euphrates in summer. The Fed'an division of the Anazeh (paramount chiefs, the pan-Arab Ibn Muheid and Ibn Geshirsh) ranges from Deir to Aleppo on both sides of the Euphrates and up the Khabūr Valley. The Amarat and also the Sba' division of the Anazeh (from the region of Palmyra) may be driven into the Fed'an country by lack of pasture elsewhere.

The Dilaim are a powerful tribe found in the desert on both sides of the river from Fellūjeh almost to Ānah. They own cultivated land in the Euphrates Valley (their paramount chief, 'Ali Suleiman, has a house and palm garden at Ramādiyeh), and are sheep-breeders on a large scale, but not camel-breeders. They are in close alliance with the Amarat Anazeh, and at feud with the Shammār of the Jezreh to the N. and the Shiah tribes of Irak to the S. They are noted robbers.

The western division of the northern Shammār, the predominant tribe of the Jezreh, is found near and north of Deir, and along and W. of the Khabūr. The leading sheikhs of this western division are the sons of Abdul Mehsin and Mohammed. In 1911 Asi, son of Ferhan, was appointed paramount chief of all the Mesopotamian Shammār: he keeps to the Mosul district.

The half-settled tribes of the Euphrates Valley cultivate the soil more or less, but retain to varying degrees the traces of their former nomadic habits. Most of them spend at least the summer in tents. Even where villages have been built they are liable to be abandoned and to reappear on new sites. The half-settled Arabs form large tribes, but they play little or no part in the politics of the desert, and are usually obliged to pay tribute to the nomads. The following half-settled tribes may be mentioned: the Yeghaifeh (from Ānah to Irsi), the Bū Kemāl (Irsi to Meyāddīn), the Abu Mueyt and Abu Hleyhil (round Meyāddīn), the Baggarah (in summer near Deir, a despised tribe), the Afadle (in winter W. of the Belikh), the Qeys (near the Belikh and up-stream to above Meskeneh), the Weldeh (in summer near Qal'ah Jābir), the Ugeydat (scattered from the Khabūr to Damascus, accounted base-born by the Bedouin). The 'Ugeil (caravan men and guides of Arabia) are much employed in the caravan traffic between the Euphrates and Syria.

For the inhabitants of the towns see *Gazetteer of Towns*.

ROUTE IV E

. FELLŪJEH—HĪT (79½ m.)

Right Bank.	Total distance
	Miles
Width of river up to Hīt varies from 490 to 270 yds., the current being generally almost 2 miles (3 kilometres) an hour. Depth averages 12 ft. Near Fellūjeh the river overflows its banks in the flood season and forms numerous islands.	0
Direction SW.	
River bends NW.	3
Hereabouts Fed'an Canal takes off: it runs roughly parallel to r. bank at about 1-1½ m. from river. It is regulated by a new regulator with opening 8 ft. wide, over which passes the Baghdad—Aleppo road.	7
	8
	9
The river now winds in many large bends until Ramādiyeh is reached. The general direction is W. by N.	
Habbāniyeh Lake is 4 m. SSW. of the river at this point, over rising ground. It is 11 m. from NE. to SW. and 7 from E. to W., and has a marsh on its W. side. Normal level is 120 ft.; h.w. level in April-May is 131 ft. above sea-level. Rising ground surrounds it except on W. The hill at its S. end is 250 ft. above sea-level. The lake draws its supply from the overflow of the river, and rises when river overflows. The water is brackish, and (in connexion with river works) has been found unsuitable for engine boilers. The lake is exposed to storms, when a sea dangerous	17

Inter- mediate distance	Left Bank.
Miles	
0	Fellūjeh. Bridge of boats.
3	
4	'Ambar, ruins on W. slope of rising ground 2 m. from river.
1	Saqlāwiyeh village, apparently at some distance from river. It lies on the Fellūjeh—Hit track and on the Saqlāwiyeh Canal, over which is a ferry, reported in 1896 to be $\frac{1}{2}$ m. beyond the village. The Saqlāwiyeh Canal used to take water from the Euphrates to the Tigris at Baghdad , but was closed to protect Baghdad from floods. Wheat was seen growing in its bed in Jan. 1905, but it appears to have been reopened (see Appendix). After a short course NNW., N., and NE., its general direction is easterly to Lake 'Aqarqūf , 8 m. from Baghdad. According to Willcocks's map, based on surveys 1909-11, the canal has a head near Saqlāwiyeh village, and another about 6 m. by river up-stream.
1	
8	

Right Bank	Total distance
<p>to native craft is raised. The country between Fellūjeh and the lake has been reported easy for motor lorries: difficulties, however, are certain to be met with in the h. w. season. Even through the cultivated land road-making would not be difficult. It has been proposed to make Lake Habbāniyeh into a storage reservoir, supplied by an escape canal from the river near Ramādiyeh, and discharged through an outlet canal running E. through the desert tableland E. of the lake. The canal has been cut, but the water is not yet let in, the outlet canal having not yet been constructed. (See m. 39½.)</p> <p style="padding-left: 2em;">Creek.</p>	Miles 23 26½ 36 39½
<p>The Baghdad—Aleppo caravan route here crosses the head of the new canal leading to the Habbāniyeh Lake, and a prominent object on the N. side of the canal is the newly built engineer's house.</p> <p>Ramādiyeh. Alt. 158 ft. 400-500 houses. P.O., T.O.</p> <p>Ramādiyeh is a modern village standing on slightly elevated ground about ½ m. from the river. It is the seat of a kaimmakam and a <i>zaptieh</i> post. It has several brick khans (one of them large enough to accommodate 50 men and horses), a big square, a bazaar, and a minaret. There are date-palms in clumps ¼ m. apart on r. bank only. The land on both sides of the river is low and frequently flooded. The Jezreh side is quite flat, and the plateau of the Syrian Desert is low, while the village is surrounded by cultivation. On l. bank a little below the village are mud ruins. The country round has been seen white with snow (Feb. 8).</p> <p>The chief sheikh of the Dilaim, 'Ali Suleiman, has a house and palm garden at Ramādiyeh.</p> <p>There is a considerable amount of cultivation round about, with some date-palms. Water-supply from wells and river.</p> <p>The place is the head-quarters of a small garrison—infantry and cavalry.</p> <p>There is a local civil official.</p>	40½
<p>Et-Tāsh (Azeziyeh) Canal, which carries flood water from river to Habbāniyeh Lake. It irrigates the flood lands of Et-Tāsh, near the lake, which are cultivated by the Dilaim.</p>	41½

Inter-
mediate
distance
Miles

Left Bank.

6

$3\frac{1}{2}$

$9\frac{1}{2}$

$3\frac{1}{2}$

Small lake nearly 1 m. N. of this bank.
Near l. bank, small island ?

1

1

Right Bank.	Total distance
	Miles
River makes a big U bend to the S.	56
Abu Rayāt. The road and T.L. here touch the river.	60
	61½
	68½
	69½
Valley of Wādi Mohammadi joins the river.	70½
In the reach from Banān village (opposite) upwards to Qarya Banān , there are bitumen pits, El-Lata'if and Ma mūreh (with ruined village), about 4-5 m. back from r. bank.	75
Qarya Banān village.	76½
Date plantations begin.	78
Hit. 600 houses. P.O., T.O.	79½

ROUTE IV F

HĪT TO ĀNAH (119½ m.)

Hit.	0
From Hit the river has a general direction NW. as far as Salāhiyeh, and the stream runs about 6 m.p.h. (Jan.-Feb. 1903). Navigation is said not to be difficult.	
Moslem shrine. El-Merj bitumen pits 3 m. W. of it.	11½
	3
Imām Sheikh Jelādeh , Moslem shrine.	4½
Filuwi Island, in mid-stream. One authority says there are two small islands containing a hamlet.	6½
The channel in 1903 kept to r. bank. The current runs about 2 m.p.h. (Jan.-Feb. 1903), except at rapids, till the Nawās Is. are reached (see m. 33½). Immediately above tail of islands is—	
Salāhiyeh. Some cultivation.	
The road passes through the village and proceeds NW. The road leaves the river, which bends N. and NNE., and does not return to it till Khān Baghdādiyeh .	
The Wādi Rezūs (or Sikali), which flows past Qasr	

Inter- mediate distance	Left Bank.
Miles	
14½	
4	
1½	Qal'at et-Tumādi. Alt. 170 ft.
7	Qal'ah Zawiyeh fort and village.
1	
1	Bas village.
4½	Banān village.
1½	Qal'ah Dhawāb fort.
1½	
1½	
0	
1½	
1½	Qasr Sa'di , fort on the river.
1½	
2	

Right Bank	Total distance
	Miles
Khubbāz , joins the river. The water is bitter, as is another small stream 10 min. ride farther on, at which animals will not drink.	
Qasr Beit Aiyub , fort on river. Its position on a promontory would appear to command the reach below to the top of Filuwi Island.	9½
Imām Sheikh Sa'di , Moslem shrine.	10½
Munākhireh Qasr , fort.	11½
Beit Sa'ādeh , village.	12½
El-Qasr , fort.	14½
Jerifeh Island, 1½ m. long and very narrow, near r. bank.	15½
	16
	20
	21
	27
El-'Aliyeh , small village. Opposite here are bad rapids between two <i>naurs</i> , with a rock in the middle.	28
Gharrāf or Elkaraf Island.	30
Baghdādiyeh village, standing a little back from the river.	31½
At Baghdādiyeh Fahd Bey of the Amarāt owns some property and has planted a palm garden.	32½
Nawās Islands, very small, near r. bank. In Jan.-Feb. 1903 the speed of the stream, which had been about 2 m.p.h., increased to 4 m.p.h.	33½
Khān Baghdādiyeh . A khan was being built here in 1908. There is no village, the inhabitants dwelling in caves in the precipitous sides (200 ft.) of a gorge which runs back into the plateau. This cave-dwelling is a marked feature in the gorges of the bluffs from here up to Hadīseh ; no houses are seen on the bluffs.	34
	37
Jibbeh fort. <i>Zaptieh</i> post near the river, E. of road. See p. 17 on route to Damascus	38
Jibbeh Island, with large village near S. end. Ferry. From here up to Hadīseh a few palm gardens are passed. Past the island the channel went to the r. in 1903.	40½
	41½

Inter- mediate distance Miles	Left Bank
3	
1	Jebel Hajar ed-Dibs , about 2 m. from bank.
1	
1	
2	Jebel Hajar ed-Dowāliyah , about $3\frac{1}{2}$ m. E. of bank.
1	Qasr Madrūk , fort.
$\frac{1}{2}$	
4	
1	Jebel Ja'al , \approx 2 m. NE. from river.
6	Abu Ghānim , a small island near l. bank.
1	Jebel Murjifeh , a broad promontory of the desert plateau round which the river winds.
2	Qasr Māliyah , fort.
$1\frac{1}{2}$	Channel in 1903 followed l. bank past Gharrāf Island.
1	
1	
$\frac{1}{2}$	Qasr et-Tā'im , fort.
3	
1	Madaniyah , village.
$2\frac{1}{2}$	Imām Ibn Hasan , Moslem shrine.
1	

Right Bank	Total distance Miles
Just above island are remains of a ruined bridge, where the current is rapid and the only passage is on the extreme r. near right-hand pier.	
Mouth of Wādi Haurān . This is usually dry, but has violent floods. There is grazing along it in spring. See p. 17. Qal'ah Suwān fort is just above the mouth.	45½
Manqar Island, near r. bank. Channel in 1903 kept to r. bank.	46
Rock and ruin in mid-stream.	46½
About here is a ruin of a bridge-pier in mid-stream; above this is a bad rapid caused by a <i>naur</i> . For 2 m. above this <i>naur</i> the current is slow (Jan.-Feb. 1903).	47
Qasr Dowāliyah , fort. Channel in 1903 hereabouts passed to l. bank. (See opposite.)	48½
Dowāliyah Island, small, near r. bank.	49½
	51½
Alūs or Eluz , island and large village. The island lies at a bend of the river.	55½
'Abhāsiyah Island; smaller islands above it. (There are some 16 islands in all marked on the map between Alūs and Hadīseh.)	56½
Haji Island, near r. bank. The passage between the island and the r. bank is blocked to navigation by a ledge of rock.	58½
Fātiḥat Khidhr Ilyās , ledge of rock, 400 yds. above Haji I. This ledge runs obliquely from N. to S. across the whole bed of the river, making navigation on this stretch very difficult. In order to deepen the water on the r. side of the river, the Turkish Government built a rectangular dam which runs out from the l. bank just above the ledge. In 1903 above Haji I. the channel left the l. bank and bent towards mid-stream, passing over the ledge close to the extremity of the dam. The channel then turned to l. bank and kept at a distance of 10 to 20 yds. from the shore as far as the upper end of the artificial channel near the bottom of Hadīseh I.	
In 1870 the Turkish Government constructed the channel referred to here and at m. 48½, to assist the navigation of the	

Inter- mediate distance	Left Bank
Miles	
4	
$\frac{1}{2}$	
$\frac{1}{2}$	
$\frac{1}{2}$	
$1\frac{1}{2}$	Hereabouts is the lower end of an artificially excavated navigation channel, extending up to Hadiseh, on l. bank, with a current of 7 m.p.h. (Jan.—Feb. 1903). (See Fātihat Khidhr Ilyās, m. 58 $\frac{1}{2}$, below.)
1	
2	Sheikh Hasan Island.
4	
1	
2	Channel in 1903 followed l. bank past Haji I., and then passed to mid-stream. See under Fātihat Khidhr Ilyās, opposite.
	Channel in 1903 returned to l. bank. See opposite.

Right Bank	Total distance Miles
<p>river by steamers for a distance of 12 m. Its upper end is just below the island of Hadīseh, some 9 miles above Alūs. The current at the ledge of Fātihāt Khidhr Ilyās races down at 12 m.p.h. with a fall of 1 ft. in 4 yds. (Jan.-Feb. 1903). Consequently powerful boats would be required to do the up-stream journey. Towing would seem to be hardly possible, inasmuch as the river at the ledge is 500 yds. broad, and the channel there is in mid-stream. The ledge, when the water is high, is not so great an obstacle, but at all times it is dangerous, and is so considered by the boatmen, who vow a sheep to the prophet Elias if a safe descent is made.</p> <p>Between Fātihāt Khidhr Ilyās and Hadīseh the current is about 7 m.p.h.: the dams of the <i>nours</i> are troublesome to navigation.</p> <p>The small islands between Haji and Hadīseh are inhabited.</p> <p>Small islands. 59½</p> <p>Mouth of Wādi Fadiyeh. 60</p> <p>Abu Sa'īd Island, one of the many small islands in this stretch. 61</p> <p>Wādi Hajlān, with sulphurous springs near the mouth.</p> <p>Jāfidi village. 62</p> <p>Beni Dāghir village. Island immediately above. 62½</p> <p>'Ali 'Awīs village, with palm-trees, and an island close to the bank in front of it. 63½</p> <p>Hadīseh or Hadītheh Island and village. For navigation see opposite. 65</p> <p>Hadīseh Island is 1 m. long and 200 yds. broad. There is a big village in the middle of it. The village has a defensible wall washed by the river and stands on high ground. Half-way up the island are the ruined piers of a bridge, very difficult to pass, with one narrow channel close under a flour-mill (1903) on the E. shore of the island. To the right of the bridge are two conspicuous saints' tombs some way from the water. At the upper end of the island is a ruined castle. There are magnificent date-groves in the vicinity.</p> <p>The people spin wool and cotton and weave cloth.</p> <p>A flood in 1888 destroyed the barracks, and a farm-house</p>	

Inter- mediate distance Miles	Left Bank
1	Haddādiyeh village.
$\frac{1}{2}$	Reimid village.
1	Ma'ber adyān village.
1	Abu Sa'īd , ruined fort.
1	Murejjelān village.
1	Berwān village and island.
$\frac{1}{2}$	
1	
$1\frac{1}{2}$	Channel in 1903 followed l. bank past Hadīseh I. At S. end of island is a difficult ledge of rock, having a narrow passage close under E. side of island. Ruins of bridge: channel under shore of island. See opposite.

Right Bank	Total distance
	Miles
<p>was being used for the purpose in 1889. This was a good specimen of the farm-houses which occur isolated or in groups on the river between Hadīseh and Hit. A high wall of small stones set in mud surrounds the court, on three sides of which are buildings of the same material. These farm-houses look like forts, especially as they often have a small round watch-tower attached for watching the water-wheels. They are in fact intended for defence against the Bedouin Arabs. The present <i>zaptieh</i> post is on the r. bank of the river.</p> <p>There is also a modern village on the r. bank (mainland) with orchards. High rocky hills flank the village, and contain remarkable caves, apparently partly natural and partly artificial, which serve as dwellings for the poorer of the population. There are good and easily worked quarries: owing to the stratification, the stone comes out in large, almost squared, blocks.</p> <p>Inland from the river, and separated from it by a high ridge, are ruins of a large ancient town, and nearer the river, and visible from it, are a number of small <i>mazārs</i> with pointed dome-like roofs. There is grazing in the wadis S. of Hadīseh in spring.</p> <p>In 1889 there were only six boats by which communication was kept up between the main portion of the village on the island and the smaller portion on the mainland.</p> <p>The area between the river and the bluffs varies from 200 to 600 ft., and is all cultivated.</p> <p>Sheikh Hadīd, Moslem shrine.</p> <p>Bārij Rapid. A difficult ledge, with only one narrow passage in mid-stream. The channel bank kept to l. in 1903 past Bārij Island. This island is placed in a description of 1903 either opposite the ledge or below it, but the map puts it 1 m. above the ledge and shows it as $\frac{1}{2}$ m. long and very narrow and close to the bank.</p> <p>Qasr Abu Khebūr, fort, close (?) above Bārij Rapid.</p> <p>Joheiniyeh Island, small.</p> <p>Mouth of Wādi Ausāiyeh.</p>	<p>67 68$\frac{1}{2}$ 69</p> <p>71$\frac{1}{2}$ 72 73$\frac{1}{2}$</p>

Inter-
mediate
distance
Miles

Left Bank

2

$1\frac{1}{2}$
 $\frac{1}{2}$

Sanāniyeh village.

Channel in 1903 followed l. bank past Bārij I.

$2\frac{1}{2}$
 $\frac{1}{2}$

$1\frac{1}{2}$

Qasr Zibdeh, fort on the river.

Zibdeh village. 4 m. E. of it is **Jebel Bichinneh** Hill.

Right Bank	Total distance Miles
Beni Amām Island, small, near r. bank. For the next *8 m. islands are numerous. For the next 17 m. the river makes a great horseshoe bend N.	74
Khawājeh es-Sūseh Islands. Channel in 1903 kept to l. bank.	75
Ūdi Island.	75½
Umm Jedyeh Islands.	77
	78
Tel Serbaliḡ ?	81
Deis (Deir) Island, near r. bank. Channel is said to keep to r. bank.	82
Qasr Sarīfeh fort, opposite upper end of Deis Island.	82½
Habīb en-Najjār I. There appear to be two islands here.	85
Kerneh Island, nearly in mid-stream.	89
	94½
	96
Here is Muhāreh Island, with a very difficult rapid, the only safe channel in 1903 being a very narrow one with a considerable fall along the l. bank and close under a <i>naur</i> .	
Muhāreh village is on the island.	
Jerreh or Kūru Island in mid-stream, with a fortified house on it.	98½
	100
ʿAskar Island and village (Chesney appears to have erroneously shown an island about 10 m. below this point as ʿAskar Island, and this mistake has been repeated in Kiepert's map). Channel in 1903 followed l. bank past	102½

Inter- mediate distance	Left Bank
Miles	
$\frac{1}{2}$	There is some doubt about the position of this village (see under Zibdeh Islands below). Beni Amām village.
1	
$\frac{1}{2}$	
$1\frac{1}{2}$	
1	Zibdeh Islands, extending nearly 2 m. There is no clear agreement about the actual position of these islands, but the channel was reported in 1903 to be to the E. of them. Report of 1903 says:— 'About 2 m. below Deis (see m. 82) are the islands and village of Zibdeh, the position of which seems to have been erroneously shown by Chesney as about 7 m. farther down the stream. The islands now known as Zibdeh appear to have been shown by him as Tafahah and Nāsiriyyeh. The channel goes to l. (i. e. by l. bank).'
3	Nāsiriyyeh Island, small, near bank (?).
1	
$\frac{1}{2}$	
$2\frac{1}{2}$	Jebel Kuleibeh lies \approx 2 m. NE. and Jebel Habīb en-Najjār \approx 3 m. W.
4	
$5\frac{1}{2}$	Wūdiyyeh Island. Jowāniyyeh village on l. bank, about half-way up Wūdiyyeh I. Channel in 1903 followed l. bank.
$1\frac{1}{2}$	
$2\frac{1}{2}$	
$1\frac{1}{2}$	Zāwiyyeh village and fort. Channel in 1903 followed l. bank.
$2\frac{1}{2}$	

Right Bank	Total distance
	Miles
'Askar Island. From 'Askar Island up to Habbein Gharbi (m. 108½) the current runs about 4 m.p.h.	
Khān Feheimēh (Fahamī) village and guard-house. The <i>zaptieh</i> post is an enclosure with sides 100 ft. long, overlooking river from the high sloping bank. Good grazing all round. Island opposite, covered with bushes. The village is on the river bank with the road immediately behind. In front of or near the barracks is a wadi. At its junction with the river is a swamp difficult to cross, where animals may get badly bogged.	103
The Zawiyeh Arabs are seen about here. They had (1907) a fortified house on an island ½ m. below Feheimēh.	
Jebel el-Khiyām , at some distance to W.	104
Sariyāfi or Bozār Island and village, near the bank. Channel in 1903 followed l. bank. Just above the island are the Bajān rocks in mid-stream.	104½
El-Waladiyeh Island.	105
Here are rocks showing up in mid-stream. From here up to Tablīs I. current is 2 m.p.h. (Jan.-Feb. 1903), except at a few <i>naurs</i> . Navigation is said to present no difficulties.	107½
	108½
	109½
Tablīs Island, almost uninhabited and with ruined fortifications still visible, is near r. bank.	110
Bishkireh or El-Bauni Rapids. Navigation difficult, but there is an artificially deepened channel 40 yards from r. bank. From here to the ruins of Ardeshīr bridge, just below Anah , the current runs 5½ m.p.h. and navigation is difficult.	111
Wādi Jedīdeh joins river.	112½
Jumeileh village in palm-trees, between river and road.	116
Qasr 'Abdallah fort stands 1 m. back from river. The low ground between the river and the desert plateau grows narrower as Anah is approached, and is not more than 200 yards wide on the Syrian side and less on Mesopotamian side.	117
Anah . The town extends for several miles along the river bank.	117½
Ardeshīr (or Lubbad) Island, small, in mid-stream. On	118½

Inter- mediate distance	Left Bank
Miles	
$\frac{1}{2}$	
1	Muadrid village.
$\frac{1}{2}$	Channel followed l. bank in 1903.
$\frac{1}{2}$	Fehimeh village.
$2\frac{1}{2}$	Qasr Ābnādādiyeh , fort, immediately above upper end of island.
1	Habbein Gharbi (Sheibighah) village.
1	Habbein village. Wādi Sūr joins river just above the village.
$\frac{1}{2}$	
1	
$1\frac{1}{2}$	
$3\frac{1}{2}$	Ruins of Old Ānah or Anātho .
1	
$\frac{1}{2}$	
1	Qasr Hubūliyeh , fort.

Right Bank	Total distance
	Miles
<p>it are a ruined castle and an early Islamic minaret 10 stories high, and also 30 houses. The island was connected with both banks by bridges, which are now ruined. Their piers, especially on the l., are an obstacle to navigation. The channel follows r. bank. Fishing-nets are let down between the piers.</p> <p>From $\frac{1}{2}$ m. below Kerableh Island (see <i>Route IV G</i>, m. 2) the current runs 7 m.p.h. the whole length of the town. The channel going up-stream passes between the piers of Ardeshr bridge near r. bank. It then curves to the l. and keeps the chain of islands between it and the town. From the island of Ardeshr up to the head of Kerableh Island is an artificial channel constructed for the Turkish steamers in 1870, one of which was afterwards wrecked close to Ardeshr bridge.</p> <p>Middle of Anah town. For navigation past the upper end of Anah town see <i>Route IV G</i>.</p>	119 $\frac{1}{2}$

ROUTE IV G

ANAH—DEIR EZ-ZOR (192 m.)

The distances which follow are taken from the middle of **Anah**, but the town straggles along the bank, above this point, for $1\frac{1}{2}$ m. or more. Rawā is opposite the upper end of Anah.

Wādi Rawā, a deep gorge, joins the river. 1 $\frac{1}{2}$

Bahaleh Rapids, passing **Kerableh I.** Here the navigation is extremely difficult. Chesney says that the ledge of Kerableh was considered the greatest difficulty for boats throughout the navigation of the Euphrates from Birijik to Basra, and this statement is supported by observation in 1903. Below the island is the upper end of the artificially 2

Inter- mediate distance	Left Bank
Miles	An artificially deepened channel extends from below the island of Ardeshr to below Kerableh Island (see <i>Route IV G</i> , m. 2, below).
1	
0	For points along and near this bank, compare <i>Route 47</i> .
1½	Rawā. On high ground above the river is Qasr el-Kureim, a large square barracks built about 40 years ago. Fruit gardens and date-groves for some distance; then the country becomes barren and is destitute of villages, though there are occasional patches of cultivation irrigated by <i>naurs</i> .
½	Kerableh Island. Channel in 1903 followed l. bank. For details see opposite.

Right Bank	Total distance
	Miles
excavated navigation channel, which has its lower end at Ardeshīr (see <i>Route IV F</i> , m. 118½). At the lower end of Keraleh I. are the Sīkr Sultān rocks, a ledge which entirely blocks the r. branch of the river. The channel in 1903 passed between l. bank and island, about 20 yds. from the island. The current ran past Keraleh I. at 7 m.p.h. in Jan.-Feb. 1903. At a point about 30 yds. above the level of the island is another straight ledge of rock stretching across the whole river, forming a waterfall on the r. and the very swift Bahaleh rapids on the l. At the head of the island the river is contracted to 200 yds. in width, and then broadens to 300 yds.	
The navigation of this stretch could be made much easier by removing the rocky obstructions with dynamite.	
Imām Meshhed tomb and ruins.	5
	6½
	9
	10
Dangerous rapids caused by dam of ruined <i>naur</i> .	10½
The stream, which has been from 250 to 300 yds. wide, now narrows considerably. From here to Mathadiyeh rock, (see m. 59½), the river is about 150 yds. wide and the current, except at <i>naurs</i> , is 2 m.p.h. The average depth is 9 ft. during winter months when the river is low (except at <i>naurs</i>).	11½
Rapid?	12½
Kūheh Island.	13½
Sherwein Island.	14
Tazāli I. Opposite or above it is a bad rapid, with a water-wheel on the r. bank. The upper end of the rapid is described as being 4 m. below Nāhiyeh . Channel in 1903 went near l. bank. Three wrecked boats were seen here in January 1903.	22
	25
Deriyeh Rapid?	27
Nāhiyeh. Khan and police post. Island opposite it. Channel in 1903 followed r. bank.	28
Cultivation now ceases, and from here up to Abu	

Inter- mediate distance Miles	Left Bank
	Channel follows l. bank (see opposite).
3	
1½	Hājiyeh , huts and date-grove below a spur of higher ground coming down to river.
2½	En-Nutāreh Island.
1	En-Nutāreh . No village; some corn-fields cultivated from Rawā.
½	
1	Serāseh Island.
1	
1	
½	
8	Channel in 1903 followed l. bank.
3	
2	El-'Ajmiyeh , small cultivated tract, with <i>naur</i> .
1	

Right Bank	Total distance
	Miles
Kemāl, about *60 m., the banks are almost uninhabited and are either bare or covered with tamarisk.	
Rather serious rapid (1903).	30
Jedīreh I. Channel follows l. bank.	32½
Qāsīm el-'Assā'iyeh (?) .	34½
	35½
Zāleh Island.	36
Za'ferāniyeh I. Channel in 1903 followed l. bank.	38½
Hamānā rocks.	39½
	41
	43
	45
	47
Qal'at Rāfideh, fort: a fine pile of ruins. Jurdān I. (small) opposite it.	51½
	52
Mathadiyeh rock, in mid-stream. The <i>naurs</i> , numerous below this point, were in 1903 not found above it.	59½
	64
Simānah rock, sunken; channel followed r. bank in 1903.	64½
	71
El-Qā'im, police post. There is no village at this place, but a good khan had lately been built in 1907. It is the residence of a Mudir. Near the river, and responsible for the cultivated ground, are Kerableh Arabs. Farther back from the river are the Jerā'if (Jeghaifeh) Arabs, who sometimes in drought cross the river to the Mesopotamian side for the better pasturage there.	
From El-Qā'im to Abu Kemāl (*17 m.) the channel is	

Inter- mediate distance	Left Bank
Miles	
2	
2½	Channel follows l. bank.
2	
1	Shehādi I.
½	
2½	Channel in 1903 followed l. bank.
1	
1½	Chedish Islands.
2	Large island at S. end of a loop in the river: channel by l. bank (1903).
2	Qal'at Bū Āghā , fort.
2	Qal'at Būlāq or Retājeḥ , small square ruined fort of sun-dried brick with round towers at the angles, on a precipitous knoll which the river is undermining.
4½	Channel in 1903 followed l. bank.
½	
7½	Jabariyeh ruins, no settled habitation. 1½ m. NW. is the Imām Sultān 'Abdallah tomb.
4½	Balijeh , cultivated ground on the l. bank, belonging to the Jerā'if .
½	Nammāleh I. and two other islands extending in all 3 m. around a sharp bend. Channel followed r. bank in 1903.
	The district from this bend to Ardhi (12 m. farther on) is known as the Qā'at ed-Dilaim (Dilaim Arabs), and is barren save for thickets of tamarisk, though frequent traces of canals show that it was once under cultivation.
6½	Two ruined piers of a bridge in mid-stream.
	The river-bed here changes from rock to gravel and mud, and navigation becomes easier.

Right Bank	Total distance
	Miles
150 yds. wide, the current 2 m.p.h., and the average depth 12 ft. (Jan.-Feb. 1903).	
The hills now draw away from the river and do not approach it again on this side till near Salāhiyeh (m. 127).	
Jerāseh I. , small. Qasr el-Qā'im, ruined tower.	72
	72½
Imām Sheikh Jābir tomb.	74
' Anqah ruins, surrounded by mud-brick wall.	75
	75½
Rummāniyeh I. , close to r. bank.	77
	79
Abu Faraj I.	80
	81½
Abu Kemāl. Pop. about 500 ; 80 houses. Police post. Residence of Kaimmakam. Ferry.	88
Abu Kemāl is a small modern village on high ground 1 m. back from the river. The ground is low and marshy towards the river ; farther W. it is fairly dry and even pebbly. It is the chief town of a <i>Kaza</i> of the same name. There is a small bazaar and fairly good khan. The village has been moved since 1896 from its old site down by the water. The old village was in danger of being destroyed, as the river was cutting a new bed on the W. bank. The new village is 1 m. from the old, and has broad streets at right angles, with stone instead of mud buildings. To the SW. (a few miles off) are three low peaks called Thelātheh, a landmark. Also to SE. El-Qā'im is visible.	
The <i>Kaza</i> of Abu Kemāl had in 1890 a population of about 15,000, practically all Sunnis. Within the last few years some Christians have come here chiefly from Deir ez-Zor and Mosul. The place is regarded as the centre of the country of the Ugeydat Arabs. The areas under cultivation produced an annual yield of nearly 5,000 tons of maize,	

Inter-
mediate
distance
Miles

Left Bank

1

El-Menāji I.

$\frac{1}{2}$
 $1\frac{1}{2}$

El-Manzil I.

1

Gharbeh I. These three islands lie close to l. bank.

$\frac{1}{2}$
 $1\frac{1}{2}$

2

Rabāt. Village on water's edge, lying in a plain. There is some land under corn by the village.

1

Ardhi or Irzī, extensive area of ruined tombs with towers on the top of a rocky bluff which bounds the plain of Rabāt, and here comes close to the river. There are no traces of houses.

The hills on this side recede from the river from this point up, stretching in a rocky ridge N. and NNW. across the desert towards the **Khabūr R.**

$1\frac{1}{2}$
 $6\frac{1}{2}$

Island off left bank.

Large island. Channel in 1903 followed r. bank.

It was opposite Abu Kemāl that Chesney lost his steamer the *Tigris*, in a violent local hurricane, on the afternoon of May 31, 1836.

Right Bank	Total distance
	Miles
sesame, corn, and barley. The live stock consists mainly of sheep.	
From here up to Deir ez-Zor (about 70 m.) there is almost continuous cultivation by water-lifts, but the cultivated strip scarcely reaches more than $\frac{1}{4}$ m. from the river.	
Mouth of Wādi Sawāb .	89
Island in mid-stream. There are stiff rapids at this point, and the river was reported in 1903 to be divided here into three channels (i.e. by the island already mentioned and another which is perhaps formed only at low water). The navigable channel then kept close to the r. bank.	91
The course of the river becomes extremely sinuous.	93 $\frac{1}{2}$
Tel Madquq , about 3 $\frac{1}{2}$ m. W. from river, near road, 60 ft. high with graves on top.	96 $\frac{1}{2}$
	106 $\frac{1}{2}$
Short, stiff rapid, the top of which was reported in 1903 as 18 miles below Salāhiyeh Khān.	109
Hereabouts the river was reported very shallow in Jan.-Feb. 1903, with snags all over it; there were two country boats seen wrecked here.	116
Island. Channel in 1903 followed r. bank.	119
A shallow (5 ft. of water in a narrow navigable channel) $\frac{1}{2}$ m. below Salāhiyeh Khān was reported in Jan.-Feb. 1903.	126 $\frac{1}{2}$
Salāhiyeh Khān , police post below the cliffs, on road and T.L., $\frac{1}{2}$ m. from river. No supplies procurable. The khan is said to be the worst on the road, dilapidated, and used as a <i>zaptieh</i> post. Some cultivation worked by Arabs living in tents.	127
Shallow (reported Jan.-Feb. 1903) with spits of sand showing above water.	129
Qal'at Salāhiyeh (or Khān Kalasi), ruined fortified town in strong position on plateau, commanding many miles	130

Inter- mediate distance Miles	Left Bank
1	Werdi , a village of reed and mud huts. Ferry to Abu Kemāl .
2	
$2\frac{1}{2}$	
3	Ground covered with tamarisk hereabouts; ducks and pigeons abundant. The tribes hereabouts are the Bu Kemāl (also on r. bank), the Dilaim, and the Ugeydat, a base-born tribe. The Anazeh come down to the r. bank in summer.
10	Tel Abu Hasan . A striking <i>tel</i> which rises 50 ft. above river level. On summit are Arab graves of Jebūr tribe, who have now migrated to the Tigris.
$2\frac{1}{2}$	
7	
3	
$7\frac{1}{2}$	
$\frac{1}{2}$	
2	
1	The country between here and the cultivation round Tel 'Afriyeh (below) is arid, with little sand-hills held together

Right Bank	Total distance Miles
of the river up and down stream. The river flows close beneath the hill.	
The width of stream from Qal'at Salāhiyeh to Meyyādīn is about 200 yds., the current 4 m.p.h., and the average depth 8 ft. (1903).	
Shiblik tombs, $\frac{1}{2}$ m. from bank on high ground.	133 $\frac{1}{2}$
	136
On the bank ruins and mounds known as Qasr el-'Ashareh , a fort.	140 143
Some miles to W. is Qal'ah Rahbeh , a well-preserved and formerly very strong castle on an abrupt rocky knoll, 245 ft. above river level.	149
Meyyādīn . Pop. about 2,000 (450 houses). T. Chief town of the <i>Kaza</i> of Achara and residence of a Kaimmakam.	154
The village stands on a mound of débris. It contains from 400 to 500 houses, a bazaar and fair shops, and supplies are procurable. There is a mosque with a leaning tower. The inhabitants are mostly Sunnis, with a few Christians.	
The <i>Kaza</i> of Achara, which comprises the country round Meyyādīn and the <i>nahiye</i> Buseireh, and stretches far across the desert towards Palmyra, had in 1890 about 24,000 inhabitants (all Sunnis). Excluding its <i>nahiye</i> Buseireh, it is estimated to contain about 65,000 head of live stock, mostly sheep. Maize, wheat, and barley are grown. Considerable quantities of wool and butter are exported on muleback to Aleppo.	
Some shallow rapids with a depth of only 4 ft.	155
Belum village.	158
Bogrus village.	159
Several small islands, breaking the river up into several channels, lie in the stream between this point and the mouth of the Khabūr River.	

Inter- mediate distance	Left Bank
Miles	by tamarisk. It is liable to flood with a high river, and there are overflow channels containing stagnant water.
$3\frac{1}{2}$	From here to Bustān, *9 m., there is cultivation, with irrigation creeks and several small villages, Abu Hammām , Abu Hardūb , Qaryat el-Bushama . The fields lie low and are occasionally flooded. Clover and corn are grown, two crops being secured, one before and one after the spring floods.
$2\frac{1}{2}$	Tel 'Afriyeh.
4	Tel Hijānik.
3	Bustān village. Palm garden. From here to the Khabūr R. is 6 hours' going for baggage animals across a level plain with traces of former habitation, pottery, and small village mounds.
6	
5	
1	
3	
1	

Right Bank	Total distance
From the mouth of the Khabūr up to the large island below Deir (see m. 192½) the width of the river is 300-250 yds., its current 3½ m.p.h., and its average depth 6 ft.	Miles 161½
Tel Zubari , mound.	162½
	164½
	165½
	169½
Marreh village. The road is here 2 m. SW. of river and 1 m. farther on crosses the Wādi el-Melha.	172½
Wādi el-Melha .	180
Abu Hasan village.	181½
Large island, the upper end of which is said to be about 5 m. below Deir. The channel in 1903 followed the l. bank.	182
	182½
	184
Binieh village. Above this the river widens to 400 yds.	187

Inter- mediate distance	Left Bank
Miles 2½	<p>Katneh on l. bank of the Khabūr R. mouth (here 50 yds. wide) at its confluence with the Euphrates. A ferry crosses to Buseireh. This was an inferior boat ferry in 1910, which would not take loaded animals. Bricks were then being gathered from Buseireh ruins with a view to building a bridge.</p>
1	<p>Khabūr River, an important tributary, 80-100 ft. wide above its mouth.</p> <p>Buseireh, <i>zaptieh</i> post (15 men). Extensive ruins lie in the angle between the Euphrates and the Khabūr. Here is the ancient site of Circesium, a frontier station of the Roman Empire, and a place of some importance in the Middle Ages under the name Karkisiyeh. In the SW. corner of the ruins is an Arab village, or fixed encampment, of about 800 persons. Together with the villages up the Khabūr it forms a <i>nahiye</i> under the <i>Kaza</i> of Achara, with a population of 6,000 Sunnis. In 1890 there were 18 villages or more, with cultivation of maize, corn, barley, and sesame. The live stock is mainly sheep (about 20,000 in 1890).</p>
2	Bureihah villages.
1	Burairideh village.
4	<p>Settlement and cultivation, apparently just above the lower end of a dry channel which takes off from the present l. bank about *15 m. farther up. It is a former bed of the river lying to E., all dry save for occasional pools. Four dry cross-channels run from the present l. bank to this old bed. By the change in its course the river has left a stretch of low alluvial ground, thinly populated, and irrigated in part by wheels. On higher ground to the E. of the old channel are occasional mounds, marking former villages.</p>
3	El-Jedid , villages.
7½	
1½	
½	
½	
1½	Former bed of river (see m. 169½, above) apparently takes off about here.
3	

Right Bank	Total distance
	Miles
	192
Deir ez-Zor.	
<p>The river branches just below Deir, and the town lies on the branch known as the Jafr Canal, said to be fordable, though Chesney's steamers passed through this branch. Immediately opposite the town is an island about 1 m. long and in mid-stream. A bridge, passable for field guns, from the r. bank to the island was completed some years ago. According to recent information it had been extended from the island to the l. bank by the autumn of 1914. (A Turkish traveller stated in 1911 that the Government were preparing to build a suspension bridge from the island to the l. bank, as the current had here proved too strong for the pile bridge which had been planned.)</p> <p>There is a ferry from the island to the l. bank. Above this island are two others. There are trees on all three islands, and gardens on the uppermost.</p>	

ROUTE IV H

DEIR EZ-ZOR—MESKENEH (181 m.)

Deir ez-Zor. From here to m. 47 the river is generally about 250 yds. broad. In January 1903 the average depth was 5 ft., and the current about $2\frac{1}{2}$ m.p.h.	0
Bereliyeh village. El-Imashiyeh ford was here about 1840, but there seems to be no more recent authority for its existence.	2 4
A small stream joins the river.	4 $\frac{3}{4}$
Tel el-Khureiteh. This hill, to the N. of which is a plateau with low mounds, lies between the two branches of the Baghdad—Aleppo road which bifurcates at Deir.	9 10
'Ain Abu Jum'a. This is a small bituminous spring near the river.	14
Lubtar Island. Round this island the l. branch of the river makes a bend NE. and then SW. The r. bank branch	14 $\frac{1}{2}$

Inter- mediate distance	Left Bank
Miles	
5	
0	For points along and near this bank, compare <i>Route 47</i> .
2	El-Huseiniyeh village.
2	
$\frac{3}{4}$	El-Maisheh (or El-Khair) village on an arm of the Euphrates was reported here in 1880.
$4\frac{1}{4}$	
1	
4	
$\frac{1}{2}$	

Right Bank	Total distance
	Miles
is apparently much the shorter. There is no evidence as to which is the better channel. Distances given below are calculated by the r.-bank channel.	
Tābūs , ruins and caves. Rising ground close to the river. Tabūs is on a high bluff overlooking a naturally fertile plain. On W. side it is protected by a deep cut in the rock.	17½
Mutlim ford, mentioned in 1840.	24½
Mouth of wadi. Here in 1908 the river bent E. for 1½ m., then N. for 3 m., and then W. Across the promontory formed by this bend water appears to flow at some seasons, forming the island of Buweitir .	31½
	34
Tureif , with two small islands opposite (1908). A military post with a khan. No supplies; grass in April plentiful, also fuel. The banks of the river were found to be 25 ft. sheer height in April 1907.	39
Island.	39½
Island.	41
Tibni ruins and village. Trees along the bank. Above is a large island.	43½
Qal'ah fort opposite the upper end of the island mentioned under Tibni above.	44¼
For about 6½ m. above this point the river flows through a range of hills, running from WSW. to ENE., called El-Hammār, or (on the r. bank) El-Bishr. These hills (300–500 ft. high) are of basalt overlying gypsum.	46
Halebiyeh , ruins of a Palmyrene fortress, with Tel Kuleibeh Hama hill 2½ m. W. of it.	47
Halebi Chelebi defile. The hills, 300 to 500 ft. high, close in on the river-bank. The narrowest part of the defile lies at its northern end above the Wādi el-Melih. Through the gorge the river contracts to 70 yds. with a depth of 7 ft., and a current running at 4 m.p.h. in Jan.–Feb. 1903. Half-way up the gorge a small island was reported in 1903:	

Inter- mediate distance	Left Bank
Miles	
3	
7 7	
2½ 5	El-Munqareh (<i>zaptieh</i> post), ½ m. from the bank, with Umm Rejeibeh (ruins) on rising ground a few hundred yards to the N.
½ 1½ 2½	Tel Abu Mutshiyeh hill.
¾	
1¾	Zalubiyeh , a ruined Palmyrene fortress (third century A.D.). It is in shape a triangle, with its base resting on the river, while its sides climb the acclivity of a conical hill and terminate at the summit in a small acropolis. It was defended by walls flanked with strong towers, which, with the public and private buildings, are constructed of fine gypsum and are as clean-cut and as fresh as if they had been recently built.
1	

Right Bank	Total distance
	Miles
the navigable channel followed the l. bank. Several small islands are shown in a map of 1908. At the top of the gorge is a strong backwater, and a whirlpool which is said to be dangerous when there is much water in the river.	51 52 $\frac{1}{4}$
Head of the defile. Above the Halebi Chelebi defile, for a distance a little under 20 m. to El-Khās (see m. 72, below), the current runs about 2 m.p.h., the river is 200 yds. broad, and the average depth does not exceed 4 ft.	53
The river bifurcates round a large irregularly shaped island which appears to be about 7 m. long and 3 m. broad in the middle. There is no evidence to show which branch is the better for navigation. Distances are here calculated by the r.-bank branch.	54
Kasubi (Kosubi), a deserted mud village, with a fort noticeable from the river.	56
<i>Durra</i> (a kind of millet) is grown on the surrounding low land.	
'Ain Tin , a spring by the side of the road, which here approaches the river.	59
Qasr Ma'dan lies between the river and the road. On the other side of the road is Darb el-Wāwi (ruins). Above this point the edge of the desert plateau recedes somewhat from the river and leaves a zone of lower land 1-3 m. wide between it and the r. bank.	59 $\frac{1}{4}$
A small tumulus; a ford to the top of the large island mentioned at m. 54 above is marked here on W.O. map, but it is uncertain on what authority. On the island opposite the ford is a larger mound which one authority calls Tel Khumeideh (but see m. 54 above under l. bank).	61
Entrance to a dry arm of the river which passes Qishlāq Ma'dan about 3 m. WSW. of this point.	61 $\frac{1}{2}$ 66 $\frac{1}{2}$
Khamīsiyeh ferry in Khamīsiyeh district. About here is the upper end of the dry arm mentioned above under m. 61 $\frac{1}{2}$.	68 70

Inter- mediate distance	Left Bank
Miles	
4	Mouth of Wādi el-Melih .
$1\frac{1}{4}$	Qabr el-Abu Atiq , ruins of a town on a height, with remains of a dam along the river in the valley below.
$\frac{3}{4}$	The hills recede from the river at right angles. Khanūqah village.
1	Tel Khanūqah (also apparently called Tel Khumeideh) near the river, is about $1\frac{1}{2}$ m. up the l.-bank branch of river past the island mentioned opposite.
2	
3	
$\frac{1}{4}$	
$1\frac{3}{4}$	
$\frac{1}{2}$	
5	Tel Mutāb on the river bank. Rising ground 2-3 m. to N.
$1\frac{1}{2}$	El-Khān , ruins. About here live Afadle Arabs.
2	

Right Bank	Total distance
Channel in 1903 followed l. bank past several small islands.	Miles 71
Here are shallows and spits of gravel. Chesney's map (1840) shows an 'old ford of Abu Chelabi' in this neighbourhood. Navigation is difficult: the channel kept to r. bank.	72 74
In this neighbourhood there appear to be two islands, Mughleh el-Kebir and Mughleh es-Saghir. It is not clear where these islands lie or whether one of them should not be identified with Abu Hamad I. mentioned below.	
Abu Hamad Island, 4 m. long. The channel in 1903 kept to r. bank.	77 79
Zor Shammār. Here are shallows and spits of sand, and the navigable channel is tortuous. The W.O. map marks a ford here called El-Khatiseh, but it is uncertain on what authority.	80 83
Zor Jibli. Channel narrows to about 100 yds. Rapids for 400 yds.	86½ 88
Zor Norud. Qishlāq Sabkhah. Police post and village. 25 houses, pop. ? 150. T.O. Ferry.	92
Below the barracks is a watering-place, and there is camping ground with good grazing. The barracks were unoccupied in 1907. The village contains a fair-sized khan, with 10 rooms, on the E. of the place, and 12 mean shops on the street which runs past the khan. A Mudir has his head-quarters here.	
According to an authority who went down the river in 1903, from Sabkhah up to Mohammed Agha and Hamrā Rapids (see m. 106½, below) there is no difficulty of navigation, the river being 200 yds. wide, with an average depth of 8 ft., and a current of 2½ m.p.h. in January. (NOTE.—An observer who passed Sabkhah travelling by land in April 1907 says, 'River here forms a right angle and runs very swiftly in a rapid. I do not see how a vessel could pass up-stream of this point.')	
A mile or more W. of the fort are the Nukhaileh ruins,	

Inter- mediate distance	Left Bank
Miles	
1	
1	El-Khās district. Tamarisk-growth on the bank (1880).
2	
3	
2	Imām Abu Sa'īdeh (Moslem shrine and cemetery) close to l. bank.
1	Jedīdeh village.
3	Jebel Munkhir esh-Sharqi , hill: 5 m. N.: a conspicuous landmark.
$3\frac{1}{2}$	
$1\frac{1}{2}$	
4	

Right Bank	Total distance
	Miles
with a spring to NW. of them, both close to the road. Tamarisk jungle on the banks above Sabkhah.	
Siffīn district (placed about here by Sarre and Herzfeld: there is another Siffīn above Raqqah: see m. 151½, below).	104½
Hamrā Rapid, in 1903 said to be short and violent, with the channel keeping close to l. bank.	106½
Mohammed Agha Rapid, which in 1903 was reported to be 300 yds. long, with current 7 m.p.h.; at the bottom the channel was close under l. bank, and at the top 100 ft. from it.	107½
	108½
	111½
	112½
From Raqqah to Abu Qubā'ī there is no rapid, but the depth of water varies continually from 12 to 4 ft., so that great care would be necessary for its navigation in low water.	
	117
Abu Qubā'ī district, with tamarisk-growth, on an arm of the river which is liable to flood. Here there is a very bad stretch of rapids, which are the more dangerous owing to the remains of a masonry bridge in the centre of the river. It was reported in 1903 that above these rapids there was no difficulty for about 9 miles.	120
Wādi Abu Qubā'ī flows in.	121½
Lower end of El-Hammām Rapids; their upper end is immediately below the islands near that place (see m. 133½). In this stretch of river (nearly 3½ miles) the navigable channel winds among spits of gravel. In January 1903 it was reported that the current was 6 m.p.h. and that there	130½

Inter-
mediate
distance

Left Bank

Miles

- 12½ The first of the mouths of the **Belikh** delta.
- 2 Channel in 1903 followed l. bank past Hamrā and Mohammed Agha Rapids. Near the Hamrā Rapid is the second mouth of the Belikh stream. The banks of the Belikh are very fertile and always green. Barley, maize, *durra*, rice, hemp, and opium can be cultivated along it with great success.
- 1 Another mouth of the Belikh.
- 1 Another mouth of the Belikh.
- 3 Another mouth of the Belikh.
- 1 **Raqqah.**
There is a ferry. A small island lies above it. The river here is about $\frac{1}{4}$ m. broad with a sloping beach on each side, a rare occurrence on the Euphrates.
- 4½ **Hiraklia** (ruins). A square fort (Greek or Parthian) with round towers at the corners, built of blocks of white gypsum. (See *Route 47*, m. 243.) There are traces of an old bridge here.
- 3
- 1½
9 **Tel Bellani** (ruins), raised on a high bank, conspicuous owing to high tree-trunks set to mark an Arab cemetery.

Right Bank	Total distance Miles
was never less than 6 ft. of water, but that great care had to be taken to keep within the channel. In the summer many boats stick at this point, and in the month of Ramazan 1902 eleven pairs of boats were upset here.	
Suriyeh ruins.	
About here the navigable channel in 1903 was reported to go between two islands.	133½
El-Hammām (<i>zaptieh</i> post and khan). From here to Meskeneh the average width of the river was reported to be about 250 yds. in January 1903, the current 3 m.p.h., and the depth 8 ft. Navigation over this stretch presents no difficulties.	134
Tel el-Thedeyin (130 ft. high).	136½
Huneideh village.	137½
In 1903 an island was passed about 12 miles below Qal'ah Jābir, the channel following the l. bank.	139½
Siffin ruins on a bluff of rock running down to the water's edge. Tall brick tower (remains of a minaret). There are caves in the limestone used as dwellings and sheep-folds.	151½
Abu Hureireh , or Qaraqgol: <i>zaptieh</i> post built of mud, and situated on a <i>tel</i> . Grazing by the river. Khan, poor; no supplies obtainable. T.L. over 1 m. to the S.	159
An island lies in front of the post. In 1903 the channel followed the l. bank.	
In January 1903 no islands were observed on the river between Abu Hureireh and the neighbourhood of Meskeneh. There are probably islands or banks showing above water at least in the low-river season. (See e. g. m. 167.)	
From Abu Hureireh to Meskeneh and beyond to Birijik the valley is cultivated. Tamarisk and liquorice jungle gives way to wheat and barley, which grow without irrigation. Valley floor extends from 1 to 3 m. on either side of the river. There are scattered ruined villages at intervals on both banks. At Abu Hureireh the gentle slope from the	

Inter- mediate distance	Left Bank
Miles	
3	
$\frac{1}{2}$	
$2\frac{1}{2}$	
1	
2	Channel in 1903 followed l. bank past island.
12	<p>Qal'ah Jābir, a fine ruined citadel on a rocky headland, with a tall minaret, from which a large stretch of country can be seen. A little to the W. is Ziyāret Sultān Selīm or Suleiman Shah. $2\frac{1}{2}$ m. NW. is Neshā'ib, a hill with Qasr el-'Abd tower, an ancient observatory and conspicuous landmark, upon it. The plateau is a monotonous plain with good pasture.</p> <p>There is little or no cultivation on this side.</p>
$7\frac{1}{2}$	<p>Channel in 1903 followed l. bank past Abu Hureireh Island.</p>

Right Bank	Total distance Miles
river to the desert gives place to a line of more abrupt chalky cliffs, which continue to Meskeneh.	
Dibsi , with Quseir ed-Dibsi ruins 1 m. S. by E. of it. The hills are now close to the river. Islands are shown in the river opposite Dibsi village and tower in a map made by Sarre and Herzfeld in 1908.	167
Dibsi tower . The ruins are of brick. About here white cliffs 200 to 300 ft. high come close to the river. They recede about 1 m. above Dibsi tower.	170½
Khafajeh village. Here the river bifurcates round a large island extending to opposite Meskeneh. The channel in 1903 followed the l. bank. Behind the village at a distance of under 3 m. are the large ruins of Bālis , the ancient <i>Barbalissus</i> , known now as Eski Meskeneh (Old Meskeneh). It lies on a bluff with a conspicuous minaret and some Roman remains.	177
Meskeneh . There is a ferry-boat here—the first above Raqqah; it takes horses. Meskeneh, Tel el-Ahmar, some 62 m. above, and Birijik, some 90 m. above, are the principal passages across the river in this part.	181
Meskeneh is situated on rising ground. There is a khan on rising ground apparently about 1½ m. from the river, with post and telegraph station just S. of it, the <i>zaptieh</i> barracks lying to the N. There were about a dozen <i>zaptiehs</i> here in 1908.	
Water-supply is partly from one or two wells, but chief supply from river.	
Some scrub and camel dung available for fuel.	
As many as 20,000 sheep have been counted in this neighbourhood in January feeding in the valley.	
Excellent pasturage was found in 1907 on the wide meadows between the post and the river.	
In 1915 there was a camp at Meskeneh for deported Armenians, many of whom died here.	

Inter- mediate distance	Left Bank
Miles	
8	
$3\frac{1}{2}$	
$6\frac{1}{2}$	Channel in 1908 followed l. bank past island opposite Khafajeh.
4	

LAND ROUTES

THE TIGRIS VALLEY WITH REGION TO EAST

ROUTE 25 a

BAGHDAD—MOSUL (292½ m.)

Via SALĀHIYEH (KUFRI), KIRKUK, AND ERBIL.

Authorities:—Military Report on E.T.A., vol. iii, 1904 (Report of 1903); Lorimer, Report of a Tour in Turkish Arabia and Kurdistan in April–May 1910; Route Report of 1910; Petermanns Mittheilungen, Ergänzungsbd. x, 1875–6 (Černik's journey of 1873); and other sources of information.

This was the usual route followed by troops before the present war. With some slight repairs and with some bridging it could be made easily passable for transport and field-guns throughout. It leads for the most part through fairly populous, well-cultivated, and well-watered country, and a number of considerable towns. The chief difficulties are to be found in the numerous irrigation cuts between Baghdad and Delli 'Abbās (these are chiefly on the Western Route, see (ii) below), in some of the wadis and large torrent-beds crossed between Salāhiyeh and Kirkuk, and in the crossing of the Great Zāb.

From Baghdad to Delli 'Abbās there are two possible routes: (i) an Eastern Route *via* Bāqūbeh, and (ii) a Western Route *via* Jedeideh and Khān Nahrawān. The Eastern Route appears to be the better.

(i) THE EASTERN ROUTE TO DELLI 'ABBĀS

As far as Bāqūbeh this is a caravan road easy for wheeled vehicles except in rain. Beyond Bāqūbeh it was reported in 1910 to be fit for guns, though only pack-animals were used on it: in this section it was rough in places, where, however, it could be improved considerably by a little pick and shovel work: the soil is sandy and going would be heavy after rain.

Miles from Baghdad	
0	Baghdad. For the road to Bāqūbeh see <i>Route 28 a</i> , m. 1—31.
31	Bāqūbeh. From the W. end of the boat-bridge (see <i>Route 28 a</i> , m. 30½) the track runs somewhat N. of NNW. (340°), parallel with the river, towards some bluffs 2 m. away.
33	Top of bluffs. It is stated that 'here the road to Mosul branches off NNW.' This seems to be a track leading to <i>Route (ii)</i> . Track here followed to Delli 'Abbās apparently bears more towards N., but the direction is here uncertain.
35	Small stream is crossed. Path turns sharp to E.
35¾	Path turns somewhat N. to NE. by N. (30°).
39	Cross small stream. Pass palm-groves about 1 m. to W. Line of sand-hills is crossed.
40	Cross small stream. Track turns sharp to about E. by N. (80°).
42	Khān Seyyid , on Diyāleh River. Water abundant from river, grazing fair. Camping ground suitable for troops. Track goes somewhat N. of NE. by N. (30°), skirting the Diyāleh.
44	Road passes through palm-grove, apparently leaving the bank of the Diyāleh.
49	A palm-grove is passed on E.
50	Tapi hamlet, a few houses on the track. Track runs hence between NE. and NE. by N. (40°).
53	Cross small stream.
55	Cross two small streams. Nuqtah on E., and a large white mound from which a good view of the surrounding country can be obtained. Road touches the Nahr Khālis . Road starts from this point at about NE. (45°).
61	Road again touches the Khālis.
63	Delli 'Abbās (see <i>Route ii</i>).

(ii) THE WESTERN ROUTE TO DELLI 'ABBĀS

Before the war, a good many irrigation cuts seem to have needed bridging in order to allow wheeled transport to pass by this route to Delli 'Abbās.

The estimates of the depth, &c., of water in the irrigation cuts were made in January 1903.

Miles from
Baghdad

- 0 **Baghdad.** The route leaves the town by the **Bāb el-Mo'adhham** and takes the l.-hand branch outside the gate (a r.-hand branch leads to Bāqūbeh).
- 1 Pass cavalry barracks, skirt a large dyke. Cross several irrigation canals, some 6 ft. deep and 10 ft. wide, with small bridges of date trunks, about 3 ft. wide. These bridges will generally carry a laden mule, but it is well to examine before using them and test them first by men on foot. Walled gardens on l. for 2 m.; cultivation on both sides for 4 m. Near Mo'adhham the track is boggy for $\frac{1}{4}$ m.
- 6 Country open and cultivated. All this region is liable to be flooded in spring. Low mounds to r.
- 11 Pass **Khān-i-Badran**, in ruins, and for the next 2 m. some irrigation channels with marshy ground extending towards the river. Ruins of **Bint Hasan** to E.
- 14 Pass **Qal'ah Tinai**, in ruins.
- 15 Cross irrigation cuts and skirt an embankment to keep out the floods of the Tigris, which is now visible to the W. The embankment is about 20 ft. high, 12 ft. wide on top, and 30 ft. wide at the base.
- 18 **Jedeideh**, 300 houses, in a grove of date gardens, enclosed by a mud wall; two khans. (The distance given by the authority here followed is perhaps too short. Jedeideh may be 20–21 m. from the Mo'adhham Gate.) The first khan reached on entering the village is about 80 yds. square, with stabling for 200 horses, having a well in the centre, with water 20 ft. below the surface. The other khan, near the river, is 60 yds. square, with stabling for 100 horses. To NE. are numerous villages along the Nahr Khālis, and canal from the Diyāleh. Small canals cross the road flowing towards Hawesh.
- Beyond the principal khan the track lies through walled date gardens for a mile. Ground swampy in winter and spring from irrigation. On leaving the village cross an irrigation channel, 15 ft. deep and 30 ft. wide. Skirt this for $\frac{1}{4}$ m., then strike half-right over a marshy plain.
- 20 Cross three parallel irrigation channels. A road goes between two of these. Channels about 8 ft. deep and 12 ft. across, with the usual palm-trunk bridges.

Miles from
Baghdad

- 22 **Dokheileh**, among date gardens, between the walls of which the road passes. Ground to r. very marshy for 2 m.
- 22½ Skirt the **Tigris** a short way to l. The bank is heavily dyked by an embankment, 15 ft. wide at top, 20 ft. high, and 40 ft. at the base, revetted with brushwood. Continue along dykes, cross and skirt a canal. Low tamarisk jungle fringes the river. Several small villages are dotted over the plain to E., each with date gardens. The Mamūdiyeh and Nahr Khālis canals from the Diyāleh traverse the plain which stretches eastward to the Diyāleh.
- 26 Leave the dykes, which here become lower, and trend half-right over cultivated and rather boggy plain.
- 29 Pass **Jeizāni Saghīr**, with a large grove of palm-trees. **Jeizāni Kebīr** is 4 m. to E.
- 31 Cross some water-channels. There are several tracks across a cultivated plain, low and boggy with a few water-channels intersecting it.
- 34 **Zedaideh**, 300 houses, hidden in date-groves, with khan.
- 36 **Khān Nahrawān**. Route turns NE. A short distance beyond Nahrawān village is the bed of the old Nahrawān Canal, 60 yds. wide, 10 ft. deep, in which excellent grazing is to be found in spring. (Most of the maps seem to make the distance up to this point about 40 m., but it is not known on what authority.)
- 36½ Desert route to **Tūz Khurmatli** and **Kirkuk** diverges to N. leading via **Qarfeh** (21 m. ?), the **Band-i-'Adheim** on the 'Adheim River (46 m. ?) through the **Hamrīn Hills** by the Demīr Qāpū defile, and thence by r. bank of 'Adheim River to **Tūz Khurmatli** (78 m. ?), whence the main Baghdad—Mosul route is followed to Kirkuk (see below, m. 142½). Supplies and water between Nahrawān and Tūz Khurmatli are deficient, the country being mainly desert. Qarfeh is a small village lying near some salt pools. There appears to be no permanently inhabited place between Qarfeh and Mufti Khān at the S. end of the Demīr Qāpū valley.
- Route passes through cultivation, interspersed with thorn bushes.
- 36¾ Cross an irrigation channel, 5 ft. wide by 4 ft. deep.
- 37¾ Cross another canal, 90 yds. wide by 15 ft. deep, partly grass-grown, and with water-channel in the bed, 8 ft. wide and 6 ft. deep, with steep sides.

Miles from
Baghdad

- Route runs parallel with general direction of **Khālis** Canal, which lies some distance to r.
- 39½ **Abu Tamar**, on the r. The soil is of soft crumbling clay, which cuts up in wet weather. A little cultivation on the r.
- 41 Cross irrigation-channel, 14 ft. wide and 10 ft. deep, trending NE. and SW., by a narrow palm-tree bridge, 2 ft. wide.
- 45 Leave T.L. and turn half r., passing some cultivation on the l.
- 46 Several irrigation channels on the r., 12 ft. wide and 7 ft. deep.
- 47 Track again turns half r.
- 50 Reach the bank of the **Khālis** Canal, 50 ft. wide and 8 ft. deep, with banks about 40 ft. high. A few water-lifts. Some cultivation on the l. bank, very little on the r. Cross several outlets of the canal, average depth 8 ft., and width about 15 ft.
- 51 **Serajik** (?) on the r., after crossing several water-cuts. The place lies among many date gardens, enclosed by mud walls. These enclosed date gardens would often form good defensive positions, especially against musketry. It contains about 100 houses.
From Serajik tortuous route among walled gardens to Duzdyari.
- 52 **Duzdyari**, 100 houses, date gardens. The **Khālis** Canal here winds a great deal, and has a current of about 2 m.p.h., its general direction being SW.
Beyond Duzdyari r. bank of canal is followed; several water-cuts for the first 3 m., about 15 ft. wide and 10 ft. deep. Small palm-tree bridges. Canal very tortuous, and navigable for large boats. Water-cuts impassable for wheeled traffic, one being at least 20 ft. deep and 16 ft. wide.
- 55½ Pass **Abu Delef** (?), a few Arab mud huts on the r. (this place is called Abdul Latif in a report of the route made in 1903); some Arab tents (1903) on the l.
- 57 Pass **Abu Guveh** (?), 50 mud huts on the r. (this place is called Abu Gharra in a report of the route made in 1903). Water-cuts to l. of road, 6 ft. wide and 5 ft. deep, occasionally overflow (as in 1903) and make ground boggy.

Miles from
Baghdad

58

Pass **Abur** on the r., 60 houses with mud walls : much cultivation irrigated by water-cuts to l. of road.

A few water-lifts along the Khālis Canal.

62

Imām Seyyid Mohammed. Canal and road bend to E.

67

Delli 'Abbās. A village on the Khālis Canal near the **Jebel Hamrīn**. 300 houses (1903) with some fruit gardens. *Zaptieh* post and garrison of about 600 men. In 1903 it was reported that there was here a brick bridge with three arches over the canal in good repair, carrying an 11-ft. roadway passable for guns. In 1910 the bridge was reported to be 45 ft. long with two arches, one of stone, the other of wood. The Khālis Canal is variously given as 60 yds. and 60 ft. broad. It is 8 ft. deep. Telegraph in 1903 reported as not passing through village.

Supplies plentiful for small caravans. Water abundant for any number from Khālis ; good grazing and fuel. 200 horses and 100 donkeys obtainable in normal times.

Routes from **Delli 'Abbās**—

1. To **Bāqūbeh** and Baghdad by r. bank of the **Diyāleh** River. See Route (i) above.
2. To **Qarfeh** (about 13 m. to WNW.). No details available. See m. 36½.
3. To **Mansūriyeh** (7 m.).

This route leaves **Delli 'Abbās** in an easterly direction, running along the foot of the **Jebel Hamrīn** and on the r. bank of the **Khālis** Canal.

At m. 2½, lake on the farther side of the Khālis Canal. The **Diyāleh** flows through this lake, leaving it about 2 m. to the S.

At m. 5 **Mansūriyeh el-Jebel** village on the slope of the **Hamrīn** Hills. Route bends ESE.

At m. 5¾ turn S., and cross the **Khālis** Canal about ¼ m. W. of the place where it takes off from r. bank of **Diyāleh**.

At m. 6½ cross upper end of lake, near the place where the **Diyāleh** River enters it from the NE.

At m. 7 **Mansūriyeh** (½ m. W. of this village is the head of the **Khorāsān** Canal which flows in a SW. direction to **Bāqūbeh**, watering the country on the SE. of the **Diyāleh** River).

About 1 m. N. of **Mansūriyeh** the **Diyāleh** issues from a narrow defile through the **Hamrīn** range, which extends for about *6 m. to the N. There is no frequented route through the defile, the most southern part of which is described as quite impassable for about 1½ m. There appears to be a track turning this part of the defile to the W. : but no information with regard to its practicability is available. The central

Miles from
Baghdad

portion of the defile is also very difficult, and is reported to be probably quite impracticable when the Diyāleh is in flood. At the N. end of the defile the course of the Diyāleh River, as one goes up-stream, turns in a NE. direction, and at this point it is joined by the Nahrīn Su, which flows from the NNW. along the foot of the NE. side of the Hamrīn Hills. Qizil Ribat lies about 79 m. NNE. of Mansūriyeh beyond the Hamrīn range, on the l. bank of the Diyāleh River and on the Baghdad—Khanikin road (see *Route 28 a*, m. 75). The section of this route lying between Qizil Ribat and Shahrabān passes 2 or 3 m. to the E. of Mansūriyeh.

Mileage below calculated from Route (ii) to Delli 'Abbās.

The Mosul route takes a northerly direction from Delli 'Abbās over slightly undulating desert. To W. is a marshy stream flowing to join the Khālis Canal near Delli 'Abbās. To E. the Jebel Hamrīn appears about 4 m. distant. The T. L. takes same general direction as the route, but apparently runs some distance W. of the usual track. The ground is boggy in places owing to a broken water-cut.

72

Cross dry nullah.

73

Cross line of small hillocks.

Enter a valley in red sandstone hills called **Jebel Hamrīn**, which close in. Ascent gradual. The ground near the road is very broken, conforming in this to the general character of this side of the Hamrīn Hills.

Sharp bend in valley.

76

Qishlaq Suhāniyeh, fortified police post in ruins in 1903. (In 1910 there was a police post hereabouts, said to be $8\frac{1}{2}$ m. from Delli 'Abbās, containing 15 men: it had one well.)

Small stream, slightly brackish but drinkable. Only a few inches of water in January 1903. Ravine 20 yds. wide, 20 ft. deep, with a pebbly bottom. Boundary between Baghdad and Mosul *Vilayets* runs in the neighbourhood.

An authority states that between this point and the highest ridge about 5 m. distant lies a series of small parallel crests rising to a height of 30–35 ft. above Suhāniyeh at intervals of 175–250 yds. Another authority says that the hillocks rise to not more than 200 ft. above the track.

For the next 5 m. the route winds among the undulating spurs of the Jebel Hamrīn till the summit of the pass,

Miles from
Baghdad

- 600 ft. above the plain, is reached. The last 100 yds. of the ascent are steep and pebbly. T.L. rejoins the route near this point. (One account makes the ascent to summit of the pass 6 m.)
- 81 Descent on N. side of *Jebel Hamrīn* begins. This is much easier than the ascent on the S. side, and the route presents no difficulty for guns. Good grazing ground (in spring?) on this slope of the hills was reported in 1873.
- 88 Enter open cultivated plain, the valley (8 m. wide) of the *Nahrīn Su*, which flows SE. to the *Diyāleh*. (One account makes the descent from the pass 3 m. in length.) Road boggy in wet weather.
- 88 ***Nahrīn Kōprū***: brick bridge across ***Nahrīn Su***: five arches in fair repair. Channel 60 yds. wide, but little water (25 ft. wide) in January 1903. In the winter of 1909–1910 water 50 ft. wide, 6 ft. deep. (One account places this bridge 5 m. from summit of pass and 2 m. from foot of hills.)
- Two villages, both called ***Nahrīn***, $\frac{3}{4}$ m. from the bridge, containing together 300 houses well built of mud.
- Four or five villages of about 60 houses each higher up valley.

The valley of the *Nahrīn* is fertile in this region and fairly well cultivated (the crops were chiefly millet in 1873), but has suffered from Kurdish raids. About 12 m. above the bridge the *Kufri Su* enters it from the NE. Above the junction of the *Kufri Su* with the *Nahrīn Su* the valley runs up NNW. between the range of the *Jebel Hamrīn* and the *Kufri Dāgh*, and becomes bare of cultivation for about 22 m., and for the most part uninhabited. Though it becomes narrower it is still some miles broad: its floor rises in a gradual slope from about 500 to about 750 ft. towards its head: the *Hamrīn Hills* on the l. rise to nearly 1,200 ft., and the *Kufri Dāgh* on the r. to about 1,000 ft., at their highest points. The valley is entered by a number of streams, which join the main channel along the bottom of the valley, here called *Chinchal Dereh* or *Neft Dereh*. The bed of this main channel is reported as only occasionally containing water, but there is much naphtha in it, as also in the hills to the N. In the upper part of the valley (possibly 18–20 m. NNW. of the mouth of the *Kufri Su*) appears to lie a large village of *Biyāt Arabs*. About 21 m. from the *Kufri Su* junction (in the neighbourhood of another *Biyāt* village) the valley leads by easy stages into a more populated plain, covered with ruined villages and tombs, and bounded on the NE. by a line of hills (*Neft Dāgh*) at the foot of which runs the *Baghdad—Mosul road* (17 m. from *Kufri*, $8\frac{1}{2}$ m. from *Tūz Khurmatli*).

Miles from
Baghdad

- Qara Tepeh is visible, lying about N. by E. from Nahr in Köprü, but cannot be reached directly owing to swamps. Route goes N. from the bridge.
- 91 Route bears easterly to—
- 95 **Qara Tepeh**, about 300 houses on the SW. slope of the Kufri Dagh. Seat of a Mudir and *zaptieh* post (100 men in 1910). Several gardens on the E. side of the village. More Shiah than Sunnis among the inhabitants. One khan (100 × 50 yds.) in good repair (1903) and stabling for 200 horses. The building is of solid brick. Large well-built granary, in the shape of a khan, to the r. Supplies plentiful for small caravans. Sheep and goats obtainable. Good grazing and fuel. Abundant water from wells.
- Vineyards beyond Qara Tepeh.
- Numerous streams in this neighbourhood, gravelly downs with plenty of grazing between Qara Tepeh and Kufri. Numerous flocks of sheep in winter and spring.
- Track leaves Qara Tepeh, going about NNE. and ascending rolling downs.
- 95½ Cross an irrigation canal, 14 ft. wide, 2 ft. deep (January 1903). Broken brick bridge.
- 100 Direction about NE. by E. (60°).
- 101 Top of downs.
- 103 Track goes about N. by E.
- Chemen Köprü** : brick bridge of six arches in good repair (January, 1903) over a stream flowing W. (Another account, of 1910, gives five arches.) In January 1903 the water was 18 yds. wide, muddy and sluggish, flowing among reeds. Country in neighbourhood of track between this point and Kufri is well cultivated.
- 104 Cross a stream flowing SW. to join the Kufri Su. It has little water except in spring. Remains of a brick bridge with only two centre arches standing. The r. bank is steep, the l. sloping. Banks would need to be repaired for guns. After much rain a bridge would be necessary : no materials locally available. The bed is 80 yds. wide.
- Cross some broken ground, with small ravines, on leaving the stream. Then across a wide plain of soft sandy loam, with much cultivation on both sides. Several villages of about 50 houses each.

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- 107 Cross the shingly bed (300 yds. wide) of the **Kufri Su** (or **Chechepan**). Little or no water except in flood.
- 108 Track turns E. (?) towards two large mounds, 1 m. away.
- 109 Track turns N. by E. again.
- 110 **Teleshān** on the other side of Kufri Su valley. Route crosses some low hills ascending by easy gradients, bearing due N. after 2-3 m.
- 115 Road reaches the crest and continues over nearly level ground for about $1\frac{1}{2}$ m., when a gradual descent towards **Salāhiyeh** begins.
Cultivated plain. Several villages. In this region ruin field of Eski Kufri.
- 117 **Salāhiyeh (Kufri)**. For coal in neighbourhood, see p. 371. On leaving Kufri, for the first 8 m. the Mosul road runs WNW. about $\frac{3}{4}$ m. from the foot of a quartz ridge (Jebel Dā'ud) to the r. The height of the ridge is variously estimated at 100-150 ft., and at 500 ft. On the l. the ground falls gradually to the bottom of the valley. To Tūz Khurmatli and for 5 m. beyond the track is throughout commanded by long-range rifle-fire from the Jebel Dā'ud. Troops and transport could march farther away from the hills, but would find the ground softer and would have to close in on the usual track at the wadis mentioned under m. 125 and m. 135. From Kufri to a point 8 m. beyond Tūz Khurmatli the route lies through a grassy undulating country, with several streams and nullahs which usually have gently sloping sides (but see under m. 135). About 4-5 m. to the S. lies the N. edge of the Kufri Dāgh, of which this part seems to be known also by the name of Jebel Koruk. The T.L. follows closely the l. side of the road. In spring there are numerous encampments of Biyāt Arabs in this region.
- 125 Mouth of gorge in the ridge to the r. This contains the shingly bed of the **Koru Su** (200 yds. wide), which on leaving the hills takes a SE. direction. It usually contains only a few pools of water. The l. bank is gently sloping and low, the r. higher and steeper.
Village of 100 mud-walled houses 3 m. to the l. (lower down the course of the Koru Su?). The line of hills on the r. approaches to within 200 yds. of the road.
Beaten track, leading N. into the hills, crosses the road

- in this neighbourhood. It seems possible that it follows the valley of the Koru Su. It is said to lead in 5 hrs. (? +15 m.) to a settlement near the Āq Su of 1,000 households of Da'udiyeh Kurds, whose chief is Samim Bey. These people are apparently warlike semi-nomads.
- 127 **Gharreh Hill** on r., with white patch. Hereabouts the floor of the valley apparently slopes to the NW., and there is little or no cultivation.
- 131 A branch track takes off to r., leading across hills to Abu Sarkāl oil-springs, situated in a maze of rugged ridges and valleys, through which it is difficult to find one's way. There are about seven borings altogether, situated on both sides of a small ravine. Near them stands a small fighting-tower. The springs are said to yield about ten donkey-loads of oil daily, and the load sells for 2s. to 2s. 4d. at Tūz Khurmatli. The principal pit is 15 ft. in diameter, and 25-30 ft. deep. The oil is brought up in goat-skins by men who clamber down for it. The springs are the property of the *Dā'irat es-Saniyeh*. In the neighbourhood are some rock dwellings cut in the face of the cliffs, and near the springs is an open plain in the hills. Here were in April 1910 two households of Na'aim Seyyids, who had then been settled here for about thirteen years.
- From Abu Sarkāl a beaten track, made by the oil caravans, leads to Tūz Khurmatli, a distance of about 6 m.
- 134 Some cultivation.
- 135 In this neighbourhood a wadi is crossed, at which blasting would be necessary to enable guns to pass.
- 137½ In this neighbourhood the tracks from the valley of the Neft Dereh join the road on the l. Head of the Neft Dereh valley 2 or 3 m. to the S.
- Khasradālah**, village of Biyat Arabs (100 households), 2 m. to the l.
- 141½ **Āq Su** (white water) (*Āv-i-Spi* in Kurdish, *Nahr Abyadh* in Arabic). This river here flows in a SW. direction over a gravelly bed, $\frac{1}{4}$ m. wide, usually containing little or no water. Its banks are easy and about 15 ft. high, the left being the higher. Usually the stream is easily fordable, but it rises rapidly, and is dangerous

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when swollen with rain or melted snow, for there are several holes in the bed. It may in a few hours become a broad and impassable torrent, and then with equal rapidity sink to fordable dimensions. Men and horses are sometimes drowned in it. On the l. bank are three water-channels, each 6 ft. wide and 10 ft. deep, with a small brick bridge about 4 ft. wide over each. Smaller water-cuts without bridges occur between the river and Tūz Khurmatli.

The Āq Su has its head near Kitshan on the S. slope of the Qara Dāgh, apparently about 47 m. ENE. of Tūz Khurmatli, above which place its course lies through low, broken hills, scored by ravines which open into its valley. As it approaches Tūz Khurmatli it flows through a gorge under the comparatively high Neft Dāgh on the l. bank. Much of its water is used for purposes of irrigation in the neighbourhood of Tūz Khurmatli. Below it turns SSW. and flows through a plain to join the 'Adheim River about 11 m. away. Its junction with the 'Adheim is near the edge of the Hamrīn Hills, and at the middle of the valley which the latter stream cuts through that range. For the last 5 or 6 m. of its course the Āq Su skirts the S. end of the great marshy area flooded in spring by the 'Adheim and its tributaries.

142½

Tūz Khurmatli ('Salt and Dates'). Pop. ? 3,000 (about 600 houses). T.O. ? The town lies at the mouth of the defile between the Neft Dāgh and the 'Ali Dāgh, which is traversed by the Āq Su. This defile, which leads in the direction of Suleimāniyeh, was guarded by an old fort, now apparently ruinous. The houses are principally mud-built, with some of stone. There are two khans in the centre of the bazaar. One khan has an upper story for half its circumference; but there are no doors, and for windows only holes in the wall. Water scarce in l.-w.; one spring in hills: grazing good. Fuel plentiful. The plain in the neighbourhood seems to be fairly well cultivated. There is a local industry of some importance in the refining of oil from the adjacent hills. There are about twenty stills outside the town (six working in 1910). Oil is sent to Salāhiyeh (Kufri), Kirkuk, and Suleimāniyeh, and occasionally as far as Mosul. A petroleum spring is marked on recent

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maps near the town on the l. bank of the Āq Su under the Neft Dāgh. It seems possible that this is due to a confusion with the Abu Sarkāl springs. From a spring S. of the town salt is obtained by evaporation. The working of the salt-pans is Government property. In 1909, 400,000 kilos of salt were taken; and the selling rate was approximately equal to 7s. 7d. per 100 kilos.

The inhabitants are for the most part Turks, with some twenty households of Jews. The place is the centre of a *nahiye* under a Mudir, and there has been usually a Turkish military post of about 200 men.

On leaving Tūz, the route takes a NW. direction (320°), crosses two small nullahs, passes some gardens, and for the first 2½ m. runs through a little cultivation. The hills to the r. are rather lower. The 'Adheim River, bordered by a great belt of swamp which is flooded in spring, is about 7-8 m. to SW., beyond which the Hamrīn Hills are visible. The road is on the whole level and good going as far as Dahuk.

145½

Two villages on the plain are passed (1903).

147½

Road here is rising. The hills to the r. converge towards the road and die away; but mounds continue near the road for 3 m. farther.

Āl Bū Sabāh village (200 houses of Dā'udiyeh Kurds) 2-3 m. SW. by W. of this point. A path crosses the road leading from this village to the Dā'udiyeh settlement to the E. near the Āq Su, mentioned under m. 125.

Other villages are reported to be visible in the plain to the W.

149½

Road reaches highest point of the gradual slope which it has been ascending for some miles.

150½

Mound on r. of road.

151

Quru Chai, water-course running SW. from the hills on the NE. to the 'Adheim River, which it joins 9½ m. SSW. The Quru Chai is rarely a continuous stream, but rain or melting snow may convert it into a torrent presenting a serious obstacle at least for a few hours. In general character it is similar to the Āq Su. It has a pebbly bed 300 yds. wide, and there was a pool ½ m. up-stream from this point in January 1903, while there

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- were several pools in the neighbourhood in April 1910. The banks are quite low and the passage is easy.
- 151½ A second arm of the Quru Chai, about 100 yds. wide, is said to unite with the first at a point a little farther to the W.
- During the next 10 m. between the Quru Chai and the Dahuk Chai a few water-courses, usually dry and with easy banks, have to be crossed. There are now some low hills to the r., beginning at a few miles distance, gradually closing to within 1 m. of the road, as the Dahuk Chai is approached. The road first covers slightly undulating ground and then ascends a long gradual rise. Direction about NNW.
- 156 About this point a village of Dā'udiyeh Kurds under Namūk Agha lies WSW. 2-3 m. distant. It contains about 300 houses.
- 158½ Top of the long rise.
- In the hills to the E. are some settlements of Dā'udiyeh Kurds, one of which is **Shoraweh** (50 houses) about .1 m. from the top of the long rise above mentioned. To the W. is a conspicuous mound, about 3 m. distant. A group of trees, rather nearer and a little N. of W. ; at this grove is said to be a village called **Iftighār**, 300 houses of Kurds under Namūk Agha (1910).
- 161 Ruined tower and house on mound. To l. of road small canal 6 ft. wide bringing water from Dahuk Chai.
- 161¼ **Dahuk Chai**, in a shingle bed 800 yds. wide. There is always some water in the Dahuk, and in winter and spring the stream flows in several channels, the width of which varies according to the season and weather: the broadest was reported as 15 yds. wide in January 1903, and as 40 yds. wide in April 1910. The current in January 1903 was 6 m.p.h. The river is unfordable when at its highest, as after rain, but sinks rapidly. The r. bank is 20 ft. above the bed, and the l. about 10, the r. being generally the steeper. For guns and transport the descent to and ascent from the river-bed would need improvement.
- The Dahuk flows to join the 'Adheim, of which it is the the largest affluent. It rises from the W. spurs of the hills SW. of Suleimānīyeh.
- It flows in a formidable torrent when in spate, and brings

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down at times such a large and rapid volume of water that it has made for itself below Dahuk village a bed about 1 m. in breadth.

The Dahuk is the boundary between the territories of the Dā'udiyeh Kurds in the SE. and the Talabāniyeh in the NE. The latter are accounted Seyyids (of the blood of the Prophet), and are turbulent and predatory.

Between the Dahuk Chai and Dahuk village are several water-channels, some of which are as much as 20 ft. deep and 20 ft. wide : all are crossed by palm-tree bridges, but these are not more than 4 ft. wide.

162 $\frac{1}{4}$

Dahuk village. Just before entering the village there is some high ground on the l. on which stands the minaret of an old mosque which has disappeared : the tower is a conspicuous landmark.

The village contains about 200 houses. Water from the the Dahuk Chai is good and plentiful. Grazing good : fuel poor. Inhabitants were reported in 1873 to be Turkomans : in 1905 there were more Shiahns than Sunnis among them. A canal from Dahuk Chai runs through the village. The place is the seat of a Mudir, with a *zaptieh* post. 1 $\frac{1}{2}$ m. NE. of Dahuk is the shrine of Zain el-Ābidīn, with one large and three small white domes and a few houses of Seyyids beside it. This shrine is a conspicuous landmark.

From Dahuk a route, reported to be easy, leads over the low hills in a NNE. direction to **Leilan** about 25 m. distant. From Leilan there is a track over the grassy plateau of the Makanjeh Dāgh to **Chemchemal** (about 24 m. NE. of Leilan). Here the high-road from Kirkuk to Suleimāniyeh, which is accompanied by a T.L., is joined. See *Route 37*. The country between Dahuk and Chemchemal is open, but contains numerous gravelly undulations and ravines, and many small streams. Villages are few owing to Kurdish raids.

For a shorter route from Dahuk to Kirkuk see m. 164 $\frac{3}{4}$ below.

From Dahuk the route runs in a general direction NNW. over rolling downs, accompanied by T.L. Track easy : only slight repairs needed here and there for guns.

164

A considerable ridge is crossed. Villages 2-3 m. to SW. of road, **Tepéh** (40 houses), **Yangiyeh** (60 houses) and **'Abd el-Ghanim** (140 houses) : all inhabited by Talabāniyeh. Dahuk lies behind, S. by E.

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164 $\frac{3}{4}$

A few water-cuts with narrow palm-tree bridges. Open cultivated plain : hills 1 $\frac{1}{2}$ m. to right.

At a point some distance beyond this ridge a track branches to r. in a general N. direction to Kirkuk, which by this way is about 18 m. distant. The way by the main road, which makes a détour to the W., is about 5 m. longer. The following is a description of the shorter road to Kirkuk :

Hrs.	Min.	
0	0	Dahuk.
0	45	Cross the ridge mentioned above.
1	55	After passing on the l. Matareh village (so called in Kurdish : Arabic name Ma'amareh : 50-60 houses of Arab Seyyids, see m. 168 $\frac{1}{2}$) this shorter route to Kirkuk crosses a small shingly stream and enters low hills.
2	15	An eminence is reached, from which Matareh bears a very little S. of SSE.
2	38	Another eminence, from which Dahuk lies a very little to the S. of SSE.
2	43	In the hills to the l., and not far off, is the village of Shirinjah Balaq , consisting of 50 houses of Talabāniyeh.
3	8	Descent from the hills begins, and Kirkuk is seen lying about due N.
3	20	Zandaneh village (70 houses of Arabs and Kurds) is seen to NW. of W. at 1 $\frac{1}{2}$ -2 m. distance.
3	30	The road emerges from the low hills.
3	45	Small clear stream called Qara 'Ali Chai (Khôr Chai), running in a deep ravine, is reached. The descent from the water to the S. bank is steep. There is a mill near the crossing (1910). On ascending the farther bank the village of Qara 'Ali appears to the NE.
3	50	Pass Qara 'Ali village (100 houses of mixed tribes), about 300 yards to the r. of the road.
4	5	Tarjil village (200 houses of mixed Kurds) is visible 4 m. away, ENE. To the r. Qara Hasan Hills, extending N. to E.
4	18	A small water-course (dry, April 1910) is reached, and in another 2 mins. on the l. side of the road is the Turkoman village of Tokmakli (about 60 houses).
4	25	A shingly bed 70 yds. wide (Chai Tokmakli) is crossed. To the WNW. at 1-1 $\frac{1}{2}$ m. are three villages called collectively Sari Tepeh (200 houses of mixed Kurds).
4	40	A covered-in well, Sabil Khaneh , on the road. Eijeibat , an Arab village of 50 houses, lies about 2 m. off ENE. Kirkuk is due N. Cultivation near road into Kirkuk.
7	15	Kirkuk is reached, standing up boldly as one approaches.

165 $\frac{1}{2}$

Tel Mustafa village and others at some distance in plain to l.

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- 168 $\frac{1}{2}$ **Matareh** village, to the r. of the road 4 m. off at the foot of a low line of hills.
- 171 The **Setal Dereh** is crossed: a ravine 10 ft. wide and 5 ft. deep. Transverse track to villages on r. and l. about 4 m. off.
- 171 $\frac{3}{4}$ Nullah 100 yds. wide, of shingle: banks cut up by small ravines.
- 173 $\frac{1}{4}$ Nullah (**Matareh Dereh?**): 100 yds. wide: dry in January 1903. Villages to the l. on the plain.
Cross numerous stream-beds, usually dry.
- 176 **Qara 'Ali, or Khör, Chai**: 12 ft. wide, 2 ft. deep (January 1903), in a pebbly bed 60 yds. broad. This water-course comes from the direction of Leilan (ENE., see alternative route under m. 164 $\frac{3}{4}$), and near this point turns S. to join the 'Adheim River (6-8 m. away) at the N. end of the Hamrīn 'Adheim marshes. The valley of the Qara 'Ali Chai above this point apparently contains a practicable route.
- Taza Khurmatli** on the r. bank of the Qara 'Ali Chai, near a high mound about 100 ft. high. The place contains about 100 houses. Good water and camping-ground. The country round is marked by a number of tumuli. The 'Adheim River; which from the N. end of the marshy belt above mentioned is known under the name of the Hasa Su, flows in a S. direction about 1 m. W. of the village. There are some villages to the SW. of Taza Khurmatli between the Hasa Su and the Qara 'Ali Chai.
- From Taza Khurmatli the road runs in a general NNE. to NE. direction.
- Hills at first lie close to road on the r.; then after $\frac{1}{2}$ m. through walled gardens and over water-cuts, some low hills are crossed. The country is open but rather stony.
- 179 Cross the **Hasa Su** (almost dry in January 1903), in a bed 300 yds. wide of shingle and sand.
- The Hasa Su (upper course of 'Adheim River) is formed by a number of torrents in the hills NW. of Chemchemal, and runs in a great curve to the W. to Kirkuk, whence it takes a S. by W. direction till it becomes known as the 'Adheim River below its junction with the Qara 'Ali (see m. 176).
- At this point the river leaves the last of its defiles (2 or

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3 m. broad) and enters the plain. It has little or no water, except after rain or the melting of the snow.

Chardakli village in plain to W.

Mound on the r. bank of river, 200 ft. high, with a guardhouse on the top.

179½

Pass some cultivation and skirt the river-bed. To the r. the valley of the Hasa Su opens out into the broad valley of **Leilan**. The village of Leilan is 15 m. to the E. To the l. is the low ridge of the Chardakli Dāgh.

181

Slight descent towards Kirkuk begins. The r. bank of the Hasa Su is still followed. The country is undulating, the track easy, and on both sides of the road there is cultivation. T.L. to the l.

183½

The bed of the Hasa Su is here ¼ m. to l. When dry it may be used as an approach to Kirkuk.

187½

Kirkuk.

Between Kirkuk and Altun Köprü (≈25 m. NNW.) is a range of hills of moderate height, variously marked as **Jebel Gurgur** or **Shamaskin Dāgh**, which run from WNW. to ESE. The E. end of this range is known as **Babā Gurgur**. To the S. of this eastern end are a number of low ridges divided by gravelly ravines, which lie to NW., W., and S. of Kirkuk. The watershed between the Hasa Su and the Lesser Zāb lies among these ridges about 10 m. from Kirkuk. On the NE. side of the **Jebel Gurgur** is a valley between these hills and the **Shuan Dāgh**. At the lower end of this valley is **Altun Köprü** town, and it is drained by a stream-bed called by some authorities the **Mayar Dereh** (see m. 208½ below), which joins the Zāb about 2 m. below **Altun Köprü**.

A traveller who crossed this stretch of country in 1909 says that there are three roads between Kirkuk and **Altun Köprü**. The safest, though not the shortest, was that which kept to the W. to avoid raiding parties of **Hamawands**, *via* **Tepeh Kōi** and a ruined khan before crossing the hills. As far as can be gathered from reports and recent maps there are several possible tracks both on the S. and N. sides of the **Jebel Gurgur**. Besides the pass over the hills mentioned under m. 198½, there is apparently another pass by **Shamaskin**.

Leaving the **Korieh** suburb of Kirkuk on the r. bank

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of the Hasa Su, the road passes the large village of **Shatarli** (200 houses, with leaning minaret), proceeds through cultivation for 2 m. in a WNW. direction. It then crosses low stony downs.

192½

Bābā Gurgur Pass. This place, which lies a little to the r. of the road, is a slight hollow in some high ground, about 50 yds. by 20 yds., and there are some twenty vents of natural gas in it. These are generally alight unless artificially extinguished. If one of the vents be stopped with earth, the gas usually escapes at some other place near by, where it can be lighted with a match. There is a strong smell of sulphur in the air.

193 (?)

A little farther on beyond the gas-vents in the same direction from Kirkuk, but quite near the road, are four to five oil-pits called **Diār** (wells). (These wells are marked 6½–7 miles from Kirkuk in a recent map of the road, but they have been reached in 1 hr. 10 minutes from Kirkuk, and are described as 'just beyond' Bābā Gurgur). They are the property of Sālih Pasha, and are said to yield eight donkey-loads (say thirty-two tins) of crude oil daily. The pits are situated on a slight hill, and are 12–15 ft. deep. The water is separated from the oil at the wells, and the oil is afterwards refined at Kirkuk. There is a sulphurous spring in the hills, a little farther on than the oil-pits.

The road to Khān en-Neft, as described below, may be somewhat NE. of the main road. Another track, followed in 1903, passed the ruins of Khān Hangia over broken country by a stony track which required improvement for wheels.

The Bābā Gurgur sandstone hills are now entered (Qarachok mountain, with two peaks, lying WNW.) and the top of the outer ridge followed for some distance.

194¼

After 23 min. ride, **Bajiwān** (30 Kurdish houses) lies 1½ m. SW. by S.; **Bataweh** (150 houses of Turkomans) 3 m. SW.; **Qumbatlar** (120 houses of Turkomans) about 4 m. SW. by W.; and **Choprijuh** (100 houses of Turkomans) 2½ m. W. The Jebel Makhul, on the other side of the Tigris, can be seen to SSW. at a great distance. Road continues along outermost ridge for 8 min.

194¾

Road bears N. by W., crossing the strata diagonally and making for an inner ridge of hills.

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- 196 The nearer peak of Qarachok lies W. by N. from about this point.
The road runs now NNW.
- 197 Cross ravine containing water, and *zaptieh* post called **Khān en-Neft**. Road runs in a general N. by W. direction to the pass over the inner ridge.
- 198½ Cross summit of the inner ridge of the **Jebel Gurgur**; very steep and pebbly ascent and descent for $\frac{1}{4}$ m. each side were reported in 1903. The track is 12 ft. wide. This is the watershed between the Hasa Su and the Lesser Zāb. The plain of the Mayar Dereh can be over-looked as far as the Lesser Zāb.
From the pass the following villages were observed in 1910:—**Kalwur**, NE. by N., **Daraman el-'Aliyeh**, ENE., **Daraman es-Sifeh**, E. by N. The road descends to the plain in a general NNW. direction.
There appear to be a number of alternative tracks from the pass to Altun Köprü. In the latest map made of the route (1912) the main road is shown as running through Ki Bibaneh and Gök Tepeh, and crossing the Mayar Dereh about $2\frac{1}{2}$ m. from Altun Köprü. It does not exactly coincide with either of the routes described below.
From the further side of Jebel Gurgur a track leads NNE. to **Köi Sanjag**, crossing Lesser Zāb by a ford (impassible in winter) at foot of range bounding the Shuan country on W., and continuing over easy foothills, below which water is found, to a pass from which Köi Sanjag is visible.
- ROUTE (i)
- The following account is taken from a report of 1910:—
- 200½ Descend from pass to plain. In 40 min. Kalwur lies due N.
- 201¾ **Kalwur** village, $\frac{1}{2}$ m. to r.
- 202½ From this point **Bibaneh Zughair** (15 houses) is 1 m. N. by E.
Bibaneh Zardak (20 houses) is about 3 m. NE. by N.
Bibaneh Kebir (60 houses) is about 4 m. NE. by E.
The road runs NW. by N. T.L. now on l.
- 207 In 1 hr. 35 min. from Kalwur a point is reached from which the prominent mound of **Gök Tepeh** is $\frac{1}{2}$ m. to N. **Nebi Aweh** (30 Kurdish houses) 1 m. W.S.W.

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- In the country through which the road now passes are a number of villages inhabited by Sawalih (or Salihi) Kurds. There are said to be about 30 villages of this tribe in all.
- 208½ The road crosses a small clear stream in a shingly bed called by the Turks Injesui and by the Kurds Galal (so reported in 1910. This may be the stream marked on maps as Mayar Dereh).
- 209¼ Road crosses two small canals spanned by small bridges. Kitkeh village about 2 m. to SW.
- 210¼ Broad depression followed by a stony ascent.
- 211½ Road crosses a small dry shingly ravine called Qara Chai in Turkish and Wishkakan in Kurdish.
- 211¾ From this point the whole way to Altun Köprü is downhill.
- 213 **Altun Köprü** town.

ROUTE (ii)

- The following account of another track is taken from a report of 1903 :—
- 199½ Foot of the hills. Open cultivated plain extending about 10 m. in all directions and up to Altun Köprü. Five or six small villages in the plain to the r. The road turns to the l. from the foot of the pass and runs parallel to the hills at a distance of about 2 m. Track level and good, through cultivation.
- 201 Small stream of good water to r. Small copse.
- 203½ Pass small village on l. ½ m. off. Several villages to r. 2-3 m. off.
- 204 *Karez* with good drinking water on either side of the road. Copse on r. T.L. parallel to the road on the l. (?)
- 206 Mound 100 ft. high to r. (This is possibly to be identified with the mound called Gök Tepeh by a 1910 authority.) Some copses about ¼ m. from the road. Small village 2 m. off to l. Cultivation on both sides of the road. Hills 4 m. to l.
- 208 Cross small stream. Copse on r. Country undulating.
- 209 Pass two streams on r. near road, the larger indicated by a line of trees along its banks.
- 211 Over stony downs to Altun Köprü. T.L. 1,000 yds. to l.
- 215 **Altun Köprü** (bridge).

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(Mileage continued from Route i, above.)

- The Baghdad—Mosul road leaves Altun Köprü in a NNW. direction up the valley of the **Injesüi**, a tributary of the Lesser Zāb. This valley contains corn-land, and is enclosed on either side by low hills, which form a semicircle to the front. Those l. of the road rise about 500 ft. above the road; those to r. are lower.
- 214 $\frac{1}{4}$ Pass a copse (1903) on l. of road. General character of country to Qūsh Tepeh is open, fairly well cultivated, undulating to hilly. Road is stony but easy.
- 215 Apparently in this neighbourhood the line of the semicircle of hills which close in on the river is reached. Direct Mosul road avoiding Erbil turns l. (So Report on Route, 1910: W.O. Map, following a description of 1873, marks this route as diverging about 4 m. farther on.) It is described as an easy route through fairly well-populated country: water from wells and streams. For Zāb ferry at Quweir see p. 69.
- The track to Makhmūr and Qal'ah Sherghat (see *Route 27*) is marked on map as diverging to the l. about 1 $\frac{1}{4}$ m. farther on: but further information on this point should be obtained.
- In this neighbourhood a bend of the Injesüi is apparently crossed (28 mins. ride from Altun Köprü): another bend is crossed 4 mins. later, and a third touched 3 mins. after the second. In April 1910 there were only a few inches of water in the stream.
- Apparently there is an alternative track over the downs to r. not far from the river: it crosses the bed of the **Ilinjak Chai**, a tributary of the Injesüi (20 ft. wide, 1 ft. deep in February 1903).
- 216 $\frac{1}{2}$ Direct Mosul road about $\frac{1}{2}$ m. l. (?). Near it is the hamlet of **Makhsūmeh** (12 Kurdish houses). Between the two roads is a mill.
- 217 $\frac{1}{4}$ Open undulating country. T.L. (two wires) crosses from l. to r. of the road.
- 218 Descent into hollow; bend of Injesüi is touched. (In this neighbourhood is the **Birinji Chai**, a mountain torrent entering the Injesüi on l. bank. There were 90 yds. of shingle and about 2 ft. of water in pools in February 1903.)

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Baghdad
218 $\frac{1}{4}$

Ascend shingly slope, and strike into stony downs, keeping NNW. from Altun Köprü. The valley and river-bed of the Injesüi now disappear to l.

This is the country of the Dizéih Kurds. There are villages to r. and l. of the road. 1 m. W. by S. is Sheikhān village (50 houses), apparently on or close to the direct road to Mosul. Cherkuchan (20 Kurdish houses) lies 1 $\frac{1}{2}$ m. to E. Erbil is said to lie N. by W. of this point, out of sight.

219 $\frac{3}{4}$

T.L. recrosses from r. to l. of the road. Country open and undulating, the track fair, rising to high featureless downs. High ground is reached about $\frac{3}{4}$ m. (10 mins. ride) beyond the point where the T.L. recrosses the road: no special features were seen from it.

222 $\frac{3}{4}$

Small stony hollow crosses the road from r. to l.

224

Second small stony hollow.

225

High ground from which Altun Köprü lies to S. by E.; **Bāsh Tepeh**, whitish mounds, to SW. in valley; **Dōlar Sazeh**, 40 houses of Dizeih Kurds, 1 m. SW. by S.; **Kasikhān**, 20 houses of Dizeih Kurds, 4 m. SW. by W., on the other side of the Injesüi.

(From about here a shorter track to Erbil diverges to r. from T.L. and main road. It passes Hamzakör, Kelebasha, Mulka, and Qara Chinaga. It is about 18 m. to Erbil by this way.)

227 $\frac{1}{2}$

Depression, 100 yds. across. **Qūl Tepeh** village, 25 houses of Dizeih Kurds, 1 m. WSW.; **Hamzakör** village, 15 houses of Dizeih Kurds, 1 $\frac{1}{2}$ m. E. by N.

228 $\frac{1}{4}$

Qūl Tepeh mound, 60 ft. high (in April 1910 covered with barley).

230 $\frac{3}{4}$

Qūsh Tepeh mound (at some distance to l. of main road), from which about a dozen Dizeih villages are visible within a radius of 6 m. The most important are Qūsh Tepeh village (100 houses, 1 $\frac{1}{2}$ m. W. by S.), Girdamala (60 houses, 1 m. to E.), and Mirghuzar (70 houses, 5 m. WNW.). At Qūsh Tepeh good and plentiful water can be obtained from two *karez*. Other villages and black-tent settlements in the distance. At a village about 10 m. WSW. near the direct Mosul road lives Ahmed Pasha, recognized by the Turkish Government as the official head of the Dizeih. An influential Dizeih chief, Mahmud Agha, lives at Girdamala (1910).

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- Road runs N. by W., through a valley about 20 m. wide, bounded by ranges of hills apparently running NW. and SE., across undulating stony country. Road easy though stony in places.
- 236 $\frac{3}{4}$ **Qarachan Agha Tepehchi** (25 Dizeih houses). (Apparently in the neighbourhood the branch line to Makhmūr leaves T.L.)
- 237 $\frac{3}{4}$ Small stream is crossed: and immediately afterwards a little dry hollow. Near latter, to r. of road, **Hamwarkeh** village.
- 239 $\frac{3}{4}$ In this neighbourhood small village on l. of road followed by authority of 1903. It has square mud-walled enclosure 50 yds. square and 12 ft. high. $\frac{1}{2}$ m. farther small village to r. with similar enclosure.
- 244 $\frac{1}{4}$ Cross a *karez* (25 ft. deep, 20 ft. wide, with 1 ft. of water) by a brick bridge (1903). Route now runs over broken ground.
- 245 $\frac{1}{4}$ **Erbil.**
The post-road between Erbil and Mosul runs through a rolling plain, the undulations of which sometimes rise to the height of downs. The country is treeless, and in parts stony, but well cultivated. More especially, the plain beyond the Zāb contains numerous villages. The Great Zāb (see under m. 262 $\frac{1}{4}$) is a serious obstacle at any season, but especially in the spring floods. The Ghāzir Su (see under m. 269 $\frac{1}{2}$) would not be fordable in spring.
- From Erbil the road runs somewhat W. of NW. to the neighbourhood of—
- 253 $\frac{3}{4}$ **Girdashir** (30 huts of Kurds). Good water from wells 25 ft. deep, drawn by rope and bucket. Thence the track runs generally WSW. over an open plain with some cultivation, but few villages in sight for 8 $\frac{1}{2}$ m. to the Great Zāb. Some stony ravines draining towards that river are crossed.
- 262 $\frac{1}{4}$ The **Great Zāb, Eski Kelek** (called now **Hasan Agha**) ferry. The channel in October 1903 was 150 yds. wide, with a fairly strong current and some 10 ft. deep at the ferry. It is not usually fordable, though it is sufficiently low to ford late in some years. The whole stream-bed ($\frac{3}{4}$ m. wide) is covered at the flood season. There are two ferry-boats to hold six laden animals, but usually loads

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are taken off and put in the boats and the animals swim. There are 15 houses (inhabited by Kurds who have to work the ferry) and a khan on the l. bank. The r. bank is open shingle, but the l. is rather steep, with gravelly cliffs in places. A short way down-stream the l. bank is easier.

Girdaresh village is 4 m. up-stream on the l. bank, and **Baishir** 3 m. up on the r. bank. (On the Great Zāb see Tigris, *Route III E*, at m. 150½.)

An alternative track to the Zāb leaves Erbil in a W. by N. direction and crosses the Demir Dāgh downs, while the post-road skirts their northern side. (Details from report of 1903.)

This other way, after ½ m., crosses a nullah, the banks of which afford complete cover from the Erbil citadel. It runs NE. by SW. The country is undulating and cultivated. At †1 m. two small enclosures are passed to the l., the first 15 yds. square with a wall 12 ft. high, and the other 50 yds. square with a wall 12 ft. high. Both have mud walls and watch-towers. Then a small stream is crossed 10 ft. wide and 1 ft. deep. At †4 m. a small village lies ¾ m. to the l., with mud-walled enclosure 50 yds. square. At †5 m. the route begins to ascend over ground undulating to hilly. At †7 m. the top of the downs is reached, and at †8 m. their watershed is followed over ground full of holes. The T.L. (two wires) crosses the road in this neighbourhood. At †16 m. a village 1 m. to l. is passed. The road is stony over undulating country. At †18 m. another small village lies to r. of road, with a small well containing good water: thence over undulating country gradually descending to river. At †20¾ m. the final descent to the river leads down by a steep and stony track winding along a pebbly ravine bed. A little farther on emerge on cultivated plain. At †22 m. the Zāb is reached. The river bed is here 800 yds. wide, of pebble and sand, but in flood extends to 1 m. in width. In February 1903 the stream was about 150 yds. wide with a current of about 4 m. an hour. Ferry-boat was punt-shaped, and lightly built, 20 ft. long and 8 ft. wide. There is a village on each bank. That on the l. is 1¼ m. distant with 50 mud houses, and a walled enclosure on a mound which commands the road as it descends from the high ground to the river plain.

263½

The road leaves the river and ascends some low gravelly undulations. Tamarisk shrubs and a few trees in the river-flat.

269½

Manguvar village on the l. bank of the **Ghāzir Su**, which in October 1903 was 60 yds. wide and 2 ft. deep. The bed is 300 yds. wide, and consists of shingle and sand. In spring there are freshets from 8 ft. deep with a great rush of water. It has then to be crossed by raft. In

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winter and spring, even when the river is fordable, its depth and current make the passage difficult. There are some small villages down-stream.

Continue over open plain of good soil well cultivated.

The road passes close to the S. extremity of the hilly country of the Maqlüb and Zardak ranges.

274½

Pass **Targulla**, 1½ m. to the N. of road. It lies at the S. extremity of the Zardak Hills (or Jebel 'Ain es-Safra). Large spring in these hills.

278½

Keremlis. Christian village of 120 well-built stone houses near a mound. The main road passes close to it, but there are several parallel tracks all equally good. Water from stream and from wells. A few vegetable gardens and an olive-grove. **Birtulla** is another large Christian village, 4 m. to the NW. One track goes through it.

There is a track running along the l. side of a stream-bed which leads S. by W. to **Nimrüd** (†19 m., see Tigris, *Route III E*, m. 159¼). From Nimrüd there is a track along the l. bank of the Tigris to Mosul (†22 m. from Nimrüd).

From Keremlis the post-road runs across the open plain to Mosul, which lies W. by N. of Keremlis.

290½

Ruin-mounds of Nineveh (**Qoyunjiq** and **Nebi Yunus**).

292½

Mosul.

ROUTE 25 b .

BAGHDAD—MOSUL (230 m.)

Via RIGHT BANK OF THE TIGRIS

Authorities :—*Military Report on E. T. A.*, vol. iii, 1904 (route report of Feb. 1903) ; a report of a journey in autumn 1903 ; and other sources of information.

Baghdad—Samarra.—Before the present war there was a route passable for wheels as far as Samarra. This was followed by the large pilgrim-waggons which plied between Samarra and Baghdad. The road appears to afford good going in dry weather, but is likely to be very heavy after rain, and in the neighbourhood of Baghdad the country traversed is more or less flooded in spring. Numerous water-channels are crossed. The palm-tree bridges described in the itinerary below as occurring near Baghdad do not appear to be suitable for heavy wheeled traffic, and it appears that the pilgrim waggons did not follow exactly the course here detailed. At many places there

are several possible tracks for pack-animals. Near Baghdad the tops of the canal-banks and riverside dykes may sometimes be used in order to avoid flood or marshy ground. For railway see Appendix.

Water appears to be plentiful, from canals, wells, or the Tigris. There is a fair amount of cultivation and at least two flourishing villages (Sumeikeh, m. 39, and Beled, m. 51) are passed: a certain amount of supplies for small bodies of men could therefore perhaps be obtained. As regards grazing, there is some camel-thorn, and apparently some grass here and there in spring. Fuel probably scarce.

Samarra—Mosul.—Beyond Samarra the character of the route changes. Before the present war it was just passable for wheels (though with difficulty) throughout. Light carts had occasionally traversed it, and a few years ago a motor-car was brought by this route from Baghdad to Mosul, but it broke down on the return journey. For most of the way there would be no serious difficulties in road-making. The track passes sometimes along the floor of the Tigris Valley (for description, see *Route III E*) over stony ground or alluvial soil, crossing fairly numerous wadis: sometimes it leaves the river-trough and ascends the low plateau or hills bordering the valley: here it generally runs through open rolling country, but in places has to traverse broken ground (as near Tekrit: see m. 100½). At one point (see m. 134) it makes a long détour from the river, about 34 m. in length, where the r. bank becomes impassable owing to the Hamrîn Hills. These hills though low are very rugged and broken, and the river flows close under their NW. side from Qal'ah Sherghat to the Fet-hah gorge by which it breaks through them. The track by which the route eventually crosses the hills to rejoin the river near Qal'ah Sherghat would need in places considerable improvement before it could be made easy for wheels (see m. 157). The authority whose report is here chiefly followed made the journey on horseback in 1903.

Between Samarra and Mosul water can generally be obtained from the river, but on the détour of 34 m. already mentioned drinkable water is very scarce. Between Samarra and the cultivated area near Mosul, patches of rather poor cultivation occur at intervals along the Tigris Valley, but there are few permanent villages and those are usually small. In peace time camps of Shammâr and other nomads were occasionally to be found near the river. Unless the flocks and herds of the Jezreh nomads could be drawn upon, no amount of local supplies worth considering could be found on the r. bank of the Tigris, except for a limited quantity at Tekrit. There is much good grass grazing in spring in places between Qal'ah Sherghat and Mosul (see note under m. 168, m. 173, m. 206, m. 210 below):

between Samarra and Qal'ah Sherghat spring-grazing for horses is much more scarce. In Feb.-March 1878 there was some wild barley and rye in places near the river, and good grass pasture was reported in the valley a few hours N. of Tekrit. Grass is found in April in the Jebel Hamrīn, where the track crosses the hills. Grazing for camels apparently fair near the river. Fuel is apparently scarce throughout: tamarisk is found in places near the river.

Note on left bank. The route along the r. bank is followed by travellers, as fewer obstacles are to be met with on that side of the river than on the l. bank. It is possible on the l. bank to follow the Baghdad—Salāhiyeh road (see *Route 25 a, ii*) as far as the neighbourhood of Khān Nahrawān, whence a track apparently leads to Samarra. But the 'Adheim River (see *Route III D, m. 59½*) would be a serious obstacle in spring and the distance from Baghdad to Samarra by the l. bank would be considerably longer. Supplies as far as Khān Nahrawān would probably be more plentiful than on the r. bank. For the Nahrawān canal, see p. 33.

Above Samarra the l. bank track as far as Tekrit (and probably as far as the Hamrīn Hills) seems to be much the same in character as that on the r. bank. The only details available as to the crossing of the Hamrīn range near the E. bank of the river are given in *Route 26*. Above the Hamrīn the Lesser and Great Zābs would be difficult obstacles especially in the flood season. Local means of crossing are merely a few ferry-boats or *keleks*. Material for raft or bridge-building is lacking in the neighbourhood of the mouths of these rivers. In the immediate neighbourhood of the l. bank above Samarra local supplies would seem to be as scanty as on the r. bank of the Tigris: but on the plain E. of the Tigris between the Zābs the district of Erbil produces enough corn to export in normal times to Baghdad, and the plain between Erbil and Mosul is fairly populous and well-cultivated. For a general description of the country between Baghdad and Samarra on the r. bank of the Tigris see *Tigris, Introduction to Route III E*.

Fords across the Tigris, passable in the l. w. season, are mentioned on p. 19 and p. 40.

Miles from
Baghdad

0

Baghdad. From the neighbourhood of the boat-bridge the route follows the line of the tramway to Kazimain, or by Zobeideh's tomb and thence farther inland passing W. of Kazimain. Railway line at some distance to W. of road.

Miles from
Baghdad

3

Kazimain. From here the possible tracks strike across an open cultivated plain, liable to inundation in the spring floods. In Feb. 1903 the water-cuts in this region were easy to pass. The best track for wheels is said to keep about 3 m. from the river in order to avoid water-cuts and marshy ground.

For the track which diverges to the l. beyond Kazimain and leads NW. across the desert to Anah, see *Route 48*.

16 $\frac{3}{4}$

A possible track follows the top of a raised dyke along the river, leading to two water-cuts $\frac{1}{4}$ m. farther on, which have to be crossed. One had no bridge in 1903, and its ford would require improving for guns. The other had only a palm-tree bridge 3 ft. wide.

18

Cross two small canals, with palm-tree bridges 6 ft. high. Road follows top of canal bank 20-30 ft. high. Keeping in a general direction between N. and N. by W., it now leaves the neighbourhood of the river, which bends to the E. near Haseiweh.

A track apparently branches off in a NNE. direction to the Bābi tract on the r. bank of the Tigris, whence it runs N. to the Qal'at Tarmīyeh police post. Beyond Qal'at Tarmīyeh a track seems to follow the course of the river. (Thus on the right bank opposite Sindiyyeh about 9 m. NNE. of Qal'at Tarmīyeh is a grove of poplar described as a halting-place for caravans from Baghdad.)

20 $\frac{1}{2}$

A line of ruin-mounds is passed.

21 $\frac{1}{4}$

Well with good water 20 ft. below the surface.

22 $\frac{1}{4}$

A canal with bank 10 ft. high is skirted.

23

Khān Meshāhidīyeh. Railway station. A brick khan 100 yds. by 90 yds., with walls 18 ft. high, crenellated on top. There is a semicircular bastion at each corner, and a small square one in the middle of the curtain. Close to the khan is a two-storied *zaptieh* post, with stabling for six horses and a courtyard 15 yds. by 12 yds. There is a well, perennial but brackish, water being 35 ft. below the surface. Water can also be obtained in skins from the river, about 4 m. to the E. (opposite Reshīdiyeh on the l. bank). The country round the khan is desert.

24 $\frac{1}{2}$

Ground low: boggy in winter. Beyond this cultivation begins again.

29

Khōr Tarmīyeh: swamp about 1 m. to E. Ruin-heaps and old canal beds henceforward frequent.

31 $\frac{1}{2}$

Road runs through a group of ruin-mounds.

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Baghdad
32

Ruins of **Wāneh** on old bed of the Tigris about $1\frac{1}{2}$ m. to E. of road.

R. bank of the Tigris, at Mansūriyeh ferry and near mouth of Tarmiyyeh canal, lies about $6\frac{1}{4}$ m. to E.

Ruin heaps to left.

On W. side of railway-line, which apparently runs to left of the track, are small irrigation-cuts belonging to the Dujeil system (see *Route III D*, m. $81\frac{1}{4}$), some of which may still carry a little water in the h. w. season. W. of these (? about 2 m. WNW. of this point on the route) is the tomb of Sheikh Ibrahim.

34 Ruins of **'Akbareh** about 1 m. to E., on the old bed of the Tigris, which above 'Akbareh makes a détour to E.

From here to Sumeikeh the route takes a general NNW. direction. Several dry canal beds are crossed. The soil here is sandy clay.

37 Two small canals with water in them in Feb. 1903. They are about 15 ft. between the banks and 10 ft. deep; the water was 4 ft. wide and 2 ft. deep.

Old bed of the Tigris about 1 m. to r.

39 **Sumeikeh** (or **Dujeil**) village, and date-groves watered by the Dujeil Canal; about 2,000 inhabitants; khan. Railway station. The village and neighbouring lands are the property of the *Dā'irah-es-Saniyeh*. Supplies fairly plentiful. Water good and abundant: wells and canal.

Sumeikeh lies about 9 m. W. by N. of a point on the r. bank of the Tigris opposite Sa'diyeh. The old bed of the Tigris runs about 1 m. NW. of the village, outside the date-groves.

From Sumeikeh the road takes a general NW. direction. The railway apparently lies to right. The road runs parallel to the course of the Dujeil ($1-\frac{1}{4}$ m. to r.) and the old Tigris bed ($2\frac{1}{2}$ -1 m. to r.). Between the old and present beds of the Tigris a space about 12-8 m. wide is dotted with ruin-mounds and ruin-fields.

The country-side is fairly well cultivated.

Khazraj Arabs in this neighbourhood.

In the next 8 m. several canals are crossed, varying in width from 10 to 40 ft. and in depth from 5 ft. to 20 ft. below the level of the plain. Some of them contained water in Feb. 1903. Almost all were traversed by palm-tree bridges about 10 ft. wide.

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- 47 Route runs along bank of small water-channel, 10 ft. wide by 5 ft. deep: the water in it was 3 ft. wide and 2 ft. deep in Feb. 1903.
- 49 The old bed of the Tigris is visible to r. for about 4 m.
- 51 Country intersected by dry canal-beds, with banks varying in height from 5 ft. to 20 ft.
Ruins of **Harbeh** to r.
Beled village, with date-groves and some vineyards (the property of the *Dā'irat es-Sanīyeh*) lies 3-4 m. between ENE. and NE. of this point. Railway station. Water from wells. There are fords in the low-water season across the Tigris at Darāwīsh Island and Baheirdeh Island, in the neighbourhood of Beled (4 and 3 m. from the village respectively). These fords have pebbly bottoms.
The soil is sandy clay: the track is good except after rain.
- 52 **Harbeh** Canal, from Tigris, consisting of three channels, each about 15 ft. wide, 10 ft. deep, the banks 15 ft. high. Only one channel had water in it in Feb. 1903.
The canal is crossed by a brick bridge (Jisr Harbeh) of solid construction. In 1903 it was reported to have four arches, and to be 60 yds. long, carrying a roadway 27 ft. wide. Beyond the Harbeh bridge is an open plain much intersected by dry canal beds, with pebbly waste and acacia scrub.
- 55 In this neighbourhood apparently T.L. leaves route, and runs NNW. to cross the river near El-Hāwīyeh ferry, whence it goes NW. to Samarra.
- 57 **Feshātiyeh** canal (45 ft. wide, banks 25 ft. above bed). Water in Feb. 1903 6 ft. wide, 3 ft. deep, crossed by a brick bridge about 10 ft. wide.
For about 4 m. the country is covered with old and dry canal beds, with banks varying from 5 to 40 ft. in height. Some of them are crossed by the route.
- 62 Dry canal reported to r., 30 ft. deep and 60 ft. wide; sides very steep.
- 64 Mouth of **Dujeil** Canal, a short distance to r. Henceforward up to Samarra boat-bridge the route runs close to the river: the railway is apparently close to it on the l., and near the railway seems to be the bed of the dry Ishaki Canal. Istaḅlāt station is 13 m. by rail from Samarra.
- 66 **Istaḅlāt**: *zaptieh* post in the immediate neighbourhood. The country is a pebbly desert without cultivation; a little scrub acacia in the hollows.

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Baghdad

- 70 **Tineh**, village on river bank. Ford at l.w. season (1910). Level plain, partly cultivated.
- 74 **Samarra** boat-bridge. Khan and village. Railway station. From Samarra boat-bridge the route runs about 300 yds. from the river bank, with a line of hills to the W. The country generally is sandy and uncultivated. There are numerous ruins.
- 78 **Qal'at el-'Ashiq**, ruined fort. **Ma'shūq** ruins on a mound. Well-preserved walls and towers. The track after this becomes pebbly and poor. Some cultivation by water-lifts on the river bank.
- 82½ The track crosses a pebbly ridge diagonally.
- 83 Line of mounds to the W. **Eski Baghdad** lies opposite, on the E. bank of the Tigris. The road is now good over an alluvial cultivated plain (1903) with low hills about 50 ft. high, 1 m. to the W.
- 86 **Loweyyeh** camp-ground. Stream running to the Tigris, with good water, 20 ft. wide and 3 ft. deep (Feb.).
- 90 **El-Muheijir** camp-ground on a stream running to the Tigris. The track is still easy and level. After El-Muheijir the track divides, the eastern path affording better going, through continuous cultivation.
- 92 The track crosses a pebbly ridge.
- 94 Hills to the W. recede. The track is about 2 m. from the river. **Dūr** is about 3 m. distant on the E. bank of the Tigris (see *Route III E*, m. 20½).
- 97½ **Nahr Ishaki**, an old canal here 35 ft. wide and 5 ft. deep, with easy banks, lies beside the track on the W.
- 98½ The track is good, skirting the hills to the W. The hills begin to approach the river, gradually dwindling in height. The track runs along an alluvial plain about 100 yds. from the river; low cliffs, 50 ft. high to left.
- 100 Small wadi.
- 100½ The track now becomes stony, and rises slightly over country cut up by ravines on the E. The country to the W. is more open and flat.
- 101 Steep, stony ravine, 200 yds. wide, 150 ft. deep. The track is here about 300 yds. from the river.
- 102 Wadi, 200 yds. wide. The track leads over undulating, broken, stony ground.
- 103 The track bends slightly W. to avoid some ravines. The

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Baghdad

- road descends through ruins and over stony broken ground towards Tekrit.
- 104 **Tekrit.** Moderate quantities of supplies are obtainable. Caravans usually rest here for a day on the road to Mosul. Most of the Tekrit muleteers do not go up the river, but work between Tekrit and Baghdad. (A 1903 authority estimates the distance from here to Shereimiyeh—see m. 131 below—at 31 m.)
- 106 N. end of the ruins of ancient Tekrit. Small nullah, after which the track emerges into undulating desert, high above the river, towards which run many deep ravines.
- 112 $\frac{1}{2}$ The track is now fairly good, over nearly flat country.
- 113 $\frac{1}{2}$ Broad, shallow nullah. The track is now very stony and the country broken by ravines.
- 118 **Wādi Mahzim.** There is here a little cultivation and some acacia scrub.
The track now skirts some low hills to the W., and is broken in places.
- 119 **Sheriyet el-Hamzeh,** camp-ground, with good water from an arm of the Tigris, 30 ft. wide, 5 ft. deep.
The track now lies through continuous cultivation.
- 122 At 3 m. it touches the river, which is here about 150 yds. wide. The hills are here about $\frac{1}{4}$ m. to the W., rising to 70 ft. above the plain.
- 124 The track is easy, occasionally touching the river bank.
- 126 The track skirts the river, which is here about $\frac{1}{2}$ m. wide, $\frac{3}{4}$ m. from the hills to the W. At some point in this neighbourhood is the ravine, reported by a German traveller in 1893, which marks the boundary between the *Vilayets* of Baghdad and Mosul.
- 128 The hills are 1 m. to the W., with cliffs 70 to 100 ft. high, and after some distance give way to sandy mounds.
Qal'at Mekrūn, ruins on a projecting bluff. This is perhaps identical with **Khān el-Kharnīneh,** Turkish barracks on the site of the ruins of a thirteenth-century building.
The track here runs N. by W., skirting low sandhills, 50 ft. high, on the W., over a sandy, ellipse-shaped plain, 7 m. long and $1\frac{1}{2}$ m. broad.
- 131 **Shereimiyeh,** guard-house and camp-ground. To W. is a line of low sandy hillocks about 50 ft. high.
- 134 The track bends away from the river, having on the NE. low spurs of the *Jebel Hamrīn*, winding through low

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- sandy mounds with a very brackish stream on r. A few pools of very salt and quite undrinkable water. The route from here to the point where it rejoins the river at Qal'ah Sherghat is lacking in good water. The country is desert. There is here no settled population, but occasional encampments of Dilaim may be seen.
- 137 In autumn 1903 water reported 5 ft. below surface. Arabs camped here in spring.
- 141 In autumn 1903 water was reported 4 ft. below surface.
- 145 In autumn 1903, it is reported, water-holes were found in a nullah about 14 m. from Shereimiyeh at a locality called **Museltain**. The water was 3 ft. below surface, and was estimated to be sufficient for 5,000 camels a day. It may be brackish.
- 152 Track approaches Jebel Hamrīn creek, rather difficult for wheels.
- 155 **Bilalij**, spring at foot of the Jebel Hamrīn. The water is scanty and brackish. This is perhaps the spring reported by another traveller as being bitter with sulphur and pitch. The quantity of water has been estimated at 50 gall. p.h.
- The hills are here intersected with many nullahs, up and down which the track winds. The ascent to the crest of the range, which is here about 200 ft. high and 1 m. wide, is easy. The track keeps along the crests of the spurs.
- The track crosses a valley (? the Wādi Jahannam) at right angles, and gradually ascends the Jebel Khanūqah by a sandy track.
- 157 **Jebel Khanūqah**, summit of the range. The track is difficult for wheels, and winds over occasional outcrops of marble among low hills. From the summit it descends, winding in and out of ravines.
- 166½ **'Ain Shababik**. The track descends, winding through low sandy mounds 60-100 ft. high.
- Large mound, probably on the site of an ancient city.
- 168 **Qal'ah Sherghat** ruins on large *tel*, close to the bank of the Tigris. For description see *Route III E*, m. 109.
- Turkish post.
- There is good camping-ground on sandy soil, with a fair but limited supply of water. There is some cultivation in the neighbourhood of the *tel*.

Miles from
Baghdad

The **Wādi Tartar** lies about 28-30 m. W. of Qal'ah Sherghat. In this part of its course it carries water perennially, and is much frequented by the nomads of the Jezīreh, especially the Shammār, for its water, which is good, and for the pasture along its banks. The country between Qal'ah Sherghat and the Tartar is open and undulating, traversed by a number of deep wadis which have water in spring. There is much rich pasture in this region in April. The Wādi Tartar near El-Hadr (see below) is 25-30 ft. wide, and in spring is 5-7 ft. deep. The banks are rotten. There are few places where camels can cross.

About 31 m. WNW. of Qal'ah Sherghat are the ruins of **Hatra (el-Hadhr)**, situated about 2½ m. W. of the Wādi Tartar. These ruins include the remains of a palace with seven vaulted halls, some of the walls of which are still standing to a great height, built of squared blocks of stone. Protection was afforded by a wall over 3 m. in circumference and strengthened at intervals with towers, and by a wide, deep moat. Considerable portions of the wall are still standing.

At the SE. corner, inside the wall, is a sulphur spring, and a little to the NE. of this spring, outside the wall, a pool of rather brackish water. There is said, however, to be a good spring of fresh water just outside the walls, though no other indication is given as to its position.

The period of the greatest prosperity of Hatra fell in the first and second centuries A.D., under the Parthian Empire. It was destroyed by the Persian king Sapor I (A. D. 242-72).

The mileage up to Shura (see m. 204) is very uncertain; the authority from which these distances are taken gives 7 hrs. as the time between Qal'ah Sherghat and Shura, but this appears to be an error. Another authority estimates the distance between Qal'ah Sherghat and Shura as 42 miles and gives the time taken from Kaiyara to Qal'ah Sherghat at 8¾ hrs.

Creek, 20 ft. wide, 5 ft. deep.

The track now enters the open desert again, the hills trending to the W.

171 The track skirts the hills, with the river 1 m. E.

172 The track enters a small alluvial plain called **Sherghat**, partly cultivated. The road is good and sandy, skirting the hills, which are here about 100 ft. high.

173 The track touches the river, which here has banks 20 ft. above the water. In 1903 there were sheep grazing on the plain and nomad Arabs in the valley.

173½ The road is good, lying up the bed of a stream over a low line of hills.

174½ Summit of the hills. Stony downs to r. and l. The track is fairly easy.

Miles from
Baghdad

- 175 **Jarnaf** camping-ground, with fair drinking water from a stream and rain-pools.
The track now crosses a creek, 20 yds. wide and 20 ft. deep. Water good, 25 ft. wide and 2 ft. deep (Feb. 1903).
- 178 Depression in the chain of hills for about 1 m.
- 180 The track is good, about 300-400 yds. from the hills on the W., which are here about 150 ft. high. On the E. is a small winding grassy nullah.
- 181 The track rises over a pebbly path from the cultivated plain to the plateau, 50 ft. higher.
- 182 The road passes over broken ground, crossing a small nullah, soft, deep, and 40 yds. wide. There is a gap in the hills to the W. On the E. is some cultivation, about 1 m. distant.
- 183 The track passes through fairly open country over an alluvial plain. The hills on the E. are broken by ravines; those on the W. are about 150 ft. high.
- 185 The road is pebbly and crosses a small valley, with some cultivation on the E.
- 185½ The track is stony, with ravines to r. and l. The river is 1½ m. to the E.
- 189½ Naphtha and bitumen wells to the W. The country is flat and open. The track is ½-1 m. distant from the river.
- 190½ **Kaiyara (Qaiyareh)**. Oil springs and refinery. (For description, see *Route III E*, m. 135½.) The descent into the valley (ascent to N. of it?) is rocky and impassable for wheels.
- 193 **Romana** camp, near a stream impregnated with naphtha and sulphur. The track is good over some low hills.
- 194 The track crosses a stream 20 ft. wide and 3 ft. deep in a ravine 30 yds. wide and 10 ft. deep. The water is clear, but brackish, and not fit for drinking.
- 194½ The road enters a large open valley along the Tigris.
- 196 Small nullah, dry and easy.
- 201 The track skirts a creek with steep banks. The water is clear, but slightly brackish.
- 203 A nullah on the W. skirts the road.
- 204 **Shura** village. There is drinking water here, slightly brackish. In 1903 there were 20 *zaptiehs* belonging to the Sultan's farm and acting as desert-guards, housed in a khan 60 by 40 yds. The place has a Mudir.
The distances N. of Shura are again uncertain: the

Miles from
Baghdad

- authority from which they are taken gives the time between Shura and Hammām 'Ali (see m. 217 $\frac{3}{4}$) as 7 hrs. Another authority supports the distance given below, making it 13 m. between Shura and Hammām 'Ali.
- 205 A nullah on the W. 30 ft. deep, but easily crossed at various points, skirts the track.
- 206 Splendid grass in April. The ground here is under the *Dā'irat es-Sanīyeh*.
- 210 Ruined village 2 m. to the W. The country is gently undulating and easy, with good grazing.
- 212 The track descends from a plateau, with a stony and rocky patch, for 100 yds. The ruins of Nimrūd (see *Route III E*, m. 159 $\frac{1}{4}$) are 4 m. distant on the E. bank.
- 214 The road winds through rocky stony hills, passing a ruined town.
- 215 It skirts some low hills 200 yds. to the W., and then runs along the Tigris, crossing a stream in a ravine 30 yds. wide.
- 217 $\frac{3}{4}$ **Hammām 'Ali.** (For description, see *Route III E*, m. 167 $\frac{1}{2}$). Good grazing. Village among the hills about $\frac{3}{4}$ m. to the W. There is cultivation along the level. The distances N. of Hammām 'Ali are uncertain: the authority from which they are taken gives the time between Hammām 'Ali and Mosul as 6 $\frac{1}{4}$ hrs. Other estimates make the time between these two places 4 $\frac{1}{2}$ or 5 hrs. Another authority makes the distance between Hammām 'Ali and Mosul 16 m. The track is good, running along the river bank for 1 $\frac{1}{2}$ m. All this plain is under the *Dā'irat es-Sanīyeh*.
- 218 $\frac{3}{4}$ **Iezadeh** (Lazzāqeh? see *Route III E*, m. 174 $\frac{1}{2}$) village and khan. The track undulates over stony ground.
- 222 $\frac{1}{4}$ Small village to the E. The track runs along the bottom of an open valley 500 yds. wide, rising, after $\frac{1}{2}$ m., over stony downs, with some rocky ravines running towards the river.
- 224 $\frac{3}{4}$ An alternative easy track keeps close to the river. Village on the E., with mud and brick fort commanding the track as it ascends the hills from Mosul. It is 60 by 50 yds., with walls 20 ft. high, and two towers. The fort is apparently the Qasr of Seramūn mentioned in *Route III E*, m. 180 $\frac{1}{4}$.

Miles from
Baghdad

The road now descends over stony ground towards the river.

The hills recede from the river, and there is cultivation on both sides of the track.

230

Mosul.

ROUTE 26

TEKRIT—KIRKUK (77½ m.)

Authority:—Military Report on E.T.A., vol. iii, Route 104 a.

The following is a desert route. The only details obtainable are those given below. They are taken from a report of 1885.

Miles from
Tekrit

0

Tekrit. (See *Route 25 b*, m. 104.)

The first march from Tekrit is N. by E. across an undulating tract of uninhabited prairie.

22

Inkhilā, small oasis, with a brackish spring half hidden in bulrushes. At no great distance to NW. is the Fet-hah defile.

From Inkhilā cross the Jebel Hamrīn, rising 500 ft. above the plain, thence for 12 hours over open desert.

53

Bashirīyeh, Kurdish hamlet of about 100 hovels on the Kirsā Chai in open cultivated country.

From here follow the broad depression of the Kirsā Chai.

66

Taza Khurmatli on Baghdad-Kirkuk-Mosul road.

Follow this road to Kirkuk. (See *Route 25 a*, m. 176-187½.)

77½

Kirkuk.

ROUTE 27

QAL'AH SHERGHAT—ALTUN KÖPRÜ (67 m.)

Authority:—Sykes, Dar-ul-Islam (journey of 1903).

This route is easily passable for wheels as far as Derban (m. 54), except at the Hasan Ghāzi Pass over the Qarachok Dāgh (m. 34). From Derban onwards it is only just passable for wheels. Supplies probably lacking as far as Makhmūr, fair from that point onwards.

Water not plentiful till beyond Derban. Pasture good in spring. Fuel probably lacking.

The details of the following route are taken from an authority who went over it in April 1903.

Miles from
Qal'ah
Sher-
ghat

- 0 **Qal'ah Sherghat.** Ascend r. bank of Tigris for about 2 m. to a place where a ferry-boat is moored. (The ford about 5 m. above Sherghat reported by an authority of 1893 as passable in the l.w. season is not included in a list of Tigris fords compiled in 1910 from information of native raftsmen. See *Route III E*, m. 113½.)
- 2 Cross Tigris by Mezār esh-Sherghat ferry. In 1903 there was one crazy boat steered and moved by one oar. From the ferry proceed in a northerly direction to—
- 7 **El-Haichel** camping-ground. Here in April 1903 there was a camp of Jebūr semi-nomads, who had left their village and migrated into tents for the summer.
- 9¼ From El-Haichl strike across plain in an ENE. direction. ¾ hr. from El-Haichl, cross bed of ancient canal 30 yds. broad. This canal is said by local Arabs to run S. to the Lesser Zab. It is called the Wādi el-Hafr.
- 11 Through a line of low hills (½ hr. from canal) dotted with artificial mounds. Here is passed a small permanent spring.
- Enter a broad open plateau 800 ft. above sea-level, dotted with villages. In the spring of 1903 these had been abandoned owing to drought and locusts. Makhmūr lies under the saddle between the northern and southern heights of the Qarachok Dāgh which lies ahead across the plain.
- 21 Pass artificial mounds (3 hrs. from hills). Between this point and Makhmūr water in small quantities is to be found as a rule.
- 31 **Makhmūr** (3 hrs. from the mounds). Outside the village are the remains of an ancient town, each side measuring about 420 yds., surrounded by a square of mound walls as at Nineveh. In the centre is a large mound. Makhmūr itself is a new place, being the centre of a large estate of the *Dā'irat es-Saniyeh*, which comprises most of the country between the two Zābs in the neighbourhood of the Qarachok Dāgh. Makhmūr is

Miles from
Qal'ah
Sher-
ghat

connected by telegraph with Erbil. There are here a large khan, a bazaar, and a *serai* (government building) erected by the *Dā'irat es-Sanīyeh*. The town in 1903 was flourishing, a good many caravans passing through the place. Some Turkish troops under a captain were stationed here. In 1903 Agha İbrāhīm, the chief of the Disdiyeh Kurds, resided at Makhmūr. He exercised civil jurisdiction over his tribe, who are semi-nomads (1,200 families) having their head-quarters in the Qarachok Dāgh. In 1903 they were armed with Martinis manufactured at Suleimāniyeh.

From Makhmūr the track ascends the saddle leading across the Qarachok Dāgh. This pass is called **Hasan Ghāzi**, after a Kurdish saint, whose tomb is here. The shrine is much revered by the Disdiyeh, and is a place of refuge for outlaws and persons pursued by a blood-feud.

At some points the pass is difficult for wheels, but it might easily be improved.

34 Summit of the **Hasan Ghāzi** Pass.

At the eastern foot of the pass, the track bears ESE., running over an open plain parallel with the southern part of the Qarachok Dāgh. It is quite easy in fine weather. There are a number of villages in the plain and along the slopes of the Qarachok. These are mainly inhabited by Disdiyeh. Flocks of sheep were seen in 1903: the animals appeared to thrive on the pasture in the neighbourhood.

Across the plain, here about 15 m. to E., is the line of the Zergezawan Dāgh.

49 In the neighbourhood the track bears to E., crossing the plain towards a pass in the Zergezawan.

54 **Derban** village ($6\frac{1}{2}$ hrs. from Makhmūr). The residence of a Kurdish Agha. From here to Altun Köprü the track is just passable for wheels. Water is plentiful.

Cross pass over Zergezawan Dāgh.

$57\frac{1}{2}$ Summit of pass: wide view obtained here.

$59\frac{1}{2}$ **Girdlanik** village in plain below pass.

64 Join Altun Köprü—Kirkuk high road (see *Route 25 a*, m. 215, p. 163), along which runs the T.L. Follow the high road into Altun Köprü.

Miles from
Qal'ah
Sher-
ghat
67

Altun Köprü. (The time taken between Derban and Altun Köprü is variously given by the same authority as $3\frac{1}{2}$ hrs. and 5 hrs.)

ROUTE 28 a

BAGHDAD—KIRMANSHAH (222 m.)

Via KHANIKIN

Authorities:—Routes in Persia, vol. iii, 96 (1910); *Corrections to vol. iii*, 1914; Route Report of 1909.

This is the main caravan and trade route between Mesopotamia and Persia. It is passable for wheels in dry weather, but in wet weather, unless the season is exceptionally mild, the road becomes very heavy and in places a quagmire. In the years immediately preceding the war there was a motor-car service between Baghdad and Bāqūbeh. The complete journey is performed in 20 days by camels, and in 14 days by horses and mules. Mules, ponies, and donkeys are the usual transport animals, camels being used only in the summer and not after the rains have set in.

As far as Khanikin, on the Persian border, the road lies over rich alluvial soil which in many places is subject to inundation. After 1 in. of rain the whole country becomes so boggy as to be almost impassable. From November to April the road is impassable for camels owing to the rain and snow. A Persian company was formed in 1905 to put and keep the road in repair. A few years before the war it was reported to be in fairly good order and quite passable for wheeled traffic, though very rough in places, especially beyond Khanikin. The range of low hills over which the road passes to Khanikin would offer no obstacle to the construction of a railway.

In January and February the cold is considerable and water often freezes. During July, August, and September the heat is intense during the day, but very hot nights are unusual at any time, and in June there is generally a refreshing north breeze. The annual rainfall is about 7 in. and falls in the cold weather. Between Baghdad and Khanikin the rainy season may be said to commence about November and to end in March. Beyond Khanikin the rain starts somewhat earlier, and ends later. Snow falls in the region between Ser-i-Pul and Kirmanshah.

Supplies of all kinds would be available in large quantities, especially after the harvest, as the surrounding country is very rich and well cultivated in the Baghdad districts. In the Persian districts there is not such a large amount of cultivation, but still the country traversed is fairly rich.

The grazing varies much from year to year, there being seldom much except in the spring. Mules, donkeys, and horses using this route are fed on barley and straw, which are always procurable. In the spring camels graze on what they can find *en route*. At other seasons they are fed on barley-flour made into cakes, and straw.

Until Persian territory is reached, fuel is very scarce; there it can be obtained in any quantities from the mountains.

Water is good and plentiful throughout the route, generally being obtained from streams or canals.

At Baghdad about 1,000 camels could be collected in a fortnight; other animals ordinarily about 100 daily. Beyond Khanikin no animals are obtainable until Kirmanshah is reached. Most of the mules and ponies used in this route come from Persia. If time were given very large numbers could be collected, as large caravans are continually passing along this route. As far as Qasr-i-Shīrīn (m. 112), there are practically no obstacles, except for the heavy state of the road after rain and the numerous irrigation channels which have to be crossed. The boat-bridge over the Diyāleh River (m. 30½) might require to be improved. When last reported on (1907) it was only fit for the passage of light vehicles, unhorsed and man-handled across, and was unfit for the passage of guns or heavy vehicles. The river is fordable in the l. w. season. The pass over the Jebel Hamrīn (beginning m. 64) is narrow but passable for carts drawn by 4 horses abreast. At the Tāq-i-Garra Pass (m. 143) guns would have to be double-horsed in certain places. In the stretch from Karind (m. 164½) to Khorāsābād (m. 175½) the first 3 m. are stony and exceedingly rough, and the remainder of that stretch along the valley is heavy and swampy after rain, and passes over frequent streams. The Na'l Shikan Pass (m. 190½) would have to be improved to render it fit for the passage of guns.

T.L. accompanies the route on left hand.

The general direction of the route to Khān Beni Sa'īd (m. 18) is NNE. The road to that point is good and passable for all arms in all weathers. Supplies, fuel, and forage scanty. Water from wells.

Miles from
Baghdad

0

Baghdad. Road leaves by North Gate, the Bab el-Wasitāni. The track across the plain to Bāqūbeh is clearly marked.

Miles from
Baghdad

- When there is any doubt, as at night, the telegraph-line can be followed. General direction to Khān Beni Sa'īd NNE. For the first 3 m. the road is a broad level track over a plain of alluvial soil, showing frequent signs of flood.
- 9 An irrigation channel is crossed by a rickety wood and stone bridge with 12-ft. roadway. Width of channel 12 ft., depth below bank 3 ft. Some cultivation.
- 11 **Khān el-Bīr** ruins on r. Limited supply of brackish water. About here a second irrigation channel similar to first is crossed. On the other side of the channel is the postal staging station. From here the **Nahr Tahwīleh** runs parallel to the road for 1 m., then diverging N.
- 15½ Line of mounds crosses road running NE. and SW. The road from here shows no sign of flood up to
- 18 **Khān Beni Sa'īd** or **Ortah Khān**, a village with two khans, one of which is 100 yds. square, of massive brick, in which there is accommodation for 300 men and horses. There is also plenty of room for camping. Brackish water from wells. Grazing scarce. Fuel scarce locally. There are villages in palm groves about 4 m. to NW. From Khān Beni Sa'īd to Bāqūbeh the general direction is NNE. The road throughout is good and passable to all arms except at the Diyāleh bridge.
- 24 Road to Beledrūz *via* Bahrīz branches off NE. See *Route 30*. Cultivation on both sides of the route.
- 27 Irrigation canal, 6 ft. wide, 3 ft. below the banks, crossed by a stone bridge in bad repair; the bridge roadway is 12 ft.
- 28½ A narrow deep channel is crossed, 6 ft. wide and 10 ft. below the banks, running N. and S.
- 30 Reach r. bank of the **Diyāleh**, here a sluggish river, 60 yds. wide, with deep-cut banks. Gardens, dates, and poplar-trees on either hand. Road now runs up river bank, ground becoming hilly and broken.
- 30½ Small khan l. of road.
- Swinging bridge over the Diyāleh, consisting of 11 boats (with two spare for increasing the span when the water rises), over which a 12-ft. roadway is laid. It is rickety, serviceable for pack-transport, but unfit for guns or any wheeled vehicles except very light ones. The pontoons are in good condition; a very slight repair (materials for which are obtainable on the spot) would put the roadway

Miles from
Baghdad

- into condition for the passage of guns. The river is fordable in this neighbourhood during the l. w. season. The approaches on both sides are soft and likely to be slippery after rain. The banks of the river are perpendicular, the r. being 15 ft. and the l. 30 ft. above the level of the water. The road now runs in an easterly direction through high-walled gardens and enters Bāqūbeh. It is reported that a force attempting to cross the river here from either side could be brought to either bank under cover, on the r. owing to the configuration of the ground, on the l. owing to the town walls and palm-trees.
- 31 **Bāqūbeh.** Pop. 4,000-5,000. P.O., T. There is good camping ground to be found anywhere outside the town. Supplies abundant. Water from the river. Forage and fuel plentiful. No camels. About 20 other transport animals could be collected daily.
- The route now runs in a general north-easterly direction to Abu Jezreh. To this point the road is good and passable to all arms in dry weather. Some of the canals would require ramping, and some of them are crossed by rickety bridges. In wet weather the worst part of the road is the last mile. Between Bāqūbeh and the frontier (100 m.) the road used to be dangerous owing to the depredations of the Shammār Arabs and Hamawand Kurds, and more recent accounts (e. g. 1909) suggest that this was still the case in the years immediately preceding the present war.
- The road emerges from the northern entrance of Bāqūbeh through the walled gardens, bearing easterly, and winds through hilly ground over numerous irrigation channels, and would be deep and bad in wet weather.
- 34 Cross an irrigation channel. Road here broad and level over an alluvial plain. To NW. lie numerous villages. The ground is low and in parts marshy, and cut up by frequent irrigation channels which sometimes contain water. To E. is a plain stretching to a distant range of low hills on which there are a few hamlets visible. The plain is barren but green with camel-thorn and patches of grass.
- 43 Cultivation on either side, and large villages 4 m. to NW.
- 46 Ground very bad in wet weather.
- 47 Caravanserai of **Abu Jezreh**; accommodation for some

Miles from
Baghdād

200 men and horses. This is not a usual halting-place for caravans, which generally go right through. Fuel scarce.

From Abu Jezreh to Shahrabān the general direction is NE. The road is passable in dry weather for all arms, but is deep and heavy and impracticable for wheels in wet weather. Many culverts, ramps, and bridges would be required. Supplies could be collected from neighbouring villages. There are quantities of cattle, sheep, and goats. Water good but muddy from canals. Good grazing. Fuel scarce.

Leaving Abu Jezreh caravanserai the road runs over uneven hilly ground liable to flood. On the r. is a deep, high-banked irrigation canal. Numerous irrigation channels cross the road which is somewhat confined with banked canals on either side up to Shahrabān (see m. 57 below).

53 Road passes the high-walled caravanserai, 100 yds. square, of the village of **Jellāli**; there are gardens and date-palms. Emerging from the village the road crosses a canal 30 ft. broad, running swiftly SE.; the bridge consists of one 12-ft. arch of stone, strong, and in good repair.

57 **Shahrabān**. T., P.O., several caravanserais, and a roofed bazaar. There are walled gardens and date-groves. No camels. About 20 other transport animals could be collected daily. Supplies plentiful in normal times. Water good and abundant from wells and canals. Fuel scarce.

From Shahrabān to Qizil Ribāt the general direction is NE. The track generally has been described as a carriage-road, but a very bad one, both over the hills where it is very stony and the gradients are apparently steep, and over the plain where it is very soft. For the first 4 m. from Shahrabān the road is heavy in wet weather and impracticable for wheels. Numerous culverts and small bridges are required.

Passing through the roofed bazaar and walled gardens of Shahrabān the road emerges over undulating ground liable to flood. There are numerous irrigation channels in all directions, some deep and narrow with few and bad foot bridges.

61 Two canals, each about 12 ft. broad, crossed by masonry

Miles from
Baghdād

- bridges of one arch ; height of bridges above water 5 ft. (It seems possible that one of these 'canals' mentioned in one report may be identical with the canal mentioned by another authority under m. 63.) Ground becomes more elevated.
- 63 Canal 15 ft. wide and 3 ft. below the banks is crossed by a bridge in bad repair ; roadway 9 ft. Immediately beyond this is a sluggish river 20 yds. wide with perpendicular banks 15 ft. high. The road crosses by an ancient brick bridge with roadway of 12 ft. between the parapets. Some ruined houses near by. From here the road traverses undulating gravelly country crossed by broad, shallow ravines.
- 64 Rising gently, the road enters the **Jebel Hamrīn** range (low barren hills) by a narrow pass. See also under m. 69 below. On the ordinary track the path here, only wide enough for single animals, is a deeply worn gut in the smooth rock. After about a hundred yards the gut widens and the road spreads into several deep worn paths divided by ridges of smooth rock. Gradual ascent for 2 m., road widening and traversing some plateaux.
- 67 Summit of pass, 400 ft. above the plain. Apparently at the summit the pass is narrow but passable for carts drawn by four horses abreast. The descent is gentle by a broad track over stone and gravel.
- 69 The road emerges from the hills and descends a gravel slope. There is said to be a comparatively easy cart-track over the **Jebel Hamrīn** range by which guns could pass ; it enters the hills about 1 m. to the S. of the ordinary track, winds about till it joins after reaching the summit.
- The following is a description of a track just fit for vehicles across these hills. The gradients are variously described as 'steep' and 'easy'. The hills nowhere command the track by more than about 15 ft. Direction on leaving plain 50° (somewhat E. of NE.) ; after 2 m. pass *Nuqtah* on E. of track. 2 m. beyond the *Nuqtah* the track bends more towards the N., going on about 15° for 1 m., then on 20° (slightly N. of NNE.) for another mile, after which it enters the plain 7 m. from *Qizil Ribāt*, which lies about NE. by N.
- 71 Salt stream. The road now enters a broad plain, bounded, except to the N., by low hills and ridges in which there are a few villages and on which herds and flocks graze.
- 71½ Cultivation on both sides ; the **Diya'leh** ½ m. to the l. flowing in a broad stony and rushy bed.

Miles from
Baghdad
75

Qizil Ribāt. T., P.O. Several caravanserais on the farther side of the town. Supplies plentiful in normal times. Water abundant. Good grazing. Fuel scarce. No camels. About 50 other transport animals could be collected daily.

Authority :—*Routes in Persia, Corrections to vol. iii (1914), 96 (D) ;*
a report of 1911.

From Qizil Ribāt to Pāi-Tāq (see m. 143, below) there is an alternative route practicable only for lightly laden mules and donkeys (65 m.). Difficulty would be experienced in crossing the Āb-i-Dereh, Sarāb-i-Garīn, and Āb-i-Qal'ah Shāhin for a day or two after rains. The water from the Tangāb stream is bad, but otherwise drinkable water is obtainable everywhere. No fuel except in the Shāh Kūh (Dar-i-Barū). Grazing is plentiful from January to March, after that a little only is available in the mountains. In the Dīrā plain small quantities of supplies and fruit are available in season, and from Dīrā to Pāi-Tāq supplies are plentiful. Intermediate distances are uncertain ; Pavānmakā is about 33 m.

Miles

- 0 From **Qizil Ribāt** to Pavānmakā, the general direction is E. Nomad camps on the route in spring. The track is at first over flat country, then over rising and stony ground between northern and middle portions of the **Bāghcheh Hills**. At the frontier the ground is broken and cut up by ravines, and this terrain continues up to the foot of the Gamakavū and Shāh Kūh, where the ravine of the Tangāb stream is followed straight through the hills to Pavānmakā. The water of the Tangāb is indigestible and sometimes oily and sulphurous. The Pavānmakā gorge is approached over gypsum hills ; going is very bad and treacherous.
- 33 **Pavānmakā gorge.** Here the Tangāb ravine takes a turn N. into the gorge which is entirely enclosed by precipices. No permanent habitation here. The Tangāb ravine is then followed out of the hill. Thence the track makes across the valley towards the Bāzī Darāz range. It passes by undulating ground to the water of **Mai Qurī Khān**. The track then follows this stream, but keeps above it, on the level plain, as the ravine is deep and precipitous in places. It then passes through the outer gypsum range into a narrow valley called Pushteh, and strikes across the ridges of the Bāzī Darāz. Here it is a very bad and stony road. Water is to be found between Pavānmakā and Bāzī Darāz, but not in the latter region.
- 50? **Dīrā**, a fertile plain at the foot of the Bāzī Darāz. Villages and nomad camps. In the authority followed Dīrā plain is given at 42 m., and Pāi-Tāq at 50 m., but the total distance given at the head of the route is 65 m.
- From Dīrā the track goes NE. It passes round the end of

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the Danavishk mountain into the Qal'ah-i-Shāhīn plain, which it crosses to a pass between the Qal'ah-i-Shāhīn and Enzal mountains. After crossing the Āb-i-Dereh the main Baghdad—Kirmanshah road is joined $2\frac{1}{2}$ m. from Pāi-Tāq.

65 Pāi-Tāq (see m. 143, below).

From Qizil Ribāt to Khanikin the general direction is NE.

The road throughout is good and passable to all arms in dry weather. The first 4 m. from Qizil Ribāt would be in wet weather very heavy and impracticable for wheels. No water or supplies between m. 80 and m. 90.

Leaving Qizil Ribāt the road runs past walled gardens and houses, crosses a canal by a massive bridge, 25-ft. roadway, and traverses a cultivated plain. Irrigation channels run across the road, which gives signs of flood in places.

76 Two canals crossed in succession by bridges of strong masonry. The road is now gravelly over undulating country.

81 Low, bare hills are entered, the road, a broad, stony track, ascending some 150 ft. gently to a *kutāl* (pass or col). Emerging from the hills, the road crosses the stony plain for about 4 m.

83 *Nuqtah* passed on E.

86 Another range is now traversed.

89 Level plain of alluvial soil begins, bounded on all sides by low hills. There are villages some 3 m. to NW. with flocks and wheat fields.

92 $\frac{1}{2}$ Low gravel ridge is crossed and Khanikin comes in sight.

93 $\frac{1}{2}$ Stream; the road passes between and over stony streets.

94 **Khanikin.** T., P.O. Situated on both banks of the **Ālvand** among gardens. One authority gives the distance from Qizil Ribāt to Khanikin as 22 m. Supplies are plentiful and water abundant. No camels. About 20-30 other transport animals could be collected daily.

Bridge over the **Ālvand**, a rapid stream; river bed 100 yds. wide; bridge is solid brick and stone 154 yds. long, 20 ft. above water in a low river, 10 ft. in flood season, with 10 arches, roadway 24 ft. The stream is 60 yds. wide, and fordable in l.w.

Alternative route from Khanikin to **Ser-i-Pul** (see m. 132, below) via **Imām Hasan** (30 m.). See *Corrections to Routes in Persia*, vol. iii, 1914, Route 96, Alternative (E): a report of 1912.

According to the authority from which this description is taken, the route described here cuts off 4 m. of road. The estimate of

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its length is, however, 8 m. less than the estimated length of the route in *Routes in Persia*, vol. iii, 96, stages 6-8.

The route is possible only for mules and donkeys throughout its length. Carriages would be able to get as far as the Ālvand, opposite Kāni Biz, or to Kāni Biz itself by crossing the river at Khanikin bridge and proceeding near the l. bank, via Kārız and Akbar, to Kāni Biz (about 10 m.).

The climate is unpleasantly hot only during July and August (shade temperature about 110°) and is very dry. It is cooler at Imām Hasan, and over the Shisrā pass. Water ample. Green grazing for all beasts, all the way, from January to April, and drier grasses for the rest of the year except in Ganumbān. No fuel. Wheat is plentiful; otherwise, the only supplies would be at Kāni Biz where 10 sheep could be furnished almost at once by Mahmud Bey. The following rivers are crossed: Ālvand, Hūdarā, Imām Hasan (along the course of which the road runs for 2½ m.), and Āb-i-Dereh.

From Khanikin to Qasr-i-Shirīn the general direction is NE. The road is good and broad throughout, passable to all arms in all weathers, with the exception of places at m. 107 and m. 110 (see below).

Road which is hard and stony still runs NE., rising gently over broken and hilly country.

- 95 Road rises gently over some barren hills.
- 100½ Turco-Persian frontier line. In the neighbourhood is a round mud tower and a Turkish picket. Thence a descent over slabs of rock deeply worn into many tracks, after which the road ascends and descends low bare hills.
- 104 Cross stream of brackish water. On the spur above is a ruined fort, and the houses occupied by the Persian frontier guard. From here the road ascends gently, passing springs of water and Kurdish camps.
- 107 Track here goes over some sheet rock, which is not only steep but inclined at an angle sideways.
- 108 Spring of good water crosses road.
- 110 Qasr-i-Shirīn and Alvand river sighted.
Ālvand River, 30 yds. wide and fordable.
Large grove of poplar and willow on the l. bank.
Road runs along r. bank.
Road along hillside had fallen away a few years before the war, and there was only room for one horse at a time.
- 112 Road passes under a hill crowned by a stone fort to

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Qasr-i-Shīrīn (see *Gazetteer of Persia*, vol. ii). Supplies plentiful. Water abundant. Grazing good. Fuel scarce. Road to Mindar (*Route 28 b*, m. 122 $\frac{1}{4}$). For routes to Suleimāniyeh and Chīāh Surkh see App., pp. 397-398.

Authority :—*Routes in Persia, Corrections to vol. iii*, 1914, no. 96.

From Qasr-i-Shīrīn to **Ser-i-Pul** there is a route, alternative to that described below, fit only for lightly laden mules or donkeys, but 5 m. shorter than the main road. The Alvand River can be recrossed at any point desired to regain main road, and so avoid crossing the Āb-i-Dereh. No water, supplies, fuel, or fodder.

Leave **'Ali Murād Khān** village, opposite Qasr-i-Shīrīn, on the S. side of the Alvand river. Route almost immediately enters Sumbulak (gypsum mountain), passing over ridges and hills of gypsum for 4 m. Road extremely bad in places, and treacherous in wet weather.

Miles	
0	Qasr-i-Shīrīn.
3	Seyyid Khatil village passed on l.
5	'Ajab 'Ali.
15	Ser-i-Pul.

For the rest of the route only a summary account of the general character of the stages has been given. For details see *Routes in Persia*, vol. iii, 96, stages 8-15.

From Qasr-i-Shīrīn to Ser-i-Pul the main road runs in a general E. by S. direction. It is passable throughout to all arms, but would be heavy in wet weather, and laborious owing to the amount of loose shingle and stones.

132 **Ser-i-Pul (i-zuhāb).** Supplies are procurable. Water abundant. Forage and grazing good. Fuel from adjacent mountains. For route from here to Deh Balā see *Routes in Persia*, vol. iii, 97.

From Ser-i-Pul to Surkhadiza Khān the road runs in a general ESE. direction. It is passable for all arms, but the Turks are reported to have difficulties with transport at the Tāq-i-Garra Pass.

143 In this neighbourhood is the **Tāq-i-Garra** Pass, at the W. end of which is **Pāi-Tāq** village (see above m. 75).

149 **Surkhadiza Khān.** Supplies scarce. Water abundant. Fuel plentiful. Forage abundant. From this point to Karind the general direction is SE. Road bad throughout, for the first 3 m. on account of loose stones and rocks, and later because it is not only stony and rough, but liable to become heavy and swampy after rain and snow.

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164½

Karind. Supplies, water, forage, and live stock plentiful. Fuel obtainable. General direction to Khorāsābād is SE. Road for first mile from Karind and between m. 170 and m. 174½ is bad and stony, otherwise good. It is passable for all arms throughout, running over cultivated plain with friable soil.

175½

Khorāsābād village (see *Route 28 b*, m. 170¾). Camping ground beyond village on grassy plateau. Wood, water, and forage plentiful. Supplies obtainable from villages in neighbourhood. Road to Harūnābād runs SE. It is mainly a gentle descent crossing several streams, and is passable throughout for all arms.

183½

Harūnābād. Limited supplies. Water plentiful. Forage except in winter. Wood from the mountains. Route runs in a general NE. direction to Salārābād. It is good except possibly at the Na'l Shikan Pass (see m. 190½ below) where the Turks are said to have met with difficulties of transport in summer, 1916. An alternative route to Māhdesht (see m. 205½ below), though it also goes through the Na'l Shikan, is said to be good and passable for all arms. See *Routes in Persia*, vol. iii, 96, Alternative (A).

186½

Here an alternative route to **Kirmanshah** branches off to E. See *Routes in Persia*, vol. iii, No. 96, Alternative (C).

As far as Tang-i-Shuvan village it is good and passable for all arms.

Miles
(contd.
from
main
route)

206¼

Tang-i-Shuvan village, just below pass of same name. Supplies might be collected. Water plentiful. Forage abundant. Wood from adjacent mountains. From here across Tang-i-Shuvan to the Siah Chaga the general direction is NE. Road is passable for laden animals as far as Adawar, but bad in parts. From Adawar the road is passable to all arms, but would be very heavy in winter.

210¼

Head of **Tang-i-Shuvan** pass. Descent for first ½ m. very steep and dangerous.

212¾

Adawar village in plain.

217¼

Siah Chaga village on **Āb-i-Mark** river. Supplies could be collected. Water good and plentiful. No fuel, except cowdung, available nearer than the Kurkur range.

General direction to Kirmanshah NE. Road passable as far as the Ser-i-Āb for all arms.

220¼

Road begins to ascend to the pass of **Sāfid Kuh**. Gradients

Miles from Baghdad	Miles (contd. from main route)	
		over this range are sometimes steep, and guns would have to be let down with ropes in places.
	222 $\frac{3}{4}$	Summit of pass. Descent steep at first.
	225 $\frac{1}{4}$	Ser-i-Āb at foot of slope: a large spring from which flows the chief water-supply of the city of Kirmanshah. From Ser-i-Āb several paths, some narrow and intricate, lead through gardens to Kirmanshah. Route from Ser-i-Āb is passable for laden animals. Guns should make a considerable détour to W. to strike main road from Harūnābād via Māhidesht.
	229 $\frac{1}{4}$	Kirmanshah.
190 $\frac{1}{2}$		Entrance of Na'l Shikan Pass (see above under m. 183 $\frac{1}{2}$), over which road is very bad and stony. Descent from summit contains gradients which are steep and slippery for guns. (Another account describes the gradients as easy, the going being rocky and slippery in places.)
193 $\frac{1}{2}$		Sālārābād. Supplies scarce. Water from streams. Forage in spring and summer. Fuel procurable. From Sālārābād to Māhidesht the general direction is N. by E. The road is good and passable for all arms.
201 $\frac{1}{2}$		Here alternative route to Kirmanshah branches off to l., going NE. See <i>Routes in Persia</i> , vol. iii, 96; Alternative (B).
	Miles (contd. from main route)	
	207	Cross the Āb-i-Mark stream, 14 ft. broad, 10 inches deep, between 18-ft. banks, 20-30 yds. apart. Much cutting necessary to render river passable for guns. Cross alluvial plain, with villages.
	213	Route runs through down country.
	215 $\frac{1}{4}$	Summit of hill, 400 ft. First few hundred yards of descent impassable for guns. Beyond, the descent is gentle.
	216 $\frac{1}{2}$	Ser-i-Āb-Nilnfar , small village. Water good from neighbouring lake. Grazing good in the vicinity. From here to Kirmanshah the general direction is SE., but in the earlier part of the stage the route makes a bend to northwards.
	219 $\frac{1}{2}$	Kirmanshah—Suleimāniyeh road is reached and followed into Kirmanshah. See <i>Route 35</i> .
	230 $\frac{1}{4}$	Kirmanshah.
205 $\frac{1}{2}$		Māhidesht (generally known as Moidasht). Supplies plentiful, except in winter. Water and forage abundant. Grazing good in spring and summer. From here to

Miles from
Baghdad

222

Kirmanshah road goes in a general ENE. direction. It is throughout good and passable for all arms.

Kirmanshah (see *Gazetteer of Persia*, vol. ii). Supplies abundant. Water and forage plentiful. Fuel from the mountains.

ROUTE 28 b

BAGHDAD—KIRMANSHAH (217 $\frac{1}{4}$ m.)

Via MANDALI

Authority :—*Routes in Persia*, vol. iii, no. 95, from reports of 1897, 1903, and 1906.

There was very little traffic on this route before the war. It was used by the people of Mandali to carry produce to Kirmanshah, but not by people from Baghdad. As far as Beledrüz (also spelt Bālādōz) it has been in use as a route for carts carrying heavy machinery, &c., for the D'Arcy Oil Company. (For another road to Beledrüz see *Route 30*.) The remainder of the route in its present condition is only a mule track. It is a difficult route for camel transport. As far as Mandali the route lies over alluvial plains which after rain become more or less inundated and impassable owing to the boggy nature of the soil. Even a little rain, by making the road slippery and sticky, may produce a serious obstacle. After heavy rain some 24 hours at least are required to allow the road to dry sufficiently to permit of the passage of caravans. The latter part of the route lies through mountainous and rocky country, and the going is bad until the main Baghdad—Kirmanshah route is reached at Khorāsābād (see m. 170 $\frac{1}{4}$). To render the route fit throughout for the passage of carts a large amount of labour would have to be expended on a great number of points.

Till Khorāsābād there would be practically no supplies along the route with the exception of the stretch from about 16 m. before Beledrüz and the stretch between Beledrüz and Mandali. A certain amount of live stock, however, might be purchased from nomads. After the rains in the spring there would probably be an abundant supply of grass and grazing for animals, but later in the summer it would be extremely scarce. Fuel would be scarce or practically non-existing until the Persian border was crossed, after which there would be a certain amount of small shrubs and bushes, becoming more plentiful in the later stages. The water for the first 73 m. is rather brackish, more particularly in the summer months. In

the latter part of the route the water appears to be good and fairly abundant from streams. Along the road itself there would be practically no transport animals obtainable, as the districts passed through are almost without inhabitants except for some nomad tribes.

Miles from
Baghdad

- 0 **Baghdad.** The general direction of the route is NE. The country through which it runs is flat but interspersed with mounds which are seldom more than 15 ft. above the surrounding country and have gently sloping sides. They form no real obstacle to the movement of men, horses, or even carts, but they afford cover to view or fire to a considerable distance in rear of them. For the first 8 m. the track is passable for carts in dry weather, but even a little rain is a serious obstacle, and after a heavy fall it would be impassable for at least 24 hours after the ground began to dry. An inch of rain makes the country difficult even for men on foot.
- 3½ The first group of mounds mentioned above.
- 7 Silted-up remains of old canals running generally N. by W. to S. by E. There are two or three such embankments varying in height from 15 ft. to 5 ft., and in breadth from 40 ft. to 10 ft.
- 8 The soil, which up to this point has been a light clay, now becomes more sandy.
- 13 Boat ferry at the **Diyāleh.** The river here has steep banks even at the ferry, and they are in many places precipitous. It is about 60 yds. wide. The depth varies considerably according to the season, say from about 15 ft. to 2 ft. The current of the river varies according to the season from 4 m.p.h. after a rise to an almost imperceptible flow during the dry season. The ferry a few years before the war consisted of a light boat of rectangular or punt shape, about 30 ft. long by 10 ft. wide, one end of which was open and nearly flush with the bank; at this end embarkation and disembarkation took place. A slack hemp rope was stretched from bank to bank and moored to wooden pegs let into the banks. Along this rope the ferry-boat was hauled by men in the boat; two men sufficed for this unless the wind was unusually strong and directly up and down stream, when more labour would be required. The boat could carry eight horses at a time,

Miles from
Baghdad

and a proportionate number of mules or other animals. The sides of the boat were only about 3 ft. above the water, and if the animals were restive there was some danger of their jumping out of the boat or putting their feet through the sides, which were lightly built of laths laced between timbers about 4 to 6 inches in diameter, which formed the ribs of the boat. The outside of the boat was covered with a kind of pitch or bitumen, apparently a sufficient protection against leakage. The boat was furnished with a long rudder built out on a framework of light timber. The rudder made a powerful lever, and the boat was proportionately handy. Despite the steepness of the banks, it is not necessary to unload animals laden with ordinary weights. On the far, or l., bank there are at a distance of 50 ft. the remains of an old canal—the Nahrawān Canal. It is silted up but is about 20 ft. wide and about 10 ft. high.

14

Abu 'Arūj, a little N.

General direction of route NE. The country E. of the Diyāleh is said to be much greener than that on the Baghdad side. There is sporadic cultivation in some hollows where rain-water has collected, but it is not annual. There are one or two encampments of wandering Arabs who halt at places where there is water until it is finished. The country is featureless and flat, with a few mounds at intervals. During the h. w. season this portion of the desert is dotted with shallow lakes, and it is not possible to move in a straight line in any direction for more than 3 or 4 m. at a stretch. These lakes are merely collections of rain-water in depressions of the ground, and do not generally exceed 3 ft. in depth. There are no reeds or grass in these lakes and no cover of any kind on or near them. During winter grass is abundant but very short, and in the hot season the water and grass disappear, and the place becomes a burning desert of dust. A portion (not located) of the land along this route belongs to the *Dā'irat es-Saniyeh* and is fertile. As one approaches Beledrūz the land becomes lower and marshy. During or soon after rain this part of the country must be quite impassable.

At 2 or 3 m. from Beledrūz a few irrigation channels are met with, but they are not a serious obstacle even to carts.

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The main canal from the N., however, known as the Beledrüz Canal, is about 8 ft. deep and about 20 ft. wide, and when full is a complete obstacle to all progress except at the few places where it is bridged. There are only three such places in the neighbourhood of Beledrüz, and when they were last reported on one bridge only consisted of two palm-trees thrown across with some dust and mud spread over them. The other bridges are one of brick and one of wood in the village of Beledrüz itself. The brick bridge is about 10 ft. wide and strong enough for field artillery or ordinary carts. It leads into the farm-yard of a farm which belonged some years ago to a Constantinople Greek named Zarifi. From the farm-yard there is an exit to r. and l. on the opposite side of the bridge. The farm-houses and buildings are of brick and consist of four courtyards leading by narrow passages one into another.

46

Beledrüz (Bälädöz). The place is thickly wooded and consists largely of date gardens and orchards. All these gardens and orchards are enclosed by walls, about a foot and a half thick and about 10 ft. high. Each enclosure has one or two narrow doors. The bazaar consists of one street and is insignificant. The lanes between the gardens are about 12 ft. wide and very filthy; they are nearly all on a rectangular plan. The wooden bridge over the canal in the centre of the village has been described as a frail structure of wood fit for loaded mules and perhaps camels, but hardly for anything heavier. It was about 4 ft. wide and was supported in the centre by a brick column. Water plentiful and good. There are no trees or bushes between Baghdad and Mandali except at Beledrüz, and the country round, with the exception of a few mounds and canal-banks, is perfectly flat.

At Beledrüz *Route 30* joins the present route.

The general direction is now E. by N. Leaving the gardens, the route starts over a broad clay track through grassy fields skirting an irrigation-cut. For 2 m. the only road leads through a reedy marsh with from 18 in. to 2 ft. of water; the bottom is fairly firm, but in places there are deep muddy cuts into which the animals sink. The track is cleared of reeds, and there is no chance of missing it in the water. The marsh is said to be dry or nearly

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Baghdad

- so in the summer months. By making a *détour* of some miles to the S. the marshy part to be crossed is said to be less, but the route described seems to be the regular caravan route.
- 50 $\frac{3}{4}$ The marsh is left, and the plain regained, in the hollows of which there is an abundance of short green grass.
- 58 $\frac{3}{4}$ Small stream, with an occasional pool of sweet water (in spring?). From here the ground slopes down gently to Mandali.
64. The **Nāfāt** River, a sluggish stream 20 to 25 yds. wide and 6 ft. deep, with steep earth-banks lined with reeds and tamarisk scrub. In the hot weather the water is not only unpleasantly flavoured with petroleum, but is unwholesome to drink, causing diarrhoea. The banks of the Nāfāt are at present impassable for carts, but ramps could easily be made, for the soil is a soft red sandy loam.
- 66 $\frac{3}{4}$ Ford over the river, which is some 40 yds. wide and 2 ft. deep, with easy approaches. Bottom muddy.
- 68 The large tomb of **Nabi Tehrān** or **Imām 'Abdallah** is passed, on a mound 1 $\frac{1}{2}$ m. to the S. A stream flows midway between it and the road. There are several springs and streams passed in this dip, all brackish and unfit to drink, and the ground is thickly covered with saline incrustations. The only vegetation is a few low bushes.
- 70 $\frac{1}{4}$ A few scattered fields of barley as the town is approached.
- 73 **Mandali**, village situated in a large patch of date gardens. It is surrounded by trees in walled gardens similar to, but much more extensive than, those in Beledrūz. The houses are largely built of mud or sun-dried bricks, and the enclosure walls in nearly every case of mud. Mandali is on ground sloping to the S., and is amply supplied with good water, which is brought by a canal taken off, from the Gangīr River, at a distance of about 3 m. to the NE. of the town. This canal divides into three branches, of which one turns northwards without entering the town and is lost in the desert about 6 m. to the N. of Mandali. (This branch may be almost parallel to the first part of *Route 29*). The other two branches pass through the town and bifurcate in various directions on the way. The supplies available at Mandali are of the same kind as at Beledrūz, but about treble the quantity. There is ample water in the Gangīr River all the year round. This

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- stream is very rapid near Mandali, about 5 m. an hour, and the water is about $2\frac{1}{2}$ ft. deep and 60 ft. wide at the end of February. The banks are greatly shelving and the bottom is pebbly. At the time when the snows have begun to melt the stream is probably much larger.
- The road continues in a general NE. direction. It runs at first through the narrow street and date gardens between high mud walls, and crossing several small irrigation channels emerges on to the plain and follows the edge of the enclosures.
- 74 Date-groves end, and road crosses a wide grassy plain, leading towards gap in the range in front.
- 75 $\frac{3}{4}$ Two small irrigation canals 6 ft. wide and 2 ft. deep are crossed. Small date plantations, with tombs dotted alongside these canals. There are also several mills, and the banks are lined for a short distance with barley crops. The clay soil ends here, and the ground becomes stonier and rougher.
- 76 $\frac{1}{2}$ The **Rūd-Khāneh-i-Gangīr** or **Āb-i-Ravān** (Gangīr River) lies 500 yds. S., running in a wide gravel bed along several small channels. The road crosses some low undulations.
- 77 $\frac{1}{4}$ Route lies along the course of the river here 400 yds. wide. The water is brackish, and the banks quite bare of vegetation. On the l. bank are some low sandstone cliffs.
- 77 $\frac{1}{2}$ The Turco-Persian frontier is here marked by a pile of stones standing just at the mouth of the open valley through which the road now runs, leaving the plain. The road is a good 30-ft. track over red sandstone and gravelly conglomerate. This open defile, where the river debouches into the plain, is known as the **Tang-i-Sunmar**.
- 78 Road continues up the valley, here about 1 m. wide, bordered by low undulating hills. A small and very brackish stream enters on the left bank from the direction of Jebel Atish. Naphtha springs lie in that direction. The river here winds considerably.

[From this point only a summary is here given of the detailed report in *Routes in Persia*, vol. iii, no. 95.]

Road continues up Gangīr Valley by a track generally easy

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- and broad, occasionally crossing spurs of hills over gravelly or stony soil. Patches of grass occur here and there. Rounded hills at first border the valley, becoming steeper and more rugged farther on. River forded at m. 79, m. $94\frac{1}{2}$ (or possibly m. $95\frac{3}{4}$) and m. $98\frac{1}{2}$. The second ford is difficult owing to swiftness of stream. River-water brackish up to m. 91. Sweet spring on l. bank at m. 79, and several springs of good water at m. 90.
- $98\frac{1}{2}$ **Muaranna** camping-ground. Good water, excellent grazing. Summer camp of Karind Kurds; no village.
- Direction still NE. and up valley, across several ravines and clay undulations. Track rough where it follows river-bed from m. $99\frac{1}{2}$ to m. 100. Then fairly easy till—
- 105 Steep rocky spur juts across valley causing river to make a sharp bend. The track ascends a side valley for a short distance and then turns up over the ridge, following a steep ascent for 300 yds. by a series of short zigzags.
- $107\frac{1}{4}$ Road descends into the river valley and again reaches a wide grassy terrace overlooking river-bed. A cutting in the soft shale round the extremity of the ridge would make this into a good cart-road. About 1 m. farther on the road becomes for 500 yds. a track along a 1 to 2 foot ledge, taking advantage of the broken parts of nearly vertical strata overhanging the river. It is impossible to avoid this bad portion as the river is not fordable here. Cuttings in the soft shale would not be difficult. The road then becomes a broad track closely overlooking the cliff along the left bank.
- $108\frac{3}{4}$ Pass through **Tang-i-Shutar Gardān** gorge.
- $109\frac{3}{4}$ Ford river. The ford is 40 yds. wide and 2 ft. deep over a rough, rocky bed in a rapid stream. Approach and ascent easy. Road now enters **Sambak** Valley.
- $110\frac{1}{4}$ Road turns sharply to the right up a side valley, the **Tam** Valley, the track following bed of a small stream.
- $111\frac{1}{2}$ Valley gradually opens out into the wide undulating plain of **Cham-i-Surkh**, rising towards the N. with some signs of irrigation and cultivation, with several side valleys. The stream flowing through this plain is crossed four times.
- $114\frac{1}{4}$ Camping-ground in centre of valley. The only supplies would consist of sheep and goats, which could be purchased from the nomads in large numbers. Water from the stream good. Grazing excellent.

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- General direction to Zarneh Valley is SE. Road at first follows a broad track up the centre of the valley on the stream bank inclining towards N.E. and gradually ascending. Several small springs in the hill-sides, and the water-supply good and abundant. On the W. of the plain is a curious isolated hill called the **Qal'ah-i-Markara**, the top of the hill being crowned by a cliff 60 ft. high and the ruins of an old fort.
- 115 $\frac{3}{4}$ Road skirts slope of **Bāgh Kūh** range to E.: lower slopes earth, with large boulders; shrubs, stunted ilex, and oak.
- 117 $\frac{1}{4}$ Road turns up through the **Tang-i-Khushk** and ascends a gentle slope up a valley. **Gilān Kūh**, a steep, rocky ridge bounding the valley to the NW., lies to l. The pass is a deep gap between this and the Bāgh Kūh. At the foot of the pass the gradient is 5° and the valley is 60 to 80 yds. broad with a small stream. The road winds among trees and boulders and is stony, but is fairly easy going. The ascent to the summit of the pass is gradual the whole way, and could be made a good cart-road. It is at present passable for artillery.
- 119 $\frac{1}{4}$ Summit of pass, 1,875 ft. above the Cham-i-Surkh Plain. Immediately below to the NE. lies a deep narrow valley running down towards the Gangīr. The road from the summit keeps along that side of this valley and is rough and narrow; in places it is only an 8 to 5 ft. ledge. Soil rich clay covered with grass. After 2 m. the road descends by a series of sharp zigzags.
- 121 $\frac{1}{2}$ Road takes a sharp bend through the lower pass, also known as the Tang-i-Khushk. The pass is a rift in the mountain range from 30 to 40 yds. wide, the total length being 1,300 yds., bordered by precipitous cliffs of grey limestone. The road is rough and stony and in the spring a torrent sweeps down the centre. It is level throughout and for the last 300 yds. the track lies in the dry bed of the torrent. There are several caves at the N. mouth of the pass. $\frac{1}{4}$ m. farther on the road opens out into a narrow valley with steep stony sides, and $\frac{1}{2}$ m. farther emerges into the **Mindar Valley** running NW. in the direction of Gilān and SE. in the direction of Zarneh. It is here 1 $\frac{1}{2}$ m. wide.
- 122 $\frac{1}{4}$

Route, passable for wheels except at some bad ravines, to **Gilān** and **Qasr-i-Shirīn** (Route 28 a, m. 112).

Miles from
Baghdad*See Routes in Persia, corrections to vol. iii, 1914, no. 95 B.*

- 125 The summit of a long gradual ascent on an easy track is reached, this ridge forming watershed of the Gilān and Zarneh valleys. Road passes ruins on the site of Karan. Trees gradually disappear as descent is made, and Zarneh Plain is quite bare.
- 134½ Camping ground near the ruins of old **Zarneh**. Supplies possibly procurable from nomads.
General direction of road to Charmilleh NE. It follows a broad track down centre of the valley over gravelly soil where going is easy. It slopes gradually towards the centre and numerous small streams are passed flowing towards Zarneh. These join the head-waters of the Gangīr.
- 139¼ Ruins of village of **Zarneh** on a large tumulus 200 yds. in diameter and 100 ft. above the plain. A few of the houses are still standing. Just north of the tumulus lies a large spring called the **Chasmeh-i-Zarneh**, from which a stream of good water issues. Numerous other small springs are passed and water is abundant at all times of the year. The plain grows good grass, and patches of Indian corn are sown on it by nomads as soon as snow is off the ground. At southern end of plain is **Manisht Kūh**.
- 140¼ The road leaves Zarneh Plain and turns up through a pass in the ridge bordering it on the E. The pass is 30 to 40 ft. wide at its narrowest, and 400 yds. at its broadest, bordered by steep grassy slopes dotted with a few trees and topped with steep rugged cliffs. The track is level, but the going is rough owing to loose stones which might at parts easily be cleared away. At times the road follows the dry bed of a stream.
- 143 Road emerges into a small grassy valley ¼ m. broad bordered on the N. by a steep ridge called the **Gumir Kūh** impassable on this side because of sheets of vertical limestone strata. The valley runs up 2 m. in a NW. direction and is well wooded. The road leads diagonally across the valley. To the S. lie the undulating table-land and hills of **Asimābād** or **Asmānābād**, where are the extensive ruins of an ancient city. A long gradual slope rises from here to the flat summit of **Manisht Kūh**.
- 144½ Head of the valley is reached and the road turns E. up

Miles from
Baghdad

- a stony, rough ascent for 400 yds. through trees. The track is rough and occasionally much obstructed by large stones and (at m. 145 $\frac{1}{4}$) by a rough, steep ascent under overhanging trees.
- 145 $\frac{3}{4}$ Summit of col is reached and road proceeds along ridge by a broad track. Soil is rich and grows good grass. Track is broad and well defined through forest and the going is easy. The head of the **Chillav** Valley is passed. Track descends from the head of the col into it and then turns north again and emerges into
- 147 $\frac{3}{4}$ A small grassy basin shut in between hills. This place, **Charmilleh** camp, is sometimes used by the nomads as a camping-ground. Supplies, especially live stock, might be obtained from the nomads.
- A road runs through the Chillav Valley from **Gilān**, and another branches off here to **Harūnābād** through **Guar**. Through the valley also passes a route from **Ser-i-Pul** (i-zuhab) to **Deh Bālā**. See *Routes in Persia*, vol. iii, 97.
- The route now goes in a general N. direction to Tirau camp. Begin the ascent of the **Kalāja Kūh**, a lofty rocky ridge separating the road from the Harūnābād district. Track rough at times: it could be improved by clearing loose stones. Steep stretch for 300 yds. at m. 150. Ascent thence to summit more gradual and consisting of several mule-paths running between large stones; along the side a stony ravine: dwarf oaks, &c., on hill-side.
- 150 $\frac{3}{4}$ Summit of **Derbend-i-Kalāja** Pass. This is the highest point on the route. The crest of the ridge, a rounded summit, lies 1,000 ft. higher to the right. The descent of the northern slope of the range is much steeper and occasionally rough, but becomes easier towards the end.
- Foot of the range is reached and the route strikes across the **Guar** Valley, which extends for some 20 to 25 miles. It averages 3 to 4 m. in width and is covered with abundance of fine grass and watered by numerous small springs and streams from the foot of the border ranges. Stream in the centre of the valley 12 ft. wide and 8 inches deep with sloping earth-banks, flowing over a gravelly bottom.
- 156 Defile of the **Tang-i-Juimerk**, 300 yds. broad, is entered, in the range bordering the valley on the N. Road is a level and much used track: rocky shelving slopes on either hand; no difficulties except from stoniness of road.

Miles from
Baghdad

- 156 $\frac{3}{4}$ Road bifurcates, one branch going direct to Karind over the Nua Kūh : said to be a rough mountain track.
- 158 The other side of the valley reached and road ascends a succession of stony spurs and mounds. Track good but very rough with scattered loose stones.
- 159 Summit of ridge reached and route zigzags down a narrow track over stones and boulders and between low trees. The slope of the hill is 22°. This is the most difficult portion of the route between Charmilleh and Tirau camps. After a descent of 320 ft. the road reaches the level of the **Tirau Valley** and starts along a broad track across a grassy valley. Several old ruins.
- 160 $\frac{1}{4}$ Camping-ground by small stream. Soil rich gravelly clay. This is a summer camping-ground of nomads, from whom supplies might be obtained. Water from the stream. Grazing plentiful. Fuel good.
General direction of road N. It strikes diagonally across valley to ascend rounded ridge NW. of the valley.
- 161 $\frac{1}{4}$ Route ascends rough, stony mule-track 6 to 8 ft. broad following the side of a small ravine. This might be made a good road. The series of undulating hills hereabouts is known as the **Chalbacā Kūh**, which forms part of a long spur from the Nua Kūh to the NW. Paths cross it at any point.
- 162 $\frac{1}{4}$ Undulating plateau dotted over with good oak and pistachio trees. There is no perceptible track here and horses sink into the soft friable soil at every step.
- 163 $\frac{1}{2}$ Gradual descent begins, following the line of a rocky ravine.
- 164 $\frac{1}{2}$ Road emerges on to a lower grassy terrace of the ridge by an easy gradient. $\frac{3}{4}$ m. farther on the ruins of a village are passed and the road descends a grassy valley bordered by a few stunted trees. Soon after the valley narrows to $\frac{1}{4}$ m. with craggy sides and the going becomes more stony.
- 167 $\frac{3}{4}$ Route emerges into an open basin $\frac{1}{2}$ m. wide with fine grass. $\frac{1}{2}$ m. farther on the valley again narrows to 100 yds. with low cliffs on either hand. The track is stony but the going easy ; a little clearing would make a road of easy gradient through this pass. $\frac{3}{4}$ m. farther on valley opens out again. Side valley bounded by rounded hills stretches away to l. for about 1 m. All this ridge is fertile and grows rich grass. It has numerous ruins but is unin-

Miles from
Baghdad.

- habited. The road now enters a craggy valley bordered by cliffs of grey limestone down which runs the Karind River. This is called the **Tang-i-Ismā'īlu**.
- 169 River is forded, 30 yds. wide and 2 ft. deep with a rapid stream over a stony bed among boulders; the route continues along a broad track down the left bank; the pass is 100 yds. wide and on either side are two high, conical, craggy cliffs. Emerging from the pass the river makes a rapid turn off to the r. and the road leaves it and turns up a small valley bordered by rounded hills. It is a well-defined, easy track along a stream-bed almost dry. Some cultivation along river bank. Wheat seen here for the first time since leaving Mandali.
- 170 $\frac{1}{4}$ Main road from Baghdad to Kirmanshah *via* Khanikin reached.
- 170 $\frac{3}{4}$ Village of **Khorāsābād**, 50 flat-roofed huts of mud and stone. Grazing good. Fuel plentiful.
- For continuation of route to **Harūnābād** (178 $\frac{3}{4}$ m.), **Sālār-ābād** (188 $\frac{3}{4}$ m.), **Māhidesht** (200 $\frac{3}{4}$ m.), **Kirmanshah** (217 $\frac{1}{4}$ m.), see *Route 28 a*.

ROUTE 29

MANDALI—KHANIKIN (45 m.)

Authority :—*Routes in Persia, Corrections to vol. iii* (1914), *Route 95 A*.

This route is much used, especially by oil caravans. It connects *Route 28 a* and *Route 28 b*. In 1912 it was reported to be unsafe in winter and spring owing to brigands, as it lies on the Persian frontier, and to be subject to raids from the Kalhur, Sanjabi, Ahmedavand Buhtūr, and Qaraulūs. It runs across a plain for most of its length, and is practicable for light wheeled traffic. The climate is excessively hot during June–September owing to the hot wind known as *bād-i-sām*. Grazing in plenty is to be obtained from January to March, none at other seasons. General direction N.

In the neighbourhood of Mandali beyond the date plantations of the town the ground is broken. Water, good and bad, is here to be found. Encampments and villages of Qaraulūs are to be seen. There is a choice between several tracks out of Mandali. One track is said to go a little E. of the **Gangīr** River, which is rapid and

contains ample water at all times. The route then approaches the **Bāghcheh** Hills, and follows round the foot, passing over the spurs. The ground is stony and bad: gullies are crossed in places. After April no water is to be found beyond a small spring in Qatār. Having passed the Bāghcheh Hills (? 33 m.) the country is flat as far as **Khanikin** (45 m.).

A report of 1916 refers to one canal of good water, and slightly brackish water elsewhere between Mandali and Khanikin: exact route not specified.

ROUTE 30

BAGHDAD—BELEDRŪZ (52½ m.)

Via **BAHRĪZ**

Authority:—*Routes in Persia*, vol. iii, 95, Alternative Stage (A).

Miles from Baghdad	
0	Baghdad. General direction NE. For the first 24 m. of the road, see Baghdad—Kirmanshah <i>via</i> Khanikin (<i>Route</i> 28 a). For general description of the country on the route see introductions to <i>Routes</i> 28 a and 28 b.
24	Here main road and T.L., which proceed in the direction of Bāqūbeh, are left.
28	Bed of an old canal is crossed.
28½	Sudden dip in the plain is reached. The Diyāleh River is here about ¼ m. S., the river making a sharp bend. The road crosses a hollow, said to be the ancient bed of the river, in which there is water in high floods.
29¼	River bank is reached. The stream is about 150 yds. wide, with a moderate current. It runs in a deep bed sunk 25 to 30 ft. below the general level of the plain with steep earth banks. Ferry, as last reported, consisted of an old hull of a native craft (<i>baghalah</i>) which carried about six animals.
29½	Bahrīz , 400 houses on l. bank of the stream. There are two caravanserais and a small but well-supplied bazaar, in which grain and dates, &c., are procurable in abundance, and fruit in autumn. Supplies plentiful. Good water from the river. Grass on the plain in the spring. Road now goes in a general E. direction. Leaving the caravanserai the road at first skirts the Khorāsān Canal, crossing several small side channels emerging from

Miles from
Baghdad

- it. The track is 10 to 12 ft. wide, through barley and wheat fields. Good clover and grass on the waste land. The canals are mostly 4 ft. wide and 1 ft. deep, and easily crossed. The main channels are 6 to 8 ft. deep, and difficult for mules. Flocks of sheep and goats are grazed on the plain.
- 31½ Small shrine of **Imām Abu Feyyāb** passed 1 m. to the S. There is a cluster of huts, with a few date-trees round it. This forms a good landmark on the plain. The belt of irrigated land now gradually ceases, and open alluvial plain commences. The shrine of Abu Khums lies about 6 m. to the S.
- 33 Irrigation cuts are left, and the route strikes across the plain in a direction almost due E. Winding track.
- 36 **Shehr Habīb**, extensive ruins, strewn with broken pottery and bricks, marking site of an ancient town. Water lodges close by in some of the hollows of old canals, where plenty of green grass is to be found.
- 39½ Good water hereabouts, apparently from canal.
- 41¾ The last of the brick mounds is passed.
- 42 Small tomb 2 m. to the S. on a mound.
- 44½ Marshy hollow, about 1 m. square, to the N. The water in these hollows is not good, but is sweet and drinkable. A few Arab encampments with flocks of sheep and goats may be seen. The general direction of the canals is NE. and SW. They are not in straight lines, but wind in all directions.
- 52½ Road reaches the W. side of the large grove of dates, in which **Beledrūz** (also written Bālādōz) is situated. (For description, see *Route 28 b*, m. 46.)

ROUTE 31

BAGHDAD—BĀQŪBEH (47 m.)

Via THE DIYĀLEH BRIDGE AND LEFT BANK OF THE DIYĀLEH RIVER

Authority: Route Report of January 1904

For main road to Bāqūbeh see *Route 28 a*. In 1904 the country for 2 m. above the mouth of the Diyāleh (m. 9), near Bahrīz (m. 43),

and between that place and Bāqūbeh, was cut up by numerous water-cuts which were impassable for wheels. The soil on the l. bank of the Diyāleh is a sandy clay, in places heavy going. The authority above referred to calls the country on the river bank, from 2 m. above the Diyāleh mouth to near Bahrīz, open desert. But another account describes the plain to the E. of the river in the region of Abu 'Arūj as bearing abundant short grass in winter (which, however, dries up completely in summer) and as containing patches of cultivation here and there in the hollows. (See *Route 28 b*, m. 14.)

Miles from
Baghdad

- 0 **Baghdad.** Leave the city by the gate called **Bāb esh-Sharqi**, and proceed SE.
- 3½ **Qarāreh**, on l. bank of the Tigris. (Boat-bridge here across the Tigris often removed in flood season: for description, see vol. ii, *Route III C*, m. 190½.) Proceed on l. bank of Tigris.
- 9 **Mouth of Diyāleh River.** Cross boat-bridge. In 1904 this bridge consisted of 16 boats, with one spare boat: each was flat-bottomed, 32 ft. long, 12 ft. wide, and 6 ft. deep. The bridge was divided into four sections connected by planking. The banks at the bridge, though ramped, were reported steep (about 20°) and difficult for wheels. In the neighbourhood of the bridge they were precipitous and 30 ft. above water. A few mud huts at each end of the bridge.
- Turn NNE., and ascend l. bank of Diyāleh River. Many water-cuts, described in 1904 as 'very difficult or rather impassable for wheels without a little bridging or ramping'.
- 11 Water-cuts cease. Country 'an open desert—cultivable but uncultivated in all directions' (1904).
- 15 In this neighbourhood there was in 1904 an encampment of Arabs belonging to a small tribe called Neza Da'ag (?). The authority already mentioned 'camped in their vicinity after having marched for six hours' (from Baghdad).
- Continue along l. bank over open sandy plain. In some places the sandy dust is heavy and trying to animals. Track crosses and recrosses several times an old dry canal or river bed, marked on recent maps as the Nahrawān Canal, on earlier ones, apparently, as the old bed of the Diyāleh.

Miles from
Baghdad

23½

32

37

43

47

Pass 'Abu Arūj' ferry across the Diyāleh, near Sifweh ruins. Continue along l. bank.

In this neighbourhood the authority of 1904 crossed the 'old bed of the Diyāleh' (Nahrawān Canal?, see p. 33) at the point where it took off from the Diyāleh. He adds, 'This point was about 5 m. S. of Abu Khums, and the alignment on the map (Sheet 56, SW. Asia Series) of this old bed of the Diyāleh is quite misleading. At this point it looks as if the bank of the present stream were giving way on the E. side, and as if the river would in a high flood again take the old bed. This might result in a large marsh near Sifweh, which would probably affect the climate and health of Baghdad.'

Pass **Abu Khums**, a shrine in the plain, apparently 2-3 m. E. of the river.

As Bahriz is approached, the country is much broken by water-cuts with narrow plank bridges. These water-cuts would be quite impassable for artillery or wheeled transport (1904).

Bahriz. (See *Route 30*, m. 29½.)

Between Bahriz and Bāqūbeh the road crosses numerous water-cuts impassable for artillery or wheeled transport without some bridging. Date gardens along river begin to l. of track a short way beyond Bahriz.

Bāqūbeh.

ROUTE 32 a

KHANIKIN—SALĀHIYEH (KUFRI) (33½ m.)

Authority:—Lorimer, Report on a Tour in Turkish Arabia and Kurdistan in April-May 1910.

This route lies over open rolling country, the only serious obstacle to artillery being the Diyāleh River (see m. 13½). On the W. side of the river the road is reported to be frequently intersected by small ravines, few if any of them more than 12 ft. deep and 20 ft. broad, and probably all capable of being easily made passable for artillery. The country seems to be fairly well populated, and there is a certain amount of cultivation. Water seems sufficient, but there is no information with regard to a water-supply, beyond

the references to streams in the itinerary. Clover was seen here and there E. of the Diyāleh.

The times given in the text of the itinerary are from the authority mentioned above: they are those of riders, not of the baggage caravan. The riders took 3 hrs. 22 min. from Khanikin to the Diyāleh ferry (E. bank), the baggage a little over 4 hrs. (Passage of river by raft-ferry, 3 hrs.) From the W. bank of the river to Zengabād the riders took 30 min., the baggage 40 min. From Zengabād to Salāhiyeh (Kufri) the riders' time was 5 hrs. 9 min., that of the baggage 7 hrs. 50 min. The approximate distances given in the margin are only calculations from the riders' times at an average rate of $3\frac{1}{2}$ m. an hour.

Miles from
Khanikin

- | | |
|----------------|--|
| 0 | Khanikin. Follow r. bank of Ālvand River, here 20–30 yds. broad and generally fordable. |
| $\frac{3}{4}$ | At 15 min. leave bank of river crossing flat lands (fallow, &c.), passing a hollow called Darwanjik coming from hills on the N. |
| 1 | At 20 min. cross a canal called Quleh , 20 ft. wide, water 3 ft. deep, coming from W. Khanikin lies to SE., Kawazi village $\frac{1}{2}$ m. NE., tomb of 'Abbās on a mound $\frac{3}{4}$ m. SW., Aliwayeh (100 houses of Kurds) 1 m. W. Just beyond this point the Quleh Canal is spanned by an aqueduct 4 ft. wide. |
| $1\frac{3}{4}$ | At 35 min. Aliwayeh village, mentioned above, lies 1 m. to S. by W. on a ridge, with small village (Mohammed Shehr Bey) in line with it $\frac{1}{2}$ m. nearer. Husein village (50 Kurdish houses) lies $1\frac{1}{2}$ m. to ENE. Imām Beidhā Mahmūd, tomb on light-coloured mound, 3 m. to NNW.: two palm-groves on each side of mound (see m. $4\frac{1}{2}$), behind them (out of sight) Bāweh Palāu (or Falawi) village, 150 houses of Kurds. Sheikh Hasan, 30–50 houses of Arabs to NW. by W., on road farther on. Red peak of Marwari Hill, near Dekkeh, about 10 m. NW. by N. Proceed NW. by W. |
| $2\frac{3}{4}$ | At 56 min. Sheikh Hasan village mentioned above. 3 small Kurdish villages 3 m. to NE. Marwari Hill about NW. by N. |
| $3\frac{1}{2}$ | At 1 hr. 6 min., Khanikin lies SE. Imām Beidhā Mahmūd lies $1-1\frac{1}{2}$ m. N. Part of Bāweh Palāu, mentioned above, lies $1\frac{1}{2}-2$ m. N. by W. |

Miles from
Khani-
kin

- 4 $\frac{1}{4}$ At 1 hr. 18 min., pass Imām Beidhā Mahmūd, 3 m. to r.
- 4 $\frac{1}{2}$ At 1 hr. 24 min., pass second of two date-groves mentioned under m. 1 $\frac{3}{4}$. These date-groves are irrigated by a spring from Marwari Hill.
- 5 $\frac{1}{4}$ At 1 hr. 38 min. **Bāweh Dāgh** mound to r. of road. Several small Arab villages from W. to SW. at various distances. Tel Mal Quleh 2 m. SW. by W. Crops of clover, wheat, and barley, irrigated from Quleh Canal. Hamrīn hills visible on l. front from WNW. to WSW.
- 8 $\frac{1}{2}$ At 1 hr. 58 min. reach rising ground.
- 9 At 2 hrs. 8 min., top of rising ground. Marwari peak at 3-3 $\frac{1}{2}$ m. N. by W.
- 9 $\frac{1}{2}$ At 2 hrs. 19 m. pass **Bankan**, Kurdish village to l. of road.
- 10 $\frac{1}{4}$ At 2 hrs. 30 min. **Ghaznah Tepeh**, light-coloured mound on r. of road. Hamrīn hills along horizon from W. to SW. To WNW. at 2 m. Mahmūd Rōsam, small Kurdish village. Dekkeh to NW. Marwari peak slightly W. of N. Khanikin slightly E. to SE. Sangar Canal runs from W. along l. side of road between this period and Dekkeh, 6 ft. wide and 6 in. of water.
- 12 At 3 hrs. 2 min. reach **Dekkeh**, just beyond a ruined village. Dekkeh contains 60 houses of Jaf Kurds. Marwari peak 2 m. to ENE. Beyond Diyāleh River the Ban Sanduq hills appear from NW. to W. (called Kara Bulak on W. O. Map, E.T.A., sheet 38: they are there marked extending too far S.: they do not go farther S. than Dekkeh). Zengabād village across the Diyāleh, 4 m. distant. For 15 min. through thick growth of *palk* (a bush with round leaves which vary in size between a shilling and a half-crown). Then for 5 min. over shingle to the edge of the Diyāleh.
- 13 $\frac{1}{2}$ At 3 hrs. 22 min. **Diyāleh** ferry. Marwari peak bears ENE. at 3-4 m. To NNE., apparently at 7-8 m., upper Qara Bulāq, village of 30 houses of Talabāniyeh Kurds (Sheikh Tayyib's section) at a red hillock: said to be on W. bank of Diyāleh. To N. at about 5 m. the greater Qara Bulāq village, 50-60 houses of Kurds of the same tribe and section.
- Small raft-ferry (16 skins): it was said in 1910 that no other ferries existed either up or down stream. Raft in April 1910 drifted $\frac{1}{2}$ - $\frac{3}{4}$ m. down stream and reached

Miles from
Khani-
kin

- opposite side at off-take of a canal called Kashawul leading towards Zengabād. Width of stream at narrowest, in April 1910, 150 yds. General direction of river N.—S. It took 3 hrs. to ferry two travellers over with servants and baggage, the raft making more than one journey. Unloaded mules swam by a more direct line. See further *Route 32 b*, m. 25. From landing-place Zengabād lay WSW. Ban Sanduq hills from NW. to nearly N. Cross open ground and fields.
- 16 At 30 min. for riders, or 40 min. for baggage, from landing-place, reach **Zengabād** village. 200 houses of Zengabād Kurds. Small suburb about $\frac{1}{4}$ m. to W. A few Jews. Mosque. Gardens of *Dā'rat es-Sanīyeh*. Irrigation from two water-cuts on W. and E. of village. About 1 m. to W., Tepeh Girān, conspicuous mound. Road proceeds NNW., passing crops.
- 17 $\frac{1}{2}$ At 25 min. from Zengabād, **Ban Sanduq** village, 40 houses of Zengabād Kurds. Shaitapaneh village, 25 houses of Zengabād Kurds, W. by S. Low hills to r. of road. Direction to m. 18 $\frac{1}{4}$, somewhat W. of NW.
- 18 $\frac{1}{4}$ At 40 min. from Zengabād neck of low hills. Zengabād lies SE. Shaitapaneh 2 m. SSW. Marwari peak to E. Just beyond this point on road is a ruined village.
- 19 $\frac{1}{4}$ At 55 min. from Zengabād, **Tazashan** village, 30 houses of Zengabād Kurds. Direction to m. 20 NW.
- 20 At 1 hr. 7 min. from Zengabād, Hājilar village (70 houses of Zengabād Kurds belonging to Majid Pasha of Salāhiyeh) is 1 m. distant, a little W. of SSW. Direction to m. 21 $\frac{1}{4}$ a little N. of WNW.
- 20 $\frac{1}{4}$ At 1 hr. 12 min. from Zengabād pass **Kokaz** village, 30 houses of Zengabād Kurds, to l. of road.
- 21 $\frac{1}{4}$ At 1 hr. 27 min. from Zengabād, Tepeh Chami hamlet (7 houses) 1 $\frac{1}{2}$ m. SW. by S. Direction to m. 22 $\frac{1}{2}$ WNW. by N.
- 22 $\frac{1}{2}$ At 1 hr. 50 min. from Zengabād the tomb of Ibrāhim Samīm is 4 m. to SW., Tepeh 'Ali, 40 houses of Zengāneh Kurds, about 3 $\frac{1}{2}$ m. SW. by S. Arab village of 30 houses 2 m. to r. On l. the Hamrīn range runs from WNW. to SSE.
- 24 At 2 hrs. 15 min. from Zengabād, **Kushk**, ruins and mound, on r. of road. Ibrāhīm Samīm, mentioned above, bears SSW. and Tepeh 'Ali S. by W.

Miles from
Khani-**kin**
24 $\frac{1}{4}$

Cross **Kodareh** watercourse, dry, about 8 ft. deep and 24 ft. broad. End of Zengabād territory. Direction to m. 27 NW. by N.

27

At 3 hrs. 9 min. from Zengabād, Zardeh village, 120 houses of Zengāneh Kurds, lies 1 m. WSW. Mound of Teleshān (or Tel Ishān) about 2 m. to W. (Village of same name on road ahead.) Eski Kufri several miles WNW. Near here, at a place called Salaisheh, there is a garden belonging to Haji Husein, son of Sa'id Ahmad of Kufri. The low hills to r. of road are hereabouts called Chalau Khurik (or Chalāo Khurik): to NNE., beyond them, other reddish hills called Shirwāneh are visible. Direction to m. 28 $\frac{1}{4}$ NW.

28

Cross shingly bed of **Zardeh** stream, which is here formed by the junction of a stream of sweet water coming from N. with another stream not so sweet from E. Each stream in April was clear, a few feet broad, and quite shallow. The Zardeh is said to run W. for a mile or two and to be expended in irrigation.

28 $\frac{1}{4}$

At 3 hrs. 32 min. from Zengabād, **Teleshān** village, 40 houses of Zengāneh Kurds. Direction N. by E. to m. 28 $\frac{3}{4}$. Ground hilly.

28 $\frac{3}{4}$

At 3 hrs. 40 min. pass mill of 'Abd el-'Āziz Agha of Qara Tepeh.

29 $\frac{1}{4}$

At 3 hrs. 52 min., mound by road, from which Salāhiyeh (Kufri) bears due N. **Tanaishimyeh** village (60-70 houses of Zengāneh Kurds) 2 $\frac{1}{2}$ m. to NE. **Rāhi Murgheh** village, 100 houses of Zengāneh Kurds, 3 $\frac{1}{2}$ m. E. by N. Proceed through low hills, not far from bed of a stream flowing from Salāhiyeh.

31 $\frac{1}{4}$

At 4 hrs. 29 min. **Sercham**, temporary harvesters' village, was passed in April 1910.

Cross flat land, with some cultivation.

33 $\frac{1}{2}$

At 5 hrs. 9 min. from Zengabād, **Salāhiyeh (Kufri)**.

ROUTE 32 b

SALĀHIYEH (KUFRI)—KHANIKIN (40 m.)

Via KULA SU

Authority :—Route report of 1910 (apparently of a journey taken in 1909).

This track is over level ground all the way, and suitable for guns and wheeled transport, though the soft soil would make very bad going after rain or the passage of heavy traffic. The only serious obstacle is the Diyāleh (see m. 25 below). Sheep and goats plentiful, and perhaps some other supplies from villages in the Diyāleh Valley. Water plentiful in the Diyāleh Valley (canals from river). Very good spring grazing. Fuel plentiful. Good camping-ground near the Diyāleh. A few horses might be collected *en route*.

It is possible that Defteh (m. 27 below) village is the same as Dekkeh in *Route 32 a*, m. 12.

Miles from
Salāhi-
yeh

- | | |
|----|---|
| 0 | Salāhiyeh. Track leaves Salāhiyeh slightly E. of S. by E. (165°). Cross wadi (apparently the bed of the Kufri (Chechepan) Su is meant). |
| 2 | Reach rolling downs; cross these. |
| 4 | Reach plain. Here track runs S., with wadi parallel to it. |
| 7 | Aleaza village, about 50 houses, on both sides of wadi, which is here about 4 furlongs broad, with 2 streams, each 12 ft. broad, 1 ft. deep. |
| | Track leaves wadi (which bends to E.), and bears slightly S. of SSE. (160°) across sandy desert. |
| 12 | Cross small stream. Track changes to between SE. and SE. by E. (130°). |
| 16 | River to W. Thence continues slightly E. of ESE. (110°). |
| 19 | Grass more abundant. Bear slightly E. of E. by S. (100°). |
| 21 | Bear slightly E. of ESE. (110°). |
| 22 | Shrine passed on W. |
| 23 | Kula Su village, 600–700 inhabitants. Other villages in neighbourhood at intervals of a mile or so. |
| | Bear between NE. and NE. by N. (40°). |
| 25 | Diyāleh River. Camping ground for large force on bank. Bed of the river here about $\frac{1}{2}$ m. wide; in spring it is |

Miles from
Salāhi-
yeh

- filled from bank to bank and unfordable. At other times two channels run in it, enclosing a large island. In 1909 the western channel was only 1 ft. deep and 20 ft. broad, easily crossable; the eastern was about 50 yds. broad and generally 6 ft. deep, but shallowing to 4 ft. at a ford, which runs from the southern end of the island above-mentioned, just N. of another, smaller, island. The Diyāleh, however, alters considerably with every spring flood, and these details may not hold at present.
- Kelehs* are constructed at Defteh village.
- From E. bank of river track continues as before between NE. and NE. by N. (40°).
- 27 **Defteh** village. Proceed, apparently, between SE. and SE. by E. (Authority has here and at m. 36 '230°', apparently an error for '130°').
- 30 **Gāzābād** village. In same direction as before to—
- 33 Large conspicuous mound. Proceed SE.
- 36 Direction apparently between SE. and SE. by E. See above, m. 27.
- 40 **Khanikin**.

ROUTE 33

QASR-I-SHĪRĪN—SALĀHIYEH (KUFRI) (55 $\frac{3}{4}$ m. ?)

Authority :—*Routes in Persia*, vol. ii, no. 72.

On at least one stage there seems to be some confusion in the authority with regard to distances: see under m. 20 $\frac{1}{4}$. The report dates from 1888: the route was apparently traversed at some time in the dry season. The route appears to be very little used. The track is often ill-defined, and is much intersected by streams and ravines. It would be unsuitable for wheeled traffic without much previous preparation and labour. The Diyāleh River would need bridging: this, it is stated, could be easily done by pontoons or trestles.

In 1888 good crops were passed *en route*. Cattle were available in limited numbers. Water from streams, &c., throughout. Forage scarce. No information as to fuel. Transport not obtainable.

Miles from
Qasr-i-
Shirin

0

Qasr-i-Shirin. General direction to Merkez W. Leave Qasr-i-Shirin and strike across some low, gravelly undulations by a well-defined track, in direction 258° (W. by S.). Soil, light clay and gravel, growing thin grass mostly burnt up in dry season. For 1 m. out of town, barley and wheat crops (1888). Gradient ascends gradually till a few pools and little streams are passed in a ravine. Gradient now becomes steeper, ascending low, rounded range of conglomerate hills. Broad, easy track over ridge, which can be passed at any point. Grass sometimes available in hollows.

4

Rounded summit of ridge, alt. 2,020 ft. (a rise of nearly 600 ft. from the start). Cross it skirting a dry, gravelly ravine to r. Along the summit of the ridge runs the Turco-Persian frontier, as settled in 1914. The NW. side of ridge is cut up by several long ravines running towards the Diyāleh. Begin easy descent along ridge of a spur; valley with dry water-course to l. Wide view over Diyāleh Valley, a gently undulating country intervening. Short steep descent for 100 yds. from end of spur at junction of two valleys. Valley to r. contains gravelly bed of stream 150–200 yards wide; stream in valley to l. nearly dry in l.w. season. Water disappears in this gravelly soil, but could be found in wells or *karez*. Follow stream bank: easy going over gravel and pebbles. Track in 1888 seemed to be hardly ever used. Stream contains good clear water. Tall hedges on banks; no trees in sight; some fields of Indian corn close by. Pass round masonry tower, some 30 ft. high, on spur to r. This in 1888 was a frontier mark (but see above). A line of these towers runs about NNW. towards Diyāleh (341°), and between SSW. and S. by W. (197°) towards Khanikin. Pass through some low gravelly mounds, and emerge into a flat valley 1 m. wide. Well-defined track over light, gravelly soil, well cultivated with good wheat and barley, to

12½

Merkez village, 80 well-built houses (1888). Alt. 1,045 ft. Population Turkomans, speaking only Turkish. On spur close by strong brick loopholed building, which in 1888 contained 50 *saptichs*. Water from a *karez*, from which runs a clear stream 4 ft. wide, 6 in. deep. Soil

Miles from
Qasr-i-
Shirin

a light loam, growing wheat and barley well, also rice.

General direction NNW. to Salahi. Follow easy track over undulating gravelly plain. Cross dry bed of stream, 100-150 yds. wide, running south towards the Diyāleh. Ascend a flat-topped ridge which here crosses the plain: track only very slightly defined. The northern side slopes very gradually towards the Diyāleh Valley. Grass on hill-slopes poor, but improves nearer the valley. Track easy and gravelly.

20 $\frac{1}{4}$

Salāhi village, $\frac{1}{4}$ m. to r. of track, surrounded by three large orchards and cultivation.

General direction to Sheikh Sa'id on farther side of Diyāleh, N. (Another Sheikh Sa'id is passed just after leaving Salāhi.)

With regard to this stage there appears to be some confusion in the route-book, and possibly in the W.O. map, sheet 38. The distance given between Salāhi and Sheikh Sa'id in *Routes in Persia*, vol. ii, no. 72, is 20 miles. This seems to be too long, unless a very considerable detour is made, of which there is no mention in the report. On the other hand, Hamr'ala is marked on the map as lying to the S. of Salāhi, whereas the Sheikh Sa'id which is passed near Salāhi is placed about WSW. of Salāhi, between it and the Diyāleh. The Diyāleh River at about 5 m. from Salāhi, on bearing 26° (slightly E. of NNE.), breaks through a ridge in the hills and emerges into the plain.

Cross large canal which runs through Salāhi and irrigates country between it and river by numerous minor cuts. Canal 20 ft. broad and about 2 ft. deep. On the eastern bank the ground slopes up, and is drier and less cultivated. Clay track 15-20 ft. wide, through wheat fields, follows r. bank of canal. Pass deep irrigation cut 8 ft. wide and sunk 6-8 ft. below the surface. It is crossed by rough bridge of tree trunks with fascines and earth: there are several of these little bridges, otherwise the canal would be difficult for laden mules. Several mills dotted about the plain, each with a loop-holed watch-tower some 30 ft. high. Pass **Hamr'ala** village (150 houses, some well-built of

Miles from
Qasr-i-
Shirīn.

bricks) surrounded by fruit gardens. Close by is a large ruin mound, containing bricks which in 1888 were being dug out by natives for building purposes. Inhabitants of this valley are Bagilan, half Arab, half Kurd, wearing Arab dress. Extending S. from here is a well-cultivated plain 8-10 m. long, dotted with several villages, each surrounded by an orchard. Another ruin mound 1 m. to r. From Hamr'ala cross plain to NW., approaching the Diyāleh. Soil fertile, irrigated by numerous small canals; narrow track through tall grass and cornfields. Pass **Shaki** village, 250 houses in 1888, including some good two-storied buildings, but apparently suffering from Hamawand raids; low mud wall breached in several places round village. Good crops of wheat and rice grown in this valley. Rafts constructed here for passage of the river in 1888: none ready-made. On nearing river enter belt of tall hedges and osiers extending to river-bank.

25 $\frac{1}{4}$ (?)

Diyāleh River. The river flows in a wide gravelly bed, with several channels. The course taken by the stream varies from year to year, and also the point for crossing. Rafts can only take light loads in high water. Mules and horses have to be swum across. When the river was crossed in 1888 there were broad sedgy flats and creeks on the l. bank, and on the r. low gravel cliffs 25 ft. high, with ruins of small village. The main deep channel was then near r. bank, and the other channels were fordable. Opposite ford the ruins of a small village.

Route from r. bank passes low gravelly undulations covered with a little grass. Soil improves, and, later, cultivation (wheat and barley) is to be seen. No cultivation or irrigated ground on r. bank, which rises rapidly to some low undulations on the l. Pass dry gravelly bed of ravine from l. On nearing **Sheikh Sa'id** cross rich soil, unirrigated, growing good wheat and barley. Easy track between fields.

29 $\frac{1}{4}$ (?)

Sheikh Sa'id, 150 mud huts: Kurds. Cultivation in a sort of basin of 3-4 m. radius round village. Plain quite treeless. Water-mill turned by a small irrigation-cut. (On river bank 3 m. from Sheikh Sa'id is Qal'ah Shirwān, in 1888 winter residence of a Jaf chief, a fine

Miles from
Qasr-i-
Shirin

stone building. Some 6 m. to NE. a range of low rounded hills, at the foot of which were some ruins and a *ziyāret.*)

From Sheikh Sa'id to Salāhiyeh (Kufri) general direction W.

Leave village along a good track over a broad valley sloping gently upwards from river. Good gravelly soil. Pass dry, gravelly bed of stream running into Gök Su. Pass several dry ravines. Plain 6-8 m. wide, perfectly open and bare; gravelly soil would grow good wheat crops.

35 Reach bank of **Gök Su**, a large stream flowing into the Diyāleh. Gravelly bed, 200 yds. wide, with many small channels: good clear water. Ford stream. Good soil with a little grass on the plain: only ruined village visible. Good soil with a little grass. Gradually ascend a low range of hills on r. bank of Gök Su. Turn up side valley over some low spurs. This range is called *Jebel Kushki* (Dry Hill) owing to absence of water in ravines. Best line to Salāhiyeh is parallel to ridge, the general direction of which is from NW. by N. to SE. by S.; it is easily passable at any point. No well-defined road, but several small paths. The range is cut up by many gravelly ravines with strata of gypsum cropping out here and there.

39¼ Reach crest of ridge (alt. 1,290 ft.): view back over plain of Gök Su: no village or trees in sight. Descent winds among steep gravelly spurs; no well-defined track; cross several small stream-beds; a little grass in the hollows. Cross stream with little water in wide and stony bed; some clear pools. General direction of valley and undulations 216° (between SW. and SW. by S.). Pass a small stream and valley with some good grass. A few ledges of sandstone rock begin to appear at intervals. Soil improves, becoming less gravelly. Some herds of cattle and sheep seen in 1888; patches of wheat between undulations.

46¼ Leave spurs of range and emerge on level cultivated plain of **Chenimassi**. Cross several sandstone ledges; white incrustations here and there in the soil; water sweet. Pass *Chenimassi* village (100 houses) in centre of plain

Miles from
Qasr-i-
Shirin

2 m. to SE. The other side of the plain is bounded by a ridge called Imām Divānza, similar to Jebel Kuski. (In front of this ridge a ruined village in 1888.) Track follows bed of stream. Wheat and barley grown on plain without irrigation. Continue down plain and cross one branch of the **Darkhāneh** River, flowing over several small channels in a gravelly bed 150 yds. wide; only a few pools of water in dry season; some melon plantations along bed. (The 'main post road' from Baghdad to Mosul was met near here in 1888. Road described in *Route 25 a*, m. 107-117 runs on other side of Kufri Su Valley.) Cross main bed of **Darkhāneh** river, flowing in several channels; bed gravelly, 400 yds. broad. Pass Eski Kufri on low gravelly mounds 2 m. to l. Cross wide bed of **Kufri Su (Chechepan)**. Good wheat and barley crops in the plain. Pass another branch of stream 300 yds. broad. Water in several channels among banks of shingle; most of it led off into irrigation cuts.

55 $\frac{3}{4}$

Salāhiyeh (Kufri).

ROUTE 34 a

SALĀHIYEH (KUFRI)—SULEIMĀNIYEH (88 $\frac{1}{2}$ m.)

Via ZAGIRMEH PASS

Authority :—*Military Report on Eastern Turkey in Asia*, vol. iii. (1904), *Route 105*.
(The account of the Route there given dates from May, 1888.)

It is clear that there is much confusion in the mileage of this route as printed in the *Military Report*, and in two places at least (see under m. 54 $\frac{1}{2}$ and m. 64 $\frac{1}{4}$ below), there is difficulty with regard to the times. The total distance in the *Military Report* is brought out to as much as 200 $\frac{3}{4}$ m. The distances given below are generally calculated at the rate of about 3-3 $\frac{1}{4}$ m. an hour, but at somewhat slower rates at some difficult places. The times given in the text of the itinerary are based on those given in the *Military Report*. Up to the Tang i-Kalakh they are calculated from Salāhiyeh: beyond that point from Dolan, Rish Olan, and Temar successively.

No general account is given of this route. It is not suitable for wheels. For a note on supplies, &c., in this country, see Introduction to *Route 34 b*. It would appear from the entry under m. 51 that fuel on this route is scarce between *Salāhiyeh* and the *Zagirmeh Pass*.

The track described in *Route 34 b*, though it goes through *Ibrāhīm Khānji* and *Temar*, cannot be certainly identified with any other part of this route. *Route 34 b* seems to cross the *Qara Dāgh* some way SE. of *Route 34 a*.

Miles from
**Salā-
hiyeh**

- | | |
|-----------------|---|
| 0 | Salāhiyeh (Kufri : alt. 760 ft.). Along a broad track between the town and the Kufri Su (<i>Chechepan River</i>). |
| $\frac{3}{4}$ | At 13 min. from start ford river where it emerges from hills. Gravelly bed, 200 yds. wide, in several shallow channels. Wind between low gravelly mounds and ledges of sandstone. Track at first well-defined, but gradually becomes less so. |
| 2 | At 40 min. follow winding track 15 ft. wide along small stream between two ridges of sandstone. <i>Chechepan river</i> $\frac{1}{4}$ m. to W.; the valley is 300-400 yds. wide, bordered by a confused mass of sandstone ridges. Several fruit gardens and hills along it. |
| 3 | At 1 hr. pass an orchard 200 yds. to l. Alt. here 865 ft. Several reed huts with patches of wheat and barley in the little valleys between the undulations. |
| $3\frac{1}{4}$ | At 1 hr. 6 min. reach stream flowing from NE. into <i>Chechepan</i> ; continue up its r. bank. Rich soil: several irrigation cuts. Track through these ridges generally level, passable for wheels. |
| $4\frac{1}{4}$ | At 1 hr. 25 min. (alt. 850 ft.). Emerge on rolling upland of gravelly undulations. Good grass found along streams in first half of May; elsewhere grass already burnt up. Continue over undulating gravelly plateau sloping N. |
| 6 | At 2 hrs. track well defined, but little used. Soil rich clay. |
| $7\frac{1}{4}$ | At 2 hrs. 25 min. pass Kūh Murmil village (about 100 reed huts) between mounds $\frac{1}{2}$ m. to r. It is surrounded by patches of wheat and barley. <i>Ziyāret</i> of Bukh-rasūl about here. Country much cut up by ravines. Soil light clay much waterworn. |
| $16\frac{3}{4}$ | At 5 hrs. 35 min. stream turns sharp E. in a deep narrow valley bordered by steep earth and gravel slopes. |

Miles from
Salā-
hiyeh

- 17 Broad clay track: numerous short ascents and descents over ridges.
- 18 $\frac{1}{4}$ At 6 hrs. 5 min., alt. 1,500 ft. Easy descent into valley with steep clay sides.
- 19 $\frac{1}{4}$ At 6 hrs. 25 min., alt. 1,400 ft. Cross stream flowing E. over a gravelly bed. Good track crossing several ravines. Deep valley to l.
- 20 At 6 hrs. 42 min., steep descent into narrow valley bordered by sandstone ledges and slopes of gravel and conglomerate. An easy clay track winding down in a few zigzags. Patches of cultivation in the valley: cuttings in the clay would make this passable for carts. Valley 200 yds. wide.
- 20 $\frac{1}{4}$ At 6 hrs. 47 min., ford large stream flowing W. to join the Aq Su or Av-i-Spi. Alt. 1,300 ft. Short ascent with steep zigzags: then reach a rolling plateau. The valley of the Aq Su lies $\frac{1}{2}$ m. W., and 2 m. W. is the small village of **Gil**, near which are sulphur springs. To E. the plateau gradually rises to a low flat-topped ridge of sandstone.
- 22 $\frac{1}{2}$ At 7 hrs. 30 min., alt. 1,670 ft. Gradual descent. Country cut up by small ravines: it presents a curious tumbled appearance as of sea-waves.
- 23 $\frac{1}{2}$ At 7 hrs. 50 min., alt. 1,450 ft. Steeper descent by a ledge 3 to 4 ft. wide, which might easily be cut wider for carts.
- 23 $\frac{3}{4}$ At 7 hrs. 55 min., **Ibrāhīm Khānji** in valley of the **Āq Su** (see *Route 34 b*, m. 60). 150 houses in 1888. Valley bare, but good grass along river. The place lies in a small basin shut in by steep gravel cliffs about 1 m. each way. On hill overlooking village is a ruined mud fort. In 1888 there was a ruined khan on mound on opposite bank of **Āq Su**, and also a deserted village on that side of river.
- 24 $\frac{1}{4}$ At 8 hrs. 5 min., ford **Aq Su**. This was done with difficulty on May 11th, 1888, the river being then swollen by rain, 80 yds. wide, with rapid current. It is almost dry in summer. (Compare *Route 34 b*, m. 58.) Alt. at ford 1,310 ft. Thence proceed along level terrace 200 yds. broad above stream. On l. bank are bare earth cliffs 150 to 200 ft. high. Valley $\frac{1}{4}$ m. wide with a few patches of cultivation.
- 25 At 8 hrs. 21 min., ford **Āq Su** to avoid cliff. River here

Miles from
Salā-
hiyeh

- 100 yds. wide, 2 ft. 6 in. deep; rapid current over a pebbly bottom (May 11th, 1888).
- 26 $\frac{1}{4}$ At 8 hrs. 47 min., ruined village of 150 houses (1888). Over small spur and along a rocky ledge at top of a cliff overhanging l. bank. Dip into river-valley, here 400 yds. wide, bordered by steep ground and earth cliffs cut up in all directions by ravines. River in a gravelly bed 200 yds. wide: easy track.
- 27 At 8 hrs. 59 min., over low spur, and open up another valley 600 yds. wide, half of which is taken up by stream.
- 28 At 9 hrs. 17 min., ford 120 yds. wide, 18 in. deep (May). Rapid stream flowing over pebbles and round stones. Dry later in year. Alt. 1,350 ft. Continue up broad track along r. bank. Valley narrows to 300 yds. Alt. 1,450 ft.
- 28 $\frac{1}{4}$ At 9 hrs. 24 min., river turns E. between steep ledges of rock with vertical strata. Follow a ravine 80 yds. wide with small stream.
- 28 $\frac{1}{2}$ Steep ascent (gradient 1 in 6 to 1 in 8) along a ledge 2 ft. wide for 300 yds. at the top. Short zigzags among sandstone ledges. A little clearing would make it passable for carts.
- 29 $\frac{1}{2}$ At 9 hrs. 49 min., level of plateau cut up by ravines in all directions (alt. apparently 1,605 ft.). Soil is a rich clay with good grass on the undulations. Numerous small springs in the ravines, their position marked by clumps of oleanders.
- 30 At 9 hrs. 57 min., wind along the watershed by an easy track, avoiding the descent into the deep ravine on either hand.
- 31 At 10 hrs. 14 min., descend into small valley by ledge worn in hill-side.
- 32 At 10 hrs. 37 min., round shoulder of flat-topped sandstone ridge to r. A good clay track, through low gravelly hills and ravines.
- 32 $\frac{1}{4}$ At 10 hrs. 42 min., fewer ravines. Open up a wide plain called **Chiazarin**, bounded by the Qara Dāgh.
- 32 $\frac{1}{2}$ At 10 hrs. 49 min., alt. 1,530 ft. Descend into narrow deep valley of the Chiazarin River which joins the Aq Su. Wind down a narrow ledge in steep slope. A cart track might be improvised here. Drop 90 ft. in 3 min.

Miles from
Salā-
hiyeh

33½

At 11 hrs. 8 min., ford the **Chiazarin** River, 20 yds. wide and 18 in. deep in May, running SE. in a narrow gravelly channel.

Gradual ascent out of valley, passing some ledges of sandstone to l.

34¼

At 11 hrs. 22 min., over plateau nearly level. Alt. 1,560 ft.

37¼

At 12 hrs. 22 min., cross bed of stream which in May was found almost dry, but with occasional pools.

Gradual ascent towards gap in ridge.

37½

At 12 hrs. 29 min., pass large artificial mound called **Tepēh Gowāri** at the entrance of the gap. Extensive ruins to W.

Through gap in small ridge 300 yds. wide with steep sloping sides of hard stone: the strata nearly vertical. A small stream comes through gap. Alt. apparently 1,785 ft.

38¼

At 12 hrs. 46 min., descend into valley of stream. Track stony in places. To NE. a succession of ridges called the **Hatla Dāgh**. Short steep ascent. Pass numerous springs. Track a narrow ledge among slabs of rock. An easier track higher up the valley.

39¾

At 12 hrs. 56 min., round foot of grassy mound on which are the ruins of a stone fort named **Qal'ahjaq**, a good position for barring the entrance of the pass. Alt. 1,985 ft.

40¾

At 13 hrs. 14 min., ascend grassy plateau. Rocky ledges crop out at intervals.

41½

At 13 hrs. 31 min., alt. 2,440 ft. Along flat ridge between two grassy villages. Good track nearly level.

44¼

About 14 hrs. 25 min., alt. 2,605 ft. Open out a wide undulating upland about 4 m. across. Rich soil with fine grass (May). A good site for a large camp for troops. Grass burnt up later in year.

45¼

At about 14 hrs. 44 min., summit of plateau. *Ziyāret* of **Gök Tepēh** to l. on mound with a few trees (alt. 2,715 ft.). Descend grassy ravine. Track a ledge 10-12 ft. wide, stony in places.

46¼

At 15 hrs. 4 min., alt. 2,525 ft. Track in rough stony bed of stream: sharp descent (12° slope).

47

At 15 hrs. 21 min., alt. 2,065 ft. Track in deep narrow valley among stones and boulders. Steep ascent to **Gök Tepēh** village.

Miles from
Salā-
hiyeh
48 $\frac{1}{4}$

- At 15 hrs. 46 min., **Gök Tepeh**, 50 houses overlooking the ravine (alt. 2,400 ft.). Some cultivation near water from small springs on the plateau, and in the valley grass, plentiful in May.
- Cross plateau by an easy track gradually ascending. Skirt deep ravine to l., with a stream.
- 51 At 16 hrs. 39 min., alt. 2,690 ft. Beginning of **Zagirmeh** Pass. Cross small stream; a few low trees and shrubs, the first since Salāhiyeh. Up bed of stream, crossing several times; ground rather stony; sandstone ledges. Valley 150 yds. wide with easy shelving sides bordered by wooded spurs. Several small springs.
- 51 $\frac{3}{4}$ At 16 hrs. 56 min., steep ascent for 300 yds. up a spur by short zigzags. It could be made practicable for carts if longer zigzags were cut.
- 52 $\frac{3}{4}$ At 17 hrs. 21 min., alt. 2,935 ft. Ascent more gradual, over loose stones. Some oaks, 12-18 in. in diameter, and scrub underwood.
- 54 $\frac{1}{4}$ (?) At 17 hrs. 53 min., alt. 3,720 ft. A rough track joins from Gök Tepeh Ziyāret. Follow a 12 ft. ledge, stony but easy, winding through oaks and hawthorns. Deep narrow ravine to l. (The authority followed makes this entry under 8.32 p.m., and the next entry under 8.30 p.m.: the times and distances here given assume that '8.32' should read '8.22', but this is obviously quite uncertain.)
- 54 $\frac{1}{2}$ At 18 hrs. 1 min., alt. 3,825 ft. Zigzag up among loose stones and boulders: by clearing the boulders a cart track could be made.
- 54 $\frac{3}{4}$ At 18 hrs. 6 min. ascent rather easier, along broad 12-15 ft. road to summit.
- 55 $\frac{1}{2}$ At 18 hrs. 21 min., top of pass (alt. 4,430 ft.). Reach a deep gap in the rocky summit of range bordered by crags. Width about 300 yds. Remains of a wall and casemated gateway drawn across summit. Gateway almost choked up in 1888. Track through wide breach in wall. The pass is easily defensible as the crags on either side are impassable. In 1888 it was a favourite resort of Hamawand robbers. A wide view towards Kirkuk.
- 55 $\frac{3}{4}$ At 18 hrs. 27 min., alt. 4,255 ft. Follow a ledge 25-30 ft. wide over shingle and gravel, and at uniform slope of

Miles from
**Salā-
hiyeh**

- 1 in 14. The slopes are craggy with stunted oaks and shrubs, and to r. is a torrent among rocks.
- 56 $\frac{3}{4}$ At 18 hrs. 51 min., alt. 3,620 ft. Sharp turn to E., zig-zagging down a stony spur through low oaks.
- 57 $\frac{1}{4}$ At 19 hrs. 1 min. reach foot of slope (alt. 3,600 ft.). Then follow a fairly level but stony track along a torrent, crossing several times in a narrow bed among rounded stones and boulders.
- 64 $\frac{1}{4}$ (?) At 22 hrs. 48 min. (?), narrow defile called **Tang-i-Kalakh**. The strata are vertical, and in the gorge the ledges of rock overhang the road to a height of 150-200 ft. The entrance is 8 ft. wide, through large boulders in a stream-bed, and for 50 yds. is paved. Then follows a single 12 ft. arch with a paved roadway 8 ft. wide. 20 yds. farther the stream makes a sharp turn under the base of the cliff, and there is another bridge similar to the first. The road could be rendered impassable by the destruction of either of these bridges (called the Pul-i-Kalakh). Both arches were in a bad state of repair in 1888. The arch of the second was supplemented by a few sticks and fascines.
- (There is much confusion here in the times and distances as printed in the *Military Report on E. T. A.*, *loc. cit.* The distance given above between the top of the Zagirmeh Pass and the Tang-i-Kalakh (8 $\frac{3}{4}$ m.) is that given in the *Military Report*. The time at which the Tang-i-Kalakh was reached is given as 1.8 a.m. The next entry is under 10.18 a.m. A halt was apparently made at or near the Tang-i-Kalakh, but the time at which the march was resumed is not stated. The distance from the Tang-i-Kalakh to Temar given in the *Military Report* (17 $\frac{1}{2}$ m.) does not agree with the W.O. map.)
- After passing the Tang-i-Kalakh, alt. 2,960 ft., emerge into a rolling country crossed by several low wooded spurs from the Qara Dagh, the main ridges of which lie to SE. The nearest slope of the range has a rich soil with vineyards. Rice in the valleys. Grass along stream. Track passes through an open country of undulating ridges. Oaks, 2 ft.-2 $\frac{1}{2}$ ft. in diameter.
- 65 $\frac{1}{2}$ (?) Pass **Dolan**, 30 huts, $\frac{1}{4}$ m. to W. in a ravine. This place seems to be about $\frac{3}{4}$ m. beyond the end of the Tang-i-Kalakh.

Miles from
Salā-
hiyeh
66 $\frac{1}{4}$

- Alt. 2,780 ft. Cross small stream, 13 min. after passing Dolan. It flows to the Diyāleh. Over a ridge and descend into another valley running W.
(This is said to be the watershed between the Āq Su and the Diyāleh ; but the map (W. O., sheet 36) does not bear this out.)
Rice-fields.
- 67 $\frac{1}{2}$ At 41 min. after passing Dolan, alt. 2,750 ft. Numerous small springs. Follow a 20 ft. gravelly track up a grassy valley $\frac{1}{2}$ m. wide. Few trees here.
- 69 $\frac{1}{4}$ At 1 hr. 13 min. after passing Dolan, cross low spur. Alt. 2,960 ft.
- 70 $\frac{1}{2}$ Valley narrows towards summit of ridge. Easy gradient. Alt. 3,450 ft.
Descend broad track following spur with ravine on either side. A few zigzags would make this easy for guns.
- 70 $\frac{3}{4}$ **Rish Olan** at foot of the slope 1 m. to NE. This place is given as 1 hr. 48 min. after passing Dolan. In 1888 the village consisted of 40 flat-roofed mud huts surrounded by a few trees, orchards, and cultivation. In spring the grass grows thick on the roofs of the houses, so that a village is scarcely distinguishable from the plain around.
Along broad clay track in a well-wooded valley, 3-4 m. wide, cultivated with barley and wheat. Then by narrow track through orchards and hedgerows to
- 72 $\frac{1}{2}$ **Temar** (see *Route 34 b*, m. 22), 30 min. after passing Rish Olan.
Across valley through wheat-fields, and then over several low spurs, beginning ascent of Gilzerda Dāgh. Good track over gravel and clay.
- 73 At 10 min. from Temar, several ravines with springs. Track narrow in places, the soil being washed away by the rains. The lower spurs of the Gilzerda Dāgh are covered with brushwood. Steep ascents and descents among ravines.
- 74 $\frac{1}{2}$ At 32 min. from Temar, gradual ascent of **Gilzerda Dāgh** by a 20 ft. gravelly track up the side of a spur. Skirt deep valley 400 yds. to r. The slopes are rounded, with some rock at intervals. Alt. about here 3,050 ft.

Miles from

**Salā-
hiyeh**74 $\frac{1}{2}$

At 43 min. from Temar bend round head of ravine by easy 10 ft. ledge: portions of it are paved.

75 $\frac{3}{4}$

At 1 hr. 8 min. from Temar, alt. 3,670 ft. Through a dip in the upper part of the range. Along steep slope with craggy ravine to l. A foot-path takes a direct line from Temar and avoids bend.

76

At 1 hr. 15 min. from Temar, rounded summit of rocky ridge. Road bifurcates, one branch going direct to Suleimāniyeh by Gilzerda village on a steep rocky slope in front. Descend diagonally, bending SE.

76 $\frac{1}{4}$

Along a ledge 12-15 ft. broad, stony in places, through low shrubs and brushwood. Easy gradient.

76 $\frac{1}{2}$

Zaz, 1 hr. 26 min. from Temar: 30 houses in a rocky ravine 1 $\frac{1}{2}$ m. to l. The strata crop out almost vertically.

77

Alt. 3,500 ft. Steep stony descent following dry bed of stream. A cart-track could be made by clearing away loose stones. Portions of paved road here and there.

77 $\frac{3}{4}$

At 1 hr. 56 min., alt. 3,090 ft. Track now easy across plain.

81 $\frac{3}{4}$

At 3 hrs. 15 min. from Temar cross **Khanjiru** River in a gravelly bed 300-400 yds. wide. Irrigation channels water a fringe of rice-fields on either bank. Ford the channel 40 yds. wide, 1 $\frac{1}{2}$ -2 ft. deep with rapid current in middle of May. Shelving banks.

85

At 3 hrs. 53 min. from Temar pass **Chenimassir** $\frac{1}{4}$ m. to r., 40 huts, by a small stream, among grassy undulations.

85 $\frac{1}{2}$

Pass large spring in which fish are said to be sacred. Three large mulberry trees overhang it: otherwise the plain is treeless.

86 $\frac{1}{4}$

At 4 hrs. 34 min. from Temar pass **Balka**, 30 huts $\frac{1}{4}$ m. to l.

87 $\frac{3}{4}$

No gardens or outskirts to Suleimāniyeh. Cross small stream coming from the town in a gravelly bed.

88 $\frac{1}{2}$

Suleimāniyeh, 5 $\frac{1}{4}$ hrs. from Temar.

ROUTE 34 b

SULEIMĀNIYEH—SALĀHIYEH (KUFRI) (89 M.)

Via DĀR

Authority.—Report of a journey, made apparently in 1909 (report dated February 19, 1910).

This is not a main caravan track, but is used by caravans of mules and ponies in summer and in winter when the passes are open. The track, as far as Dār (m. 34), is bad for mules and impassable for camels, and requires improvement for any kind of transport. The last 9 m. require repair for camels. The country traversed consists of rolling downs and stony hills, generally low. The passes over the Qara Dāgh are the chief obstacles: in winter they may be closed by snow, but this does not always happen. The plain of Suleimāniyeh is cultivated; but beyond Tamar, until Salāhiyeh is reached, practically no supplies are obtainable apart from sheep and goats, which are plentiful throughout. Water reported plentiful from streams at Tamar (m. 22), good supply from a stream at Dār (m. 34), abundant from the Āq Su at m. 58, and plentiful throughout the stage from Ibrāhīm Khānji (m. 60) to Salāhiyeh. Grazing reported very good at Tamar, Dār, Ibrāhīm Khānji, and thence to Salāhiyeh. Fuel plentiful throughout. No transport.

This route touches *Route 34 a* at Tamar and at Ibrāhīm Khānji, but the details of the two accounts cannot be reconciled.

Miles from
Sulei-
māniyeh

- | | |
|---|---|
| 0 | Suleimāniyeh. General direction to Tamar somewhat S. of SSW. (200°). Track leaves town in a southerly direction over rolling stony downs. |
| 2 | Track turns from S. (180°) to between S. and S. by W. (185°). |
| 4 | Alternative track to Tamar branches off to W.: it is shorter than, but not so good as, the route here followed. |
| 5 | Stream (Khanjiru? Cp. <i>Route 34 a</i> , m. 81 $\frac{3}{4}$). From here two tracks can be seen winding up the hills in front: the easterly track is the one to be followed. From the stream the track winds steeply up-hill for 2 m. |
| 7 | Pass over Gilzerda Dāgh begins. In this pass the track is very stony, steep, and bad, and is impassable for camels. Blasting would be necessary to turn it into |

Miles from
Sulei-
māniyeh

- a good camel-track. Authority states that he entered pass here on bearing 310° , i. e. between NW. and NW. by W.
- 11 Track bends sharply to 140° (between SE. and SE. by S.), ascending slightly.
- 12 Top of pass. Continue nearly SE. by E. (120°) over low hills.
- 15 Bottom of pass. Stream. Ascend for 3 m.
- 18 Top of ascent. Track bends to SW. and descends.
- 20 Bottom of descent. Ascend steep narrow valley, direction between WSW. and SW. by W. (245°).
- 22 **Temar** village, about 4 furlongs E. of track. Village of about 150 houses. No khan. See Introduction to this route, and *Route 34 a*, m. $72\frac{1}{2}$.
From Temar to Dār, general direction S.
Descend, going S. for 2 m.
- 24 Begin ascent of first of the two ranges of the **Qara Dāgh** on bearing 240° (somewhat W. of SW. by W.) towards large cleft visible in hills due S. Track very stony, steep through stunted trees.
- 26 Top of the pass over first range of Qara Dāgh. The passing of the gap is easy. There is a stream here crossed by a stone bridge 20 ft. long, 10 ft. broad, 10 ft. above water.
The track descends slightly for a mile.
- 27 Foot of pass over first range. Track now proceeds up valley separating the two ranges of the Qara Dāgh, going somewhat N. of W. by N. (285°). It is here stony. Stunted trees and bushes on both sides of valley.
- 29 Track turns sharp S., and begins ascent of second range of Qara Dāgh, going somewhat E. of S. by E. (175°). Track very steep and stony: impassable for camels and requiring improvement for other pack-animals throughout pass.
- 31 Top of pass. Track descends in slightly better condition.
- 33 Reach plain at foot of pass.
- 34 **Dār** village, 200 houses, no khan. See Introduction to this route.
General direction from Dār to Ibrāhīm Khānji between SW. and SW. by S. (220°). Track is now suitable for camels.
Leave Dār in a direction somewhat W. of SW. by W. (240°) over rolling downs.

Miles from
Sulei-
māniyeh

- 41 Track turns S. Enter low hills through which the track is very stony.
- 44 Track bears somewhat W. of S. by W. (195°).
- 47 Track bears between SW. and SW. by S. (220°).
- 49 View of large wadi at m. 51. It presents the appearance of a large amphitheatre with perpendicular sides, a small valley running down into it.
- 50 Track bears S.
- 51 Large wadi, dry in l.w. season except for a small stream. It cannot be seen from S.
- Track proceeds between SW. and SW. by S. (220°).
- 53 Track bears between SW. by S. and SSW. (210°).
- 58 Cross **Āq Su**: crossing easy in l.w. season. Compare *Route 34 a*, m. 24 $\frac{1}{4}$. Depth here not more than 2 ft., breadth 50 yds. in l.w. Natives report that the stream here is always fordable even in flood.
- Track now bears between SW. and SW. by S. (220°) running parallel with river.
- 60 **Ibrāhīm Khānji**. See *Route 34 a*, m. 23 $\frac{3}{4}$.
General direction to Salāhiyeh between SW. and SW. by S. (220°): track passable for camels.
Track bears between SW. and SW. by S. (220°): crosses **Āq Su** twice in first mile.
- 61 Track bears about S. by W. (190°).
- 63 Pass shrine and graveyard. Enter low hills.
- 66 Cross stream. Continue bearing somewhat S. of SSW. (200°).
- 68 A branch track (apparently leading to Qasr-i-Shirīn) turns off to SE. The ordinary route bends somewhat S. of SSE. (160°).
- 70 Track bears about S. by W. (190°).
- 73 River to W. of road.
- 77 Track bends to between SW. and SW. by S. (220°) and continues in this general direction to Salāhiyeh.
- 80 Track enters low hills and becomes very stony. It is still just passable, though difficult, for camels. This section would need improvement for continued camel transport.
- 89 **Salāhiyeh (Kufri)**.

ROUTE 35

SULEIMĀNIYEH—KIRMANSHAH (174 m.)

Authorities :—*Routes in Persia*, vol. ii, *Route 77* (from a report of 1886); *Corrections to vol. ii*, 1912, 77; Soane, *Through Mesopotamia and Kurdistan* (journey of 1908-9).

This has been reported as the best and most natural approach from the Central Persian plateau to Turkey in Asia, though preparation would be required before the road could be made passable for all arms (1886). Beyond the River Sirvan (†m. 70) the route is practically only a mule-track, and in some places narrows down to 2 ft. in width. The Sirvan River and the Qara Su near Kirmanshah when in flood present the only serious obstacles. Movements in the mountains would be somewhat hampered by snow in winter. Between Halebjeh and Sirvan the construction of a cart-road would be difficult, as hill-cutting would be necessary for a few miles (1886).

The snow in winter is nowhere very severe and the summer heat is not excessive.

Large flocks of sheep and goats and herds of cattle are met with on most of the stages. Cultivation is not very extensive, but fruit of all kinds is plentiful. Luxuriant pasture is to be found in most of the valleys, but the supply of grain is limited. Water from streams is plentiful throughout.

A sort of low oak scrub which might supply fuel grows on the hills in many of the stages. Near Mohun (m. 25) and Pavar (m. 97) is much liquorice.

Numbers of donkeys can be obtained at various places for transport. These animals will carry three-fifths of a mule-load at 2½ m. an hour.

Miles from
Sulei-
māniyeh

0

The road from **Suleimāniyeh** keeps at first close to the foot of the hills on the l., with considerable undulations. The surface is generally firm; width about 18 ft. General direction to Mohun SE. Later the valley is 6-7 m. broad, with abundant wheat, barley, and grass; the hills on either side are 1,000-1,500 ft. above the valley. Some of the steeper gradients into the ravines would require to be improved for wheeled traffic.

Miles from
Sulei-
māniyeh

- 17 Valley here 10-12 m. broad, mostly covered with grass.
- 22 The hills begin to recede to the N.
- 25 **Mohun** village. The valley here is about 6 m. wide, with excellent pasture. The neighbourhood is a favourite camping-ground of nomads.
- Numerous mounds indicating former settlements.
- General direction of track to Halebjeh SE.
- The track winds over the flat towards the hills on the S., crossing many streams flowing in deep channels between steep banks of clay. Liquorice root, grown here for firewood, is plentiful.
- 37 Two streams, banks flush with the plain. One of these streams is 100 ft. wide and 3 ft. deep, the other 40 ft. wide and 2½ ft. deep.
- 40 The valley here is about 15 m. broad, and in the high-water season swampy in places.
- Pasture luxuriant; numerous nomad encampments and villages with large flocks of sheep and herds of cattle. A good many horses are to be seen.
- 45 **Halebjeh**, small town among gardens, which has developed greatly in recent years. Bazaar. Head-quarters of the Jaf Kurds. Climate hot in May; some snow in winter. Route to Penjevin (40 m.), very bad from Zangisar (m. 25). From Halebjeh to Nausūd (m. 68 below) the general direction of the track is E., width 10-15 ft., leading across the head of the valley through which it has hitherto run, and over foot-hills.
- After some miles the road narrows to 6 ft., ascending a side valley by a good mule-track.
- 50-1? Head of this side valley. Alt. 3,400 ft. Gradual ascent for some distance, after which the track becomes steeper and more undulating.
- 57 Summit. Oak-scrub.
- On either side are rolling, undulating hills and broad, deep valleys.
- The track runs high up along the sides of the hills which border the r. bank of the Sirvan. Soil a gravelly clay.
- 59 Alt. 5,100 ft. near **Bulkhah Jura**. Plantations of walnut and mulberry fill the valley. Timber (in 1886), 18-24 in. in diameter, 30-40 ft. high.
- 60 Alt. 4,650 ft.

Miles from
Sulei-
māniyeh

- 61 The track crosses the **Tavala** stream.
For 1,000 yds. the track is in the form of steps.
Path winds up the side of the valley, gradually narrowing to 4 ft.
- 62 ? Alt. 4,900 ft. Track descends at first gradually, then more steeply, winding with deep loops to the l.
- 65 The track ascends the Nausūd spur.
- 68 **Nausūd**, large village. Summer climate healthy and cool; much snow in winter.
From Nausūd the track crosses huge ravines, 2,000-3,000 ft. deep, with rounded slopes, affording good grazing for sheep. Then across the **Sirvan** River, here 50 yds. wide and very rapid. Only the centre arch of the bridge was standing in 1886. Approaches difficult. Many villages are passed. The track is now only 2-4 ft. wide.
General direction to Dishar SE.
- 89 **Dishar** village, 150 houses.
Track well made, ascending valley and crossing stream several times. General direction ESE.
- 97 **Pavar** village, 300 houses. About 2,000 sheep.
Here a branch route leads to Marivān. It is much used as part of route between Kirmanshah and Marivān. Water is generally available from villages and streams. Distances not reliable.

Miles from
Pavar

- 0 Proceed up valley from Pavar, deflecting before the spur S. of Avrūmān is passed, and then along banks of Sirvan River. No particular difficulty on the road as far as
- 25 **Durud** village, at the junction of the Ohang and the Sirvan. Beyond Durud the Sirvan is forded and the road is undulating, one or two necks offering some difficulty.
- 38 ? A village in the Avrūmān district.
Leave Sirvan Valley in NNW. direction across lower Avrūmān Hills.
- 50 ? **Marivān**. See *Route 36*.

General direction for over 20 m. now SSE.

On this stretch some swampy valleys occur. The track is at first up over the head of a gradually narrowing valley. At the head of this valley is the **Mil-i-Palangān** Pass, which is blocked with snow in winter. There is a lower road by Juanrūd. The track then crosses undulating plateau with some sharp ascents and descents.

Miles from
Sulei-
māniyeh
121

Mar-i-Kharvār, bivouac cave in the hill-side, capable of holding about 30 men and 30 animals.

The track now ascends a valley by a good road, 10 ft. wide. An undulating plateau with several villages near and a good many cattle is then crossed, after which the track descends to the Qara Su.

General direction to Agha Hasan SE.

Shortly before reaching Ruvānsar the route from Qasr-i-Shīrīn to Senna is crossed, at or near Kāni Khadrān (see *Routes in Persia*, vol. ii, 73).

139

Ruvānsar village, 100 poor huts, near the river, which about here is 10 ft. wide, 2½ ft. deep, with current 3 m.p.h.

From here alternative roads lead to **Kirmanshah** :—

- (i) Westerly route via **Sadikābād**, **Shaliābād**, **Patīābād**, and **Dustavand** (about 48 m.). This route runs close beside the main road, and is said to touch the latter about 8 m. beyond Sadikābād. Road passable for all arms except at two or three points; but in 1897 it was reported inferior for troops to the main road. A trestle-bridge or cutting for guns would be needed at the Āb-i-Mark (about m. 22), the banks of the Lilufar stream (m. 42) need easing for guns, and small parts of the road between Patīābād (m. 28) and Dustavand (m. 43½) are liable to flood. Supplies on the whole good; water plentiful; grazing good after Shaliābād (about 15 m.); little or no fuel. See *Routes in Persia*, vol. ii, 75.
- (ii) Via **Khaglistan**. This is a détour to E. (about 54–66 m. according to the season), following route (iii) below for about 16 m. and branching off to S. a few miles from Kamara (Kamaran). Beyond that point it is a camel road which could with slight improvements be made passable for artillery, but a détour ESE. has to be made near Kirmanshah in winter and spring when the Qara Su is unfordable. Good water throughout; few supplies, little fuel and forage. See *Routes in Persia*, vol. ii, 78.
- (iii) Via **Bilavar** Valley and **Tang-i-Kinishk**; a long détour to E. (75 m.). Fair track, only in parts passable for all arms; no great difficulties in road construction. Water plentiful. Supplies and fuel generally very scarce; grazing good. See *Routes in Persia*, vol. ii, 76.

The valley is broad and rather swampy, and the road runs across it in a general SE. direction, at first through scattered villages and then along hard ground on the hill-sides. Cultivation along the river; elsewhere grass.

Miles from
Sulei-
māniyeh

- 143 **Agha Hasan**, 50 houses. Large herds of sheep and cattle. General direction of track still SE. over clay soil. Valley 6-15 m. broad. Numerous villages along the river, which varies in breadth from 100-200 ft., with clay banks 3-18 ft. high. The road is not well defined and is swampy in parts.
- 163 $\frac{1}{4}$ Route from Sālārābad, &c., joins (see *Route 28 a*, under m. 201 $\frac{1}{2}$).
- 165 **Gurabun** village, 108 houses. The track now is broad and muddy, over fields. The Qara Su is crossed; it is fordable, except in flood.
- 174 **Kirmanshah**. (See *Gazetteer of Persia*, vol. ii.)

ROUTE 36 a

SULEIMĀNIYEH—SENNĀ (144 m.)

Via MAMA KULAN AND PENJEVIN

Authorities:—*Routes in Persia*, vol. ii, *Route 85* summarized (reports of 1881, 1882, 1905); Map of Turco-Persian Boundary Commission, 1914 (no. 13).

In parts this route is practicable for led animals only, and would require considerable labour and expense to render it suitable for all arms. Military operations on it would be difficult in winter.

Crops are met with along the greater part of the route. There are no details as to grazing, except what may be inferred from the presence of animals in villages. The only mention of fuel occurs near Barudar, 30 m. from Senna, and round Suleimāniyeh. In the former case the quantity is probably limited. Water is on the whole plentiful.

The only local means of transport are the donkeys to be found in the neighbourhood of Suleimāniyeh.

Considerable labour would be required to improve the road over the Qal'ah Kal Ya'qūb (beyond Barudar, m. 114), and the Gerdilan River (m. 73) would also be a serious obstacle unless the bridge has been repaired.

An alternative route goes by Harmaleh, rejoining the main route about m. 41 (see *Route 36 b*). It seems also that there is a third route by 'Ālāweh, S. of that described, and rejoining it at m. 32, but no details regarding it are available.

Miles from
**Sulei-
māniyeh**

- 0 **Suleimāniyeh.** The track runs generally NE. at first over easy cultivated ground.
- 3 Track enters a ravine, and ascends steeply for about 1 m.
- 4½ Crest of **Giuzeh** (? Azmir) Hills, alt. 5,250 ft. The W. slopes of the hills are bare, the E. slopes covered with oak-scrub. The track now descends a steep winding path into the **Harrik Chai Valley**. (This name was not recognized in 1912.)
- 6 Alt. 4,150 ft. Descent becomes less steep.
- 7½ Ruins. Track gradually descends a small glen, into a ravine at a steep gradient. Ploughland and vineyards on the sides of the valley. Steep ascent.
- 9 Steep ascent ends. Country beyond this point becomes open.
- 12½ Alt. 3,900 ft. The Harrik Chai Valley is left. Track descends straight for ½ m.
- 13 Country becomes wilder and rougher. Cliffs overhang the road for some miles.
- 16 Stream and water-mills. Some villages and cultivation. Some distance farther on a ford over the **Tankabwa River**, just above a mill-dam, is reached; alt. 3,150 ft. Track then follows the stream for about ½ m. Width of river here 100 yards. Track then leaves the river, running through some cultivation and over a spur, and then along the course of a brook for about 1 m.
- 21 **Mama Kulan**, small village, 40 huts and a kind of khan. General direction to Penjevin SE. The track now ascends a ravine.
- 22½ Saddle of hill, alt. 4,850 ft. Mama Kulan disappears from view. Track winds down and across a ravine.
- 24 Track runs along ridge for about 1 m. Oak woods and deep valleys on both sides. Bimānsū River to N., **Kasha Mt.** on S. Large partly cultivated valleys on N., with wooded mountains beyond.
- 25 Alt. 4,700 ft. Track gradually descends hill. After some distance the village of **Diyyeh** in a large valley to l. is passed, in the neighbourhood of which a track appears to branch off to **Serambal** on the N.
- 28 Ground becomes less open. Track gradually descends a small ravine with thick copse on either side. Trees here thoroughly English—oak, hawthorn, ash, wild rose.

Miles from
Sulei-
māniyeh.

- Numbers of common wood-pigeons. Track then emerges on to open, cultivated, undulating ground.
- 30 Track crosses small stream called **Mashkal** or **Yahāreh** (apparently a tributary of the **Bimānsū**), flowing due N. between high but not very steep wooded mountains, with a few villages on the slopes in the distance.
- Track ascends gently.
- 32 Southern route from **Suleimāniyeh** by 'Alāweh here joins the present track. Ground shortly after becomes less open and cultivated. Some small villages high up on mountains to N.
- Track runs high up slopes on W. side of **Bimānsū** valley to alt. 5,200 ft. Then comes the steepest descent of the road, to a level of 4,550 ft. Small huts of **Zerqāu**. Track then crosses a ravine, and ascends for about 700 ft.
- 38 Summit of ascent. Path now indifferent, winding along wooded slopes on l. side of **Bimānsū** gorge.
- 39 A bold, rocky, isolated crag, with a ruined fort opposite a village called **Hāsīlīn**, 50 huts.
- Track emerges from the mountains, skirting a low range of hills on the r.
- Some distance on **Ahmad Kulvān** village is passed on the r.
- 41 Alternative route (*Route 36 b*) apparently joins the present route here. The track skirts a low range of hills on the r. for some miles. Ground cultivated, with numerous small streams.
- 48 **Penjevin**, village of 200 houses. General direction of track now E. to **Kānimiran**. Route to **Halebjeħ**: see p. 233.
- 50 $\frac{1}{4}$ **Binavasuta** village to r.
- 51 $\frac{1}{2}$ River **Binavasuta** and Turco-Persian frontier.
- Bayeva** village, on the Persian side, 1 m. to r.
- Track crosses the plain of **Bihif** (?).
- 54 $\frac{1}{2}$ (?) **Kānimiran** village. Track bears SSE.
- 55 $\frac{1}{2}$ **Assadābād** village. The track then skirts the E. shore of **Lake Zeribar**. Marshy ground.
- 59 **Siv Sufēħ** village.
- 62 $\frac{1}{2}$ **Kulan** village.
- 66 **Qal'ah Merivan**, substantial stone fort, about 300 yds. square, with Persian garrison. Good timber and fruit trees on surrounding hills. Export of gall-nuts.

Miles from Sulei- māniyeh	(For details of the rest of the track, see <i>Routes in Persia</i> , vol. ii, 85.)
	General direction now E. Good grazing, and some cultivation and game.
87	Sheikh 'Attār village, 30 huts. General direction to Barudar ESE. Abundant water, some cultivation.
114	Barudar village. General direction to Duvizeh E. Steep ascent and descent beyond Barudar.
129	Duvizeh village. General direction S. by E. Track hilly but good.
136½	Safyān village.
144	Senna , in well-watered district. (For description, see <i>Gazetteer of Persia</i> , vol. ii, under Sinneh.)

ROUTE 36 b

SULEIMĀNIYEH—PENJEVIN (37 M. ?)

Via HARMALEH

Authority :—*Routes in Persia*, vol. ii, no. 85, alternative stages (report of 1881).

The distances over this route are very uncertain. It is said to be impassable in winter.

Miles from Sulei- māniyeh	
0	Suleimāniyeh. Track crosses the plain and ascends a steep rough slope.
3½	<i>Gardān</i> or neck of pass.
6½	Foot of lower spurs of Giuzeh (? Girgeh) Hills.
10	Naudeh village. The plain near here is called Bazkadraih.
15 ?	Kimseh ? village. Rough descent for 2–3 m.
17½ ?	Harmaleh village, near a tributary which joins the Lesser Zāb at Altun Köprü. Camping-ground near stream in enclosed plain below low hills ; very hot in August. Valiabar, Maneh, and Suwādlar, Kurdish villages in the neighbourhood. The track winds through fairly wooded hills and valleys. Few villages.

Miles from
Suleimānīyeh

- 30? Summit of **Taridar** range of hills, which forms the boundary of the *Nahiye* of Qiziljeh.
- 32½? Foot of Taridar range. Track now runs across Qiziljeh plain.
- 37? **Penjevin.**

Times taken on a ride from Penjevin to Suleimānīyeh *via* Harmaleh.

From Penjevin to foot of Taridar range . . .	1½ hrs.
Ascent to summit of Taridar	¾ hr.
From summit of Taridar to Harmaleh	4¼ hrs.
From Harmaleh to Kimseh	¾ hr.
From Kimseh to Naudeh	?
From Naudeh to foot of Giuzeh or Girgeh Hills	1 hr.
Ascent to Gardān	1 hr.
From Gardān to Suleimānīyeh	1 hr.

ROUTE 36 c

PENJEVIN—BANAH (34 M.)

Authority :—*Routes in Persia*, vol. ii, 104, stages 4–5 reversed (reports of 1882 and 1905).

This is a mule-track, liable to become very muddy in the plains; and, in the hills beyond Serambal, almost, if not quite, impassable in winter owing to snow. The Bimānsū Chai and Sūrāb would be serious obstacles in flood.

Water is on the whole plentiful. Supplies are scarce. There is no information as to fuel and fodder.

Miles from
Penjevin

- 0 **Penjevin** (alt. 4,850 ft.). General direction N.
- 1 Apparently direction here is westerly, going for 1 m. over open bare ground down valley between low hills.
- 2 Ford **Bimānsū Chai** (or Qizil Oja) 70 yds. wide, girth deep (it is not stated explicitly at what season, but apparently in spring).
- Open ground till a small defile is reached near
- 5 **Bamabal** village.
- Route skirts foot of hills on E.: cultivated but wet plain to W. of road.

Miles from
Penjevin

- 6 Cross wide plain, with some isolated hills on it.
- 9 Cross rocky saddle.
From the saddle down line of small stream, and thence over open plain.
- 14 L. bank of **Sūrāb** (or Chiler) River. Here a road from Sūleimāniyeh *via* Bistan joins route. Bistan is said to be 2 hrs., and Suleimāniyeh 10 hrs. distant.
Cross Sūrāb River : 70 yds. broad, just fordable.
Up r. bank of small stream (apparently a tributary of the Sūrāb). Then ascend by zigzag path, not rocky (4,650 ft.—5,050 ft.).
- 16 Over undulating forest ground for 2 m.
- 18 Skirt along hill, ascending, with deep wooded ravine on l.
- 19 Alt. 6,050 ft. The Turco-Persian frontier is crossed here.
Down spur, then up for a short distance to
- 21 **Serambal** (or Serambend), 50 houses.
- 22 Ascend slightly. Summit of spur (alt. 6,200 ft.). Descend. In next mile two more spurs and two deep ravines have to be crossed. Part of path is in zigzags : very difficult.
- 23 Between this point and m. 25 there is a 'fearful piece of road in wind or heavy snow' on the descent of a wooded spur. Drifts may be too deep for mules.
- 25 Ford stream below spur (bridge marked on map, 1914).
Undulating road.
- 28 Artificial mound on r. bank of stream (Āb-i-Fan?).
- 29 Through valley : on r., village of **Helebjik** and the Āb-i-Fan. Through wooded hills, and up banks of small stream fringed with willows to
- 31½ Low saddle with ploughland.
- 32 Very muddy road.
- 34 **Banah**. (See *Gazetteer of Persia*, vol. ii, under **Bāneh**).

ROUTE 37

KIRKUK—SULEIMĀNIYEH

The country between Kirkuk and Suleimāniyeh consists of open rolling uplands. The Hamawand Kurds who live here are noted brigands and fighters. In 1887 a route from Kirkuk to Suleimāniyeh

was reported on, which was said to be passable for wheels as far as the Baziyan Pass. The report on the route, which is given below under (A), has, it is stated, been confirmed by recent local information. In 1903 a route from Kirkuk to the Baziyan Pass *via* Kurga was found 'just passable for carriages', and a road similarly described led from the pass to Suleimāniyeh. (Possibly Routes (A) and (B) coincide from Chemchemical.) In 1909 a journey from Kirkuk to Suleimāniyeh *via* Chemchemical, and, apparently, the Baziyan Pass was made by a track which was said to be quite unfit for wheels except in the last 16 m. into Suleimāniyeh. It is impossible to say exactly what is the relation between the route (given under (C) below) and the road or roads described in 1887 and 1903. In 1909 a traveller, accompanying a caravan, made a *détour* to the N. through the Shuan country to avoid the Baziyan Pass. His route is referred to under (E) below.

The only supplies to be obtained in any quantity between Kirkuk and Suleimāniyeh would be sheep and goats from the nomad Kurds. In peace time large flocks and herds pastured on these uplands at least from October till June. Beyond Chemchemical very few permanent villages, and these deserted April–Nov. Water is reported plentiful on Route (A) between Kirkuk and Chemchemical. On Route (B), in spring 1903, it was reported scarce throughout. In 1909 a good supply was found at Chemchemical (wells and small streams) and Khān Jāriyeh (stream). In the Shuan country to N. (see Route (E)) water is scarce in summer.

Grazing is very good in spring and until June, especially in the Shuan country and in the Baziyan Valley. Fuel is very scarce.

An uncertain quantity of mules, horses, and donkeys might be collected from the neighbouring tribes *en route*.

(A)

Authority :—*Military Report on Eastern Turkey in Asia*, vol. iii, 106 (a report of 1887).

Miles from
Kirkuk

0

Kirkuk. The route leaves in an E. direction over low gravelly hills, and is stony and steep in places. Water was reported plentiful (?) in 1887, but country mainly pastoral, with a fair number of villages at first.

It would appear that it is not difficult to miss the right track, there being numerous side-tracks to Kurd villages.

30

Chemchemical, small town (about 200 houses). T.O. In 1887 there was a post of 250 infantry and a battery of

Miles from
Kirkuk

- mountain guns. In 1909, 8,000 troops were collected here to deal with the Hamawand brigands.
- 38 From Chemchemical the road continues over gravelly hills. **Baziyan** Pass, an opening in the Qara Dağh, with room for two caravans to pass. There are still to be seen the ruins of a wall built across the neck of the pass by 'Abd er-rahman Pasha of Suleimāniyeh in 1805, in an attempt to assert the independence of this part of Kurdistan. NW. of the pass are the Chemala and Khalkalan ranges of earth hills, of no great height, with furrowed sides.
41. **Deir Gezin**, Kurdish village, with streams from the Qara Dağh. The road now enters the **Baziyan** Valley, or plain, down the middle of which runs a line of hills lower than the Qara Dağh. The road passes N. of the end of this ridge.
- Baziyan village, the chief Hamawand village, lies a little way up the plain.
- 50 The road crosses the hills by an easy pass near the **Tāsluji Tepeh**, down to the Suleimāniyeh Plain, open undulating ground, with several streams, all fordable, though the **Khanjiru** or Bakhān is deep and swift as late as May.
- 66 **Suleimāniyeh**. 2,500 houses. T.O.

(B)

Authority :—Sykes, *Dar-ul-Islam* (the journey therein described from Kirkuk to Suleimāniyeh took place in the spring of 1903). Total time, 20 hrs.

Just passable for carriages. Water scarce.

- | | |
|------|---|
| Hrs. | |
| 0 | Kirkuk . The route to Chemchemical apparently goes somewhat N. of that followed in 1887, perhaps by Gulen Ova. |
| 5 | Kurga . |
| 8 | Chemchemical . Over Baziyan Pass to |
| 14 | Bebejek . |
| 20 | Suleimāniyeh . |

(C)

Authority :—Report of a journey made apparently in 1909 (the report is dated February 1910).

This track as far as Chemchemical is described as absolutely impassable for guns, and in need of repairs for camels. Nothing short of making a new road would make it practicable for guns. From

Chemchemical to Jāriyeh is a very difficult stage, impassable for camels. Blasting would be necessary to turn it into a good camel track. From Khān Jāriyeh to Suleimāniyeh the road is level, easy, and suitable throughout for guns.

Miles from
Kirkuk

- 0 **Kirkuk.** Track leaves town bearing somewhat E. of ENE. (70°) towards hills.
The gradients to m. 12 are very steep. The track leading up to first pass is very rough.
- 3½ Top of first pass. Track descends in E. direction.
- 7 Bottom of pass. Here is a stream which flows parallel with the route for some way.
Track improves. It runs up a valley bearing between ENE. and NE. by E. (60°).
- 10½ Top of second pass. Descend about E. by N. (80°).
- 12 Bottom of pass. Track in very bad condition, stony and broken. Overhanging cliffs in parts.
Continue between ENE. and NE. by E. (60°) over rolling downs.
- 21 Foot of **Jebel Mēkrān**, which is crossed in an E. by N. direction (80°). Limited water-supply on W. side.
- 23 Chemchemical visible. Descend.
- 24 Reach Lummocky plain, which is crossed to
- 27 **Chemchemical.** See (A), m. 30.
Continue over plain between NE. and NE. by N. (40°).
- 28 Reach foot-hills. These are crossed in same general direction by a very bad road, over several small streams.
- 36 Foot-hills cease. Road ascends gentle slope between NE. and NE. by E. (50°).
- 38 Reach pass in hills called by authority **Jebel Khanzīreh**. This pass, which seems to be the **Baziyan**, is described as easy. Beyond the pass continue between NE. and NE. by E. in middle of valley about 1 m. wide. This runs into
- 40 **Baziyan** Valley, a large valley running here NW. and SE. between the **Jebel Khanzīreh** and the **Tasluji Tepēh** (called by this authority **Jebel Taralusa**). Track turns sharply down the side of the valley, going between SSE. and SE. by S. (150°).
- 45 Reach stream (12 ft. wide, 1 ft. deep). Suitable place for camp. Track now crosses to N. side of valley, going somewhat N. of NNE. (20°).

Miles from Kirkuk	
47½	Reach N. side of valley. Proceed along it, going a little S. of SSE. (160°).
50½	Turn sharply to between ENE. and NE. by E. (60°) to cross the Tāsluji Tepeh by a very bad, stony, and steep track, impossible for loaded camels.
52½	Top of pass.
54	Reach plain. Khān Jāriyeh , 200 houses (not mentioned by other authorities). From here the track, which is here plainly marked, runs across a grassy plain about E. by S. (100°), following the telegraph poles. It is passable for guns. Distance given as '6 m.': an error for 16 m.?
70	Suleimāniyeh .

(D)

Authority :—H. G. Hony. Correction to W. O. Map, sheet 35 (1912).

This route goes to the N. of *Route* (C), above.

Miles from Kirkuk	
0	Kirkuk (alt. 1,383 ft.). Route starts about NE. by N. up l. bank of the Kirkuk (Kissa) Chai .
2	Cross mouth of a tributary of the Kirkuk Chai .
3¾	Pass Yarvali village on opposite bank of Kirkuk Chai .
6¾	Cross to r. bank of Kirkuk Chai and continue up-stream, going about NE. by E.
8	Cross a small stream and pass Buyuk Soura to l.
10½	Pass Kuchuk Soura to l.
11¼	Recross Kirkuk Chai , and continue in same direction as before (NE. by E.), leaving the stream, which above this point flows from about N. by E. Proceed over undulating country.
13¼	Cross small stream flowing southward.
14	Cross another stream flowing southward. Ascend gradually.
17	Alt. 2,651 ft. Descend.
17¾	Track turns to E.
18¾	Grouma , on bank of stream. Alt. 2,382 ft. Cross stream and proceed over rise.
19¾	Cross another stream. Ascend slope on farther side and then turn about SE.
21	Track turns about SSE. and descends into depression.
21¾	Cross small stream.

Miles from Kirkuk	22 $\frac{1}{4}$ Cross small stream. Ascend out of depression, and skirt hills to SW. 23 $\frac{3}{4}$ Bina. Track turns ESE. 29 T.L. from Suleimāniyeh to Chemchemal crosses road from W. Track now runs S. of T.L. 31 $\frac{3}{4}$ Pass ruined fort to l. 32 Chemchemal.
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(E)

Authority :—E. B. Soane, *To Mesopotamia and Kurdistan in Disguise*. (The journey from Kirkuk to Suleimāniyeh was made in the spring of 1909.)

In order to avoid the Baziyan Pass, where the Hamawand Kurds were plundering caravans, and also to obtain the protection of the Shuan Kurds who were friendly with the Hamawands, the caravan with which Mr. Soane travelled (a large one including 70 soldiers) struck off the ordinary Kirkuk—Suleimāniyeh route a few miles out of Kirkuk, and marched almost due N. into the Shuan country, open grassy downs with excellent pastures. The caravan suffered at first from lack of water. Long stops were made, the days being divided into morning and evening marches with a rest for some hours at noon. Apparently on the second day a point was reached from which the Lesser Zāb could be seen. On the third day the caravan turned southwards, and leaving the Shuan country entered that of the Hamawands. Towards sunset, after passing through well-watered, well-wooded country with fine pastures, the Baziyan Valley, 2 m. wide, was reached. On the fourth day the caravan crossed a neck in the Tāsluji Hills and descended to the plain of Suleimāniyeh.

ROUTE 38

SULEIMĀNIYEH—RANIYEH (75 $\frac{1}{2}$ m.)

Authority :—*Military Report on E.T.A.*, vol. iii, 113 (a report of May 1888).

This route is passable for wheels in the Suleimāniyeh Plain, but becomes a mule-track as the Zāb is approached. In 1903 Sykes went to Surdash (10 hrs.) by Dartut (5 hrs.): and from Surdash to Dukhan in 4 hrs.: 'a good mule-track impassable for carriages'. A mule-track goes to Surdash E. of Pīr 'Omar Gudrun by the Qara Cholan valley and Malouma. (An alternative and shorter

route to Marga (m. $57\frac{3}{4}$) apparently branches off from this mule-track, and fords the Qara Cholan).

There is no adequate local means of transport either at the Dukhan ferry over the Lesser Zab (m. $47\frac{1}{4}$) or at the crossing of the Khudrān River (m. $62\frac{3}{4}$). Besides these there are various small streams and occasional irrigation cuts which should present no difficulty.

Water is found all along the route, but that from the springs at Raniyeh is unpleasant in taste. Fuel and fodder are generally good, and some wheat, rice, and fruit could be obtained. The nomad Kurds have large numbers of sheep, goats, cattle, horses, and mules.

The details concerning villages are unreliable, as the country has been unsettled. The sedentary Kurds often spend the summer in booths on the hill-sides.

Miles from
Sulei-
māniyeh

0	Suleimāniyeh. The track is broad and gravelly, running W. over a rich loamy plain.
$\frac{1}{2}$	Āl Bū Lāq village $1\frac{1}{2}$ m. to l.
$1\frac{1}{2}$	The track crosses three small streams and undulates over low mounds. Springs along the foot of the hill to r.
$3\frac{3}{4}$	Ser Chinār. Large spring of good water which becomes a stream 30 ft. wide and 2 ft. deep, running into the Khanjiru Chai.
$4\frac{1}{4}$	Ford across the Khanjiru Chai (or Bakhān). River 200 yds. wide, in a shallow pebbly bed. Alt. 2,245 ft.
$4\frac{3}{4}$	Low hills 1 m. to r., outliers of the Pir 'Omar Gudrun range.
$5\frac{3}{4}$	Track broad, ascending a valley, over undulating country.
$9\frac{1}{2}$	Hamawand camps may be seen in this neighbourhood.
$11\frac{1}{4}$	Plain gradually narrows and is now 4 m. broad.
$12\frac{3}{4}$	Some low rocky mounds cross the plain and form the watershed between the Diyāleh and the Lesser Zab. Track broad and gravelly, crossing several small streams.
$13\frac{1}{4}$	Ruins of tomb and village; track undulates over spurs of the range on the r.
14	Alt. 2,735 ft.
$14\frac{1}{2}$	Narchu , 30 flat-roofed huts of mud and stone in a valley $\frac{1}{2}$ m. to the r. Gardens and orchards.
$15\frac{1}{2}$	Hiskaneh , 40 huts, on a stream $1\frac{1}{2}$ m. up a valley to the r. Soil stony; good grazing.
$16\frac{1}{4}$	Darbarberu , wretched village of a dozen huts $\frac{1}{4}$ m. to the r. Some cultivation and fruit.

Miles from
Sulei-
māniyeh

- Easy undulating track. Some wheat-fields.
- 18 **Yerankos**, village of 30 houses. A stream in an open valley at the foot of Pir 'Omar Gudrun $\frac{3}{4}$ m. to r. of the track. Some cultivation and fruit. Altitude of village 2,745 ft. Track stony.
- Pir 'Omar Gudrun** peak (9,700 ft.) to NW., a rugged conical mass scored by ravines; good landmark. Rounded, easy hills opposite. **Zāwiyeh** village with large orchards up a gorge with stream.
- 19 $\frac{1}{4}$ Steep ascent by short zigzags for 200 yds. across a spur; might be avoided by keeping S. Several ravines from the lower slopes of Pir 'Omar Gudrun.
- 20 Alt. 2,800 ft. The plain here is 4-5 m. wide. Small villages high up the mountain to the SW.
- 20 $\frac{3}{4}$ Track descends into stony valley, crossing water-course at the foot. Descent and ascent easy. Good going.
- 22 $\frac{1}{4}$ **Qara Chatan**, 150 houses at the foot of a rocky spur from the r. Fig-orchards irrigated by springs. Track 5 ft. wide through orchards and village.
- 23 $\frac{1}{2}$ Ruined village.
- 25 Some huts $\frac{3}{4}$ m. to the r. under the hill-side.
- 25 $\frac{1}{4}$ **Su Sai**, 60 huts on a large stream $\frac{1}{4}$ m. to l. Orchards along the stream.
- 27 $\frac{1}{4}$ **Khān-i-Mirān**, 50 houses 1 m. to l. Alt. 2,420 ft. Considerable cultivation. Track here divides, one branch following the centre of the valley, and rejoining the present track at Dukhan ferry (m. 47 $\frac{1}{4}$).
- 28 $\frac{1}{2}$ End of plain. Track follows a broad valley running NW. The main valley runs W. to the Lesser Zāb. Between these valleys is a rugged group of hills covered with low trees and brushwood.
- Rocky ridge 300-400 ft. high in plain $\frac{1}{4}$ m. to r.
- 31 Track follows a narrow winding ledge for a short distance, undulating over clay spurs.
- Tabin** River, swift stream over gravel, 30 yds. wide, 2 ft. deep, lined with willows, poplars, and orchards. Spring. Track now follows a narrow ledge on the far side of the valley.
- 32 $\frac{1}{4}$ Track skirts range to r. and ascends small valley along a water-course. Breadth of track 12 ft.
- 32 $\frac{1}{2}$ Steep zigzags in the hill-side and then a gradual ascent.

Miles from
Sulei-
māniyeh

- 34 **Surdash**, 100 houses divided by a rocky spur, at the foot of Askut Dāgh. This mountain rises 2,000 ft. above the village in a steep wall of rock with a jagged summit. It is quite impassable.
Two large springs irrigating orchards. Abundant grazing on the hill-sides. Many oaks and poplars.
The track is now stony and winding, and runs parallel to the Askut Dāgh.
- 35½ Track crosses small stream lined with mulberry and fig-trees. Vine cultivation. Then follows descent over stony spurs.
- 36½ Small V-shaped valley on r. with orchards and vineyards. Track stony and rugged.
- 37 Cross a broad spur. Alt. 2,750 ft. Track easier.
- 38¼ Steep, narrow descent, with short zigzags among boulders. **Gaichina** village, 50 houses on a plateau. A small stream lined with orchards of pomegranates, figs, and vines runs through the village. Alt. 2,555 ft. Fertile ravines near. **Sarka Kailkuma Dāgh**, ridge to SW. Wheat cultivation on the lower slopes. Oaks and brushwood in the ravines. Villages high up.
Track for ¼ m. descends steeply along a 10-ft. ledge in the hill-side.
- 39½ Easier slope through wheat-fields; along a lane with low stone walls. Alt. 2,125 ft.
Some huts ½ m. to r. high up on the hill-side.
- 39¾ Cross narrow stream from a gorge in the Askut Dāgh.
- 40 Oaks, poplars, and orchards on a large stream to r. flowing to the Lesser Zāb. **Khāni Khān** village, 40 huts, in this neighbourhood.
- 40¼ Good 12-ft. field-track, following general line of valley towards the Lesser Zāb. Alt. 1,900 ft.
- 41½ Cross stream lined with terraced vineyards and orchards. Valley fertile and well wooded. Track easy.
- 41¾ Pass *ziyāret* in a grove of oaks. These surround the shrine. The trees in such cases are never cut. Track undulates over stony spurs from the r. Alt. 1,700 ft.
- 42½ Pass village of 30 houses high up to r. at base of cliff. The Askut Dāgh now ends in low rounded hills.
- 42¾ Steep zigzag descent for 200 yds. over bare shale spurs. Soil is a soft grey shale.

Miles from
Sulei-
māniyeh

44 $\frac{3}{4}$

Reach the **Lesser Zāb**, 150–200 yds. wide, with a swift current over a gravelly bottom.

The track ascends the river valley. Good grass on the slopes.

45

Qal'ah Dukhan, dismantled fort 60 yds. square, with round flanking towers, on a knoll overlooking the stream. The heights above command it.

47

Dukhan (or **Du Kani**, 'two springs'), small khan with a few houses.

47 $\frac{1}{4}$

Dukhan ferry, one *kelek*. Horses and mules have to be swum. A backwater on each bank helps the crossing. The valley is 400 yds. wide. On the r. bank spurs come close to the water's edge. River 150 yds. wide; fordable in l.w. Deep and rapid in h.w. The Tang-i-Dukhan, through which it emerges, is 1 m. up-stream.

Track now leaves the river and skirts the low hills bordering the valley. Abundant grazing on the hill-sides.

48

Track turns to the l. shortly before the Tang-i-Dukhan over a rounded spur with small ravines. Soil shale, with some gypsum.

49 $\frac{3}{4}$

Summit. Alt. 1,750 ft. Diagonal descent by a steep gradient.

50 $\frac{1}{2}$

Gradient 1 in 3 to 4, following 3 ft. ledge in the clay for 300 yds. A road fit for wheels could be improvised. Alt. 1,360 ft.

51

Ford a tributary of the Zab, 15 ft. wide, 1 ft. deep (l.w.).

Gulnāri, 60 houses of Kurds, on the opposite bank. Pomegranate, fig, and vine cultivation. Large flocks of sheep and goats on the hills. Some cattle. Good grass.

Track good, following the river, here 50 yds. wide, but becoming broader farther on.

52 $\frac{1}{4}$

Undulating easy track. Some wheat cultivation. Track inclines to l. and ascends a small side-valley, leaving the river.

The **Kutsrut Dāgh**, high range, to the N. Lower slopes rounded and grassy: higher, rugged and sparsely wooded.

54 $\frac{1}{4}$

Track divides, the lower branch being the easier. The other ascends to the l. through two small villages up the Kutsrut Dāgh and reaches the plain farther N.

54 $\frac{1}{2}$

Skirt a shale hill to the l. by a well-worn ledge 2 ft. wide. Then ascend a broad spur from the Kutsrut Dāgh.

Miles from
Sulei-
māniyeh

- 54 $\frac{3}{4}$ Summit of spur (alt. 1,760 ft.). Fine view of plain of Raniyeh and Marga.
- 56 $\frac{1}{4}$ **Turbeh**, 100 well-built houses. Water from a large spring. Rich gravelly soil; wheat cultivation and orchards.
- Pai Kūh**, large village in orchards and vineyards, on opposite bank of the Zāb where it enters the Tang-i-Sheikh Ismail.
- 57 $\frac{1}{4}$ Easy broad track with gradual descent.
- 57 $\frac{3}{4}$ **Marga**, 200 houses on the lower spurs of Kurkur Dāgh is 10 m. to the E. It is the seat of a Mudir under Qal'ah Dīzeh. Large mound and ruins in plain below it. Route to Banah (48 m.), difficult up to Banah Sū.
- 58 $\frac{1}{2}$ Reach plain, the river 1 m. to r. Good grass; soil a rich loam. No trees.
- 59 $\frac{3}{4}$ Cross small stream from l.
- Chailasura**, 30 huts, $\frac{1}{2}$ m. distant on l. bank of the Lesser Zāb, here 150-200 yds. wide with rapid current. Track skirts the river.
- 61 Broad track, trending away from the river. Orchards and cultivation on the upper slopes of the Kutsrut Dāgh. Low oak scrub.
- 62 $\frac{3}{4}$ Ford the **Khudrān** River, 60 yds. wide, 3 ft. deep. Swift current. Probably unfordable in h.w.
- 64 $\frac{1}{4}$ Some huts; irrigation channel 6 ft. wide.
- 65 Numerous mounds in this neighbourhood.
- Quru Shina** on the r., 40 poor Kurdish huts. The Lesser Zāb is now 1 m. to the r.
- 66 $\frac{1}{4}$ Some rice cultivation. Track swampy in places.
- 68 Pass **Bazmusian**, 40 huts, near a mound. Some irrigation cuts.
- 69 $\frac{1}{2}$ 20 huts to r., by a mound.
- 71 Pass **Gulek**, 60 huts, to l.
- 75 $\frac{1}{2}$ **Raniyeh**, 300 houses.

ROUTE 39

KÖI SANJAQ—SULEIMĀNIYEH (63 $\frac{1}{4}$ m.)

Authority :—*Military Report on E. T. A.*, vol. iv, Route 112 (report of 1886).

The main track to Suleimāniyeh keeps SE. over open country along the foot of the Heib es-Sultān Dāgh, which lies to the E., and

divides this open district from Raniyeh Plain. It crosses several ravines trending towards the Lesser Zāb. These ravines are about 50 ft. deep, with more or less difficult descents and ascents, and only the larger of them carry water in the l.w. season. Another track ascends the Heib es-Sultān Dāgh, and goes by Kāni 'Othmān to Dukhan ferry.

In 1903 Sykes travelled from Dukhan to Kōi Sanjaq in 7 hrs.; good mule-track; water plentiful.

Miles from

Kōi San-

jaq

0

Kōi Sanjaq.

2

Cross a stream. Track keeps 2 m. from ridge on l. Soil stony clay with occasional ledges of sandstone.

6½

Cross a stream. Some wheat cultivation. Track good and broad in places, but often merely a ledge or mule-track, 2 ft. wide, over clay or soft sandstone.

9

Dundur, a few huts. A direct track leads from here to Dukhan ferry, and so to Suleimāniyeh (see *Route 38*). It follows a steep mule-track past some Kurd villages over a wooded ridge. The descent is steep to Dukhan (20 m. from Kōi Sanjaq).

11

Cross a stream in a ravine.

13

Chewashun, **Kāsbeği**, and **Kānikur**, villages at the foot of ridge 2 m. to l. Nomad encampments may be seen here in spring.

16

Kharābeh village 1½ m. to r.

16½

Descend to valley of Lesser Zāb. Keep down a valley with reddish clay hills to r., and sandstone ridge to l.

19

Khānābi, on r. bank of Lesser Zāb. Raft ferry.

A track runs up the river valley from Khānābi to Dukhan. At 2½ m. pass Bogut, a Kurdish village, with a small masonry fort on the height above the village. At 5½ m. a steep, stony ascent over a prolongation of the Heib es-Sultān Dāgh. At 8 m. pass Kirkusmuk. Descend steeply by a zigzag with a gradient of 1 in 6 to 1 in 10, and at 12 m. from Khānābi reach Dukhan.

36

Track now leads over a low wooded ridge.

Khān i-Mirān. (For the rest of the track, see *Route 38*, m. 27¼-0).

63¼

Suleimāniyeh.

ROUTE 40

ALTUN KÖPRÜ—RANIYEH (66½ m.)

Via VALLEY OF THE LESSER ZĀB

Authority:—Military Report on E.T.A., vol. iii, Route 108 (report of October 1892).

To Taktak, 32 m., this is a good route, passable for wheels, although difficult at some places. To Kōi Sanjaq the route appears to have been passable for artillery except in a few places where levelling and widening were needed. The soil is clay or gravel. From Kōi Sanjaq to Raniyeh the track in 1892 was rough, stony, and steep in places, but was apparently considered passable for guns. The chief obstacle is the Khudrān River (m. 55), but this seems easily fordable.

At Taktak, Kōi Sanjaq, and Raniyeh there are supplies to be had. Open space suitable for camping is found near Taktak and Kōi Sanjaq, and in the valley of the Khudrān (m. 54). The plain should be avoided as a camping-ground owing to malaria: the border hills are healthy. Good water from Khudrān River and springs. Fuel from hills. Wheat and rice are grown round Raniyeh. Fine grass in May and June.

Miles from
Altun
Köprü

0

Altun Köprü. A good route, passable for wheels, although difficult at some places, follows the r. bank of the Zāb to Taktak (32 m.).

There is no information as to details of the route as far as Taktak. For villages on the Zāb see *Route III F.*

32

Taktak, Kurd village of 30 houses, on the r. bank of the Lesser Zāb, the channel of which in October is here 110 yds. wide, 4 to 5 ft. deep. The river bed is here shingle, and 300 to 400 yds. wide. The river is fordable at several points. Taktak is the head of raft navigation at ordinary l.w. season. For steamer navigation on the Lesser Zāb see *Route III F.* A trade in tobacco is carried on with Baghdad, large rafts being used for transport. Wheat, wool, and pomegranate skins for dyeing are also among the cargoes. On the r. bank there is an open place suitable for camping. On the l. bank the

Miles from
Altun
Köprü

- ground rises rather steeply to the Kherenao Dagh, with a village of that name about $1\frac{1}{4}$ m. off.
- A route from Kirkuk is reported to reach the l. bank of the Lesser Zab near Hamdun (*Route III F*, m. 103). This route passes through the hills of the Shuan country, which in spring are grassy downs. The Shuan Kurds are a strong semi-nomadic tribe (mostly shepherds), who have a reputation for law-abiding conduct.
- From Taktak route follows r. bank of river for about $\frac{3}{4}$ m. Route diverges from river, over rising ground.
- 32 $\frac{3}{4}$
34 The Zab disappears from view. Easy broad track. Farther on route follows broad summit of a spur between two ravines, and then apparently descends, and runs about 1 m. l. of a sandstone ridge, rising between it and the Zab.
- 36 **Baghajder** village, $\frac{1}{4}$ m. to r., almost hidden among ravines. In places the road, otherwise passable for artillery, requires levelling.
- 37 $\frac{3}{4}$ Cross a stream, from the Heib es-Sultān Dagh, with little water in October, in a shingle bed 30 yds. wide. Ascend the r. bank for a short distance. Track rather narrow in places where washed away.
- 40 Enter an open plain extending to the foot of the hills to the E.
- 43 **Shileh**, 40 houses, 1 m. to l., in a ravine among gardens. Well-defined clay track.
- 46 **Köi Sanjaq**, alt. 1,800 ft. (2,500 ft. in map, 1912). Abundant open space round Köi Sanjaq for a camp. Fire-wood from the ridges to the N. and E. Good water. Distances from Baghajder very uncertain; total estimated in *Mil. Report* as 10 m., time in reverse direction $2\frac{1}{4}$ hrs. From Köi Sanjaq route follows a well-used track, dipping into a small ravine.
- Cross stream-bed 40 yds. wide, of boulders and stone, with little water in October, except in canals. Sandstone formation, nearly horizontal strata.
- The route proceeds along an easy track covered with loose stones.
- 48 40 min. from Taktak reach foot of the Heib es-Sultān Dagh, a limestone ridge, running SE., and the first outlier of the Kurdish hills. Several small ravines, which contain streams in the spring, drain south.

Miles from
Altun
Köprü

- Ascend ridge diagonally, gradient 1 in 15 to 20, by a track 15 to 20 ft. wide, passable for guns, although rough and stony at some points.
- 48 $\frac{1}{4}$ **Ziyāret Heib es-Sultān**, spring and shrine.
- 49 $\frac{1}{4}$ Summit of ridge, alt. 2,940 ft. (2,800 ft.?). Route descends by short zigzags for $\frac{1}{4}$ m., after which easy gradient again. Follow back of spur with rocky valley on either side. Fine view of Raniyeh and Marga plains, with the gap at Derbend and Pishder Plain beyond.
- 51 $\frac{3}{4}$ Limestone is replaced by a soft shale, easily broken but forming a firm track. Scattered oaks and brushwood. To the SE. is the valley of the Kelek Khān Dereh, which extends between two ridges for about 3 m. **Bakiyān**, 20 houses, and **Kāni 'Othmān**, 60 houses, are Kurd villages up this valley with orchards and trees. A track runs to **Dukhan** on the Zāb, and thence to **Suleimāniyeh**.
- 52 $\frac{1}{2}$ Pass **Bakrān**, 15 houses, on hill to r. among trees. Above is a steep bluff, the **Kutsrut Dāgh**, the eastern boundary of the Kelek Khān Valley. Track is stony, but fairly level and passable for guns. Commence ascent of another ridge, parallel to the Heib es-Sultān, but lower and more rounded.
- 53 $\frac{1}{2}$ Summit of ridge, alt. 2,100 ft.; steep descent for last $\frac{1}{4}$ m.; very stony. Road 10 ft. wide, revetted on the outside and in good order.
- 54 Route reaches foot of ridge, among rounded outliers and spurs. Room for camping troops here. Good water from Khudrān River and small springs. Firewood from neighbouring hills. Supplies from Kōi Sanjaq and Raniyeh. The plain should be avoided as a camping-ground owing to malaria, as the soil is a rich black loam with numerous small springs. The border hills are healthy.
- 55 Ford the **Khudrān**, a rapid stream flowing from Aughir Dāgh over shingle 100 yds. wide, the channel in October being 40 ft. wide and 18 in. deep. Follow much-used track over the plain. Skirt the Khudrān, about $\frac{1}{4}$ m. from it.
- 56 $\frac{1}{4}$ Cross the **Serkupkan Su**, 30 ft. wide, over gravelly bottom.

Miles from
Altun
Köprü

- Pass **Buraish**, 20 houses, on the other bank of the Khudrān, $\frac{1}{2}$ m. to r. Near it is a *ziyāret* and grove of oaks.
- 59? **Boraka**, 20 Kurd houses, on a marshy stream flowing towards the Khudrān. Small patches of cotton are sown. Wheat and rice round Raniyeh, but the soil is not utilized to its fullest extent. Fine grass in May and June.
- 60 Pass **Gora Khān**, 20 houses, near a spring.
- 60 $\frac{1}{2}$ **Doghur Khān**, 20 wretched huts, on a mound 1 m. to r. Cross stream from several small springs. Easy level track; muddy in rainy weather.
- 62 **Gulek** (*Route 38* at m. 71), 1 m. distant. Thence direct to
- 66 $\frac{1}{2}$ **Raniyeh**.

ALTERNATIVE ROUTE FROM M. 62 *via* DERBEND

- Cross canal, 4 ft. wide and 2 ft. deep.
- 64 Ford a winding, sluggish stream, 10 to 12 ft. wide and 4 to 6 ft. deep, with marshy tracts flowing to the Zāb. At the ford it spreads over a gravelly bottom 50 yds. wide and 18 in. deep. It is difficult to cross except at this point. Rich loamy soil about here. Cross a large stream from the Raniyeh direction flowing in a gravelly ravine.
- 66 Reach some gravelly cliffs lining the shingly and stony bed of the Lesser Zāb, here $\frac{1}{2}$ m. wide. Pass some springs, and skirt the bend of the river. Tamarisk shrubs on the shingle. This is the Pishghelli district.
- Sirsyān**, Kurd village of 60 houses, on the opposite bank. Pass a Kurdish masonry fort with bastions at the corners, in ruins.
- 68 **Derbend** village at the mouth of defile called **Bābā Derbend**, where the Lesser Zāb issues into Raniyeh Plain. Thence to **Raniyeh** (6 m.), see *Route 41*, m. 6-0.

ALTERNATIVE ROUTES FROM KÖI SANJAQ TO RANIYEH.

In 1903 Sykes followed a route from Köi Sanjaq to Raniyeh which he describes as a good mule-track. This also goes by the Ziyāret Heib es-Sultān; after traversing the Heib es-Sultān Dāgh it crosses the Kelek Khān Valley, leaves Nahrawān to l., turns northward near Khudrān village, and then crosses the route described above, passing over the Dahli Bisman, a small range of five

peaks about 4 m. from Raniyeh, while the main route skirts round the SE. end of this line of hills. Sykes took 3 hrs. to Khudrān village, and 3 hrs. again from that point to Raniyeh. There seems to be very little difference in the length between the two routes.

Sykes's map shows a third route to Raniyeh which diverges to the l. a short distance beyond the Ziyāret Heib es-Sultān and passes through Kusrilan near the NW. end of the Dahli Bisman.

ROUTE 41

RANIYEH—BANAH (70 m.)

Authorities:—Routes in Persia, vol. ii, Route 106 (reports of 1888, 1902, and 1905).
Military Report on E.T.A., vol. iii, Route 108, pp. 269-70. The distances given in *Routes in Persia* for the stage from Raniyeh to Shlamatte (Shalmatti) are confused, probably owing to misreading of the account in the *Military Report on E.T.A.*

The nature of the road varies greatly, and, from the information given, it is doubtful whether it would be passable, except here and there, for guns or carts and transport. It is very hilly and stony with steep inclines in some parts, in others the track crosses muddy rice-fields and marshy valleys. From Ser Desht to Banah the route goes over a good open road and would probably be passable for all arms at all times.

There are two intricate fords at $7\frac{3}{4}$ m. and $13\frac{1}{2}$ m. from Raniyeh which are difficult to cross without guides. Many of the streams in the valleys are liable to flood, and would then have to be crossed higher up, necessitating considerable détours.

No exact data can be given regarding supplies, but a limited amount could probably be got from the villages. Forage, fuel, and water are fairly plentiful in parts, especially near Raniyeh. Water is chiefly from streams or springs and is plentiful everywhere except in hills. No details can be given about transport.

The climate is good in general, cultivation of most kinds flourishing. Between Raniyeh and Ser Desht, however, the roads are blocked by snow from the middle of December to the middle of March. Whether this is due merely to the small amount of traffic, or whether the route is rendered quite impassable, is not stated, but the former seems possible.

Miles from
Raniyeh

- 0 **Raniyeh.** Route starts in general direction ESE., crosses stream from a spring and makes across the plain for the Derbend gap. There is no road but several tracks across fields of rice and barley : very muddy in wet weather.
- 1½ Pass **Boksin**, small village of Raya Kurds, $\frac{3}{4}$ m. to r.
- 4 **Kuragu** village, similar to above, close by on r.
In about ten minutes T.L. (single wire) from Kōi Sanjaq to Qal'ah Dīzeh crosses the road. Spring about 1 m. away to SW.
Cross a small stream : path very stony.
- 5¼ Route here rounds a spur and enters **Bābā Derbend**, defile by which the Lesser Zāb issues from Pishder into Raniyeh Plain. A narrow rocky ridge extends NW. to the **Qandil Dāgh**, and a similar ridge to the **Kerkur Dāgh**. The gap is 300 yds. broad ; the river being 80 yds. wide, 6 to 8 ft. deep, and unfordable. There is no track on l. bank of Lesser Zāb into Pishder. On the r. bank is a track, 18 ft. wide, well revetted, but loose stones and boulders require to be removed to make it passable for guns.
- 6 **Derbend**, Kurdish (Mangūr) village of 40 houses.
Track rough and stony among boulders through rocky defile, close along r. bank of the river.
- 7¾? Ford the **Shirushi Chai** from the Qāndil Dāgh, 25 yds. wide, 2 ft. deep, in a shingly bed 150 yds. wide.
In about 10 minutes pass **Kōmallāh**, village of Mangūr Kurds $\frac{1}{2}$ m. to l. Turn SE. and follow river, which has steep cliffs along its far bank. On this side is a shingly bed about $\frac{1}{4}$ m. wide, and then a stretch of marsh of about a quarter mile. In spring the river fills this wide bed. On the l. is a succession of low spurs, terminating in the banks under which the road runs. Between these are gullies down which streams flow to join the Zāb. The valleys are marshy, which makes the streams difficult to ford although they are not deep, but in spring it would be necessary to ford higher up.
- 10½ **Kharaju**, small Mangūr village under the bank.
Cross a small stream in a wide bed of stone and shingle.
- 12 **Kinjari**, another small Mangūr village under the bank.
Turn l.
- 13½ Ford the **Sharvat Su**, a network of streams and marsh overgrown with willows, reeds, and brambles. Difficult and intricate ford for which a guide is advisable.

Miles from
Baniyeh

- Route to Urumiyeh *via* Wazneh Pass branches l. (see vol. iv, *Route* 68 a).
- Emerge on an open down, one of the flat parallel spurs running down from the mountains towards the Zab, which constitute the plain of Pishder.
- 14 $\frac{3}{4}$ Ford, similar to the last, over the **Wazneh** River or **Charāwa Su**. Ruined and deserted village on its l. bank. Easy going over a flat plain gradually rising.
- 18 Cross spur 2,300 ft. high. Steep descent into a gully and over a stream.
- 18 $\frac{3}{4}$ **Qal'ah Dizeh** (Hamidiyeh), small village under a mound on the opposite bank, on a spur which runs out as a sort of peninsula, having gullies with steep banks on three sides. Qal'ah Dizeh is the seat of a Kaimmakam and the centre of the *Kaza* of Hamidiyeh. No government buildings (1905). T.L. connecting Qal'ah Dizeh with Kōi Sanjaq but not crossing the frontier. On the mound above the village is a fort and at its foot barracks.
- Leaving Qal'ah Dizeh, descend the bank by a muddy path to the mound. Cross the stream S. of the fort; start SE. across a muddy plain and rice-fields.
- 21 $\frac{1}{4}$ **Serenel**, small village with one good house belonging (1905) to Baiz Agha, chief of the Nūr-ud-Din Kurds.
- Leave Serenel in a NE. direction, crossing a stream. Track gradually rises over open country.
- 23 **Nūr-ud-Din**, large village on the l. **Pir Mālik** at elevation of 2,300 ft., **Ustināwa** $\frac{1}{2}$ m. to the l. in the valley on the other side of the stream.
- 24 $\frac{1}{2}$ Turn r. and cross a succession of spurs, the road gradually trending more S. About 600 yds. to the r. Kurd village of **Khār Ābdār** in a valley.
- 27 Cross a spur, 2,700 ft., and turn l., going NE. for $\frac{1}{2}$ m.
- 27 $\frac{1}{2}$? Cross a stream, down which is **Shlamatte** (Shalmatti) about 1 m. away.
- General direction E. to Ser Desht; turn r. (SE.) again over more spurs and valley, the road steadily rising into the hills. Pass through oak grove with *ziyāret*.
- 30 $\frac{1}{4}$ Pass **Gira**, village of about a dozen scattered houses on slope above to l. among trees and cultivation. To r. is a mound on which are the remains of an old castle.
- The road here bends r. Good going on a flat plateau for about $\frac{3}{4}$ m.; then begin ascent of spur, from which a

Miles from
Raniyeh

- fertile valley opens to view below to the r. In this valley is Beshir, a large village through which the road from Suleimāniyeh to the Pishder Plain passes. Route winds by a narrow rocky path round the hill-side. The **Beshir Su** is 700–800 ft. below in a narrow gorge. Rounding the spur, the path goes NE., ascending the ravine of Beshir Su and still keeping above its r. bank.
- 33 $\frac{1}{4}$ **Bakhlū**, 30 houses, alt. 3,900 ft. Continue winding up the ravine, general direction NE. Turn up valley to l. and commence a sharp ascent. Reach plateau at 5,200 ft., cross it, and commence another long and steep ascent. The sides of the mountains are covered with oak. A little plateau is immediately below the pass. On the r. is a spring.
- 36 $\frac{3}{4}$ Reach top of pass, 6,950 ft. In heavy snow a détour to the r. is necessary from here. Even and gradual descent, following a stream on the r. by difficult and winding path.
- 40 $\frac{3}{4}$ **Kanamashka**, village of Malkari Kurds, on l. The valley opens out, and there are small fields on both sides.
- 42 $\frac{1}{4}$ **Bevrān**, village of Malkari Kurds, 40 houses. Cross an open valley, the slopes covered with terraced fields.
- 44 Hamlet of Beiraji Kurds, 40 houses. Ford stream. **Bevrān-i-Zirū** (Lower Bevrān) about $\frac{1}{4}$ m. to r. on the other side of the stream.
- 45 Leave the valley of the **Bevrān Su**, which flows down a ravine to the SE. Cross a couple of spurs and rise to a flat plateau. This plateau is covered with ploughed fields and crossed by a lane 8 ft. wide, almost impassable in very wet weather owing to deep mud.
- 46 $\frac{1}{2}$ Track to **Maraghān** branches off to the r. over the hills. Short rocky ascent to 5,700 ft., from which Ser Desht is to be seen 1 $\frac{1}{2}$ m. distant, surrounded on all sides except one by hills, which slope down NE. towards the valley of the Lesser Zāb, a succession of fields and well-cultivated terraces. Ser Desht is on the highest of these, separated from the mountains on the NW. by a deep ravine.
- 48 $\frac{1}{4}$ **Ser Desht**, 350 houses, said to contain 2,000 inhabitants, mostly Kurds, and a few Jewish and Armenian shopkeepers. Two springs in the village give good and plentiful water. There is some traffic between this place and Suj Bulaq, the seat of the Persian governor (Hakim). Persian soldiers

Miles from
Baniyeh

- are quartered here during the summer months, but are withdrawn to Suj Bulaq during the winter.
- General direction of route ESE. From Ser Desht to Banah is about seven hours' journey along an open road with the Zab to cross *en route*.
- The following villages are passed on the way, the distances noted being approximate.
- | | |
|-----|---|
| 50½ | Kānibard (Qalabird ?). |
| 54 | Khanihalujeh. About 1 m. to r. and between these two last villages is Banejaj . |
| 55 | Sianmeh , where a track joins in from Alūt. |
| 59 | Nojgak , with Malmal about 1 m. to l. |
| 62½ | Yaknabād. |
| 63½ | Zervav Sufia. |
| 64½ | Ganzaleh. |
| 66½ | Sueru , to the l.: Duman less than 1 m. to r. |
| 68 | Kaupich. |
| 70 | Banah (see <i>Gazetteer of Persia</i> , vol. ii, under Bāneh). |

ROUTE 42

ERBIL—KÖI SANJAQ (46¾ m.)

Authorities:—Military Report on E.T.A., vol. iii, Route 110 (report of 1902). Sykes, Dar-ul-Islam (journey of 1903).

According to native information given in 1903 this route was then passable for carriages in summer as far as Ashqaf Saqqā, but beyond that point impassable for wheels, though a good mule-track. Other information represents it as passable for wheels throughout. Water is said to be scarce; most of the stream-beds are apparently dry or nearly so in the low-water season. See further under camping-grounds mentioned at m. 9, m. 21, and m. 33½.

Miles from
Erbil

- | | |
|----|--|
| 0 | Erbil. Leaving the khan follow a track E. over the plain. Pass an open brick duct which brings water for the town from <i>karez</i> . Follow a well-beaten track over gravelly clay soil. |
| 4? | Follow a stream about ½ m. to r. Skirt a shallow ravine and stream-bed (dry in October). |

Miles from
Erbil

- 4½ Pass **Hasan Khān**, ½ m. to r., with a few houses near a marshy pool from a *karez*.
- 6 Pass **Sekeleka**, 10 houses, ¼ m. to r., partly in ruins. Water from *karez*. A long, gradual ascent, nearing some gravelly hills; beyond are the sharp ridges of the Sefīn Dāgh.
- 8 Pass **Qiz Nizan**, a dozen huts, ½ m. to l. on a stream. Good firm track 30 ft. broad to
- 9 **Pirush**, 40 houses of Dizeih Kurds 2 m. to l. at the foot of outlying hills. Pass mouth of a *karez* with stream 3 ft. wide and 8 in. deep (October 1902). Enter gravelly hills and follow a shingly stream-bed (dry October 1902). Near the *karez* is a suitable site for camping troops. Supplies from Erbil and surrounding district. Firewood from the Sefīn Dāgh.
- 11 Spring at the base of a low cliff. Easy broad track gradually ascending.
- 12 Small stream in ravine which becomes lost in the shingle ¼ m. lower down.
- 12¼ Cross to l. bank of stream. Several ravines on either hand. Good grass in spring on these hills.
- 13 Reach watershed. Open out view of Sefīn Dāgh and hills NE. To the SE. gravelly undulations with no prominent features. Keep along the broad ridge forming the watershed SE. towards the Lesser Zab and NW. to the Bastoreh Chai. Sandstone ledges at intervals, but soil is mostly conglomerate and gravel.
- 18 Road winds among low hills but remains broad and easy. The Sefīn Dāgh lies nearly due N.; a rocky ridge runs NW. through which the Bastoreh Chai emerges by a wide gap. At the mouth of the gap is **Derbend**, 20 houses, 2 m. distant in a fertile basin. Road bifurcates. A well-beaten track goes through the gap to valleys on the Sefīn Dāgh. Turn SE., rounding several narrow ravines.
- 19¼ Pass a *ziyāret* with group of oaks. Track more stony as the main ridge is approached. Soil rich with a little cultivation; good grass in spring and summer.
- 19¾ Cross a stream.
- 20¾ Cross another stream; nearly dry in October 1902.
- 21 Reach larger ravine in which is **Ashqaf Saqqā**, 40 houses of Gardi Kurds. Just above the village are half a dozen good springs, which are used to irrigate gardens below

Miles from
Erbil

the village. 2 m. NE. is a well-marked rocky ridge, rising 400 to 500 ft., covered with low oak shrubs, and extending towards Kōi Sanjaq. Kermanji or Kurdish only spoken here in 1902. No one knew Turkish. *Zaptiehs* usually can act as interpreters. Plenty of open space suitable for camping troops. Water from the springs. Firewood from ridge to N. Supplies in small quantities. Sheep and cattle from nomad tribes. Time from Erbil, 5-5 $\frac{3}{4}$ hrs. The times given in brackets from this point to Degāreh are from *Mil. Report*; the distances cannot be exactly estimated.

Keep parallel to the ridge, avoiding deep ravines to the r.

Cross ravine with stream from a spring (20 min.). **Baqli** village, 20 huts, $\frac{1}{4}$ m. down this ravine.

Cross several shallow ravines (30 min.). **Aghlia**, 10 huts, $\frac{1}{4}$ m. to r., down a ravine with stream, which is crossed.

Ridge 1 $\frac{1}{2}$ m. to the l. covered with oak scrub.

Cross broad stony bed of ravine, dry October 1902 (47 min.). Cross a stream. Good level track.

Cross a larger ravine with short steep descent (1 hr. 5 min.).

Descend steeply by short zigzags among rocks into a large ravine with the **Zāzir Su** flowing SW. from a gap in the ridge to the l. (1 hr. 25 min.). Another ridge is visible through the gap, parallel to the first. Stream-bed 30 yds. broad and nearly dry (October 1902), the water being diverted into irrigation canals. Cotton cultivation.

30 **Degāreh** (1 hr. 50 min.), 40 houses on the slope of the l. bank, up which the track steeply winds. Level track when the ravine is passed. Gradient would require improving here for wheels.

31 Track rough and stony, but level.

31 $\frac{1}{4}$ Cross a stream in a broad ravine, going SW.

33 $\frac{1}{2}$ A cluster of houses at the foot of the ridge, $\frac{1}{2}$ m. to the l., near a spring. Cross several shallow ravines, dry in October 1902, but containing water in spring. Good soil, but little cultivated. Near here would be a good site for camping troops. Water from spring near Tatawwul and streams. Firewood from ridge to the N. Supplies scarce. Track rough, but passable for guns.

Rocky mound to r., 30 min. farther on. Then cross dry ravine (35 min.); a rough stony track continues to three dry ravines (1 hr.), and later another (1 $\frac{1}{2}$ hr.; 10 min.

Miles from
Erbil

- before Tatawwul) with broad stony channel and some rocks.
- 39 $\frac{3}{4}$ **Tatawwul**, a few houses in a ravine 1 m. to l., with a few trees and gardens watered by a spring. Cross two shallow ravines with stony channels.
- The times given in brackets below are reckoned from Tatawwul.
- Cross a stream (25 min.). Very rough country, full of ravines, to r.
- Round a flat-topped spur from the l. (35 min.). In October 1902 some Gardi Kurds who had left their summer quarters in the Qandil Dāgh had arrived here with their flocks for the winter.
- Cross small ravines ; track still rough and stony, gradually descending (45 min.).
- Cross a stream (1 hr. 10 min.). **Topzawa**, 20 houses, $\frac{3}{4}$ m. to l., near a spring.
- 44 A strong stream, with **Shileh** and gardens and orchards about 1 m. to r. Ridge ends here. Kōi Sanjaq visible in a well-cultivated basin.
- 46? Skirt base of a mound overlooking the town. On it is a square masonry fort, 200 yds. side, with round bastions at the corners. It is half ruined, but was used as an infantry barracks in 1902.
- 46 $\frac{3}{4}$ **Kōi Sanjaq**. The total mileage of the route (taken from *Mil. Report*) may be 6 or 7 miles too long.

ROUTE 43a

ERBIL—ROWANDUZ (? 60 M.)

Via SHAKHLAWA AND BĀTĀS

Authority :—Lorimer, *Report of a Tour in Turkish Arabia and Kurdistan*, April–May 1910. Distances estimated from Lorimer's times : see m. 26 and m. 39 $\frac{1}{4}$.

This road does not seem to be passable for wheels. There are, however, no serious obstacles, and baggage animals have not much difficulty except in the stage from Bātās to Rowanduz.

Supplies are fairly plentiful, especially at Shakhlawa, and the Kurds met with appeared to be hospitable. Water is good and plentiful everywhere, and as soon as the hills are entered there is abundance of fuel and timber.

Miles from
Erbil

- 0 **Erbil.** The track at first runs NE. across open plains.
- $2\frac{3}{4}$ **Bairkod** village, 10 houses of Gardi Kurds, to W. Cross a small hollow.
- 3 **Ankowa** slightly N. of W. It consists of 300 houses of Oriental Christians and is about $\frac{3}{4}$ hr. from Erbil.
- Qarachok** Hills visible W. of S. To ENE., main peak of long dark range (**Sefin**). A nearer and lower range is **Dulopā**.
- 5 **Pirzin**, 50 houses of Gardi Kurds about $\frac{3}{4}$ m. NNW.
Pirush, 40 houses of Dizeih Kurds, ESE.
Nomad encampments may be seen near.
- 6 Two ravines.
- 8 Cross a small clear stream. Knoll on stony but more or less cultivated ground.
- Shawāq**, 25 houses of Gardi Kurds, 1 m. E.
- 9 **Mulla Omar**, 25 houses of Gardi Kurds. Timber becomes more plentiful. Track rises gradually.
- $11\frac{1}{2}$ Summit of the outer hills bounding the Erbil Plain. Sudden descent into the valley of the Bastoreh stream, which is the boundary between the *Kazas* of Erbil and Kōi Sanjaq. The range on the other side of the valley is crossed, within view from this point, by three passes:
(1) The **Galiyāweh** to NNE. leading to Shakhlawa and Rowanduz.
(2) The **Shakhlawa** to NE. also leading to Shakhlawa and Rowanduz (crossed by route).
(3) The **Saiwakeh**, to NE. by E.
- $12\frac{1}{2}$ Cross the **Bastoreh** stream. Stony bed, about 80 yds. wide.
Track rises for some miles.
- $14\frac{1}{2}$ **Saiwakeh** village $\frac{1}{4}$ m. N. by E. Good spring in a hollow.
Donguzāweh village $\frac{1}{2}$ m. S. by E. Rough track; fairly easy ascent.
- $16\frac{1}{2}$ **Saiwakeh** fort, a square stone building with bastions.
- $17\frac{3}{4}$ Top of the pass. Descend into a valley.
- 20 Reach the bottom of the valley and cross a stream. Track stony and rough.
Koreh, 30 houses of Hoshnau Kurds, 600 yds. to E. Tall poplars and willows near.
- $21\frac{1}{2}$ **Hasan Māwilāwi**, 30 houses, 1 m. NW.
Track runs up through a gorge, **Derbend Sefin**, with a stream flowing through it.

Miles from

Erbil

22½

Hujarān, 15 houses of Hoshnau Kurds immediately on the r. of the track. Valley running up into the hill on the r. At its head on N. is principal peak of **Sefin Dāgh**. Grove of trees.

23 Top of a small pass. Road bends E. Going heavy in wet weather.

26 ? **Shakhlawa** village, at the foot of the northern precipices of a mountain with the same name. There are 230 houses of Kurds, 130 of Christians, and 5 of Jews. The Jews are weavers, the Kurds and Christians cultivators and muleteers, and also weavers. Poplars are grown for timber, and planes and mulberries grow to a great size. Wheat, barley, *māsh*, and *arzān* are grown, and some cotton, sesame, and a little tobacco. Fruits include grapes, apples, pears, and mulberries. There are some magnificent clear springs on the hill-side which drive five flour-mills and water the orchards, vineyards, and woods that extend down into a valley below the village. The place is sometimes used as a summer resort by Europeans from Mosul.

In spite of all its resources, however, it is said to have a poverty-stricken appearance.

Lorimer's times from Erbil to the principal points thus far are :—

	hrs.	min.
Erbil	0	0
Pirzin	1	25
Mulla 'Omar	2	46
Pass (m. 17¾)	5	16
Shakhlawa	8	20

Track descends a stony lane to a valley. Near the foot of the descent it crosses a stream coming down from Shakhlawa.

27¾ **Derbend Soraq**, gap in a red ridge parallel to the hills behind Shakhlawa. All the drainage of Shakhlawa and its valley appears to escape through this gap. The highest peak of Sefin Dāgh is about 3 m. S.

29 Cross to r. bank of the **Rū Soraq**, the stream which issues from Derbend Soraq. It is of varying depth, flows rapidly westward, probably to join the Great Zāb, and has a breadth of 5-10 yds.

Miles from
Erbil

- Track rises by an easy ascent.
- 30 $\frac{1}{4}$ Pass over the **Mirāweh** ridge, which runs parallel to that of Soraq. It is composed of a whitish rock.
- Māwarāneh** village, 60 houses of Rowanduz Kurds, 2-3 m. W.
- Tilgareh** village, 10 houses of Hoshnau Kurds, 3-4 m. S.
- Mamazailkeh**, 20 houses of Hoshnau Kurds, 1 m. NE.
- Track now runs in a general N. by E. direction.
- 31 $\frac{1}{4}$ Cultivation begins, reaching as far as the steep, barren **Harīr** Hills in front.
- Track to Rowanduz breaks off to r.
- 31 $\frac{3}{4}$ Cross a small stream with a good flow of water.
- Mir Rustam** village, destroyed by fire in 1909.
- 33 **Shuweisiyeh**, 10 houses of Mir Mahmali Kurds, 300 yds. to r.
- Shināweh**, eight or nine houses, 1,000 yds. to r.
- Both villages are under the Emir of Shakhlawā.
- 33 $\frac{1}{2}$ Track crosses another ridge. **Kōikeh**, deserted village.
- Sisāweh**, 10 houses of Mir Mahmali Kurds, 500-600 yds. E.
- Motrāweh**, 30 houses of Mir Yūsufi Kurds, 1 $\frac{1}{2}$ m. NNW.
- Sursureh**, 30 houses of Mir Mahmali Kurds, 2 $\frac{1}{2}$ m. NW. by W.
- Sheikh Mahmūdiyeh**, 60 houses of Mir Mahmali Kurds, 2 $\frac{1}{2}$ m. distant, slightly E. of Shināweh.
- Good fruit orchards in the neighbourhood. Two streams from valley on r. Track leads N.
- 34 $\frac{1}{2}$ **Ari Sirak**, 10 houses of Mir Mahmali Kurds.
- Cross an irrigation channel.
- 35 $\frac{1}{2}$ **Bāwiyeh**, 100 houses of Rowanduz Kurds, $\frac{3}{4}$ m. NE. by E. on some foot-hills.
- 37 **Karwātāneh**, 40 houses of Rowanduz Kurds, beside the track.
- Path rises gradually and obliquely up to the top of a ridge parallel to Harīr.
- 38 Water-mill.
- House and ruin of square blocks of stone set in good mortar.
- Harīr** village, about 100 houses of Rowanduz Kurds, about 1 m. NNE.
- Track runs along the SW. side of the ridge, just below the crest.
- 39 $\frac{1}{4}$ **Bātās** village, 100 houses of Surchi Kurds.

Miles from
Erbil

Lorimer's times from Shakhlawā are :—

	hrs.	min.
Shakhlawā	0	0
Derbend Soraq	0	30
Mirāweh ridge	1	16
Ridge (m. 33½)	2	16
Bātās	4	3

For the next few miles there is no evidence available.

The last 16 m. are the same as the last stage of the route from Mosul to Rowanduz *via* 'Aqreh and Qandil ferry (see *Route 45 a*, m. 73½).

The track between Bātās and Rowanduz is difficult.

Baggage animals take a full day to cover it.

60?

Rowanduz.

ROUTE 43 b

ERBIL—ROWANDUZ (? 52 m.)

Via BAHIRKA AND THE BĀBĀ CHICHEK DĀGH

Authority :—*Military Report on E.T.A.*, vol. iii, Route 116 (a report of 1881).

This route appears to be a fair to difficult mule-track. No information as to supplies, &c.

Miles from
Erbil

- | | |
|----|---|
| 0 | Erbil. Route runs NE. over an undulating plain, approaching a rocky ridge to E. |
| 3 | ' Ankowa , 300 houses of Oriental Christians, 2 m. to l. |
| 10 | Bahirka village, 150 houses of Gardi Kurds; the residence (in 1910) of Kakil Agha, head of the Gardi Kurds. |
| 11 | Cross the Bastoreh Chai , dry in January. This stream rises in the long black range called the Sefin Dāgh to E. |
| 12 | Pass Dumwakh , and enter a valley among gravelly hills. |
| 13 | Cross a watershed, 1,950 ft. Many rough, broken earth scarps, with numerous streams. |
| | Descend rather steeply for 300 ft., and then follow a fair track through some small glens, with clear streams and grass. |

Miles from
Erbil

- 16 **Dera** village. Oak copse begins to show on the hill-sides. From here perpetual ascents and descents over wild, stony country, with some deep ravines and numerous streams. Oak scrub plentiful on the hills.
- 22 Cross bed of a large stream. Turn through a gorge in a razor-backed range in front. Track difficult, among boulders in the ravines along the foot of this range. Keep NE., skirting a stream; the slopes become easier, dotted with oaks.
- 27 Cross a col in the Bābā Chichek Dāgh (2,000 ft. ? or more), which runs SE. for some distance, and descend through oak copse and scrub.
- 31 **Herāsh** village, alt. 2,400 ft. ? **Bābā Chichek** village is 4 m. W. over some hills. Descend over easy downs, cross a stream from the **Narib Desht**, a long open valley to SE.
- 36 Begin gradual ascent, which becomes much steeper. Zigzag ascent to 2,650 ft. Reach comparatively level country, with a little cultivation. Sparse oak woods. Winding ascent along a valley, up a steep hill-side for $\frac{1}{2}$ m.
- 37 **Kurruk** village, alt. 3,200 ft. This appears to be identical with Qarakhin in *Route 45 a* (m. $74\frac{1}{2}$), which is joined in this neighbourhood (the exact point cannot be determined).
(For the rest of the route to Rowanduz, see *Route 45 a*, m. $74\frac{1}{2}$ – $89\frac{1}{2}$.)
- 52? **Rowanduz**.

ROUTE 44 a

ROWANDUZ—RANIYEH ($53\frac{1}{2}$ M.)

Via THE BEJĀN PASS AND BALASSĀN

Authority :—*Military Report on E.T.A.*, vol. iii, *Route 111* (report of 1902).

This route is not passable for wheels, except for the last $2\frac{1}{2}$ m. into Raniyeh. It is very difficult for pack-animals at the ascent to and descent from the Bejān Pass (m. 8) and in the narrows of Keshān Dereh (m. $30\frac{1}{2}$ and following).

There are good camping-grounds, with wood and water plentiful, along the Alaneh Dereh, especially about Balassān (m. 28½).

A mobile force, such as mounted infantry unhampered by pack-animals or guns, could do it comfortably in two days, halting in the Alaneh Dereh.

Miles from
**Rowan-
duz**

- | | |
|-----|---|
| 0 | Rowanduz. Direction SW. Track rough, paved with cobble stones. |
| 1½ | Serderiyeh Pass? If correctly placed, this cannot be identical with the pass mentioned under the same name in <i>Route 45 a</i> , m. 83¼. |
| 3? | Kānikhur , 60 houses of Rowanduz Kurds on r. The Kalant Su in a deep gorge on l. The track descends into a valley where two streams meet and follows that on the r., the Nergir Chai , up a narrow rocky gorge, well wooded. Ascent steep and difficult. Enter an amphitheatre of perpendicular cliffs and ascend a shaly spur covered with oak scrub. |
| 8 | Bejān Pass, 5,325 ft. Long descent begins. Oak forest on the hill-sides. The pass is very difficult in places and hardly passable for pack-animals. |
| 9½ | Bejān Qal'ah , ruins of a large mud fort, on l. Cross a valley and descend along flat stony spur among oak trees. |
| 14 | Reach the Alaneh Dereh and turn l. round a spur. |
| 15 | Mill and shrine. Cross a swift stream in a rocky bed, the Bila Su (unfordable November 1902), by a wooden bridge on three stone piers 15 ft. by 2 ft., 10 ft. above the stream. Track now runs roughly S. parallel to the general direction of the Alaneh Dereh. Cross a succession of sparsely wooded spurs running from the Kurek Dāgh . |
| 17 | Pass through a <i>ziyāret</i> and burial-ground. |
| 17½ | Benāwi , about 20 houses of Haruti Kurds (alt. 3,900 ft.). Descend towards the centre of the valley across spurs. Oaks give place to stony fields. |
| 20 | Tarawa , small Haruti village ¼ m. to l. Track from Khān-i-Batman joins the present track here. |
| 21 | Skirt the steep, bare hills which enclose the Alaneh Dereh on the W. A track to Shakhlawā (about 7 hrs.) leads across a depression in these hills. |
| 22 | Sartikan , village of Haruti Kurds, 1 m. to l. |

Miles from
Rowan-
duz

- 22 $\frac{3}{4}$ **Ashkafka**, village of Haruti Kurds, 1 m. to l. In this neighbourhood is the boundary between the *Kazas* of Rowanduz and Kōi Sanjaq.
- 23 $\frac{1}{2}$ **Khata**, village of Mīr Makhmali Kurds, $\frac{3}{4}$ m. to l.
- 25 $\frac{1}{2}$ **Tutma**, village of Mīr Makhmali Kurds, $\frac{3}{4}$ m. to l.
Track leaves the Alaneh Dereh and begins ascent of an outlier from the Kurek Dāgh.
- 28 Cross spur overlooking a fertile valley called **Desht-i-Balassāni**.
- 28 $\frac{1}{2}$ **Balassān** (Badissān?), straggling village of 200 houses. The eastern portion belongs to Mīr Yusufi Kurds, the western to Mīr Makhmali (1902). A stream, the Khudrān, passes through the village and down the valley. Surrounding area well wooded, with orchards and vineyards to E.
The village of Berawa (Mīr Yusufi Kurds) lies E. or SE., and the villages of Daraj (Mīr Makhmali Kurds) and Chiwa (Pishghelli Kurds) lie to SW. or S. Authorities of 1902 and 1912 differ as to their exact positions. The position of villages in this neighbourhood is known to be liable to change.
Track now crosses the Desht-i-Balassāni.
- 30 $\frac{1}{2}$ Cross a spur and enter the **Keshān Dereh**, an eastern bifurcation of the Alaneh Dereh. It is a narrow gorge, some 7 m. long, finally opening into the Raniyeh Plain. It soon narrows to about $\frac{3}{4}$ m., and continues about that breadth.
- 31 Cross a stream from a gorge to the l. A track leads up this gorge over the hills to Betwata (see below).
- 33 $\frac{1}{2}$ **Malok**, 20 houses of Pishghelli Kurds.
Follow rocky path along hill-side.
- 35 **Warra**, 40 houses of Pishghelli Kurds.
- 37 $\frac{1}{4}$ **Nuwāweh**, 30 houses of Pishghelli Kurds.
Valley here 500 yds. wide. Track continues down the Keshān Dereh by a stony path winding among rocky spurs sparsely covered with trees.
- 40 Reach Raniyeh Plain. Leave the Khudrān and keep more to the E.
- 42 Cross a stream in a ravine full of boulders. In high water this stream would be difficult to ford.
Sari Kāni and **Angos**, Pishghelli villages at the foot of the hills about 1 $\frac{1}{2}$ m. to l.

Miles from Rowan- duz	
42 $\frac{1}{4}$	Betwata appears in sight, up a gorge due N. Residence of Ahmed Bey, chief of the Pishghelli Kurds (1902). Continue across the plain. Going easy, but stony.
45 $\frac{1}{2}$	Sari Chāwi , a Bilbass village. Residence of Mohammed Agha of the Pirān section (1902). Large spring just before entering the village and from it a river flows SW. across the plain to join the Khudrān. Road turns nearly S. to avoid outlying spurs.
46 $\frac{3}{4}$	Tilleh , village of Pirān Kurds at foot of a mound on r.
47 $\frac{1}{4}$	Turn to l. round spur.
47 $\frac{3}{4}$	Pass mouth of narrow valley running into the hills. In it are a few hamlets of Ako Kurds.
48 $\frac{3}{4}$	Cross a bed of shingle and boulders $\frac{1}{4}$ m. wide. Stream 4 yds. wide, not everywhere fordable (November 1902), flowing down the middle of the bed. Follow direction of a low range on l. which juts out into the Raniyeh Plain.
51	Turn to l. and ascend slope towards a gap (alt. 2,125 ft.) in the range. Here join the road across the plain from Kōi Sanjaq to Raniyeh. Rough undulating road, unfenced and crossing fields, but fit for wheels. Direction NE. by E.
53 $\frac{1}{2}$	Raniyeh .

ROUTE 44 b

ROWANDUZ—RANIYEH (53 m.) .

Via KHATA, WITH BRANCH TO KŌI SANJAQ

Authorities :—Lorimer, *Report on a Tour in Persian Arabia and Kurdistan*, April-May 1910, from native information; Hony, map of route, 1912.

This is said to be the easiest route between Rowanduz and Raniyeh, and is apparently not liable to be blocked by snow like the 'more direct' (?) routes. The distances are very uncertain. It is not clear how far this route differs from *Route 44 a*; thus Sarwisāweh may be identical with Sari Chāwi (m. 45 $\frac{1}{2}$ above).

Miles from Rowan- duz	
0	Rowanduz (alt. 2,200 ft.). Cross Derbend 'Ali Bey (alt. 5,800 ft.?).
14	(7 hrs.) Benāwi .

Miles from Rowan- duz	16?	(8 hrs.) Khata . The track bifurcates here, the right-hand branch going to Siktan (15 hrs.) and Kōi Sanjaq (20 hrs. ; 44 m. ?). Track now easy along a valley.
	32	(15 hrs.) Chiwa . Track still easy. Apparently another route to Kōi Sanjaq diverges here to r.
	45	(21 hrs.) Sarwisāweh . Track now over a plain.
	53	(24½ hrs.) Raniyeh .

ROUTE 44 c

RANIYEH—ROWANDUZ (53 M.)

Via THE NALKEWAN VALLEY

Authorities :—*Military Report on E.T.A.*, vol. iii, Route 114 (report of 1888); Sykes, *Dar-ul-Islam* (journey of 1903).

This route is simply a mule-track for most of its length, and is very rough going at many points. It is closed by snow at the Gurmanjan Pass for three months in the year. Water is plentiful, but supplies scarce, except in the first and last few miles. Fuel is plentiful except between m. 20 and m. 30.

Miles from Raniyeh	0	Raniyeh (alt. 1,245 ft.). Ascend a wide grassy valley by a broad track.
	2¼	Skirt some rocky spurs from the r. The valley narrows to about ¾ m. Rocky spur to r. The ridge, of vertical sheets of rock, rises 1,000 ft. ¼ m. to r. To l. the hills are also rugged, but more rounded. Valley narrower and more stony as ascent is made. Dalaran , Zebān , and Hājireh , small villages along the ridge to r.
	4½	Pass gap in the ridge to l., 300 yds. wide and ½ m. long, through which flows the Serkupkan Su , 50 ft. wide and 18 in. deep (May 1888), over a stony bed 200–300 yds. wide. It enters the upper part of the Raniyeh Plain, and joins the Khudrān there. A large irrigation channel takes water in the direction of Raniyeh. Neraban is a small village at the mouth of the gap.

Miles from
Raniyeh

- 5½ Follow stony track 10-12 ft. wide up the Serkupkan Su. Rocky spurs from either side. The river becomes a torrent among boulders.
- 6½ **Berkhoused**, 50 houses, on the river.
- 7¼ Groves of mulberry and a few sycamore and ash trees by the stream. Alt. 1,653 ft. The hills to the r. are covered with low oaks and brushwood.
- 8¾ Follow a narrow mule-track among large stones and boulders.
- 9½ Wheat and tobacco cultivation on terraces in the hill-side. Valley 50-80 yds. wide; rough stony track in the stream-bed for a short way.
- 9¾ Ford to r. bank of stream, 20 yds. wide and 1-1½ ft. deep (May) over gravel.
- The track is generally a good 8 ft. ledge 50-60 ft. above the stream, narrow in places.
- 11 Craggy wooded ravine with small stream from high rugged hills to N.
- 11½ Broad easy track; cultivation in terraces dotted with oak and mulberry trees.
- Kāni Benao**, large spring, and village of same name to r.
- The razor-edged ridge which skirts the E. side of the valley of Raniyeh ends abruptly here, and gives place to rounded spurs from **Qandil Dāgh**. These are thickly covered with fine oaks.
- Narrow ravines in the rocky ridge to W.
- 12 Along stream-bed, winding among boulders.
- 12¼ Stream divides, the larger branch going N. Track follows the smaller NW. Another track, 2 hrs. longer, leads up the larger branch, also to the Gurmanjan Pass (see below, m. 25½).
- 13½ **Burzungeh**, straggling village, mostly on the r. bank of the stream (4 hrs. 25 min. from Raniyeh).
- Rich soil, cultivated in terraces. Vines, walnuts, figs, mulberries, pomegranates.
- Path narrow and obstructed with trailing vines.
- Several small springs. The ridge to W. is steep and rocky, of conglomerate and boulders, while the summit is a perpendicular wall of rock 200-300 ft. high. **Dera** and **Burt Khra** are other villages in the valley.
- 14¼ Rough steep track in and out of a ravine from the W.

Miles from
Raniyeh

- Ruined fort 50 yds. to l. with solid masonry walls and round flanking towers at the corners.
- 15½ Cross another ravine, along a rough ledge.
- 16½ Through oaks and across a narrow craggy valley from the l. Some walnut trees by the stream.
- 17 **Golan**, scattered village on small terraces on the hill-side. (About 6 hrs. from Raniyeh.)
Figs, mulberries, walnuts, and vines. Tobacco grown in large quantities. Coarse silk is produced. Large herds of cattle, sheep, and goats. Good grass in spring. Above the village the slopes are bare and craggy, culminating in a wall of rock over which no path can be traced. Ascend a narrow track on the hill-side.
Cross a small ravine with stream from W., and through a large grove of walnuts.
- 17¾ Cross bed of a torrent (dry in May) among boulders. Gradient steeper.
- 18¾ Follow a narrow 3-4 ft. ledge, ascending a small V-shaped valley.
- 19½ Easy track in clay slope, through low oak wood.
- 20¾ **Gurmanjan Dāgh**, a rocky ridge to l. Lower slopes are steep clay, the summit a perpendicular face of rock 400-500 ft. high.
Trees gradually disappear (alt. 4,656 ft.). Only stunted pear and fig trees and gum tragacanth above this height.
- 21¾ Head of valley. Good broad track, nearly level.
Gurmanjan Dāgh ¼ m. to l.
- 22½? Large spring. Wide basin, 6-8 m. in diameter to r. It is shut in by snowy spurs from the **Nuchewan** and **Qandil Dāgh**, and cut up by several deep valleys, with well-wooded slopes, drawing towards the head of the Shaur Valley and Serkupkan Su.
Round the head of a wooded valley following a ledge 4-6 ft. wide. Steep wall of rock 300 ft. high to l.
Rough narrow track for 100 yds. among boulders crossing the bed of a ravine.
- 25½ Turn sharp up hill-side to l. by a steep rough track heading for a gap in the ridge of the **Gurmanjan Dāgh**. Several small springs in the hill-side. Kurdish encampments may be seen.
Gradient steeper to the summit, ascending by short zigzags among boulders and stones, along a 2-3 ft. ledge.

Miles from
Raniyeh

- 27 $\frac{1}{4}$ Summit, 5,940 ft. This pass is closed for three months in the year, from the middle of December to the middle of March, by 3-4 ft. of snow. Steep range to E., a long spur from the Qandil Dagh called the Nuchewan or Nalkewan Dagh.
- Good grass in the uplands in summer.
- 27 $\frac{1}{2}$ Large spring. Descend a bare stony valley, 300-400 yds. wide, bordered by rocky ridges.
- Track follows a stream formed by the overflow of the spring.
- 31 $\frac{1}{2}$ Cross stream from a narrow gorge on l. which rises in a high ridge $\frac{1}{2}$ m. distant. Very rough going. Alt. 5,380 ft.
- 32 $\frac{1}{4}$ Cross another ravine from l.
- Follow a narrow 2-3 ft. ledge for $\frac{1}{2}$ m. The stream is below to r. A few low shrubs and trees.
- 32 $\frac{1}{2}$ Descend by short steep zigzags into the stream-bed.
- Rough going.
- 33 Bend to l., crossing a valley from the SW. with a stream.
- 34 $\frac{1}{2}$ Valley now 600 yds. wide, bordered by crags. It is now called **Nalkewan Valley**.
- Distances very doubtful.
- Follow a path through a thicket. Grass more plentiful, and trees larger as descent is made.
- 36 $\frac{1}{2}$ Cross mouth of ravine from l.
- Valley now 400-500 yds. wide.
- 36 $\frac{3}{4}$ Ascend a neck, leaving the stream, which enters a narrow wooded gorge. Easy gradient, but rough track.
- 37 $\frac{1}{2}$ Summit of small col, 5,210 ft. Enter another valley 300-400 yds. wide.
- 38 $\frac{1}{2}$ Descend through thick forest with much underwood. Track obstructed by boulders. Valley 100 yds. broad. Track follows a stream-bed.
- 38 $\frac{3}{4}$ Alt. 4,620 ft. Better going.
- 40 $\frac{1}{4}$ Round a spur from the r.
- Traverse a forest of fine oaks. Some pears, hawthorns, and low shrub. Good grass. Valley 200 yds. wide. The range to r. is more sloping than that to l., which consists of vertical sheets of limestone cut up by craggy glens.
- 41 $\frac{1}{2}$ Round craggy spurs from l. Valley gradually opens out.
- 42 Cross rocky spur. Alt. 3,770 ft. Valley $\frac{3}{4}$ m. wide.

Miles from
Baniyeh

- Track broad and well defined over clay and shale, on W. side of the valley, undulating over low spurs. Follow stream in rocky bed 400-500 yds. to r.
- 42 $\frac{3}{4}$ Valley now $\frac{3}{4}$ -1 m. wide. Wheat and vine cultivation. Broad 20 ft. track.
- 43 Round a low mound.
- Gurrawān**, 50 houses, at the mouth of a rocky gorge through which a large stream emerges. This runs up 3 m., and opens out laterally 3 m. each way, forming the upper valley of Gurrawān, in which some villages are seen high up the mountain, with cultivation and vineyards.
- Terraced cornfields and vineyards along the stream. Fruit trees include pears, apricots, apples, plums, and mulberries.
- Opposite is the valley of Guillau. Through a narrow gorge can be seen a huge basin, 3 m. in diameter, shut in by a perpendicular wall of rock at the top.
- Large stream through the gorge.
- Broad track, 12-15 ft. wide, between low stone walls.
- Remaining distances uncertain.
- 44 $\frac{1}{4}$ Cross a stream from craggy ravines to W. Alt. 3,180 ft. Descend by a narrow 2-3 ft. ledge in the soft shale for $\frac{1}{2}$ m.
- 45 Through vineyards and cultivation. Track now 12-15 ft. wide. Alt. 2,805 ft.
- 45 $\frac{1}{4}$ Bend 500 yds. to W., and cross a gorge from the SW. similar to Gurrawān.
- 45 $\frac{3}{4}$ Stream cuts through a gorge $\frac{1}{2}$ m. long, bordered by cliffs 60 ft. high. Ascend spur to l. through thinly wooded country.
- 46 $\frac{1}{2}$ Stream emerges from gorge and enters a flat grassy valley 500-600 yds. wide.
- Skirt foot of flat-topped spur forming a sort of barrier across the valley: masonry watch-tower on the end of it, now in ruins.
- 46 $\frac{3}{4}$ Bend 400 yds. to l., crossing a large stream from a gorge to W., up which an elevated plateau is visible. At the mouth of the gorge is **Firkeari**, 100 houses (alt. 2,500 ft.). This point is given in the *Mil. Report* as 13 m. beyond Gurrawān, but the time is only 1 hr. 19 min. from reaching that point.
- Along stream-bank are terraces of orchards and vineyards.

Miles from
Baniyeh

- 48 Skirt stony spur, and cross ravine with stream from W. One track fords the river (here 30 ft. wide, 2 ft. deep in May) to avoid this stony part.
- 48½ Down the flat, grassy border of the river, here 400 yds. broad.
- 49 Valley opens out to about 1 m. Cultivation, but bare of trees, except a few stunted oaks.
- 50½ Valley sloping up to the **Kurek Dāgh** to SW., culminating in craggy ravines: a large stream comes down it. Ascend a rounded ridge by a zigzag stony track. The river pierces this ridge in a gorge 80-100 yds. wide, bordered by cliffs 500-600 ft. high. This is the **Kalūnd Gorge**, and skirts the S. side of Rowanduz.
- 51¼ Follow a track 15 ft. broad, crossing a ravine with a waterfall. **Kānikhur**, 60 houses, among orchards, is up this valley to l. The ascent was once paved, and the stones are now slippery.
- 52½ Skirt the l. side of the gardens of **Qal'ah Teluk** on the height above Rowanduz, a few yards from the edge of the gorge. River 400 ft. below. Track may here coincide with that followed in *Route 44 a* (beginning). Descend slippery paved road into
- 53 **Rowanduz**. (*Mil. Report* places Rowanduz 20 m. beyond Firkeari, but the time is only 2 hrs. 3 min.)

ROUTE 45 a

MOSUL—ROWANDUZ (89½ m.)

Via 'AQREH AND QANDĪL FERRY

Authorities:—Lorimer, *Report of a Tour in Turkish Arabia and Kurdistan*, April-May, 1910; *Military Report on E.T.A.*, vol. iii, *Route 118*, m. 1-19½ (report of 1888).

This route may have been passable for wheels in 1910 as far as Barda Resh, but was apparently a mule-track for most of its length. The last 7 m. before reaching Rowanduz in the gorge of the Rowanduz Chai were very bad. But it is reported (1916) that the route from Harir, near m. 72½, to Rowanduz has been made passable for wheels. See also under m. 22½.

The chief obstacle is the passage of the Zāb, and difficulty might be experienced at the ford over the Ghāzir (m. 18) and the bridge over the Khālifān.

No definite information as to supplies, &c. Water seems plentiful.

The distances given below are calculated mainly from Lorimer's times, and are doubtful.

Summary of Lorimer's times on the way from Rowanduz to Mosul.

	<i>Travellers.</i>	<i>Baggage.</i>
Rowanduz to Ashkhar	About 7 hrs.	9½ hrs.
Ashkhar to Qandil Ferry	1 hr. 53 min.	?
Qandil Ferry to 'Aqreh	About 7 hrs.	?
'Aqreh to Barda Resh	5 hrs. 31 min.	?
Barda Resh to Mosul	Uncertain. (Some confusion in the text.)	A led horse took 11 hrs.

Miles from Mosul	
0	Mosul. Cross boat-bridge and pass.
5½	Gogjali village, 80 houses of Bazwān Turkomans, on the r.
8	Ba Zuwāyeh village, 60 houses of Turkomans, about ¾ m. to r. N. by E. is the beginning of the Naorān ridge, and N. by W., 1½ m. off, Upper Tahrawa , 40 Turkoman houses. NNW. about 1 m. away is Lower Tahrawa , 15 Turkoman houses.
9½	Small, light-coloured mound 300 yds. to l. Naorān Hills 5-6 m. away. Terjilleh village, 30 Turkoman houses, about 1 m. to N. (Another village of the same name appears to lie some miles SE.) Derwishi , 50 houses, about 2 m. NNW.
10¼	Topezaweh , 50 houses, 600 yds. to r. General direction now NE. by E.
11¼	Mound on l. Behind the mound is Tiz Kharābeh , 60 houses of Shabak Turkomans.
12½	Imām 'Ali Riza , shrine built of round stones and mortar, with a dome, on the r.
13	Bir Hellān , village of 15 houses of Kurds and Arabs, on l.
14	Top of the high land joining the Maqlūb Hills to NNW., and the Zardak ('Ain es-Safra) Hills to SSW. The Jebel Naorān , divided by a valley from Jebel Maqlūb , lie between NNW. and WNW. Several villages on the slope of Maqlūb. General direction E. by N.
16½	Track touches a bend of the Ghāzir on the r.
17	Seikāni village, 40 houses of Bōt Kurds, 1½ m. to l. in the direction of Jebel Maqlūb .

Miles from
Mosul

- 18 Cross the **Ghāzīr** by a ford a little above the village of **Qādisiyeh**, 20 houses of Bōt Kurds. The river is 50 yds. broad and in places 3 ft. deep, with a fairly strong current (May 1910). Below the village it circles round to SW. 1 m. S. on the l. bank of the Ghāzīr is **Dusera** village. 50 houses of Bōt Kurds. Wheat and barley cultivation.
- 19 Track crosses ravine with a small stream.
- 21½ Top of **Zirg Barda Resh**. This ridge runs to the Great Zab. **Kāni Zerdek**, reddish hill to SW. Deep V-shaped gorge called **Bāzai** in the hills to N.
- 22½ **Barda Resh Walad**, 60 houses of Achair Saba, &c. A Mudir is stationed here. ¾ m. to l. is **Barda Resh Yūnus**, 50 houses, and 1 m. to r. **Khailāki**, 50 houses. All these villages are on the same low hills which join on to the **Jebel Maqlūb**. (W.O. Map 33 (1916) shows carriage-road from Barda Resh Yūnus direct to Qandil.
- 23¾ Track crosses a stream, and, shortly after, a second. General direction N. by E.
- 24½ Mound on r. Pond on l. This place is called **Qara Bey**. Track follows a marshy stream on r. Direction NE. by E. This district is notoriously unhealthy, and hot and steamy even in May. Going difficult owing to luxuriant vegetation.
- 25¼ **Mamōzin**, mound 30 ft. high on r. Strong clear spring with a few willows close to the marshy stream. Just beyond the mound is another smaller spring which feeds the stream.
- 26¾ General direction changes from NE. by E. to NE.
- 27½ Clear pond formed by springs and containing fish. It is surrounded by grassy slopes and its overflow goes S. or E. to the plain as a small stream.
- 27¾ **Jūjar Tepeh**, mound, ¾ m. to l.
Dōstak, 20 houses 2 m. SSE.
Track now lies over high country with barley cultivation.
- 28½ **Jūjar Kebīr**, 50 houses ½ m. to N. **Jūjar Saghīr**, 20 houses 500 yds. SE., inhabited by Achair Saba Kurds.
- 29½ **Rawiyeh** fort on a mound ½ m. to l. It belonged to **Ismā'īl Agha**, a chief of the Gaiz Kurds (1910). Rice cultivation. There is also a village of 60 houses inhabited by mixed Kurds. To NW. and WNW. is a great open plain with mounds and villages.

Miles from
Mosul

- 29 $\frac{3}{4}$ Track approaches the **Kāni Karwān** River. The valley is also called by this name.
- 31 Cross the **Serderiyeh**, a tributary of the Kāni Karwān. Shingle bed 60 yds. wide. Water in May 1910 only 3 yds. wide and 6 in. deep. On the opposite side of the Kāni Karwān are two mills driven by an artificial stream.
- 31 $\frac{1}{2}$ Valley bends from E. or ESE. to NE. The hills on either side become higher. Some cultivation.
- 33 $\frac{1}{4}$ Encampments of Hakkī Kurds seen in 1910 in this neighbourhood. These Kurds are said to number about 700 tents and have scores of mares and young stock.
- 34 Green mound in the middle of the valley.
- 35 $\frac{1}{2}$ Track passes out of the Kāni Karwān Valley, between a hill called **Jebel Surchi** and a detached portion of it.
- 39 **Shakhlawa** Hills to SE. by E. Rough and stony path, mostly up-hill.
- 41 **'Aqreh**. 5 $\frac{1}{2}$ hrs. from Barda Resh.

According to native information an alternative route from 'Aqreh to Rowanduz goes by Rizān ferry. This track crosses broken country with two bad hills to **Bireh Kafra**, about 7 hrs. from 'Aqreh. From there about 3 hrs. easy going takes one to a raft ferry across the Zāb at **Rizān**. The next 3 hrs. are steep and stony and mostly up-hill to **Baibarān**, from which the road is difficult for about 8 hrs. to **Sheitāneh**, a place which grows good tobacco. From Sheitāneh the road is fairly easy, through hills, to **Rowanduz** about 5 hrs. farther on. These times appear to be at the rate of 2-2 $\frac{1}{2}$ m.p.h.

The track now descends a long stony gully and crosses a swift stream.

- 44 **Jodah**, village consisting partly of caves, on the l.: about 15 houses of Surchi Kurds.
- 45 $\frac{3}{4}$ Track crosses a clear stream, 10 yds. wide, 1 ft. deep (May 1910). This stream emerges from a tremendous cleft in the hills on the l.
- 46 $\frac{1}{4}$ **Zinteh** village, 15 houses of Surchi Kurds.
- 49 $\frac{3}{4}$ **Begil** village, 80 houses of Surchi Kurds piled up one above another on the hill-side. The place is divided into two parts by a great ravine in which is a waterfall. On the E. side of the village is a smaller ravine with a water-mill in a cave.
- There is not much cultivation, but fruit, especially the fig, is luxuriant.

Miles from
Mosul

- There is here a long, low *qasr*, with two tiers of loopholes, on the top of a rock on the W. side of the large ravine.
- 51½ 40 houses of Surchi Kurds on the l. above the road.
Cross the wooded Begil ravine by a narrow stone bridge without parapets.
- 53¾ For 3 or 4 m. now the track runs up and down across valleys with small, clear streams.
Gulsair village, 150 houses of Surchi Kurds, on the hills to the r.
- 54¾ Ruined castle on the l. Near it is the village of Qal'ateh (60 houses of Surchi Kurds).
- 58¾ **Susnāweh** village, 30 houses of Surchi Kurds, on the outer slope of a range of hills, possibly a continuation of the **Harir** Hills, running towards the Great Zab.
The track now winds along watersheds between complicated valley systems, all apparently draining into the Great Zab. In places the track is steep and narrow, but quite passable for horses. The hills are a gravelly conglomerate, covered with grass and clover.
- 63¼ **Qandil** ferry. In 1910 there was only one *kelek*, of 18 skins. In l.w. the river is fordable a little way below the ferry. Breadth of the river here (in May 1910) 150 yds.: rate of current 6 m.p.h. Flocks and herds in the neighbourhood.
Astriland, 20 houses of Surchi Kurds, $\frac{1}{2}$ – $\frac{3}{4}$ m. down-stream. The position of the ferry seems liable to alteration according to the state of the river.
Track runs along cliffs for about 1 m.
- 64 Cross a small stream running down a gully to the river.
- 64¼ **Qandil** village, four or five houses of Surchi Kurds, with a fruit garden containing figs, vines, &c. Some cultivation by nomads.
- 67 Pass **Bārzīn**, 20 houses of Surchi Kurds; steepest part of ascent from river hereabouts.
- 68¾ **Ashkhar** camping-ground, a grassy but stony plain, which seems to be frequented by nomad Kurds.
1–2 m. NNW. the Great Zab issues through a gorge in the hills.
- 69½ Track enters the hills by a gap in the outer range. Graveyard and a grove of trees near.
- 71 **Ashkaftu** village, seven houses of Surchi Kurds.
Cross a transverse watershed. Track now runs down-hill,

Miles from
Mosul

- through a green but almost treeless valley which forms a trough between an outer range of hills and the Harir range.
- 72 $\frac{1}{4}$ Stony ascent begins. Cross a ravine which comes down from the l.
- 72 $\frac{1}{2}$ Near **Harir**, from which a cart-road now runs (1916) to Rowanduz, route joins *Route 45 b* (m. 72).
- 73 $\frac{1}{2}$ A track from Bātās joins (see *Route 43 a*).
- 73 $\frac{3}{4}$ Cross a pass called **Spilik**. From here the Kurek Dāgh is about E. 'Ali Bey gorge (see below) is E. by N.
- 74 Kurek Dāgh is now E. by S. The track winds among and over hills well wooded with oaks, crossing several small streams. General direction ESE.
- 74 $\frac{1}{2}$ **Qarakhin** village, 12 houses of Surchi Kurds, $\frac{1}{2}$ m. to l. above the track on the farther side of a brook running down to join a stream at the bottom of the valley on the r. *Route 43 b* apparently joins near here.
- 75 $\frac{3}{4}$ Leave the valley and cross the watershed. General direction still ESE.
- 76 Kurek Dāgh now bears E.
- 77 $\frac{1}{4}$ **Khān-i-Batman**, 20 houses of mixed Kurds, $\frac{1}{4}$ m. to N. Possibly identical with Kāni 'Othmān mentioned in a report of 1888. Track descends a valley through which a stream flows to join the Khalifān (see below).
- 78 Pass a Kurdish graveyard and a fine grove of oaks. 'Ali Bey gorge 1 m. ENE. Track emerges from the hills.
- 80 **Cham-i-Khalifān**, open camping-ground. **Khalifān** village, seven houses, on the opposite side of the **Khalifān** stream. The track now runs for over 2 m. down the gorge of the Khalifān, here called the **Gali 'Ali Bey**. A report of 1888 describes the upper end of the gorge as 30 yds. wide, but it broadens to 50 yds. a short distance on. River a rapid torrent. Road close to water's edge. Height of cliffs increases.
- 80 $\frac{3}{4}$ About 13 min. from Khalifān village, cross wooden bridge of three spans with masonry piers. Bridge (in 1888) 35 yds. long, with 10-ft. roadway. In 1910 its upper structure consisted of strong timbers overlaid with earth and brushwood. It had no parapets.
- 81 Round rocky spur by good 12-ft. road (1888) among enormous boulders.

Miles from
Mosul81 $\frac{3}{4}$

Border cliffs 250–300 ft. high; valley 200–250 yds. wide. In 1888 the track passed along river bed for 50 yds. through 2 ft. of water round spur. This is not mentioned in the report of 1910.

82 $\frac{1}{4}$

Lablai waterfall. It is not possible to get a satisfactory view of it from the track. The fall is very high, and the water pours over undivided.

Towards the end of the gorge the valley is 300 yds. wide, with cliffs 400–500 ft. high on either side. The river is 10 yds. wide, 3–6 ft. deep, with a rapid current over boulders. The road, in 1888, was an easy track 12–15 ft. broad following the r. bank, generally 50 ft. above the water. It sometimes wound round boulders fallen from cliff above. Portions of it are paved. The banks of the river are wooded with oaks, sycamores, and shrubs.

83 $\frac{1}{4}$

The **Khalifān** River joins the **Rowanduz Chai** near this point. The gorge at the Rowanduz Chai is generally 30–40 yds. wide at the bottom, though sometimes it narrows to as many feet. The hill-sides are covered with low oak and brushwood. Precipices 1,500 ft. high on either side of the valley. The track now winds steeply up-hill, often over very bad surface. The rock is hard and slippery where worn smooth. Parts of the road (which in 1888 was 6–10 ft. wide) were described in 1910 as cobbled and ridged across at intervals of 2–3 yds., the packing between consisting of large unshaped stones of $\frac{1}{2}$ –1 cubic foot in size. It was reported in 1888 that this made ascent was 3 $\frac{3}{4}$ m. in length, and was called the **Serderiyeh** Pass. In 1910 the made ascent seems to have been less long (it took between 40 min. and 1 hr. to walk down it); and it crossed the shoulder of the Kurek Dāgh by a pass called Darakasab. Apparently the road described in 1888 crossed the Kurek Dāgh higher up its slope. See note at end of route. As regards the name Serderiyeh, see *Route 44 a*, m. 1 $\frac{1}{2}$. There is no information as to the line of the new cart-road (1916).

85 $\frac{3}{4}$

Pass called **Darakasab**, a shoulder of **Kurek Dāgh**. **Bala-kyān** Hill 2 m. to N. The track descends by a bad path about 400 ft. into the bed of the **Kānijuz** ravine or valley which opens through a gap on the l. of the track into the gorge of the Rowanduz Chai.

Miles from Mosul	Cross a stream and ascend steeply about 300 ft. up the other side of the ravine.
88 $\frac{3}{4}$	Gardagard Pass. Balakyan Hill is now 1 $\frac{1}{2}$ m. to NW., just above the gorge of the Rowanduz Chai and just beyond it. Peak of Kurek Dāgh 1 $\frac{1}{2}$ m. WSW. The track now descends to Rowanduz.
89 $\frac{1}{2}$	Rowanduz.

In 1888 the following track led from Rowanduz to the summit of the Serderiyeh Pass (m. 83 $\frac{1}{4}$). Its relation to the track described above between Darakasab and Rowanduz cannot be exactly determined. The time is 64 min. longer than Lorimer's time from Rowanduz to Darakasab.

Hrs. min.	
0 0	Rowanduz (alt. 1,500 ft.). Ascend.
0 19	Summit of ridge over town. Alt. 2,260 ft. Skirt gardens and orchards well fenced; follow a good metalled road 15 ft. wide for a short distance. T. L. to Mosul here near road, but diverges later.
0 23	Qal'ah Teluk , 50 scattered houses. 30-ft. track between ridges. Spring on summit, but the water is not so good as that of the river. Along broad stone track, ascending a rounded ridge.
0 33	Khanikhur , 60 huts, $\frac{1}{4}$ m. to l. in orchards and vineyards.
0 48	Cross ridge over shaly rock. Alt. 2,880 ft.
1 3	Short stony zigzag, 6 ft. wide, descending a shale slope for 200 yds.
1 8	Alt. 2,580 ft. Foot of steep slope, followed by gentler gradient. Descend into valley with a stream which breaks through a narrow rift barely 30 yds. across into the gorge of the Rowanduz Chai to r. (This seems to be the Kānijuz ravine mentioned above.) Track follows a 3-6 ft. ledge along a small stream, but could be widened. Sharp limestone ridge 500 yds. to r.
1 35	Good track in bottom of valley. Then ascend steep slope.
1 51	Alt. 2,945 ft. (Summit of?) Kurek Dāgh, 3 m. to l. : low trees and brushwood near summit.
2 28	Reach end of ascent after a long pull up steep stony track. Alt. 3,215 ft. Top of Serderiyeh Pass (see under m. 83 $\frac{1}{4}$).

ROUTE 45 b

MOSUL—ROWANDUZ (89 M.)

Via GIRDAMAMIK

Authority:—Military Report on E.T.A., vol. iii, Route 117 (report of 1886).

This route apparently crosses the col between the Maqlūb and 'Ain es-Safra Hills some distance N. of *Route 45 a*, and then passes to the S. of that route near Dusera. Thence it runs to the

Girdamamik ferry, and beyond the Zāb, after running to Rishwān, turns NE. and joins *Route 45 a* not far from Harīr. The route may be passable for wheels as far as the Zāb. Beyond that river to Harīr it may continue passable, but there is no definite information on this point. For the rest of the route, see *Route 45 a*.

Miles from
Mosul

- 0 **Mosul.** Cross to r. bank of Tigris by the boat-bridge and enter the mounds of **Nineveh**. Pass **Qoyunjiq** on l., and **Nebi Yūnus** on r. Cross the **Khizir**, 12 ft. broad, 6 in. deep in October 1886.
Emerge on open undulating plain with light gravelly soil growing good wheat crops. Follow a well-defined broad track.
- 4½ Pass **Arpajiyeh**, small Moslem village, with good water from wells 20 ft. below surface.
Pass **Kolan Tepēh**, **Ba Zuwayeh** (?), and **Gurigharībān**, and through **Qara Tepēh**, a Shabbakh village.
Pass **Derāwish** and **Ba Jerboa**.
- 13½ **Basheikha** at the foot of some bare outliers from **Jebel Maqlūb** to NE.
Ba Hazeineh, 200 houses, ½ m. to W. The inhabitants were mostly Yezidis in 1886, with some Christians. Several Yezidi shrines on the hill near. A large stream runs through the place, irrigating gardens lower down.
Track now keeps E. through a wide gap between the **Jebel Maqlūb** on the N. and the **Jebel 'Ain es-Safra** (**Sari Bulāq Dāgh**) on the S.
- 21? Cross a col by the ruined khan of **Dubardan**. (Distance from **Basheikha** 15½ m. according to *Mil. Report*; apparently exaggerated.)
Sheikh Mutti monastery to N. up the slope of **Jebel Maqlūb**. A few Shabbakh villages near the top of the col. Country passable for wheels.
- 27 Descend over easy country, ford the **Ghāzir Su**, and pass through **Dusera** on the l. bank.
In this neighbourhood route crosses to S. of *Route 45 a*.
- 34 Cross low ridge and reach **Girda pan** in a basin draining into the **Ghāzir Su**.
- 40 Cross another ridge and descend to the Great Zāb.
- 43 Cross the **Great Zāb** by a ferry.
Girdamamik village on the l. bank, above the junction with the **Bastoreh Chai**.

Miles from
Mosul

- Track ascends the Bastoreh Valley eastwards.
- 49 **Rishwān.** Turn NE. over open country, undulating but cut up by ravines.
- 59 Cross a broad ridge and reach **Deir Borusa** in a narrow valley draining towards the Zāb.
- 62 Ascend by a rocky gorge to the **Bābā Chickek Dāgh.**
- 63 Cross by a rough ascent and pass Bābā Chickek on l.
- 71 Cross stream from the Narib Desht flowing towards the Zāb.
- 72 **Harīr** (Deireh Harīr) to N., 200 houses, with the residence of a Kaimmakam. Apparently a short distance beyond this point *Route 45 a* is joined (at m. 72½), and followed to
- 89 **Rowanduz.**

THE EUPHRATES VALLEY

ROUTE 46

BAGHDAD—ALEPPO (524 m.)

Via THE EUPHRATES VALLEY

Authorities:—Dobbs's Report of 1903; *Military Report on Arabia* (a report of April 1896); Bury, *Baghdad—Aleppo Road*, March–April 1907; Route reports of May–June 1905, Nov. 1905, and March 1908 and 1909; J. P. Peters, *Nippur*, 1897; Sarre & Herzfeld, *Archäologische Reise* (journey of 1907–8); E. von Hoffmeister, *Kairo—Baghdad—Konstantinopel* (journey of 1908); oral information.

This is a regular caravan route. Caravans take from 20 to 25 days; a carriage about 15 days. It is on the whole suitable for wheeled traffic, although some stretches are so sandy and others so stony as to necessitate slow going; the going is good over other stretches where the ground is level and hard. A 40-h.p. Argyll motor-car went over the stretch from Anah to Aleppo in 31 hrs. It experienced little difficulty up to Deir Hafir, except where the road was being remade near Tibni. There was one bad wadi, but once over the Tibni Hills the running to Sabkhah was excellent. From Deir Hafir the road was greasy after rain, and considerable difficulty was experienced. From Raqqah to Aleppo a motor journey has been done in 8¼ hrs. See note at m. 410.

As far as Fellūjeh there is a good, although unmetalled, driving road. At Fellūjeh the route crosses the Euphrates and goes along its r. bank to Meskeneh *via* Hit and Anah. There are some troublesome wadis between Hit and Anah, which might require improvement for heavy wheeled traffic. There are also numerous gullies between Deir and Qishlāq Ma'dan, some of which are now bridged. At Meskeneh the route leaves the Euphrates, and stretches W. across a great unirrigated but not uncultivated plain to Aleppo.

The road is at its worst in May when the river is in flood and the wadis are full of water, but even then it is passable for wheels. There are very few gradients, and those that do occur are short. Between

Meskeneh and Aleppo the track by Tel Aghul (see left branch under m. 482, below) is said to be the better for military purposes, though it is not the usual caravan route.

A good road could be made over this route; for which purpose an ample supply of metal is obtainable at certain points on the route, as between Feheimeh and Anah and at Deir ez-Zor and Qishlāq Ma'dan; while there are no serious engineering difficulties: only a few stone bridges and culverts—no iron girders—would be required.

In May and June it is said to be better to march by night, or evening and morning. Sandstorms are common below Anah. The mosquitoes are not intolerable, but a virulent sandfly is found in certain places, when neither man nor beast can sleep unless a strong breeze is blowing. During floods the difficulties and discomforts of this route are increased. Violent storms may also occur, including storms of very large hailstones. Within a few minutes after sunset a blast of cold air comes from the E. which may tear down a tent that is not properly fixed.

Over many parts of the route there are probably alternative tracks besides those indicated in the itinerary.

For Arab tribes on the route see Introduction to Euphrates River Routes (pp. 94, 95). Compare *Routes IV E-H* throughout.

The T.L. follows the line of the route to Fellūjeh and is carried across the Euphrates up-stream of Fellūjeh; thence it accompanies the route. The poles for carrying the two wires are of wood near Fellūjeh and Ramādiyeh, but elsewhere iron standards are used. Pits are dug round these poles to prevent caravan animals from pushing them out of position, but they have frequently to be set straight. Arabs occasionally damage the wires, and, from one cause or another, telegraphic communication may be altogether suspended for days together.

The route passes, to a large extent, by irrigated or non-irrigated cultivation, through jungles of tamarisk, thorn, and liquorice, or over land which has rich pastures in spring. The irrigated cultivation is only on a narrow strip of the river bank, and is rather poor. No supplies can be relied on except for small parties. The best part of the route, as regards supplies, is from Meskeneh onwards. Water is generally plentiful. Some pools are brackish, but the river water, although thick, is good. Watering-places would have to be prepared and ramps made in the banks. All along the route fuel is very scarce, especially in spring, when the sap is in the thorn or tamarisk scrub; there is a little wood in the large villages, and camel dung. Transport and live stock may be got from the nomad tribes, and this source of supply is naturally most abundant when the nomads

are using the pastures. After the second hour from Baghdad flocks of 80 to 100 sheep are met with. On leaving Fellūjeh the track passes through corn land, and there are only occasional flocks. After 2 m. of cultivation the track from Ramādiyeh to Hit strikes across the desert. From Hit to Anah the track leads for the most part across the desert, touching the river at long intervals. There are narrow strips of cultivation on the river bank. About Anah cultivation improves, but beyond Anah, between Nāhiyeh and Abu'l Kemāl, the river-valley is almost uncultivated. From Abu'l Kemāl to Deir ez-Zor there is almost continuous but poor cultivation. Round Deir ez-Zor there is a belt of cultivation and good grazing. From Deir ez-Zor the cultivation becomes only occasional instead of continuous, but the route traverses a plain on which there is rich grazing. Continuous cultivation begins again at Abu Hureireh. At Meskeneh the route leaves the Euphrates and runs through cultivated country. Of this stretch a traveller in 1906 says: 'On the way from Haleb (Aleppo) to Meskeneh, as far as the eye can see, there stretches a glorious tract of corn-bearing land, spotted with mud villages, containing a mixed race of people who reply equally readily in Turkish, Kurdish, or Arabic to the questions put by the passing traveller. Many of the villages are the property of wealthy citizens of Haleb, whose influence is sufficient to obtain protection for their tenants from the Government. The cultivation is not elaborate, but the ground is fairly tilled, and the continual influx of industrious people is steadily regenerating the land. . . . At present the reclamation only extends within an hour of Meskeneh, but as the most easterly villages were only built last year, there is every hope that within a short time the river banks themselves will be populated.'

Miles from
Baghdād

0

Baghdād. For details of the route as far as Fellūjeh, see vol. ii, *Route 22*. For Decauville Railway to Ridhwāniyeh see p. 396.

43½

Fellūjeh. Here the route meets the Euphrates Valley and crosses by a bridge of boats from l. to r. bank. Except in flood-time there is very little current; but in flood-time the crossing is difficult.

At the bridge of boats the river is 200 to 250 yds. broad. Khan at each end of the bridge. The track starts at first S. by W. round a bend of the river, then generally W. by N. for 5 m. through corn-fields irrigated by *cherrads* (water-lifts). A few mud huts of settled Arabs. Many irrigation cuts. Ground rather heavy and liable to flood.

Miles from
Baghdad

- 45 Track touches river and enters a plain. It is spoilt by sand drifts for 1 m. **Sinthabaneh** Hills to l., behind which are said to be quarries of white stone.
- 54½ T.L. crosses from l. bank.
- 51½ Low foot-hills (120 ft. high) dominate the track.
- 61½ Country becomes dead flat; good soil but no grass.
- 66½ Two shallow water-courses, sometimes dry, but having 2 to 3 ft. of water at flood.
- 72½ **Ramādiyeh.** Heavy going beyond this in the high-water season.
- 73½ Road crosses tributary with banks 6 ft. high crossed by a single-arched stone bridge. Away from the river the ground is barren, and beyond is a waste of broken hills, but a continuous strip of cultivation follows the river banks.
- 74 Cross **Et-Tāsh** (Azeziyeh) Canal, 18 ft. broad, by an old single-arched brick bridge. This canal connects with the W. side of Lake Habbāniyeh, but is sometimes dry. Numerous neglected irrigation cuts with or without water are mentioned as occurring in this part of the route, some of which form obstacles even to light wagons.
- 74½ The road, which for 2 m. from Ramādiyeh has gone through cultivation, strikes off across level desert through the country of the Beni Hasan tribe and some of the Dilaim. The former are here the more numerous.
- 84½ The ground becomes covered with tamarisk scrub, about the height of gorse; soil sandy.
- 85 Road reaches the river at the S. extremity of a great horse-shoe bend. The river is here ½ m. broad. The road again leaves the river.
- 86 **Abu Rayāt** (Khān or Sheriyet Abu Rayāt).
- 89 Road rejoins river and rises 100 ft. over marble-like rock at the foot of which the river flows. The road is very rough here for carriages (1907). There are low hills on l. bank, and the smoke of **Hīt** bitumen pits can be seen.
- 90½ Cross a ford over a wadi (Wādi Mohammadi?) with water up to the hocks (end of March).
- 97½ From here for 2 m. track winds through a succession of knolls, numerous side gullies running back from the track and suitable for ambushades. As one approaches Hīt the smell of sulphur becomes noticeable, and a dirty deposit of sulphur and bitumen forms on the ground.

Miles from
Baghdad

108½

Hit.

Furnaces in which bitumen is melted and which emit dense clouds of smoke are passed close by. Brooks discoloured by minerals flow near the town. The track skirts a succession of walled date gardens ¼ m. wide, extending W. of the town along the bank of the river for nearly 1 m. Piles of limestone fragments are now passed, their yellow colour denoting the presence of sulphur.

Track then crosses stony undulating desert.

110½

Salāhiyeh. Track touches the river. Track now cuts off a bend of the river, crossing desert and three wadis.

124½

The road, which has lately been rocky and difficult in places, now descends from the high land into the valley and continues between the foot of the cliffs and cultivated land to

128½

Khān Baghdādiyeh. A khan was being built here in 1908. An authority (March 1908) reports that the Wādi Baghdādi is in this neighbourhood, and that it has steep banks and a mud bottom; this is probably the wadi over which a substantial bridge has lately been built.

132½

Jibbeh fort, small *zaptich* post, near the river. The village is on an island ¾ m. above Jibbeh fort. There is plenty of grass in April, and supplies may be got in small quantities from the neighbouring villages.

NOTE.—Authority of 1909 gives the distances as follows:—

Hit—Salāhiyeh 5 m.

Salāhiyeh—Baghdādiyeh 19 m.

Baghdādiyeh—Jibbeh 4 m.

Between Jibbeh and Hadīseh a number of wadis are crossed: see under m. 146½ and 150½. The route at first strikes up on to high stony plain.

137½

Cross bed of **Wādi Haurān**, which is usually dry, but subject to periodic floods of great violence. The bed is conglomerate slabs. One authority says that there is a possible route to Damascus in six days by following up this wadi and then proceeding W., but the lawlessness of the Anazeh has made it unsafe. **Wādi er-Rajadān** lies apparently beteen Wādi Haurān and Wādi Fadiyeh. Pass **Alūs** village.

145½

Cross **Wādi Fadiyeh**.

Miles from
Baghdad
146½

Wādi Hajlān. All these wadis give grazing in spring; but they were found to be somewhat serious obstacles by a traveller (1908) passing over the route with two light wagons. Before reaching Hadīseh there is a cave in a cliff beside the road which will shelter a caravan of 100 animals.

150½

Hadīseh. A good place to camp on r. bank opposite the village. Supplies and grazing to be had. There is a bad khan.

NOTE.—Authority, 1909, gives the following times between Jibbeh and Hadīseh (some of the intermediate points cannot be identified) :—

Jibbeh—W. Hammām ¾ hr.

W. Hammām—W. Abu'l Hasan 1¾ hr.

W. Abu'l Hasan—Alūs ½ hr.

Alūs—W. Zughdān ½ hr.

W. Zughdān—W. Fadiyeh 1 hr.

W. Fadiyeh—W. Hajlān ¼ hr.

W. Hajlān—Hadīseh 1¼ hr.

From Hadīseh to Feheimah is said to be better going than the previous stage. The track keeps on the plateau parallel with the river and about 1 m. from it for the first 8 m. There is said to be good camping-ground between Hadīseh and Feheimah.

159½

Cross the **Wādi Ausāyiyeh.**

169½

Feheimah village and *zaptieh* post. Swamp at mouth of wadi near post.

A good deal of work is required on the stretch to Ānah to make the road easy for wheeled traffic. There is abundance of stone, and labour in plenty can be obtained from Ānah and the neighbouring villages. Road and T.L. leave river for high ground. The road is described by one authority as bad until it returns to the river.

175

Hereabouts road and T.L. rejoin river and continue close to its bank as far as Ānah.

180½

Ānah becomes visible about this point; it extends some 6 m. along the river.

184½

Track descends to cross a water-course with a pebbled bed. There is a bridge here, in disrepair before the war. The Ānah end was in 1907 much dilapidated, leaving a step 4 ft. high. Owing to this wheeled traffic had to cross 2½ m. up the torrent bed by another bridge. Before reaching Ānah two new bridges over shallow but rocky gullies are crossed (1907).

Miles from
Baghdad
186 $\frac{1}{2}$

Ānah.

After leaving N. gate of Ānah and passing for 1 m. through gardens and fields, the road ascends to high ground apparently by the Wādī Rawā (authority 1889), leaving the river, which here makes an acute bend N. Road keeps mostly along the plateau, occasionally descending to the river bank. It has been reported that in April 1896 a large grassy plain was reached at 1 m. from Nāhiyeh, with good grazing, but no supplies or village. Another authority (early April 1907) speaks of a lack of grazing round Nāhiyeh. Country is not so thickly populated as below Ānah.

205 $\frac{1}{2}$

āhiyeh khan and *zaptieh* post.

212

Qāsīm el-'Assā'iyeh.

The road continues due W., leaving the river, which it again approaches at El-Qā'im.

216 $\frac{1}{2}$

El-Qā'im, police post with two or three *zaptiehs* normally.

The post lies near the water's edge on a grassy plain which usually affords good grazing. There is neither village nor supplies. There is a very dirty khan. The country here is sparsely populated and villages are rare.

The road now runs over low-lying ground throughout, marshy in places and with brushwood near the river. The road keeps over the grass, avoiding the marshes (in flood time the river overflows its banks), and affords bad going to vehicles, the soil being soft sand and clay (1908). About half-way to Abu Kemāl one passes from the *Vilayet* of Baghdad to the *Vilayet* of Aleppo. Several wadis are passed.

231 $\frac{1}{2}$

Ruins of **Anqah** (also called El-Jabriyeh from neighbouring shrine of Sheikh Jābir), and large mound covered with shapeless masses of stone.

Cross large wadi called **El-Jābir**. Among the other wadis crossed between this point and Abu Kemāl are several of large size, the most considerable being the **Wādī 'Ali**.

247 $\frac{1}{2}$ **Abu Kemāl.**

Road (hard sand) reported good for wheeled vehicles in March 1908. It runs through ploughland succeeded by sparse tamarisk jungle.

Cross **Wādī Sawāb** N. of Abu Kemāl and strike NW. across a broad plain between river and desert plateau.

Miles from
Baghdad
253½

Ruin-mound called **Tel Madquq** (60 ft. high), graves on the summit. A smaller Tel Madquq is a short distance nearer Abu Kemāl. Tamarisk growth covers the plain to Salāhiyeh.

267½

Salāhiyeh khan and *zaptieh* post.

In about ⅓ m. the road reaches foot of cliffs and continues to run beneath them.

270½

At the extremity of a promontory of these cliffs, or about 1 hr. distant from Salāhiyeh khan (one authority gives the distance as 5½ m.), are the remains of the Roman fortress of Salāhiyeh, through which the road runs, having zigzagged up the otherwise inaccessible cliffs. The ascent begins with a masonry culvert forming a steep ramp constructed in 1906. The ruins comprise a gypsum wall some 15 ft. in height, running from one side of the promontory to the other (about ½ m.) with gate towers in the centre, 30-40 ft. in height. An inner wall at the NE. corner of the promontory marks the site of the citadel. Road keeps across high, stony ground for 9 m.

280

Road now descends to and crosses a large plain. Ruins of Qal'ah Rahbeh on high ground can be seen for 12 m. This is a well-preserved castle on an abrupt rocky knoll 245 ft. above river-level. The knoll is scarped away in places and faced with stone and brick. Ascent is very difficult. In the castle is a blocked well 60 ft. deep.

295½

Meyyādīn.

The road proceeds skirting what was till lately the river bed, now dry. It then lies mostly across a level plain, at first grassy. As Deir ez-Zor is approached the ground rises and is covered with wormwood. Large spring and summer camps of the Anazeh with flocks and herds, and many mares come for grazing on the Meyyādīn Plain which extends W. some 25 m., terminating as the edge of the desert plateau sweeps round to the river again shortly before Deir ez-Zor. The plain is very fertile, and once was thickly peopled. It is still the most populated region between Birijik and Hilla. T.L. appears to run generally 1-1½ m. W. of road.

319½

Difficult crossing of a ravine with bed of gravel and sand.

320½

Cultivation, edge of desert plateau near river.

Miles from
Baghdad

322½

Deir ez-Zor. (For bridge over Euphrates, see p.128.)

Two branches of the route leave Deir; one keeps up on the plateau and is waterless, and the other in the valley. They are never more than 3 m. apart. The T.L. is between them. They rejoin just before reaching 'Ain Abu Jum'a spring. From Deir to where they rejoin is 11 m. by the valley road and 12 m. by the upper road. The valley road is about 20 ft. broad and ditched and metalled for some 10 m. A traveller (1909) in a 40-h.p. Argyll car found no difficulty on this stretch of the route.

323

Gully; bridge washed away (1907) by a torrent. ¼ m. farther on is another gully with a bridge of three arches, central arch 12 ft. high.

327½

Ravine spanned by a single-arched bridge (26 ft. span). It is 20 ft. from the keystone to the torrent bed. The stone is brought from Ma'dan (two stages up-stream), and is durable against water and harder than the local stone. The road keeps to the valley, mostly over plains, grassy in spring, where numbers of bullocks and camels graze.

333½

Single-arched stone bridge hereabouts (1909). Track then proceeded across a muddy plain for 11 m., in the middle of which were 3 m. of earthwork raised 12 ft., for a chaussée, also two single-arched stone bridges.

334

Ain Abu Jum'a, small bituminous spring.

341½

Shajarat Miriam spring.

350½

Tureif, small *zaptich* post. Here the river banks are 25 ft. sheer. No supplies, but grass in spring and fuel plentiful. Two deep gullies; bridges washed away in 1907.

351

Three-arched stone bridge about here (1909).

353½

Track passes close to **Tibni** village on the bank. Khan by a wadi crossed by single-arched stone bridge. *Zaptich* post on high ground. (One account gives 6 m. as distance from Tureif.) Shortly after passing Tibni village road keeps to high ground till it descends to the plain of Ma'dan.

356

Road in 1907 made a digression W., skirting uneven ground, approaching and following T.L.

372½

Qishlāq Ma'dan.

The road on this stage is good, across a perfectly level plain. Tamarisk shrubs appear and increase to trees.

Miles from
Baghdad

389½

Tamarisk copses.

In spring 1907 Abu Rashid Arabs were seen here. Camels in the tamarisk thickets belonged to the Anazeh Arabs.

390½

Shawi Arabs with flocks and herds seen here in spring 1907. A short distance farther, after crossing a low pass, a narrow flood basin is seen, left isolated (in spring 1907) by the river.

395½

Qishlāq Sabkhah, small village, seat of a Mudir. Barracks and fair-sized khan with T.O. Watering-place on river below barracks.

397

Track enters a forest of tamarisk, 10-13 ft. high, and continues through it for 4 m.

401

Track skirts a tract fenced with bundles of camel thorn, which is the pasture of the head-quarters of the rich Suan tribe.

406½

Track descends sharply to a grassy or cultivated plain, across which it runs.

410

Raqqah on opposite (l.) bank of river (18 m. from Sabkhah according to one account).

NOTE.—A 40-h.p. Argyll car left Aleppo, May 31, 1910, and going via Nahr Dahab, Deir Hafir (4¼ hrs.), Meskeneh (5½ hrs.), and Abu Hureireh reached Raqqah in 9 hrs. The return journey took 8¼ hrs. From Raqqah to Abu Hureireh the road was smooth, but the last part was uneven and stony. From Raqqah to Aleppo can be ridden in three days.

414

Route passes among low hills continuing for 11 m.

425

El-Hammām.

Bad khan (1908), a few huts and *zaptieh* post. T.O. Not much grazing. Tamarisk thickets in neighbourhood.

Track now good, over undulating ground. The conspicuous tower of Qal'ah Jābir on l. bank of the Euphrates below Abu Hureireh forms a landmark. An alternative track appears to lead to S.

426

Tel eth-Thedeyein. Branch track S. to Hama (see Route 55).

448

Abu Hureireh watch-tower and *zaptieh* post.

Poor grazing.

457

Track rises and passes through corn-fields (not irrigated) belonging to Weldeh Arabs.

459½

Yellowish soil; there is a larger tract of plough land on a plateau.

468

Ruins of **Eski Meskeneh** are seen on hills to W. Here are two shrines.

Miles from
Baghdad

470

Meskeneh; the river is here $1\frac{1}{2}$ m. distant.

The road here leaves the river and proceeds W. by N.

482

Sulphur pool and ruins of a khan (Abu Karmess?). Near here the road divides.

(i) LEFT BRANCH.

This is said to be better supplied with water than the other. It crosses a rolling plain growing scanty, stunted barley, harvested in May. Villages of beehive-shaped huts, tents, and flocks are seen, and water is got from wells in the limestone, 2-3 ft. below the surface. Some of these wells are brackish.

486

Tel Aghul, a beehive hut village of Haddidin Arabs.

There are good water and grass here (May-June). The road now continues over stony soil, well cultivated.

502

Jebbul, large village and *zaptieh* post, with streams on both sides and good grass camping-ground to N. The salt in the neighbourhood is worked by the Government. Road still through cultivated country, but rough with loose stones.

524

Aleppo. (For description of town, see vol. iv, Gazetteer.)

(ii) RIGHT BRANCH.

The usual caravan route. Heavy going in wet weather.

486

Pass a village, and shortly after cross a stream flowing from Ala.

487 $\frac{1}{2}$ Pass **Ala** village.

489

Deir Hafir, village with khan and a few shops. Spring and stream of good water. Country covered with grass in spring; numerous Arab camps.489 $\frac{1}{2}$

Pass a small marsh.

496

Pass an isolated mound. Spring of good water.

505

Safireh. Mounds at long intervals. From this point the route perhaps coincides with that detailed from an older account in *Route 57*, m. 123 $\frac{1}{2}$ -139.

515

Terekiah. Many old dry wells, vaults in the rock. The mouths are open and they are therefore dangerous in the dark. One, with a well-head over it, held water in 1907, at an estimated depth of 40 ft.

518

Long lake at the foot of a chain of hills.

524

Aleppo.

ROUTE 47

ĀNAH—MESKENEH (296 m.)

Via THE LEFT BANK OF THE EUPHRATES

Authorities :—Miss G. Bell, journey of 1908 ; E. Sachau, 1879 ; Hinrichs, 1911.

This route has been little used, the caravan route by the r. bank being that regularly followed. There is no traffic whatever as far as Buseireh, and very little from Buseireh to Raqqah ; but no serious difficulties for pack-animals are encountered, and as a rule it is possible either to follow the river or to strike across the river-bends, sometimes over the desert plateau. The neighbourhood of the mouth of the Belikh is marshy. The Khabūr River is unfordable and there is at present no adequate ferry.

Beyond Raqqah there is a caravan-road, apparently little used, to the ferry at Meskeneh, but no evidence is available as to its condition.

Water is always to be had from the river. On the first part of the journey, where there is irrigated cultivation, it is possible to water animals at the water-wheels. Beyond Raqqah there appears to be very little cultivation, and watering-places would have to be constructed.

The country is thinly populated, and no supplies are to be obtained except at Deir and Raqqah, and even there only for small parties.

Pasture is good along the river in summer, and various tribes of nomads are to be met with at that season. (See Introduction to *Routes IV E-H.*) Transport animals might be procured from them.

There are large areas at different parts of the route covered with tamarisk and thorn, which may be used for firewood except in spring.

A good many of the distances given below must be regarded as uncertain.

Compare Euphrates, *Routes IV G, H*, throughout.

Miles from

Ānah

0

Ānah. Cross the Euphrates by ferry to the l. bank. Pass through **Rawā**. Palm-groves and fruit-gardens.

1½

Kerableh Island to l.

9½

En-Nutāreh, *naur* where animals can be watered.

Miles from

Anah

- 20 **El-'Ajmiyeh**, *naur* and watering-place. Track now over rocky ground. The track for pack-animals apparently keeps on cutting off river-bends, but it is possible to descend to the river and follow its course.
- 35 **Qal'at Rāfideh**, to l. on the r. bank of the Euphrates.
- 36 $\frac{3}{4}$ **Mazar** of Sultān 'Abdallah, a small modern shrine. Somewhere near are the ruins of Jabariyeh.
- 47 $\frac{1}{4}$ **Baliyeh** mound. Arab graves.
- 49 $\frac{1}{4}$ **Nammāleh** Island to l. Track now across high stony ground cutting off a river-bend.
- 56 $\frac{1}{4}$ At about this point **El-Qā'im** is to l. on the r. bank. After some miles the track approaches the river, running through tamarisk jungle, with traces of former cultivation.
- Rabāt** village, to l. near the river, is passed. Some corn cultivation.
- Track then leaves the plain by a steep rocky path. Pass the ruins of Ardhi or Irzi on a bluff overlooking the river. Descend from bluff into plain. On the W. side of the bluff is the lower end of the ancient Dawwarin Canal, which apparently runs under the hills to r.
- 73 $\frac{3}{4}$ **Werdi** village, in the district of the same name. Irrigation from canals by *cherrads*.
- Abu Kemāl lies on the opposite bank of the river.
- Track now through tamarisk jungle full of ducks, pigeons, and jays.
- 87 $\frac{3}{4}$ **Tel Abu Hasan**, prominent mound rising 50 ft. above the river. Arab graves on the summit.
- Other mounds are passed farther on.
- Before m. 101 $\frac{3}{4}$ track goes through some miles of loose sand with occasional patches of tamarisk.
- 101 $\frac{3}{4}$ Corn cultivation along the low ground begins.
- Track keeps to r. to avoid water-channels.
- Numerous villages during the next few miles.
- 108 $\frac{3}{4}$ **Bustān** village.
- 112 $\frac{1}{4}$ **Jemmah** mounds some distance from the river.
- 114 $\frac{3}{4}$ **Tel Buseiyih**, mound forming three sides of a hollow square, the side towards the river being open. **Tiyana** village about $\frac{1}{2}$ m. distant, in a long tract of cultivation.
- 118 $\frac{1}{4}$ **Tel el-Krah**, low mound covered with tiles and coloured pottery.
- 119 Pass some ancient foundations.

Miles from
Anah

- 124 Reach the l. bank of the **Khabūr** close to its junction with the Euphrates. Cross by a ferry to the r. bank. The ferry-boat in 1910 would not carry loaded animals.
- Buseireh** village on the r. bank, at the SW. corner of the ruins of the ancient city of Circesium.
- The track now is through thinly populated country, partly irrigated by water-wheels. Between the road and the river there lies generally a stretch of low ground, a former bed of the river, which now flows more to the W. Occasional mounds marking the sites of former villages.
- 144 **Deir ez-Zor** on the r. bank. For the bridge over the Euphrates see p. 128.
- 147½ **Es-Senujeh** village. Continuous cultivation ends. Track now monotonous, through country inhabited only by semi-nomads, chiefly Baggarah.
- 149 **El-Maisheh**, tent-village on an arm of the Euphrates (1880). Some rice and *durra* cultivation.
- 153 **Abu Sfir**, tent-village 1 m. to l.
- 155¼ Upper end of a western bend of the Euphrates.
- 160 Upper end of a western bend of the river.
- 164½ Reach the foot of a ridge which the track crosses.
- 166 Summit.
- 166½ Reach the foot of the ridge.
- 170 **Umm Rejeibeh**, ruins on a hill under the N. side of which is an old channel of the river which has carried away part of the hill. The modern *qishlaq* El-Munqareh lies under the slope. It was partly ruined in 1909, though it had been built only ten years before.
- 172 **El-Kubra**, *ziyāret* ¼ m. from the river. The banks are sandy and fall steeply to the river, which is very broad at this point.
- Track now runs across the plain.
- 176 Reach the foot of the El-Hammār Hills (see *Route IV H*, m. 46). Ascend.
- 176½ Summit on which are the ruins of the ancient fortress of **Zalubiyeh** (see *Route IV H*, m. 46). Descend.
- 177 Reach the foot of the ridge on which Zalubiyeh stands. Track lies under cliffs along river.
- 178 Ruins of the fortress of Halebiyeh opposite on r. bank of the Euphrates. The valley narrows (see *Route IV H*, m. 47).
- 182½ Cross the **Wādi el-Melih**, a broad stream. Ascend a ridge.

Miles from

Anah183 $\frac{3}{4}$

Qabr el-Abu Atiq, ruins, 150–200 ft. above the Euphrates, the ground falling steeply to an old bed of the river.

Descend and cross a dry stream-bed.

184 $\frac{1}{4}$

Emerge from the defile on to the plain.

188 $\frac{3}{4}$

Tel el-Khumeidah, isolated hill about 2 m. to l.

195 $\frac{1}{4}$

Reach the Euphrates at the upper end of a western bend.

197 $\frac{1}{2}$

El-Aleh. Afadleh tent-village in tamarisk jungle $1\frac{1}{2}$ –2 m. to l.

201

El-Khās, tent-village in a clearing.

Track now passes through tamarisk thicket.

209 $\frac{1}{2}$

Pass **Imām Abu Sa'ideh**, Moslem shrine and cemetery.

210

Jedideh, tent-village.

211 $\frac{1}{4}$

Khirbet ed-Dukhujeh.

212 $\frac{1}{4}$

Khirbet Hadawi.

212 $\frac{3}{4}$

Meida. Grassy mounds near the river. Some distance beyond this point an area surrounded with a deep ditch is crossed.

216 $\frac{3}{4}$

Kubur el-Jebel. Encampments in the neighbourhood.

220 $\frac{3}{4}$

Pass the **Jebel Munkhir**, a volcanic ridge 1 m. to r. which rises several hundred feet above the plain. From the summit the **Jebel Munkhir esh-Sharqi** can be seen lying about 3 m. E., and almost due N. on the horizon rising ground called **Jebel 'Ukala** (Tulaba).

222 $\frac{1}{4}$

Limestone *tel* with traces of masonry on the top.

228 $\frac{1}{2}$

Reach the **Belikh** and cross by a ford or a light wooden bridge. In the early spring of 1908 the **Belikh** was a muddy brook. In Dec. 1879 the ford was girth high, and the river seemed likely to be unfordable after heavy rain. Cross marshy ground as far as **Raqqah**.

232 $\frac{1}{4}$

Tel Zedan, hill running N. and S. about 2 m. to r.

236 $\frac{1}{2}$

Raqqah.

Track now WNW., partly in the plain, partly along the edge of the desert plateau.

243

Ruin of **Hiraklia**, a rectangular fortress, almost square, with a series of vaulted chambers forming the outer parts of the block and apparently larger vaulted chambers filling up the centre. At the angles are four round towers. The masonry is mostly of unsquared stones laid in a bed of very coarse mortar mixed with small stones, but the vaults are of brick tiles. The fortress is ringed round by an outer wall now completely ruined. Beyond it to the S. runs a dyke, and beyond the dyke, about 550 yds.

Miles from
Anah

- SE. of the central fort, is another mound. Still farther to the S. is a third mound, **Tel Meraish**, with a second dyke to the S. of it. The two dykes appear to have been loop-canalns from the **Euphrates**.
- 250 Pass **Tel 'Abd 'Ali**, about 1 m. from the river. Track now through thickets of tamarisk, thorn, and blackberry. No trace of settlements.
- 257½ The cliffs approach the river.
- 260 **Tel Bellani**, a prominent landmark by reason of a number of bare tree-trunks set to mark an Arab cemetery.
- 266 Track now approaches the river under low cliffs with caves. This neighbourhood is called **Kudiran**, and is a favourite camping-ground of the Anazeh in summer.
- 268½ **Mahariz**, district with ruins. Track proceeds along the river.
- 271½ **Kahf ez-Zakk**, traces of houses on a bluff. **Weldeh** camp here in 1909.
- 273 Pass **Qal'ah Jābir**, ancient fortress with a minaret. Ruins of a tower called **Neshā'ib** to NW. on an isolated hill. **Tel el-Afrai** some distance farther on. The landward side of the mound is protected by a dyke forming a loop from the **Euphrates**.
Country now desert. Line of hills 1½-2 m. to r. Swarms of locusts seen here in 1911.
- 285 Reach a bend of the river. **Dibsi** tower opposite. A short distance above this point it is said to be possible for camels to cross in summer.
- Track now NW.
- 296 Ferry opposite **Meskeneh**.

CONNEXIONS BETWEEN TIGRIS AND EUPHRATES VALLEYS

ROUTE 48

ĀNAH—BAGHDAD

ACROSS THE DESERT

The desert between Baghdad and Ānah was traversed (from Ānah to Baghdad) in the autumn of 1908 by officials of the MacAndrew and Forbes Liquorice Co., who made the journey on horseback. Their object was to inspect the route with a view to a proposed motor-car service. The details given in (C) below are based on their information. In September 1909 the desert from Ānah to Baghdad was crossed by a motor-car (see (A) below), and in November the return journey was made (see (B) below). Both (A) and (C) journeys were made *via* Helwat wells, but it is impossible to say exactly how far (A), (B), and (C) coincide. It was reported in 1908 that Salih er-Rashid of the Sūq Abu Leban on the r. bank of the Tigris at Baghdad knew this route, and had several men always passing over it. He used to run the camel overland post, and owned riding camels. He was to be found at the coffee shop of 'Ugeil.

The route lies across level plain on slightly undulating ground, which would seem generally to afford good hard going, though in places tyres may be cut or punctured. Apparently in the region E. of Hit the desert is broken by wadis, which would give some trouble to vehicles. In the neighbourhood of Baghdad and near Lake 'Aqarqūf the ground is liable to inundation in spring, and near Baghdad the going would be heavy after much rain.

There are no permanent habitations in the desert, and no supplies can be counted on. Water very scarce, from a few wells (see (A) and (B) below).

(A)

Account of a journey by motor-car from Ānah to Baghdad in September 1909. Water for the journey was carried from the Euphrates. About $1\frac{1}{2}$ days.

First day. Cross river at Ānah. This was a matter of considerable difficulty, as piers had to be improvised. Leaving river proceed over stony ridges, which continue for an hour or more (but see (C), hrs. 0– $1\frac{1}{2}$). Then traverse level plain of hard soil, and after 1 hr. of excellent going reach a well of bad water. Soon afterwards reach a strip of crystallized gypsum, which took 3 hrs. to cross: bad going. Then pebbly ground, generally good going, though soft in places. Reach **Helwat** wells, better water (compare (C), hr. $43\frac{3}{4}$). Here halt was made for night.

Second day. For about 80 m. from Helwat the ground is hard and level, with only occasional stretches of soft sand. Numerous herds of gazelle.

Then reach nomad encampments, then dried marshland ('Aqarqūf?), which could only be taken slowly (compare (C), hr. $66\frac{1}{4}$). Thence to **Kazimain**.

(B)

Baghdad—Ānah by motor-car, November 28–29, 1909. Total running time, 22 hrs.

First day. Very little difficulty: a good day's running. One puncture.

Second day. In the first part of the day's run, many difficulties with wadis. Then excellent running till 3 p.m. The **Wādi Tartar**, which flows into a salt lake about 30 m. from Hīt, was found to be in flood, and could not be crossed at the point where it was struck, owing to the bottom being of soft mud. An Arab showed the way to a crossing where the bottom was hard. The water was about $2\frac{1}{2}$ ft. deep, and stones and branches of shrubs were placed in the river to assist the passage of the car. There was some difficulty in getting the car through, but in the end it was pulled out with the help of some Arabs. On the other side of the Tartar the going was good for most of the way to Ānah, but it was necessary to go slowly in some places lest the tyres should be cut by the small sharp stones projecting through the ground. No difficulty in crossing the river opposite Ānah, as *shakhturs* and landing-piers had been prepared beforehand.

(C)

Account of a ride from Ānah to Baghdad, autumn 1908. See above. Total travelling time, $81\frac{1}{4}$ hrs. The times given below are said to be for travelling on horseback at moderate speed. Apparently this would make the total distance about 240 m. On the map the distance in a straight line from Baghdad to Hit is 160 m. The difference is perhaps accounted for by the necessity of going by wells, and by the Arab habit of marching not by compass but from landmark to landmark. But in view of the uncertainty as to rate of progress, &c., no attempt has been made to give an estimate of the miles from point to point. Times are given in the margin. The places mentioned between the point opposite Ānah and Kazimain are not villages, as these do not exist in this region. They are merely localities in the desert known to native guides.

Hours

0	Ānah. Cross the river (<i>shakhtūr</i> ferry) to the l. bank. Land on l. bank near minaret called El-Khedimeh. Hence a road over a level plain of small pebbles and gravel (but see (A) above) leads to
$\frac{1}{2}$	Ras Abu Tor. Level plain of small pebbles crossed to
$1\frac{1}{2}$	Mutaridat. Level plain of pebbles stretches as far as Mufrak el-Dorüb.
3	Murkub el-Faris.
$4\frac{3}{4}$	Garaa Umm el-Kubar.
$6\frac{1}{4}$	Mufrak ed-Dorüb. Level plain. Hard borax ground with pebbles.
$7\frac{1}{4}$	Toqqāqeh. Level plain with small pebbles.
$8\frac{3}{4}$	Rās Annab.
$9\frac{3}{4}$	Habīb en-Najjār. There is a ditch here along which a carriage could travel with ease, the ground being hard. Between Habīb en-Najjār and Nokheileh are two ravines, one of which can be easily crossed. At the other is broken ground extending for a distance of about $\frac{1}{2}$ hr. : this can only be crossed at low speed.
$10\frac{3}{4}$	Nokheileh. There is a spring here, the water of which is brackish and rather stagnant. Route now crosses a level plain of borax ground.
$12\frac{3}{4}$	Ghobeini. Level plain of hard borax ground.
$15\frac{1}{4}$	Mustafej. Route crosses level plain on which is a well of brackish stagnant water.
17	Dellayah. Level plain: hard dry ground.

Hours	
18 $\frac{3}{4}$	Goreineh. Level ground, pebbly.
20 $\frac{3}{4}$	Abu Rumaneh. Route now crosses level ground on which is a well of good drinkable water.
23 $\frac{3}{4}$	Abū Jumaa. Part of the way between this point and Oneizeh lies over undulating ground, which would not hinder a carriage from travelling quickly.
26 $\frac{1}{4}$	Oneizeh. Track runs over a level pebbly plain extending as far as Tahali (63 $\frac{1}{4}$ hrs. below).
27 $\frac{3}{4}$	Qasr el-Jarin.
31 $\frac{1}{4}$	Et-Tawil. Between this point and Rukheimi is a well of good water.
35 $\frac{1}{4}$	Rukheimi.
38	Ras Wādi el-Idi.
39 $\frac{1}{2}$	Ras Wādi Tawareh.
41 $\frac{3}{4}$	Athmed.
43 $\frac{3}{4}$	Helwat. According to the account (A) of a motor-journey from Anah to Baghdad there are wells with fair water here.
46 $\frac{1}{4}$	El-Had. Well, good water.
49 $\frac{1}{4}$	El-Joreishi.
52 $\frac{1}{4}$	Kebir Faraj.
54 $\frac{1}{4}$	Umm er-Rus.
56 $\frac{1}{2}$	Mughaireh.
58	Gulayeb Zaid.
59 $\frac{1}{4}$	Anazi.
63 $\frac{1}{4}$	Tahali. Between this point and El-Mugayer, hard red ground.
66 $\frac{1}{4}$	El-Mugayer or Ras 'Aqarqūf. The route now crosses undulations, over which carriages must travel at a slow pace. The country is liable to floods from the lakes at El-Mugayer. Several wells containing good water are found on this part of the route.
71 $\frac{1}{4}$	Ruweis. Route now traverses level plain of pebbles mixed with hard red earth.
73 $\frac{1}{4}$	Ed-Deir. Route crosses level pebbly plain to
75 $\frac{1}{4}$	Steih. From here undulating track: ground liable to be flooded from the Tigris in the high-water season.
78 $\frac{1}{4}$	Sarrakkeh. Nature of track and ground as above.
79 $\frac{3}{4}$	Kazimain. Made earth road along tramway to
81 $\frac{1}{4}$	Baghdad.

ROUTE 49 a

MOSUL—DEIR EZ-ZOR (191 m.)

Via 'AIN EL-GHAZAL

Authorities :—*Routes in Arabia*, Route 191, report of 1914; *Military Report on Arabia*, Route 23, report of 1903; Sarre and Herzfeld, *Archäol. Reise im Euphrat- und Tigris-Gebiet*, journey of 1907-8; E. Sachau, *Syrien und Mesopotamien*, journey of 1880; Sykes, *The Caliph's Last Heritage*, journey of 1906; recent unpublished information.

This route is fit for wheeled traffic the whole way. Going is heavy after rain. Water is plentiful at each of the camping-grounds, but none between stages during the dry season, which renders the route impracticable for infantry. There are practically no supplies except at Deir ez-Zor. The Yezidis of the Sinjar have made this route unsafe in parts since the outbreak of the war.

Miles from
Mosul

0

Mosul.

From Mosul to Tel A'far there are two possible routes.

(i) NORTHERN ROUTE.

This is passable for wheeled traffic.

The track leads over flat or undulating country and then rises over spurs of the low hills W. of Mosul, crossing a number of small ravines.

- | | |
|------------------|---|
| 10 | Humeidat village about $1\frac{1}{2}$ m. N. of the road. The ridge behind it runs close to the r. bank of the Tigris. |
| 15 | Route crosses Wādi Badosh , with some cultivation along its banks. |
| 16 $\frac{1}{2}$ | Khān Lubgilleh ? (see note under m. 39). Route crosses a small flat plain called Ed-Daulaieh . |
| 18 $\frac{3}{4}$ | Khirbet ed-Daulaieh (Khirbet el-Baghleh?), ruined village. |
| 20 | Northern end of a long ridge called Jebel Atshāneh , running in a SE. direction, is passed. Undulating country. |
| 21 $\frac{1}{2}$ | A group of <i>tels</i> is passed. |
| 22 | To the S. lie two hills called El-Mujelināt , about $1\frac{1}{2}$ m. apart, one directly S. of the other. |
| 25 | A wadi is crossed. This wadi, or possibly another crossed in the neighbourhood, is called Wādi Debuneh , which was reported in 1880 as probably containing water at most seasons. The depression in which the Wādi |

Miles from
Mosul

Debuneh lies is thickly strewn with large blocks of stone. In the plain to NE. of it is a hill called Tashtah, near which there is said to be a spring. The plain is bounded on N. and S. by low ridges running NW. and SE.

26½ **Uch Tepeh**, three *tels* about ½-1 m. S. of the track.

28½ **'Ain el-Beidhā**, three springs near a small hill.

29½ **Abu Miriam**, small village on a *tel*. Spring on W. side of the *tel*, and cultivation in plain to W. There are several other *tels* in the plain. A ridge bounds the plain to N., 3-6 m. distant, running in a NW. direction.

30¼ A wadi is crossed. Track rises very gradually.

34½ Route reaches the top of the gradual slope, here crossing the line of the low hills called Jebel Mehlebiyeh. It then gradually descends a valley (cultivated in 1880), with low hills on either side.

37¾ Route passes a rain-water pool. A little farther on is a cistern.

39 **Tel A'far**.

The following account has been based on the information of an Arab officer in the Turkish service who in August 1914 traversed the route from Tel A'far to Mosul in 13 hrs. by carriage:—

Miles	
0	Mosul.
16	Cross Wādi Badosh.
18	Khān Lubgilleh.
23	Re-cross Wādi Badosh at Khān el-Baghleh.
31	Abu Miriam.
38	Tel A'far.

(ii) SOUTHERN ROUTE.

This appears to be rather worse supplied with water than the northern route.

Miles from
Mosul

0 **Mosul**. The route is said to run for about 6 m. over a cultivated plain.

7 Route passes through low stony hills (Jebel Atshāneh?).

9 Route emerges into open, undulating, cultivated country, which is traversed as far as Muwali.

16 **Muwali**, village of Jebūr Arabs. Water supply from one brackish well and in winter from rain-water. Between Muwali and Tel A'far water is very scarce. Route leads

Miles from
Mosul

for some miles over open plain, with some cultivation and good grazing. Two hills also called Muwali lie near the village.

19½

Mujelināt, small settlement of semi-nomads, with bad water from springs.

22

Route runs over bare undulating ground at the foot of low hills, as far as Tel A'far.

26

Dubulu, small village.

38

Tel A'far.

A recent authority gives the following times from Tel A'far to Mosul:—

Hrs.	
0	Tel A'far.
¾	Dubulu.
5	Mujelināt.
6	Muwali.
8	Jebel Til Atshān (Jebel 'Atshāneh?).
11	Mosul.

Tel A'far, which is the residence of a Mudir, consists of about 3,000 stone houses. In 1906, the population had apparently been much depleted, the decline being due partly to recent attacks of the Shammār, partly to an epidemic of cholera some years previously. But a traveller who passed through the place in the winter of 1907-1908 estimated the population at several thousands. The inhabitants are mainly Turkish, with some Kurds. The Turkish inhabitants are indistinguishable in dress and appearance from the Arab fellahin, and many of them understand Arabic. There is cultivation to N. and S. of the town. Sufficient supplies for caravans are obtainable. Tel A'far is unwallled and stands on both sides of a stream, the water of which is slightly sulphurous. On a plateau overlooking the town from the E. is a building formerly used as a guard-house, and on the W. side is a hill several hundred feet high, on which are the ruins of a citadel called Qal'at Marwān.

39

Tel A'far. [Mileage continued from Route (i), p. 309.] From here, the track strikes SW. across the desert.

69

Ain el-Ghazal, small village with khan. 10-12 hours by carriage from Tel A'far. No supplies available but good water from spring. Route goes in a general SW. direction.

Miles from
Mosul

- 96 **El-Bid'ah.** Eight hours by carriage from 'Ain el-Ghazal. No village ; wells of brackish but drinkable water difficult to find without a local guide.
From here Shedādi is 8 hrs. ride over flat sandy desert *via* Abu Hamda.
General direction SW. across open desert with several hills on the r. The going is good in the dry season, but very heavy after rain.
- 128 **Fadgham,** small village on the Khabūr, with khan. Nine and a half hours by carriage from El-Bid'ah. No supplies are available, but there is an ample supply of good water from a stream. Irrigation by water-lifts.
- 140 Authority of 1880 left the plain and went through a narrow gorge: the cliffs receded, forming lines of hills between which the track ran for about 9 m. But this may not be the track followed by the carriage-road.
- 160 Cross **Khabūr** River, here 35 yds. broad, by a ferry.
Sawwār, small village with a khan, on the r. bank of the Khabūr River. It is the head-quarters of a Mudir, *Zaptieh* post. Mound and ruins.
Sawwār is 7-8 hrs. from Fadgham.
The track now strikes W. across the desert.
Cross an area intersected by many dry water-courses which contain salt. The name of the district is El-Melha.
- 166½ Reach the end of this area.
- 181 About here is the watershed between the Khabūr and the Euphrates.
- 189 Reach the edge of the Euphrates Valley.
Track now WSW. across the alluvial plain.
- 191 **Deir ez-Zor,** bridge. 7-8 hrs. from Sawwār.

ROUTE 49 b

MOSUL—DEIR EZ-ZOR (223½ m.)

Via BELED SINJAR AND SHEDĀDI.

Authorities as for Route 49 a ; also E. Sachau, *Am Euphrat und Tigris*, journey in 1898.

Water is scarce and apparently usually brackish between Sekenik and Shedādi, and between Tel Sawwār and Deir. Except in the

neighbourhood of Sekenik and parts of the Khabūr Valley there is no cultivation, and nowhere can any appreciable quantity of supplies be expected. There is good grazing in spring in the Khabūr Valley. For Vezidi raids, see p. 308.

Miles from
Mosul

- 0 **Mosul.** For routes as far as Tel A'far see *Route 49 a.*
(Mileage continued from route (i) under that heading.)
- 39 **Tel A'far.**
From Tel A'far to Beled Sinjar the route is generally easy, running over open undulating ground or cultivated plain; but in January 1880 the going was soft, as the result of melting snow. Up to the Solaq Chai (2½ m. from Beled) the water on the route, though plentiful, is brackish, and only just drinkable.
For 11½ m. beyond Tel A'far the route goes across an undulating plain slightly depressed in the middle, bounded by ridges to N. and open on the S. A number of *tels* are scattered over the plain.
- 39¾ Stream flowing S. crossed (January 1880). Apparently about this point, or a short distance farther on, a group of *tels* are seen at about 1 hr. ride to S.
- 42 **Tel Wardān**, large eminence.
- 46 Cross wādī with water (December), some cultivation on its banks.
- 48 Cross **Wādī Ibreh** with abundant water (December). On the further side, cultivation extending to the Wādī Mujeirat (m. 51).
- 48¼ Site of deserted village of Ibreh (1907).
- 48½ **Tel Ibreh** (called by local Arabs in 1880 Khirbet Seyyid Kleb). The *tel* contains some modern cave-dwellings.
- 50 Stream running SE. is crossed (this is apparently the Wādī Sharai, and seems to be the 'small boggy stream' described by a recent authority as a branch of the Wādī Ibreh lying 2½ m. from it).
- 50¼ **Tel er-Rus**, a few hundred yards to S. of track.
- 51 Stream flowing SE. is crossed. This is apparently the Wādī Mujeirat: a recent authority mentions the Jibbareh Chai as a small boggy stream 3½ m. from the Wādī Ibreh. Tel Abu Fuseikeh lies apparently about ½–¾ m. to the N. on the l. bank of the Wādī Sharai. Cultivation and small villages near it.
- 51¾ Cultivation apparently ceases in this neighbourhood.

Miles from
Mosul

- 54 'Ain esh-Sharīd, ruin-field, and spring near which is some cultivation. Low ridge running W. begins on N. It is 1-2 m. from the track.
- 55 Between this point and m. 57 are several water-courses. Apparently in this neighbourhood (2½ hrs. ride from Wādi el-Ibreh) lies the spring of 'Ain Tineh, under the ridge to the N., ¼ hr. ride WSW. of it are said to lie the four springs of 'Ain el-Ghassān, lukewarm and sulphurous.
- To SSW. from 'Ain el-Ghassān, about one day's march distant, is seen a hill called Tel Tartar, in which a tepid sulphurous spring takes its rise. This spring was believed by a traveller of 1880 to be a head of the Tartar River. Other springs feeding the Tartar seem to lie near Beled Sinjar.
- 57 Wadi containing water (December). This wadi is apparently a short distance W. of 'Ain el-Ghassān.
- 62 **El-Khān**, ruins of a large khan beside the track. Springs in the neighbourhood called **El-Hararat**, or 'Ain el-Khān. In 1906 the Mendikan tribe was encamped here. The bulk of the tribe are Yezidi by religion, but the Sheikhs and some of the families are Moslem. Ground from about here to Beled Sinjar was reported as very soft in January 1880, owing to the melting of snow on the hills.
- 62½ Cross large wadi with steep banks. To N. (1½-2 m. distant) are a number of hills, outliers of the chain called Et-Tōq. These hills run in a line parallel with the water (about WSW.). Beyond them to NW. (not yet in sight) lies the eastern end of the main Sinjar range.
- 64½ Village about ¼ m. to N. of track. Four *tels* in a line running E. and W. lie in a plain to S.
- 65 Cross **Wādi Dājis**.
- 65½ Cross **Wādi en-Naml**.
- 66¼ Cross **Wādi Delukhān**. About this point the first peak of Jebel Sinjar comes in sight.
- 68¾ Deep wadi.
- 70 Cross wadi.
- 71½ Cross stream. Large Yezidi village of **Mihirkan** to N. on the slopes of a hill (1880).
- 72 Pass **Qara Tepeh**, or Tel Aswad, which lies to N. of track.
- 72¼ Pass **Esh-Keptah** village, lying to N. of track.

Miles from
Mosul

73

Solaq Chai (sweet water). A number of small streams occur between this point and Beled Sinjar.74 $\frac{1}{4}$

Cultivation to S. of track.

76

Beled Sinjar.

Times given for the journey from Beled Sinjar to Tel 'Afar by a recent authority:—

Hrs.	
0	Beled Sinjar.
$\frac{1}{2}$	A <i>tepeh</i> on left (N.)
$\frac{3}{4}$	Solaq Chai.
1	Esh-Keptah.
1 $\frac{1}{2}$	Gelu Khān Chai (?).
5 $\frac{1}{2}$	Gereh Sinoh, hill with ruined village (?).
6 $\frac{1}{2}$	Kherāleh Tepeh (?).
7	Iabrah Chai (Wādi Ibreh).
10	Tel A'far.

The modern town of Beled Sinjar comprised about 400 houses in 1903. The land to N. and S. of the town is cultivated, and probably a fair amount of supplies would be available in normal years. The figs of the neighbourhood are famous in the E. The modern town, which is inhabited mainly by Yezidis, lies on the E. slope of a valley running from N. to S. watered by a stream. It is dominated to N. and W. by the Et-Tōq chain of hills. It contains a khan, Turkish barracks, and Turkish Government buildings, all of which lie on the top of the slope. The place is the residence of a Kaimmakam, and lies in the *Vilayet* of Mosul. The houses are solidly built in the Mosul style. The town formerly covered a much larger area, including the western slope of the valley, where now there is a ruin-field. The remains of the ancient walls are to be seen.

77 $\frac{3}{4}$ **Kebalish** village.78 $\frac{1}{2}$ **Daqiqeh**, Yezidi village, about 1 m. to r., and **Kānisark**, to l.

80

Qizil Khān, about 2 m. to r.81 $\frac{1}{2}$ **Gabara**, about 2 m. to r.

82

Cross wadi and pass **Debusi** village. Fairly level, stony track running past cultivation.83 $\frac{1}{2}$ **Wurdi**, alt. 1,500 ft., village of 90 Arab houses on the plain, 1 m. from the hills. One large spring of good water and one mill.

86

Jeddaleh, Arab village, to r. Cross wadi.

Miles from
Mosul

- 89 **Khubazi**. Highest points of the Sinjar range, two peaks, are now to N.
- 92 **Mejlumi**, $\frac{1}{2}$ m. to r. at the foot of the hills. **Tel Heyyāl** $\frac{1}{4}$ m. to l. Track passes two (ruined?) shrines called 'Abd el-'Aziz and 'Abd el-Qādir.
- 95 **Sekenik** (or **Ghiran**), a Yezidi village lies in a ravine of Et-Tōq hills to N. of route. It comprises about 100 houses. From the ravine a stream runs into the plain; it is there crossed by the route. For alternative route from Sekenik to Shedādi see *Route 49 c*, and for route from Sekenik to Nisibin see vol. iv, *Route 88 b*.
From Sekenik the route goes SW. over cultivated land occupied by Yezidis.
- 104 Cultivated land ends in this neighbourhood. Route traverses undulating steppe.
- 111 **Es-Sihl**, a watercourse. A Yezidi encampment was found here in March 1899.
Between Es-Sihl and 'Ain el-Hawariyeh (m. 134), the ground is a heavy red clay with numerous outcrops of gypsum. Native information, given in 1880, mentions two springs between Es-Sihl and El-Gōneh. These are named **El-Qasabeh** and **El-Mu'allaqāt**.
The route bears more westerly. Low line of heights (El-Jereibeh) to N.
- 115 $\frac{1}{2}$ West end of El-Jereibeh hills lies to N. of route. Wide view over the plain in the direction of the Khabūr. The 'Abd el-'Aziz hills, on the farther side of the Khabūr, are seen to WNW.
Route takes a general SW. direction.
- 130 **El-Gōneh**, a spring near a *tel*. The water here was said in 1880 to be bad.
Beyond El-Gōneh, cross a ridge.
- 134 **'Ain el-Hawariyeh**, a spring near a *tel*. The overflow of the spring forms a small brook.
- 139 **Wādi edh-Dhiāb** (wolf's valley) is crossed. Jebūr encampments in spring 1899.
- 153 Left bank of the **Khabūr**, opposite the *tel* of Shedādi. The river is here crossed. There was a ferry before the war. **Shedādi**, on r. bank, a long low hill overlooking the river. Towards its northern end it rises in a conical eminence about 100 ft. high. On its lower southern part is a mud fort with accommodation for several dozen *zaptiehs*.

Miles from
Mosul

- There are a few ruins of sun-dried brick and some tombs on the hill. Before the war there was a store at Shedādi frequented by the nomads of the neighbourhood. The place was the residence of a Mudir under the Mutessarif of Deir.
- The route now turns in southerly direction and runs over open desert down the western side of the Khabūr Valley.
- 154½ Route comes close to river bank, crossing a large deep wadi. Village on opposite bank in a crook of the river (1908). Between this point and Marqadah (m. 176) the track is usually 1-2 m. from the river.
- 161 A low northern prolongation of Hammeh plateau begins to W. of route and runs about parallel with it for some miles.
- 164½ **Fadgham** to E., on the l. bank of the Khabūr.
- 167½ **Tel Shemsāniyeh**, mound and ruins, to E. on the r. bank of the Khabūr.
- Beyond this point the route runs close to the foot of the **Hammeh** plateau to W.
- 169 A part of the Hammeh plateau called **Khiskhur**. Here the plateau edge recedes W. in a crescent. Three small round summits, called Tulūl el-Ma'zah, rise from the top of the plateau 8-9 m. to W. Route runs SSW. across the plain.
- 173½ *Tel* to r. of road about 1 m. distant, near the foot of the plateau which is here converging on the route.
- Track crosses a shallow wadi.
- 176 **Tel Marqadah** mound and ruins on the r. bank of the Khabūr. The SE. corner of the Hammeh plateau close to the *tel* on the W. Route now skirts the river bank.
- 176½ Cross mouth of Wādi el-Hammeh, which runs in from the NW. and forms the SE. boundary of the Hammeh plateau. River now makes a bend to the E. and the route leaves the river bank, continuing SSW.
- 178 Route touches river bank, and continues down the valley, cutting off the easterly bends of the stream.
- 181 Route passes a point on the river where there is a ford called **Esh-Sheri'ah**. A little way below the ford rocks are visible in the stream (at least in August).
- 183 Pass **Tel el-Husein**, mound and ruins on l. bank. The river winds very considerably here.

Miles from
Mosul

- For the next 9 m. the route traverses a tract called Umeilih.
- 187 **Tel Umeilih.**
- 192½ **Sawwār.** (For the route from here to Deir, see *Route 49 a*, m. 160.)
- 223½ **Deir ez-Zor.**

ROUTE 49 c

SEKENIK—SHEDĀDI

Via SHILLO PASS, KHĀTŪNIYEH LAKE, AND TENENIR

Authorities as for Route 49 a except Sykes; Layard, Nineveh and Babylon, journey in 1850.

This route passes to the N. of the Jebel Sinjar, turns W., and strikes the Khabūr at Tenenir, 40-45 m. above Shedādi. It is about 25-30 m. longer than the direct route from Sekenik to Shedādi described above, but is apparently much better supplied with water.

Miles from
Sekenik

- 0 **Sekenik.** The route runs along the southern foot of the Et-Tōq hills.
- 1 **Kolang Hafzah,** Yezidi village with five good wells to l.
- 4 Track enters hills. The Shillo or Bari Pass is described as rough and stony, but not particularly difficult. A valley through the Et-Tōq hills is first followed in a N. direction. At the N. end of the valley rises the main Sinjār range.
- 5 N. end of valley through Et-Tōq hills. Here two valleys meet, one from ENE., the other from NW. : the former runs between the Sinjār and Et-Tōq ranges, the latter between the Et-Tōq and Jereibeh ranges to W. and the Sinjār to E. The track follows this latter valley leading NW.
- 5½ **Shillo,** Yezidi village, to r. near the mouth of the valley which runs ENE. Cultivation near the village. The track winds over rocky broken ground.
- 7½ **Mamhuwed,** 50-60 dwellings inhabited only in summer.

Miles from
Sekenik

8½

Watershed about 2,250 ft. above sea level, and about 570 ft. above the plain. Main Sinjār range to r., Jebel Jereibeh to l. Pass about ¼ m. wide.

At some point on the descent, apparently not far beyond the col, the route to the Khabūr here described diverges in a NW. direction from the Nisibin route, which proceeds N. down the valley of the Howeir Khalid stream (see vol. iv, *Route* 92 a).

12½

The route winds among the hills bearing gradually to the W. 'Ain Roman, a small spring. Here the track emerges from the pass, and proceeds in a westerly direction over an undulating plain parallel with the Jereibeh hills, which lie to the S. To the N. the Kurdish mountains are visible in the distance. Several small streams flowing from the Jereibeh hills are crossed.

14

Pass **Gyrgeh** village.

17

Route bears now about WNW., rising over more sharply undulating ground.

24

Reach a strip of cultivated land bordering the E. side of the **Khātūniyeh** Lake. This piece of water is triangular, with the apex to the N., apparently covering about 4 sq. m. in the dry season. Its northern and western sides, and at least the western part of its southern shore, are marshy. Its water is brackish but drinkable. The route bears to NW. to pass round the northern end of the lake. (The southern end appears to be less marshy, but the ground there is more undulating. No further details appear to be available.)

25½

Enter marshy ground N. of the lake. On a peninsula in the lake is the wretched village of **Khātūniyeh**. The track skirts the shore of the lake to its extreme northern corner.

26½

Track emerges from marshes and runs about SW. over undulating ground.

29½

Track bears about WSW.

31½

Track runs along a low ridge forming the northern side of boggy area called **El-Haul** (El-Hol), which lies about 50-100 ft. below the summit of the ridge. El-Haul is rather over ½ m. broad, runs E. and W. with a curve towards the N., and is bordered on the S. by low spurs of the Jereibeh hills.

35½

From this point the Wādi el-Frati, a deep water-course

Miles from
Sekenik

running into the Khabūr, about 1 m. above Tenenir, is about 6 m. distant, and can be reached by striking about WNW. across the plain. In the upper part of its course its banks are marshy, and the sides of its valley are apparently broken by small ravines. There are said to be numerous springs in the valley (this is apparently based on native information).

The direct route to Tenenir continues along the ridge bordering El-Haul, which here trends in a WSW. direction.

38 Mound and spring called **Tuleil el-Mureir**. The western end of El-Haul apparently lies not far beyond this point. After the end of El-Haul is passed the track crosses a bare plain, the surface of which is gypsum. In a few fissures which traverse this plain grass is to be found in spring. Tenenir lies about W. by S. from here.

48 Reach the l. bank of the **Khabūr** at the mound of **Tenenir**. No details showing whether or in what seasons the Khabūr is here fordable seem to be available. Either side of the Khabūr can be followed from here to Shedādi.

As to the facilities or obstacles for wheeled traffic, no information is available.

(i) *Route continued by Left Bank.*

Distances only roughly estimated. Details of wadis, &c., not available.

52 **Tel Suheimiyeh**, on l. bank of Khabūr.

54 $\frac{3}{4}$ **Tel Ta'ban**, on l. bank of Khabūr, which is here cultivated.

66 **Tel 'Arabān** on opposite side of Khabūr. The l. bank is here cultivated.

73 **Tel Gharqanah** on l. bank of Khabūr. The bank is cultivated for some distance below this point and there are two or three villages close to the river.

75 $\frac{1}{2}$ **Sher'iāt Ba'ājeh**, a ford at a bend of the river a short distance above a village on the r. bank. Cultivation on l. bank.

77 $\frac{3}{4}$ Village and cultivation on l. bank.

80 $\frac{1}{2}$ **Shedādi**, on opposite side of Khabūr.

Miles from
Sekenik(ii) *Route continued by Right Bank.*

	Distances continued from Tenenir.
51½	Tel Mehleibiyeh , on r. bank. Immediately beyond is the mouth of the Wadi Mehleibiyeh, which flows from the WNW. into the Khabūr.
52½	Cross another wadi.
55½	Tel Suheimiyeh on l. bank of the river, 1-2 m. distant.
56½	Sheikh Sleb , mound and spring on r. bank of river. Cultivation along r. bank below this point between track and the river.
58	Tel Ta'ban on l. bank of the river.
59¼	Between this point and Ed-Dugheirāt the track crosses two or three deep wadis.
61¾	Ed-Dugheirāt (or El-Mugheirāt), ruins. The ground for about 1 m. S. of this point is rocky.
63¼	Cross shallow wadi.
64¾	Old canal bed about 50 paces across.
67¾	Tel 'Arabān (or Ajtjeh), large mound and ruin-field on r. bank of the Khabūr. Marshy plain to W. of track, a few hundred yards from the river.
69	Cross small stream flowing into the Khabūr.
70¾	Cross small stream.
71½	Cross small stream.
72½	Cross Wādi Qubāthēh .
77	Cross wadi. Ba'ājeh ford across Khabūr.
77¾	Cross stream.
79½	Track now traverses rolling ground which continues as far as Shedādi.
88	Shedādi .

ROUTE 49 d

SEKENIK—THE KHABŪR AT TEL 'ARABĀN

Via UMM EDH-DHIBAN

The following route was ridden by Layard in March 1850.

From Sekenik the plain S. of the hills is crossed to Umm edh-Dhiban. The direction seems to be about SW., and the distance about 13-15 m., but both are uncertain. Umm edh-Dhiban is a muddy

pool, the water in Layard's time being apparently drinkable only by animals. From Umm edh-Dhiban cross an undulating country (some-what N. of W.) with deep ravines worn by winter torrents. Grazing in spring, except in some places, where outcrops of gypsum occur. Skirt Jereibeh hills, which are well-wooded with ilex and dwarf oak, and contain numerous springs. The springs in the region are said to be all brackish and unpleasant to the taste, but drinkable, and the Arabs declared the water to be wholesome. A beaten track was found and followed by Layard near the hills, and 'four hours' ride' (either from the point where the track was struck or possibly from Umm edh-Dhiban) brought him to a spring with scanty water. Half an hour farther on was another spring. 'In five and a half hours' a small stream near the ruins of an ancient village was reached. From here the dark line marking the wooded banks of the Khabūr and the 'Abd el-'Azīz range beyond were visible at sunset. Two hours' ride from this point brought Layard to a Bedouin encampment, and after leaving it 'at length' (apparently not more than a few miles farther on) he reached the Khabūr opposite Tel 'Araban. 'The river was not at this time [end of March] fordable.'

ROUTES 50 (i-vi)

SOME MINOR DESERT ROUTES IN THE SOUTHERN JEZĪREH

(i) BAGHDAD—EL-HADHR (HATRA)

The following account of places at which water is to be found on a camel-route from Baghdad to El-Hadhr (Hatra) was given to Sachau by the Shammār in 1880. The journey by camel is said to take 6 days at 6-8 hours a day.

Abu Tabag.

Abu Nheleh.

Lubbād.

Abu Khasheb.

Et-Tumēreh.

Fawāreh.

Ez-Zbedi.

Abu'l Gudūr.

Maras.

Es-Sultāniyat (identical with, or near, Museltain ; see *Route 25 b*, m. 145).

Umm et-Tus wat-twesan, two springs.

Hamrat Dubeshi, hill and two springs.

El-Malha.

El-Beniyeh.

Eth-Theliyeh.

El-Hadhr. For the country between El-Hadhr and the Tigris see *Route 25 b*, under m. 168.

(ii) EL-HADHR—THE KHABŪR RIVER AT TEL ES-SAWWĀR

The following account of places at which water can be obtained is given by Sachau. For the greater part of the route from El-Hadhr to El-'Oja the information was obtained by him from the Shammār in 1880. The journey is said to take 4 days by camel to El-'Oja, at 6-7 hours a day. El-'Oja is 1 day's march from Tel es-Sawwār.

Umm Midhyābeh near El-Hadhr.

Et-Tamahiyat, 4-5 springs.

Fāwārat, 3-4 springs.

Eth-Therey, 3 springs.

El-'Aseleh, spring.

El-Ghlesiyeh, spring.

Et-Trjariyeh, spring : near el-Ghlesiyeh.

'Agelat el-Halib, spring.

Ardh el-Magrabbah, wells reported.

El-'Oja, rain-water.

Tel es-Sawwār (Sawwār) on the Khabūr. See *Route 49 a*, m. 160.

(iii) ĀNAH—MOSUL

In the Board of Trade's Report on British Trade in Syria (1911) it is stated (p. 80) that there is a route used by camel-caravans from Rawā (on the Euphrates opposite to Anah) to Mosul. The estimate, however, for the time taken by camel-caravans from Rawā to Mosul—4-5 days—is clearly much too low. It is said that there is some difficulty in finding ready means of transport at Rawā during certain periods of the year.

(iv) TEKBIT—HĪT

There is said to be some caravan-traffic between Tekrit and Hīt, but no details are obtainable.

(v) SHEDĀDI—RAQQAH

The intervening desert is very little known. Sykes, when he crossed it at the end of the dry season (November) 1906, found five permanent wells, and a population of about 20,000 Bedouin. Shammār are among the Arabs found here.

(vi) MESKENEH—RAQQAH *via* TEL ES-SEMEN

Across open rolling uncultivated ground traversed by numerous wadis. For three months in spring there is pasture, the good grazing land alternating with stony tracts. Anazeh were found here in 1906 (see Introduction to *Routes IV E-H*, p. 94).

The following notes are taken from Sykes's account of his journey in 1906.

Meskeneh. Cross Euphrates.

Muraibet: camp of Weldeh Arabs about 4 m. to S. from the Meskeneh ferry. From here a day's march to—

Wādi Dushan.

At $1\frac{1}{2}$ hours from the Wādi Dushan, an encampment of nomad Arabs, at that time under Sheikh Saleh of Harran, a person of considerable influence among the local Arabs, as his family keeps also the fountain of Abraham at 'Ain el-'Arus (see vol. iv, *Route 132 b*, m. 60 $\frac{1}{4}$).

3 hrs. farther on, Göl Bashi, or El-Guela, a large lake or swamp, connected by a backwater with the Belikh. Much water-fowl.

Over level plain to Tel es-Semen. (Afadleh Arabs were found here in 1906: some cultivation in neighbourhood.) Thence over land covered with traces of old irrigation-canals (see vol. iv, *Route 132 b*) to

Raqqah.

THE SYRIAN DESERT

ROUTE 51

HĪT—RAHĀLIYEH (81 M.)

Authorities :—Miss G. Bell, *Amurath to Amurath*, journey in 1909; *Routes in Arabia*, Route 194, native information, 1909.

This is a desert track. No supplies are obtainable, and drinking-water is scanty, except at Rahāliyah. Here supplies are normally obtainable in small quantities, and some live stock is kept. Here also is a plentiful supply of water from a spring. The water is warm and slightly salt in taste, and may not be wholesome. The fuel-supply at Rahāliyah is good.

Miles from

Hit

0

Hit. For the stage between Hit and Temāil the following points have been mentioned, but it is possible that they do not lie in the most direct line between these places. The distances to Asibiye are estimated from the report of the traveller who went over the ground in 1909. Native information gives a total distance of 78 m. with distances as follows—**Temāil** 33 m., **Asileh** 52 m., **Asibiye** 63 m., **Rahā-liyeh** 78 m.

17

'Ain el-'Ufūriyeh, a tiny mound with a spring of water, sulphurous but just drinkable. There is a pitch well about 3 m. SE.

20

Jelib esh-Sheikh, several pools in an outcrop of rock, which are sufficiently sweet to drink.

Just beyond these pools the **Wādi Mohammadi** is crossed, which stretches W. to the **Ghārat el-Jemāl** and E. to the Euphrates. The wadi was dry and encrusted with sulphur in 1909.

27

Tel, from the top of which the landmarks of Abu Qir, two high mounds of stones, are sighted.

Miles from
HĪT
33

- Abu Qīr**, eight asphalt springs. Ruins of a small square fort, round which are the foundations of houses, stone walls, and crumbling mounds of sun-dried brick. Water abundant and used by the Dilaim to raise a few patches of corn and clover, but the insecurity of the desert is too great to allow of permanent occupation.
- 40 **Temāil**, wadi and small village with good water from a spring. Flocks of goats. Mound with fort of mud and unhewn stones. It has a single door and round bastions at the angles of the wall. Below it is a copious sulphur spring which flows into some cornfields.
- 56 **Asileh** or **Er-Redaf** on the **Wādi Burdān**. Four wells of drinkable water. No village. This is an autumn camping-ground of the Anazeh.
Track now rises in a gradual slope. On this stage were noticed a great many colocynth gourds, which are said only to grow where the plain is very dry.
- 76 **Asibīyeh**. Four wells of drinkable water. No village. View of palm trees of Rahāliyeh.
- 81 **Rahāliyeh**. Oasis surrounded by swamps (see vol. ii, *Route 17*, m. 56).

ROUTE 52

HĪT—DAMASCUS (375 m.)

Authorities:—Huber in *Bull. de la Soc. de Geog. de Paris*, vii, 5 & 6, journey in 1882; *Geographical Journal*, 1914, journey in 1912; Miss G. Bell, *Amurath to Amurath*, journey in 1909; oral information.

This is the route followed by the camel-post which was discontinued in October 1912. It traverses the desert almost due W. to Dumeir. From the seventies of last century the post was in English hands, but Midhat Pasha was authorized by the Turkish Government in 1884 to establish a post to compete with the English one. This led to the latter being discontinued in the eighties, and therefore the Turkish post alone provided for a weekly exchange of letters between Baghdad and Damascus. Only ordinary letters, not articles of value, were taken. Each post rider, in addition to the animal on which he was mounted, had a reserve camel laden with water. The post-riders were almost exclusively Ugeil. Passengers were not officially recognized, but sometimes accompanied the post at their own expense and risk. The post was discontinued owing to the frequent attacks

by Bedouin, and post-bags were dispatched by a safer, if longer, route by Aleppo.

The journey over this route, always monotonous and sometimes dangerous, is extremely trying physically. It may require to be varied to avoid hostile Arabs, and it often happens that the usual wells are thus missed and the traveller left for three or four days without water.

The camels march from 16 to 19 hours a day, and the halts are so arranged as never to allow a continuous rest of more than 2 or at the most 4 hours. Sometimes tempests of cold wind hinder the advance of the camels. In favourable circumstances and with good dromedaries the distance may be accomplished in about 7 days, but, as in any circumstances delay may occur, it is safer to calculate on the journey lasting from 9 to 10 days. The journey is shortest in the dry weather; longer in winter and spring when the rains make the desert slippery in places.

The route leads over sandy or gravelly plains, hills or valleys, which are barren or produce only prickly shrubs and tall feathery grass which the camels eat. Over this region wander numerous tribes, the most important of which is the Anazeh. Sometimes a *ghazzu* or plundering expedition of the Shammār or other wandering tribes may be encountered. There is most danger of these in winter, as water can then be found in unfrequented spots, so that the marauders are not obliged to visit regular watering-places, always dangerous for them. In the centre of the desert there is scarcely any herbage for the greater part of the year, the plain being covered with black basalt, very trying for the feet of camels. Across the route a succession of wadis run NE. trending to E. Among these the Wādi Haurān, about one-third of the way between Hīt and Damascus is important, as it is principally by means of it that this part of northern Arabia is drained towards the Euphrates some miles above Hīt. The distances are very uncertain.

Miles from

Hīt

0

10½

Hīt.

Kebeiseh village. Pop. 500 (1882). 50,000 palm trees (1911). Some commerce with the Bedouin in dates and other commodities. Gardens in a separate enclosure to N. of the town. Spring on the border of these gardens; water abundant, but bitter and salt. Sulphur spring. Good drinking water found only in a single well, situated about 1 m. outside the walls, half-way between the town and the shrine of Sheikh Qadr, which has a conical spire.

Miles from
Hit

- Kebeiseh is the seat of a Mudir. It is subjected to continual depredations from the Anazeh, and is the last inhabited centre on this route until Syria is reached. The route goes WSW.
- 15 **'Ain Za'zu.** There is said to be water here, drinkable but disagreeable. Clover is sown here, as at other springs, for fodder in rainless years. Track follows a shallow valley westwards, and then rises over the Jebel Muzahir, 50 ft. high, the first of a number of long bare ridges. Before Qasr Khebas the land falls suddenly for about 130 ft.
- 31½ **Qasr Khebas.** Ruin, walls still about 10 ft. high; vault of portal entire. To the N. is a wadi in which are traces of a large masonry tank, now leaky, and half full of soil. Good grass is found round it. Leaving Khebas the route proceeds slightly S. of W. From here to Damascus the route is sometimes called the Darb Zobeidah.
- 43½ **Rijm es-Sabun,** small mound with ruined building of large blocks is passed lying about 6 m. to S. A few miles beyond this one enters the Qasr 'Amij district and the desert of **El-Dhai'ah** or **El-Dhuwai'ah.**
- 62½ **Qasr 'Amij.** No water. The *qasr* is a ruin built on the steepest side of a plateau. The only remains are the foundations and the gate with its arch. At a little distance to the W. of the *qasr* there is a basin nearly 40 ft. square, now filled up with sand.
- 80½ Mound or heap of stones, apparently called **Rijm es-Sabun.**
- 89½ Remains of enclosure walls are found on both sides of the route, and may be traced for about 1¼ m.
- 92½ Cross **Wādi el-Mu'aisir** which rises about 5 m. S.E. of the route and after a course of about 12 m. in a NW. direction runs into the Wādi Haurān.
- 102½ Cross the **Wādi Haurān.** Ruins of **Qasr 'Aiwar (Muheiwir)** on the r. bank of the wadi. The arched gate is said to be still standing. The wells of 'Aiwar number twelve, but seven are filled up. They are in the bed of the wadi, and have been dug in the gravel, their walls being made up with large round blocks taken from the wadi. The water, which is very good, is found 13 to 14 ft. down. On the opposite bank, facing Qasr 'Aiwar, there is a ruined tomb, and all around for a considerable area are tombs, this being the burying-place of the Solubbeh, who

Miles from
Hit

- own the wells. At 'Aiwar the banks of the wadi disappear, and its bed is filled with pebbles and round blocks, showing that the wadi is occasionally torrential. The surroundings of 'Aiwar are hilly, of a compact calcareous formation. Track now across undulating desert, with no vegetation.
- 114½ Arrive at W. extremity of district called El-Dhai'ah or El-Dhuwai'ah. See m. 43½, above. The less sterile and more hilly country of **El-Ghārah** is now entered. Good grazing.
- 152½ **El-Meluseh**, a long chain of hills. Wells. The wells of Meluseh are also called **Er-Rāh** or **El-Gherāri**.
- 160½ Camping-place near the **Su'eib Semhān** which flows into the **Wādi Ratqah**, an affluent of the **Wādi Haurān**.
- 171 Enter the region of **El-Harriyeh**, a stony desert.
- 173½ In the next 3 m. cross the three wadis of **El-Harriyeh**. Enter the **Sawāb** tract where the rocks are mostly flint and red limestone.
- 181½ Cross a small tributary of the Wādi Sawāb.
- 186½ Cross a second tributary.
- 190 Cross a third tributary. These streams are about 20-26 ft. broad, with low banks.
- 202 Cross the **Wādi el-Wālij** in the district of the same name. Route now runs W. across difficult volcanic country. (This may be avoided by a détour to N. through the barren Khuweimāt region, where the ground is covered with flints. This détour is about 12 m. longer than the direct route, which it rejoins about m. 233½.)
- 222 **Umm Uwel** water-pan.
- 233½ Depression of **Khōr et-Tanj**. Jebel Salan and Jebel el-Ghurāb lie to N. Ground in this neighbourhood covered with small fragments of rocks. More rarely large stones are found resembling unhewn blocks. The plain gives way to country broken by hills and valleys, in which excellent grazing is to be found.
- 249½ **Zerqā Kebut** district entered. It is covered with black basaltic stones.
- 258½ **Laqateh** district is entered.
- 265½ Enter **Esh-Shāmi** district.
- 272 About 2½ m. S. of the route are three water-holes. These belong to the Solubbeh, who resort to them in spring when they contain water.
- 273½ **El-Merreh** district is entered. Here the stony desert ends

Miles from Hit	
	and the route begins to traverse a fertile country with good grazing.
288½	El-Hā'il district is entered, crossed by the Wādi Hā'il .
297½	El-'Aitsah district is entered. It contains the Wādi Sab'ah Bi'ār .
310½	Large square building of hewn stones called Qasr Saigal , which marks the beginning of the territory of the same name.
322½	Khān Abu esh-Shāmeḥ , in ruins, with only the lower part standing. The walls are of unhewn stone, and about 8 ft. thick.
328	' Ain er-Rāhib lies in the hills to r. It is said to hold water only occasionally.
330	El-Maqsūreh , large rectangular building in ruins. This is either near to, or the same as, the place called by another traveller Birket Senbīn .
336	Dumeir , village of houses closely packed together.
360	Damascus .

ROUTE 53

ABU KEMĀL—TADMOR (228 m.)

Authority :—*Routes in Arabia*, Route 188, journey in March, 1910.

There is no direct track. The bearings given are only approximate, and only indicate general directions. Water is very scarce, especially after m. 51. The time given is 6 (*dhalūl*) days.

Miles from Abu Kemāl	
0	Abu Kemāl . (For track from Ereḳ see <i>Route 54</i> , m. 103.) Bear WNW. (295°) over stony grassy plain with gentle slopes (say 1 in 80).
5	Reach a stretch of broken ground running NE. and SW. The hillocks composing it are about 50 ft. high; the soil is stony. The slopes of the valleys between are about 1 in 30. This broken ground is about 4 m. wide, and is succeeded by the plain with slopes slightly steeper than before (say 1 in 60).

Miles from
Abu
Kemāl

- 11 Turn (direction doubtful) over a perfectly flat stony plain.
- 19 Reach two wells, 5 ft. below surface gravel; plentiful supply of water, brackish but drinkable. From here NW. (320°) over rolling downs, stony but with abundance of grass (March 1910), slopes about 1 in 30.
- 29 Four wells, 5 ft. below surface of ground; water good. From here due W. over flat grassy plain.
- 51 Conspicuous red mound visible from a considerable distance round. About $\frac{1}{2}$ m. W. of this are five wells, 5 ft. below surface, water brackish but drinkable. From here W. by N. (280°) over a sandy stony plain, grass becoming appreciably less, up to m. 87.
- 87 From here W. by S. (260°) over similar ground.
- 97 From here W. (270°).
- 119 Reach the **Wādi Hā'il**. This is a valley about 1 m. broad, which holds running water (according to native reports) at times of excessive rain. Its bed is about 50 ft. below surface of the plain; its sides slope at about 1 in 60. Its course is from NE. to SW. According to native reports it begins at hills to the NE. and runs for a day's march (say 40 m.) to the SE. of the present track. Also according to native reports (a) water can be obtained at 4 ft. below the surface but is very brackish, (b) there is a well of bad water in the wadi about 4 m. SE. of the point at which the track crosses.
- From the wadi NW. by W. (300°) over rolling stony downs, grazing improves.
- 139 Eight wells, 10 ft. below surface of plain, with good water, slightly salt. From the wells W. (270°) up a long broad valley, running E. and W., bordered on S. by edge of the downs, on N. by salt hills.
- 167 From here WSW. (250°) follow the course of the valley.
- 183 Turn SW. (220°) to S. border of valley.
- 196 The downs bend away to S., and valley ends. From here SW. by W. (240°).
- 212 Track joins the Deir ez-Zor—Tadmor route. (See *Route 54*, m. 103.)
- 228 **Tadmor.**

ROUTE 54

DEIR EZ-ZOR—DAMASCUS

Authorities:—Oppenheim, *Vom Mittelmeer zum Persischen Golfe*, journey in 1893; Lady Anne Blunt, *The Bedouin of the Euphrates*, journey in 1877; *Military Report on Syria*, part ii, sources of 1900-10; E. Sachau, *Syrien und Mesopotamien*, journey in 1879; oral information.

This is a portion of the regular caravan route between Baghdad and Damascus, both goods and passenger traffic between these two places being fairly regular. Caravans cross each way every 40 or 60 days. The present route occupies about 100 hours. According to a consular report of 1911 the Euphrates is left at Meyyādīn, whence one goes direct to Bīr Qabāqīb; others, however, make Deir ez-Zor the point at which the river is left. The latter is accepted here as the beginning of the route.

The caravan route across the desert consists of narrow footpaths worn by the feet of camels, and of these there may be a dozen or more at varying distances from one another. In the neighbourhood of brooks or settlements these paths may become hundreds in number.

The route goes over the Hamād, the 'hard stony desert' which extends from the Euphrates Valley and the mountains of Haurān in the N. to the oasis of El-Jauf in the S., crossing rather hilly country with numerous more or less independent parallel chains running from NE. to SW.

Generally speaking, the Hamād sinks from W. to E. towards the Euphrates, and also occasionally inclines towards the S. as in the NE. part. These are accordingly the directions taken by the numerous wadis by which it is intersected. The water from these numerous slopes and wadis is gathered partly in natural pockets or depressions (*radīr*), where it soon evaporates. Partly, however, it is collected in a few larger rain brooks, as in the Wādī Ghareh and the Wādī Haurān, which flow into the Euphrates. In winter and spring, during and after the rainy season, the steppe which constitutes a considerable part of the route has numerous Arab camps, and herds of gazelles may be seen. As the vegetation withers the Arabs draw nearer the cultivated districts and are followed by the gazelles, and the Hamād becomes a desert or desert-steppe in which water is only to be found in a few springs or in a few artificial cisterns or draw-wells. On account of the scarcity of water and the likelihood that marauding parties of Arabs may have been attracted to the few watering-places, the Hamād is seldom traversed by caravans in summer.

Miles from
Deir ez-
Zor

- 0 **Deir ez-Zor.** The stretch from Deir to Sukhneh takes about 18 to 24 hrs. going. It is regarded as dangerous, as the traces of the route to be followed may be obliterated rather easily from the hard soil.
Route turns S. to ascend steeply to the edge of the desert-plateau.
- 5 $\frac{1}{4}$ Reach the level of the plateau. Track runs through a broad valley, **El-Melha** ('salt spring'), in which several wadis unite and run thence to the Euphrates.
- 7 $\frac{3}{4}$ Track emerges from the valley.
Tel Dimmeh to l. Water has been found here in several pools, but owing to evaporation it is salt and unsuitable for drinking.
- 8 Cross the **Wādi el-Kuseiyibeh**, and shortly afterwards two other wadis.
- 12 Cross two wadis which unite on the r. of the track.
- 14 $\frac{3}{4}$ **Wādi el-Melha.**
- 17 $\frac{1}{2}$ **Wādi el-Ghir**; ruins of a khan on the side of a hill of the same name to l.
- 22 $\frac{1}{4}$ **Qabr en-Nasrāni.** Route goes for about 2 $\frac{1}{2}$ hrs. at first W. then WSW. over the gradually rising plateau.
- 31 $\frac{1}{4}$ **Qishlaq** of **Bir Qabāqib** (about 7 $\frac{1}{2}$ hrs. from Deir). Draw-well, a few paces from the *qishlaq*, over 65 ft. deep. The water is bitter, but more agreeable than the sulphur-tainted water found elsewhere, as at Sukhneh (see below, m. 81). The *qishlaq* is a small building with a small court, and shelters about twelve soldiers. The gypsum formation which extends from the Tigris and Euphrates ends here.
Route begins to descend from the plateau and crosses a depression known as Fedat Qabāqib.
- 42 $\frac{1}{4}$ Cross the **Shu'eib ed-Dufeini** (Dufein). Cross the **Wādi Dufeini** (?). To the r. of the route there is said to be a well called **Bir el-Quteibeh** in a cleft at the foot of the **Jebel el-Kutebat** in which the wadi begins. Track now runs almost SW.
- 45 **Bir Qabāqib** disappears from view. Route now lies across a broad depression; **Jebel el-Murabba'** and **Jebel el-Heil** a long way to l.
- 55 $\frac{1}{2}$ **El-Muheifir.** This place is about half-way between Qabāqib and Sukhneh (see below). The Turkish Govern-

Miles from
Deir ez-
Zor

- ment about 20 years ago made unsuccessful efforts to sink a well near here, making borings to a depth of 200 ft. The borings lie about 3-4 m. behind a depression called **Ghadir et-Teir** (alt. 1,650 ft.), which holds much water in the rainy season. The brooks which probably existed here earlier are now obliterated.
- 59 Hills to r.; the **Jebel el-Beshri** gradually approaches the track, and comes to an end.
- 62½ **Jebel el-Buweib** to l.
- 65 **Jebel en-Nejib** to l., said to contain water-holes.
- 66½ First peak of a line of hills begins on the r. running WSW. It is of a red colour and is part of the **Jebel ed-Duweihik**.
- 68½ Second peak begins on the r.
- 75 End of the **Jebel ed-Duweihik**.
- 77 **Tel el-Mayyāleh** on the l. The track now runs across country open to the S., and bounded on the N. by a ridge, fairly steep in places, called the **Jebel Dhahik**.
- 81 **Sukhneh** ('the Warm'), alt. 1,640 ft. Wells and *qishlaq*. About 100 houses, a number of which were empty in 1899. The place gets its name from the sulphur wells close to it. The water acquires a very bad taste after standing, but is still drinkable. Pools have formed in the neighbourhood of the wells, and in these the inhabitants bathe; in some of these there may be leeches. A town has existed here since ancient times but has dwindled owing to migrations to Aleppo, Homs, Hama, or Deir, and through the growing commercial importance of Deir, where most of the desert trade is now concentrated. The present inhabitants live in a very poor way, being scarcely able to raise enough grain for their own consumption. The *qishlaq* is a large fortified post with a strong garrison. 10½ hrs. by carriage from Bir Qabāqib.
- Routes* from Sukhneh (1) to Aleppo, which goes off NW., crossing the saddle 13 m. from Sukhneh between **Jebel el-Mukeibireh** on the NE. and **Jebel Dabbas** on the SW. (2) To Raqqah directly N. by Et-Tayyibeh and Resāfeh. (3) The present route to Damascus.
- 82¾ **Wādi el-Kebīr**. Route now has **Jebel Dhahik** on the N. and the hills known as **Tulūl el-Qubbeh** on the S.

- Miles from
Deir ez-Zor
- 86 $\frac{1}{4}$ Pass a ruined *Qubbeh* or shrine, from which the Tulū el-Qubbeh get their name.
- 87 $\frac{1}{4}$ **Khān el-Khuleilāt** on the l.
- 90 $\frac{3}{4}$ Pass a rectangular water reservoir 20 to 30 ft. square. Mound and ruins on r., remains of a Mohammedan settlement.
- 97 $\frac{3}{4}$ Cross the **Wādi er-Ramāmīl**.
- 99 $\frac{1}{2}$ Cross the **Wādi et-Tumeid**; ruined khan of the same name to r. of route.
- 101 $\frac{3}{4}$ Reach the edge of a basin in which Ereḳ lies. Track changes direction from SW. to SSW.
- 103 **Ereḳ**. Village of 15 to 20 Fellahin families, lying in a small basin surrounded by low hills. At a short distance to the NE. there is a *qishlaq* on rising ground. As the single well lying N. of the *qishlaq* has very little water, the settlement can never be large. The water is sulphurous, but not to the same extent as at Palmyra. There are some small vineyards and patches of cultivated land. Ereḳ is 5 $\frac{1}{2}$ hrs. by carriage from Sukhneh. A track E. across the desert to Abu Kemāl (see *Route 53*) leaves the Deir—Damascus route near Ereḳ. **Jebel el-'Amr** is to N. of route, 5 m. distant.
- Track now runs due W. Cross three wadis.
- 109 $\frac{1}{2}$ Pass ruins of khan called **Qasr el-Ahmar**, at the foot of the **Jebel et-Tuleituweh**, which now changes its name to **Jebel el-Qatār**.
- 110 $\frac{1}{2}$ A depression in the hills to r. Behind this depression there are said to be springs called '**Ain el-Qatār**, and farther N. another well, called '**Ain el-Milah** ('salt-spring').
- 113 From here Tel Fira lies due S., a long distance away, and further S. the **Jebel el-Ghurāb**, not far from the Hit—Damascus route.
- 118 **Tadmor** (Palmyra). Pop. 1,500, sedentary Arabs of various tribes. They have little part in the caravan trade from Deir to Damascus, being practically confined to a share in the transportation of salt and potash. They also cultivate fields to the SE. of the city and work at the exploitation of the salt lake or marsh called **Sabkhah** or **Mamlahah** which lies about 2 m. out in the desert and about 4 m. from the city. It is about

Miles from
Deir ez-
Zor

4 to 5 m. long and $\frac{3}{4}$ of a m. broad, and lies in a flat depression between the city and the desert plateau. The salt, procured by evaporation, is very fine. There are several small watch-houses on the shore of the lake. The greater part of the inhabitants now dwell within the protecting walls of the ancient Temple of the Sun. To the NW. of this temple a barracks has been built and, as a result of the security afforded, the town has grown to the E. and N. There is a school. The Mudir resident here is under the Mutessarif of Deir. Tadmor had formerly, despite its small population, a thriving market which provided the Arabs of the desert with necessaries. This business has now gone to increase the prosperity of Deir.

Water-supply from a single well. Time from Erek, $3\frac{1}{2}$ hrs. Many of the pillars of the ancient city are standing and some walls and towers are in very fair preservation.

From Tadmor there are two or more tracks to Damascus.

- (i) By **Qasr Hāzim** and **Bir Zobeideh**, the most direct but least known route.
- (ii) By **Qaryatein** and **Nabq**. This is said to be the regular caravan route. (For alternative to the stage as far as Qaryatein see *Route 58 a.*)

ROUTE (i).

- Track runs apparently SW. or SSW.
- 133 Several deep wells called **Bir Sakr** (1878).
Ruined tower called **Qasr Hāzim**.
Track runs SW. up a wadi between two well-marked ridges, passing after some miles a ruined khan called **Halbeh**.
- 161? **Bir el-Buseiri**, well of good water, 60 ft. below the surface.
Track now passes between two high hills, **Kökleh** to r. and **Rummākh** to l.
On this stage some water-holes are passed.
- 191? Camping-ground in this neighbourhood. There is a spring of good water called **Bir Zobeideh** in the **Jebel Rank** which bound the plain to the N. (1898).
Track approaches the hills, which it skirts.

Miles from
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Zor

212 ?

Khān Abu esh-Shāmeḥ. (For the rest of the route see
Route 52, m. 322½.)

247½ ?

Damascus.

ROUTE (ii).

This route continues over the plain of Palmyra and then enters a pass-like depression called the **Wādi el-Qubūr** between the **Jebel Hayyāl** on the l. and the **Jebel Marbat 'Antar** on the r. The pass has funeral towers and monuments on each side. Hence its name, which means 'the valley of graves'.

Route now traverses a great sandy plain called **Wijan er-Raml.**

124

Abu Fawāris, place where water may be found.

132

'Ain el-Beidhā, well and watch tower (*qishlaq*) accommodating twelve men. The well is about 50 ft. deep and has plenty of water, which is, however, strongly impregnated with sulphur. A military report of 1911 makes no mention of this well, and it is possible that only animals can drink the water.

Time from Tadmor, 5½ hrs. Route to Homs, *Route 58 c,* diverges here to r. The present route turns SW.

151

Khān el-Libn, ruined khan with the **Jebel Abyadh** on the l.

157

Cross the small **Wādi el-Muteireh.**

170

Qasr el-Heir, ruin, with square tower and part of portal apparently of Roman times. Many architectural remains in neighbourhood. To the N. are the remains of a reservoir and aqueduct running from SSW.

Water may be found in the vicinity. If none is to be had here a detour might be made to **'Ain el-Wu'ul,** 10-12 m. SE.

174

Cross the broad **Wādi el-Kebir.**

188

W. boundary of a district called **Arḍh er-Raudheh** district. Signs of cultivation. Track now runs W.

191¼

Qaryatein (i.e. the two villages, but no division into two is visible). Alt. 2,460 ft. The houses are so close together that their outer walls unite to form as it were a town wall, which, on the E. side, towards Palmyra, actually possesses a gate. The population numbers

Miles from
Deir ez-
Zor

between 1,200, and 1,500 most of whom are Moslems. There are, perhaps, 500 to 600 Jacobite Christians, having their own priest and church. Christians and Mohammedans live very peaceably together. There is a mosque with minaret. There are 16 wells with abundant water. Potash is manufactured here and sent to Damascus. Time from 'Ain el-Beidhā, $9\frac{1}{4}$ hrs.

From Qaryatein there are tracks:—

- (1) The route detailed below to Damascus by Nabq.
- (2) To Homs. See *Route 58 a*, m. 64.
- (3) To Damascus by Quteifeh.

This track runs SW. through treeless and uninhabited country in which no water is to be found till 'Atneh is reached, 38 m. from Qaryatein. 3 m. farther on is **Jerūd**, a village of 2,000 inhabitants in a fertile and well-cultivated plain, with large salt marshes near. After another $7\frac{1}{2}$ m. **Enheibeh** village is passed, where there are remains of substantial masonry aqueducts, and, 2 m. farther on, **Quteifeh**, on the Homs—Damascus road, which is then followed.

- (4) Cross track to join route (i) from Tadmor to Damascus.

This was followed by a traveller in 1898 in order to avoid robber-bands of nomads and is not a regular track. It runs ESE., rising fairly steeply on to a plateau, passing a ruin on the edge of the plateau and reaching a chalk ridge called **Jebel el-Hufeir**, in the neighbourhood of which, to E. of the track, there is said to be water. The track then turns in a southerly direction over fairly level ground between hills, gradually changing direction to SW. and reaching **Bīr Abu 'l-Hayāyeh**, where there are several large deep wells, at about m. 30 from Qaryatein. From there the direction again changes to SE. to **Bīr Zobeideh**, about 10 m. farther on. See route (i), m. 191 above.

A motor has been used hence to Damascus; exact route not specified.

Track runs W. across the plain on leaving Qaryatein.

Pass a ruin said to have been formerly a military post.

Cross an ancient aqueduct.

Ascend from the plain of Qaryatein to a plateau.

Several peaks to the l., about 1,000 ft. above the plain, the beginning of a range which gradually approaches the track.

Mahīn village with spring and brook on the W. side. The water tastes slightly of sulphur. About $3\frac{1}{2}$ m. N. of Mahīn there is a wadi with a spring of good water.

195 $\frac{1}{2}$

195 $\frac{3}{4}$

198 $\frac{1}{4}$

203

203 $\frac{3}{4}$

Miles from

Deir ez-Zor213 $\frac{3}{4}$

Isolated hill on r. In the neighbourhood of this hill there is a spring called '**Ain Erkhebeh**.

217 $\frac{1}{4}$

Cross a water-channel, about 30 paces long, in a depression along which the track runs. The water in this channel loses itself in the ground.

The direction of the track is now WSW.

225 $\frac{3}{4}$

Deir 'Atiyeh. Cultivated ground with vineyards and gardens. An American Mission has for many years had a school here.

Excellent water from a brook.

Track now runs SW. across undulating desert which rises gradually towards a range of hills on the l.

231

Nabq, springs. Village about $\frac{1}{2}$ m. to E.

The track now follows the Homs—Damascus road.

280

Damascus.

ROUTE 55

RAQQA—HAMA (166 $\frac{1}{2}$ m.)

Via RUSAFEH

Authorities:—J. Östrup, *Hist.-topogr. Bidrag til Kendskabet til den syriske Örken*, journey in 1893; M. Hartmann in *Zeitschr. des deutschen Palästina-Vereins*, vol. xxiii, journey in 1880; Sarre and Herzfeld, *Archäol. Reise im Euphrat- und Tigris-Gebiet*, journey in 1907.

This route crosses to the r. bank of the Euphrates, and follows the Baghdad-Aleppo caravan route for 16 m. It then turns S. towards Rusafeh and from there in a general SW. direction to Seriyeh.

To Seriyeh, 83 m., the route goes over land that has always been desert, the saltness of the soil preventing cultivation; the few watering-places on this stretch yield water with a salt taste naturally less noticeable after a heavy rainfall. Beyond Seriyeh the direction is generally WNW. or W. to Anderin, and the country through which the track lies formerly supported a fairly dense population; but it has been out of cultivation for centuries. From Anderin the general direction is SW. From Seriyeh to beyond Anderin there is good grazing ground, and the pastures between these places are among those most frequented by the Bedouin.

Miles from
Raqqah

- 0 **Raqqah.** For the first 16 m. see *Route 46*, m. 410-426.
- 16 **Tel eth-Thedeyein.** Route strikes S. The distances from this point are rather uncertain, and in a good many cases taken from maps.
Route follows a shallow depression called **Silat eth-Thedeyein.** Water, probably brackish, might be got by sinking wells.
- 36 **Rusafeh,** the ancient Sergiopolis (St. Sergius martyred here, 300 A.D.). Rusafeh, formerly of great importance, is now ruined and almost abandoned owing to scarcity of water. There are no springs, and the subsoil water is 230 feet below the surface. It is now the head-quarters of the northern Anazeh. The chief ruins are those of a large building surrounded by a wall originally 25 ft. high which has hardly anywhere retained its original height. Outside is an earthen rampart 20 ft. from the wall. The W. side of the rampart has two towers. The outer wall of the ancient town, which, like a large part of the buildings inside, is built of stone blocks, was furnished with a chain of large and small towers interspersed (20 large, 9 small), those at the four corners round, the rest square. Inside is an arcade formed by the wall and a line of pillars which runs the whole length of the wall. Here and there are cross walls forming small cells. The outer wall is loopholed, and is on the whole well preserved, with the exception of a large breach on the E. side. The ground within the wall is higher than that outside. Within are ruins of churches and other buildings. In the SW. corner are six large cisterns, now dry.
Track now runs WSW. over country level or intersected only by low hills. The map illustrating the route of the traveller who crossed this stretch of country in 1895 shows considerable windings, of which no indication is given in his text.
- 55 Cross a low range of hills, the **Jebel Khuraibeh.** ? Wells or pools on l.
- 69 **Khirbet el-Fārih ez-Zeireh,** ruins of a fortified cistern. Three old wells, quite dry. A few miles from this place the track runs through some low hills, the **Jebel Seriyeh.**
- 83 **Seriyeh** (Serianeh), reached through a narrow pass. The place is practically uninhabited. Ruins of a stone wall

Miles from
Baqqah

with traces of its foundations enclosing remains of a well (dry), and some buildings. Outside the wall are remains of pillars and rough hewn stones. Dry well to N. Other ruins SW. A report of 1875 says that a well in the plain to SE. had been cleared by the nomads, and afforded excellent water.

From Seriyeh a track runs SW. towards Selemiyeh, passing after about 20 m. **Bugheidid**, where there is water, and 4 or 5 m. farther on **Es-Sa'an Ummes-Su'ein**, two springs. This latter place is said to lie about 12-15 m. S. of Anderin, and 6-8 m. E. of Qasr Werdan (see below).

The track appears now to run between NW. and WNW.
? Water-holes.

98
107½

Bir Abu Daruk, well.

About 3½ m. S. of Bir Abu Daruk and 6½ m. from Anderin (see below, m. 114) lies the ruin-field of **Khirbet el-Matrān**. There are here the ruins of a town, the inner fortifications of which show the same characteristics as those of Rusafeh. Instead of the usual cisterns or wells there is a number of large stone basins which have served to collect rainwater.

To S. are ruin-mounds, and there are similar ruins reported about 4 m. farther S.

114

Anderin, the ancient Androna. Within a long rectangular wall, rounded at the corners, are the ruins of a few cisterns and churches. The most important are those of a basilica on the S.

A track here branches off NW. to El-Kharāyij, about 9½ m. distant (see *Route 57* under m. 96), passing a good many traces of ancient water channels.

Track now runs SW. and SSW. over quite flat country which seems to have been cultivated in earlier times. Ruins passed are **Khirbet el-Majūs** and **Khirbet el-'Abd** on the r., and **Khirbet Suhah** and **Khirbet el-Khanzir** on the l. From the track the line of hills called **Resm el-Humeireh** is visible to N., and to NE. the **Jebel Halawān**.

127

Qasr Werdan, ruins.

From here a track runs SW. to Selemiyeh and thence to Homs or Hama. Cultivation begins on this track at about 6½ m. from Qasr Werdan. The inhabitants are mainly Circassians, living in villages of beehive-shaped huts. **Selemiyeh** lies about 25 m. SW. of Qasr Werdan. It is a modern Turkish village on the site of the

<p>Miles from Raqqah</p>	<p>ancient Salaminius, with a few thousand inhabitants, and is the seat of a Mudir.</p>
<p>131½</p>	<p>Cross a ridge.</p>
<p>134</p>	<p>Tel el-Malih. There is water here.</p>
<p>137½</p>	<p>Here a cross track branches off to join that to Selemiyeh (see above), passing after some miles Tel esh-Sheyib, where there is an abundant supply of good water.</p>
<p>142¼</p>	<p>'Ain el-Hamreh, springs.</p>
<p>145</p>	<p>Abu'l Gndūr village, at the foot of a hill. Ruins called El-Anzeh.</p>
<p>153</p>	<p>Wells.</p>
<p>166½</p>	<p>Hama.</p>

ROUTE 56

RUSAFEH—SUKHNEH (53 M.)

Authorities :—J. Östrup, *Hist.-topogr. Bidrag til Kendskabet til den syriske Örken*, journey in 1893; *Geographical Journal*, vol. xxx.

This is a desert track without supplies of any kind.

<p>Miles from Rusafeh</p>	<p>0</p> <p>Rusafeh. Route goes in general direction S. over absolutely flat country. There are no permanent villages. The country is in the hands of Bedouin belonging to the independent and warlike tribes of Fed'an and Sbah (1893). After some miles the ruins of a tomb on the l. are passed. On the r. are hills, Simlet en-Na'am, which are continued to the S. in the Jebel Mumqabareh. Beyond the former is Tel el-Faddeh. Farther W. is the Jebel Muhr, beyond which is a place called Abu Fejjād, where coal was formerly worked in primitive fashion by the Bedouin.</p>
<p>30</p>	<p>'Ain el-Qom, a wretched village of about 30 houses, some domed. These houses are constructed of sun-dried bricks, and have neither windows nor chimneys. Abu Chamis, sometimes marked as the name of this village, is really the name of a Bedouin tribe living between Et-Tayyibeh (see below) and the Euphrates. The ruins of Nedewiyeh are about 5 m. NE. of 'Ain el-Qom. The Jebel Munshar extends parallel to the route from here, and continues farther S. in the Jebel Dhahik.</p>

Miles from
Eusafeh
37½

Et-Tayyibeh, an insignificant village of about 30 houses on a small hill. The houses have their backs to an encircling wall, leaving an open space in the middle, in the centre of which rises a watch tower, about 17 ft. high, which has preserved its old stone door. An early account speaks of a spring, rather hot, with a slight mineral taste, near the E. gate. Due W. of the village is a solitary and steep hill with a monument to Sheikh Ibrahim, the local saint. About 8 m. E. are the ruins called **Qasr el-Heir**, consisting mainly of two large stone-walled quadrangles, the larger 200 paces square, the smaller 90-100. The walls are about 40 ft. high and 12 ft. thick, and are specially well preserved in the smaller enclosure, which has lost only one of its original 12 towers. A well is spoken of, but no indication is given as to whether it contains water or not, and an old account speaks of an aqueduct from the hills on the r.

Tract now runs S. by W.

53

Sukhneh.

ROUTE 57

SUKHNEH—ALEPPO (139 m.)

Authorities:—E. Sachau, *Syrien und Mesopotamien*, journey in 1879; Th. Bischoff's map in Sachau (see App. to Oppenheim's *Vom Mittelmeer zum Persischen Golfe*, vol. ii).

This track appears to have been little used. Over most of the route there are no supplies, and water is scanty and often bad, but conditions improve as Aleppo is approached.

Miles from
Sukhneh

0

Sukhneh. The track runs in a general NW. direction, curving at first round the base of the Jebel Dhahrk to the l. For about 20 m. it crosses undulating country with low hills to l., and many terebinth trees, which the nomads in winter use for firewood. Farther on large pistachio trees are met with.

33

Jubb Kedem, spring with bad, sulphur-tainted water.

35

Cross the **Wādi Fasākeh**.

40½

'Ashīqah, ruins. Many dry wells and traces of gardens and vineyards.

Miles from
Sukhneh
42½

Cross the **Wādi Heibekeh**, and reach three wells in the plain. These wells were formerly covered up, but one was reported in 1875 to have been cleared by the Arabs and to afford excellent water.

59 **Serīyeh**. For description see *Route 55*, m. 83.

77 **'Ain ez-Zarqā** ('Blue Spring'), in a chalk and limestone depression. Water rather bad.

79 **'Ain ez-Zareqā**, well. Rather better water.

'Ain el-Ghazal ('Gazelle Spring').

81 Ruins of a solitary building, perhaps a church or monastery.

88½ **Khunāsareh**, ruins lying in a plain 6-9 m. broad bounded by two parallel ranges of hills, the **Jebel Shebet** on the E. running from SSE. to NNW., and the **Jebel el-Hass**, which runs N. and S. on the W. The buildings generally are of basalt from the **Jebel el-Hass**, but white marble columns are to be seen.

96 The place must formerly have been very well supplied with wells, but only two or three are now in use. The water is good, without any brackish or bitter taste.

A track here branches off to the l. crossing the **Jebel el-Hass** after about 2 m., and about 7 m. farther on **Er-Ramleh**, a camping-ground with wells. A salt-marsh is then passed, and the camping-ground of **El-Kharāyij** reached about 20 m. from **Khunāsareh**. The general direction of this track then changes from SW. to SSW. Various nomad encampments are then passed, and **Tel Halāweh** reached about 32 m. from **Khunāsareh**. For some miles before **Tel Halaweh** is reached there is abundant water along the track, which still continues SSW. through country well supplied with water, passing **El-Hawāyis** after 4 m. and striking *Route 55* (m. 114) at about 42 m. from **Khunāsareh**.

The track now runs NW. across the plain. The most direct route after about 7 m. passes **Jubb el-Weshshāsh**, a well on the S. slope of the **Jebel el-Amīri** and so on to **Bīr el-Amīri**, on the other side of that range. The regular track, however, branches off, apparently before **Jubb el-Weshshāsh** is reached, and leads round the **Jebel el-Amīri** on its E. side.

106½ **Bīr el-Amīri**, well, on the N. side of the **Jebel el-Amīri**. Ruins on the slopes. This place stands about 400 ft. higher than Aleppo.

The track now runs through the most easterly of the 5 valleys which run from S. to N. between the parallel ridges of the **Jebel el-Hass**.

Miles from
Sukhneh

- 110 **El-Bekkūreh**, ruins on the r.
- 112 Emerge on to the plain from the foot-hills of the **Jebel el-Hass**.
- 113 **Khirbet 'Annazi**, ruins on the l.
- 114 $\frac{1}{4}$ **Tel Annazi**. From this point **Sheikh Juneid**, a small village, lies to E., and near it to the S., **Higleh Jefreh** village is about 5 $\frac{1}{2}$ m. NE., and **El-Guthin** about 2 m. N.
- 115 Ruins.
- 117 Ruins called **Es-Semmūgeh**, of basalt from the **Jebel el-Hass**.
- 120 $\frac{1}{2}$ **Tel Hibr** on the r. **Tel Abu Jeren** about 5 m. to E., and E. of it **Tel 'Agrabus**, with village, and still farther E. **Tel Abu Derīheh**, also with village. **Jebbul** village to NE.
- 121 $\frac{1}{2}$ **El-Mellūhah**, ruins.
Track now good. Direction still NW. through cultivation.
- 123 $\frac{1}{2}$ **Safireh**, large Moslem village.
District fertile and well cultivated.
- 125 **'Ain Safireh**, spring in a hollow. The overflow runs E.
- 127 **Tel 'Arah** village on a mound $\frac{1}{4}$ m. to r.
The NW. extremity of the **Jebel el-Hass** is here about 3 $\frac{1}{2}$ m. W. It is continued to the N. in the ridge called **Tel Shureib**.
- 127 $\frac{3}{4}$ **Tel Hasil** village. Numerous villages to E. and N.
- 129 $\frac{3}{4}$ **Tel Shureib** village, at the foot of the ridge of that name to the W.
- 130 $\frac{1}{2}$ End of the **Tel Shureib** ridge about 7 m. to W.
- 133 **Nirab Haleb**, small village.
Jebrīn village about 2 m. to N.
Tiyāreh village about 3 $\frac{1}{2}$ m. NE.
- 134 $\frac{1}{4}$ Vineyards and olive groves begin.
- 139 **Aleppo**.

ROUTE 58 a

TADMOR—HOMS (121 $\frac{1}{2}$ M.)

Via QARYATEIN

Authorities:—E. Sachau, Syrien und Mesopotamien; Military Report on Syria, part ii.

There is very little water on the first stage of this route, and the ground in places is made difficult by the burrows of jerboas, into which animals often sink up to the knee.

The more usual track as far as Qaryatein seems to be that described in *Route 54*, under m. 118 (ii).

Miles from
Tadmor

- 0 **Tadmor.** Track crosses the ruin-field and goes over the hills that bound it on the W., descending slightly till the level desert is reached. General direction SW.
- 32 **'Ain el-Wu'ul.** There are reported to be leeches in the water of this well.
- 39 Track now runs along the foot of the **Jebel el-Wu'ul.** End of the **Jebel el-Wu'ul.** In the narrow valley between this range and the next, called **Jebel el-Bardi**, there is a very well-preserved ancient dam, built of irregularly hewn blocks and bound with mortar. It is 10-15 ft. thick and in places 50-60 ft. high, stretching right across the valley, which forms a water-basin, though there was no water in it in October 1882.
- 46 Track now passes a low hill, broad on top, which forms the N. end of a ridge which the route skirts for some distance. Direction bends from SW. to about W., with a gradual descent.
- 50 Track leads over a ridge.
- 64 Track leads over a second low ridge.
- Qaryatein.**
- Track now apparently follows that of *Route 54* (section ii, m. 191 $\frac{1}{4}$ -203 $\frac{3}{4}$), turning N. at Mahin.
- 78 **Hawārīn**, large Moslem village with ruin-field to E. and SE. Gardens and fields and plenty of excellent water. About 1 $\frac{1}{2}$ m. N. is the **Wādi el-Karm** ('wine valley'), and 1 $\frac{1}{2}$ m. farther **Mezra'at el-Karm** ('wine field') with a spring of good water. 10-11 m. farther N. is **'Ain el-Ghuntur**, a village with a small spring of water which remains good at all seasons.
- 85 **Sadūd**, head-quarters of the Jacobite Church in Syria. Stream on the W. side of the town.
- 91 Track now runs over several ridges.
- 92 Cross a depression with a limestone quarry.
- 97 Spring beside the track.
- Hāsiyeh** (Iki-Qapulu), Moslem village of fifty well-built stone houses on the Hōms-Damascus road. Ruins of a large khan to r. Water from a large *karez* from the E. which flows into two masonry-lined ponds 30 yds. square close to the road.
- 121 $\frac{1}{2}$ **Homs.**

ROUTE 58 b

TADMOR—HOMS (102½ m.)

Via ALA HALIYET

Authorities :—Vignes, *Voyage à la Mer Morte* (De Luynes), 1864; Černik (1873) in *Petermanns Mitteilungen*, vol. x; Moritz in *Abhandlungen der Akad. der Wissenschaften*, 1889; Oppenheim, *Vom Mittelmeer zum Persischen Golfe*, journey in 1893.

This route was during last century a more regular caravan route than that described in *Route 58 c*, being somewhat protected by the nature of the ground from attack by Bedouins.

Miles from Tadmor	
0	Tadmor. The track follows that to Qaryatein (see <i>Route 54</i> , m. 118, ii).
2¼	Strike off to the r. from the Qaryatein track. Direction NW. by N. (322°). Track now runs across a plain bounded to N. by the <i>Jebel Wassheh</i> .
6¾	Cross a range of hills. The beaten track now runs 40° W. of N. towards the <i>Jebel Abyadh</i> . Present track runs NW. by W. (298°).
15¼	Reach the foot of the hills and enter a large ravine.
21	Reach a small plain, in the middle of which is Jisel , a large well of foul water. Present track rejoins the beaten route, which now runs NW. by W. (305°), with the <i>Jebel Abyadh</i> on the r. and the slopes inclining towards the great plain between Tadmor and Qaryatein on the l.
23¼	Pass the remains of huge tombs attributed to the legendary giants <i>Beni Ghilal</i> .
24¼	Reach the caves of Ala Haliyet in the side of the hill on the r. These are chambers carefully hewn in the perpendicular face of the hill, which is here of white calcareous rock. Part of the chambers may have been tombs, but some seem to have been used as dwellings, as there are two huge cisterns excavated in the rock and cemented on the inside.
	The plain now narrows to a ravine through which the track runs W. by N. (285°).
24¾	Begin to ascend by a zigzag path, occasionally difficult.
26	Reach the summit. The <i>Jebel Wassheh</i> is now SW. by W. (236°).
	Track now follows a valley with the <i>Jebel Abyadh</i> on the r. and the slopes towards the great plain on the l.

Miles from
Tadmor

- 32 End of the **Jebel Abyadh**. Track now very monotonous, running across a plateau with light-coloured surface. General direction W. by N. (276°).
- 47½
50 White hill called **El-Heimeh** ('The Tent') on the r. Tel called **Ghur Buto Ala** with tombs and ruins on the l. Ground now becomes more broken. Track crosses several hills. On the r., about 3 m. distant, a low range of hills running from E. to W. On the l. the more considerable range of **Jebel Tofhah** running SW., till after a short distance it sinks into the plain.
- 55 Small plain surrounded by hills. No water. Track now crosses undulating country. General direction W. by N. (280°).
- 59 **Jubb Hābil**, well with a little water on the r. Track runs through the middle of a broad valley with the **Jebel Shumriyeh** ridge on the r. General direction now SW. (230°).
- 62 Track emerges from the valley. Ruins of a village, **Khirbet Euboulia**, on the r. Pools may be found here.
- 66 Two wells in the middle of ruins called **Jubb Hāmet en-Nasif** near the track.
- 71½
73½ Track crosses a valley running SSE. Pass through a ruined village called **Shumriyeh**. Track now enters a ravine, the **Jebel Shumriyeh** forming the r. slope.
- 81½
82½ **Shekiyeh**. Small pool infested with leeches. *Route 58 c* here joins the present route. Track now runs across a great plain, after which it crosses a range of hills, then descending into a broad valley with plenty of water.
- 89½ **Aifir**, camping-ground in the valley, with wadi and water. Alt. 1,640 ft. The water tastes abominably, being merely a pool which has formed under an overhanging cliff, and swarms with life. The neighbouring country rises in hilly undulations, with saddles and wadis. A broad level terrace rises towards the steep foot of the **Jebel Sovan** on the S. Track now rises out of the valley on to a plateau from which the citadel of Homs may be seen. General direction W. by N. (280°). Descend into a broad valley running N.

Miles from
Tadmor

91 $\frac{3}{4}$	Tel Batiyeh , ruins of a village at the foot of a mound. Emerge from the valley.
94 $\frac{1}{2}$	Zukereh village. Alt. 1,450 ft. Cultivation now begins. Soil chiefly clay or marl with layers of gypsum. Some sugar plantations.
96 $\frac{1}{2}$	Tel Kuleif village on the l.
99	Zeideh village on the l.
102 $\frac{1}{2}$	Homs .

ROUTE 58 c

TADMOR—HOMS (78 $\frac{1}{2}$ m.)*Via* KHIRBET EL-HANŪREH*Authorities as for Route 58 b.*

The first part of this track lies across the difficult waterless plain already spoken of in *Route 58 a*, and for about 18 $\frac{1}{2}$ m. follows that route.

Miles from
Tadmor

0	Tadmor . Cross a saddle (alt. 1,575 ft.) between the Jebel Senāyeh and Jebel ed-Dalaureh .
2 $\frac{1}{4}$	Track by the high ground (<i>Route 58 b</i>) branches off here.
6 $\frac{1}{4}$	Abu Fawāris (alt. 1,410 ft.), well in a basin surrounded by hills of respectable size. Cross a low saddle.
14	About here apparently the track leaves that to Qaryatein (<i>Route 54 ii</i>).
33	Leave the plain and enter a defile near the ruins of Khirbet ed-Dāhireh . Pass 6–8 summits to l.
35	Hajar ed-Duhūr ruins, alt. 1,870 ft.
40 $\frac{1}{2}$	Khirbet el-Hanūreh , about 2 m. to r. of route. Deep ravines. To E. the slope of the Jebel et-Tiyas culminates in an abrupt crest of 2,560 ft.
47 $\frac{1}{2}$	Khirbet el-Qa'ah , alt. 1,870 ft. Ruins. Track goes along a slope intersected with ravines and over a small saddle.
55	El-Perklus , spring. The water is reported to be very unpleasant and full of infusoria and other creatures. Remains of numerous walled terraces.
57 $\frac{1}{2}$	Es-Sebil ruins, with fine hewn stones. The whole region is said to show traces of former cultivation. One

Miles from
Tadmor

traveller reports having seen oil-presses of basalt, but this appears to be contradicted by another authority. There are no olives to be seen now.

58½

The track here joins *Route 58 b.*

78½

Homs.

ROUTE 59

TADMOR—SELEMĪYEH (78 m.)

Authority.—Sobernheim in *Zeitschr. des deutsch. Palästina-Vereins*, xxii.

A party of travellers in 1899 went from Tadmor to Selemīyeh by a route that does not appear to have been used before by Europeans. At about 6 m. from Tadmor they turned N., making a long *détour* behind the *Jebel 'Abyadh*, which would not be followed under normal circumstances.

About 28 m. from Tadmor the *détour* is ended, and from that point the route followed is fairly direct to Selemīyeh.

Miles from
Tadmor

0

Tadmor. From the beginning of the direct track the direction is NW. (The distances are measured from Tadmor, allowing 28 m. up to the point where the *détour* referred to ends.)

39

Cross the **Wādi es-Surra**, a water-course in a ridge of the same name.

The track then curves round the *Jebel es-Surra* in a northerly direction towards the *Jebel Bil'as*, which may perhaps be a part of the *Jebel es-Surra*.

49

Jebel Bil'as. From this point the general direction is W. by N. over alternating rolling and plain country.

56

Jebel es-Sued on the r.

62

Jebel es-Suha, a slight eminence in a district of the same name.

Beyond this cultivated land is reached.

70

Mufaggareh village.

73

Taltut village to l.

78

Selemīyeh.

GAZETTEER OF TOWNS

ALTUN KÖPRÜ ('Golden Bridge': called by Arabs El-Qantareh), on the Lesser Zāb River. Houses variously estimated at from 350 to 600. T. (Baghdad—Mosul line.)

River Route—For the navigation of the Lesser Zāb see *Route III F. Land Routes*—

- (i) The main **Baghdad—Mosul** highway runs through the town (see *Route 25 a*, p. 162). Besides this route across the Great Zāb to Mosul *via* Erbil, there are others direct to the Great Zāb, avoiding Erbil and passing no considerable town. These appear to be some miles shorter than the main route.
- (ii) To **Raniyeh** *via* Taktak and Kōi Sanjaq. (See *Route 40*.)
- (iii) To **Suleimāniyeh** *via* Kājār and the Baziyan Pass, over gravelly hills.
- (iv) To **Qal'ah Sherghat**. (See *Route 27*.)
- (v) Tracks lead down both banks of the Lesser Zāb to the villages in that region. The track on the r. bank is the better.

General Description.—The town stands on an island about $\frac{1}{2}$ m. long and $\frac{1}{4}$ m. broad in the Lesser Zāb. The direction of the river near here is from NE. by N. to SW. by S. The western channel is dry most of the year. In the h.w. season the water in the eastern channel may be 40 yds. broad and 10 or more ft. deep, but when the spring floods are over this branch becomes fordable above and below, but not at the town. It is crossed by a bridge of a single 60-ft. span, about 50 ft. above h. w. level, with some minor arches in the abutments. Owing to its steepness this bridge is difficult of ascent from both sides. The western channel is crossed by another bridge of 3 arches of about 20-ft. span each. It is less steep, but has a turn or elbow in the middle. It has a toll-station.

The walls of the outer houses of the town are built in continuation of a low cliff-face giving the appearance of fortifications. One long street runs through the town from the bridge. The T.O. is near the eastern end; then come the barracks, which are only occasionally occupied, and towards the western end a small bazaar.

On the E. side of the eastern branch is a suburb called **Mahalleh Sülāni**, consisting of about 70 houses of Arabs, Kurds, and others. On the W. side of the western branch there is another suburb called **Mahalleh Tis'in**, of about the same size, of mixed population. On the r. bank of the river nearly due S. of the bridge and a little below the junction of the two arms is a small mixed Turkish and Arab hamlet called **Kazābāshi**.

Supplies and Commerce.—There are about 50 shops. Trade is mostly in wheat and barley, which are exported and floated down the Tigris on rafts. There is a small export of wool and timber brought by river from the hills. Drinking-water is obtained from the river.

Inhabitants.—The inhabitants are mostly Turkomans, and there are also some Arabs and Kurds. They are reported to be not very well disposed to the Osmanlis. Turkish is the prevailing language.

ĀNAH, on the r. bank of the Euphrates, 119½ m. by river above Hit, and 192 m. below Deir.

Pop. : estimated in 1909 at 15,000 (2,000 houses). P.O., T., (Baghdad—Aleppo line). Ferry to the village of Rawā on l. bank ; *shakhtūr* ferry (for wheeled transport) below Ānah at Jumeileh.

River Routes—For communications on the Euphrates see *Routes IV, F, G*.

Land Routes—

- (i) **Baghdad—Aleppo** caravan road passes through Ānah. (See *Route 46*.)
- (ii) Track along l. bank of Euphrates up-stream to **Raqqah**. (See *Route 47*.)
- (iii) Track across desert to **Baghdad**. (See *Route 48*.)
- (iv) Track across desert to **Mosul**. (See *Route 50* (iii).)

General Description.—For the river see *Route IV F*, m. 117½ seq. Ānah comes next in importance to Deir ez-Zor among the towns between Aleppo and Baghdad. It lies among palm trees, and is a long, straggling town, consisting practically of a single street which extends for some 4–5 m. along the Baghdad—Aleppo caravan route. The road in the town crosses numerous water-channels by bridges that are rough for traffic. The houses are interspersed among gardens and date groves. The town has three mosques. On an eminence to N. of the town, close to the Euphrates, is a ruined castellated building, formerly a fort, built in the first half of the last century, to command the river approaches. The island of Ardešhīr or Lubbad and other

islands in the river opposite Ānah are cultivated and contain palm trees. On the l. bank opposite the upper end of Ānah is Rawā village with fruit-gardens and date groves. On the hill above are modern barracks (apparently defensible) called Qasr el-Zā'im.

Supplies and Commerce.—Before the present war all necessary supplies for a caravan could be obtained here. In the region of Ānah wheat and barley are cultivated, but there does not seem to have been in recent years any appreciable surplus for export. Dates, apricots, plums, figs, pomegranates, &c., are produced in the gardens of the towns. The live stock of the *Kaza* consists mainly of sheep. Water is to be obtained from wells, and also from the river.

Wool, butter, and dates were exported to Aleppo. Grain, soap, honey, and spices came down the Euphrates from Birijik. It was reported in 1911 that merchandise from Aleppo for Mosul was sometimes sent down the Euphrates by *shakhtūr* to Rawā opposite Ānah, and thence conveyed by camel to Mosul. Arab cloaks are manufactured here. It was estimated in 1909 (with regard to a projected railway) that 7,000 men and 8,000 women would be available in the district for labour.

Inhabitants.—The people of Ānah are mostly Sunni Arabs. A few Jews live in the southern end of the town. The boatmen of Ānah are famous for their knowledge of the Euphrates.

Administration and Authorities.—Ānah is the head-quarters of a *Kaza* in the *Vilayet* of Baghdad. There was a small Turkish garrison in the place.

'**AQREH**, about 40 m. ENE. of Mosul. Pop. 3,000 (1,000 houses).

Routes—

- (i) To **Mosul**. (See *Route* 45 a.)
- (ii) To **Zebān** and across the Great Zāb to Neri.
- (iii) To **Ashkān** and **Rowanduz** via Qandil ferry. (See *Route* 45 a.)
- (iv) To **Amadiyah** via Herin.

General Description.—The village stands partly on a steep col, connecting an outer and lower hill called Giri with a higher one on which is a prehistoric fort, and partly in two valleys which come down from the hills. These are called Gali Kānyarash and Gali Sheikh 'Abdul Azīz, and lie respectively E. and W. of Giri and the fort, uniting below Giri to form the Rūdbār Samileh, which is said to reach the Zāb at Zairāo below Garmak.

The Jewish quarter is on the l. bank of the western Gali, the Christian on the E. bank of the eastern.

Supplies and Commerce.—The town is supplied with water from some large springs, and there are streams in the neighbourhood. Some rice and tobacco are grown for local consumption.

Inhabitants.—The population is mainly Kurdish (another earlier account says Jewish), with 50 houses of Chaldaean Catholics, 10 of Jacobites, and about 20 of Jews. The Christian section of the population are blacksmiths, joiners, and artisans, and the Jews traders and weavers.

Administration and Authorities.—The place is the seat of a Kaimmakam under Mosul. In 1910 the Kaimmakam was 'Ali Niyāzi Bey, a native of Syria, and in May of that year an Anatolian battalion was in garrison here.

The chief Kurd in the hilly districts to the E. in 1904 was Hasan Agha, chief of the Zebari tribe.

BAGHDAD. (See vol. ii of this handbook, *Gazetteer of Towns.*)

DEIR EZ-ZOR, on the r. bank of the Euphrates, 192 m. above Ānah, and 115½ m. below Raqqah. Lat. 35° 20' N., long. 40° 11' E. Pop.: estimates vary from 12,000 to 22,000. P.O., T. (Baghdad—Aleppo line). Bridge, still incomplete at outbreak of the present war, but now reported finished: see p. 128.

River Routes.—For communications by the Euphrates see *Routes IV G, H.*

Land Routes—

- (i) **Baghdad—Aleppo** caravan road. (See *Route 46.*)
- (ii) To **Mosul** via 'Ain el-Ghazal. (See *Route 49 a.*)
- (iii) To **Mosul** via Beled Sinjar. (See *Route 49 b.*)
- (iv) To **Nisibin** via the Khabūr River.
- (v) To **Raqqah** and **Meskeneh** via l. bank of Euphrates. (See *Route 47.*)
- (vi) To **Ānah** via l. bank of Euphrates. (See *Route 47.*)
- (vii) To **Damascus**. (See *Route 54.*)
- (viii) To **Homs** via Tadmor. (See *Route 58 a.*)

General Description.—For the river and bridge see *Route IV G,*

m. 192. The town stands on rising ground above the river opposite an island. It is said to be comparatively European in appearance, having macadamized roads, public gardens, and street-lamps. It has one fairly broad straight street in which are the bazaar, three khans, and the government buildings. There were two Turkish barracks, and a civil and a military hospital here before the war. There is said to be good camping-ground W. of the town.

Supplies and Commerce.—In peace time all necessary supplies for caravans (including sheep, grain, fruit, and vegetables) could be purchased at Deir, but these seem to have been largely imported from other districts. It was stated in 1903 that there was no grain available for export grown in the country between Deir and Sabkhah. About 5,500 tons were imported from Birijik and about 1,600 tons from Najib and Sheikh Arūd. Vegetables and fruit were also imported. Cultivation, however, has recently been increasing in the neighbourhood. Sheep and other live stock might be obtained from nomads in neighbourhood. Good blood-horses. Water-supply from wells and river.

Deir is now a prosperous town, having revived with the increase of security in the Euphrates Valley. It is a meeting-place of trade routes: here the direct route from Damascus or Homs to Mosul crosses the Baghdad—Aleppo caravan route. The route Aleppo—Deir—Mosul has lately been more and more frequented. Here too the down-stream river-traffic from Birijik has its entrepôt, the merchants of Deir buying up the cargoes of the Birijik boats and re-exporting them to places further down the river. It was stated in 1903 that 150 boats annually left Deir for towns downstream. They mainly carried grain (about 700 tons). The same boatmen are not accustomed to navigate the river above and below Deir. There was a horse-market here in which good thoroughbreds were bought and sold. Manchester cottons, tinned food, fresh provisions, &c., were found in the bazaar before the war.

Inhabitants.—These are mostly town Arabs (Sunnis), and are said to be a very low class. There is a colony of Christians, mainly Syrian Catholics (Jacobite Uniates). There also are some Jews, some Armenians, and a Circassian settlement NW. of the town. A large number of deported Armenians were kept here in 1915. It was said that they were to be made to work on the Baghdad road.

Administration and Authorities.—Deir is the head-quarters of the Deir ez-Zor *Mutessariflik*, and is under the administration of the Mutessarif. In peace time there was a garrison here of one battalion of infantry and some mounted infantry on mules.

ERBIL, about 48 m. E. by S. of Mosul. Pop. about 39,000 (1,800 houses). Another estimate gives the population as 15,000 and the number of houses as 3,000. T. (Baghdad—Mosul line; and branch lines to Rowanduz, to Qal'ah Drzeh *via* Kōi Sanjaq, and to the Sultan's estate at Makhmūr).

Routes—

- (i) To **Kōi Sanjaq**. (See *Route 42*.)
- (ii) To **Rowanduz**
 - (a) *via* Shakhlawa. (See *Route 43 a*.)
 - (b) *via* Bahirka. (See *Route 43 b*.)
- (iii) To **Mosul**. (See *Route 25 a*, m. 245½.)

General Description.—Erbil (Assyrian 'Aba-Ilu, 'Four Gods') was a great Assyrian city, being especially famous for its cult of the goddess Ishtar, and under Persian rule it continued to be a considerable place, and its temple of Ishtar was still famous. Alexander won the decisive battle that made him master of the Persian Empire somewhere in the plain to the SW. of Erbil near the Great Zāb in B. C. 331. Later Erbil was the burial-place of the Parthian kings. Its sanctity disappeared with the rise of Christianity, and since the Mohammedan conquest its history has not been of general importance, though its position as a road centre in a fertile district has ensured its continued existence. The battle which transferred the Caliphate from the Omayyad to the Abbasid family was fought in the neighbourhood about the middle of the eighth century.

The modern town of Erbil stands partly on a large artificial mound of Assyrian origin, which rises 200 ft. above the plain with a slope of 1 in 1. The mound is 600 yds. in diameter. It is surrounded by a ring wall, against which houses have been built on the inside, with windows pierced through to the outer face. Inside, on the summit of the hill, there are many winding streets, some being only 4–6 ft. wide and very intricate. There are only two gates, both on the SW., with camps leading up to them. Below the mound a large quarter (said to be growing) has sprung up to the W. and S. The khan, baths, posting-station, and telegraph office are at the foot of the hill on the W. side. On the NW. side is a one-storied block of mud barracks. On the N. and E. sides of the citadel are the remains of a wall of mud 4 ft. thick which would still make a good parapet. The stony bed of the Erbil River (usually dry) lies about 1 m. SE. of the town, and 1½ m. in the same direction is Badowa, a village of 50 houses of Dizeih Kurds. WSW. from the mound, just outside the town, is an old minaret.

Supplies and Commerce.—The *Kaza* of Erbil produces large quantities of wheat and barley, with a considerable surplus for export to Baghdad *via* the Tigris. There is much corn-land in

the plain and undulating country which surrounds the town and in the district of Shemamlık to the SSW. Some rice is also grown in the neighbourhood. In the hills to ENE., supplies of fruit, vegetables, and firewood can be obtained among the Kurdish tribes, who bring them into Erbil for sale. The capacities of Erbil as a supply centre are increased by its position at the meeting-point of numerous routes. In October most of the streams are dry, but abundant water can be obtained from *karez* and wells. There is a large *karez*, led first through an open brick duct 3 ft. above the ground and 4 ft. broad, where animals are watered, and then into a large masonry tank and other channels. It is excellent water if taken where it enters the duct, but becomes contaminated lower down. Water is carried to the upper town on skins slung on ponies and donkeys. The neighbouring tribes bring wool and hides to sell in Erbil, and articles are locally manufactured from these raw products. There is much transit commerce of goods passing between the Kurdish and Persian hills and Mesopotamia.

Inhabitants.—The population is mainly Kurdish, of the Babari tribe. Their language is a variation of the Mukri dialect. There is also a certain Turkoman element, and Turkoman is understood.

Administration and Authorities.—The place is the head-quarters of a *Kaza* under Kirkuk *Sanjaq*. The land-taxes are said to produce £T90,000 a year, of which one-third comes from land owned by the *Dā'irat es-Sanāyeh*. In peace time the garrison consisted of one battalion.

HĪT, on the r. bank of the Euphrates, 79½ m. by river above Fellūjeh, and 119½ m. below Anah.

Pop. estimated (1909) at 1,600. Houses estimated at 600. P.O., T. (Baghdad—Aleppo line).

River Routes.—For communication by the Euphrates see *Routes IV E, F*.

Land Routes—

(i) **Baghdad—Aleppo** caravan road passes through Hīt. (See *Route 46*.)

(ii) To **Damascus** across the desert. (See *Route 52*.)

(iii) To **Mosul** across the desert. No details available.

General Description.—Hīt is a small walled town with two gates, built of field stones plastered with mud. It stands upon a mound on the river-bank which is precipitous to the plain, and slopes less

steeply to the river. A tall leaning minaret near the river-bank is a conspicuous landmark for miles. At the S. end of HĪt are boat-building yards. There is a khan below the town. In the neighbourhood of the mound on which the modern town stands are other, somewhat lower, eminences which mark the sites of former settlements. To N. and S. are palm groves. To W. near some *Imāms* are the chief bitumen springs, and beyond them a barren desolate plain of sand, clay, and black-seamed rocks. There is a ferry at N. end of the town. The Mesopotamian plain on the other side of the river is here quite flat; a little farther down-stream it contains naphtha springs, and beyond these salt lakes. The atmosphere of HĪt is smoky owing to the burning bitumen kilns, and the furnaces of the boat-building yards. A strong smell of sulphur (from neighbouring sulphur springs) and of boiling bitumen pervades the air; it is said to have saved HĪt from a cholera epidemic. The ground round HĪt is very dirty, owing to the bitumen and sulphur.

Supplies and Commerce.—No appreciable amount of supplies for troops can be expected at HĪt. The cultivated area near the town is a very narrow strip, which does not produce a surplus for export.

HĪt owes its existence to the bitumen springs around it, which are said to have been worked here for 5,000 years. The bitumen has a sale in Mesopotamia for caulking boats, binding bricks, &c. Boat-building is an important occupation. The boats are made with branches of tamarisk and mulberry trees interlaced with basket-work of reeds and straw, the whole covered with bitumen and sand. They draw 22 in. when laden, and 6 in. when empty. They are exported to other places in Irak. Earthen pottery is also made at HĪt.

Inhabitants.—The population consists of Sunni Arabs.

Administration.—HĪt before the war was the head-quarters of a *Kaza* and the seat of a *Kaimmakam*.

KHANIKIN, 94 m. N.E. of Baghdad and $6\frac{1}{2}$ m. from the Persian frontier. Pop. 5,000 (1911). P.O., T. Bridge over the Alvand.

Routes—

- (i) To **Baghdad**. (See *Route 28 a*.)
- (ii) To **Kirmanshah**. (See *Route 28 a*.)
- (iii) To **Mandali**. (See *Route 29*.)
- (iv) To **Salāhiyeh (Kufri)**. (See *Routes 32 a, b*.)

General Description.—The town lies among gardens on both banks of a tributary of the Diyāleh, the rapid Alvand stream, which

is spanned by a solid brick and stone bridge, with roadway of 25 ft. This bridge was constructed at the expense of the Persian Government to facilitate the weekly postal service between Turkey and Persia. The river here is 60 yds. wide, and fordable. The town lies mainly E. of it. There are some well-built houses in the main streets. The place owes its importance to its position so near the frontier, and on the Shiah pilgrim-route from Persia to Kerbela and Nejef. The Baghdad Railway Company before the war had taken up the scheme, for which a native company had previously secured a concession, of building a branch line from Baghdad to Khanikin. There are several khans.

Climate and Hygiene.—Khanikin is the quarantine station on the Turkish side of the frontier. A report of 1894 states that there is here, as at most of the frontier towns, a European health officer. The altitude of the town is about 1,000 ft. above sea-level, and no extreme of cold is ever felt.

Supplies and Commerce.—Water is abundant, and supplies are said to be plentiful, but few details are given. The gardens are famed throughout the Baghdad *Vilayet* for the excellence of their fruits, which include dates, pomegranate, figs, and lemons. Barley and wheat are the chief agricultural products.

Inhabitants.—The inhabitants are mainly Kurds and Lurs, with some Turks, Arabs, Jews, and Persians.

Administration.—Khanikin is the head-quarters of a Kaimmakam in the Baghdad *Vilayet*.

KIRKUK, on the main route Baghdad—Mosul, 187½ m. N. of Baghdad. Pop. variously estimated at from 15,000 to 50,000. Probably 20,000 is fairly near the number (4,000 houses). P.O., T. Brick bridge of 15 arches across the Hasa Su from Kirkuk to Qarveit Mahalleh.

Routes—

- (i) Main **Baghdad—Mosul** road. (See *Route 25 a*, m 187½.)
- (ii) To **Suleimāniyeh**. (See *Route 37*.)
- (iii) To **Köi Sanjaq**. (See *Route 25 a*, m. 187½, and under m. 198½.)
- (iv) To **Taktak**. (See *Route 40*, under m. 32.)

General Description.—The town lies on the l. bank of the Hasa Su, with the suburb of **Qarveit Mahalleh** opposite it at the W. end of the bridge. In this suburb are the *serai*, military barracks, military hospital, post and telegraph office, a school, and the residences of

many officials. On the W., N., and NE. the low hills stand close round the town, hiding it from view in these directions until one is near it.

At the northern end the citadel stands on a large flat-topped mound, 130 ft. in height, with the quarter near the Mosque of 'Ali at its base. The Chaldaean community has a new cathedral built by the French Roman Catholic mission. The town contains two arched bazaars and several khans, as well as public baths which are reported to be very bad. Owing to the sheltered position of the town, the climate is excessively hot and not very healthy in summer.

Supplies and Commerce.—The town is said to contain apparently about 500 shops, but the local authorities claim that there are upwards of 1,800. Wheat, barley, a little rice, beans, melons, cucumbers, and a few grapes are grown in the country round Kirkuk. There are several flour-mills on the bank of the river. The inhabitants were reported in 1903 to own 30,000 sheep in the pastures near the town; but the live stock of the district may have been diminished owing to the constant raids of the Hamawand between the years 1906 and 1909. Water can be obtained after rain or the melting of the snow from the Hasa Su, but there is generally little or no water in the river bed, and most of the rather scanty supply comes from wells. There are oil springs at Babā Gurgur, 5 m. NW. of the town. Kirkuk is a centre for the purchase of Arab horses, which are exported.

Some cotton is grown in this region, and the chief exports of the place are oil, wool, gall-nuts, wheat, barley, fruit, gum, and a little wine. The chief occupation is that of drapers and mercers, and the chief imports are cotton goods, Kirkuk being a distributing centre for Kurdistan. Fruit trees include the vine, lime, olive, fig, apricot, and mulberry.

Inhabitants.—The inhabitants are of many races and religions. The principal are Turkoman, Kurd, and Arab. There are also Armenians, Chaldaeans, Syrians, and numerous Jews, who are said to own 200 houses out of 4,000. An equal number of houses is said to be inhabited by the Christians of various sects. Arabic and Kurdish are spoken indifferently in the bazaars, and Turkish is understood by most.

The town itself has been strongly held by the Turkish Government, which has maintained fair order within the walls.

The Sunni element is probably considerably stronger than the Shiah. There is said to be a fanatical population in the quarter round the Mosque of 'Ali to the N. of the town; but the Moslems of Kirkuk have been given a good character for honesty and generosity, at any

rate in their dealings among themselves. They are said to be more interested in local than imperial politics.

Administration and Authorities.—Kirkuk and the surrounding country is administered by Mutessarif under the Vali of Mosul. In peace time it was the head-quarters of the 12th Division of the 6th (Baghdad) Corps. The ordinary garrison was a battalion of infantry and a large detachment of infantry mounted on mules.

There is a Persian Consul (in 1909 a Kirmanshah Kurd).

History.—Kirkuk, in recent years an important Turkish administrative centre, is an ancient city. It is fairly certain that the town goes back far beyond Seleucid times, though nothing seems to be known about its early history.

Three tombs shown to visitors are said to be those of Daniel, Shadrach, and Meshech, and there was also one, now lost, of Abednego. The place was one of the most important sees of the Eastern Church, and figures largely in its martyrology. Outside the town is a mound called Tamazgerd which was generally the scene of martyrdom. It was acquired after the great persecution of Shapur II in the fourth century, and takes its name from Tamazgerd, the stimulator of the persecution in the reign of Yezdigird I, who is said to have turned Christian at the sight of the endurance of the martyrs. About 100 years ago the place was devastated by plague, which carried off most of the educated community and consequently destroyed many local traditions.

KÖI SANJAQ, about 90 m. ESE. of Mosul, between Erbil and the Persian frontier. 1,200 houses. T.L.

Routes—

- (i) To **Erbil**. (See *Route 42*.)
- (ii) To **Raniyeh**. (See *Route 40*.)
- (iii) To **Suleimāniyeh**. (See *Route 39*.)
- (iv) To **Rowanduz**. (See *Route 44 b*.)

General Description.—The town lies in a kind of basin about 3 m. across, bounded on N. and E. by low hills. On the N. is a knoll with a ruined masonry fort 250 yds. square with towers at the corners. A report of 1904 states that it was used as a barracks. The town is less squalid than Suleimāniyeh, and has a few good houses.

There are good places for camping in the neighbourhood.

Supplies and Commerce.—There is good water from a large stream and springs to the N. Corn and tobacco are exported down the

Lesser Zāb and Tigris to Baghdad. Pomegranates, apricots, figs, mulberries, melons, cherries, and vines are cultivated, but, according to an authority of 1904, without much knowledge of horticulture. Cucumbers and other vegetables are also grown. Firewood could be had from the wooded ridges to N. and E. There is no information as to forage, but it is probably fairly plentiful.

Inhabitants.—The population are Kurds, with 50 Jewish and 30 Chaldaean houses. The prevailing language is Kurdish, but Arabic is generally understood. Turkish is spoken only by officials and educated people. An authority of 1904 speaks of the local Kurds as being neither interesting nor attractive, without intelligence or manners.

Administration and Authorities.—The place is the residence of a Kaimmakam. There is no evidence as to the size of the garrison.

MOSUL, on the r. bank of the Tigris, some 230 m. (overland) NNW. of Baghdad. Pop. 70,000–80,000 (?). P.O., T. Communication before the war with Baghdad, Diyarbekr Rowanduz through Erbil, Suleimāniyeh through Kirkuk. Bridge of boats.

River Routes.—For communication by the Tigris see *Routes* III D, E, F.

Land Routes.—

- (i) To **Baghdad** via Erbil, Kirkuk. (See *Route* 25 a.)
- (ii) To **Baghdad** via r. bank of the Tigris. (See *Route* 25 b.)
- (iii) To **Rowanduz** via Qandil ferry. (See *Route* 45 a.)
- (iv) To **Rowanduz** via Girdamamik. (See *Route* 45 b.)
- (v) To **Deir ez-Zor** via 'Ain el-Ghazal. (See *Route* 49 a.)
- (vi) To **Deir ez-Zor** via Beled Sinjar. (See *Route* 49 b.)
- (vii) To **Nisibin** via Beled Sinjar or Samukhd. (See vol. iv, *Routes* 92a, b.)
- (viii) To **Nisibin** via Eski Mosul. (See vol. iv, *Route* 91.)
- (ix) To **Jeziret-ibn-Omar**. (See vol. iv, *Routes* 90 a, b.)
- (x) To **Amādiyeh**. (See vol. iv, *Routes* 67 a, b.)

General Description.—Mosul stands on the W. side of the Tigris trough and is bounded on the E. by the river. To the W. of the city the country consists of rocky formations, rising in gentle undulations out of the plain. In the immediate vicinity these formations consist of solid beds of compact, granular gypsum, in horizontal strata and non-fossiliferous. This rock is extensively quarried as 'Mosul marble', and varies in colour from pure white to bluish grey. Superimposed on the gypsum is a layer of coarse

friable limestone, abounding in shells. This layer is thin to the W., but much thicker to the S. of the city, where it is extensively quarried for building purposes.

The Tigris at Mosul cuts into the side of its trough and threatens some of the buildings of the town. The whole river-bed, covered in high flood, is about 675 yds. broad, and there is a deep channel on the W. of about 150–200 yds. The bridge of boats crosses the river from a pier 32 yds. long opposite the Bāb el-Jisr Gate (in the southern half of the river-front) to a gravelly bank which is submerged when the Tigris is in flood. The boat-bridge is 125 yds. long, and has a roadway of rough planking 24 ft. wide, which is laid on 17 pontoons, flat-bottomed boats 26 ft. long by 10 ft. wide, with a waterway 10 ft. between each and its neighbour. The gravelly bank on the E. side of the river is crossed by a bridge of brick faced with sandstone, which is laid at an angle of about 45° to the boat-bridge. The masonry bridge is approached from the pontoon-bridge by a ramp 46 yds. long, and has a total length of 278 yds. : the roadway, which is 16 ft. wide, is laid on 29 arches, each of 20 ft. span, and at the eastern end there is a ramp 52 yds. long. Beyond the E. end of the masonry bridge the road may be under water for as much as 150 yds. in the flood season. In high flood the boat-bridge is removed, and the river is then crossed by boats. These boats (of which about 30 used to be available) are each about 24 ft. long by 8 ft. wide. They are punt-shaped, with the stern cut down to allow animals to go on board. Each boat can take 6 laden mules. The boat-bridge may be expected to be in position from some time in the early part of June to the end of March.

The town of Mosul, though dusty, glaring, and treeless, is not unpicturesque at a distance, the outline of the walls being broken by numerous domes, minarets, and towers. The city is partially surrounded by badly-built rubble walls, 15–20 ft. high, with a thickness of about 6 ft. at the bottom and 3 ft. at the top. These were constructed at the beginning of the last century as a protection against Bedouin raids, and are now out of repair. In many places they have already been breached, and the ditch has been filled in. There are 11 gates. On the river side, houses have been built into the wall, and their windows look out on to the river. To the N. and W. there is an expanse of waste land between the houses and the walls. To the S., beyond the Bāb es-Serai, the river is fringed with mud houses inhabited by raftsmen, boatmen, and fishermen. Behind these houses is a broad road planted with trees, and E. of this is a broad open space used partly as the drill-ground of the

garrison, and partly, apparently, as a cattle market. At the end of the road, about $\frac{3}{4}$ m. from the city gate, are the barracks and Government offices, and the residences of the Vali and other officials. The post and telegraph offices lie on the road somewhat nearer to the town.

The streets of Mosul are narrow, undrained lanes, winding between blank house walls. A few of the streets are paved with stones, which make very slippery going. The houses are built of sun-dried bricks or of stone ('Mosul marble') set in gypsum cement. Little wood is used in their construction. The larger houses are built round a courtyard, into which the rooms and a hall open. They usually have *serdābs*, or underground rooms, for use in the hot weather. The number of houses has been estimated at 12,000. There are numerous mosques and several large khans. The bazaars are held in booths in the streets. About the middle of the river-front, not far above the bridge, is an old citadel. The church of the French Dominican Mission is marked on a plan of 1873 as slightly W. of the centre of the town.

Mosul is not an attractive place; it is insanitary and dirty, with a bad climate and smoky atmosphere. The smoke comes from the gypsum kilns. The most unpleasant quarter appears to be a cluster of some 300 houses near the river, which serves as abattoir, tannery, and dye-works for the whole town. In 1906 it was stated that the Government had twice endeavoured to abolish this quarter, but on both occasions the attempt had provoked a riot.

Climate and Hygiene.—The climate of Mosul is very trying in the summer. The worst part of the hot weather is from July to September, when the thermometer may go as high as 120° F. in the day, and not fall below 95° at night. Hot winds blow in from the desert. Even in May a temperature of 100° may be looked for, and the cool season does not begin till November. In the cool weather, which is also the rainy season, the nights are often frosty. (See chapter on *Climate*, vol. i, and accompanying tables.)

Owing to the glare and the dust, the amount of which is appreciably increased by the numerous kilns and pounding mills in which gypsum is worked, ophthalmia is common, and tuberculosis is said to be 'terribly prevalent'. Cholera, on the other hand, is not common, though its existence has been suspected. Visitations of plague are reported. Mosul has its 'boil', from which few who reside there long escape; it is said to be not distinguishable from the Baghdad 'date-mark'. Almost all travellers comment on the filthy and insanitary conditions of the place; which, in the opinion of one observer, call for the abandonment of the site and the building

of a new town on another site. Sulphur springs, some of them hot, are found near the Tigris both above and below Mosul (e.g. at Hammām 'Ali, see *Route III E*, m. 167½), and are much resorted to for medicinal purposes.

A hot eddying wind—the *Sām*—which blows in the desert W. of the city, is said occasionally to affect fatally those who are exposed to it. It is sometimes possible to avoid its worst effects by lying on the ground.

Supplies and Commerce.—In spite of its arid appearance much of the country from which Mosul is supplied is fertile, and agriculture has on the whole been developing during the past twenty or thirty years. There are said to be about 200 flour-mills in the city. In normal times the bazaars of the town are well stocked with grain, fruit, and meat. The principal crops of the Mosul country are wheat and barley, which ripen in April, and among the minor produce may be mentioned lentils, peas, beans, millet, maize, cucumbers, as well as many fruits—melon, orange, fig, plum, pear, and grape. The date palm grows, but does not fruit freely. Sheep and goats were numerous before the present war.

The water-supply is not satisfactory; there are numerous wells, but they are brackish; and the people rely for their drinking supplies on the Tigris, from which the water is brought on ponies in skins. The Tigris water is considered good except when the river is low. Schemes for a municipal water-supply have been talked of for years, but nothing has been done.

There is much excellent spring grazing near Mosul. Wood for fuel seems scarcely to be found in the neighbourhood of the city. In normal times timber is brought from the Kurdish hills.

Mosul would make a good centre for the collection of transport animals of all kinds. In peace time numerous donkeys, mules, horses, and camels could be obtained here.

In the Middle Ages Mosul was an important entrepôt and manufacturing centre, and was celebrated for its jewellery, arms, and carpets, as well as for cotton and silk and embroidered fabrics (the word 'muslin' is said to be derived from the name of the town). Misrule, insecurity of transport, the introduction of cheap machine-made goods, and the diversion of trade by the Suez Canal have in various ways affected its prosperity, but there are still a considerable number of gold and silversmiths, of workers in iron and copper, of shoemakers, and above all of weavers; and only security is required to increase very largely its commercial importance. Mosul is a distributing centre for European goods imported through Aleppo, and for Indian goods which come through Baghdad; and to it are

brought for re-export the abundant raw products and the textile fabrics of Kurdistan and NW. Persia.

The following statistics (giving value in £ sterling) for 1912 show that before the war trade was still on a fairly extensive scale :

	IMPORTS.	EXPORTS.
	£	£
United Kingdom	51,000	163,000
India	41,000	22,000
Other foreign countries	56,000	53,000
Total	148,000	238,000
Other parts of Turkey	30,000	188,000
Grand total	178,000	426,000

The chief articles of import were cotton piece-goods, and yarn, and the demand was increasing in spite of the superior durability of locally woven articles. Iron and copper were always in large demand, Swedish iron being much used. From France came tanned leather and cigarette papers, from Austria broadcloths, from India cotton goods, coffee, and gunnies, from Persia carpets. Petroleum was also imported. The imports from other parts of Turkey included piece-goods, soap (from Aleppo), dates (from Baghdad), dried fruits, peas, and nuts. The main exports to other countries were wool, hides and skins, boots and shoes; and to other parts of Turkey wheat, sheep and cattle, galls, hides, and fruits. In favourable seasons exports of wheat were on a very large scale; in 1908 their value amounted to £200,000.

There is a large local production of flour, the number of mills being not less than 200, and there is a good opening for the introduction of Western methods of milling.

About 40 m. from Mosul, near the bank of the Tigris, are the Kaiyara naphtha springs, which yield a thick black product. In 1908 the right of exploitation was leased to a native of Erbil, who sold the refined product at his own village at 9 to 15 piastres for 4 gallons.

Inhabitants.—The population was estimated about 1904 at 40,000–50,000, but more recent calculations raise it to double the former figure. Fully three-quarters of the people are Mohammedans, and practically all of these are Sunnis. The Mosulis are a race of mixed origin, their language being Arabic. They have a bad reputation for turbulence, cruelty, and viciousness. In normal times there is a considerable floating population of Arabs and Kurds.

The Christians (perhaps about 15,000) are chiefly Syriac speaking, and belong to various sects—the Chaldaeans, West Syrian Catholics, and Jacobites are all represented; there are also some Nestorians.

There is a large and important French Dominican Mission in Mosul, and at the Dominican mission-school many of the Chaldaeans and West Syrian Catholics have learnt to speak French. There are also a few native Protestants, the converts of an American mission; some of these probably speak English. The strong Jewish colony lives in a quarter of its own.

Administration and Authorities.—The municipal administration before the war was in the hands of the Vali of the province and a council of notables. This council has a particularly evil fame for corruption and intrigue. Its members are wealthy merchants and landowners, some of the latter being descended from the Arab oligarchy which ruled Mosul in the eighteenth century. So far as they could not make the Turkish officials their tools, they were generally in more or less concealed opposition to the Vali's administration. For the furtherance of their ends they used their money and influence among the lower classes of the city, and they have been known covertly to instigate violent outbreaks of riot.

The Chaldaean Christians have a patriarch in Mosul; the West Syrian Catholics and Jacobites have their respective bishops. There was also before the war a Papal Legate with supervisory powers over the Uniate churches of the country.

In 1914 there was a French consul at Mosul, and also British, Russian, and German vice-consuls.

History.—On the l. side of the Tigris, opposite the present city of Mosul, are the extensive ruin-mounds which mark the site of Nineveh. After the fall of Nineveh and of the whole Assyrian State in 604 B.C., no considerable city appears to have existed in the neighbourhood for many centuries. Under the Mohammedan Caliphate Mosul rose to importance as a centre of commerce and manufacture, and in the decay of the Abbasid's power it became the capital of an independent kingdom under an Arab dynasty.

In the eleventh century it was ruled by a dynasty of Seljuk Turks—the Atabegs. It was sacked by the Mongol invaders of the thirteenth century, and at the end of the fourteenth was for some time the head-quarters of Timur Lang. The Persians conquered it early in the sixteenth century, but in 1516 it was won by the Turkish Sultan Selim. It was placed under the Pasha of Baghdad. The Turkish hold on the city was for long weak, and in the eighteenth century the city was practically ruled by an oligarchy of local notables. In the nineteenth century Turkish authority was revived, and in 1878 Mosul became the capital of a separate *Vilayet* which was carved out of the *Pashalik* of Baghdad.

RANIYEH, about 100 m. E. of Mosul, not far from the Persian frontier. 300 houses. No T.L., though the wire between Kōi Sanjaq and Qal'ah Dizah passes within a few miles of it.

Routes—

- (i) To **Kōi Sanjaq**. (See *Route 40*.)
- (ii) To **Suleimāniyeh**. (See *Route 38*.)
- (iii) To **Banah**. (See *Route 41*.)
- (iv) To **Rowanduz**. (See *Routes 44 a, b, c*.)
- (v) To **Urmia**. (See vol. iv, *Routes 60 a, b*.)

General Description.—The village is built partly on a mound, partly round it. It is dilapidated and unhealthy. Camping-grounds could be found on the numerous gravelly spurs round the plain.

Supplies.—Water is procurable from springs in the plain. It contains some impurity, and is rather unpleasant to taste. There is some rice-cultivation, and firewood is abundant on the neighbouring hills.

Inhabitants.—The population is composed of Raya Kurds.

Administration and Authorities.—The place is the seat of a Kaimakam and the head-quarters of a Redif battalion composed of Kurds. In summer, during peace time, it had a garrison of two companies of Nizam infantry.

There is also a *zaptieh* post of 20 men.

RAQQAH, on the l. bank of the Euphrates, 2 hrs. ride above the mouth of the Belikh River, and 112½ m. by river above Deir-ez-Zor. Pop. apparently about 2,000. T. (connexion with Baghdad—Aleppo line).

River Routes.—See *Route IV, H*.

Land Routes—

- (i) **Baghdad—Aleppo** caravan route on opposite bank. (See *Route 46*.)
- (ii) To **Meskeneh** by l. bank. (See *Route 47*.)
- (iii) To **Ānah** by l. bank. (See *Route 47*.)
- (iv) To **Harrān**. (See vol. iv, *Routes 132 a, b*.)
- (v) To **Hama**. (See *Route 55*.)

General Description.—The Arab settlement lies about 1 m. from the river in the SW. corner of a large semi-circular enclosure, formed by an old brick wall with round bastions at intervals. In the middle of the enclosure are the remains of a mosque. To the west of the

Arab village, outside the enclosure and standing on high broken ground, is a Circassian colony. To the east of the enclosure containing the Arab village is another ruin-field with a minaret rising from its centre.

Supplies and Commerce.—There is a good deal of cultivation in the neighbourhood. The settlement has a bazaar, and is much used as a market by the surrounding Arabs.

Inhabitants.—Arabs and Circassians.

Administration.—Raqqah is the head-quarters of a *Kaza* in the *Vilayet* of Aleppo and is the seat of a *Kaimmakam*.

History.—Raqqah occupied the site of the ancient cities of Nicephorium and Callinicum. The later town, Callinicum, was a strong fortress and important market on the frontier of the Roman Empire. It flourished under the early Caliphs (Harūn er-Rashīd had a palace here), but by the fourteenth century it was a mere ruin-field, the city having probably been destroyed by the Mongols. About 40 years ago the site was nearly unoccupied, but the place has been growing in size and importance during the last few years.

ROWANDUZ, about 80 m. ENE. of Mosul, not far from the Persian frontier. T.L. from Erbil. Pop. at least 5,000. Number of houses probably about 1,000 (1910).

Routes—

- (i) To **Mosul**
 - (a) *via* Qandīl ferry. (See *Route* 45 a.)
 - (b) *via* Girdamamik. (See *Route* 45 b.)
- (ii) To **Erbil**
 - (a) *via* Bātās and Shakhlawā. (See *Route* 43 a.)
 - (b) *via* Baba Chickek Dāgh and Bahirka. (See *Route* 43 b.)
- (iii) To **Raniyeh**
 - (a) *via* Balassān. (See *Route* 44 a.)
 - (b) *via* Khata. (See *Route* 44 b.)
 - (c) *via* the Nalkewan valley. (See *Route* 44 c.)
- (iv) To **Urmia**
 - (a) *via* the Kelishin Pass and Ushnu. (See vol. iv, *Route* 61 c.)
 - (b) *via* Neri. (See vol. iv, *Route* 61 a.)
- (v) To **Suj Bulaq**. (See vol. iv, *Route* 61 d.)
- (vi) To **Köi Sanjaq**. (See *Route* 44 b.)
- (vii) To **Amadiyeh**. (See vol. iv, *Route* 62 a.)

General Description.—The town is remarkably situated on a sloping tongue of land, very abrupt in parts, which runs down to the cañon of the Rowanduz Chai; this tongue is separated from the country eastwards by the Kalund, a great gully with precipitous sides which joins the Rowanduz Chai just above the town. An easy track, by which the narrow streets of the town can be avoided, leads from the S. end of the gorge to the Persian route in the river valley $\frac{1}{2}$ m. E. of the town.

At the top of the town is a suburb called **Qalah Teluk** on a plateau among gardens. It contains the house of Sa'id Bey, villas of Turkish officers, and the summer residences of some of the inhabitants.

The town itself is long, steep, and straggling, and is in two parts, of which the upper is the larger. Between the two parts is a tract less steep than the rest, with the summer quarters of the Kaimmakam and the palace of 'Abdallah Pasha. The T.O. and winter *serai* are in the lower town.

The streets are narrow, and the houses are built across them in some places, while in others the road goes over the roof. To make a wheel road some of the houses would have to be levelled. Sanitation is quite unknown.

A stream flows through the town. Below the lower town the Rowanduz Chai is crossed at a deep and narrow gorge by a wooden bridge of 18 ft. span without parapets. The Kalund gorge is crossed by a similar wooden bridge of 20 ft. span. Both are passable for mules but not for guns.

About 1,500 yds. to the N. the town is commanded by an old Kurd blockhouse, and at a short distance are the insignificant ruins of a castle on a yellow, bluff, steep-sided knoll. They were constructed about eighty years ago by Mohammed Pasha. (See below: *Administration and Authorities*.) To SE. is the Beni Hindawin, a steep ridge rising to about 8,000 ft., wooded near the summit.

Supplies and Commerce.—There is little evidence as to supplies. Water seems to be plentiful, and a little wine is made, but practically none is exported. Grapes may be had either fresh or dried.

Trade is mostly in gall-nuts, wool, and goat's hair.

Inhabitants.—The inhabitants are mostly Kurds. There are about 40 households of Jews and about a dozen Christians who have come for trade, unaccompanied by their families.

Administration and Authorities.—Rowanduz is the seat of a Kaimmakam in the Kirkuk *Sanjak* of the *Vilayet* of Mosul. In 1910 the Kaimmakam was a Moslem Greek. The *Kaza* includes the following four *Nahiyes* (1910):

<i>Nahiye</i>	<i>Head-quarters</i>
Deireh Harîr	Deireh Harîr
Bârak	Gellala
Baradost	Sadâqah
Shirwân	Beirisîyâo

A battalion of Nizam is usually quartered here (1910); they have no barracks, but camp near the Government buildings which lie in the suburb of Qal'ah Teluk (1904). In 1910 the place was the head-quarters of two Redif battalions, probably nominal, which had not been embodied.

There is also a post of 60 *zaptiehs* (1904).

SALĀHIYEH (KUFRI); in some maps also marked **Zengabād**, on the Baghdad—Mosul main route, 417 m. NNE. of Baghdad. Pop. (800 houses) ? 4,000. T. (Baghdad—Mosul line).

Routes—

- (i) To **Baghdad**. See *Route 25 a*.
- (ii) To **Mosul**. See *Route 25 a*.
- (iii) To **Suleimāniyeh** *via* Zagirmeh Pass. See *Route 34 a*.
- (iv) To **Suleimāniyeh** *via* Dar. See *Route 34 b*.
- (v) To **Qasr-i-Shirin**. See *Route 33*.
- (vi) To **Khanikin**. See *Routes 32 a, b*.

General Description.—The town lies in a plain at the mouth of a gorge in a low ridge (300–400 ft. high) to the N., through which the Chehepan (Kufri Su) emerges. The river, on the r. bank of which Salāhiyeh stands, is unbridged. A cultivated treeless plain extends for a few miles to the S. and E. for about 10 m. to NW. The hill of Bāwa Shāh Suwār, to the N. of Kufri, commands an excellent view of the town. There are a shrine and a cemetery on it. The town is surrounded by a mud wall in poor repair. The houses are of stone and mud, with flat roofs; a few on the S. are built of lime and gypsum from the hills close by. There is a stone khan on the N., outside the town, and a new khan on the E. with upper rooms. It is 40 × 55 yds., with stabling for 150 horses, and of rough stone and cement. There is another khan, single-storeyed, 30 yds. square, and stabling for 50 horses.

Supplies and Commerce.—There is a bazaar at Salāhiyeh containing about 80 shops with a fair amount of supplies (flour, dates, dried fruits). The neighbourhood is said to produce good wheat, and near the town are gardens with date and fruit trees. Sheep and goats are plentiful in normal times. The water, which comes from the

Kufri Su east of the town, is abundant and good. There is very good grazing in the neighbourhood of the town. Fuel is plentiful. In normal times it was estimated that 400 horses and 300 mules might be obtained here.

The Nasāleh coal workings lie in the low hills E. of the town, the nearest being about $\frac{3}{4}$ hour from the town: the newest workings apparently lie at a distance of 1 or 2 m. The coal obtained before the war was of poor quality, but possibly a better quality has since been found in deeper workings. It is said that three workmen can excavate about 30 cwt. or 20 donkey-loads daily, and the coal is sold in Salāhiyeh at $7\frac{1}{4}$ Raij Piastres per donkey-load ($3\frac{1}{2}$ d. a cwt.). During the war coal has been exported by camel to Sindiyyeh (*Route III D*, m. $45\frac{1}{2}$), and thence floated down the Tigris, and a Decauville railway has been reported.

Inhabitants.—The inhabitants are mostly Kurds, though there are a few Arabs and Jews. The town lies in the country of the Jaf Kurds, whose power has recently been much reduced by the Turkish Government, though they are still a considerable tribe. They inhabit both sides of the frontier and live a semi-nomadic life, moving between the hills and the plains. The Turkish Jaf claim that, though they are the less numerous section, they number 3,000 mounted men: this is probably an exaggeration.

In the country towards Khanikin live the Bajalan Kurds (150 riders) and the Zengabād Kurds (270 riders). The Hamawand Kurds at least as late as 1910 were a serious danger on the roads in the neighbourhood, and in spite of measures taken against them in recent years may possibly still cause trouble.

Administration.—The Turkish Government is represented here by a Kaimmakam, and there was before the war a post of infantry mounted on mules.

SAMARRA, on the l. bank of the Tigris, $89\frac{1}{4}$ m. above Baghdad by river. Pop. 2,000 (?). T.L. to Baghdad. Bridge of boats (32–55, according to width of river). In Oct. 1903 (l. w.), when river was 370 yds. wide, only 270 yards were spanned by 32 boats: on l. bank it was necessary after leaving bridge to cross some shallow water for about 80 yds. to a sandbank, from which the river bank could be reached. Roadway across bridge 12 ft. wide. Reported 1903 to be unfit for wheeled traffic. The Baghdad Railway has been laid as far as Samarra (see Appendix).

River Routes—See *Routes III D*, E.

Land Routes—

- (i) To **Baghdad** via r. bank of Tigris. See *Route 25 b.*
- (ii) Track to **Baghdad** via l. bank of Tigris, joining Baghdad—Salāhiyeh road near Khān Nahrawān and Deltāweh. No details available.
- (iii) Across desert to Hrt (+75 m. ?). No details available. It apparently runs by Abu Khasheb and S. end of Tartar River, which carries water after rain.
- (iv) To **Mosul** via r. bank of Tigris. See *Route 25 b.*

General Description.—The modern town is reported as lying about 400 yards from the river bank. The country round is a rolling sandy plain strewn with ruins, with few or no signs of vegetation visible from the city. The river varies in breadth between 370 and 460 yds., according to the season. Its current is 3 m. an hour (mean water ?), and the depth is considerable: information reported unreliable estimates it at 30 ft. in deepest places. The l. bank is high and steep, shutting off the view of the town from the opposite side of the river. The height is estimated at 60–70 ft. above low-water level. The r. bank is said to be about 30 ft. high (above low-water level) and steep. The banks and river-bottom are mainly firm earth, with not much sand and few stones (the sand is found chiefly on r. bank). On the r. bank at the bridge is a small village of 40 mud houses and a khan 50 yds. square, with stabling. The town is surrounded by a polygonal wall, with about 15 sides, 20 ft. high and 4 ft. thick, until near the top, where it narrows to little over 2 ft. It is crenelated with 2 rows of loopholes, one at a height of 6 ft., the other near the top. It has four gates, north, south, east, and west, and has a semi-circular bastion at each salient angle built to flank the curtains. The ruins and broken ground in the vicinity would afford good cover for an attack. The town is said to contain about 900 houses, mostly of brick, but not only is there much open space within the wall, but many of the houses are empty (as in the area S. of N. wall), and the place seems to be declining. Its importance lies in its position on the Shiah pilgrim route from Persia to Kerbela and on its own sanctity as containing the tombs of the 10th and 11th Shiah Imāms, and the cleft into which the 12th Imām (the Imām Mahdi) is believed to have vanished, and from which he is expected one day to reappear when he comes to establish the true faith upon earth. The principal Mosque in the modern town, where the Imāms are buried, is jealously guarded against infidel intrusion. The tombs of the 10th and 11th Mahdis are under a dome of fine Persian tiles, while a smaller dome covered with gold-leaf is built over the place where the Imām Mahdi disappeared. Of the ruined

buildings of old Samarra, the most important lie to the N. of the present city. A few hundred yards outside the walls lie the ruins of the great Mosque (260 yds. \times 170 yds.), a large rectangular enclosure (middle 9th century A. D.), surrounded by a ruinous wall, with four large angle towers, with smaller rounded bastions at intervals of about 20 ft. The longer sides run N. and S. There is a large gate in the middle of the southern side. The E. and W. walls are broken by numerous doors. The wall above the larger doors has in every case fallen away. There are 5 gates to the N. Windows occur irregularly. Near the centre of the N. wall stands a minaret called the Malwiyeh, about 160 ft. high, which is ascended by an external spiral path. From the top there is a wide view over the town of Samarra and the neighbouring country. To the N. of the Malwiyeh, between it and the ruins called the Beit el-Khalifeh, a space of nearly 3,000 yds. is covered with the remains of walls and streets.

Supplies and Commerce.—Local supplies are described in general as limited, but before the war the town must have had sufficient provisions for the numerous Shiah pilgrims who visit or pass through the town. Melons and vegetables appear to be the chief agricultural export. The Baghdad supply of melons comes mainly from Samarra. There are no wells in Samarra containing drinkable water, but the water which is obtained from the river is said to be excellent. The pilgrim-waggons (capable of carrying about 20 men) which ply between Samarra and Baghdad are owned in Kazimain, but in the pilgrim-season there are usually 10–20 of them in the small village which lies opposite Samarra on the r. bank. Large sailing boats (*baghalehs* and *safinehs*) can ascend to Samarra, except, apparently, when the current is strongest at flood-time, and *quffehs* are still in use (see vol. i, p. 166). Before the war a small steamer made weekly voyages to Samarra from Baghdad.

Inhabitants.—Probably about four-fifths of the inhabitants are Shiahs, and there is a Persian community in the place. Persian is said to be more spoken here than Arabic, and Persian coinage prevails. A few Jews are settled here, and there is a small British Indian colony, mostly Kashmiris.

Administration and Authorities.—Samarra is the headquarters of a *Kaza* in the *Vilayet* of Baghdad.

History.—Samarra was a small town for many centuries in the Assyrian, Persian, Greek, and Sassanian periods (here the army of the Roman Emperor Julian halted in its retreat from Ctesiphon in A. D. 363, and near the town Julian died of wounds); but at the beginning of the ninth century there seems to have been little

on the site but a Christian monastery. In 836 the Caliph Hutasim, anxious for political reasons to leave Baghdad, fixed on Samarra as the site of his new capital; and within the following thirty-seven years a great city rose, extending for 21 m. along the Tigris, with palaces, mosques, and extensive quarters for the Caliph's Guard (a large body of Turks and Berbers who had caused great discontent among the people of Baghdad when the Caliph resided there). About the year 872 the Caliph Muhtadi brought back the court to Baghdad, and Samarra fell into decay, being kept alive only by its connexion with the Shiah sect.

SULEIMĀNIYEH, ⁷60 m. E. by N. of Kirkuk. 2,500 houses. It is the largest Kurdish town in Southern Turkish Kurdistan. T.O.

Routes.—

- (i) To **Salāhiyeh**. See *Routes* 34 a, b.
- (ii) To **Kirmanshah**. See *Route* 35.
- (iii) To **Senna**. See *Routes* 36 a, b.
- (iv) To **Kirkuk**. See *Route* 37.
- (v) To **Raniyeh**. See *Route* 38.
- (vi) To **Köi Sanjaq**. See *Route* 39.
- (vii) To **Suj Bulaq**. Difficult, and impassable for wheels. No details available.

General Description.—Suleimāniyeh lies on the lower slope of the hills between two spurs. Through the valley between the spurs runs an abundant supply of excellent water. The town itself, seen from without, is insignificant, possessing no large buildings or anything conspicuous except a minaret recently erected. It has, however, a fine open square in the middle of the town on to which the Government buildings face, and a very fine vaulted bazaar. The streets are narrow and dirty, and most of the houses are flat-roofed mud huts. A report of 1904 says that the barracks were a rather ruinous line of buildings of burnt brick.

There are no walls or fortifications, the outskirts being composed of small one-storeyed houses.

Supplies and Commerce.—There are fair supplies of cereals, vegetable and dairy produce from the neighbouring Kurds, though the capacities of the place as a base of supply are probably not what they were 10 years ago, for reasons explained below. The hills to the E. are well-wooded. The water-supply is very good and comes from some large springs near the town.

At the accession of Abdul Hamid the town was a market for the produce of all southern Kurdistan. Carpets for Mosul and Baghdad came here for sale, gum from Banah began to be sold here instead of in Senna, and a large number of Chaldaeans of Mosul carried on here an extensive and profitable business in the cotton cloths of Aleppo and European fabrics. The beys and pashas of the Jaf tribe entered into agreements to send all the produce of the tribe—skins, wool, tobacco, and butter—to the bazaars of Suleimāniyeh.

In 1880 the value of the trade was estimated at £T500,000. In 1909 it had sunk to £T400,000 and was decreasing. The reason is to be found partly in the history of the town during the interval (see below), partly in the presence of a 15 per cent. customs duty.

An important local industry is the manufacture of fire-arms, especially of rifles. The model for this is the Martini-Peabody American patent, but the bore is that of the Russian Bourdan rifle. All the cartridges are of Russian manufacture. These weapons, which can be turned out at the rate of about 9,000 per annum, are fairly reliable up to 500 yds. One craftsman constructs the barrels (spirally welded strips of sheet-iron), another the locks and springs, a third collects and browns the arms and an agent sells them, the cheapest for £T2, the dearest for £T4. There is an excellent market for the weapons among the neighbouring Kurds.

Shoe-making and saddlery are also important occupations.

The coinage-system and weights and measures at Suleimāniyeh are more than usually complicated. Though it is long since the town belonged to Persia the Persian currency has been retained, no Turkish coin being accepted but the mejidieh. The actual coins are the copper 'pul', the silver 'baichu' or Persian 'panj shahi' and the ordinary 2-qran piece of Persia, here called 'tihrani'. Everything is reckoned in 'qamari', an imaginary coin worth 4 pul. The 'baichu' is worth 7 pul. For larger amounts there is the 'tihrani' which is equivalent to 5 baichu and 1 pul, or 9 qamari. Other names used are 'charkhi', 'jout', 'deh para', 'ghazi', 'qran', and 'qran-i-rash'.

(It may be noted that in Kirkuk the baichu is called a qamari and the tihrani a qran.)

As for weights, the local 'huqqa' is equivalent to $2\frac{1}{2}$ times that of the Stamboul 'oke', which is the basis throughout Asiatic Turkey. It is also, however, $\frac{4}{5}$ of the Panjurn huqqa, $\frac{4}{5}$ of a Tabriz 'man', and $\frac{2}{5}$ of the Halebjeh 'man'. It is divided into 400 dirhams, and all fractions must be expressed in Turkish.

Inhabitants.—The inhabitants are a mixture of Kurdish, Arab,

and Turkish stock. There are said to be 100 houses of Jews and 20 of Christians who live in a separate quarter outside the town. Kurdish is the chief language spoken, though nearly everybody understands Persian. The dress is partly that of the Kurds, but in costume and other matters the natives are said to be extremely conservative. They are also suspicious and inquisitorial in their bearing towards strangers.

Administration and Authorities.—The place is the seat of a Mutesarraf under Mosul. There is also a Persian consul. The usual garrison is 4 battalions of about 400 men each (report of 1904). See also under *History*.

History.—The importance of the place in modern times dates from the time of Suleiman Pasha of Baghdad. In 1779, during his tenure of office, the government of the district, which was then ruled by chiefs descended from a Kurdish priest called Mullah Ahmed, was transferred to the site of the present town. A government house and other buildings were built and the new town called Suleimani. In 1851 Kurdish rule in Suleimāniyeh (the more modern name of the town) came to an end with the seizure of 'Abdallah Pasha and his brother Ahmed. Ismail Pasha, a Turk, was appointed kaimmakam, and a garrison sent to the town.

From now onward the priests, free of the restraints imposed by the Kurdish pashas, gradually acquired for themselves a position which kept both governor and governed in awe. Up till 1876, however, under Sultan Abdul Aziz, they contented themselves with gaining a reputation for sanctity. After the Sultan's death and the accession of Abdul Hamid, Sheikh Sa'id, the leader of the priestly family, began a system of self-aggrandizement and enrichment. This led to revolts on the part of the people who summoned the Hamawands to expel the governor and sheikhs. The arrival of a battalion from Kirkuk drove off the Hamawands and Sheikh Sa'id began a campaign of open robbery, assisted by a very effective spy-system. The merchants were the chief sufferers, many of whom moved into Persia, as did also the fruit and vegetable cultivators in consequence of a 300 per cent. special entry duty imposed on every load entering the town. The ultimate object of the Sheikhs seems to have been to make themselves practically independent. Matters at last reached such a pass that Sheikh Sa'id was summoned, or rather induced, to come to Mosul with some members of his family, where he was murdered by the mob in 1909, at the age of 85. Thereupon fresh revolts broke out in Suleimāniyeh, fomented by the family of the sheikh who had influence both there and in Constantinople, and in August 1909 the sheikhs were still predominant.

TEKRIT, on r. bank of the Tigris, 31 m. above Samarra by river. Pop. possibly 5,000 ; 950 houses. Ferry.

River Route. See Route III E, m. 31.

Land Routes.

(i) To **Samarra** (a) along r. bank of Tigris. See *Route 25 b*, m. 104.
 (b) L. bank, caravans appear to travel to Dūr and Samarra on this side, but there is no regular route, and no details are available.

(ii) To **Hīt**, 85 m. SW., a little caravan traffic ; no details available.

(iii) To **Mosul**. See *Route 25 b*, m. 104.

(iv) To **Kirkuk**. See *Route 26*.

General Description.—The town is built in the form of a semi-circle on conglomerate cliffs, which at the centre of the town rise to a height of 50-60 ft. The frontage of the town on the river is 400 or 500 yds. The stream here has been estimated at 250 yds. wide in October (1903), and 500-600 yds. wide in May (1910). It is shallow on the Tekrit side. In May 1910 it was possible to wade 100 yds. from the r. bank. The current has been estimated at 2-3 m. an hour (l. w. season). Along the banks, where there are no bluffs, there is a strip of cultivated land averaging $\frac{1}{4}$ m. in width. W. of the town there is high broken and stony ground, uncultivated. The neighbourhood of Tekrit is covered with ruins of the pre-Mohammedan city. There is a wide view over the country to S., N., and E. from an eminence a few minutes W. of the town. Jebel Selweh, $4\frac{1}{2}$ m. WNW., rises to 407 ft.

Above Tekrit the cliffs (mud and conglomerate) continue on the r. bank. The district immediately above the town is called Qā'im.

Supplies and Commerce.—A few poor shops; sheep exported overland to Syria. Small local export of cereals, melons, &c. ; import of cheap manufactured goods. The place is a centre of rafting trade down-stream ; many raftsmen live here. Several large boats are available, fit to carry horses, which, however, are usually swum across the river. The wickerwork *quffehs* (ferry-boats) carry 10-15 men each.

Inhabitants.—Mixed Arab population ; the men are largely employed as raftsmen (some of them are settled for this purpose in Mosul).

Administration.—The place is administered by a Mudir, under the Kaimmakam of Samarra.

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TRANSLITERATION OF ARABIC, PERSIAN, AND TURKISH NAMES

AN attempt has been made in the Handbook to transliterate Arabic, Persian, and Turkish names upon a uniform system, which is explained in detail in the following paragraphs. The aim has been to assist the reader in their correct pronunciation, without overburdening the text with a large number of diacritical marks. It will be noted that a long accent is used to mark the length of a vowel above which it is placed (ā, ī, ō, ū); the only other symbols employed are ' for the consonant 'Ain, and ' for the Hamzah, or cutting off of the breath which can precede or follow a vowel. Conventional spellings have been retained when sanctioned by general usage; a list of examples, with their correct equivalents, is given on p. 387.

TRANSLITERATION OF ARABIC, PERSIAN, AND
TURKISH NAMES

I

ARABIC

I. Consonants

1. ʾ (Hamzah) = ' except at the beginning or end of a word, and in common terms such as *Bir* and *Ras*, when it is omitted in transliteration; e.g. *Ahmad*, *Rejā*, *Medā'in*.

ب = b	ذ = dh	ط = t	ل = l
ت = t	ر = r	ظ = z	م = m
ث = th	ز = z	ع = ' (Hamzah)	ن = n
ج = j	س = s	غ = gh	و = w
ح = h	ش = sh	ف = f	ه = h
خ = kh	ص = s	ق = q	ي = y
د = d	ض = dh	ك = k	

II. Vowels

2. (i) َ (Fet-hah) = *a* or *e* according to pronunciation, e.g. *Jebel*, *Qal'ah*.

(ii) ِ (Fet-hah + Alif) = *ā*, e.g. *Jemāl*.

(iii) ِ (Fet-hah + final ye, rare in place-names) = *a*, e.g. *A'ma*.

3. (i) ِ (Kesrah) = *i*, e.g. *Dizful*.

(ii) ِ (Kesrah + Ye) = *ī*, e.g. *Mināb*, *Qasim*.

4. (i) $\overset{\circ}{\text{u}}$ (Dhammah) = *u* or *o* according to pronunciation, e.g. *Jubb*, *Hodeideh*.

(ii) $\overset{\circ}{\text{w}}$ (Dhammah + wau) = *ū* or *ō* according to pronunciation, e.g. *Shūsh*, *Khōr*.

III. Diphthongs

5. $\overset{\circ}{\text{aw}}$ (Fet-hah + wau) = *an*, e.g. *Haurān*.

6. $\overset{\circ}{\text{aww}}$ (Fet-hah + double wau) = *aww*, e.g. *Fawwāreh*.

7. $\overset{\circ}{\text{ay}}$ (Fet-hah + ye) = *ei* or *ai* according to pronunciation, e.g. *Sheikh*, *'Ain*.

8. $\overset{\circ}{\text{ayy}}$ (Fet-hah + double ye) = *eyy* or *ayy* according to pronunciation, e.g. *Feyyādh*, *'Ayyād*.

IV. Remarks

9. Teshdid (ّ) is represented by doubling the English consonant over which it stands, e.g. *Mohammed*, *Jinn*.

10. In the Definite Article (ال), spelled as usually pronounced *el*, the usual assimilation of the *l* is made before *dentals*, *sibilants*, and *l, r, n*; e.g. *Sūq esh-Shuyūkh*, *Harūn er-Rashād*.

11. A Hyphen is used only in the following cases:—

(1) After the Definite Article.

(2) Between the following consonants when they belong to different syllables, s-h, d-h, t-h, k-h, z-h, to prevent confusion with the single consonant sh, dh, th, kh, zh; e.g. *Is-hāq*.

12. Final eh (the feminine ending) = *eh* or *ah* (*et* or *at* before a vowel), e.g. *Meskench*, *Qal'ah*, *Birket esh-Shuyūkh*.

13. Final eh = *iyeh* (*iyet* before a vowel), e.g. *Zāwiyeh*, *Zāwiyet*.

Final eh = *iyeh* (*iyet* before a vowel), e.g. *Nāsiriyeh*.

V. *Compound Words*

14. The two components in a compound name (in the absence of the *izāfat* or ال between them) are written with a capital and without a hyphen connecting them, e. g. *Bandar 'Abbās, Hayāt Dā'ūd*.

15. When, however, the second member of the compound is a verbal root or is inseparably connected with the first, the whole has been treated as one word whether written in vernacular as one word or two, e. g. *Imāmzādeh, Sabzabād*.

16. Words which have become Europeanized are left in that form, e. g. Mecca (for *Makkah*), Basra (for *al-Basrah*), Medina (for *al-Medīnah*).

17. The Arabic article ال prefixed to names has been omitted in English, except in cases where its retention is authorized by general usage.

18. The word *ibn* occurring in the name of a person is written without a hyphen before or after it, e. g. *Yūsuf ibn Ibrāhīm*.

II

PERSIAN

I. *Consonants*

19. The same as for Arabic, plus :

پ = p	ذ = z	ض = z	و = v or w
ث = s	ژ = zh	گ = g	
چ = ch			

II. *Vowels*

20. The same as for Arabic.

III. *Diphthongs*

21. The same as for Arabic.

IV. *Remarks*

22. 'Izāfat' is transliterated by *i* with a hyphen before and after, e.g. *Kōh-i-Siyāh*.

23. Final *he* (ه) is transliterated only when pronounced, e.g. *shāh, deh*.

III

TURKISH

24. The same as for Arabic, plus:

Modified vowels *ö, ü*.

25. A few Turkish words where two vowels come together, as in *Bair*, are written with a Hamza, e.g. *Ba'ir*.

26. In Turkish a half audible *y* sound is introduced between *k* and following vowel.

IV

(a) CONSONANTS

LETTER				NAME	TRANSLITERATION	
Final	Medial	Initial	Arabic		Persian, Turkish	
ا	ا			alif	a	a
ب	ب	ب	ب	be	b	b
پ	پ	پ	پ	pe		p
ت	ت	ت	ت	te	t	t
ث	ث	ث	ث	the	th	s

(a) CONSONANTS (continued)

LETTER				NAME	TRANSLITERATION	
Final	Medial	Initial	Arabic		Persian, Turkish	
ج	ج	ج	ج	jim	j	j
چ	چ	چ	چ	che		ch
ح	ح	ح	ح	ḥe	h	h
خ	خ	خ	خ	khe	kh	kh
د	د	د	د	dāl	d	d
ذ	ذ	ذ	ذ	dhāl	dh	z
ر	ر	ر	ر	re	r	r
ز	ز	ز	ز	ze	z	z
ژ	ژ	ژ	ژ	zhe		zh
س	س	س	س	sīn	s	s
ش	ش	ش	ش	shīn	sh	sh
ص	ص	ص	ص	ṣād	s	s
ض	ض	ض	ض	dhād	dh	z
ط	ط	ط	ط	ṭṭā	t	t
ظ	ظ	ظ	ظ	dha	z	z
ع	ع	ع	ع	'ain	'	'
غ	غ	غ	غ	ghain	gh	gh
ف	ف	ف	ف	fe	f	f
ق	ق	ق	ق	qāf	q	q
ك	ك	ك	ك	kef	k	k
گ	گ	گ	گ	gāf		g
ل	ل	ل	ل	lām	l	l
م	م	م	م	mīm	m	m
ن	ن	ن	ن	nūn	n	n
و	و	و	و	wau	w	v or w
ه	ه	ه	ه	he	h	h
ي	ي	ي	ي	ye	y	y

(b) VOWELS AND DIPHTHONGS

ARABIC, PERSIAN, AND TURKISH

Short

◌َ (Fet-hah) = a or e

◌ِ (Kesrah) = i

◌ُ (Dhammah) = u or o

Long

◌َ (Fet-hah + Alif) = ā

◌ِ (Kesrah + Ye) = ī

◌ُ (Dhammah + Wau) = ū or ō

Diphthongs

◌ِ (Fet-hah + Ye) = ai or ei

◌ُ (Fet-hah + Wau) = au, and also ū and ö (Turkish).

V

EXAMPLES OF CONVENTIONAL SPELLING
RETAINED

Acre	' <i>Akka</i>	Hejaz	<i>Hijāz</i>
Aden	' <i>Adan</i>	Irak	<i>Irāq</i>
Akaba	' <i>Aqabah</i>	Kaimmakam	<i>Qā'im Maqām</i>
Aleppo	<i>Halab</i>	Kerbela	<i>Karbalā</i>
Alexandretta	<i>Iskandarūn</i>	Khediye	<i>Khidiv</i>
Alexandria	<i>Iskandarīyeh</i>	Koran	<i>Qur'ān</i>
Algiers	<i>Al-Jazā'ir</i>	Koweit	<i>Kuwait</i>
Anazeh	' <i>Anzah</i>	Mecca	<i>Makkah</i>
Asir	' <i>Asir</i>	Medina	<i>Al-Madīnah</i>
Basra	<i>Al-Baṣrah</i>	Meshed	<i>Mashhad</i>
Bedouin	<i>Badawī</i>	Mocha	<i>Mokhah</i>
Beyrout	<i>Bairūt</i>	Moslem	<i>Mustim</i>
Cadi	<i>Qādhi</i>	Mosul	<i>Al-Mauṣil</i>
Cairo	<i>Al-Qāhirah</i>	Muezzin	<i>Mu'adhdhin</i>
Caliph	<i>Khalīfah</i>	Muscat	<i>Masqat</i>
Damascus	<i>Dimashq</i>	Oman	' <i>Omān</i>
Dervish	<i>Darwīsh</i>	Suez	<i>Suwais</i>
Diarbekr	<i>Diyār Bekr</i>	Tangier	<i>Tunjah</i>
Euphrates	<i>Al-Furāt</i>	Teheren	<i>Tihrān</i>
Fakir	<i>Faqīr</i>	Tripoli	<i>Tarābulus</i>
Fez	<i>Fa's</i>	Vizier	<i>Wazīr</i>

GLOSSARY OF TOPOGRAPHICAL AND OTHER TERMS

(A.) = Arabic. (T.) = Turkish. (K.) = Kurdish. (P.) = Persian.
(S.) = Syriac. (H.) = Hindustani.

- Āb (P.) Water, river.
 'Aba (A.) (Arab. 'abū' or 'abū'ah) Arab cloak.
 Ābād (P.) Town, plain.
 Abu (Abū) (A.) Father (often used, in the genitive relation, to denote possession, &c.).
 Abyadh (A.) White.
 Agha (T.) Chief.
 Aghāj (T.) Tree.
 Ahmar (A.); *fem. sing.* Hamrā Red.
 'Ain (A.) Spring (of water).
 Āl (A.) Tribe; Bū, in the expression Āl Bū (occurring in many tribal names), is an abbreviation of Abū (*see* Abu).
 Ambār (Anbār) (A.) Storehouse.
 'Ami, 'Ama (A.) Blind (used of dry stream-beds).
 Aq, Aqcheh (T.) White.
 Arabeḥ, Arāba (T.) Four-wheeled cart or carriage.
 Arid (A.) A small desert plant eaten by camels.
 Arzān (P.) Millet.
 Ashāghī (T.) Lower.
 Ashīreh (in genitive relation Ashīret) (A.) Kindred, family, tribe; used of the tribes paying taxation through their own heads.
 Asiyāb (P.) Water-mill.
 'Atīq (A.) Ancient.
 Av (K.) Water, river.
 Bāb (A.) Gate.
 Bādgir (A.) Wind-scoop; house ventilator.
 Baghaleh Big cargo-boat, sometimes of 200-300 tons burthen.
 Bāghcheh (T.) Garden.
 Bahr (A.) Sea, lake.
 Banāt (A.) *see* Bint.
 Bandar (P.) Port.
 Bāsh (T.) Head, summit.
 Beg, Bey (T.) Title given to persons of distinction.
 Beit (A.) House.
 Bel (T.) Pass.
 Beled (A.) Town, district, country.

- Bellam (A.) Long narrow boat used on the rivers and marshes of Southern Irak.
- Beni (A.) Sons of (plur., in genitive relation, of Ibn, q. v.).
- Bhusa (H.) Chopped straw.
- Bin (A.) Son; variant form of Ibn (q. v.).
- Bint (plur. Banāt) (A.) Girl, daughter.
- Bîr (Bî'r) (A.) Well.
- Birkeh (in genitive relation Birket) (A.) Pool, cistern, tank.
- Boghaz (T.) Pass, defile (lit. neck, throat).
- Boyun (T.) Col, ridge (lit. nape of neck).
- Bund (P.) Dam.
- Büyük (T.) Great.
- Chai (T.) Stream.
- Cham (K.) Meadowland, field (In T. = pine).
- Chemen (P.) Meadowland, field.
- Chenār (A. Sinār.) Plane-tree (*platanus orientalis*).
- Cherrad (Churd or Karad) (A.) Water-hoist of skins, drawn by animals.
- Chiftlik (T.) Farm.
- Chöl (K.), Chöl (T.) Desert.
- Dāgh (T.) Mountain.
- Dā'irat es-Sanīyeh (A.) The name of the Government Department which manages the Turkish Crown lands.
- Dānak (A.) Flat-bottomed boat of a kind used on marshes of Southern Irak.
- Dār (A.) House.
- Darb (A.) Road.
- Deh (P.) Village.
- Deir (A.) Monastery.
- Derbend (T.) Pass. (Pronounced Devrent.)
- Dereh (T.) Stream-bed, valley.
- Desht (Dasht) (P.) Plain, plateau, desert.
- Deveh (T.) Camel.
- Dhalül, Dhelül (A.) Riding-camel.
- Dirah. Area within which a nomad tribe usually moves and has grazing rights.
- Durra (H.) Millet (*sorghum vulgare*).
- Düz (T.) Level, plain.
- Emîr (A.) Ruler, prince, commander.
- Eski (T.) Old.
- Fātihah (in genitive relation, Fātihat) (A.) Opening.
- Fethah (A.) Opening.

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Gardān (P.)	Pass.
Gavvan (P.)	Small prickly shrub used for firewood.
Gechid (T.)	Ford, pass.
Gedik (T.)	Pass.
Gharb (A.)	West.
Gharbi (A.)	Western.
Ghi (H.)	Clarified butter.
Girik (K.)	Hill.
Gök (T.)	Blue.
Göl (T.)	Lake.
Göz (T.)	Fountain; arch of bridge (lit. eye).
Gumbet (T.)	Small domed shrine.
Gund (K.)	Village.
Gurmah (in genitive relation, Gurmat) (A.)	Canal, channel.
Hadrah (A.)	Commercial mission.
Haji (Hajji) (A.)	The title assumed by a Moslem who has performed the pilgrimage to Mecca.
Hajj (A.)	The pilgrimage to Mecca; pilgrim caravan.
Hamād (A.)	Barren (region), used of the Syrian Desert.
Hammām (plur. Hammāmān) (A.)	Bath.
Hamrīn (A.)	Red; plur. of Ahmar (q. v.).
Hāwi (A.)	Used in Tigris Valley for a flat foreshore between the river and the side of the valley.
Hisar (T.)	Castle.
Howeir (A.) (Khuwair).	Diminutive of Khōr, q. v.
Ibn (A.)	Son.
Idhrah (A.)	Mealies.
Imām (A.)	Religious leader; tomb of Imām.
Imāmzādeh (A.)	Tomb of Imām.
Irmak (T.)	River.
Jāmi' (A.)	Friday mosque.
Jebel (A.)	Hill, mountain.
Jezireh (A.) (in genitive relation, Jeziret).	Island; Mesopotamia.
Jirf (Jurf) (A.)	Cliff.
Jirjib (A.)	Stream-bed dry in summer.
Jisr (A.)	Bridge.
Juss (A.)	Gypsum; gypsum mortar.
Kaimmakam (T.)	Administrator of a Kaza (q. v.).
Kani (K.)	Spring, well.
Kpau (T.)	Gate.
Karez (P.)	Underground water-channel.

GLOSSARY OF TOPOGRAPHICAL AND OTHER TERMS 391

Kaza (T.)	Turkish administrative district, subdivision of a Sanjaq (q. v.).
Kebīr (A.)	Great.
Kefr (A.)	Village.
Kelek (A., &c.)	Raft of beams and branches, supported on inflated skins, of a kind used on rivers of Northern Mesopotamia (especially the Middle Tigris).
Keli, Kel (K.)	Pass.
Kesik (T.)	Broken.
Khabrah (A.)	Depression in which rain-water collects.
Khāchīyeh (A.)	Light summer cloak.
Khān (A., P., &c.)	Inn, caravanserai (spelt Khan except with names).
Khān (P.)	Lord, chief.
Kharāb (A.)	Ruin.
Khidhr (A.)	Prophet (used of Elias and a few others).
Khīrbeh (A.) (pronounced Khūrbeh, in genitive relation, Khīrbet.)	Ruin.
Khōr (A.)	Sheet of water, bay, inlet, marsh; also used by Bedouins to denote salt-encrusted ground.
Kilīseh (T.)	Church.
Kīnāseh, Kunāseh (A.)	Shoal or sandbank.
Kīrk (T.)	40, numerous.
Kōi (T.)	Village.
Kōprü (T.)	Bridge.
Kūchūk (T.)	Little.
Kūh (P.)	Mountain.
Kūt (A.)	Fort.
Kutal (Kotal) (P.)	Col.
Mā, often pronounced Moi (A.)	Water.
Ma'den (T.)	Metal, mine.
Maheileh (A.)	River sailing-craft of large size used in Irak.
Maidān (A.)	Open space, plain.
Malik (A.)	King, chief.
Mamur	Turkish subordinate departmental official.
Mār (S.)	Lord, master.
Māsh	A kind of vetch or pea.
Mashhūf (A.)	A light reed or plank canoe covered with bitumen used on the marshes of Southern Irak.
Mazār (A.)	Shrine.
Medīneh (A.) (plural, Medā'in).	City.
Merkez (A.)	Head-quarters.
Mezjid (A.)	Place of prayer; small mosque.
Mudir (T.)	Administrator of a Nahiye (q. v.),

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- Mujtahid (A., &c.) Shiah religious authority.
 Mutessarif (Mutesarrif) (T.) Administrator of a Sanjaq (q. v.).
- Nahiye (Nāhīyeh) (T.) Turkish administrative district, subdivision of a Kaza (q. v.).
- Nahr (A.) River, canal.
 Naqīb (A.) Leader, head of community, local head of Seyyids (q. v.).
- Naqībzādeh (A.) Son of a *naqīb*.
 Naur (Nā'ūr) (A.) Water-wheel, used in irrigation.
 Nizam (T.) Turkish regular troops.
 Nullah (H.) Water-course.
 Nuqtah (A.) Police post.
- Pā (P.) Foot.
 Pīr (P.) Old.
 Pul (P.) Bridge.
 Punār (T.) Spring.
- Qabr (A.) Tomb.
 Qal'ah (in genitive relation, qal'at) (A.) Fort.
 Qanāt (Qanāb, plur. qanawāt) (A.) Canal, water-channel, subterranean conduit.
- Qanātīr (A.) *see* Qantareh.
 Qantareh (plur. qanātīr) (A.) Bridge.
 Qara (T.) Black, great.
 Qasr (A.) Palace, castle, fortress, walled village.
 Qishlāq (A., &c.) Barracks.
 Qubbeh (A.) Dome, cupola; small domed shrine.
 Quffeh (A.) Coracle used on rivers of Central Mesopotamia.
 Quru (T.) Dry.
 Qūyū (T.) Spring, well.
- Rais (Ra'īs) (A., &c.) Chief.
 Ras (Ra's) (A.) Head, promontory.
 Rayah. Subject; used to denote that part of the population of the Turkish Empire which pays taxes direct to the Imperial Government (cp. Ashīreh, above).
- Reāl (A. Riyāl) The Maria Theresa dollar, worth about 2s. These coins, though still being minted, all bear the date 1788. They are the usual medium of circulation in Arabia.
- Redif (A.) Turkish reserve force.
 Resh (K.) Black.
 Ribāt (P.) Inn, caravanserai.
 Rūdbār (Rubar) (K.) River.

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Safīneh (A.)	Large-sized sailing-craft, used on Lower Tigris and Euphrates.
Saghīr (A.)	Small.
Sājeh (A.)	Small boat.
Sanjaq (T.)	Turkish administrative district, usually a subdivision of a Vilayet, q. v.
Sarīfeh (A.)	Reed and mud hut of marsh Arabs.
Ser (Sar) (P.)	Head, summit.
Serai (Serā'i, Serāyeh)	Used in Mesopotamia of Government buildings; in India and Persia it is used to mean caravanserai.
Serdāb (A.)	Underground room (for protection against the heat of summer).
Seyyid (A.)	Moslem claiming descent from the Prophet.
Sha'ir (A.)	Barley.
Shakhtūr (A.)	Large flat-bottomed boat used for down-stream navigation on Middle Euphrates.
Shamāl (A.)	North, north wind.
Shāmiyeh (A.)	Used of the l. bank of the Middle Euphrates (towards Esh-Shām, Damascus).
Sharq (A.)	East.
Sharqi (A.)	Eastern.
Shatt (A.)	River-bank, river.
Sheikh (A.)	Chief (of tribe or subtribe); also used of religious leaders.
Shiah (Shī'ah) (A.)	<i>Adj.</i> , professing, or pertaining to Shiism, one of the two great divisions of Islam.
Shōk (A.)	Camel-thorn.
Shu'eib, Sha'ib, Shi'b, Shāib (A.)	Ravine, small water-course.
Shuyūkh (A.)	Plural of Sheikh (q. v.).
Spī (K.)	White.
Stanga (?)	Path built out from or cut in the rock, in the form of steps.
Su (T.)	Water, river.
Sudd (A.)	Dyke, embankment.
Sunni	<i>Adj.</i> , professing, or pertaining to Sunnism, one of the two great divisions of Islam.
Sūq (A.)	Market.
Tang (P.)	Defile, gorge.
Tāsh (T.)	Stone.
Tekīyeh (A.)	Hostel for pilgrims.
Tel (Tell) (A.)	Mound, hill.
Tepeh (T.)	Hill.

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Tezek	Cow or other dung used for fuel.
Tibbīn (Tibn)	Straw.
Tulūl (A.)	Plural of Tel (q. v.).
Tura (Tur) (S.)	Mountain.
Umm (A.)	Mother (used, in genitive relation, to denote possession).
Veiran (T.)	Ruined, ruin.
Vilayet (T.)	Province of Turkish Empire, under a Vali.
Wādi (A.)	Water-course, bed of stream, river-valley (spelt wadi except with names).
Waqf (A.)	Property held (actually or nominally) in trust for religious purposes.
Wazir (A.)	Chief minister or ruler.
Yāilā (T.)	Summer pasture-grounds.
Yeni (T.)	New.
Yuqāri (T.)	Upper.
Zaptieh (T.)	Member of armed police force.
Ziyāret (P. &c.)	Pilgrimage, place of pilgrimage, sanctuary, usually a tomb.
Zozan (K.)	Summer pastures.

APPENDIX

BAGHDAD—SAMARRA RAILWAY ($73\frac{3}{4}$ M.).

Authorities :—Petermanns *Mitteilungen*, July 1915, and recent information.

Gauge, 4 ft. $8\frac{1}{2}$ in. Time taken by troop-train in Jan. 1916, 5 hrs.

The following is the list of stations. Compare *Route* 25 b.

Miles from Baghdad	0	Baghdad.
	$5\frac{1}{4}$	Kazimain.
	$12\frac{1}{2}$	Tajiyeh.
	$25\frac{1}{2}$	Khān Meshādidiyeh.
	38	Sumeikeh.
	$49\frac{1}{4}$	Beled.
	61	Istablāt.
	$73\frac{3}{4}$	Samarra.

RIVER ROUTES.

The information given below was received at a late stage in the preparation of this volume.

THE TIGRIS: MOSUL—SAMARRA OR BAGHDAD.

(Compare *Routes* III D, E.)

Keleks conveying troops down the Tigris are said to carry usually 75 men each. But it is also reported that a *kelek* may carry up to 40 tons or 150 men. For times based on evidence dating from before the war see p. 40 (Mosul—Samarra), and p. 20 (Samarra—Baghdad). The *keleks* conveying troops are said to travel by day only.

The following times are taken from the diary of a Turkish officer who descended the river in January 1916:—

1st day	$8\frac{1}{2}$ hrs.
2nd day	6 hrs.
3rd day	7 hrs.
4th day	6 hrs.
5th day (Tekrit)	5 hrs.
6th day (Samarra)	8 hrs.

(From Samarra the journey to Baghdad was made by rail in 5 hrs.)

THE EUPHRATES AND CONNEXIONS BETWEEN THE EUPHRATES AND BAGHDAD

(Compare *Routes IV E-H.*)

- (i) The following are estimated normal times for native craft (*shakhturs*) descending the Euphrates from Meskeneh to Fellūjeh:—

March-June: 6 days

July-February: 12 days

A Turkish prisoner seems to have taken 15 days on the journey in January 1916.

It is rumoured that metal rafts are to be used on the Euphrates.

- (ii) There are now (1916) stores of petroleum at Hit, and depôts of supplies at Anah and Deir ez-Zôr. Compare *Gazetteer of Towns*, pp. 351-352, 353-354, 356-357.
- (iii) Grain is reported to be sent from Deir to Ridhwāniyeh (see vol. ii, *Route IV D*) by a small launch with barge. Ridhwāniyeh is the western terminus of the Decauville railway from the Euphrates to Baghdad *via* Abu Thubbah and Tel Aswad (see vol. ii, *Appendix*).
- (iv) It is reported that in 1916 motor-boats were sent from Baghdad to the Euphrates through the Saqlāwiyyeh Canal (see *Route IV E*, m. 8).

ROUTES FROM KHANIKIN AND QASR-I-SHIRIN TO SULEIMĀNIYEH AND HALEBJEH. (Soane, 1911-13.)

(i) KHANIKIN—SULEIMĀNIYEH

Via HĀŪSH KURI AND HALEBJEH.

Passable for wheels to Hāūsh Kuri. Caravans frequently use whole route.

Miles from
Khanikin

0 **Khanikin.** General direction to Hāūsh Kuri N.: quite flat. Water *en route* only from villages off road. Fodder sometimes from district of Ben Kudra, on Turkish side of frontier-towers and fort passed at m. 13.

15 **Hāūsh Kuri**, on stony ground under low peaked hill. Water from spring and stream. Very little supplies. From here route proceeds up Sirwan (Diyaleh) River: tracks marked on both banks, but no information as to their nature except that they are well used.

Miles from
Khanikin

- At Sheikh Nasr-ed-Din's village on l. bank, a route joins from Chīāh Surkh (about 14 m. distant)..
- At Banakhilān ford, route from Chīāh Surkh and Hurin joins from SSE., and route to Suleimāniyeh *via* Qara Dagh diverges to NW. See *Route* (iv) below.
- 75 ? **Halebjeħ.** For route to Suleimāniyeh see *Route* 35.
- 120 **Suleimāniyeh.**

(ii) QASR-I-SHĪRĪN—SULEIMĀNIYEH

Via HĀÜSH KURI AND HALEBJEħ.

Just passable for strong carriages as far as Hāüş Kuri, but only if the road is left at the worst parts.

Miles from
Qasr-i-
Shirīn

- 0 **Qasr-i-Shirīn.** General direction WNW. Track leads between gypsum hills and the Agha Dāgh, undulating and rising very gradually.
- 3 **Ahmad Naizi,** large village in gap in the gypsum hills. Road continues to rise till the gypsum hills merge into the Agha Dāgh. Road proceeds among hills and small valleys.
- 10 **Hāüş Kuri.** See (i), above, for this place and remainder of route.
- 115 ? **Suleimāniyeh.**

(iii) QASR-I-SHĪRĪN—CHĪĀH SURKH.

From **Qasr-i-Shirīn** (A) follow the cart-road of the Anglo-Persian Oil Company to their works at **Chīāh Surkh** (13½ m.). Crude petroleum is available for fuel.

Another road (B) not fit for wheels, though broad in parts, goes W. of the cart-road. Total distance 10 m. General direction NE. Cross flat space outside **Qasr-i-Shirīn**, at N. end of which track narrows and goes over seven sandstone ridges: rocky descent from last. Thence over flat ground to bank of **Quretu** River, very muddy after rain. Here track crosses some bad gullies. **Quretu** village on mound by l. bank of river, 7 m. from **Qasr-i-Shirīn**. River crossed here by a ford bad after rain. Proceed NE. to **Saikavand** over gravel and mud. Cross **Qizil** stream by ford very bad after rain:

stream is dry after April. Saikavand is a hamlet at foot of cliff on S. side of brook. Broad road hence ascends gradually to a high ridge, whence a bad descent leads through a valley about $\frac{1}{2}$ m. broad, where the ground is marshy and treacherous. From here path ascends steeply to the Oil Company's works at **Chīāh Surkh**.

The Quretu River is crossed by a good ford apparently to E. of that mentioned above. A track leads to it, and, after crossing the Qizil stream 2 m. farther on, rejoins the other track 1 m. before Saikavand.

(iv) CHĪĀH SURKH—SULEIMĀNIYEH

Via HURIN AND BĀNAKHILĀN.

Well used by pack-caravans.

Hours from
Chīāh
Surkh.

- 0 **Chīāh Surkh.** Proceed N. over undulating plain W. of Dār-i-Divān range to Hajilar Plain, wide and well cultivated, occupied by Sheikhs Hamid Talibani and Tahir. Good going for all pack-animals to—
- 4 Principal village of **Hajilar**. From here road almost to Hurin flat and good going, except at slight rise over Nāo Māchik, which presents no serious difficulties. The 'Abbasān ford at foot of these hills is quite easy. Approach to Hurin, on spur of the Bamu, about 400 ft. above the plain, is bad and stony. Water *en route* at several places, and large quantities of barley, wheat, rice, and maize are obtainable.
- 9 **Hurin.**
Alternative road from Chīāh Surkh to Hurin, not so good as that described above and 1 hr. longer, goes NE. to Dār-i-Divān range, which it crosses by an easy pass, thence through eastern ridge of the same system (no difficulties), to Tilekū Plain, flat and stoneless. Ample water here from spring and the stream, which disappears before the passage between the Band-i-Hūān and Shawaldir hills to E. Road runs through this passage into Ser Qalāū Plain, flat and stoneless. 'Abbasān R. crossed between Bāwisi (summer village) and Māmishān (no village). Thence road leads along foot of Bamu hills, becoming very stony in parts. Abundant water *en route*. **Hurin** in 10 hrs.
- From Hurin the road is stony and narrow, across spurs of Khoshik, till a descent is made to Bāsak, whence there is easy going to—
- 13 **Bānakhilān** ford on the Sirwān (upper Diyāleh). Thence two stages by Qara Dāgh to Suleimāniyeh.

(v) CHĪĀH SURKH—HALEBJEH.

Hours from
Chīāh.
Surkh

- From **Chīāh Surkh**, road leads E. to Pet Bur cliff: good going so far. Thence over undulating country to Kel-i-Hūān, a narrow passage between the S. end of the Dār-i-Drvān and Band-i-Hūān, and the N. end of the Biznān Mt. Road stony near hills. Water at western mouth of Kel-i-Hūān under a tree, 2 m. E. of Pet Bur.
- Beyond the Kel-i-Hūān over stoneless plain to—
- 4 **Ser Qalāū**. Small village: scanty supplies: water from strong spring. Road leads N. over low neck of Taqtaq, and as it descends into Jaigīran, an almost N. direction is taken. The 'Abbāsān and Cham-i-Garraī streams are crossed, and a short distance farther N. is—
- 7 **Asgilleh** village, low down on a spur of Bamu. Some supplies. From here road rises to neck between Bamu and N. end of Garrai, and then descends, keeping along Cham-i-Qala stream, which it follows as far as junction with the Naijanao stream. It then ascends the spurs of Shāh Karam and Pusht-i-Qalan mts. by a rough, bad track, and descends into Shemīrān Plain.
- 1 **Shemiran** Plain. Hence it is 1 day's march to Halebjeh. The Sirwān is crossed apparently at Sirawān.

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