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## 'Military Report on Russian Turkistan or Central Asia'

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|-------------------------------|----------------------------------------------------------|
| <b>Holding Institution</b>    | British Library: India Office Records and Private Papers |
| <b>Reference</b>              | Mss Eur F111/388                                         |
| <b>Date(s)</b>                | 1905 (CE, Gregorian)                                     |
| <b>Written in</b>             | English in Latin                                         |
| <b>Extent and Format</b>      | 1 volume (80 folios)                                     |
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### About this record

A confidential report on Central Asia, compiled by Captain H H Dowding, Captain of the General Staff, War Office, 1905.

Contained within the report are chapters on the history, geography, administration, communications, resources, ethnography, and military of the region. Also included is a preface by Major-General J M Grierson, General Staff, War Office (folio 3), appendices (folios 63-78), including detailed information on the railways of the region, and a colour map of Central Asia (folio 81).

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ON  
RUSSIAN TURKISTAN  
OR  
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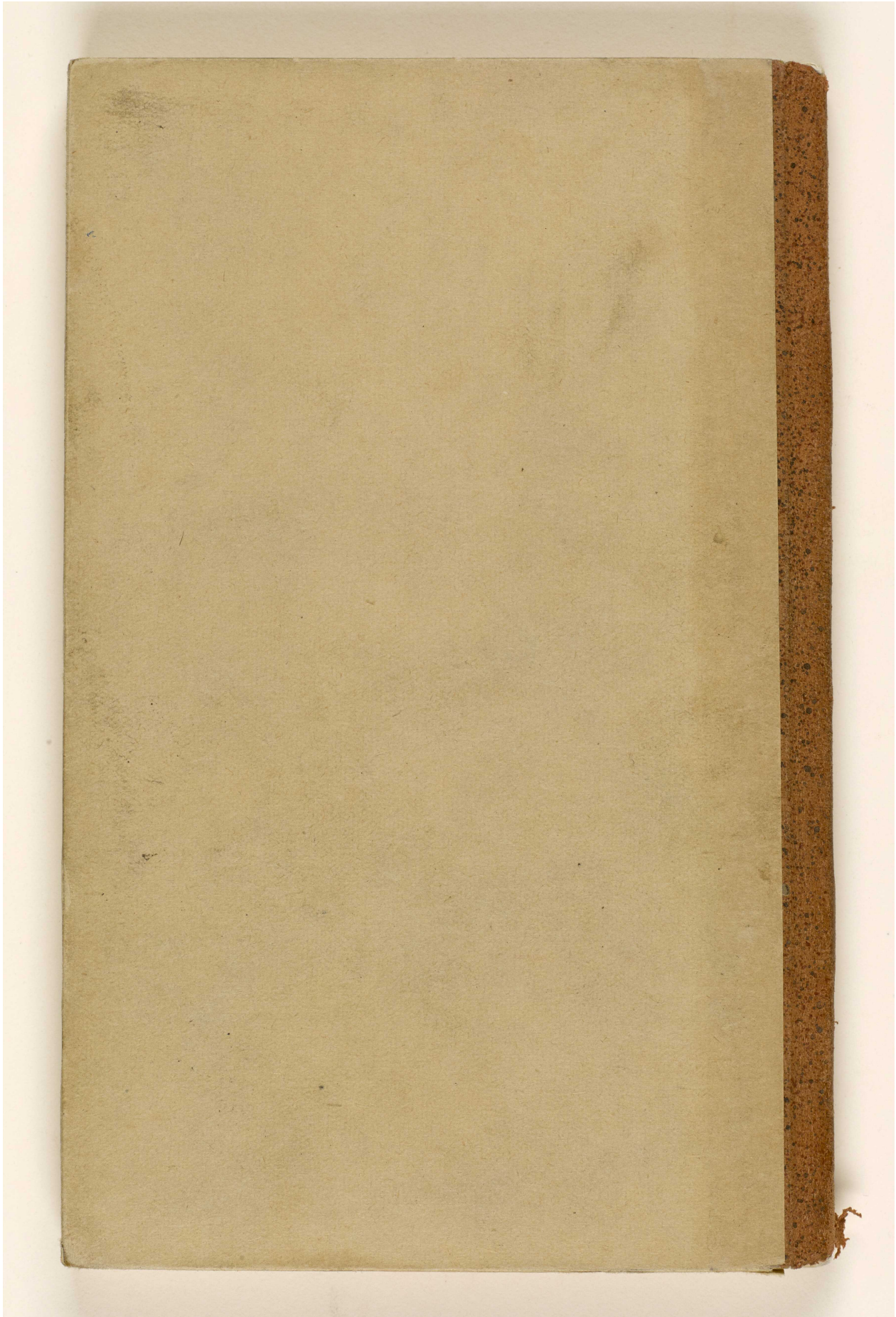
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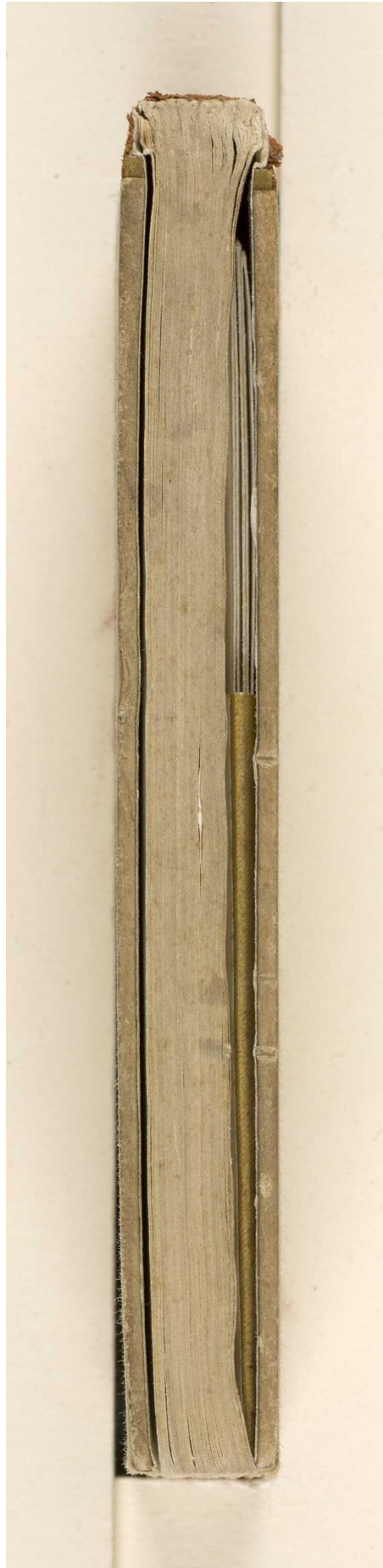




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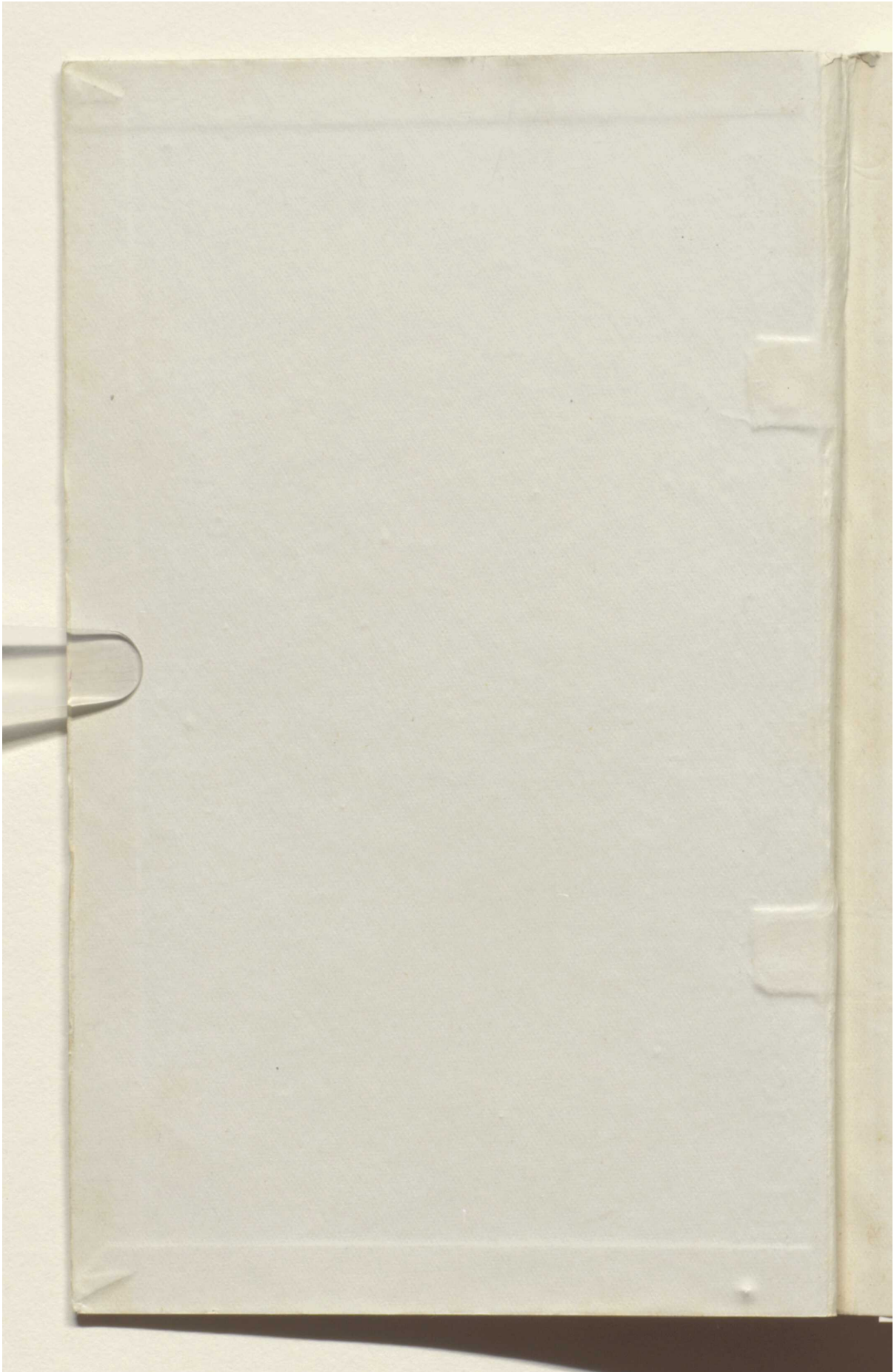




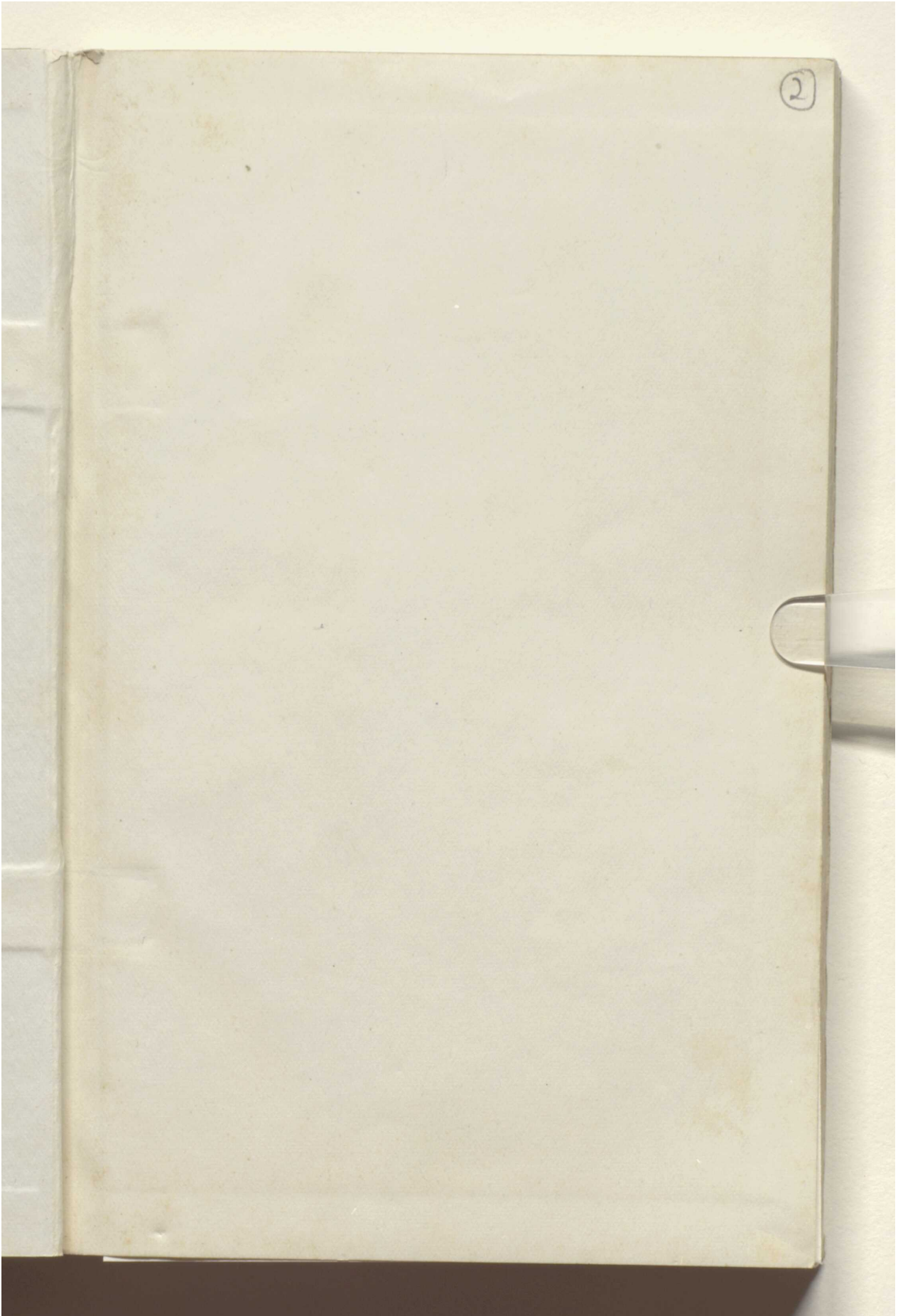
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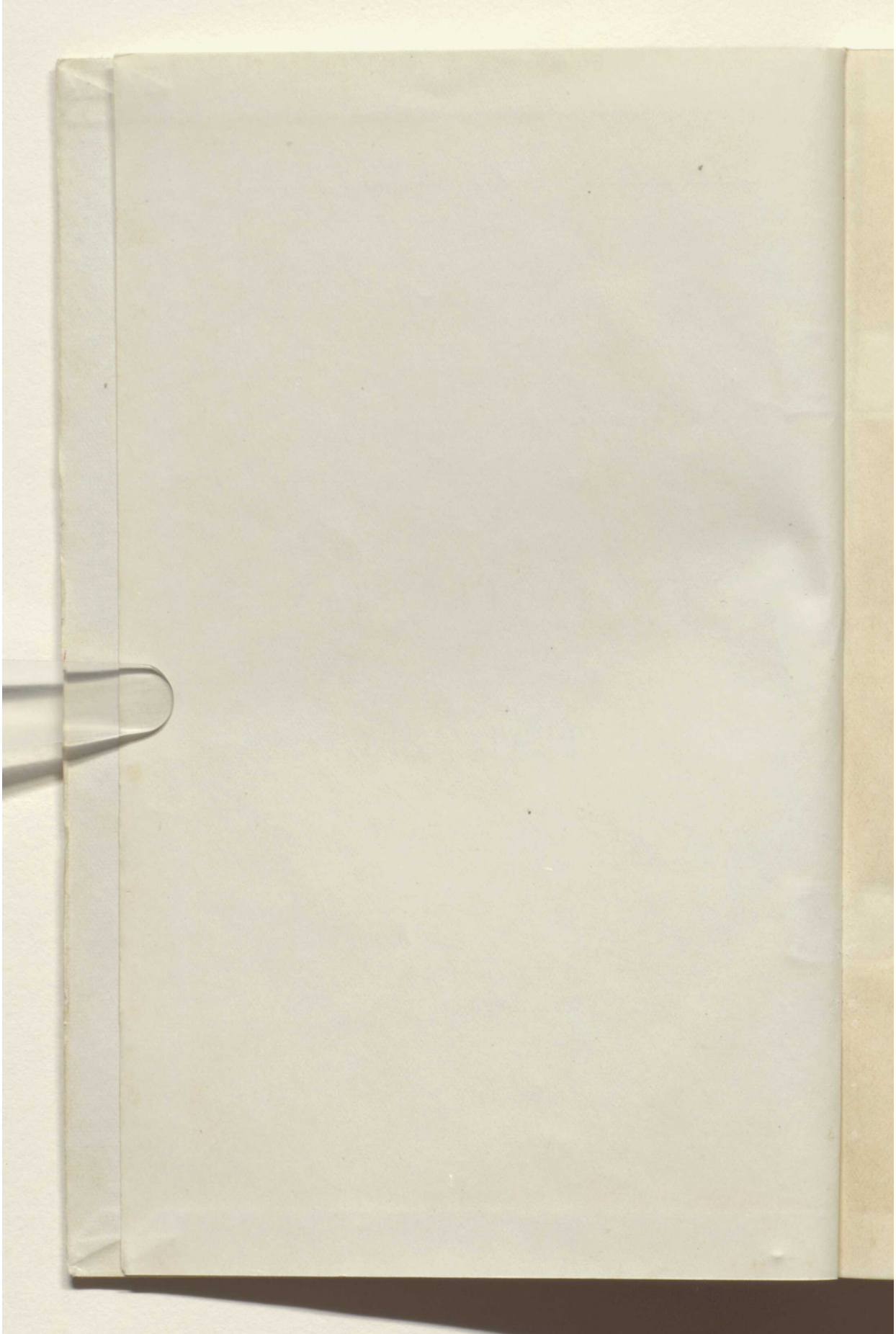


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RUSSIAN TURKISTAN  
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PREPARED BY THE GENERAL STAFF,  
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H. 957.

1905.



## P R E F A C E.

THE terms "Turkistan" and "Central Asia" appear sometimes to have been used almost indiscriminately to describe either the whole of that immense tract of country to the east of the Caspian, between Siberia on the north, and Persia, Afghanistan and Tibet on the south, or merely to designate separate parts of the same region.

The present Report deals only with Russian Turkistan, which includes the five Russian provinces of Trans-Caspia, Samarkand, Ferghana, Syr Daria, and Semirechia, and the two semi-independent Khanates of Khiva and Bokhara.

The Report has been prepared by Captain H. H. Dowding, Captain of the General Staff.

J. M. GRIERSON,

General Staff,

Major-General,

War Office.

D.M.O.

18th February 1905.



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Map of Central Asia - - In pocket.

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# MILITARY REPORT ON RUSSIAN TURKISTAN.

## CHAPTER I.

### HISTORY.

The history of Russia's connection with, and advance into, Central Asia may be briefly summarised and divided into phases, or periods, as follows:—

As early as the beginning of the eighteenth century, 1703–1718. incursions of nomads into the then newly settled territory of Siberia made some sort of arrangement between Russia and the peoples of Central Asia inevitable. Friendly relations with the Khanates of Bokhara and Khiva were desirable in the interests of Russian commerce. To obtain a footing in the affairs of Khiva, Peter the Great, in 1703, sent an Embassy to congratulate a new Khan on his accession. The Khan, hard pressed by his more powerful neighbour the Amir of Bokhara, welcomed the Embassy and proposed to place his country under the suzerainty of Russia, in return for protection against Bokhara.

In 1714 the Khan again begged assistance from Peter the Great, and asked that a chain of forts might be built on the east of the Caspian to protect him against the Turkomans. An exploring expedition was sent in answer to this appeal. The difficulties it encountered, however, were very great and, although it persevered for four years, it was at last completely annihilated by the Khan's successor, who was suspicious of the designs of Russia.

The first phase thus terminated in disaster, and nothing had been gained beyond a merely nominal suzerainty over Khiva.

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1732-  
1830.

The second phase of the Russian advance was opened by disputes among the Khirgiz hordes inhabiting the Steppes lying southward of Russia's frontier at that time. In 1732 the "Middle Horde" gave in its submission to Russia, and in 1740 the Khan of Khiva was persuaded to do the same. Russia promised protection in return for submission; Orenburg was fortified, and became Russia's southern outpost, a centre of caravan traffic, and a base for subsequent expeditions.

The nomads of the Steppes, however, still continued their raids, to which Russia retaliated by pushing her frontier steadily further towards the south.

1834-  
1865.

In 1834 a Russian fort was constructed at the head of Kultuk Bay on the Caspian, under the name of Novo Alexandrovsk, in order to dominate the Kirghiz and Turkoman tribes and to protect the eastern trade of the Empire. Four years later an expedition under Count Perovski was despatched from Orenburg to Khiva in order to release certain Russian prisoners, to establish trade relations, and to subjugate the Kirghiz tribes. The expedition suffered greatly from heat and drought, and ultimately was obliged to retire. The Khan, however, persuaded by an English officer, Captain Abbot, who visited Khiva while Perovski was attempting to reach it, and also, no doubt, hearing of the preparation of a second Russian expedition, made his submission, and liberated the Russian prisoners in question.

In 1842 a treaty was concluded by which the Khan undertook never to engage in hostilities with Russia or to permit acts of robbery to pass unpunished. Advantage was taken of the peace thus secured to improve the Russian line of communications with the country hitherto held by the Kirghiz hordes of Northern Turkistan. Forts were constructed to form links in the line of advance along the Syr Daria (Jaxartes), from Aralsk, on the coast of the Aral Sea (constructed in 1848) to Fort Perovsk 250 miles further up the river, built on the ruins of Ak Masjid, a town of Khokand, in 1853.

Further active operations were checked by the outbreak of the Crimean war. The Khan of Khokand, however, attempted to retake Fort Perovsk (with the open sympathy of the Amir of Bokhara), and in 1860

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he moved against the Russians in Semirechia, who retaliated by advancing against Chimkend and Tashkend, which were seized and occupied in 1864.

In 1865 Turkistan was constituted a Russian frontier district, with Tashkend as its administrative centre.

Russia had by this time subdued the whole of Eastern 1866-Turkistan, and only the Khanates remained to be dealt 1876. with. The struggle was renewed by the Amir of Bokhara, who in December 1865 took the offensive, occupied Khojend, and imprisoned four Russian envoys. General Romanovski moved against him and, in May 1866, after a decisive battle at Irgai, re-took Khojend.

An Ukase of 1867 placed Turkistan under a Governor-General, whose authority extended over the provinces of Syr Daria and Semirechia. After defeating the forces of Bokhara and Khiva, General Kaufmann, who was appointed to form the Government, occupied Samarkand in May 1868, and continued his movement against Bokhara, the subjugation of which was completed in June 1868. A treaty was signed, the chief articles of which were: the cession of the province of Zerafshan to Russia, the payment of a war indemnity, and the right of trading freely throughout Bokhara to all Russian subjects.

It was not long before Khiva gave General Kaufmann a pretext for farther conquests. In 1869 the Khivans supported the Kirghiz in a revolt against Russia, which was so serious, followed as it was by an outbreak in Kashgar, where Yakub Khan showed signs of combining with Bokhara and Khiva in the declaration of a holy war against the Russians, that it was not until 1872 that General Kaufmann was free to give his whole attention to Khiva. A Russian column advanced from Krasnovodsk to Kizil Arvat in 1872, but was compelled to retreat with loss. Rumours of a further expedition being contemplated caused so much disquietude in England that Count Shouvalov was despatched to London in 1873 to explain the intentions of the Russian Government. It was declared that "not only was it far from the intention of the Emperor to take possession of Khiva, but positive orders had been given to prevent it."

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In March 1873 three Russian columns advanced simultaneously from the Caspian, Tashkend, and Orenburg, converging upon Khiva. After a short bombardment the city capitulated and a treaty of peace was signed, the terms of which included the cession of the entire territory of Khiva on the right bank and in the delta of the Oxus, the payment of a large indemnity, and the reduction of the Khan to a position of complete dependency.

In 1875 the Khanate of Khokand was invaded and early the following year the capital was occupied by a force under Skobelev. The native forces were defeated in several subsequent engagements, and in March 1876 Khokand was declared a portion of the Russian Empire under the name of Ferghana.

1879-  
1886.

After the final conquest of the Khanates there still remained the fierce Tekke Turkoman tribes, who had for ages been in possession of the Merv oasis, whence they swept down upon Persia, harrying the northern provinces and selling their captives into slavery. The result of the campaigns of Skobelev and Kuropatkin, with the final victory of Geok Tapa, in January 1881, was the extinction of the Turkomans\* as a people, and the confirmation of Russian influence in the Khanates. Persia, on the other hand, was delivered from the scourge which had for centuries despoiled her richest provinces. A substantial proof of gratitude was immediately required and given in the permission granted to Russia to lay the 'Trans-Caspian (as it was then called, now the Central Asian) Railway through country which was, at that time, still under Persian sway.

Askhabad was occupied in February 1881, and a year later relations were opened up with the Tejend oasis. A small Russian mission, under Alikhanov, visited Merv in 1882. In the following year, General Komarov, newly appointed Governor-General of Trans-Caspia, occupied the whole of the Tejend oasis, and early in 1884 Merv, the ancient "Queen of the World," was quietly absorbed, and became part of the Russian Empire.

\* The total number of Tekkes slain during the siege of Geok Tapa was estimated at 20,000; 8,000 men, women and children being killed during the Russian pursuit.

Sarakhs, a place of strategic importance, on the banks of the Tejend, was seized a few months later, a proceeding which was followed by the occupation of Pul-i-khatun, on the Hari Rud, and of Panjdeh, on the Murghab. At the latter place the Russians were confronted by a number of Afghans on the Kushk river, a tributary of the Murghab. The Russians attacked the Afghans at Ak Tapa on the 30th March 1885, and also seized the Zulfikar Pass, on the Persian frontier, about the same time. The latter was, however, evacuated a few months later. A joint Anglo-Russian Commission was appointed to delimit the Russo-Afghan boundary from the Oxus to the Persian frontier, and commenced work in November 1885. The labour of defining the southern boundary of Russia's newly acquired territory, with regard to Afghanistan, was continued until 1886.\*

In 1889, a Russian "scientific mission," under 1889. Colonel Gromchevski, was despatched to the Pamirs, but was stopped by Afghan outposts. In 1891, a considerable force, under Colonel Ionov, was moved to the Pamirs, and two British officers, Captain Younghusband and Lieutenant Davidson were summarily ordered to quit "Russian territory." The Afghan tribes of the district refused to acquiesce in the Russian occupation and Colonel Ionov retired, his action being disavowed by the Russian Government. The following year, however, the same officer returned to the Pamirs, and a collision occurred between his men and a party of Afghans. During 1893 and 1894 difficulties between the Afghans and Russians continued to crop up until, in 1895, 1895. an Anglo-Russian Boundary Commission was appointed to define the various spheres of influence in the Pamirs, and to delimit the frontier. This work was concluded in September 1895.

\* Certain questions were then reserved for further discussion. Negotiations were carried on at St. Petersburg, the results of which were embodied in a protocol signed in July 1887. The actual delimitation of the frontier was recommenced in November and was completed in January 1888. The final protocol and maps were signed on the 4th February 1888.



## CHAPTER II.

### GEOGRAPHY.

#### GENERAL DESCRIPTION—AREA—PLAINS—MOUNTAINS— RIVERS—INLAND SEAS—CLIMATE—INHABITANTS.

The area now subject to Russia stretches from the Caspian Sea to the Chinese frontier, and from Persia and Afghanistan to the Siberian Governments of Tobolsk and Tomsk, and is approximately equal to the combined areas of Austria, Germany, Denmark, France and Italy.

In such an extent of territory it is obvious that there must be a considerable variety of geographical features; in this respect the country may be divided into two parts, sharply contrasted with each other, the plains and the hills.

#### Plains.

The plains occupy about three-quarters of the whole area, their general character being that of an arid waste, depressed in parts below ocean level, and bounded on the south and east by high mountains. The central depression was formerly, in all probability, occupied by a great inland sea, of which the Caspian and Aral Seas are only remnants. It is sandy, salt or argillaceous, and salt marshes are of frequent occurrence. Sandy deserts occupy vast stretches of country, and, though there are various local names in use, the general characteristics of such deserts are very similar. The best known are the Kara Kum, or "black sands," of Trans-Caspia, the Kizil Kum between the Oxus and Jaxartes, the Arys Kum in the northern part of the province of Syr Daria, and the wastes lying between the mountains of Semirechia and the shores of Lake Balkash.

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The soil at the foot of the mountains, however, is rich and very productive, as is also the alluvial soil on the banks of the rivers, or where artificial irrigation is possible. The principal oases are the following :—

The Akhal oasis, the chief towns of which are Kizil Arvat and Askhabad, and the Atak oasis extending between the towns of Artyk and Kaahka; both of these lie along the northern foot of the Kopet Dag range, and form narrow strips of fertile land, recovered from the sandy wastes lying to the north, and watered by mountain streams. The Tejend oasis is formed by the river of that name, and the Merv oasis by the lower course of the Murghab, while higher up the latter river lie the oases of Panjdeh and Yolatan. Other fertile districts are formed along the courses of the other great rivers mentioned below.

On the south and east the plains of Turkistan are girt about with a succession of mountain chains, which extend from the heart of the Asiatic continent to the Caspian Sea. These ranges belong to the three great systems of the Hindu Kush, the Alai-Pamir and the Tian Shan mountains. To the first of these systems belong the series of ranges running from the Hindu Kush through northern Afghanistan and the Kopet Dag, which after forming the northern frontier of Persia continues its course north-west to the Caspian Sea, not far from Balkan Bay and Krasnovodsk.

Further eastward lie the Alai-Pamir ranges (among which the mighty Oxus takes its origin), which form a connecting link between the Hindu Kush and Tian Shan systems. On the northern edge of the Pamirs the Alai Tagh mountains rise to a height of 20,000 feet above sea level, shutting in the fertile valleys of the province of Ferghana. One branch of this mountain system, extending from the Zerafshan glacier westward (called by Russian geographers the Turkistan range) becomes somewhat lower in elevation, and is known as the Kharli Tau, Osmut Tau, and Kara Tau, and gradually sinks and becomes merged in the plains north of Nurata (north-east of Bokhara city). This range extends some 200 miles,



and forms the watershed between the Syr Daria on the north and the Zerafshan on the south.

A more southerly branch, or rather the actual prolongation of the Alai Tagh range, runs from the Zerafshan glacier in a south-west direction, and divides the valleys of the Zerafshan and Kashka Daria from that of the Oxus. This range is known as the Hissar mountains, and runs westward for about 250 miles to the town of Khuzar. The average elevation is some 16,000 to 18,000 feet, with still greater altitudes towards its eastern extremity, a large proportion of its peaks being above the snow line. Numerous spurs and subsidiary ranges stretch southward towards the Oxus, while at Kilif they run right down to the river bank.

This forms the mountainous belt of country, lying between the Central Asian Railway line and the frontier of Afghanistan, which is important in connection with the routes leading southward, referred to later (*vide* pp. 39-44).

Immediately to the east of the region just mentioned, forming the south-eastern corner of Russian Central Asian dominions, lie the Pamirs, the so-called "Roof of the World," consisting of a series of elevated mountain valleys running from east to west, contracted at their western extremities into gorges, where they become merged in the mountain systems of Roshan, Shighnan, and Wakhan. The general elevation of the Pamir valleys is from 12,000 to 14,000 feet, while the intervening mountain ranges attain altitudes of 20,000 feet and more, culminating in the Mustagh Ata ("Father of mountains") 25,800 feet.

From the northern borders of the Pamirs, and in prolongation of the general direction of the Alai Tagh range, the wide and complex Tian Shan mountains trend to the north-east. The subsidiary ranges and ramifications of this system extend over the northern part of Ferghana and the greater part of Semirechia.

The main feature of these rugged highlands of Turkistan is their inaccessibility and high and difficult passes. Owing to the dryness of the atmosphere the

snow line, throughout Turkistan, is very high, being not less than 12,500-13,800 feet; the amount of snow is, therefore, considerably less than might be expected from the height of the mountains.

The rivers of Turkistan are very unequally distributed; the southern part and the shores of Lake Balkash being comparatively well watered, while in the north 340 miles of riverless waste intervenes between the Syr and Amu Daria, and between the latter and the Caspian Sea there is not a single river or lake of importance.

The famous river of Central Asia, the Amu Daria (Oxus), from its source in the Pamirs to its mouth in the Sea of Aral, has a course of over 1,500 miles in length, the extent of its basin being greater than the whole area of Italy. It may be defined as the great drainage channel of the huge mountain system, bounded by the Pamirs on the east, the Hindu Kush on the south, and by the mountains of Bokhara on the north. It is navigable as far as Termez, and, indeed, with increased difficulties and smaller craft it is said to be navigable still further. The Russian Government maintain a flotilla of steamers, which carry on regular traffic (See page 48.)

The chief tributaries of the Oxus on its right or northern bank are the Surkhab or Waksh, the Kafirnihan and Surkhan, which flow through fertile and populous valleys. The Kokcha and the Kunduz rivers join it on the left or Afghan bank. Below the latter no Afghan rivers of any importance reach the Oxus. The Tashkurghan, Balkh, Shibarghan, and Andkhui rivers are all absorbed by the countless irrigation channels of the plains of Northern Afghanistan, and none of them cross the fringe of sand desert which lies south of the Oxus.\*

The Syr Daria (Jaxartes) rising in the Tian Shan mountains, south of the Issik Kul lake, is even longer (Jaxartes).

\* Further information regarding the Oxus will be found in the "Gazetteer of Afghanistan." For crossing places see page 41 et seq.



than the Amu Daria, and waters a vast expanse of country. Though navigable in its lower reaches, no flotilla is now maintained, owing to the absence of populous districts on its banks.

Both these great rivers empty themselves into the Sea of Aral, but in spite of the volume of water thus discharged, the evaporation is so rapid that the area of that sea is sensibly diminishing. There are indications which lead to the inference that the Oxus must once have flowed into the Caspian Sea not far from Krasnovodsk, and the Jaxartes into the present delta of the Oxus. There is a remarkable parallelism in the formation of these two great streams, and though the question must still be regarded, to some extent, as an open one, the indications of a previous variation of their original courses towards the east are interesting, and tend to raise the question as to whether any such movement is continuing at the present day. If so, it may be found to be of some importance with regard to the newly constructed railway along the eastern bank of the Syr Daria.

**Zerafshan.** The Zerafshan rises in the Alai Tagh range, and flows westward for a distance of some 400 miles. It was once a tributary of the Oxus, but now terminates in a series of small lakes a day's march east of that river. It is shallow and easily fordable in many places, but is subject to floods three times a year, in March, June, and September. On its banks lie Samarkand and Bokhara, and its waters provide for some two millions of the population.

**Murghab. Tejend.** The Murghab and the Hari Rud (Tejend) enter Russian territory from the south, and after forming the important Merv and Tejend oases lose themselves in the sands of Trans-Caspia. There appears little doubt that both these streams, like the Afghan rivers and the Zerafshan mentioned above, were once tributaries of the Oxus.

**Atrek.** The Atrek rising in Persia forms the Russo-Persian frontier between Chat and the Caspian Sea.

It would be out of place here to attempt to discuss the many various indications which tend to show that a gradual dessication of Central Asian regions has taken

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place in the past, or the possible bearing of this fact upon the present and the future. It may, however, be noted that the question of the water supply of Turkistan is a problem of great gravity and difficulty, which must be solved, if it be possible to do so, before the somewhat optimistic views, sometimes expressed as to the future development of the country, can be realised.

The Caspian Sea has an area of 169,380 square miles, and lies between  $36^{\circ} 40'$  to  $47^{\circ} 20'$  N. latitude, and  $46^{\circ} 50'$  to  $55^{\circ} 10'$  E. longitude. Its surface is 86\* feet below the level of the ocean. The northern portion does not exceed a maximum depth of 20 fathoms, and is gradually being silted up by the deposits of the Volga, the Ural, and the Terek. The middle portion of the sea has an average depth of 50 fathoms, and reaches a maximum of 421 fathoms. This portion is divided from the southern and deepest part of the Caspian by a submarine ridge which is a continuation of the main Caucasus range and connects it with the Kopet Dag. The depth of water over this ridge varies from 30 to 150 fathoms. The southern portion, which lies at the foot of the high Elburz border ridge of the Persian plateau, has in its centre a depth of more than 500 fathoms. The northern portion freezes for 3 or 4 months along the shores, but ice only appears in the middle portion if brought by north winds. The ports Petrovsk and Krasnovodsk, however, are occasionally closed by drift ice.

The Gulf of Kara-Bughaz on the east coast is a great expanse of water, with an area of 7,500 square miles, separated from the Caspian by a narrow sand bar pierced by a strait 115-170 yards wide only. The average depth of water does not exceed 34 to 36 feet. Expeditions to examine the peculiarities of this gulf, in 1895-96, discovered that its bottom is covered with a layer of pure Epsom salt, which represents a quite unique

\* According to the Aral-Caspian levelling 96.7 feet. Other triangulations give 84 and 89 feet. It is an open question whether these differences can be explained by mere errors. A longer series of observations is required before positive conclusions can be arrived at. The level has undergone several oscillations in modern times.



formation and a stock of about 1,000,000,000 tons of that salt. Owing to the shallow water this could be easily extracted.

Ports.

The Caspian ports belonging to Russia are Astrakhan, Petrovsk, Derbend, Baku, Lenkoran, and Astara on the west coast; Krasnovodsk, Uzun Ada, and Chikishliar, on the east coast; Ashurada at the extreme south-east corner of the sea, commanding the Persian port of Bandar Gaz,\* is a Russian naval station. Of these ports the more important are referred to in greater detail below, *vide* pp. 49-50.

Aral Sea.

The Aral Sea is situated between  $43^{\circ} 41'$  to  $46^{\circ} 45'$  N. latitude, and  $58^{\circ} 19'$  to  $61^{\circ} 47'$  E. longitude. It covers 26,166 square miles, and is consequently the second largest inland salt sea of the world. Its depth is insignificant, being only 222 feet in the north-west and 90 feet in the middle. Its altitude is 246 feet above the Caspian, *i.e.*, about 160 feet above ocean level.

Lake Balkash.

Lake Balkash lies between the provinces of Semipalatinsk and Semirechia, about 550 miles east of the Sea of Aral. It is about 280 miles long, with a width of 55 miles at its western and of 10 miles at its eastern end. It has an area of 8,610 square miles, and lies at an altitude of 900 feet above M.S.L. Its north-western shore is a dreary plateau, the "Famine Steppe," while its southern shore is low, and shows traces of a much greater extension of the lake in former times. Its desiccation is proceeding rapidly, a lowering of the level of its water by as much as 3 feet having been observed in the course of 14 or 15 years. Its most important confluent is the Illi river.

Climate.

In such a wide expanse of country, offering considerable diversities of physical configuration, the climate can hardly be described in general terms, and is referred to later on (pp. 15, 17, 18 19, 20 and 23) in the description of the various provinces. It may, however, be noted here that the rainfall is generally small, and the climate characterised by extremes of heat and cold, though the winter is of short duration. The whole country is swept by cold winds from the north and north-east, which so

\* Other Persian ports are :—Meshed-i-Ser and Enzeli,

increase the dryness of the atmosphere that in many places the amount of moisture evaporated is largely in excess of the rainfall.

The inhabitants are partly of Turco-Mongolian, Inhab-  
partly of Aryan origin. The Kirghiz form 26 per cent. tants.  
of the whole population, Sarts 24 per cent., Uzbaks and  
Kipchaks 19 per cent., Tajiks  $9\frac{1}{2}$  per cent., Turkomans  
5 per cent., Russians  $4\frac{1}{2}$  per cent.,\* Jews, Gipsies, Ar-  
menians, &c., 2 per cent. Russian colonisation is being  
pushed forward by the Russian Government, and, in  
spite of the many drawbacks of soil and climate, villages  
consisting almost entirely of Russians have been estab-  
lished, especially in Semirechia. In 1897 the total  
population of Russian Turkistan numbered, approxi-  
mately, some 8,280,000 souls.

For a more detailed statement of the population *see*  
pages 65-75.

\* See page 71.



### CHAPTER III.

#### ADMINISTRATION.

GENERAL DESCRIPTION—EDUCATION—ADMINISTRATIVE DIVISIONS—TRANS-CASPIA—SAMARKAND—FERGHANA—SYR DARIA—SEMIRECHIA—KHIVA—BOKHARA—CURRENCY—WEIGHTS AND MEASURES.

The government of Turkistan is administered by the Governor-General, whose headquarters are at Tashkend. The five provinces—Trans-Caspia, Samarkand, Ferghana, Syr Daria and Semirechia—are administered by military governors with extended powers, and are subdivided into districts in which administrative and police powers are assigned to district chiefs. Reformed tribunals, but without juries, were introduced in 1898. The executive officials are also responsible for the collection of revenue, the principal source of which is the land-tax. Irrigation has been left in native hands for, though not scientific, it is based on the results of long observation, and is on the whole well adapted to its purpose. A special official in each village is entrusted with the care of the water-works, and may, in case of necessity, call out the entire male population for service in connection with them.

In Bokhara, still nominally ruled by the Khan, a Russian Resident at the capital represents the suzerain power. Barbarous treatment of prisoners and criminals, with which the Russians do not interfere, still exists. The post and telegraph services are in Russian hands.

Lord Curzon remarked, when he visited Central Asia, in 1888, on the large number of Russian soldiers observed. This feature is not less marked at the present day. Comparing the normal peace strength of Russian troops with the area and population of Turkistan (including the quasi-independent Khanates of Bokhara and Khiva), we find that there is one Russian soldier to every 143 inhabitants and to about  $12\frac{1}{2}$  square miles of area. The corresponding figures, in the case of British India, show that there is only one British soldier to 3,973 inhabitants or to 24 square miles of area.

The educational level of the native inhabitants of Turkistan is low. The educational habits and institutions of the Mussulmans have been left untouched. The *makhtabs*, or primary schools, and the *madrassis*, or higher schools, still communicate their straitened and stunted learning, and their senseless lessons by rote. In 1900 there were 7,370 such native schools, teaching some 79,600 children.

Certain so-called Russo-native schools have been introduced with the object of teaching Russian, reading, writing and arithmetic and, in 1901, 57 of such schools were in existence, teaching some 1,860 pupils. The total number of Russian educational establishments, including those just mentioned, as well as those for the education of Russian children, amounted in 1901 to 267, teaching some 15,000 pupils. In 1902 a cadet school was established at Tashkend for the education of Russian boys.

The following five provinces form the component parts of the administrative Government of Turkistan:—

Trans-Caspia dates as a Russian province from 1881, when the lands of the conquered Tekke Turkomans and a large part of what was once Khivan territory were incorporated with the Government of the Caucasus. In 1890, however, its steadily increasing importance led to its being formed into a separate Government under General Kuropatkin, while in 1899 it was placed under the Governor-General of Turkistan, and now forms part of that Government.

It is bounded on the west by the Caspian Sea, on the north and north-east by Uralsk, Khiva, and Bokhara; on the south-east and south by Afghanistan and Persia. Its area is officially estimated at 220,540 square miles.

The climate is thoroughly continental in character and subject to great extremes of heat and cold. In summer the heat is tropical, while in winter the cold is arctic. Heavy falls of snow cause great loss of life on the steppes, and 13° below zero (Fahr.) have been registered. Such extremes of temperature make campaigning, in any but the spring and autumn months of the year, a somewhat precarious undertaking. In the spring, however, heavy rains in the mountains on the Persian frontier sometimes cause great damage to the Central Asian Railway.



In 1897 the domiciled population numbered 372,193 souls, exclusive of troops. The bulk of the population is composed of Turkomans, of whom the Tekkes are the predominant tribe. Recent attempts to encourage Russian immigration have not proved very successful, as the climate is quite unsuited to the Russian constitution.

The province is divided into five districts, the chief towns of which are Askhabad (19,428), which is also the capital of the province; Krasnovodsk (6,359); Alexandrovsk (882); Merv (8,727); and Tejend (382).

The country is rich in minerals, rock-salt, naphtha, gypsum and sulphur. Excepting along the few rivers, and in the line of oases which border the northern slopes of the Kopet Dag range, the province is a desert incapable of cultivation and important only in a strategic sense. Some 300,000 acres are irrigated by the natives, and attempts are being made by the Russian Government to increase the irrigated area by means of dams and new canals. Efforts are also being made to increase the forest area; several hundred thousand trees are planted every year and a forest guard has been established to prevent useless destruction of the saksaul trees. The land in the oases, especially in the Atrek oasis, is highly cultivated. Wheat, barley, sorghum, Indian corn, rice, millet, and "kunjut" for oil, are all cultivated. In the Merv district nearly 10,000 acres are under cotton.

Cattle breeding is the chief occupation of the nomad Turkomans and Kirghiz. In 1900 it was estimated that there were in the province 124,000 horses, 48,000 horned cattle, 16,000 donkeys, 233,000 camels, and 3,677,000 sheep and goats.

A considerable amount of fishing is carried on off the coasts of the Caspian, and seals are killed on the Mangishlak peninsula.

Samar-  
kand.

The province of Samarkand was formed in 1887 out of the Zerafshan district of Bokhara, and occupies the south-eastern portion of Turkistan. It has on the north and north-east the province of Syr Daria, on the east Ferghana, on the west Bokhara, and on the south the Hissar and Darwaz districts of the same Khanate.

Its area is 26,627 square miles. It is very hilly in the south, where it is intersected by a series of mountains belonging to the Alai-Pamir system. The high Hissar range runs between the Zerafshan and the Amu Daria, an offshoot of this range, called the Zerafshan, and further north yet another range, sometimes called the Turkistan range, are all approximately parallel and run from east to west. The majority of this mountainous neighbourhood is well wooded, and it is estimated that some 4,500,000 acres are under forests.

The north-western part of the province is occupied by the Famine Steppe and by the desert of Kizil Kum with its shifting sands. This Famine Steppe occupies nearly five million acres, covered with loess-like clay. In the spring it is covered with grass and offers good pasture. It is estimated that nearly  $1\frac{1}{2}$  million acres might be irrigated and made available for the cultivation of cotton, and a beginning has been made in that direction.

The chief river in the province is the Zerafshan, or the "Distributor of gold," a name fully explained by its value in irrigation; 83 main canals are drawn from it, within the province, watering 1,200 square miles.

The climate is very dry and continental in character. The average temperature for July at Samarkand is  $79^{\circ}$  Fahr., and  $85^{\circ}$  at Khojend and Jizak. The average winter temperature is  $34^{\circ}$  and frosts of  $11^{\circ}$  have been experienced. The total rainfall is 12 inches at Samarkand. The hilly tracts have a healthy climate, but malaria is very prevalent in the low-lying districts.

In 1897 the domiciled population numbered 857,847, of which the Uzbaks forms over two-thirds; after them the Kirghiz and Tajiks are the most numerous. Jews, Gipsies, Tartars, Afghans and Hindus are also met with. In the same year there were nine Russian settlements (2,000 inhabitants) on the Syr Daria.

The province is divided into four districts, the chief towns of which are Samarkand (54,900, including troops); Jizak (16,041); Kata Kurghan (10,084); and Khojend (30,076).



In 1898 nearly 1,000,000 acres were irrigated and about 800,000 acres half irrigated. The chief crops were wheat 4,156,000 cwt. ; rice 2,584,000 cwt. ; barley 1,240,000 cwt.

Cattle-breeding forms the chief occupation of the Kirghiz. In 1897 there were 82,760 horses, 170,890 cattle, 1,087,500 sheep and goats, 39,500 donkeys, and 45,800 camels in the province.\*

Mining is in its infancy, but coal, sulphur, ammonia, and gypsum are obtainable.

Ferghana.

Ferghana was formed into a Russian province in 1876 out of the former Khanate of Khokand. It is bounded on the north, north-west, and north-east by the provinces of Syr Daria and Semirechia, on the east by China (Kashgaria); its southern limits on the Pamirs were established by agreement between Great Britain and Russia in 1895.

The area is about 57,000 square miles, of which some 17,600 square miles are on the Pamirs. The province occupies the rich and fertile valley of the upper Syr Daria and Naryn, and extends northwards over the mountains of the Tian Shan system, and southwards over the Alai and Trans-Alai mountains. Two rivers, the Naryn and the Kara Daria, water the valley, and by their confluence near Namangan form the Syr Daria (Jaxartes).

The climate is dry and warm. In March the temperature reaches 68° Fahr., rising to 95° Fahr. in June, July and August. For five months from May there is no rain, which begins to fall in October. Snow and frosts occur in December, January, and occasionally in February. The fertility of the valley is dependent on irrigation.

In 1897 the population was 1,560,411, of whom 236,369 lived in towns. Two-thirds of the people are Sarts, who mostly live in the valleys, while the Kirghiz, partly nomad and partly agricultural, occupy the slopes of the mountains. The mass of the population are Musulmans, and only 3,985 belong to the Russian Greek Church.

\* The figures for 1900 are given below on page 61.

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The land is admirably cultivated, the crops being wheat, rice, jugara, millet, lucerne, tobacco, root plants, and all sorts of vegetables. Some 17,300 acres are under vineyards, and 512,000 acres under cotton.

The province is divided into five districts, of which the chief towns are New Margilan, capital of the province (8,977); Andijan (46,680); Khokand (82,054); Namangan (61,906); and Osh (36,474). Two other important towns are Old Margilan (36,592) and Chust (13,686).

The province of Syr Daria comprises wide tracts of Syr Daria, land on both sides of the river from which it takes its name, from the Sea of Aral up to Khojend. It is bounded on the north by the province of Turgai and Akmolinsk, on the east by Semirechia and Ferghana, on the south by the province of Samarkand and on the west by the Sea of Aral. Its area is 194,853 square miles. Of this the mountainous tracts of the south-eastern border of the province form only a small part; the rest of its wide surface is level, and largely desert. Towards the Tian Shan mountains, however, a thick deposit of loess girdles the foothills and forms the fertile soil to which the province is indebted for its rich fields and gardens.

The climate is most severe in the high treeless tracts of the mountain region, while in the lowlands it is very hot and dry. As a whole the western slopes of the Tian Shan receive but little rainfall, and are therefore poor in forests. In the lowlands the summer heat rises to 111° Fahr. in the shade. The winter is severe in the lower parts of the province, where the Syr Daria remains frozen for three months.

Although cultivation is possible only in a few oases, it is there carried to great perfection owing to a highly developed system of irrigation. Two crops are gathered every year of wheat, barley, peas, millet, lentils, rye and oats. Cotton is cultivated in the districts of Khojend and Turkistan.

Cattle-breeding is largely carried on, not only by the nomads, but also by the settled inhabitants.

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In 1897 the domiciled population was 1,479,848, of which the Kirghiz form the bulk and the Sarts the next important element; Tajiks and Uzbaks come next in importance. A large number of Kuramints (settled Kirghiz mixed with other elements), a few Tartars, Jews, Persians, and Hindus must be added. The Russian element is small, if troops be excluded.

The province is divided into eight districts, the chief towns of which are Tashkend (163,264), Aulie Ata, Jizak, Khojend (31,103), Kazalinsk, Chimkend, Perovsk, and Chinaz. The towns of Turkistan (14,085) and Ura Tapa\* are also important.

Semi-  
recchia.

The province of Semirechia† is bounded on the north by the Steppe province Semipalatinsk, on the east and south by Chinese territory, and on the west by the provinces Ferghana and Syr Daria. Its area is 152,280 square miles.

The climate is thoroughly continental, the average temperatures at Vierni (2,430 feet) are, for the year, 46° Fahr.; for January 17°, and for July 74°. The yearly rainfall is 21.6 inches.

In 1897 the population was 990,107 domiciled inhabitants. The Kirghiz formed 76 per cent. of the population, Russians 10 per cent., Taranchis 7 per cent., and Dungans most of the remainder. Of the Russians, 26,500 were Cossacks, about 15,000 troops quartered in the province, and 53,110 were peasants and artisans in towns.

The province is divided into six districts, the chief towns of which are Vierni, capital of the province (22,982); Jarkend (16,372); Kopal (2,842); Pishpek (6,622); Prjevalsk (7,987); and Sergiopol (1,044).

The chief occupation is agriculture. In an average year the crops yield about 137,500 cwt. of wheat, 47,500 cwt. of barley, 103,750 cwt. of oats, 61,250 cwt.

\* Shown as Ura Tube on the map. Tube, Tepe, and Tapa are varying forms of the same word, meaning a hill.

† Or the "Land of Seven Streams," so called from seven important streams draining the province and flowing into Lake Balkash,

of millet, 3,075 cwt. of rice, and 5,250 cwt. of potatoes, a supply which more than satisfies the needs of the population. Various oil-bearing plants and green fodder, hemp, flax, poppies, &c., are also grown.

Cattle-breeding is extensively carried on by the Kirghiz; in 1899 there were said to be available 750,000 horses, 425,000 horned cattle, 4,274,000 sheep, 100,000 camels, 282,000 goats, and 15,000 pigs.\* Orchards and fruit gardens are well developed, while bee culture is widely practised, nearly 6,700 cwt. of honey being obtained every year. Exports to China have been estimated at about 260,000*l.* annually, and imports at a little over 100,000*l.*

Khiva, formerly an important kingdom, is now a Khiva. small vassal khanate, limited in extent to the lower reaches of the Oxus. Its frontier runs down the left bank of the Oxus, from 40° 15' N. latitude, and down its left branch to the Aral Sea. It is separated from Trans-Caspia by a line running almost W.N.W. to E.S.E. from the Uzboi to the Oxus. The length of the Khanate from north to south is 200 miles, and its greatest width is 300 miles.

The area of the oasis is 5,210 square miles, while that of the steppes is about 17,000 square miles; the total population is estimated at 500,000 souls.

The water of the Oxus, brought to the oasis by a number of large irrigation canals, and the thin layer of fertile ooze which it deposits, make the cultivated land very fertile. Millet, rice, wheat, oats, peas, flax, hemp, cotton, madder, and all sorts of vegetables and fruit, including the vine, are grown.

Cattle-breeding is carried on, on a large scale, by the nomads.

Uzbaks are the dominating race among the settled inhabitants of the oasis and from them the officials are recruited. The Sarts and Tajiks are the best agriculturists and tradespeople. Nomad Turkomans live in the steppes, south and west of the oasis. The Karakalpaks live to the south of the Sea of Aral, and are the prevailing element in the towns, Kungrad, Khojeili, and Kipchak. There are also some 10,000 Kirghiz.

\* The figures for 1900 are given below on page 61.



The trade of Khiva is considerable; cotton, wool, rough woollen cloth, and silk cocoons are exported to Russia, and various animal products to Bokhara. Cottons, hardware, manufactures, &c., are imported from Russia, and silks, cottons china and tea from Bokhara.

The Khan of Khiva still maintains about 2,000 soldiers. The Khanate, burdened since 1873 by a heavy war indemnity, which has never been paid, is practically under the complete dominion of Russia.

The capital, Khiva, lies 20 miles from the left bank of the Oxus, and 240 miles north-west of Bokhara. Its population is about 12,000.

The prevalent religion is the Sunni form of Muhammadanism.\*

The internal government is an absolute despotism and, subject to a certain amount of moral control exercised by the Russians, is entirely in the hands of the Khan.

Bokhara.

The Khanate of Bokhara lies in the basin of the Oxus between the Russian province of Trans-Caspia (on the west) and Samarkand and Ferghana (on the north and east), while its southern frontier marches with that of Afghanistan along the course of the Oxus.

With regard to its geographical features and characteristics, Bokhara may be divided into two sections by a line running approximately from Nurata fort by Khatirchi (some 20 miles west of Kata Kurghan) and Karshi to Kilif, west of which are wide open plains, while to the east lies mountainous country, intersected by fertile valleys. The western portion of Bokharan territory is watered by the Zerafshan and irrigation canals. The land is suitable for cultivation in oases only. The eastern or hilly districts increase in altitude towards the east. The valleys are watered by numerous streams flowing towards the Oxus, and are densely populated, especially in the Hissar regions.

The area of Bokhara may be taken to be some 75,600 square miles. The population is estimated at about 2,500,000 and is, in the flourishing oases, as dense

\* See page 65.

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as 4,000 to the square mile; 65 per cent. of the population is settled, 20 per cent. nomad, and the remaining 15 per cent. semi-nomadic in their habits.

The climate is one of extremes. In the lowlands a very hot summer is followed by a short but cold winter, during which the temperature may fall to  $-20^{\circ}$  Fahr. and the Oxus may be frozen for a fortnight or three weeks. Malaria is widely spread, and after a wet spring is apt to take a malignant character. In the highlands winter lasts about four months, while above 8,000 feet level the summer is short and rainy.

The chief centres of population are:—The city of Bokhara (100,000), Karshi (60,000), Shar-i-Sabz (10,000), Khuzar (25,000), Shirabad (20,000), Hissar (15,000), Kerki (10,000), Charjui (15,000), Kermineh (12,000), Kilif (7,000).

The chief industries are agriculture and cattle-breeding, of the former cotton-growing occupies the most important place. Trade with Russia is carried on chiefly over the Central Asian Railway, but also by the Orenburg route. Exports to Russia (cotton, dried fruits, wool, skins, hides, &c.) amount to 1,200,000*l.*, and imports from Russia (manufactures, sugar, kerosene oil, &c.) to 1,500,000*l.*

Trade with Afghanistan passes chiefly by Kilif, but also *viâ* Herat. The imports from Afghanistan are principally rice and grain foodstuffs, Bokhara's own produce being insufficient for the needs of its population. Imports from Afghanistan amount to about 600,000*l.*, while exports only amount to some 50,000*l.* Bokharan trade with Persia is said to amount to 50,000*l.* exports to, and 500,000*l.* imports from Persia. The total foreign trade of Bokhara is estimated at some three and a half million sterling.

With the exception of the railway which for 200 miles runs through Bokharan territory, and the river traffic carried out by the Amu Daria flotilla, the communications are very primitive. There is a post road from Charjui-Kerki-Kilif to Termez, and another



(opened in January 1902) from Samarkand to Termez. Other caravan roads are for pack transport and are mere tracks, in the mountainous districts, the most important being (a) Bokhara-Karshi-Khuzar-Denau-Hissar to Baljuan, a distance of 400 miles; (b) Bokhara-Kerki-Andkhui to Maimana, a distance of 340 miles; (c) Bokhara-Karshi-Khwaja Sala to Balkh, about 270 miles; (d) Karshi-Jam-Samarkand, 94 miles.

The armed forces of Bokhara consist of a standing army amounting to 10,000 or 12,000 men of all three arms, with 20 guns, and a militia, called out only in case of need. The maintenance of this force costs the Amir about 150,000*l.* a year. Russian attempts to induce the Amir to reduce his army have not so far met with success, but its military value and efficiency is small. The finances of the State are about to be placed under complete Russian control.

The present Amir, Said Abdul Akhad Bogodur Khan, was born in 1857, and succeeded his father in 1885. He has been twice in Russia, and holds the rank of full general in the Russian Army, and is A.D.C. to the Emperor. His son and heir apparent is Amir Said Mirza Ali.

Currency. Russian money is current throughout Turkistan.

The Russian silver rouble = 100 kopeks = 2*s.* 1½*d.* in English money (nearly).

In addition to the silver rouble, notes of 100, 25, 10, 5, 3 and 1 rouble are legal tender.

The rate of exchange may be taken to be, approximately :—9·46 roubles = 1*l.* sterling.

In Bokhara, the silver *tanga* is valued at about 5*d.*, in English money.

In Khiva, the currency is the gold *tilla*, the silver *tanga*, and the copper *pul*. The approximate values of which are :—

35-50 *pul* = 1 *tanga* = about sevenpence in English money.

28-35 *tanga* = 1 *tilla* = from 16*s.* to 1*l.* sterling.

Russian, Persian, and Bokharan money is also in circulation.

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Russian weights and measures, in constant use, are Weights and mea-  
as follows. sures.

*Length.*

1 *arshin* = 28 inches.

3 *arshins* = 1 *sajen* = 7 feet.

500 *sajens* = 1 *verst* = 1166 $\frac{2}{3}$  yards or .663 of a mile.

*Area.*

1 *desiatin* (or *deciatine*) = 2.7 acres (nearly).

*Liquid Capacity.*

1 *vedro* = 2.705 British Imperial gallons.

*Weights.*

1 *funt* (pound) = 14 $\frac{1}{2}$  oz. avoirdupois (nearly).

40 *funts* = 1 *pud* (or *pood*) = 36.11 lb. avoirdupois.



## CHAPTER IV.

### COMMUNICATIONS.

CENTRAL ASIAN RAILWAY—ORENBURG-TASHKEND RAILWAY—  
PROJECTED EXTENSIONS OF THE RAILWAY SYSTEM—ROADS  
— WATERWAYS — AMU DARIA FLOTILLA — CASPIAN  
MARINE—PORTS—TELEGRAPHS.

Central  
Asian  
Railway.

This great railway, which now extends from the Caspian Sea almost to the Chinese frontier, owes its origin to Skobelev's campaign against the Akhal Tekke Turkomans in 1880. Its construction was undertaken, at first, as a light narrow-gauge tramway; this was, however, soon found to be unsatisfactory and, in November 1880, the construction of a line of normal Russian gauge (5 feet) was decided on, and by September 1881 was completed from Michaelovsk on the Caspian as far as Kizil Arvat, a distance of 143 miles.\* The second section of the line, from Kizil Arvat to the Oxus, was undertaken in May 1885, and by the end of 1886 the line had reached the Oxus, at Charjui, a distance of 498 miles. At the same time the Caspian terminus of the line was removed to the more convenient port Uzun Ada, about 18 miles from Michaelovsk.

The third section, from Charjui to Samarkand, a distance of 228 miles, was completed in 1888. This section involved the bridging of the Oxus with a temporary wooden bridge nearly two miles long.

In 1894 it was decided to remove the Caspian terminus of the line from Uzun Ada to the more convenient and commodious port of Krasnovodsk. This involved the construction of  $47\frac{1}{2}$  miles of additional line. The work was completed in 1896.

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\* The work was carried out by the present 1st Trans-Caspian Railway Battalion, which was raised for this purpose. The battalion consisted of 25 officers, 30 engineer mechanics, and 1,081 rank and file skilled workmen. For the earthwork, Russian navvies, brought from Europe, and Persians were engaged,

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In April 1897 work was begun on the branch line from Merv to Kushk Post near the Afghan frontier, and was completed in December 1898.\*

In June 1895 it was decided to extend the line from Samarkand to Tashkend, and also to Andijan—an additional length of line of 421 miles, which was completed in 1899.

Meanwhile the desirability of substituting a more permanent structure for the temporary wooden bridge over the Oxus, had long been under consideration. Work on the present iron bridge was begun on 30th October 1898, and was completed on 9th June 1901. This bridge is 1,750 yards long, (the longest in the whole of the Russian Empire) and the total cost of its construction was approximately 516,270*l*.

The length of line now open for traffic is:—

|                                     |                       |        |
|-------------------------------------|-----------------------|--------|
| Krasnovodsk to Tashkend (main line) | 1,158                 | miles. |
| Branch line to Andijan              | - 202 $\frac{1}{4}$   | „      |
| Branch line Merv to Kushk Post      | - 194 $\frac{1}{4}$   | „      |
| Local Feeder: Krasnovodsk—Ufra      | - 3 $\frac{1}{2}$     | „      |
| „ „ Kagan—Bokhara                   | - 8                   | „      |
| „ „ Gorchakovo—Margilan             | - 5 $\frac{1}{4}$     | „      |
| Total                               | - 1,571 $\frac{1}{4}$ | miles. |

The line, after leaving Krasnovodsk, runs in a generally south-east direction, for the first fifty miles or so along a shallow indent of the Caspian Sea, then over sandy wastes to Kizil Arvat. From this point to Dushak (a distance of some 240 miles) it runs at the northern foot of the Kopet Dag range, along the Persian frontier. At Dushak the line turns sharply to the north-east, and after passing the Tejend and Merv oases (from the latter

\* The distance of 194 miles was completed in 19 months and 8 days, or at an average rate of about 10 $\frac{1}{2}$  miles per month.

From 3,500–5,000 men were employed, of whom Russian workmen formed from 27 per cent. to 45 per cent., the remainder being Bokhariots, Persians, Sarts and Afghans. *Plate-laying* was carried out at an average rate of from 1 to 1 $\frac{1}{2}$  miles a day.

For description of Kushk Post, see page 36.



of which a branch line runs almost due south to the Afghan frontier—a distance of 194 miles), the main line traverses the shifting sands of the Kara Kum desert until the Oxus is reached at Charjui. After crossing the sandy tract of country lying between the Oxus and Bokhara, the line follows the course of the Zerafshan river as far as Samarkand, from whence it again inclines to the north-east till Tashkend is reached. A branch line diverges towards the east at a point some 126 miles east of Samarkand, and after passing Khojend, Khokand and Margilan, reaches Andijan, the present eastern terminus of the line.

Technical details.

The line is a single one throughout, with passing places, 500 yards in length and capable of accommodating trains in pairs, between stations, at intervals varying from 4 to 8 miles\* (see Appendices D and E). The gauge is 5 feet. The rails weigh from 65 to 68 lbs., which is light for sustained heavy traffic. The track is level and, for the greater part, straight; it is well maintained and guarded, though liable to "washouts," inundations and sand drifts.

Liquid fuel and water are transported by train, the former from Krasnovodsk. Reserve naphtha fuel stores are maintained at the termini and principal stations. Water is generally scarce, and has to be conveyed by train for considerable distances.

Rolling stock available is estimated as follows:—Locomotives about 330. Passenger cars, &c., 200; wagons, trucks, cisterns, &c., about 9,300. (See Appendix C.)

The main workshops are at Kizil Arvat, Askhabad, Tashkend, and Krasnovodsk. Stations are well equipped; those at Krasnovodsk and Samarkand are somewhat cramped, while that at Tashkend is spacious.

\* The maximum interval, on the main line, as far as can be ascertained, occurs between Charjui and Samarkand near Kermineh, and is 8 miles long. Between Krasnovodsk and Charjui the maximum interval is  $7\frac{1}{4}$  miles.

On the Merv-Kushk branch line the maximum interval is  $9\frac{1}{4}$  miles.

Between Samarkand and Tashkend, and on the branch line to Andijan, no such passing places between stations exist, at present.

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The traffic scheduled at present, is as follows:—

Main line--10 trains each way, in 24 hours.

Merv-Kushk Branch--2 to 4 trains each way, in 24 hours.

Andijan Branch--6 trains each way, in 24 hours.

The above include water and fuel trains (on the main line), of which there are two or three running each way daily.

The average speed of mail trains is  $17\frac{1}{2}$  miles an hour, and that of goods trains  $7\frac{1}{2}$  miles an hour, both including stoppages.

One locomotive draws from 72 to 150 axles; or two locomotives draw 134 to 200 axles. The average composition of trains recently observed was 90 axles.

It is estimated\* that the maximum carrying capacity of the line, as a whole, for military purposes would not exceed 12 pairs of trains (of not more than 100 axles) a day, with two or three additional pairs for fuel and water, at an average speed of 13 miles an hour.

There is telegraphic communication throughout the length of the line. Hand signals, however, are used for controlling the traffic.

The passing-places, on this branch line, are from five Merv- to nine and a quarter miles apart. The line rises towards Kushk, at an average gradient of  $\frac{1}{450}$ . The water supply branch. is good.

\* A competent observer who visited the line in 1904, estimated the maximum carrying capacity of the various sections of the line, after careful consideration of all the conditions affecting the question, as follows:—

| Section of Line.      | Maximum, Pairs of Trains, daily. |                     |        |
|-----------------------|----------------------------------|---------------------|--------|
|                       | Military.                        | Fuel and Water, &c. | Total. |
| Krasnovodsk-Charjui - | 12(a)                            | 3*                  | 15     |
| Charjui-Samarkand -   | 12(b)                            | 3*                  | 15     |
| Samarkand-Tashkend -  | 10(c)                            | 2*                  | 12     |
| Merv-Kushk -          | 10                               | 2                   | 12     |
| Andijan-Chernayevo -  | 12                               | 2                   | 14     |

\* It is, perhaps, possible that these numbers might be reduced by one in each case, making the estimated maximum numbers (a), (b) and (c), 13, 13 and 11 respectively. Every effort would, no doubt, be made, in anticipation of any military operations, to increase the carrying capacity of the Merv-Kushk section, so as to approximately equal that of the remainder of the line.



The station at Kushk is a substantial stone building, with quarters for railway staff, and a certain number of furnished rooms for travellers. There are seven sidings, engine depôt and workshops, naphtha and water tanks or reservoirs. The station premises are lit with electric light. There is said to be a considerable store of railway material available for future use.

Orenburg-  
Tashkend  
Railway.

This railway brings European Russia into direct communication with Central Asia, as contrasted with the present route across the Caspian Sea. Imperial sanction for its construction was given early in 1900, but it was not until October 1901 that work was actually commenced, and carried on simultaneously from both ends. The length of line, according to the original surveys, between Orenburg and Tashkend, is 1,168 miles. In the course of construction, however, certain modifications of the original trace have been introduced, resulting in a reduction of the total length of line, by some 16 miles, making the actual length, according to the latest information available, some 1,152 miles. The cost of construction is estimated at about 12,560,000*l*.

The general trace is as follows. From Orenburg, where the Ural river is crossed by a bridge some 1,120 feet long, the line runs through the valley of the river Ilek, passes Aktiubinsk, crosses the Emba river by a bridge 327 yards long, and reaches the Mugadshar mountains at about the 320th mile. So far the country is fairly populous, but from here the line runs through barren and desolate steppes for a distance of some 300 miles. The Sea of Aral is touched at its northern extremity, and after passing Kazalinsk at a distance of  $7\frac{1}{4}$  miles (owing to the fact that its immediate neighbourhood is subject to destructive floods) the line follows the right bank of the Syr Daria, at varying distance, and approaches Perovsk over low-lying ground, between the river and marsby lakes which the post road avoids by a detour to the eastward. Perovsk is reached at the 826th mile. After passing Julek, Turkistan and the River Aris (said to be the future junction for the projected line to Vierni, Semipalatinsk and Omsk, on the Siberian Railway), the line enters the hilliest part of its course; Chinkend is left some 30 miles to the eastward, and after negotiating some considerable



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gradients, and crossing the Salar and Keles rivers, Tashkend is reached.

The general type of permanent way and section is much the same as that of the Central Asian Railway. The permanent way, although recently laid, appears to be very stable and well ballasted. The ruling grade is about 9/1000, and the minimum curve about 2,100 feet radius. Technical details.

Stations occur at an average interval of about 13 miles; the maximum being  $18\frac{1}{4}$ , and the minimum 9 miles. The principal stations are intended ultimately to have numerous sidings, and in addition there are said to be crossing-places at intervals of five or six miles. On the southern section of the line, however, (from Tashkend to Turkistan) very few of such crossing places exist at present, the maximum interval being  $11\frac{1}{4}$  miles.

Where seen, these crossing-places were about 500 yards in length, as on the Central Asian Railway. Food depôts, and facilities for providing troops with a hot meal, are said to have been already organised at convenient intervals along the line.

The water supply is good, and affords a great contrast to that of the Central Asian line.

Liquid fuel is obtained from Krasnovodsk, and until the deposits of Ferghana are explored and developed this will continue to be the case.

The traffic at present running between Tashkend and Turkistan is four pairs of trains daily, at an average speed of  $12\frac{1}{4}$  miles an hour. Taking into consideration the temporary facilities and newness of the permanent way, which until thoroughly consolidated limits the speed, to say, 10 miles an hour continuous running, it is estimated that the present maximum carrying capacity of the line could hardly exceed 8 to 10 trains a day, each way; and it is certain that any continuous use of the line at high pressure would soon destroy the efficiency of the permanent way, unless all defects were most carefully and immediately attended to.

It is difficult to arrive at any very reliable estimate of rolling stock at present available; and such estimate is of comparatively small value owing to the fact that the rolling stock is constantly being increased, and that on



the completion of the line the general resources of the railway system of European Russia, previously available for the northern section only, has now become available for the whole line. It is believed that, in 1904, the rolling stock on the southern section did not exceed about 120 locomotives, 1,600 goods wagons and trucks, and 450 cistern wagons.

The laying of the rails between Orenburg and Tashkend was completed in 1904, and the line was opened for traffic in January 1905.\*

The opening of this railway must eventually prove a factor of great economic and strategic importance. The cotton industry of Turkistan is as yet in its infancy, and it is anticipated that this line, by making the resources of the rich corn-growing tracts of Western Siberia and Eastern Russia directly available, will greatly facilitate its further extension and development—at present limited and hampered by the necessity for the local cultivation of foodstuffs in Turkistan.

From a strategic point of view, it may be remarked that in deference to economic considerations the line has been carried along a somewhat unsatisfactory alignment, subject, in certain parts, to periodic interruption by floods. But notwithstanding this objection the new line will compare favourably with the Central Asian Railway, which lies along a foreign frontier exposed to some extent to interruption, not only by natural but also by human hostile forces. The movement, concentration, and supply of Russian troops in Central Asia will undoubtedly be greatly facilitated and expedited by the uninterrupted railway communication thus established with European Russia, in addition to the existing Central Asian line.

The time required to reach Merv from Moscow, by either route, is approximately the same, viz., about nine days. The journey between Moscow and Tashkend, however, *via* Orenburg takes only seven days, while *via* Baku, the Caspian and the Central Asian Railway, it takes 11 days, showing a gain in time of four days.

The strategic importance of the new line will be still further developed by the completion of its proposed extension, upon which work is said to have been already

\* The newly appointed Governor General of Turkistan travelled to Tashkend, over the whole length of the line, in October 1904.

Samar  
kand-  
Termez.

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begun, from Samarkand,\* *viâ* Karshi, Kerki, and Kilif, to Termez on the Oxus. In the event of military operations in Afghanistan, the facilities which would then be afforded for the movement of troops from one base to the other, (*i.e.*, from Kushk to Termez, or *vice versa*) will be far from being the least important factor in the situation created by the completion of this line.

Other projects, for the ultimate extension of the Russian railway system in Central Asia, may be briefly alluded to.

The inhabitants of Omsk and merchants of Moscow Tashkend- have petitioned the Government for the construction of Siberian a line between Omsk (on the Siberian Railway) and Railway. Tashkend. M. de Witte, in an official report on the Siberian and Manchurian lines in 1902, laid considerable emphasis on the importance of such a line being constructed as soon as possible. A new field for colonisation would thus be opened, while the facilities afforded for the importation of cheap grain, from Siberia to Central Asia, would make it possible still further to extend the cultivation of cotton in Turkistan.

Various projects have been mooted, from time to Other time, for the connection of Meshed with the Central projected Asian Railway, by a branch line either from Askhahad lines. or Dushak (both of which routes, however, appear to be subject to great, if not insuperable, engineering difficulties); or from Tejend or Merv, *viâ* Sarakhs; both of which seem to be free from any special technical difficulty. The advisability of connecting the Merv-Kushk branch with Meshed by a line running along the Afghan frontier, and through Pul-i-Khatun, has also been discussed, as well as another extension of the same branch line, from Ak Tapa (Panjdeh), up the Murghab river, towards Maruchak.

These various projects, however, appear to be more or less in abeyance at present, and a more detailed reference to them here is unnecessary.

\* Juma and Kagan (New Bokhara) have both been mentioned as probable points from which this extension may be constructed.



Roads.

It would serve no useful purpose to attempt a full and exhaustive catalogue of all the communications of the country. Many of the formerly important caravan routes have lost much of their significance since the advent of railways, and it has therefore been considered sufficient to indicate their existence on the accompanying map. In the following pages only the more important communications, from a military and strategic point of view, have been enumerated; and even so it will be seen that certain routes owe what importance they may appear to possess rather to their geographical position and direction than to any special excellence or suitability for military movement.

The following are the main post roads of the country, generally speaking, fit for wheel traffic, though often in a very bad condition:—\*

(1.) From Orenburg to Tashkend, *viâ* Orsk, Irgiz, Kazalinsk, Perovsk, Turkistan, and Chimkend, a distance of 1,475 miles.

(2.) From Tashkend to Vierni, *viâ* Chimkend, Aulie Ata, and Pishpek, a distance of 513 miles.

(a.) From Pishpek (168 miles west of Vierni) a similar road runs *viâ* Tokmak to the western extremity of the Lake Issik Kul, where it bifurcates; the southern branch leading to Narynsk, a distance of 208 miles, while the northern branch, skirting the northern edge of the lake, leads to Prjevalsk, a distance of 245 miles.

(3.) From Vierni to Sergiopol, *viâ* Altyn Emelski and Kopal, a distance of 467 miles.

(a.) From Altyn Emelski (130 miles north-east of Vierni) a similar road runs to Jarkend (Yarkent), a distance of 100 miles, and thence to Kuldja, in Chinese territory, 77 miles further on.

\* The roads of Central Asia, even the postal roads and main lines of connection, have long been famous for their execrable badness. Skobelev, in a letter, once wrote that "If known to Dante the Central Asian roads would have served as an additional horror to hell."

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(b.) From Sergiopol the road continues on by Semipalatinsk and Pavlodar to Omsk in Siberia, a distance of 523 miles.

(c.) From Sergiopol a road runs to Bakhti, on the Chinese frontier, a distance of 184 miles.

(4.) From Bokhara to Andijan, *viâ* Samarkand, Jizak, Khojend (from each of the last-named places a branch road leads to Tashkend), and Khokand, a distance of some 520 miles.

(a.) This road continues on from Andijan to Osh, a distance of 30 miles.

The following routes\* lie to the south of the Central Asian Railway, and connect stations on that line with Persian and Afghan territories:—

(5.) From Chikishliar (a small Caspian port) to Kizil Arvat and to Bami (stations on the Central Asian Railway), *viâ* Chat, Tersaken, and Khwaja Kala, a distance of 204 miles.

(a.) There is also a route from Chikishliar across the Atrek river to the Persian town Astrabad. Little is known of this route, which is probably bad, but the distance is only 68 miles.

(6.) From Askhabad to Meshed, *viâ* the Persian Herat line frontier station Baj Girha (30 miles), and of advance. Kuchan, a distance of 177 miles. This is a carriage road and used for regular wagon traffic. From Meshed to Herat there are the following routes:—

(a.) *Viâ* Pul-i-Khatun and Zulfikar to Herat (difficult in parts), a distance of 240 miles.

(b.) *Viâ* Turbat-i-Sheikh Jam and Khusan to Herat; the main caravan route, a distance of 216 miles.

(c.) *Viâ* Khaf and Ghurian to Herat, a distance of 280 miles.

\* For more detailed information see "Routes in Central Asia," Sections I, II. and III.



(7.) From Dushak to Sarakhs, *viâ* Meana and Chaacha, a distance of 85 miles. This route is described as level and good for marching, though sand-hills might make wheeled traffic difficult; there is, however, no water in the last 42 miles.

(8.) From Dushak to Meshed *viâ* Meana and Chaacha; a distance of 112 miles. A considerable amount of trade is said to pass over this route, caravans taking about 10 days on the road. It is stated that the firm of Nobel Brothers recently expended some 1,100*l.* in improving this route, and that they contemplate making use of automobiles for the conveyance of goods.

(a.) An alternative route *viâ* Chardeh and Kelat-i-Nadiri; a distance of 102 miles. A mule track across the mountains, said to be capable of improvement; water and supplies, however, are scarce.

(9.) From Tejend, up the right bank of the river of the same name to Sarakhs, a distance of 80 miles, fit for wheeled traffic.

(10.) From Sarakhs to Ak-Rabat (on the Afghan frontier), *viâ* Old Naurozabad a distance of 92 miles. Said to be fit for wheels.

(a.) From Ak-Rabat to Herat, a distance of 100 miles. Described as a good and easy route.

(b.) From Ak-Rabat to Kushk Post,\* *viâ* Islim Chashma, a distance of 52 miles; described as a good route.

\* *Kushk Post*.—A fortified Russian post, officially graded as a 3rd class fortress, standing in the valley of the Humbezli stream, a tributary of the Murghab river. It is surrounded by hills, except on the north side, the elevations of which are about 2,300–2,400 feet, or 260 feet higher than the fort itself.

A continuous loop-holed wall, about 10 feet high, surrounds the whole "post," including the railway premises in the valley and fortifications and barracks on the hills to the east of the stream. This wall, the alignment of which gives very little flanking fire, forms

(11.) From Merv to Kushk Post, *viâ* Yolatan, Chorvak, Ak Tapa (Panjdeh), and Chaman-i-Bed, a distance of 203 miles. This is a post road, constructed by the Russian Government.

(a.) From Ak Tapa (142 miles S. of Merv) up the River Murghab to Maruchak and Maimana (in Afghanistan), some 150 miles; a difficult route in times of flood.

(b.) From Ak Tapa to Herat the distance is 160-196 miles according to variations of alternative routes.

(c.) From Kushk Post to Herat, *viâ* Chahildukhteran the distance is 76 miles, and offers no special difficulty.

(12.) From Merv to Meshed, *viâ* Shegitli (Shentli) and Chaacha, a distance of 160 miles. An indifferent route; the last part is difficult, over mountains.

(a.) From Merv to Sarakhs, *viâ* Shegitli, a distance of 92 miles. A good camel route.

a rough rectangle, the sides of which are about 700-800 yards long. It appears to be built of inferior brickwork. The railway passes through a defensible portal, on the north face, furnished with towers, machicoulis galleries, crenelated parapet, and plate iron (? steel) gates.

The surrounding hills are crowned with fortifications which appear to consist of enclosed earthworks with masonry revetment walls and ditch. The barracks and quarters appear to be substantially built on terraces cut in the hillsides, and are estimated to accommodate about 4,000 men.

From Kushk Post a track leads to Chahildukhteran, about 14 miles to the south, which is the Frontier Guard Post and Customs Station on the Afghan frontier. The neighbourhood is exceedingly feverish, especially during the summer months, from May till September. The maximum sickness from malaria occurs during August, when (in 1903) the number of sick amounted to nearly 25 per cent. of the strength of the garrison. The mean temperature for the year is  $57\frac{1}{2}^{\circ}$  Fahr.; the maximum  $109\frac{1}{2}^{\circ}$  Fahr.; and the minimum  $-0.4^{\circ}$  Fahr. (*i.e.*, more than  $32^{\circ}$  of frost).



Kabul line  
of advance.

(13.) From Charjui, where the railway crosses the Oxus, up the left bank of the river, *viâ* Kerki, where the river is crossed by ferry to Kilif, a distance of 132 miles to the former, and a total of 211 miles to Kilif. The road is said to be a good one, running through cultivation with but little sand.

(a.) From Kerki a route runs across desert to Ak Tapa, on the Merv-Kushk railway, a distance of 221 miles, of which, however, practically nothing is known.

(b.) From Kerki to Andkhwi over firm and level ground, 72 miles, and from thence to Maimana, about 78 miles.

(14.) From Farab on the right bank of the Oxus, opposite Charjui, by Burdalik to opposite Kerki (which is reached by ferry), a distance of 140 miles, and thence to Kilif (74 miles) and Termez; a total distance, between Farab and Termez, of about 270 miles. The road is regularly used for four-wheeled wagon traffic.

(a.) From Burdalik a route described as "good," but of which little is known, except that it passes over desert, runs to Karshi = 81 miles.

(b.) From Burdalik to Bokhara, a distance of 97 miles. This route passes over desert tracts, and water supply would be difficult.

(15.) Bokhara to Karshi, a distance of 109 miles. Fit for wheeled traffic, except in wet weather.

(16.) Kerminch to Karshi = 93 miles. This road is fit for wheeled traffic, except in wet weather.

(17.) Kata Kurghan to Karshi = 93 miles. Fit for wheeled traffic, except in wet weather.

(18.) Samarkand to Karshi = 100 miles. This road is fit for wheeled traffic, except in wet weather.

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(19.) From Karshi the following routes lead in a southerly direction :—

(a.) To Kerki = 87 miles, across desert country.

(b.) To Kilif (*viâ* Karkijak) 117 miles but little is known of this route, which runs across desert—there is probably a dearth of water ; or *viâ* Khuzar and Kugitan, 129 miles, fit for pack transport only ; or *viâ* Khuzar, Darband, and Shirabad, 197 miles, fit for carts, but passes through the defile mentioned below (c).

(c.) To Chushka Guzar *viâ* Khuzar, Akrobat, Darband, and Shirabad, a distance of 178 miles. Generally speaking, fit for wheeled traffic, but near Akrobat passes through the famous "Iron Gate" defile, a mile long and in places only a few paces wide. During the winter months the stream renders this defile impassable.

(d.) To Termez ferry, *viâ* Darband and Shirabad, a distance of 194 miles. Mostly fit for wheels, and though difficult in parts, is capable of improvement. This route passes through the "Iron Gate" defile just mentioned above (c).

(20.) From Samarkand to Chushka Guzar or to Termez (ferries), *viâ* Jam, Chirakchi, Yartube,

The total distances by routes (15)–(19) inclusive, are as follows :—

|                                  | Miles.  |
|----------------------------------|---------|
| Bokhara, Karshi, Kerki - - -     | 196     |
| " " Kilif - - -                  | 226-238 |
| Kermineh, Karshi, Kerki - - -    | 180     |
| " " Kilif - - -                  | 210-222 |
| " " Chushka Guzar - - -          | 271     |
| Kata Kurgan, Karshi, Kerki - - - | 180     |
| Samarkand, Karshi, Kerki - - -   | 187     |
| " " Kilif - - -                  | 217-229 |
| " " Chushka Guzar - - -          | 278     |
| " " Termez (ferry) - - -         | 294     |



Akrabat, Darband, and Shirabad; a distance of about 260 and 275 miles respectively. This route offers no special difficulty.

(21.) A more direct road from Samarkand to Termez, by Kitab, Shar-i-Sabz (joining the last-mentioned route, some distance north of Yartube), Darband, and Shirabad, a distance of 240 miles. Fit for wheels, except perhaps between Shar-i-Sabz and Akrabat.

(22.) From Samarkand to Termez *viâ* Shar-i-Sabz, Yartube, Khuzar, Gumbulak, Tengikaram, Akrabat, Darband, and Shirabad, a distance of 237 miles. This road is a regular post road, divided into 17 stages, opened in January 1902; it appears to be a combination of other routes previously utilized, giving increased facilities, and probably largely superseding them.

From a comparison of the later stages of routes 20, 21, and 22 it appears probable that the actual capacity of these three roads would not largely exceed that of one fairly good road. Similarly it will be noticed that the routes from Karshi mentioned above, *i.e.* the last alternative indicated under 19 (*b*), 19 (*c*), and 19(*d*), all coincide in certain stages with (20), (21), and (22). It therefore appears improbable that all these routes could be fully utilized simultaneously.

The above are the most important roads leading from the Central Asian Railway to the Afghan frontier, but it must be remembered that, with the rare exceptions indicated as Government post-roads, they are merely natural surface tracks, and would be liable to considerable and rapid deterioration when subjected to heavy traffic, or bad weather. Any expression of opinion as to their goodness, or fitness for wheeled traffic, must therefore be understood as a relative term, in comparison with other routes in Central Asia, under normal circumstances.

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The following details concerning points of passage over the Oxus, to which reference has been made in the foregoing routes, may perhaps usefully be noted here.

*Kerki*.—A Russian military station, of some importance, on the left bank of the Oxus. A number of Government buildings have, from time to time, been erected, and there are indications of an intention to increase the size and importance of the place and its garrison. The latter at present normally consists of two battalions infantry, one cavalry regiment, two field batteries, one company fortress artillery, and one section of the Frontier Guard. The river is crossed by means of ferry boats drawn by swimming horses. Kerki is believed to be connected with Termez with a subaqueous telegraph cable in addition to a land line. It is a regular port of call for the Amu Daria flotilla and is directly connected with Charjui by a road and telegraph along the left bank, and with Kilif and Termez by a road and telegraph up the right bank of the river.

*Kilif* is an excellent point for establishing a military crossing. The river is here at its narrowest, 330 to 470 yards, the stream is not too swift for bridging, while the banks are sound and accessible, and are approached over firm sound ground. At least 20 large boats could be collected within a short distance for rafting or bridging, and a considerable quantity of timber suitable for rafts to supplement the boats, or for the superstructure of a bridge would be procurable in the neighbourhood. The flat-bottomed boats are towed by swimming horses and carry each 30 horses or 15 laden camels, or 100 infantry. The crossing takes from 10 to 20 minutes. Native boats carry 25 men each, and could be lashed together and platformed for the transport of guns. The left bank of the river commands the right.

*Chushka Guzar* is not to be compared with Kilif as a point of crossing, but it is not at all impracticable for military purposes. The breadth of the river at this ferry is 1,300 yards. Three or four of the large boats already described are kept at the ferry.



*Termez*, opposite *Pata Kesar*, has within the last few years made considerable progress as a military base. It is connected with *Farab* and *Charjui* by a good road, fit for wheeled traffic, along the right bank of the *Oxus*, as well as by the *Amu Daria* flotilla. It is also connected with *Samarkand* by a post road. It is in direct telegraphic communication with *Charjui*, *Kerki*, and *Samarkand*. The 4th *Turkistan Rifle Brigade* (four battalions), one *Cossack horse battery*, a company of *Fortress Artillery*, a pontoon company of *Engineers*, and a section of the *Frontier Guard* are stationed at *Termez*.

At *Pata Kesar* ferry the breadth of the channel is 1,000 yards, current from 4 to 6 miles an hour, in the summer months. There are four of the large boats already described, worked with long sweeps, except when there is a strong wind, when horses are used to tow, as at *Kilif*. The river here is well adapted for bridging. The right bank slightly commands the left. The comparative proximity of the river, at this point, to *Mazar-i-Sharif*, and the fact that the sandy strip of desert to be crossed is only 9 miles wide, as well as the close neighbourhood of *Chushka Guzar* ferry as an auxiliary point of passage, all seem to render *Pata Kesar* an advantageous point of passage.

Less important points of crossing, mentioned in connection with routes (25), (26), and (27), are :—

*Aliwanj (Aiwanj) or Khisht Tapa*. The river here is nearly a mile broad, current about 4 miles an hour; depth of main channel is said to be considerable. The ferry is at *Aliwani*, about 5 miles lower down stream than *Khisht Tapa*, during the summer months. At *Khisht Tapa* the river is about 700 yards wide, in two channels. Though it would be an excellent spot for a permanent bridge, it is not a favourable place for ferrying a large number of troops, even in late autumn or winter, when alone it would be practicable.

*Takht-i-Kuva ferry*. The site of former gold-washing operations lying about midway between the confluence of the *Waksh* on the right bank of the

Oxus, and that of the Kunduz river on the opposite bank, which are about 2 miles apart. There is only one ferry boat under normal conditions.

*Kanda Guzar, or Sarai*, is a ferry only during the summer months. The river is forded here in winter.

Near *Santi Bala* the Oxus may be said to enter the plains, and is there crossed by means of "gupsars," or inflated skins. The width is about 500 yards, the current rapid, and the water at lowest is waist-deep. The bed of the river is sandy.

The following routes are far from being of equal importance, as compared with those enumerated above; not only are they further removed from the railway, but the country through which they pass becomes more mountainous and difficult:—

(23.) From Darband a continuation of the road from Bokhara *viâ* Karshi\* forms a lateral communication running eastward *viâ* Baisun, Denau, Karatagh and Hissar to Faizabad, a distance of 179 miles, and thence to Garm (Harm) on the Kizil Su river, a distance of 271 miles from Darband, or some 480 miles from Bokhara. Though difficult, with steep gradients in places, and as a whole unfit for wheels, this route is not without importance, passing through the heart of this populous and cultivated part of Bokharan territory.

(a.) From Faizabad to the Oxus *vide* (26).

(b.) From Garm to Kala Khum, &c., *vide* route (28) below.

(24.) Another route, approximately parallel to the last, lying to the north of the Hissar range and running up the course of the Zerafshan river, is that from Samarkand to Garm, *viâ* Penjakent, Urmitan, Varsaminar, Oburdan, and Paldorak, a distance of 240 miles. Though difficult in places, and presumably suitable for

\* *Vide* Routes 15 and 19 above.



pack transport only, portions of this road are good, and Russian troops have, before now, moved along it.

(a.) At Urmitan a route, of which little is known, comes in from the north, from Zamin and Ura Tapa,\* distant 43 and 56 miles, respectively.

(b.) At Varsaminar a route comes in from Ura Tapa (on the main post road No. 4 above, and connected with the railway by a similar road), a distance of 61 miles. This is described as a good road.

(c.) At Oburdan there is another route from Ura Tapa, presenting no serious difficulty for mountain ponies; a distance of 49 miles only.

(d.) From Penjakent a route is said to run by Sari Jui to Denau, a distance of about 110 miles. There is some doubt, however, as to whether it actually extends further south than the Hissar mountain range. From Denau a route runs down the course of the Surkhan river to Termez, presenting no special difficulties, a distance of some 97 miles.

(25.) From Varsaminar, mentioned above (24), a road runs south to the Oxus at Aliwanj and Khisht Tapa ferries *via* Karatagh (on route 23 above), Hissar, down the Kafirnihan river, and Kabadian, a distance from Varsaminar of 215 miles, or from Ura Tapa of 276 miles. It is described as a difficult mountain road as far as Karatagh.

(26.) From Faizabad (route 23 above) a route runs down the valley of the Waksh or Surkhab, by Kurghan Tapa, Kabadian, to the Oxus at the Aliwanj and Khisht Tapa ferries,

\* See footnote on page 20.

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a distance of 170 miles. Parts of this road are described as very good even for carts.

(a.) From Kurghan Tapa a route, said to be good and much travelled, runs to Karaul Tapa, a ferry on the Oxus near Serai (not shown on our maps but near Kanda Guzar), a distance of 45 miles, from which Kunduz (in Afghanistan) is 44 miles.

(b.) From Kabadian a route runs to Takht-i-Kuva ferry (about a mile below the confluence of the Waksh with the Oxus), a distance of 29 miles, and from which Kunduz is 60 miles distant.

(27.) From Faizabad to Kulab, *viâ* Baljuan, is about 90 miles. From Kulab to the crossing over the Oxus at Samti Bala the distance is 19 miles, and to Faizabad (in Badakhshan) 129 miles; the road is said to be fit for wheels from Kulab, but not so between that place and the starting-point.

(a.) From Kulab a route runs south-west by Siab to Kanda Guzar (Serai), a distance of 72 miles, and from there on to Kunduz a further 44 miles. This is a usual caravan route, and is shown on a Russian map as being fit for wheels for a considerable distance. It is difficult during two months in summer, when fording is dangerous.

(28.) From Garm (route 23 above) *viâ* Childara to Kala Khum is 70 or 80 miles according to different estimates. The road is difficult.

(a.) A difficult pack road runs from Kala Khum to Kulab, a distance of 118 miles.

(b.) From Kala Khum a bad and difficult road runs along the right bank of the Ab-i-Panjah (Oxus) *viâ* Kala Wamar to Kala Bar Panja, a distance of 98 miles.

(c.) From Kala Bar Panja a route follows the left bank of the Ab-i-Panjah as far as Ishkashim and thence over the Hindu



The  
Pamirs.

Kush to Chitral, a distance of 168 miles, or a total distance between Garm and Chitral of 340-350 miles.

(29.) From Osh (the terminus of the post road No. 4 above) a military road, suitable for light wheeled traffic, runs to the Pamirski (Murghabi) Post, *viâ* Gulcha, the Taldik pass, Kizil Art pass (14,260 feet), Kara Kul lake, and Kizil Rabat, a distance of some 250 miles. In fine weather mail carts cover this distance in 10 days, though there would be difficulty in moving artillery over certain portions of the road.

(a.) From Pamirski (Murghabi) Post to Chitral, *viâ* the Kara Su, Neza Tash pass (13,650 feet), the Alichur Pamir, Khargosh pass (14,450 feet), Langar Khisht, Sarhad-i-Wakhan, Baroghil pass (12,460 feet),\* and Mastuj, a distance of 340 miles. A hill route of extreme difficulty.

(b.) From Pamirski (Murghabi) Post to Gilgit, *viâ* the Ak Su valley, Ak Tash, Kizil Rabat,† Bozai Gumbaz, and over the Khora Bort pass (15,000 feet), a distance of 260 miles; a mountain route of great difficulty, in many places impassable except for men on foot.

(c.) From Pamirski (Murghabi) Post to Tashkurghan, in the Taghdumbash Pamir, a distance of about 100 miles, there is said to be a route fit for wheels.

(30.) From Margilan to the Pamirski Post, *viâ* Daraut-Kurghan, the Alai valley and Archa Bulak (and thence over the Kizil Art pass as

\* From south of the Baroghil pass, a route runs *viâ* the Darkot pass (15,200 feet) to Yasin and Gilgit, a distance (from Pamirski Post) of 320 miles. A route almost impassable for armed men.

† From Kizil Rabat there is an alternative route over the Bayik pass into the Taghdumbash Pamir, Chadir-tash, and thence over the Mintaka pass (15,430 feet), down the Killik river, Hunza to Gilgit, a distance from Pamirski Post of about 265 miles.

in route 29) the distance is about 297 miles. Dr. Sven Hedin marched over this route which does not, however, compare favourably with the last mentioned.

(31.) From Margilan a route runs to Tashkurghan *viâ* Uch Kurghan, Tenghiz pass (11,800 feet), Daraut-Kurghan, Tersagar pass (12,000 feet, Altyn Mazar, Takhta Koram pass (15,480 feet), and the Kudara river, a distance of about 220 miles; or, to the Khargosh ravine, where route 29 (a) is met, *viâ* the Karabulak pass (14,460 feet), Karabulak, on the Murghab river, Marchenai pass (15,700 feet), and the Yeshikkul lake at Somatash (a distance of some 300 miles). This is a mountainous route of great difficulty, as may be readily seen from the number and altitude of the passes to be negotiated.

(32.) From Osh to Kashgar, *viâ* Gulcha, Sufikurghan, over the Taldik pass\* (12,070 feet), Irkeshtam (the Russian frontier post), and thence by Ulukchat (the Chinese frontier), and Ak Salar, a distance of 252 miles. The road is fit for wheels between Osh and the Taldik pass, and might be made so with little labour between the latter and Irkeshtam.

(33.) From Narynsk (*vide* post road No. 2 (a) above) to Kashgar *viâ* the Chadirkul lake, over the Turgat pass (12,760 feet), and Chakmak, a distance of 213 miles.

This is the main caravan route, and is traversed throughout by camels. It is practicable all the year round, the most difficult season being in summer, owing to swollen streams. It is said that carts and sledges are used during the winter.

(a) An alternative route runs eastward of that just mentioned from Narynsk, over

\* The Shart Dawan (12,800 feet) and Terek Dawan (12,700 feet) are alternative tracks, but fit for pack transport only.



the Terek pass (12,800 feet), which, though difficult in parts, is reported generally as being good and capable of being made fit for wheels. The distance from Narynsk to Kashgar by this route is 184 miles.

Amu Daria  
flotilla.

The Amu Daria (Oxus) is the only navigable river utilized as a waterway in Turkistan. A flotilla of steamers and barges is maintained by the Russian Government, and plies regularly between Charjui and Termez, a distance of 287 miles. The official time-table shows the journey between Charjui and Termez to be timed to take from six to ten days, and the return journey down stream two days only. Delays, however, owing to difficulties of navigation, are not unfrequent.

Between Charjui and Petro-Alexandrovsk, down stream, the journey takes 3-5 days, and the return journey, up stream, from 5-7 days.

The flotilla consists of six steamers and eight barges, each of the former being capable of carrying, on an average, 450 men, and the latter an average of 250 men, with 100 tons of goods.

Assuming the average duration of the journey, from Charjui to Termez and back to be about 10 days, the maximum daily carrying capacity of the existing flotilla would be\* :—

$$\frac{(6 \times 450) + (8 \times 250)}{10} = 470 \text{ men, and}$$

$$\frac{8 \times 100}{10} = 80 \text{ tons of supplies, stores, &c.}$$

Caspian  
flotilla.

The "Caspian Flotilla," which is under the command of a rear-admiral and forms part of the naval forces of Russia, consists of a gunboat (383 tons), a transport and five steamers (the two largest of which are 1,010 tons and

\* Assuming all the vessels to be in working order, and none under repairs, i.e., for a comparatively short period only. On the other hand, the existing flotilla might be expanded, by both steamers and barges transported in sections from European Russia, in a comparatively short time. It is believed that 12 troop boats and 4 petroleum launches have recently been added to the flotilla.

745 tons respectively, while the remainder average about 300 tons), two launches, one small steamer for lighthouse service, three lightships, and one barge.

The mercantile marine of the Caspian Sea, according to the latest information available, consists of approximately 265 steamers, representing a total tonnage of about 120,000 tons, and 550 sailing vessels of various sizes. There are some ten steamship companies engaged in the carrying trade, of which the "Kavkaz and Merkurs" Company is perhaps the most important, with connections and agencies in many places in Russia, Persia, and Central Asia. The Caspian fleet of this company consists of 22 large and small steamers, the majority being constructed for cargo and passengers, 9 tugs, and 33 barges. The "Nadejda" Company also has several agencies and a considerable trade. Their fleet consists of 50 passenger, cargo, and tug steamers, besides a number of barges and other boats.

The Russian ports in the Caspian, to be considered in connection with Central Asia, are the following :—

*Baku.*—A large commercial town and port on the western shore of the Caspian Sea. It is frequented by a considerable amount of shipping, for the accommodation of which there are 14 piers, jutting out from the quay, which extends for some 4 miles along the shore. The main streets lead down to this quay and provide ample facilities for embarking and disembarking traffic of all kinds.

*Petrovsk.*—A small port on the western shore of the Caspian, 235 miles by rail from Baku. It has considerable commercial importance in the export of various products of Central and Southern European Russia. Its harbour is protected by a long breakwater, some 500 yards in length, along which there is a line of railway. There are numerous quays, with berths for the steamers and barges of the Caspian shipping companies. Considerable numbers of troops and military stores could be embarked with ease.



*Derbend*.—A small seaport town (14,800 inhabitants) on the railway between Petrovsk and Baku, 83 miles from the former and 152 miles from the latter. As a port it must be considered bad, the open roadstead being exposed to all winds. It is, however, a regular port of call for steamers. It owes its past importance to the fact of its commanding the coast road, which runs between the eastern extremity of the Caucasian range and the Caspian Sea.

*Krasnovodsk*.—Lies on the eastern shore of the Caspian almost directly opposite Baku; the distance between the two ports is 180 miles and the crossing occupies from 15–18 hours, in the better steamers. The town is situated at the bottom of a bay completely sheltered by surrounding hills. It is easily accessible for ships of a draught not exceeding 12 feet. The foreshore is somewhat cramped by sheds and other buildings, so that facilities for entraining troops and loading stores direct from the piers are somewhat restricted, notwithstanding the railway sidings available. There are, in all, some 17 piers and landing-stages, large and small. Owing to the cramped situation of sidings and tracks the unlading of bulky goods is carried out at Ufra, some  $5\frac{1}{2}$  miles to the south-west of Krasnovodsk, where a certain number of piers and landing-stages have been built. Ufra is connected by a line of rail with the main line at Krasnovodsk.

*Uzun Ada* ("Long Island"), formerly the terminus of the Central Asian Railway, lies some 80 miles south of Krasnovodsk. It was abandoned in favour of Krasnovodsk owing to its inconvenience as a port, having only 10–12 feet of water, and liable to constant silting and occasional freezing. It is not now connected with the railway and cannot be considered as an effective port.

*Chikishliar*.—A small port on the south-east coast of the Caspian Sea, to the north of Hasan Kuli bay, a shallow lagoon into which the Atrek river flows. The wells around it are 10 feet deep, and the water,

though potable, is brackish. The shore is very shoal; a mile from the beach there is barely 5-6 feet of water. Steamers and the larger sailing craft have to lie off at a distance of 2,500-3,000 yards from the shore. Vegetation is so scanty that even the camel requires imported fodder. Chikishliar was occupied by Russia in 1871, and was described by a Russian officer as having "no soil, no vegetation, no water, no air, no scenery—producing nothing but flies and mosquitoes." Steamers of the "Kavkaz and Merkuri" Company call here, the run from Astrakhan occupying about 70 hours. Wheeled traffic was established from this base as far as Duzlu Olam during the Russian campaign against the Turkomans in 1879.

The island *Ashurada* at the extreme south-east corner of the Caspian, was first occupied by Russia as a naval station in 1838. It lies at the extremity of a neck of land which forms the shallow lagoon, some 40 miles long and 8 miles broad, in which lies the Persian commercial port of Astrabad (Bandar Gaz), which it completely dominates, and from which the important town itself of Astrabad is distant some 30 miles only. This port has lost much of its commercial importance, however, since the opening of the Central Asian Railway. The place is considered as a naval arsenal and rendezvous for the Caspian flotilla, and would no doubt, in certain eventualities, serve as a powerful *point d'appui* for the exercise of Russian influence in Persia.

*Astrakhan*.—A large trade is carried down the Volga by the Kavkaz and Merkuri Company's steamers. The river is, however, frozen for about seven months in the year, and does not open until the middle or end of May. During this period goods are shipped from Petrovsk or Derbend to Krasnovodsk and Persian ports. There is a suggestion that the railway should ultimately be extended from the present terminus at Tsaritzni to Astrakhan, so as to render commerce independent of the frozen river.



The following two ports may be briefly mentioned, though whatever small importance they may be deemed to possess is rather in connection with Persia than with Central Asia. They are both regular ports of call for the steamers of the Caspian steamship companies :—

*Lenkoran.*—A small town (8,700 inhabitants), 130 miles S.S.W. of Baku, on the flat and sandy shore of Kizil Agatch Bay, at the mouth of a small stream.

The open roadstead is some 2 miles from the town and entirely exposed. There is a certain amount of trade in timber, fruits, cotton seed, &c.

*Astara.*—A village and landing place on the north bank of the mouth of a small river of the same name (which here forms the frontier between Russian and Persian territory), about 23 miles S. of Lenkoran. A sandy bar extends across the mouth of the river, leaving only a narrow shallow passage on the northern side. Vessels have to lie a couple of miles out to sea. There is a certain amount of commerce in wine, fruits, &c. A project for connecting Astara with Baku by rail has been mooted.

Tele-  
graphs.

The telegraphic system of Turkistan is as follows :—

(1.) A submarine cable across the Caspian Sea from Baku to Krasnovodsk.

(2.) From Krasnovodsk along the whole length of the Central Asian Railway, by Kizil Arvat, Bami, Askhabad, Merv, Charjui, Bokhara, Samarkand, to Tashkend, as well as to the eastern terminus of the railway at Andijan. From this main line there are the following branches :—

(3.) From Kizil Arvat to Chikishliar, on the Caspian, and thence to Astrabad, in Persian territory, where connection is made with the Persian telegraph system.

(a.) From Askhabad to the Persian frontier at Gaudan, along the cart road.

(4.) From Merv to Sarakhs, connecting with the Persian line at that place.

(5.) From Merv along the branch railway line to Kushk Post, near the Afghan frontier.

(6.) From Charjui, down the Oxus, to Khiva, and up the left bank as far as Kerki, and thence on the right bank to Termez.\*

(7.) From Charjui to Hissar, exact route doubtful.

(8.) From Kagan station (formerly named New Bokhara) to the city of Bokhara.

(9.) From Khojend to Tashkend.

(10.) From Andijan (the eastern terminus of the railway) *viâ* Osh and Gulcha to Irkeshtam (the Russian frontier station), on the way to Kashgar, to which there is said to be an intention of ultimately extending the line.

(11.) From Tashkend, along the line of the Orenburg railway to Kazalinsk; and from Kazalinsk, along the old post road, *viâ* Irgiz, and Orsk to Orenburg, where connection is made with the general telegraph system of European Russia. A line also follows the line of railway, which diverges from that of the post road at Kazalinsk in a more westerly direction by the Emba river and Ilets'k, to Orenburg.

(12.) From Tashkend, along the post road, Chimkend, Merke, Vierni, Altyn Emelski, Kopal to Sergiopol, and thence to Semipalatinsk and Omsk, on the Trans-Siberian Railway.

From Semipalatinsk a branch line runs south-east to Zaisan on the Chinese frontier.

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\* There is reason to believe that a subaqueous line is laid in the river bed between Kerki and Termez in addition to the land line (6). It is also almost certain that a telegraph line extends along the post road from Samarkand to Termez.



(13.) From Altyn Emelski by Jarkend (Yarkent) to Kuldja, in Chinese territory, there connecting with the Chinese line running eastward to Pekin.

(14.) From Sergiopol to Chuguchak (Tarbogotai) in Chinese territory and thence to connect with the last mentioned (13) at Shiko (Kur Kara ussu).

(7.) From Chafai to Hissar, exact route doubtful.  
(8.) From Kagan station (formerly named New Bokhara) to the city of Bokhara.

(9.) From Khejend to Tashkend.

(10.) From Andian (the eastern terminus of the railway) via Osh and Gulistan to Tashkend (the Russian frontier station), on the way to Kashgar, to which there is said to be an intention of ultimately extending the line.

(11.) From Tashkend, along the line of the Orenburg railway to Kashi, and from Kashi along the old post road via Tsigi and Osh to Orenburg, where connection is made with the general telegraph system of European Russia. A line also follows the line of railway, which diverges from that of the post road at Kashi, in a more westerly direction by the Irtys river and thence to Orenburg.

(12.) From Tashkend, along the post road Chirchik, Mulla Vural, Akyn, Kheski, Kopal to Sergeopol, and thence to Semipalatinsk and Omsk, on the Trans-Siberian railway.

From Semipalatinsk a branch line runs south-west to Naisan on the Chinese frontier.

\* There is reason to believe that a telegraphic line is laid in the river bed between Kuldja and Tashkent in addition to the line (9). It is also stated that a telegraphic line extends along the post road from Samarkand to Tashkent.

CHAPTER V.

RESOURCES.

MINERAL—AGRICULTURAL—FORESTS—CATTLE—TRADE AND  
INDUSTRY—RESOURCES OF THE NEIGHBOURING STEPPE  
PROVINCES, PERSIA, AND AFGHANISTAN.

The mineral resources of Turkistan, great as they may be, must still be considered as latent and undeveloped. In the mountains of Ferghana and Samarkand, naphtha, asphalt, coal, as well as small quantities of gold, copper ores and sulphur are found. Rock salt covers 80 acres on the island of Cheleken, and is also found along the Uzboi and elsewhere in Trans-Caspia, as well as ozokerite and gypsum.

There is a remarkable deposit of pure Epsom salts, of vast extent, in the Kara Bugaz gulf of the Caspian Sea. In 1899 about 1,500 tons of asphalt,\* 6,000 tons of coal,† 30,000 tons of salt, and in 1897. 14,000 tons of naphtha, 1,240 tons of gypsum, and 5,000 tons of sulphur were obtained.

According to recent Russian estimates the area of Agricultural land under cultivation in the various provinces of Turkistan is approximately as follows:—

|              | Acres.    |
|--------------|-----------|
| Ferghana     | 2,565,000 |
| Syr Daria    | 1,485,000 |
| Samarkand    | 1,107,000 |
| Trans-Caspia | 202,500   |
| Semirechia   | 540,000   |
| Bokhara      | 1,080,000 |
| Khiva        | 540,000   |
| Total        | 7,519,500 |

\* In Ferghana.

† Chiefly in Samarkand.



Cotton. Of this amount of cultivated land, the following areas were, in 1900-01, devoted to the cultivation of cotton:—

|                    | Acres.  |
|--------------------|---------|
| Ferghana - - -     | 511,936 |
| Syr Daria - - -    | 89,100  |
| Samarkand - - -    | 61,627  |
| Trans-Caspia - - - | 28,890  |
| Semirechia* - - -  | —       |
| Bokhara - - -      | 162,000 |
| Khiya - - -        | 175,500 |

Total area under cotton 1,029,053

The crop amounted to 358,970 tons of cotton, but approximately only 6,490,000 acres remain available for the produce of foodstuffs for the inhabitants and their cattle or, in other words, only about three-quarters of an acre per soul of the population.

Cereals, &c. The harvests of 1900-01 yielded approximately the following amounts of foodstuffs, fodder, &c. in the Russian provinces:—

|                    | Tons.     |
|--------------------|-----------|
| Trans-Caspia - - - | 47,242    |
| Samarkand - - -    | 353,897   |
| Ferghana - - -     | 411,011   |
| Syr Daria - - -    | 640,323   |
| Semirechia - - -   | 38,827    |
| Total - - -        | 1,491,300 |

including wheat, rye, barley, oats, millet, rice, buck-wheat, "jugara," † potatoes, peas and, in Ferghana especially, a large amount of vegetables. The amount of seed required to produce these crops amounted to 207,858 tons. If this be set aside and, together with

\* Cotton is not cultivated in Semirechia.

† A kind of maize, crushed to a coarse flour or meal; it is largely given to animals, but is also eaten by the people.

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the barley crop and a large proportion of the "jugara" (both used for fodder for domestic animals), be deducted from the total yield of the harvest, the remainder is found to be insufficient for the support of the population. Trans-Caspia is the worst off in this respect, and imports annually a considerable amount of grain from European Russia, Persia, and Khiva.\*

The insufficiency of local products to meet the local consumption is also seen in the high prices which normally obtain. Thus, in 1900, the average price for wheat throughout Trans-Caspia was from 1s. 8d. to 2s. 6½d. per pood (36 lbs.), and for barley from 1s. 0¾d. to 1s. 10d. for the same amount. In Samarkand the price for wheat was from 2s. 1½d. to 2s. 4d., and for barley from 1s. 0¾d. to 1s. 6d. per pood.

In Ferghana the prices for grain were even higher than in the neighbouring provinces, owing to the still greater area devoted to the cultivation of cotton, which is constantly spreading, with a corresponding increase in

\* The following amounts of foodstuffs, &c., are said, in a recent Russian publication, to have been imported into Trans-Caspia, over the Central Asian Railway in 1898, viz.:—

From European Russia :

|                          | Cwts.                                                                        |
|--------------------------|------------------------------------------------------------------------------|
| Wheat and flour -        | - 43,500 (of which 11,300 cwts. passed to other parts of Russian Turkistan). |
| Barley -                 | - 5,000                                                                      |
| Rice -                   | - 26,000                                                                     |
| Tea -                    | - 15,800                                                                     |
| Sugar -                  | - 128,000                                                                    |
| Beer, wine and spirits - | - 57,000                                                                     |

From other parts of Russian Turkistan :

|                   |          |
|-------------------|----------|
| Wheat and flour - | - 18,500 |
| Rice -            | - 21,900 |

The following supplies were imported to Trans-Caspia from Persia (in 1902-03) :

|                           | Cwts.    |                                                                 |
|---------------------------|----------|-----------------------------------------------------------------|
| Wheat and flour -         | - 29,852 | } Vide Consular Report on the Trade of Khorassan, &c., 1902-03. |
| Cattle -                  | - 13,552 |                                                                 |
| Sheep -                   | - 15,962 |                                                                 |
| Animals (not specified) - | - 14,046 |                                                                 |



the shortage of grain. This deficiency, however, is partly made up for by the use of vegetables and fruit for food.\* Wheat and rice are now grown of better quality than formerly was the case.

Perhaps the most characteristic feature of Turkistan agriculture is the variety of crops grown other than cereals and fodder plants. Kunjut (for oil), lucerne, madder, tobacco, rice, melons, water-melons, cucumbers, onions, and various kinds of haricots and oleaginous seeds, as well as fruit trees—chiefly the apricot, plum, pistachio, mulberry, nut, and pomegranate—are all widely cultivated; and fruit and vegetables eaten with bread form a substantial part of the food of the population. Successful attempts have also been made to introduce beetroot for the making of sugar. Sericulture is beginning to revive, after the production of silk had almost been put a stop to by silkworm disease about 1885. It is estimated that some 30,000 cwt. of raw cocoons are obtained annually. The vine, which was formerly

\* The above figures and remarks are taken from a Russian source, and are interesting as being unlikely to exaggerate the unfavourable symptoms noticed. The following figures are given in Mr. Drage's "Russian Affairs" (London, 1904).

Approximate total average yield of grain in Turkistan:—

|             |   |   |   |   |               |
|-------------|---|---|---|---|---------------|
| Wheat       | - | - | - | - | 634,475 tons. |
| Rice        | - | - | - | - | 236,475 „     |
| Barley      | - | - | - | - | 191,050 „     |
| Other grain | - | - | - | - | 132,000 „     |
| Total       | - | - | - | - | 1,194,000 „   |

As will be seen, the total arrived at is even smaller than that quoted above, and the author arrives at the same conclusion, *i.e.*, "the total output is not sufficient for the wants of the people."

According to recent statements in the Russian press, the Council of the Governor-General of Turkistan has decided that it is necessary to establish depôts of cereals, partly for the use of the native population and partly "for the use of the State." A special Commission, appointed to select the best positions for such depôts and to decide upon the amount and description of cereals to be stored, has indicated strips of land on either side of the newly constructed Orenburg-Tashkend Railway, and various points in the districts of Tashkend, Chimkenā, Perovsk and Kazalinsk as being the most suitable positions for such depôts. Recommendations as to the amount of corn and grain to be thus stored, "in case of emergency," were also formulated.

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grown only for its fruit, is now being cultivated for wine also, of which about 270,000 gallons are obtained annually.

The forests of Central Asia are confined almost entirely to the slopes of the mountains. The steppes are, however, in places covered with low bushes, and plantations are met with in the oases. In times past the forests were barbarously thinned and wasted, but the Russian Government is taking measures to prevent further devastation. Strenuous efforts are being made to increase the forest area in Trans-Caspia; several hundred thousand trees are planted every year and a forest guard endeavours to prevent useless destruction of the saxaul trees.

Cattle-breeding is the chief occupation of the nomad Turkomans and Kirghiz, and is extensively carried on throughout Turkistan. The numbers of cattle, camels, horses, &c., in the five provinces, in the year 1900, given in tabular form on page 61, are taken from a recent Russian source. The figures concerning Bokhara and Khiva are estimates only, definite information being entirely lacking.

With regard to camels, the most important factor in respect to military transport, it may be noted that their average term of life is 45 years. They are not fully grown until they are 16, and should not be used before they are five years old at earliest. They are not, as a rule, fit for hard work beyond the age of 25. Female camels are only used as beasts of burden to a limited extent, as they are more valuable for breeding and milking purposes. From the above data it is estimated that of any given number of animals male camels between the ages of 5 and 25 will constitute 22 per cent. only. Even if a considerable number of females be employed, it appears that, after deductions on account of weaklings, animals temporarily unfit, breeding, &c., the total percentage suitable and fit for the hard work of a campaign cannot greatly exceed *one-third* of the total number of camels according to census.

Census figures, however, must be received with reserve; they are said to be probably less than the reality,



the owners being apt to conceal the full number of cattle they may have, in order to avoid taxation. The conditions of nomad life are not such as to facilitate an accurate computation of numbers, or the concentration of animals when required.\*

It seems probable that the advent of railways will tend to have an appreciable effect in diminishing the numbers of camels maintained in their neighbourhood; an effect noted in the past, here and elsewhere, and liable to become more marked, in the future, as additional lengths of railway are opened to traffic.

Trade and  
industry.

There being, at present, no British Consul in any part of Russian Central Asia there is difficulty in obtaining reliable trade statistics. Small industries are widely spread, but still retain much of their primitive character. The manufacture of native carpets has deteriorated and good specimens are both rare and expensive. All kinds of woollen goods required for clothing are made by the settled population. The cleaning of cotton is an important branch of industry, though still in its infancy. In 1903 there were 359 cotton factories (25 of which employed steam power) the number of hands engaged being 6,295.

\* The figures in the table on p. 61 can only be taken to represent an approximation, perhaps as accurately compiled as circumstances admit. The following totals, given in another authority are appended for comparison.

|                                                        | Horned<br>Cattle. | Sheep and<br>Goats. | Camels. | Horses.   | Donkeys. |
|--------------------------------------------------------|-------------------|---------------------|---------|-----------|----------|
| Cattle estimated to be<br>in Trans-Caspia in<br>1895.  | 41,000            | 3,000,000           | 186,000 | 106,000   | 18,000   |
| In the other 4 provinces<br>of Turkistan, 1898-<br>99. | 1,571,000         | 11,500,000          | 548,000 | 1,581,000 | 78,000   |
| Total                                                  | 1,615,000         | 14,500,000          | 734,000 | 1,687,000 | 96,000   |

The same authority estimates the resources of Bokhara, (not included in either of the above tables) to be approximately: 700,000 cattle, 7,000,000 sheep and goats, 300,000 camels, and 1,000,000 horses.

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CATTLE AND TRANSPORT ANIMALS IN RUSSIAN TURKISTAN,\* 1900.

| Provinces, &c.                  | Horned Cattle. | Sheep.      | Camels.   | Horses.   | Goats.    | Donkeys. | Pigs.  |
|---------------------------------|----------------|-------------|-----------|-----------|-----------|----------|--------|
| Trans-Caspia                    | 48,263         | 3,276,534   | 233,468   | 124,467   | 400,000   | 15,531   | —      |
| Samarkand                       | 232,178        | 719,889     | 33,840    | 111,535   | 200,000   | 42,315   | —      |
| Ferghana                        | 422,481        | 1,334,546   | 22,735    | 304,678   | 356,012   | 19,849   | —      |
| Syr Daria                       | 485,500        | 3,874,000   | 448,500   | 394,000   | 638,000   | 17,000   | —      |
| Semirechia                      | 462,028        | 4,367,929   | 82,929    | 714,489   | 294,900   | 2,890    | 13,010 |
| Totals in the Russian provinces | 1,650,450      | 13,272,958  | 821,472   | 1,650,069 | 1,888,912 | 98,185   | 13,010 |
| Bokhara (estimated)             | 700,000        | 7,000,000†  | 300,000   | 1,000,000 | †         | ?        | ?      |
| Khiva (approximate estimate)    | ?              | ?           | ?         | ?         | ?         | ?        | ?      |
| Totals (approximate)            | 2,750,500      | 20,273,000† | 1,221,000 | 2,750,000 | ?         | ?        | ?      |

\* For information concerning the Steppe provinces, &c., see page 62 *et seq.*

† The estimate, in the case of Bokhara, of 7,000,000 sheep includes goats.



The imports of Bokhara are in excess of its exports, and it may be that the same unfavourable balance exists in the other provinces of Central Asia. Turkistan, however, provides a considerable proportion of the raw material—cotton, hides and wool—required by Russian manufacturing industries, while the imports from Russia of manufactured goods amount to some 11,800 tons annually. Sugar, timber, iron, kerosene oil, naphtha, grain, and flour are also imported from Russia.

A large trade is carried on with Persia ; in 1897 the exports of Turkistan to Persia amounted to about 411,000*l*. and the imports to 355,000*l*. The exports to Afghanistan for the same year amounted to 53,000*l*. and the imports to 178,000*l*. There is also a considerable transit trade in Russian goods through Turkistan to China ; in 1897 the exports amounting to 444,000*l*. and the imports to some 555,000*l*.

Conclu-  
sion.

In connection with the agricultural and other local resources of Turkistan, it may be noted here that the completion of the Orenburg-Tashkend Railway will afford railway communication with the rich corn-growing lands of Western Siberia. It is anticipated that the increased facilities for the importation of Siberian wheat in large quantities will set free additional areas of land, in Turkistan, for the cultivation of cotton. The Orenburg-Tashkend Railway, recently completed, and still more, a line connecting Tashkend with Omsk, said to be contemplated (*vide* page 33), would make available for Turkistan the resources of a vastly greater area than its own. With this view, the following brief summary of the resources of the four provinces immediately to the north of Turkistan may perhaps usefully be noted here.

Resources  
of the  
Steppe  
Provinces.

According to the latest data available, the four provinces of Akmolinsk, Semipalatinsk, Turgai, and Uralsk (the western portion of which will be opened up by the Orenburg-Tashkend line, and the whole of which would be tapped by a line from Omsk, on the Siberian Railway, to Tashkend) contain a population of 2,225,460 natives and 318,300 Russians. The live stock of the settled inhabitants, in 1900, amounted to 434,773 horses,

410,000 horned cattle, 508,850 sheep, 195,405 camels; and, including the cattle of the nomads, the total number of animals was computed at 11,477,000. The area under cultivation, in 1901, was 516,670 acres. The mineral resources of these four provinces include coal, copper, iron, silver, gold, naphtha, and precious stones.

Though somewhat beyond the scope of this report, the following brief notes on the resources of Khorassan and the neighbouring portions of Afghanistan are added here for convenient reference.

The annual grain resources of the Persian provinces Persia of Khorassan and Seistan were estimated by Colonel Picot in 1896, to be about 2,273,100 cwts., of which, after local consumption had been provided for, there would remain available for export some 555,000 cwts. of grain. Of this amount it was estimated that the normal exports to Russian Central Asian territory amount to some 232,000 cwts.\* The same authority estimates the following transport animals to be available, viz., 17,500 camels, 6,200 mules and ponies, 4,300 donkeys.

It has been calculated that a reasonable estimate of the resources of Khorassan, &c., would be that a force of 20,000 men could be locally supplied, in addition to the normal amount of exports to Central Asia.

It has been estimated that the Herat valley could supply from local resources some 99,000 cwts. of wheat; 66,000 cwts. of rice; 44,000 cwts. of barley; and 146,000 cwts. of forage (*bhusa*). There is a very large number of sheep, while vegetables and fruit are abundant.

It has been calculated that a force of, say, 40,000 men might be supplied locally for six or seven months or, say, 25,000 men for one year.

Afghan Turkistan does not produce as much as the Herat valley just mentioned, but is believed to be capable of supplying a force of some 10,000 men for four or five months.

\* This estimate cannot be reconciled with the amount actually exported during the year 1902-3 according to the Consular Report referred to above (page 57, footnote).



These figures are chiefly based upon information contained in the records of the Afghan Boundary Commission, 1884-86. Since then more recent reports go to show that the cultivated area in the Herat provinces has been largely increased, and the same may be safely assumed in respect to Afghan Turkistan. It is certain, therefore, that the agricultural resources of the districts referred to have materially increased during the period of more or less settled conditions, secured to the inhabitants by the strong rule of the late Amir of Afghanistan, since the data upon which the above estimates are based were collected.

The following figures, taken from the latest Consular Report on the trade of Khorassan, may serve as some indication of the resources of Western Afghanistan, which exported to Persian territory during the year 1902-03:—

|                          |   |   |                 |
|--------------------------|---|---|-----------------|
| Rice -                   | - | - | 4,000 cwts.     |
| Grain, various -         | - | - | 610 "           |
| Wheat -                  | - | - | 230 "           |
| Provisions (preserved) - | - | - | 530 "           |
| " (eggs) -               | - | - | 330 "           |
| Butter and edible fats - | - | - | 1,492 "         |
| Sheep -                  | - | - | 60,385 animals. |
| Cattle -                 | - | - | 210 "           |
| Horses -                 | - | - | 281 "           |

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## CHAPTER VI.

### ETHNOGRAPHY.

KIRGHIZ—TURKOMANS — UZBAKS — KARA-KOLPAKS — SARTS  
— TARANCHIS — SART-KALMIKS — TAJIKS — PERSIANS —  
AFGHANS — HINDUS, &c. — RUSSIAN COLONISATION —  
POPULATION — IMPORTANT TOWNS — NATIVE FEELING  
TOWARDS RUSSIA.

The native population of Turkistan is a conglomerate of various races, the result of a fusion of Turko-Mongolian and Indo-Iranian stock.

To the former belong—

*The Kirghiz*, who form the predominant element of Kirghiz, the native population, their numbers amounting to some 36 per cent. of the whole. The tribes inhabiting the plains of the north and north-west are distinguished from the Kara-Kirghiz, or Buruts, of the mountains in the east and south-east, by differences of physical type and appearance, as well as by marked peculiarities of dialect, though all Kirghiz nominally speak the Turki language. Their religion is the *Sunni*\* form of Muhammadanism.

\* The great division and schism of Muhammadanism into the opposing *Sunni* and *Shiah* sects maintained with the extreme and bitter hatred which often belongs to hostile creeds and religious bodies. Generally speaking, the greatest bitterness is displayed on the side of the *Sunnis*, who accept the orthodox tradition (*Sunna*) as well as the literal interpretation of the Koran as the source of all theologic doctrine and rule of life, and who claim to be the orthodox exponents of the faith of Muhammad.

The *Shiahs*, on the other hand, are the partisans and votaries of Ali, the son-in-law and early successor of Muhammad; they introduced the practice of giving the Koran an allegorical interpretation which permits a considerable latitude in reconciling words and statements in the Koran with the extreme respect paid to Ali and his linear descendants. To the Muhammadan confession of faith, "There is no god but God, and Muhammad is the prophet of God," the *Shiahs* add, "And Ali is the viceregent (*Wali*) of God." Other points of difference between the *Sunnis* and *Shiahs* are chiefly petty matters affecting ceremonial.

The *Shiah* form of Muhammadanism became the Persian national religion on the accession of the Sefavi dynasty (which



The vast majority of Kirghiz tribes are nomad, and their chief occupation is cattle-breeding, though in some parts of Semirechia, the Syr Daria province and Trans-Caspia, a certain proportion have turned their attention to agriculture, and have thus become more or less settled inhabitants.

Turko-  
mans.

The *Turkomans* form about 79 per cent. of the population in the Transcaspian province and about 5 per cent. of the whole population of Turkistan. They are subdivided into the following tribes:—

- (a.) *Yomuts* (4,800 tents), found along the rivers Sumbar and Atrek, and migrating over the plains round Krasnovodsk and into Khivan territory.
- (b.) *Tekkes* (38,000 tents) occupy the Akhal, Atak, Tejend, and Merv oases and neighbouring steppes. They are divided into Akhal-Tekke and Merv Tekke, the latter being further subdivided into Tokhtamish and Ottamish.
- (c.) *Sarihs* (7,300 tents) inhabit the oases and plains of Yolatan and Panjdeh on the borders of the Merv district.
- (d.) *Salors* (3,000 tents). — The oldest of the Turkoman tribes, dating their connection with the neighbourhood of the Oxus from the 7th century. Their principal habitation is the Sarakhs oasis in the Tejend district. They are also found in insignificant numbers in the Khanates of Khiva and Bokhara.

claimed descent from the family of Ali) at the beginning of the 16th century.

It is estimated that the number of Muhammadans throughout the world amount, all told, to between 150 and 200 million souls, of which some 20 millions are adherents to the Shiah form, or heresy.

The great majority of Russian Muhammadan subjects profess the *Sunni* form of faith, and Russia has appeared in the past to claim, to some extent, the position of champion of *Sunni* Muhammadanism as against the Shiah heresy of the Persians. This fact, as well as the hatred existing between the Afghans (*Sunnis*) and Persians (*Shiahs*), tends to give the schism a political, as well as religious, importance.

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(e.) *Goklans* (750 tents) live along the River Atrek and in Khivan territory.

(f.) *Ikdîr* (400 tents) { lead a nomadic existence  
(g.) *Abdala* (60 tents) { along the shores of the Caspian.

(h.) *Ogurdjali* (1,025 tents) inhabit the shores of the Caspian, between Krasnovodsk and Chikishliar, and also the island Cheleken.

There are certain small tribes among the Turkomans (amounting to about 1,200 tents) who consider themselves to be of Arab descent, but who in dress, language and manner of life are in no way distinguishable from other Turkoman tribes.

The following small tribes also belong to the Turkoman population:—Chanduri (or Chadari) and Imraili, found in the north-western parts of Khiva; and the Alieli, Nukhurli, Murgali, Anauli, Mekhinli, found in small detached bodies in various parts of Trans-Caspia.

The language spoken is Turki, and the Turkoman religion is Sunni Muhammadanism.

*The Uzbaks* (Uzbegs) form the bulk of the population of the province of Samarkand, and of certain districts in the Syr Daria and Ferghana provinces. They also form the dominant section of the population and ruling element in the Khanates of Khiva and Bokhara (more than 25 per cent. of the whole population). They are of pure Turkoman type, and speak the Turki language, though with a large admixture of Persian words. They are distinguished by their religious strictness and fanaticism—their women are veiled, even when migrating from place to place. They are semi-nomadic in their habits, though a large number have now become settled and engage in agriculture, and in their mode of life are not distinguishable from Sarts. Nomad and semi-nomad Uzbaks are found in eastern Bokhara, and are hardly distinguishable from the nomad Kirghiz, save by their greater strictness of religious observances. As much as one-third of the whole population of Northern Afghanistan belong to this tribe.

*The Kara-Kolpaks and Kipchaks* resemble the Kirghiz of the plains. They inhabit the centre of the

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province of Ferghana and the lower reaches of the Oxus.

The following tribes belong to 'Turko-Iranian stock :—

Sarts.

*The Sarts*, who occupy the second place next after the Kirghiz in order of numerical importance. They form the mass of the town and village population in Ferghana, and in certain districts of the provinces of Syr Daria and Samarkand, numbering over 24 per cent. of the whole population of Turkistan. They form the educated upper classes of Mussulman society, merchants, artisans, and agriculturalists. They are clever, good men of business, and quickly adapt themselves to new conditions.

Taranchis.

*The Taranchis*, a kindred race to the Sarts, who number some 47,000 of the population. They migrated into Russian territory in Semirechia, from Chinese territory in the Kuldja neighbourhood.

Sart-Kalmiks.

*The Sart-Kalmiks*, who are related to the Sarts, have adopted the manners, dress, and language of the Kalmiks, but have retained the Mussulman religion. They inhabit the shores of the Issik Kul lake, near Prjevalsk, and number some 230 tents. Their habits are semi-nomadic, agriculture and cattle-breeding being their chief means of subsistence.

Tajiks.

*The Tajiks* are of Iranian origin, having entered Turkistan from Iran in pre-historic times. They still preserve the Iranian type of physical features, and speak pure Persian. They constitute about 10 per cent. of the whole population of Turkistan, and are intelligent and successful as agriculturalists. Their greatest numbers are to be found in Ferghana and Semirechia, and also in the eastern portions of Bokhara. Small colonies are also met with in the Syr Daria province in the neighbourhood of Tashkend. A small number, with still purer Iranian characteristics, are to be found on the Pamirs. Tajiks belong to the Shiah sect of Muhammadanism, and keep aloof from Sarts and Uzbaks, who are Sunnis.

In the mountainous districts of the Upper Zerafshan valley mountain Tajiks or "Gulchas," of a fair-haired type, are met with.



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*Persians* are found, as permanently settled inhabitants, in the Khanates of Khiva and Bokhara. As temporary inhabitants, they are chiefly met with along the Central Asian Railway. They are all Shiah in faith, and are, therefore, not liked by the Sunnis, who predominate. In Khiva and Bokhara they are not permitted to carry out public worship.

*Afghans* are met with, in small numbers, in the southern parts of Turkistan, along the line of the Central Asian Railway, and in Khivan and Bokharan territory, having migrated in consequence of internal dissensions. There is a large village of Augani-Kishlaks close to Khokand, where Afghans have long been settled. Of all the Sunni Mussulmans the Afghans are the most uncompromising enemies of the Persian Shiah.

Of the remaining elements of the native population the Dungans, Hindus, and Jews may be mentioned.

*The Dungans* are Chinese who have adopted Muhammadanism. In the sixties they rebelled against the Chinese authorities in Eastern or Chinese Turkistan, and soon after began to migrate to Russian territory. At present their settlements in Semirechia, at Prjevalsk, Jarkend, Vierni, and Pishpek, number some 9,000 souls. They live in towns, and engage in agriculture and market gardening with a considerable measure of success and prosperity.

*The Hindus*, who come chiefly from Peshawar, live in the towns and in caravanserais specially allotted to them. Their wives and families remain in India, and the difference in religion prevents their marrying in Turkistan. Their occupation is not so much trade in the products and manufactures of India as money-lending at usurious interest.

There are Jews in every town in Central Asia. It has been suggested that they may, perhaps, be the descendants of the tribes taken into captivity by the Persians and Assyrians on the destruction of the kingdoms of Israel and Judæa. In dress, language, and manner of life they resemble the tribes around them, though the Jewish type of feature is very apparent.

F 2



Armenians, Gypsies, Tartars, and Arabs by descent, though almost entirely merged in the Uzbaks, form other small groups, in the motley population of Turkistan.

Russian  
colonisa-  
tion.

The colonisation of Turkistan by the Russians began with the gradual expansion towards the south and south-west of the Siberian Cossack settlements. By the middle of the 19th century, keeping pace with the advance of the frontiers of the Russian Empire, the Cossacks occupied point after point on the Kirghiz Steppes. In 1831, the town Sergiopol was founded; in 1847, Kopal; in 1854, Vierni; in the following year, Lepsinsk and Karabulak. Every year fresh settlements sprang up until 1867, when the province of Semirechia was formed, and contained 14 such villages, with a population of 14,413 souls, which were organised as a new "Semirechia" Cossack *Voisko*. This new body of Cossacks was reinforced and increased by migration from European Russia, and in 1901 there were 28 Cossack settlements, with a population of 29,323 souls, and 30 colonies of peasants numbering 38,022 souls.

The colonisation of the Syr Daria province began in 1873. In 1892 more than 1,200 families brought from various parts of European Russia were settled in existing or new villages on the post road from Tashkend to the borders of Semirechia, and in 1901 there were 57 settlements with a population of 18,259 souls.

In the Samarkand province colonisation began in 1896. In 1901 there were nine settlements with a population of 2,126 souls, all of them being (with one exception) in the Khojend district in the vicinity of certain irrigation works undertaken in that neighbourhood (near where the Syr Daria makes its great bend towards the north) with a view to bringing the so-called "Famine Steppe" under cultivation. Owing to the non-completion of these works, the state of some of these settlements is precarious and unsatisfactory.

In Ferghana colonisation was commenced in 1893 by the establishment of twenty Russian families in the Osh district. In 1901 there were five villages, with a Russian population of 2,835 souls.

In Trans-Caspia colonisation began in 1889, and in 1901 there were 23 settlements with a population of 1,751 souls, of which two (465 souls) are situated in the Kushk valley,  $2\frac{1}{2}$  miles from Kushk Post, the most southern settlements in the Russian Empire.

It will be seen from the above that in 1901 the number of Russian Cossack and peasant colonists or settlers was somewhat less than 100,000 souls, or less than 1.9 per cent. of the population in the Russian provinces (exclusive of the Khanates of Khiva and Bokhara),\* or about 1.2 per cent. of the whole population of Russian Turkistan, the numbers and distribution of which are given in the following table:—

\* If troops, officials, and railway employés, &c., be included the Russian inhabitants are said to amount to about  $4\frac{1}{2}$  per cent. of the population of the five Russian provinces. If this be so, there would appear to be somewhat less than 237,000 Russian inhabitants.

An article in the "Revue de Géographie" (1902), while arriving at approximately the same conclusion, goes on to state that the Russian inhabitants constitute only .4 per cent. of the population of Ferghana, 1 per cent. of Trans-Caspia,  $1\frac{1}{2}$  per cent. of Samarkand,  $3\frac{1}{2}$  per cent. of Syr Daria, and over 10 per cent. of Semirechia. On this basis the Russian population would amount to somewhat less than 180,000 souls. It will be noticed that the difference between this number and the larger estimate given above almost exactly coincides with the peace strength of the troops, which would appear to have been omitted from the second calculation.

In the absence of any definite official statement as to the Russian population it may be noted that the number of Christians in the Russian provinces of Turkistan, including adherents to the orthodox Greek Church, Roman Catholics, Protestant, and other sects (given in the "Russki Kalendar, 1905, as the result of the latest census), is some 219,600 souls, or approximately 4.16 per cent. of the whole population. Adding some 16,100 Russian subjects in Khiva and Bokhara (of whom, however, it is probable that only a very small proportion are Russian born) the total amounts to 235,700 souls, which does not differ materially from the estimate arrived at above.

It would appear probable, therefore, that the Russian population of Turkistan, including troops, &c., can hardly exceed some 237,000 souls, at the utmost. It may be noted that, in the course of his remarks on Russian colonisation, the author of the French article already mentioned makes the statement that, if the colonists and settlers, "un quart seulement sont de véritables Russes."



*Population of the Russian Provinces according to the Census of 1897.*

| Province and District. | Men.    | Women.  | Total.  | Urban Population. | Per Square Verst. | Women per 100 Men. |
|------------------------|---------|---------|---------|-------------------|-------------------|--------------------|
| <i>Trans-Caspia</i>    | 206,409 | 166,084 | 372,493 | 42,431            | 0.8               | 82.9               |
| Krasnovodsk            | 30,403  | 23,450  | 53,858  | 6,359             |                   |                    |
| Mangsihlak             | 30,879  | 30,422  | 61,301  | 882               |                   |                    |
| Askhabad               | 52,505  | 39,770  | 92,275  | 23,559            |                   |                    |
| Tejend                 | 25,706  | 19,821  | 45,427  | 2,904             |                   |                    |
| Merv                   | 66,711  | 52,621  | 119,332 | 8,727             |                   |                    |
| <i>Samar'kand</i>      | 472,915 | 384,932 | 857,847 | 133,568           | 4.4               | 81.8               |
| Samar'kand             | 190,874 | 159,474 | 341,348 | 58,581            |                   |                    |
| Jizak                  | 119,762 | 100,122 | 219,884 | 16,041            |                   |                    |
| Kata Kurgan            | 61,021  | 48,982  | 110,007 | 10,083            |                   |                    |
| Khoyend                | 101,258 | 85,354  | 186,612 | 50,913            |                   |                    |

(42)

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|                   |           |           |           |         |      |      |
|-------------------|-----------|-----------|-----------|---------|------|------|
|                   | 852,279   | 707,132   | 1,560,411 | 236,369 | 1.11 | 82.8 |
| <i>Ferghana</i>   |           |           |           |         |      |      |
| Margilan          | 179,140   | 147,009   | 326,149   | 45,569  |      |      |
| Andijan           | 191,847   | 159,340   | 351,187   | 46,680  |      |      |
| Khokand           | 202,262   | 162,148   | 365,410   | 82,054  |      |      |
| Namangan          | 195,152   | 161,871   | 357,023   | 75,592  |      |      |
| Osh               | 83,517    | 74,687    | 158,204   | 36,474  |      |      |
| Pamirs            | 1,361     | 1,077     | 2,438     | —       |      |      |
| <i>Syr Daria</i>  | 804,134   | 675,714   | 1,479,848 | 206,322 | 3.3  | 84.0 |
| Tashkend          | 249,309   | 198,415   | 447,724   | 156,414 |      |      |
| Aulie Ata         | 152,133   | 126,871   | 279,004   | 12,006  |      |      |
| Kazalinsk         | 73,551    | 67,047    | 140,598   | 7,600   |      |      |
| Perovsk           | 70,752    | 63,032    | 133,784   | 5,196   |      |      |
| Chinkend          | 157,578   | 127,692   | 285,180   | 22,348  |      |      |
| Anu Daria         | 100,811   | 92,747    | 193,558   | 2,758   |      |      |
| <i>Semirechia</i> | 531,363   | 458,744   | 990,107   | 59,562  | 2.8  | 86.5 |
| Vierni            | 120,114   | 104,754   | 224,868   | 22,837  |      |      |
| Jarkend           | 64,822    | 58,356    | 123,178   | 16,656  |      |      |
| Lepsinsk          | 97,561    | 84,193    | 181,754   | 8,295   |      |      |
| Kopal             | 72,591    | 63,688    | 136,276   | 2,735   |      |      |
| Pishpek           | 95,210    | 80,968    | 176,178   | 6,413   |      |      |
| Prjevalsk         | 81,065    | 66,788    | 147,853   | 7,633   |      |      |
| Total             | 2,867,800 | 2,392,606 | 5,260,406 | 730,259 | —    | —    |



*Khanates.*

|                             |   |           |
|-----------------------------|---|-----------|
| Khiva (approximately)       | - | 500,000   |
| Russian subjects in Khiva   | - | 3,951     |
| Bokhara (approximately)     | - | 2,500,000 |
| Russian subjects in Bokhara | - | 12,150    |

Estimated total population in }  
Russian Turkistan (ap- } 8,276,500 souls.  
proximately).

Important towns.

The following details of certain important towns may be of interest as showing their development (with one or two exceptions) according to the census of 1897 and more recent data of 1901 :—

|               | 1897.   | 1901.   |
|---------------|---------|---------|
| Tashkend      | 156,414 | 163,264 |
| Khokand       | 82,054  | 86,604  |
| Namangan      | 61,906  | 61,388  |
| Samarkand     | 54,900  | 58,194  |
| Andijan       | 46,690  | 49,682  |
| Old Margilan- | 36,592  | 42,855  |
| Osh           | 36,474  | 37,397  |
| Khojend       | 30,076  | 31,103  |
| Vierni        | 22,982  | 22,982  |
| Askhabad      | 19,428  | 22,935  |
| Turkistan     | 11,592  | 14,085  |

Native feeling.

It is difficult to ascertain the actual state of feeling on the part of the natives towards the Russian Government. Though apparently satisfied with their lot, there are indications of a certain amount of secret or sullen hostility. The mountaineers, and Turkomans, on the Russo-Persian frontier, occasionally damage the railway line, but to what extent such acts of hostility might be carried, in certain eventualities, it is impossible to say.

It is equally difficult to arrive at the Russian estimation of the various classes of natives subject to them. One will say that the Tekkes are the best of all, while the Sarts are unruly and troublesome ; another,

however, would declare that the Tekkes are a useless lot, while the Sarts are a satisfied and peace-loving people. It is probable that there is not much to choose between any of the various classes.

The Sarts have spirit and force of character, due perhaps to the nominal independence of the Khanate of Bokhara and their ancient traditions; while the Tekkes, Kirghiz, and the other nomad tribes, whatever their military value may once have been, were crushed by the Russian victories, bordering on extermination, inflicted on them by General Skobelev. It is said that these tribes in Trans-Caspia have recently been disarmed by the Russian Government.

It is thought improbable that the natives of Central Asia, as a whole, will ever rise against Russia; they have little power of cohesion or capability for combination, and further have neither arms or ammunition, nor means of obtaining them.

|    |                                       |
|----|---------------------------------------|
| 1. | The General Staff.                    |
| 2. | The District Intelligence Department. |
| 3. | Artillery.                            |
| 4. | Engineers.                            |
| 5. | Medical.                              |
| 6. | Topographical.                        |
| 7. | Military Law.                         |

The troops quartered in the district in common with the rest of the Russian Army, are classified as field, reserve, fortress, and local troops. Field troops are in most cases permanently maintained at a strength not far above of war strength, and are with a few exceptions, grouped in brigades of infantry, cavalry, or artillery, and are organized as two main corps, in addition to a garrison in Samarkand. Reserve troops are main-

The present division—created probably in 1904, is known as the 13th Division, formerly 12th, of the Intendence, Member of Council, Genl. Genl., having previously served in the cavalry. He was born in 1847. It should be noted that "Intendence" troops, though classed as such, are being employed in this line in the present war in Manchuria (1904).



## CHAPTER VII.

### MILITARY.

ORGANISATION—FIELD TROOPS—RESERVE TROOPS—FORTRESS TROOPS—RAILWAY TROOPS—LOCAL TROOPS—FRONTIER GUARDS—COMBATANT STRENGTH—DISTRIBUTION AND GARRISONS—OTHER MILITARY ESTABLISHMENTS.

The Turkistan Military District, which includes the whole of the country dealt with in this report, has its headquarters at Tashkend, where the Governor-General,\* who in addition to being the chief civil authority commands the troops, has his official residence. He has a personal staff and is assisted by the District Military Council, which is composed of the Assistant to the Governor-General (nominated by the War Minister) and the heads of the first five departments of the District Staff. The latter is composed as follows:—

1. The General Staff.
2. The District Intendance Department.
3.       "       Artillery       "
4.       "       Engineer       "
5.       "       Medical       "
6.       "       Topographical       "
7.       "       Military Law       "

Organiza-  
tion.

The troops quartered in the district, in common with the rest of the Russian Army, are classified as field, reserve,† fortress, and local troops. Field troops are in most cases permanently maintained at a strength not far short of war strength, and are, with a few exceptions, grouped in brigades of infantry, cavalry, or artillery, and are organized as two army corps, in addition to a garrison in Semirechia. Reserve troops† are main-

\* The present Governor-General, appointed in 1904, is Lieut.-General Teviashov, formerly Chief of the Intendance, Member of Council, &c., having previously served in the cavalry. He was born in 1842.

† It should be noted that "Reserve" troops, though classed as such, are being employed in first line in the present war in Manchuria (1904).

tained at a small establishment in time of peace, but are capable of a large expansion on mobilization; thus each of the reserve infantry battalions becomes, when expanded to war strength, an infantry regiment of five battalions; similarly reserve Cossack cavalry regiments are formed on mobilization which find no place in ordinary times of peace; while two reserve batteries of artillery become, on mobilization, two artillery brigades each consisting of four batteries.

Fortress and local troops are allotted to certain fortresses and stations.

With the exception of the Siberian and Semirechia Cossacks, the troops are mainly recruited from European Russia, the recruits being sent to join their units during the winter and spring. The number of reservists resident in Turkistan is believed to be small; in case of mobilization, therefore, a large proportion of the men required to fill the ranks would have to be brought from Europe.

A rifle battalion consists of four\* companies, each of which has a normal strength of about 215 non-commissioned officers and men, of whom 15 are non-combatants. A rifle brigade is composed of a staff and four battalions. Each brigade has a section of mounted scouts, composed of one officer and 38 non-commissioned officers and men drawn from the units forming the brigade.

A cavalry regiment consists of either six or four squadrons, each of which, on a war footing, would contain from 143 to 150 men, of whom 23 to 25 are non-combatants.

Batteries (field and mountain) have eight guns each,† while howitzer, horse artillery, and horse mountain batteries have six guns only.

The non-combatant section of each unit includes clerks, hospital orderlies, armourers, farriers, artificers, officers' servants, and transport drivers.

The following troops are quartered within the limits of the Turkistan Military District.

\* Except in the 1st, 2nd, and 3rd Turkestan Rifle Brigades, in which each battalion consists of five companies (A.O. No. 322 of 3-16 June 1904).

† All batteries have all their guns horsed in time of peace.



FIELD TROOPS.  
*Infantry.*

| Units.                                                         | Headquarters. | Regiments, &c.                                                                            | No. of Bat-<br>talions. | Combatant Strength, † |        |
|----------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------|-------------------------|-----------------------|--------|
|                                                                |               |                                                                                           |                         | Peace.                | War.   |
| 1st <i>Turkistan Army Corps</i><br>1st Turkistan Rifle Brigade | Tashkend.     | 1st, 2nd, 3rd, and 4th<br>Turkistan Rifle Bat-<br>talions.                                | 4                       | 4,064*                | 4,908* |
| 2nd<br>do.                                                     | Samarkand     | 5th, 6th, 7th, and 8th<br>Turkistan Rifle Bat-<br>talions.                                | 4                       | 4,064*                | 4,908* |
| 3rd<br>do.                                                     | New Margilan  | 9th, 10th, 11th, and<br>12th Turkistan Rifle<br>Battalions.                               | 4                       | 4,064*                | 4,908* |
| 4th<br>do.                                                     | Termez        | 13th, 14th, 15th, and<br>16th Turkistan Rifle<br>Battalions.<br>Staffs of four brigades - | 4                       | 3,332                 | 3,928  |
|                                                                |               |                                                                                           | —                       | 12                    | 12     |

|                                                           |                     |   |                                                              |    |        |        |
|-----------------------------------------------------------|---------------------|---|--------------------------------------------------------------|----|--------|--------|
| 2nd Turkistan Army Corps<br>5th Turkistan Rifle Brigade - | Askabad.<br>Kerki - | - | 17th, 18th, 19th, and<br>20th Turkistan Rifle<br>Battalions. | 4  | 3,332  | 3,928  |
| 6th do. do.                                               | Askabad.            | - | 1st, 2nd, 3rd, and 4th<br>Trans-Caspian Rifle<br>Battalions. | 4  | 3,260  | 3,928  |
| 7th do. do.                                               | Merv -              | - | 5th, 6th, 7th, and 8th<br>Trans-Caspian Rifle<br>Battalions. | 4  | 3,260  | 3,928  |
| Garrison in Semirechia<br>8th Turkistan Rifle Brigade -   | Vierni.<br>Vierni - | - | Staffs of three brigades                                     | -- | 9      | 9      |
|                                                           |                     | - | 2nd, 3rd, 4th, and 5th<br>West Siberian Rifle<br>Battalions. | 4  | 1,876  | 3,928  |
|                                                           |                     | - | Staff of one brigade                                         | —  | 3      | 3      |
| Total Infantry                                            |                     | - |                                                              | 32 | 27,276 | 34,388 |

\* Each battalion in the 1st, 2nd, and 3rd Turkistan Rifle Brigades has recently been increased by a fifth company. The war establishment of the fifth company is not known, but assuming that it will not be dissimilar to those of the other companies, the figures above include four additional companies per brigade, each of a strength of 183 and 245 combatants, on a peace and war footing respectively. There is reason to believe, however, that each of these fifth companies may expand, on mobilisation, into a battalion.

† Including officers, N.C.O.s and men.

(45)



*Cavalry.*

| Units.                          | Headquarters. | Regiments, &c.                                                                                                                 | No. of Squad-<br>rons. | Combatant Strength. |      |
|---------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------|------|
|                                 |               |                                                                                                                                |                        | Peace.              | War. |
| 1st Turkistan Army Corps        | Tashkend.     |                                                                                                                                | —                      | 6                   | 26   |
| 1st Turkistan Cossack Division. | Samarkand     | Staff of Division                                                                                                              | —                      |                     |      |
| 1st Brigade                     | Samarkand     | 2nd Ural Cossack Regiment.<br>4th Orenburg Cossack Regiment.                                                                   | 4                      | 637                 | 616  |
|                                 |               |                                                                                                                                | 4                      | 604                 | 602  |
| 2nd Brigade                     | New Margilan  | 5th Orenburg Cossack Regiment.<br>6th Orenburg Cossack Regiment.<br>1st Semirechia Cossack Regiment.<br>Staffs of two brigades | 4                      | 604                 | 602  |
|                                 |               |                                                                                                                                | 4                      | 604                 | 602  |
|                                 |               |                                                                                                                                | 4                      | 654                 | 615  |
|                                 |               |                                                                                                                                | —                      | 6                   | 6    |

[illegible]



*Artillery.*

| Units.                                                  | Headquarters. | Regiments, &c.                                                                                                                                                     | No. of Batteries. | Guns.   | Combatant Strength. |            |
|---------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------|---------------------|------------|
|                                                         |               |                                                                                                                                                                    |                   |         | Peace.              | War.       |
| <i>1st Turkistan Army Corps</i>                         |               |                                                                                                                                                                    |                   |         |                     |            |
| 1st Turkistan Artillery Brigade.                        | Tashkend.     | Staff of Brigade<br>1st, 2nd, 3rd, 4th,<br>and 5th Turkistan<br>(Field) Batteries.<br>5 "Reserve" sec-<br>tions of 38 men<br>each.<br>6th (Mountain) Bat-<br>tery. | —<br>5            | —<br>40 | 3<br>1,060          | 3<br>1,060 |
| 1st Turkistan Artillery Flying Park.*<br>(Not brigaded) | Tashkend      | 2nd Orenburg Cos-<br>sack Horse Bat-<br>tery.<br>Turkistan Horse<br>Mountain Battery.                                                                              | —<br>1            | —<br>6  | 190<br>240          | —<br>240   |
|                                                         |               |                                                                                                                                                                    |                   |         | 71                  | 779        |
|                                                         |               |                                                                                                                                                                    |                   |         | 191                 | 186        |
|                                                         |               |                                                                                                                                                                    |                   |         | 187                 | 187        |

|                                                            |          |                                         |    |     |       |       |       |       |       |
|------------------------------------------------------------|----------|-----------------------------------------|----|-----|-------|-------|-------|-------|-------|
| 2nd Turkistan Army Corps Askhabad.                         |          |                                         |    |     |       |       |       |       |       |
| 2nd Turkistan Artillery Brigade.                           | Askhabad | Staff of Brigade                        | —  | —   | —     | 3     | 3     | 3     | 3     |
|                                                            |          | 1st, 2nd, 3rd, and 4th Field Batteries. | 4  | 32  | 848   | 848   | 848   | 848   | 848   |
|                                                            |          | 4 "Reserve" sections.                   | —  | —   | 152   | 152   | 152   | 152   | 152   |
|                                                            |          | 5th (Mountain) Battery.                 | 1  | 8   | 240   | 240   | 240   | 240   | 240   |
|                                                            |          | 6th (Howitzer) Battery.                 | 1  | 6   | 220   | 220   | 220   | 220   | 220   |
| 2nd Turkistan Artillery Flying Park.*                      | Askhabad | 4th Kuban Cossack Horse Battery.        | 1  | 6   | 138   | 138   | 138   | 138   | 138   |
|                                                            |          | —                                       | —  | —   | 71    | 71    | 71    | 71    | 71    |
|                                                            |          | —                                       | —  | —   | 117   | 117   | 117   | 117   | 117   |
| Garrison of Semirechia - West Siberian Artillery Division. | Vierni.  | 1st West Siberian Field Battery.        | 1  | 8   | 212   | 212   | 212   | 212   | 212   |
|                                                            |          | 1 "Reserve" section.                    | —  | —   | 38    | 38    | 38    | 38    | 38    |
|                                                            |          | 2nd West Siberian (Mountain) Battery.   | 1  | 8   | 240   | 240   | 240   | 240   | 240   |
|                                                            |          | Staff of Division                       | —  | —   | 3     | 3     | 3     | 3     | 3     |
| Total Artillery                                            | —        | —                                       | 17 | 128 | 4,924 | 4,924 | 4,924 | 4,924 | 5,377 |

\* Expands upon mobilisation into a Park Brigade consisting of a Staff and three parks.

(52)



*Engineers.*

| Units.                          | Headquarters. | No.<br>of Com-<br>panies. | Combatant Strength. |       |
|---------------------------------|---------------|---------------------------|---------------------|-------|
|                                 |               |                           | Peace.              | War.  |
| <i>1st Turkistan Army Corps</i> | Tashkend      | —                         | —                   | —     |
| Turkistan Sapper Battalion      | Tashkend      | 4                         | 467                 | 828   |
| <i>2nd Turkistan Army Corps</i> | Askhabad      | —                         | —                   | —     |
| Trans-Caspian Sapper Battalion  | Merv          | 3                         | 588                 | 683   |
| Pontoon Company                 | Termez        | 1                         | 260                 | 260   |
| Military Telegraph Company      | —             | 1                         | 370                 | 375   |
| Field Park                      | —             | —                         | 66                  | 157   |
| <i>Garrison in Semirechia</i>   | Vierni        | —                         | —                   | —     |
| West Siberian Sapper Company    | Vierni        | 1                         | 127                 | 266   |
| Total                           | —             | —                         | 1,878               | 2,474 |

85

(48)

SUMMARY OF FIELD TROOPS.

|                    | Combatants of all Ranks. |        | Guns. |
|--------------------|--------------------------|--------|-------|
|                    | Peace.                   | War.   |       |
| Infantry           | 27,276                   | 34,388 | —     |
| Cavalry            | 7,304                    | 7,335  | —     |
| Artillery          | 4,224                    | 5,377  | 128   |
| Engineers          | 1,878                    | 2,474  | —     |
| Total Field Troops | 40,682                   | 49,474 | 128   |

NOTE.—The Kusbk Train Cadre Company, expanding in war into a battalion of staff and five transport columns, is not included in the foregoing tables.



RESERVE TROOPS.

*Infantry.*

| Units.                                   | Headquarters. | Regiments, &c.                             | No. of Battalions. |      | Combatant Strength. |        |
|------------------------------------------|---------------|--------------------------------------------|--------------------|------|---------------------|--------|
|                                          |               |                                            | Peace.             | War. | Peace.              | War.   |
| <i>1st Turkistan Army Corps.</i>         |               |                                            |                    |      |                     |        |
| †1st Turkistan Reserve Infantry Brigade. | Tashkend      | 1st, 2nd, 3rd, and 4th Reserve Battalions. | 4*                 | 20   | 3,256               | 19,332 |
| <i>2nd Turkistan Army Corps.</i>         |               |                                            |                    |      |                     |        |
| †2nd Turkistan Reserve Infantry Brigade. | Askhabad      | 5th, 6th, 7th, and 8th Reserve Battalions. | 4*                 | 20   | 3,621               | 19,332 |
| Total Reserve Infantry                   | -             | -                                          | 8*                 | 40   | 6,877               | 38,664 |

\* Each battalion consists of five companies.

† Each Brigade probably expands to a division in war.

*Cavalry.*

| Units.                                          | Headquarters.                   | No. of<br>Squadrons.<br>War. | Combatant Strength. |       |
|-------------------------------------------------|---------------------------------|------------------------------|---------------------|-------|
|                                                 |                                 |                              | Peace.              | War.  |
| <i>1st Turkistan Army Corps.</i>                |                                 |                              |                     |       |
| 2nd Semirechia Cossack Regiment (2nd category). | } Vierni, Kopal, and Lepsinsk } | 4                            | —                   | 615   |
| 3rd Semirechia Cossack Regiment (3rd category). |                                 | 4                            | —                   | 615   |
| Total Reserve Cavalry                           | - - -                           | 8                            | —                   | 1,230 |



*Artillery.*

| Units.                                         | Head-<br>quarters. | No. of Batteries. |      | Guns.  |      | Combatant Strength. |       |
|------------------------------------------------|--------------------|-------------------|------|--------|------|---------------------|-------|
|                                                |                    | Peace.            | War. | Peace. | War. | Peace.              | War.  |
| 1st Turkistan Reserve Ar-<br>tillery Battery.* | Tashkend           | 1                 | 4    | 8      | 32   | 333                 | 848   |
| 2nd Turkistan Reserve Ar-<br>tillery Battery.* | Askhabad           | 1                 | 4    | 8      | 32   | 333                 | 848   |
| Reserve Artillery Park†                        | ?                  | --                | --   | --     | --   | 119                 | 608   |
| Total Reserve Artillery                        | -                  | 2                 | 8    | 16     | 64   | 785                 | 2,304 |

\* Each battery expands to a Brigade in war. One brigade would probably be attached to each of the two Reserve Infantry Divisions.

† Expands in war into two Flying Artillery Parks (3rd and 4th Turkistan).

SUMMARY OF RESERVE TROOPS.

|                      | Combatants of all Ranks. |        | Guns.  |      |
|----------------------|--------------------------|--------|--------|------|
|                      | Peace.                   | War.   | Peace. | War. |
| Infantry             | 6,877                    | 38,664 | —      | —    |
| Cavalry              | —                        | 1,230  | —      | —    |
| Artillery            | 785                      | 2,304  | 16     | 64   |
| Total Reserve Troops | 7,662                    | 42,198 | 16     | 64   |



FORTRESS TROOPS.

| Units.                             | Headquarters. | No. of Companies. | Combatant Strength, Peace and War. | Remarks.                                               |
|------------------------------------|---------------|-------------------|------------------------------------|--------------------------------------------------------|
| <i>1st Turkistan Army Corps.</i>   |               |                   |                                    |                                                        |
| Turkistan Fortress Artillery       | Samarkand     | 3                 | 498                                | Details of armament are not known with any exactitude. |
| Kerki Company, Fortress Artillery  | Tashkend      | 1                 | 166                                |                                                        |
| Termez " "                         | Margilan      | 1                 | 166                                |                                                        |
|                                    | Kerki         |                   |                                    |                                                        |
| <i>2nd Turkistan Army Corps.</i>   | Termez        |                   |                                    |                                                        |
| Kushk Fortress Artillery Battalion | Kushk Post    | 3                 | 652                                |                                                        |
| Total Fortress Artillery           |               | 8                 | 1,482                              |                                                        |

RAILWAY TROOPS.

| Units.                                     | Headquarters. | No. of Companies. | Combatant Strength, Peace and War. |
|--------------------------------------------|---------------|-------------------|------------------------------------|
| <i>2nd Turkistan Army Corps.</i>           |               |                   |                                    |
| <i>Turkistan Railway Brigade</i>           | Askhabad      | Staff             | 3                                  |
| <i>1st Trans-Caspian Railway Battalion</i> | Kizil Arvat   | 5                 | 1,590                              |
| <i>2nd</i>                                 | Samarkand     | 5                 | 1,590                              |
| <i>Kushk Field Railway Company</i>         | Kushk Post    | 1                 | 280                                |
| Total Railway Troops                       |               | 11                | 3,463                              |



| LOCAL TROOPS.                             |               |   | Combatant Strength,<br>Peace and War. |
|-------------------------------------------|---------------|---|---------------------------------------|
|                                           | Headquarters. |   |                                       |
| <i>Garrison of Semirechia.</i>            |               |   |                                       |
| 8 Local Infantry detachments              | -             | - | 1,439                                 |
|                                           | At Narin      | - |                                       |
|                                           | " Prijevalsk  | - |                                       |
|                                           | " Pishpek     | - |                                       |
|                                           | " Bakhta      | - |                                       |
|                                           | " Lepsinsk    | - |                                       |
|                                           | " Sergiopol   | - |                                       |
|                                           | " Jarkend     | - |                                       |
|                                           | " Kopal       | - |                                       |
| 1 Local Infantry detachment (in Ferghana) | -             | - | 195                                   |
| Total Local Infantry                      | -             | - | 1,634                                 |

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| Units.                           | Headquarters. | No. of Sections. | Combatant Strength, Peace and War. | Remarks.                                                   |
|----------------------------------|---------------|------------------|------------------------------------|------------------------------------------------------------|
| <i>1st Turkistan Army Corps.</i> |               |                  |                                    |                                                            |
| Amu Daria Brigade                | Termez        | 4                | 969                                | At Kerki, Termez, Iola, and Saraye.                        |
| <i>2nd Turkistan Army Corps.</i> |               |                  |                                    |                                                            |
| Trans-Caspian Brigade            | Askhabad      | 5                | 1,457                              | At Krasnovodsk, Karakul, Kaahka, Askhabad, and Kushk Post. |
| Total Frontier Guards            |               | 9                | 2,426                              |                                                            |



The foregoing details may be summarised as follows :—  
*Epitome of the established strength of troops in Turkistan.*

|                                 | Combatants<br>of all Ranks. |         | Guns.  |      |
|---------------------------------|-----------------------------|---------|--------|------|
|                                 | Peace.                      | War.    | Peace. | War. |
| Field Troops -                  | 40,682                      | 49,474  | 128    | 128  |
| Reserve Troops -                | 7,662                       | 42,198  | 16     | 64   |
| Fortress Troops-<br>(Artillery) | 1,482                       | 1,482   | ?      | ?    |
| Railway Troops -                | 3,463                       | 3,463   | —      | —    |
| Local Troops -<br>(Infantry)    | 1,634                       | 1,634   | —      | —    |
| Frontier Guards -               | 2,426                       | 2,426   | —      | —    |
| Grand Total -                   | 57,349*                     | 100,677 | 144    | 192  |

\* Recent reports are to the effect that the present strength of the troops has been raised, as a special measure, to about 75,000 men.

The above totals represent the established combatant strength of the troops enumerated, or in other words, the fighting force available. The non-combatants of the various units mentioned above (including officials, clerks, hospital orderlies, armourers, farriers, artificers, servants, transport drivers, &c.) have purposely been omitted.

It is estimated that, in the case of a field force of any size or importance, the established non-combatants (*i.e.*, officials and non-commissioned officers and men officially classed as such in the Russian Army, exclusive of native drivers or other temporary employees) would amount to not less than one-eighth of the total strength of such a force operating in the field.

As far as is known from official and other sources, the troops enumerated above are normally quartered in the following stations. The peace establishments represent the approximate strength of the various garrisons; the war strength of the various units forming the garrisons has been added as an indication of the war strength of such garrisons. It is not implied, however, that the units would long remain stationary at those places,

| Stations and Garrisons.                | Combatants, all Ranks. |        |       | Guns.  |      | Remarks.                              |
|----------------------------------------|------------------------|--------|-------|--------|------|---------------------------------------|
|                                        | —                      | Peace. | War.  | Peace. | War. |                                       |
| <i>Andijan.</i>                        |                        |        |       |        |      |                                       |
| 11th Turkistan Rifle Battalion.        | Infantry               | 1,016  | 1,227 | —      | —    | Furnishes a detachment in the Pamirs. |
| <i>Ashkhabad.</i>                      |                        |        |       |        |      |                                       |
| Headquarters:—                         |                        |        |       |        |      |                                       |
| 2nd Turkistan Army Corps               | Infantry               | 3,253  | 3,931 | —      | —    | Including Staff.                      |
| 6th Turkistan Rifle Brigade            | Reserve Infantry.      | 984    | 4,833 | —      | —    |                                       |
| Trans-Caspian Cossack Brigade          |                        |        |       |        |      |                                       |
| 2nd Turkistan Artillery Brigade        |                        |        |       |        |      |                                       |
| 2nd Turkistan Reserve Infantry Brigade |                        |        |       |        |      |                                       |



| Stations and Garrisons.                                                                                 | Combatants, all Ranks. |      | Guns.  |      | Remarks.                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------|------------------------|------|--------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                         | Peace.                 | War. | Peace. | War. |                                                                                                                                                                                 |
| <i>Ashabad</i> —continued.<br>Turkistan Railway Bri-<br>gade -                                          | 3                      | 3    | —      | —    | Staff ; troops of this<br>brigade are at<br>Kashi, Merv, &c.<br>Including Staff.<br>See page 88.<br>See page 83.                                                                |
| Trans-Caspian Brigade<br>Frontier Guards                                                                | 493                    | 455  | 16     | 16   |                                                                                                                                                                                 |
| 1st, 2nd, 3rd, and 4th<br>Trans-Caspian Rifle<br>Battalions -                                           | 333                    | 848  | 8      | 32   | Of these, about 170<br>men are believed<br>to be mounted.<br>Staff ; headquarters<br>of the battalions of<br>the Railway Bri-<br>gade are at Kizil<br>Arvat and Samar-<br>kand. |
| 1st and 5th Batteries 2nd<br>Turkistan Artillery<br>Brigade -                                           | 71                     | 779  | —      | —    |                                                                                                                                                                                 |
| 6th Reserve Infantry<br>Battalion -                                                                     | 293                    | 293  | —      | —    | Of these, about 170<br>men are believed<br>to be mounted.<br>Staff ; headquarters<br>of the battalions of<br>the Railway Bri-<br>gade are at Kizil<br>Arvat and Samar-<br>kand. |
| 2nd Turkistan Reserve<br>Artillery Battery.                                                             | 3                      | 3    | —      | —    |                                                                                                                                                                                 |
| 2nd Turkistan Artillery<br>Flying Park.<br>One section Trans-Cas-<br>pian Brigade, Frontier<br>Guards - | 3                      | 3    | —      | —    |                                                                                                                                                                                 |

|                                                                                                |     |   |   |                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------|-----|---|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Bakhta.</i><br>Local Infantry detach-<br>ment.                                              | 93  | — | — | On the Atrek River,<br>the Russo-Persian<br>Frontier.<br>Strength not known<br>and therefore not<br>deducted from the<br>headquarters of<br>these battalions at<br>Askhabad. |
| <i>Charjui.</i><br>17th Turkistan Rifle<br>Battalion.                                          | 982 | — | — | Strength not known,<br>has not been de-<br>ducted from that<br>of the units fur-<br>nishing these de-<br>tachments, head-<br>quarters of which<br>are at Kashi.              |
| <i>Chatli (Fort Chat).</i><br>Detachments of 1st and<br>2nd Trans-Caspian<br>Rifle Battalions. | ?   | — | — |                                                                                                                                                                              |
| <i>Gumbat-i-Kabuz.*</i><br>Detachments of Cossacks<br>and Turkoman Irregu-<br>lar Cavalry.     | ?   | — | — |                                                                                                                                                                              |

\* In Persian territory on the River Gurgan, 45 miles south of Fort Chat.



| Stations and Garrisons.                                                                                                                                                                                                             | Combatants, all Ranks.     |                            | Guns.            |                  | Remarks.                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------|------------------|------------------|----------------------------------------------------------|
|                                                                                                                                                                                                                                     | Peace.                     | War.                       | Peace.           | War.             |                                                          |
| <i>Iola.*</i><br>One section Amu Daria<br>Brigade,<br>Frontier<br>Guards.                                                                                                                                                           | 241                        | 241                        | —                | —                | Of these about 130<br>men are believed<br>to be mounted. |
| <i>Jarkend.</i><br>3rd West Siberian Rifle<br>Battalion<br>1st and 2nd Siberian Cos-<br>sack Regiments<br>1st West Siberian (Field)<br>Battery<br>Local Infantry detach-<br>ment<br>Headquarters West Si-<br>berian Cossack Brigade | 469<br>105<br>1,827<br>250 | 932<br>105<br>1,805<br>212 | —<br>—<br>—<br>8 | —<br>—<br>—<br>8 |                                                          |

| <i>Kashka.</i>                                                      |                       |     |     |    |    |  |  |  |                                                  |
|---------------------------------------------------------------------|-----------------------|-----|-----|----|----|--|--|--|--------------------------------------------------|
| 6th (Howitzer) Battery,<br>2nd Turkistan Artillery<br>Brigade - - - | Artillery             | 358 | 480 | 12 | 12 |  |  |  |                                                  |
| 4th Kuban Cossack Horse<br>Battery - - -                            | Frontier Guards       | 291 | 291 | —  | —  |  |  |  | About 170 men be-<br>lieved to be<br>mounted.    |
| One section Trans-Cas-<br>pian Brigade, Frontier<br>Guards - - -    |                       |     |     |    |    |  |  |  |                                                  |
| <i>Karakul.</i>                                                     |                       |     |     |    |    |  |  |  |                                                  |
| One section Trans-Caspian<br>Brigade, Frontier<br>Guards.           | Frontier Guards       | 291 | 291 | —  | —  |  |  |  | About 170 men<br>believed to be<br>mounted.      |
| <i>Kashi</i> (near Ashkhabad).                                      |                       |     |     |    |    |  |  |  |                                                  |
| 1st Taman Regiment<br>Kuban Cossacks.                               | Cavalry               | 891 | 889 | —  | —  |  |  |  | Furnish detach-<br>ments at Gum-<br>bat-i-Kabuz. |
| Turkoman Irregular<br>Cavalry Division.                             | Irregular<br>Cavalry. | 231 | 281 | —  | —  |  |  |  |                                                  |

\* Cannot be identified on maps. Probably on the Oxus between Pata Kesar and Sarai, perhaps near Khisht Tapa.



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| Stations and Garrisons.                                                                                                                                                                                                                                                                                                                                | Combatants, all Ranks.            |                                   | Guns.                     |                           | Remarks.                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|---------------------------|---------------------------|------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                        | Peace.                            | War.                              | Peace.                    | War.                      |                                                                                                      |
| <i>Kala Kergan.</i><br>8th Turkistan Rifle Bat-<br>talion.                                                                                                                                                                                                                                                                                             | 1,016                             | 1,227                             | —                         | —                         |                                                                                                      |
| <i>Kerki (Karki).</i><br>Headquarters 5th Turki-<br>stan Rifle Brigade.<br>19th and 20th Turkistan<br>Rifle Battalions.<br>4th Orenburg Cossack<br>Regiment.<br>2nd and 3rd (Field) Bat-<br>teries, 2nd Turkistan<br>Artillery Brigade.<br>Kerki Company, Turki-<br>stan Fortress Artillery.<br>One section Anu. Daria<br>Brigade, Frontier<br>Guards. | 1,669<br>604<br>500<br>166<br>242 | 1,967<br>602<br>424<br>166<br>242 | —<br>—<br>16<br>? 13<br>— | —<br>—<br>16<br>? 13<br>— | Including<br>Staff.<br>Brigade<br>Including<br>Staff.<br>About 130 men<br>believed to be<br>mounted. |

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|                                                                                   |                       |       |       |   |   |                                                                               |
|-----------------------------------------------------------------------------------|-----------------------|-------|-------|---|---|-------------------------------------------------------------------------------|
| <i>Kizil Arbat.</i><br>Headquarters 1st Trans-<br>Caspian Railway Bat-<br>talion. | Railway Troops        | 1,590 | 1,590 | — | — | Furnishes various de-<br>tachments at other<br>stations along the<br>railway. |
| <i>Kokand.</i><br>12th Turkistan Rifle Bat-<br>talion.                            | Infantry              | 1,016 | 1,227 | — | — | Furnishes a detach-<br>ment in the Pamirs.                                    |
| <i>Kopal.</i><br>5th West Siberian Rifle<br>Battalion.                            | Infantry              | 469   | 982   | — | — |                                                                               |
| Local Infantry detach-<br>ment.                                                   | Local Infantry        | 266   | 266   | — | — |                                                                               |
| <i>Krasnovodsk.</i><br>8th Reserve Infantry Bat-<br>talion.                       | Reserve Infan-<br>try | 1,039 | 4,833 | — | — |                                                                               |
| One section Trans-Cas-<br>pian Brigade, Frontier<br>Guards.                       | Frontier Guards       | 291   | 291   | — | — | About 170 men are<br>believed to be<br>mounted.                               |

H 2



| Stations and Garrisons.                                  | Combatants, all Ranks. |       | Guns.  |      | Remarks.                                                                      |
|----------------------------------------------------------|------------------------|-------|--------|------|-------------------------------------------------------------------------------|
|                                                          | Peace.                 | War.  | Peace. | War. |                                                                               |
| <i>Kungrad.</i><br>3rd Squadron 1st Astrakhan Cossacks.  | 148                    | 149   | —      | —    |                                                                               |
| <i>Kushk Post.</i><br>8th Trans-Caspian Rifle Battalion. |                        |       |        |      |                                                                               |
| 5th Reserve Infantry Battalion.                          | 815                    | 982   | —      | —    |                                                                               |
| One squadron 1st Kavkaz Regiment, Kuban Cossacks.        | 784                    | 4,833 | —      | —    |                                                                               |
| Kushk Field Railway Company.                             | 148                    | 148   | —      | —    |                                                                               |
| Kushk Fortress Artillery Battalion.                      | 652                    | 652   | ?      | ?    | One squadron, deducted from strength of headquarters of the regiment at Merv. |
| One section Trans-Caspian Brigade, Frontier Guards.      | 280                    | 280   | —      | —    |                                                                               |
| Kushk Train Cadre Company.                               | 291                    | 291   | —      | —    | About 170 men believed to be mounted.                                         |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |                                       |                        |                        |                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------|------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Lepsinsk.</i><br>Local Infantry detachment.                                                                                                                                                                                                                                                                                                                                                                                             | 142                                 | 142                                   | —                      | —                      | —                                                                                                                                                                                            |
| <i>Margilan and New Margilan.</i><br>Headquarters 3rd Turkistan Rifle Brigade.<br>9th Turkistan Rifle Battalion.<br>4th Reserve Infantry Battalion.<br>Headquarters 2nd Brigade,<br>1st Turkistan Cossack Division.<br>6th Orenburg Cossack Regiment*.<br>1st Semirechia Cossack Regiment.<br>3rd (Field) Battery, 1st Turkistan Artillery Brigade.<br>Turkistan Horse Mountain Battery.<br>Margilan Company Turkistan Fortress Artillery. | 1,019<br>814<br>1,189<br>437<br>166 | 1,230<br>4,833<br>1,148<br>399<br>166 | —<br>—<br>—<br>14<br>? | —<br>—<br>—<br>14<br>? | Including Brigade Staff. Furnishes a detachment in the Pamirs.<br><br>* The 6th Orenburg Cossack Regiment furnishes a detachment of 72 men at the Pamir Post, which have been deducted here. |



| Stations and Garrisons.                                     | Combatants, all Ranks. |       | Guns.  |      | Remarks.                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------|------------------------|-------|--------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                             | Peace.                 | War.  | Peace. | War. |                                                                                                                                                                                                                                                                     |
| <i>Merv.</i>                                                |                        |       |        |      |                                                                                                                                                                                                                                                                     |
| Headquarters 7th Turki-<br>stan Rifle Brigade.              | 1,633                  | 1,967 | —      | —    |                                                                                                                                                                                                                                                                     |
| 6th and 7th Trans-Cas-<br>pian Rifle Battalions.            | 814                    | 4,833 | —      | —    |                                                                                                                                                                                                                                                                     |
| 7th Reserve Infantry<br>Battalion.                          | 447                    | 445   | —      | —    |                                                                                                                                                                                                                                                                     |
| 1st Kavkaz Regiment,<br>Kuban Cossacks.                     | 250                    | 212   | 8      | 8    |                                                                                                                                                                                                                                                                     |
| 4th (Field) Battery, 2nd<br>Turkistan Artillery<br>Brigade. | 588                    | 588   | —      | —    |                                                                                                                                                                                                                                                                     |
| Trans-Caspian Sapper<br>Battalion.                          |                        |       |        |      |                                                                                                                                                                                                                                                                     |
| <i>Naryn Fort (Narynsk).</i>                                |                        |       |        |      |                                                                                                                                                                                                                                                                     |
| Local Infantry detach-<br>ment.                             | 219                    | 219   | —      | —    | This regiment fur-<br>nishes detachments<br>viz:—1 squadron<br>at Kushk Post, 1<br>squadron at Panj-<br>deh, $\frac{1}{2}$ squadron<br>at Pul-i-Khatun,<br>$\frac{1}{2}$ squadron at<br>Saraks, which are<br>deducted from<br>the strength of<br>headquarters here. |

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| Namangan.                                                                    |                |       |       |   |   |                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------|----------------|-------|-------|---|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Local Infantry detach-<br>ment.                                              | Local Infantry | 195   | 195   | — | — | Furnishes a detach-<br>ment in the Pamirs.                                                                                                                                                                                                |
| Osh.                                                                         | Infantry       | 1,016 | 1,227 | — | — |                                                                                                                                                                                                                                           |
| 10th Turkistan Rifle<br>Battalion.                                           |                |       |       |   |   |                                                                                                                                                                                                                                           |
| Pamirs.                                                                      | Infantry       | ?     | ?     | — | — | The strength of the<br>infantry detach-<br>ments is not known,<br>with any exact tude,<br>and therefore can-<br>not be deducted<br>from the strength<br>of the battalions<br>at Margilan, Osh,<br>Andijan, and Kho-<br>kand respectively. |
| Detachments of 9th, 10th,<br>11th, and 12th Turki-<br>stan Rifle Battalions. |                |       |       |   |   | The approximate<br>strength is believed<br>to be from 100 to<br>150 men. The<br>cavalry detachment<br>has been deducted<br>from the strength<br>of the regiment at<br>Margilan.                                                           |
| Detachment 6th Orenburg<br>Cossacks                                          | Cavalry        | 72    | 72    | — | — |                                                                                                                                                                                                                                           |



| Stations and Garrisons.                                                      | Combatants, all Ranks. |        |      | Guns.  |      | Remarks.                         |
|------------------------------------------------------------------------------|------------------------|--------|------|--------|------|----------------------------------|
|                                                                              | —                      | Peace. | War. | Peace. | War. |                                  |
| <i>Panjdeh.</i><br>One squadron 1st Kavkaz<br>Regiment, Kuban Cos-<br>sacks. | Cavalry                | 148    | 148  | —      | —    | <i>Vide note under<br/>Merv.</i> |
| <i>Pata Kesar (vide Termez).</i>                                             |                        |        |      |        |      |                                  |
| <i>Petro-Alexandrovska.</i><br>18th Turkistan Rifle<br>Battalion.            | Infantry               | 833    | 982  | —      | —    |                                  |
| 1st Squadron 1st Astrakhan<br>Cossacks.                                      | Cavalry                | 148    | 150  | —      | —    |                                  |
| <i>Pishpek.</i><br>Local Infantry detach-<br>ment.                           | Local Infantry         | 234    | 234  | —      | —    |                                  |

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|                                                      |                   |       |       |   |   |   |   |   |   |
|------------------------------------------------------|-------------------|-------|-------|---|---|---|---|---|---|
| <i>Prjevalsk.</i>                                    |                   |       |       |   |   |   |   |   |   |
| 2nd West Siberian (Mountain) Battery.                | Artillery         | 240   | 240   | 8 | 8 | — | — | — | — |
| Local Infantry detachment.                           | Local Infantry    | 195   | 195   | — | — | — | — | — | — |
| <i>Pul-i-Khatun.</i>                                 |                   |       |       |   |   |   |   |   |   |
| Detachment 1st Kavkaz Regiment, Kuban Cossacks.      | Cavalry           | 74    | 74    | — | — | — | — | — | — |
| <i>Samarband.</i>                                    |                   |       |       |   |   |   |   |   |   |
| Headquarters 2nd Turkistan Rifle Brigade.            | Infantry          | 3,051 | 3,684 | — | — | — | — | — | — |
| 5th, 6th, and 7th Turkistan Rifle Battalions.        | Reserve Infantry. | 814   | 4,833 | — | — | — | — | — | — |
| 3rd Reserve Infantry Battalion.                      | Cavalry           | 640   | 645   | — | — | — | — | — | — |
| Headquarters 1st Turkistan Cossack Division          |                   |       |       |   |   |   |   |   |   |
| Headquarters 1st Brigade Turkistan Cossack Division. |                   |       |       |   |   |   |   |   |   |

$\frac{1}{2}$  squadron — vide note above, under Merv.

Including Staff.

Brigade



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| Stations and Garrisons.                                                                                                                                                                                                                                                       | Combatants, all Ranks. |       | Guns.  |      | Remarks.                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------|--------|------|-------------------------------------------------------------|
|                                                                                                                                                                                                                                                                               | Peace.                 | War.  | Peace. | War. |                                                             |
| <i>Samar kand</i> —continued.<br>2nd Ural Cossack Regiment.<br>4th (Field) Battery, 1st Turkistan Artillery Brigade.<br>6th (Mountain) Battery, 1st Turkistan Artillery Brigade.<br>2nd Trans-Caspian Railway Battalion.<br>Samar kand Company, Turkistan Fortress Artillery. | 490                    | 452   | 16     | 16   | Furnishes detachments at various stations on the railway.   |
|                                                                                                                                                                                                                                                                               | 166                    | 166   | ?      | ?    |                                                             |
|                                                                                                                                                                                                                                                                               | 1,590                  | 1,590 | —      | —    |                                                             |
|                                                                                                                                                                                                                                                                               |                        |       |        |      |                                                             |
| <i>Sarakhs</i> .<br>5th Trans-Caspian Rifle Battalion.<br>Detachment 1st Kavkaz Regiment, Kuban Cossacks.                                                                                                                                                                     | 815                    | 982   | —      | —    | $\frac{1}{2}$ squadron, <i>vide</i> note above, under Merv. |
|                                                                                                                                                                                                                                                                               | 74                     | 74    | —      | —    |                                                             |

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|                                                      |                   |       |       |   |   |                                       |
|------------------------------------------------------|-------------------|-------|-------|---|---|---------------------------------------|
| <i>Saraye.*</i>                                      | Frontier Guards   | 242   | 242   | — | — | About 130 men believed to be mounted. |
| One section Amu Daria Brigade, Frontier Guards.      |                   |       |       |   |   |                                       |
| <i>Sargopol.</i>                                     | Local Infantry    | 185   | 185   | — | — |                                       |
| Local Infantry detachment                            |                   |       |       |   |   |                                       |
| <i>Tashkend.</i>                                     |                   |       |       |   |   |                                       |
| Headquarters 1st Turkistan Army Corps.               |                   |       |       |   |   |                                       |
| Headquarters 1st Turkistan Rifle Brigade.            |                   |       |       |   |   |                                       |
| 1st, 2nd, 3rd, and 4th Turkistan Rifle Battalions.   |                   |       |       |   |   |                                       |
| Headquarters 1st Turkistan Reserve Infantry Brigade. |                   |       |       |   |   |                                       |
|                                                      | Infantry          | 4,067 | 4,911 | — | — | Including Staff.                      |
|                                                      | Reserve Infantry. | 1,628 | 9,666 | — | — |                                       |
|                                                      |                   |       |       |   |   |                                       |

\* Probably Sarai, on the Oxus, some 40 miles E. of the confluence of the Wakh or Surkhab river, near Kanda Guzar.



| Stations and Garrisons.                                               | Combatants, all Ranks. |      | Guns.  |      | Remarks.     |
|-----------------------------------------------------------------------|------------------------|------|--------|------|--------------|
|                                                                       | Peace.                 | War. | Peace. | War. |              |
| <i>Tashkend</i> —continued.                                           |                        |      |        |      |              |
| 1st and 2nd Reserve Infantry Battalions.                              |                        |      |        |      |              |
| 5th Orenburg Cossack Regiment.                                        | 604                    | 602  | —      | —    |              |
| Headquarters 1st Turkistan Artillery Brigade.                         | 753                    | 639  | 24     | 24   |              |
| 1st, 2nd, and 5th (Field) Batteries, 1st Turkistan Artillery Brigade. | 333                    | 848  | 8      | 32   | See page 88. |
| 1st Turkistan Reserve Artillery Battery.                              | 71                     | 779  | —      | —    | See page 83. |
| 1st Turkistan Artillery Flying Park.                                  | 166                    | 166  | ?      | ?    |              |
| Tashkend Company, Turkistan Fortress Artillery.                       | 467                    | 828  | —      | —    |              |
| Turkistan Sapper Battalion.                                           |                        |      |        |      |              |

|                                                                     |                     |       |       |   |   |   |   |   |                                           |
|---------------------------------------------------------------------|---------------------|-------|-------|---|---|---|---|---|-------------------------------------------|
| <i>Termez.</i>                                                      |                     |       |       |   |   |   |   |   |                                           |
| Headquarters 4th Turkistan Rifle Brigade.                           | Infantry            | 3,335 | 3,931 | — | — | — | — | — | Including Staff.                          |
| 13th, 14th, 15th, and 16th Turkistan Rifle Battalions.              | Horse Artillery     | 191   | 186   | 6 | 6 | 6 | 6 | 6 |                                           |
| 2nd Orenburg Cossack Horse Battery.                                 | Fortress Artillery. | 166   | 166   | ? | ? | ? | ? | ? |                                           |
| Termez Company, Fortress Artillery.                                 | Frontier Guards     | 244   | 244   | — | — | — | — | — | About 130 men are believed to be mounted. |
| Headquarters and one section of Amu Daria Brigade, Frontier Guards. | Engineers           | 260   | 260   | — | — | — | — | — |                                           |
| Pontoon Company -                                                   |                     |       |       |   |   |   |   |   |                                           |
| <i>Vierni.</i>                                                      |                     |       |       |   |   |   |   |   |                                           |
| Headquarters of garrison in Semirechia.                             | Infantry            | 941   | 1,967 | — | — | — | — | — | Including Staff.                          |
| Headquarters of Semirechia Cossacks.                                | Cavalry (Reserve).  | —     | 1,233 | — | — | — | — | — |                                           |
| Headquarters of 8th Turkistan Rifle Brigade.                        |                     |       |       |   |   |   |   |   |                                           |
| 2nd and 4th West Siberian Rifle Battalions.                         |                     |       |       |   |   |   |   |   |                                           |



| Stations and Garrisons.                                                     | Combatants, all Ranks. |        |      | Guns.  |      | Remarks.                                                                                                          |
|-----------------------------------------------------------------------------|------------------------|--------|------|--------|------|-------------------------------------------------------------------------------------------------------------------|
|                                                                             | —                      | Peace. | War. | Peace. | War. |                                                                                                                   |
| <i>Vierni</i> —continued.<br>Headquarters West Siberian Artillery Division. | Artillery              | 3      | 3    | —      | —    | Staff of Artillery Division. The two batteries composing the division are at Jarkend and Przhevalsk respectively. |
| 1st and 2nd Reserve Regiments Semirechia Cossacks.                          | Engineers              | 127    | 266  | —      | —    |                                                                                                                   |
| West Siberian Sapper Company.                                               | —                      | —      | —    | —      | —    | See page 88.                                                                                                      |
| <i>Stations at present unknown.</i>                                         | —                      | —      | —    | —      | —    |                                                                                                                   |
| Turkistan Reserve Artillery Park.                                           | —                      | 119    | 608  | —      | —    |                                                                                                                   |
| Mobile Pack Transport Column.                                               | —                      | 117    | 117  | —      | —    |                                                                                                                   |
| Military Telegraph Company.                                                 | Engineers              | 370    | 375  | —      | —    |                                                                                                                   |
| Engineer Field Park                                                         | —                      | 66     | 157  | —      | —    |                                                                                                                   |

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#### OTHER MILITARY ESTABLISHMENTS.

Artillery depôt stores, in which is kept the artillery Artillery material requisite for supplying the current wants of depôts. the field troops and fortresses, are maintained at Tashkend, with branches at Samarkand, Margilan, Petro-Alexandrovsk, and Askhabad.

The Tashkend depôt also forms on mobilisation a mobile artillery workshop for carrying out current repairs to material.

In these depôts is also stored the reserve ammunition forming the second line of ammunition supply for the field army. Upon mobilisation these stores are organised in four local artillery parks, Nos. 1 to 4, with the requisite staffs, one local park being allotted to each two infantry divisions.

Engineer depôts exist (location unknown), in which Engineer is stored the reserve technical material for supplying depôts. the current wants of the field troops and fortresses. Upon mobilisation, these stores are handed over to the engineer field park, which is formed upon mobilisation and is divided into four corps sections and two siege sections. One corps section is attached to each army corps.

Depôts containing flour, forage, fuel, and light are Commis- established in all except small garrisons for the current sariat de supply of the troops, and are divided into four classes pôts. according to their size.

The amounts of grain stored in the four classes of depots are :—

|           |         | Bushels. |
|-----------|---------|----------|
| 1st class | -       | 288,750  |
| 2nd „     | -       | 57,750   |
| 3rd „     | • over  | 28,875   |
| 4th „     | • under | 28,875   |



According to regulation, the minimum quantity of flour and oats always stored in the depôts of Turkistan is from two to eight months' supply for the peace garrison of the district. This probably means that a reserve of six months is always kept in hand.

In addition to supplies for current consumption, fortress and reserve stores are maintained at certain points for consumption in war by fortress garrisons and by field troops on concentration. Thus the depôt at Kushk was raised in 1904 from a 2nd class to a 1st class depôt. Termez, Kerki, and Charjui are depôts of the 2nd class.

As to additional depôts of grain, said to be contemplated, see page 58.

In these depôts is also stored the reserve ammunition forming the second line of ammunition supply for the field army. Upon mobilisation these stores are organised in four local artillery parks, Nos. 1 to 4, with the requisite staffs, one local park being allotted to each two infantry divisions.

Engineer depôts exist (location unknown), in which Engineer is stored the reserve technical material for supplying depôts. The current wants of the field troops and fortresses. Upon mobilisation, these stores are handed over to the engineer field park, which is formed upon mobilisation and is divided into four corps sections and two army sections. One corps section is attached to each army corps.

Depôts containing four, three, two, and light are established in all except small garrisons for the current supply of the troops, and are divided into four classes, according to their size.

The amounts of grain stored in the four classes of depôts are:—

| Depôt   | 1st class | 2nd " | 3rd " | 4th " |
|---------|-----------|-------|-------|-------|
| 250,750 | -         | -     | -     | -     |
| 51,750  | -         | -     | -     | -     |
| 25,750  | -         | -     | -     | -     |
| 25,750  | -         | -     | -     | -     |

# APPENDIX A.

## BIBLIOGRAPHY.

The following list of authorities and previous publications, dealing with the region under consideration in this report, makes no claim to be considered exhaustive. With a view to its practical utility and brevity it has been purposely limited to books which have appeared during the not too remote past, and which are most easily accessible. Those who desire to go more deeply into the subject of Central Asian literature will find a useful bibliography in Lord Curzon's book "Russia in Central Asia."

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APPENDIX B.

SOME DATES IN THE HISTORY OF RUSSIA'S  
CONNECTION WITH CENTRAL ASIA.

- 1300—Moscow became the capital of Russia.
- 1395—Tamerlane invades Russia.
- 1558—The territory of the Don Cossacks is annexed.
- 1600—The Tsar declares the Khanates of Khiva and Bokhara to be subject to him.
- 1703—The Khan of Khiva places himself under Russian protection.
- 1740—The Khan of Khiva makes his submission to Russia.
- 1819—The eastern shores of the Caspian are surveyed, and Muraviev visits Khiva, without result.
- 1824—Russian caravans are first sent to Bokhara.
- 1828—Treaty of Turkomanchai with Persia.
- 1834—Fort Novo Alexandrovsk is established by Perovski.
- 1838—Russians appear at Ashurada.
- 1839—Perovski's expedition against Khiva.
- 1841—Russia formally occupies Ashurada.
- 1842—First treaty with Khiva.
- 1849—Fort built at Kazalinsk.
- 1857—The Caucasus is annexed.
- 1858—Ignatiev's mission to Khiva and Bokhara.
- 1864—Chimkend, Turkistan, and Khojend occupied.
- 1865—The province of Turkistan is created. Tashkend and Khokand are occupied.
- 1866—War with Bokhara—Khojend is taken.
- 1867—General Kaufmann forms the government of Turkistan.
- 1868—Samarkand is taken; the Zerafshan province is annexed; treaties made with Bokhara and Khokand.
- 1869—Krasnovodsk is occupied, and a fort built at Chikishliar.
- 1870—Michaelovsk is occupied, and the first expedition to Kizil Arvat against the Turkomans is made.



- 1873—Expedition against Khiva, which is occupied. Treaties made with Khiva and Bokhara, and the Russian district Amu Daria is formed.
- 1874—Trans-Caspia is constituted a military district.
- 1875—War with Khokand, which is occupied by General Kaufmann, but a rebellion ensues.
- 1876—Khokand is formally annexed as Ferghana.
- 1878—A fort is built at Chat, on the Persian frontier.
- 1879—An expedition against the Tekke Turkomans ends in a disastrous retreat of the Russian army.
- 1880—Skobelev is appointed to the command in Trans-caspia. The construction of the Trans-Caspian Railway is commenced. Bami is occupied.
- 1881—Fall of Geok Tapa and massacre of Turkomans. Askhabad is occupied. The Trans-Caspian province is formed, and the railway opened as far as Kizil Arvat. Treaty with Persia respecting the Akhal and Khorassan boundary.
- 1883—The Tejend oasis is occupied.
- 1884—Merv and Sarakhs are occupied.
- 1885—The Ak Tapa or Panjdeh incident.
- 1886—The Afghan boundary question is settled.
- 1887—Kerki is occupied.
- 1888—The Trans-Caspian Railway is opened to Samarkand.
- 1891—Colonel Ionov retires from the Little Pamir on the approach of Gurkha troops.
- 1892 } Pamir negotiations with Great Britain, ending  
1895 } in a frontier delimitation commission.
- 1898—Completion of railway from Merv to Kushk Post.
- 1899—Completion of the railway to Tashkend and to Andijan.
- 1900—Imperial sanction given for the construction of a line of railway from Orenburg to Tashkend.
- 1901—Work on this line commenced from both ends.
- 1904—The construction of the Orenburg-Tashkend line is completed.

APPENDIX C.  
CENTRAL ASIAN RAILWAY.  
DEPÔTS, SHOPS AND ROLLING STOCK.

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| Name of Stations.  | Skilled Hands. | Locos. | Passenger Cars. | Waggons, Trucks. | Cisterns. | Remarks.                         |
|--------------------|----------------|--------|-----------------|------------------|-----------|----------------------------------|
| Krasnovodsk, Ufra  | R. 1           | 12     | 10              | 400              | 110       | Material Depôt, First Class.     |
| Jebel              | -              | 2      | -               | 50               | 20        | Naphtha Reserve.                 |
| Akcha Kuina        | -              | -      | -               | 20               | -         | "Saxaul" Fuel Store.             |
| Kazanjik           | R. 2           | 4      | -               | 50               | 20        | Material Store, Second Class.    |
| Kizil Arvat        | R. 4           | 10     | 10              | 200              | 50        | Material Depôt. (?) First Class. |
| Baharden           | -              | 2      | -               | 35               | 10        | Naphtha Reserve.                 |
| Askhabad           | R. 3           | 15     | 15              | 250              | 80        | Material Depôt, Third Class.     |
| Kaahka             | R. 5           | 2      | -               | -                | 10        | "Saxaul" Fuel Store.             |
| Dushak             | -              | 4      | -               | 50               | 15        | Material Store, First Class.     |
| Tejend             | -              | 3      | -               | 35               | 10        | Naphtha Reserve.                 |
| Merv               | R. 2           | 10     | 8               | 100              | 80        | Material Store, Third Class.     |
| Branch { Sari-Yasi | -              | 4      | -               | 35               | 20        | Running repairs and breakdown    |
| { Kushik           | R. 6           | 4      | -               | 100              | 30        | gag.                             |
| Repetek            | -              | 5      | -               | 35               | 10        | Material Store, Second Class.    |
| Charjui            | R. 7           | 10     | -               | 100              | 100       | Running repairs.                 |
|                    |                |        |                 |                  |           | Material Store, First Class.     |
|                    |                |        |                 |                  |           | Naphtha Reserve.                 |
|                    |                |        |                 |                  |           | Running repairs.                 |
|                    |                |        |                 |                  |           | Material Store, Naphtha Reserve. |

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APPENDIX C.—continued.

| Name of Stations.              | Skilled Hands. | Locos. | Passenger Cars. | Wagons, Trucks. | Cisterns. | Remarks.                                             |
|--------------------------------|----------------|--------|-----------------|-----------------|-----------|------------------------------------------------------|
| Farab -                        | 80             | 3      | —               | 20              | 30        | Running and small repairs. Material Store.           |
| Bokharu }<br>Kagan             | 92             | 3      | 9               | 110             | 50        | Running repairs. Material Store.                     |
| Kizil-Tapa -                   | 18             | 4      | —               | 35              | 10        | Running repairs.                                     |
| Ziadin -                       | 15             | 4      | —               | 35              | 15        | Running repairs.                                     |
| Samarkand -                    | 160            | 12     | 10              | 200             | 80        | Running repairs.                                     |
| Jizak -                        | 9              | 4      | —               | 50              | 10        | Running repairs. Naphtha Reserve.                    |
| Chernayevo -                   | 93             | 10     | 6               | 140             | 70        | Naphtha Reserve.                                     |
| Tashkend -                     | 540            | 17     | 20              | 330             | 150       | Naphtha Reserve.                                     |
| Khokand -                      | 10             | 3      | —               | 230             | 35        | Running repairs.                                     |
| Branch { Margilan<br>Andijan - | 5<br>40        | 2<br>6 | 5<br>5          | 20<br>200       | 20<br>35  | Running repairs.<br>Material Store. Naphtha Reserve. |
| Running                        | 2,510          | 155    | 110             | 2,800           | 1,100     |                                                      |
| Totals                         | —              | 175    | 90              | 4,200           | 1,200     |                                                      |
|                                | 2,510          | 330    | 200             | 7,000           | 2,300     |                                                      |

N.B.—R. 1—R. 6 means Headquarters of Railway Companies, 1st Transcaspian Battalion.  
R. 4—R. 6 " " " " " " " " " " " "

APPENDIX D.  
CENTRAL ASIAN RAILWAY.  
DETAILED DESCRIPTION OF THE LINE.  
*Main Line.*

| Height in feet above M.S.L. | Class. | Stations, &c.    | Verst-<br>age. | Mile-<br>age. | Intervals between Passing Places. | Distances between Stations. | Remarks.                                                                          |
|-----------------------------|--------|------------------|----------------|---------------|-----------------------------------|-----------------------------|-----------------------------------------------------------------------------------|
| 69 below                    | I.     | KRASNOVODSK - R. | —              | —             | Miles. —                          | Versts. Miles.              | Water from condenser, Krasnovodsk.                                                |
| —                           | IV.    | Kailo -          | 20             | 13½           | 4½, 4½, 4½                        | 20                          | Naphtha and water reserve tanks.                                                  |
| —                           | III.   | Yangadja -       | 32             | 21½           | 4, 4                              | 12                          | Base terminus engine and material depot. Shops. Goods depot at Uira, three miles. |
| —                           | III.   | Kara-Tengir -    | 47             | 31½           | 5, 5                              | 15                          | Water from condenser, Krasnovodsk, transported.                                   |
| —                           | —      | Razyezd* -       | 60             | 39½           | 4½, 4½                            | 13                          | "                                                                                 |
| —                           | III.   | Belek -          | 77             | 51            | 5½, 5½                            | 17                          | "                                                                                 |
| —                           | —      | Razyezd* -       | 92             | 61            | 5, 5                              | 13                          | "                                                                                 |
| —                           | IV.    | Yagman -         | 104            | 69            | 4, 4                              | 12                          | "                                                                                 |
| —                           | II.    | Jebel -          | 125            | 82½           | 4½, 4½, 4½                        | 21                          | "                                                                                 |
| —                           | —      | Razyezd* -       | 143            | 94½           | 6, 6                              | 18                          | Water from springs in hills, pipe line.                                           |
| —                           | III.   | Bala-Ishem -     | 135            | 102½          | 4, 4                              | 12                          | "Saxaul" fuel expenses store.                                                     |
| —                           | —      | Razyezd* -       | 170            | 113½          | 5, 5                              | 13                          | Water carried.                                                                    |
| —                           | —      | —                | —              | —             | —                                 | 10                          | "                                                                                 |



APPENDIX D.—continued.

| Height in feet above M.S.L.                          | Class. | Stations, &c.                | Vorst-<br>age. | Mile-<br>age. | Intervals between Passing Places. |         | Distances between Stations. |         | Remarks.                                                                                                                                                 |
|------------------------------------------------------|--------|------------------------------|----------------|---------------|-----------------------------------|---------|-----------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                      |        |                              |                |               | Miles.                            | Versts. | Miles.                      | Versts. |                                                                                                                                                          |
| —                                                    | IV.    | Aidin -                      | 185            | 122½          | 5, 5                              | 15      | 10                          | 15      | Water carried.                                                                                                                                           |
| —                                                    | IV.    | Pereval -                    | 200            | 132½          | 5, 5                              | 15      | 10                          | 15      | "                                                                                                                                                        |
| 338                                                  | IV.    | Akcha-Kuima -                | 215            | 142½          | 5, 5                              | 15      | 10                          | 15      | Water carried. Expense "Saxaul" fuel depot.                                                                                                              |
| —                                                    | —      | Razyezd* -                   | 230            | 152½          | 5, 5                              | 15      | 10                          | 15      | Water carried.                                                                                                                                           |
| Steep grade, 9/1,000.                                | II.    | Kazanjik - R <sub>2</sub>    | 246            | 163           | 5½, 5½                            | 16      | 10½                         | 16      | Water by pipe from Idjiri. Springs. Karez. Irrigation canals. Material depot, second class. Small engine depot. Naphtha reserve.                         |
| "                                                    | III.   | Uzun-Su -                    | 262            | 173½          | 5½, 5½                            | 16      | 10½                         | 16      | River water.                                                                                                                                             |
| —                                                    | —      | Bridge -                     | 264            | 175           | —                                 | —       | —                           | —       | Nine bays of 123 feet total span.                                                                                                                        |
| 541                                                  | IV.    | Iskander (Ushak) -           | 284            | 188½          | 5, 4½, 5                          | 22      | 14½                         | 22      | Water carried.                                                                                                                                           |
| Steep grade, 1/100.                                  | —      | Razyezd* -                   | 302            | 200½          | 6, 6                              | 18      | 12                          | 18      | "                                                                                                                                                        |
| 339<br>Akhal<br>Tekke<br>Oasis,<br>13 miles<br>wide. | I.     | KIZIL-ARVAT - R <sub>1</sub> | 314            | 208½          | 4, 4                              | 12      | 8                           | 12      | Water springs 12 miles distant; yield 1,200 cubic feet per hour. Naphtha reserve tanks. Large shops, engine depot. Headquarters First Railway Battalion. |
| "                                                    | IV.    | Kodja -                      | 341            | 226½          | 6, 6, 6                           | 27      | 18                          | 27      | Water carried.                                                                                                                                           |
| "                                                    | III.   | Bami -                       | 365            | 242           | 5½, 5½, 5½                        | 24      | 16                          | 24      | Springs, good water.                                                                                                                                     |
| "                                                    | III.   | Archman -                    | 396            | 262½          | 6½, 6½, 7½                        | 31      | 20½                         | 31      | Springs 4 miles off, pumped.                                                                                                                             |

|      |             |                |     |      |            |    |     |                                                                                                      |
|------|-------------|----------------|-----|------|------------|----|-----|------------------------------------------------------------------------------------------------------|
| II.  | Bakharden   | -              | 425 | 281½ | 6½, 6, 6½  | 29 | 19  | Water from mountain spring, 140 cubic feet per hour. Material depôt, 3rd Class. "Saxaul" fuel store. |
| IV.  | Keliata     | -              | 452 | 299½ | 6, 6, 6    | 27 | 18  | Water from irrigation canal. Water from mountain streams.                                            |
| IV.  | Geok-Tapa   | -              | 478 | 316½ | 5½, 6, 6   | 26 | 17½ | Water carried.                                                                                       |
| III. | Bezmein     | -              | 499 | 330½ | 4½, 4½, 4½ | 21 | 14  | Close to Persian frontier. Water from Karez.                                                         |
| I.   | ASHKHADEAD  | R <sub>3</sub> | 550 | 344½ | 4½, 4½, 4½ | 21 | 14  | Napitha reserve. Material store. Headquarters of Administration. Large railway shops and depôt.      |
| IV.  | Anau        | -              | 529 | 350½ | 6          | 9  | 6   | Water carried.                                                                                       |
| IV.  | Giaurs      | -              | 552 | 366  | 5, 5, 5½   | 23 | 15½ | Water carried and from canals.                                                                       |
| IV.  | Ak-Su       | -              | 576 | 382  | 5½, 5½, 5½ | 24 | 16  | Water carried.                                                                                       |
| III. | Baba-Durmuz | -              | 590 | 391½ | 4½, 4½     | 14 | 9½  | "                                                                                                    |
| III. | Artik       | -              | 603 | 403½ | 6, 6       | 18 | 12  | Water from canals and mountain streams.                                                              |
| II.  | Kau-Shut    | -              | 622 | 412½ | 4½, 4½     | 14 | 9½  | Drinking water carried. Water from irrigation canals.                                                |
| II.  | Kaahka      | R <sub>3</sub> | 641 | 425  | 6½, 6½     | 19 | 12½ | Close to Persian frontier. Material store.                                                           |
| IV.  | Arman Sagat | -              | 658 | 430½ | 5½, 5½     | 17 | 11½ | Water from "Karez". Water carried.                                                                   |
| II.  | Dushak      | -              | 680 | 450½ | 4½, 4½, 5  | 22 | 14½ | Drinking water carried. Other water from Chardah stream. Running repairs.                            |
| IV.  | Takir       | -              | 699 | 463½ | 6½, 6½     | 19 | 12½ | Water carried.                                                                                       |
| II.  | Tejend      | -              | 723 | 479½ | 5½, 5½, 5½ | 24 | 16  | River water and wells.                                                                               |
| -    | Bridge      | -              | 725 | 481  | -          | -  | -   | Two spans, each 248½ feet, over River Tejend.                                                        |



APPENDIX D.—continued.

| Height in feet above M.S.L. | Class. | Stations, &c. | Verst-<br>age. | Mile-<br>age. | Intervals between Passing Places. | Distances between Stations. | Remarks.                                               |
|-----------------------------|--------|---------------|----------------|---------------|-----------------------------------|-----------------------------|--------------------------------------------------------|
| 1,050                       | III.   | Geok-Sur      | 745            | 493½          | Miles.<br>4½, 4½, 5½              | Versts.<br>22               | Water carried.                                         |
| Saxaul Desert.              | IV.    | Jujuklu       | 770            | 510½          | 5½, 6, 5½                         | 25                          | Water from Tejend.                                     |
| "                           | III.   | Dorf-Kuiu     | 795            | 526½          | 5½, 6, 5½                         | 25                          | " " "Saxaul" fuel store.                               |
| "                           | V.     | Karabata      | 818            | 542           | 5½, 4½, 5½                        | 23                          | Drinking water carried. Locomotive supply from canals. |
| 740                         | I.     | MERV          | 842            | 558           | 5½, 5½, 5½                        | 24                          | Murghab river supply, bad quality. Junction for Kushk. |
| "                           | —      | Bridge        | 842            | 558           | —                                 | —                           | 210 feet long over Murghab.                            |
| "                           | —      | "             | 858            | 568½          | —                                 | —                           | 112 feet long over Tokhtamish canal.                   |
| 758                         | II.    | Bairam Ali    | 863            | 575½          | 5½, 6, 6                          | 23                          | Water from Murghab.                                    |
| Kara Kum.                   | IV.    | Kurban-Kala   | 886            | 587½          | 6, 6                              | 18                          | " " "Saxaul" fuel store.                               |
| "                           | III.   | Amnenkovo     | 903            | 598½          | 5½, 5½                            | 17                          | " " "Saxaul" fuel store.                               |
| "                           | IV.    | Ravina        | 925            | 613           | 5½, 4½, 5                         | 22                          | Water carried from Murghab.                            |
| "                           | III.   | Uch-adji      | 944            | 625½          | 6, 6½                             | 19                          | " " "Saxaul" fuel store.                               |
| "                           | IV.    | Peski         | 972            | 644           | 6, 6½, 6                          | 23                          | Water carried from Amu Daria.                          |
| "                           | III.   | Repetek       | 1,002          | 664           | 6½, 6½, 7                         | 30                          | " " Running repairs.                                   |
| "                           | V.     | Karaul-Kiu    | 1,025          | 679½          | 4½, 5½, 5½                        | 23                          | Water carried from Amu Daria.                          |

|                        |      |                  |                               |       |      |            |    |     |                                                                                           |
|------------------------|------|------------------|-------------------------------|-------|------|------------|----|-----|-------------------------------------------------------------------------------------------|
| Kara Kum               | V.   | Barkhani         | -                             | 1,048 | 694½ | 5½, 4½, 5½ | 23 | 15½ | Water carried from Amu Daria.                                                             |
| 778 shifting<br>sands. | II.  | CHARJUI          | R <sub>1</sub>                | 1,069 | 708½ | 4½, 4½, 4½ | 21 | 14  | Naphtha reserve. Material store. Branch<br>siding to river bank. Water from<br>Amu Daria. |
| "                      | II.  | Bridge           | -                             | 1,070 | 709  | -          | -  | -   | 5,250 feet long—over Amu Daria.                                                           |
| "                      | II.  | Farab            | -                             | 1,077 | 713½ | 5½         | 8  | 5½  | Water from Amu Daria. Running re-<br>pairs.                                               |
| "                      | IV.  | Khodja-Davlet    | -                             | 1,097 | 727  | 4½, 4½, 4½ | 20 | 13½ | Water carried from Amu Daria.                                                             |
| -                      | -    | Bridge           | -                             | 1,114 | 738  | -          | -  | -   | 105 feet long over dry channel, Zerafshan.                                                |
| -                      | II.  | Kara-Kul         | -                             | 1,116 | 738½ | 6½, 6      | 19 | 12½ | Water from River Zerafshan.                                                               |
| -                      | -    | Water vat        | -                             | 1,127 | 746½ | -          | -  | -   | Very dry locality.                                                                        |
| 700                    | IV.  | Yakatut          | -                             | 1,141 | 756  | 6, 5½, 5½  | 25 | 16½ | Water carried.                                                                            |
| -                      | IV.  | Murgak           | -                             | 1,159 | 768  | 6, 6       | 18 | 12  | Water carried from river.                                                                 |
| 756                    | I.   | Kagan            | R <sub>3</sub> R <sub>4</sub> | 1,182 | 783½ | 5½, 5, 5   | 23 | 15½ | Water from Zerafshan by canal. Run-<br>ning repairs. Engine depot.                        |
| -                      | I.   | (Branch) Bokhara | -                             | 12    | -    | -          | 12 | 8   | Depôt. Water from Zerafshan river.                                                        |
| -                      | IV.  | Kiuyuk-Mazar     | -                             | 1,205 | 798½ | 6, 4½, 5   | 23 | 15½ | Water carried from Samarkand.                                                             |
| -                      | III. | Kizil-Tapa       | -                             | 1,223 | 810½ | 6, 6       | 18 | 12  | Water from Zerafshan. Running re-<br>pairs.                                               |
| -                      | IV.  | Malik            | -                             | 1,244 | 824½ | 6½, 7½     | 21 | 14  | Very dry locality. Water from Zeraf-<br>shan.                                             |
| -                      | III. | Kermineh         | -                             | 1,268 | 840½ | 8, 8       | 24 | 16  | Drinking water carried. Water for<br>locomotives from mountain streams.                   |
| -                      | III. | Ziadin           | -                             | 1,290 | 855  | 5½, 5, 4½  | 22 | 14½ | Limestone quarries. Spare engines.<br>Running repairs. Water from Zeraf-<br>shan.         |
| -                      | III. | Zerabulak        | -                             | 1,315 | 871½ | 5½, 6, 5½  | 25 | 16½ | Water from canals.                                                                        |
| -                      | -    | Bridge (small)   | -                             | 1,327 | 880  | -          | -  | -   | 70 feet over canal.                                                                       |

1 33403.

K



APPENDIX D.—continued.

| Height in feet above M.S.L.    | Class. | Stations, &c.  | Verst-<br>age. | Mile-<br>age. | Intervals between Passing Places. | Distances between Stations. | Remarks.                                                                                                         |
|--------------------------------|--------|----------------|----------------|---------------|-----------------------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------|
| 1,550 steep grade              | II.    | Kata-Kurghan   | 1,342          | 880½          | Miles, 6, 6, 6                    | Versts. 27                  | Water from Narpai Canal.                                                                                         |
| "                              | —      | Bridge (small) | 1,342          | —             | —                                 | —                           | 56 feet over canal.                                                                                              |
| "                              | IV.    | Nagornaya      | 1,366          | 905½          | 5½, 5½, 5½                        | 24                          | Water from canals.                                                                                               |
| "                              | IV.    | Juma           | 1,393          | 923½          | 6½, 5½, 6                         | 27                          | "                                                                                                                |
| 2,284 steep grade, 9 in 1,000. | I.     | SAMARKAND      | 1,415          | 938           | 5½, 4½, 4½                        | 22                          | Water from canals. Engine depot and shops. Headquarters 2nd Railway Battalion.                                   |
| "                              | —      | Bridge         | 1,417          | 939½          | None laid at present.             | —                           | Three spans, each 70 feet, over Obi-Siab Canal.                                                                  |
| —                              | —      | Bridge         | 1,423          | 943½          | "                                 | —                           | Seven spans, 406 feet long over Zerafshan.                                                                       |
| —                              | IV.    | Rostovtsevo    | 1,445          | 958           | "                                 | 30                          | Water from hills by canal.                                                                                       |
| 2,741                          | —      | Defile         | 1,463          | 970½          | "                                 | —                           | "Gates of Tamerlane," Hian Utinski Pass, highest point of line. Divide between River Zerafshan and River Sanzar. |
| —                              | III.   | Kuropatkino    | 1,472          | 976           | "                                 | 27                          | Water from streams.                                                                                              |
| Steepest grade, 10/1,000.      | IV.    | Milutinskaya   | 1,498          | 983½          | "                                 | 26                          | Water from Sanzar River.                                                                                         |
| —                              | —      | Bridge         | 1,519          | 1,007½        | "                                 | —                           | 105 feet long over River Sanzar.                                                                                 |

|                                        |      |                           |   |   |       |        |   |    |     |                                                                                                                                                 |
|----------------------------------------|------|---------------------------|---|---|-------|--------|---|----|-----|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 969<br>Steepest<br>grade,<br>16/1,000. | III. | Jizak                     | - | - | 1,521 | 1,008½ | " | 23 | 15½ | Naphtha reserve tanks. Water partly from River Sanzar. Water partly from canals.                                                                |
| -                                      | III. | Lomakino                  | - | - | 1,548 | 1,026½ | " | 27 | 18  | "                                                                                                                                               |
| -                                      | -    | Bridge                    | - | - | 1,567 | 1,036½ | " | -  | -   | 56 feet long over Sais-Khani Ravine.                                                                                                            |
| -                                      | III. | Obrucheyvo                | - | - | 1,577 | 1,045½ | " | 29 | 19  | Water from wells, brackish.                                                                                                                     |
| 970                                    | II.  | Chernayeyvo               | - | - | 1,605 | 1,064  | " | 28 | 18½ | Naphtha reserve tanks. Junction for Andijan. Water from Syr Daria.                                                                              |
| -                                      | -    | Bridge (small)            | - | - | 1,636 | 1,084½ | " | -  | -   | 56 feet broad over canal.                                                                                                                       |
| -                                      | IV.  | Golodnaya Steppe          | - | - | 1,636 | 1,084½ | " | 31 | 20½ | Water from canals.                                                                                                                              |
| 872<br>Steep<br>grade.                 | IV.  | Syr Darinski              | - | - | 1,672 | 1,108½ | " | 36 | 23½ | River water, Syr Daria.                                                                                                                         |
| "                                      | -    | Bridge                    | - | - | 1,682 | 1,114½ | " | -  | -   | 1,125 feet long over Syr Daria.                                                                                                                 |
| "                                      | -    | " small                   | - | - | 1,687 | 1,117½ | " | -  | -   | Canal.                                                                                                                                          |
| "                                      | -    | " small                   | - | - | 1,693 | 1,121½ | " | -  | -   | "                                                                                                                                               |
| "                                      | III. | Verevskaya                | - | - | 1,698 | 1,125½ | " | 26 | 17½ | Water carried from Syr Daria.                                                                                                                   |
| "                                      | IV.  | Kaufmanskaya              | - | - | 1,721 | 1,140½ | " | 23 | 15½ | "                                                                                                                                               |
| "                                      | -    | Bridge, small             | - | - | 1,726 | 1,144  | " | -  | -   | 56 feet wide over canal.                                                                                                                        |
| "                                      | -    | " small                   | - | - | 1,742 | 1,154½ | " | -  | -   | " Salar Stream.                                                                                                                                 |
| 1,486                                  | I.   | TASHKEND - R <sub>6</sub> | - | - | 1,747 | 1,158  | - | 26 | 17½ | Naphtha reserve tanks. Terminus. Large engine depot and shops. Water from River Chirehika by canals. Drinking supply scarce, has to be carried. |



APPENDIX D.—continued.

ANDIJAN BRANCH.

| Height in feet above M.S.L. | Class. | Stations, &c. | Verst-<br>age. | Mile-<br>age. | Intervals between Passing Places. | Distances between Stations. | Remarks.                                           |
|-----------------------------|--------|---------------|----------------|---------------|-----------------------------------|-----------------------------|----------------------------------------------------|
|                             |        |               |                |               | Miles.                            | Versts.                     | Miles.                                             |
| 930                         | II.    | Chernayevo    | 1,605          | 1,064         | None laid at present.             | —                           | Water from Syr Daria.                              |
| 1,103                       | III.   | Hilkovo       | 1,636          | 1,084½        | "                                 | 31                          | "                                                  |
| —                           | —      | Bridge        | 1,642          | 1,088½        | "                                 | —                           | 140 feet over Shiring Sai ravine.                  |
| —                           | —      | Bridge        | 1,647          | 1,093½        | "                                 | —                           | 280 feet over River Ak-Su.                         |
| —                           | IV.    | Dragomirovo   | 1,660          | 1,100½        | "                                 | 24                          | Water from Syr Daria.                              |
| —                           | —      | Bridge        | 1,674          | 1,109½        | "                                 | —                           | About 300 feet long over the River Hadji-Bakirhan. |
| 1,082                       | II.    | Khojend       | 1,680          | 1,113½        | "                                 | 20                          | Water from Syr Daria.                              |
| —                           | III.   | Verefkino     | 1,707½         | 1,132         | "                                 | 27½                         | "                                                  |
| —                           | III.   | Melnikovo     | 1,753          | 1,148½        | "                                 | 25½                         | "                                                  |
| —                           | III.   | Posietovka    | 1,758          | 1,163½        | "                                 | 25                          | "                                                  |
| —                           | —      | Bridge        | 1,781          | 1,180½        | "                                 | —                           | 70 feet long over the Naimanchu.                   |
| 1,300                       | II.    | Khokand       | 1,783          | 1,181½        | "                                 | 25                          | Water from River Sok. Running repairs.             |
| —                           | —      | Culvert       | 1,786          | 1,183½        | "                                 | —                           | 35 feet over Khokand Sai.                          |

|      |                   |   |   |        |        |   |    |     |                                                                                       |
|------|-------------------|---|---|--------|--------|---|----|-----|---------------------------------------------------------------------------------------|
| IV.  | Seirovo           | - | - | 1,807  | 1,197½ | " | 24 | 16  | Water from Syr Daria.                                                                 |
| III. | Vannovskaya       | - | - | 1,831  | 1,213½ | " | 24 | 15  | "                                                                                     |
| II.  | Gorchakovo        | - | - | 1,848  | 1,225  | " | 17 | 11½ | "                                                                                     |
| II.  | Margilan (Branch) | - | - | 8      | -      | " | 8  | 5½  | Depôt, running repairs. Water by canals from Margilan Sai.                            |
| IV.  | Bridge            | - | - | 1,855½ | 1,230  | " | -  | -   | Over Yangi Sai.                                                                       |
| IV.  | Fedchenko         | - | - | 1,880  | 1,246½ | " | 32 | 21½ | -                                                                                     |
| -    | Bridge            | - | - | 1,888  | 1,251½ | " | -  | -   | 175 feet over Sharikhan Sai.                                                          |
| I.   | ANDIJAN           | - | - | 1,910  | 1,266½ | " | 30 | 20  | Engine depôt. Naphtha reserve tanks. Water from main irrigation canal from Syr Daria. |

N.B.—R<sub>1</sub>, R<sub>2</sub>, &c.—Companies of No. I. Transcaspian Railway Battalion.

R<sub>1</sub>, R<sub>2</sub>, &c.—

No. II.

\* "Razyzd" is a passing-place with one or two tracks and one refuge siding with stop butt, platform, and accommodation for officials; an ordinary "passing-place" has two tracks beside the main line, no platform.

Intervals between passing-places to the nearest ¼ mile and as near as could be reckoned.



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APPENDIX E.  
MERV—KUSHK BRANCH.

| Time Table Mixed Mail. |             |             | Stations, &c.                               | Height<br>in feet<br>above<br>M.S.L. | Distance<br>from Merv. |        | Intervals between |        |         | Remarks. |
|------------------------|-------------|-------------|---------------------------------------------|--------------------------------------|------------------------|--------|-------------------|--------|---------|----------|
| Winter.                |             | Summer.     |                                             |                                      | Versts.                | Miles. | Versts.           | Miles. | Versts. |          |
| PM.<br>9 40            | AM.<br>3 35 | PM.<br>9 45 | Merv                                        | 740                                  | 0                      | —      | 0                 | —      | —       |          |
|                        |             |             | Passing place                               | —                                    | 10                     | 6½     | —                 | —      | 10      | 6½       |
|                        |             |             | Sennik (Razyezd)                            | —                                    | 20                     | 13½    | —                 | —      | 10      | 6½       |
|                        |             |             | Passing place                               | —                                    | 27                     | 17½    | —                 | —      | 7       | 4½       |
| 8 10                   | 5 17        | 8 15        | TALKHATAN-BABA                              | 804                                  | 37½                    | 24½    | 37½               | 24½    | 10½     | 7        |
| 7 15                   | 6 10        | 7 20        | Passing place                               | —                                    | 49                     | 32½    | —                 | —      | 11½     | 7½       |
| 7 12                   | 6 20        | 7 10        | YOLATAN                                     | 853                                  | 57½                    | 38     | 20                | 13½    | 8½      | 5½       |
|                        |             |             | Passing place                               | —                                    | 69                     | 45½    | —                 | —      | 11½     | 7½       |
|                        |             |             | Small bridge                                | —                                    | 72                     | 47½    | —                 | —      | —       | —        |
| 6 16                   | 7 15        | 6 24        | SULTAN BEND                                 | 891                                  | 77                     | 51     | 19½               | 13     | 8       | 5½       |
|                        |             |             | Passing place                               | —                                    | 90                     | 59½    | —                 | —      | 13      | 8½       |
|                        |             |             | Guard hut                                   | —                                    | 91                     | 60½    | —                 | —      | —       | —        |
|                        |             |             | (?) Kazakli Bend<br>(Razyezd).<br>Guard hut | —                                    | 101½                   | 67½    | —                 | —      | 11½     | 7½       |
|                        |             |             |                                             | —                                    | 108                    | 71½    | —                 | —      | —       | —        |

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|                    |                     |                |                    |                         |   |         |         |        |        |       |        |       |   |                                                                                                         |
|--------------------|---------------------|----------------|--------------------|-------------------------|---|---------|---------|--------|--------|-------|--------|-------|---|---------------------------------------------------------------------------------------------------------|
| Wed. and Sat. 4 25 | Tues. and Fri. 9 15 | Wed. Sat. 4 20 | Tues. and Fri. 1 0 | Passing place -         | - | 113     | 75      | -      | -      | -     | 1 1/2  | 7 1/2 | 5 | 6 mins. stop.                                                                                           |
|                    |                     |                |                    | Guard hut               | - | 115 1/2 | 76 1/2  | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | IMAN BABA               | - | 120 1/2 | 80      | 43 1/2 | 28 1/2 | 7 1/2 | 12 1/2 | 8 1/2 | 5 |                                                                                                         |
|                    |                     |                |                    | Passing place -         | - | 133     | 88      | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | Guard hut               | - | 135     | 89 1/2  | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | Saldatch (Razyezd).     | - | 143     | 95      | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | Passing place -         | - | 150     | 99 1/2  | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | Guard hut               | - | 155     | 102 1/2 | -      | -      | -     | -      | -     | 5 |                                                                                                         |
| 2 50               | 10 48               | 2 55           | 2 33               | SARI-YESI -             | - | 157 1/2 | 104 1/2 | 37     | 24 1/2 | 7 1/2 | -      | -     | 5 | 14 to 22 mins. stop. Engine depôt, for barracks for railway company detachment and dispensary, 15 beds. |
| 2 36               | 11 10               | 2 41           | 2 50               | Guard hut               | - |         |         |        |        |       |        |       |   |                                                                                                         |
|                    |                     |                |                    | Guard hut               | - | 165     | 109 1/2 | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | Passing place -         | - | 168     | 111 1/2 | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | Urns Dushen (Razyezd).  | - | 174     | 115 1/2 | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | Guard hut               | - | 178     | 118     | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | Barrack or guard house. | - | 184     | 122     | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | Passing place -         | - | 184 1/2 | 122 1/2 | -      | -      | -     | -      | -     | 5 |                                                                                                         |
|                    |                     |                |                    | Guard hut -             | - | 190     | 126     | -      | -      | -     | -      | -     | 5 |                                                                                                         |

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[illegible]

N.B.—Engine depôt, &c., at Sari-Yasi.

Engine depot, &c., at Port-Isl.  
Water available at all stations.

1 verst = 3,500 feet = .663 of a mile.

"Razyezd" is a passing-place having

readyed is a passing-piece having  
and telegraph instruments.

A passing-place has merely a second t

The barracks or guard houses referred

way, &c. "Storoi," or line guard,

The guard hut is for a ganger only and

\* The name con

THE NAME OF

10



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APPENDIX F.  
ORENBURG—TASHKEND RAILWAY.  
TASHKEND TO TURKISTAN.

|              |                | Versys<br>from<br>Oren-<br>burg. | Stations, &c.                                  | Versys<br>from<br>Tashkend. | Miles. | Intervals between |        |                 |        |
|--------------|----------------|----------------------------------|------------------------------------------------|-----------------------------|--------|-------------------|--------|-----------------|--------|
|              |                |                                  |                                                |                             |        | Stations.         |        | Passing Places. |        |
| —            | —              |                                  |                                                |                             |        | Versys.           | Miles. | Versys.         | Miles. |
| A.M.<br>7 25 | ↑              | 1,762                            | TASHKEND                                       | —                           | —      | —                 | —      | —               | —      |
|              | P.M.<br>10 0 ↓ | 1,758½                           | Bridge over River Salar, 84 feet<br>long (t.). | 3½                          | 5½     | —                 | —      | —               | —      |
|              |                | 1,746                            | KELES                                          | 16                          | 10½    | 16                | 10½    | 16              | 10½    |
|              |                | 1,741                            | Passing place                                  | 21                          | 14     | —                 | —      | 5               | 3½     |
|              |                | 1,740½                           | Bridge over Canal, 126 feet wide               | 21½                         | 14½    | —                 | —      | —               | —      |
|              |                | 1,740                            | Bridge over River Keles, 175 feet<br>wide.     | 22                          | 14½    | —                 | —      | —               | —      |
|              |                | 1,739                            | Passing place                                  | 33                          | 22     | —                 | —      | 12              | 7½     |
|              |                | 1,724½                           | DARBASA                                        | 37½                         | 25     | 21½               | 14½    | 4½              | 3      |
| 5 20         | midnight       | 1,706                            | DJILGA                                         | 56                          | 37     | 18½               | 12½    | ?               | —      |
|              |                | 1,688                            | SARI-AGACH                                     | 74                          | 49     | 18                | 12     | ?               | —      |
|              |                | 1,674                            | CHANAK                                         | 88                          | 58½    | 14                | 9½     | ?               | —      |
|              |                | 1,658                            | UZUN SAI                                       | 104                         | 69     | 16                | 10½    | ?               | —      |

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|              |             |                                                                |   |       |       |     |     |      |      |
|--------------|-------------|----------------------------------------------------------------|---|-------|-------|-----|-----|------|------|
| PM.<br>11 40 | 1,636½<br>* | KABUL SAI (engine run)                                         | - | 125½  | 83½   | 21½ | 14½ | ?    | -    |
|              | 1,616½      | ARIS                                                           | - | 149½  | 96½   | 20  | 13½ | ?    | -    |
|              | 1,601       | Bridge over River Aris, three spans<br>of 210 feet = 630 feet. | - | 161   | 106½  | -   | -   | -    | -    |
|              | 1,600       | Passing place                                                  | - | 162   | 107   | -   | -   | 16½  | 10½  |
|              | 1,592       | KARA KUNGUR                                                    | - | 170   | 112½  | 24½ | 16½ | 8    | 5½   |
|              | *           | Passing place                                                  | - | 184 ? | 122 P | -   | -   | 14 P | 9½ P |
|              | 1,568       | Bridge (small waterway)                                        | - | 194   | 128½  | -   | -   | -    | -    |
|              | 1,566       | TINUR                                                          | - | 196   | 130   | 26  | 17½ | 12 P | 8 P  |
|              | 1,549       | Passing place                                                  | - | 213   | 141½  | -   | -   | 17   | 11½  |
|              | 1,541       | UTRABAD                                                        | - | 221   | 140½  | 25  | 16½ | 8    | 5½   |
|              | 1,530       | Passing place                                                  | - | 232   | 154   | -   | -   | 11   | 7½   |
|              | 1,523       | Bridge (small waterway)                                        | - | 239   | 157   | -   | -   | -    | -    |
|              | 1,522½      | Bridge (small waterway)                                        | - | 239½  | 157½  | -   | -   | -    | -    |
|              | 1,522       | Passing place                                                  | - | 240   | 159   | -   | -   | 8    | 5½   |
| AM.<br>6 6   | 1,514       | TURKISTAN                                                      | - | 248   | 161½  | 27  | 18  | 8    | 5½   |

\* It is uncertain as to passing places on these intervals.



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APPENDIX F.—*continued.*

ORENBURG—TASHKEND RAILWAY.

TURKISTAN TO ORENBURG.

| From<br>Orenburg. |        | Stations, &c.    | From<br>Tashkend. |        | Remarks.                                                                                                                                                                                                         |
|-------------------|--------|------------------|-------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Versts.           | Miles. |                  | Versts.           | Miles. |                                                                                                                                                                                                                  |
| 1514              | 1003½  | TURKISTAN - -    | 248               | 164½   | 730 feet above M.S.L. and 750 feet below the level of Tashkend.                                                                                                                                                  |
|                   |        | Chornak - -      | -                 | -      | Line runs parallel to the post road.                                                                                                                                                                             |
|                   |        | Sauran - -       | -                 | -      |                                                                                                                                                                                                                  |
|                   |        | Ak-Kum - -       | -                 | -      |                                                                                                                                                                                                                  |
|                   |        | Yani-Kurghan - - | -                 | -      |                                                                                                                                                                                                                  |
| 1394              | 920    | Tiumen-Arik - -  | 368               | 243    | 562 feet above M.S.L.                                                                                                                                                                                            |
| 1367              | 902½   | Skobelev - -     | 395               | 260½   | 538 feet above M.S.L. A recently formed Russian colony.                                                                                                                                                          |
| 1343              | 886½   | JULEK - -        | 419               | 276½   | 525 feet above M.S.L.                                                                                                                                                                                            |
|                   |        | Tar Tugai - -    | -                 | -      | The line follows the post road. At Ber-Kazan it runs between the Syr Daria and lakes.                                                                                                                            |
|                   |        | Solo-Tapa - -    | -                 | -      |                                                                                                                                                                                                                  |
|                   |        | Ber-Kazan - -    | -                 | -      |                                                                                                                                                                                                                  |
|                   |        |                  | -                 | -      |                                                                                                                                                                                                                  |
| 1246              | 826    | PEROVSK - -      | 516               | 340½   | 461 feet above M.S.L.                                                                                                                                                                                            |
|                   |        | Kara-Uziak - -   | -                 | -      | The line follows the course of the Syr Daria; whereas the post road makes a detour to the eastward in order to avoid lakes and marshy ground. Two bridges, each of two spans and 420 feet long, near Kara-Uziak. |
|                   |        | Teren-Uziak - -  | -                 | -      |                                                                                                                                                                                                                  |
|                   |        | Ak-Su - -        | -                 | -      |                                                                                                                                                                                                                  |
|                   |        | Kara-Ketken - -  | -                 | -      |                                                                                                                                                                                                                  |
|                   |        | Kizil Tam - -    | -                 | -      |                                                                                                                                                                                                                  |
| 1108              | 731½   | KARMAKCHI - -    | 654               | 431½   | Between Karmakchi and Kazalinsk the line follows the route of the post road along the right bank of the Syr Daria.                                                                                               |
|                   |        | Khor Khut - -    | -                 | -      |                                                                                                                                                                                                                  |
|                   |        | Diurmen Tapa - - | -                 | -      |                                                                                                                                                                                                                  |
|                   |        | Tiuratan - -     | -                 | -      |                                                                                                                                                                                                                  |
|                   |        | Ak-Suat - -      | -                 | -      |                                                                                                                                                                                                                  |

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APPENDIX F.—continued.

| From Orenburg. |        | Stations, &c.      | From Tashkend. |        | Remarks.                                                                                                                                |
|----------------|--------|--------------------|----------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Verss.         | Miles. |                    | Verss.         | Miles. |                                                                                                                                         |
| 978            | 645½   | Mai-Libash - -     | 784            | 517½   | { 297 feet above M.S.L. A small branch line (2½ miles) is projected from this station to the Syr Daria landing stage.                   |
|                |        | Baskara - -        | - -            | - -    |                                                                                                                                         |
| 942            | 621½   | KAZALINSK - -      | 820            | 541½   | { 252 feet above M.S.L. and 1,240 feet below level of Tashkend station, 7½ miles E. of the town, to avoid ground subject to inundation. |
|                |        | Bik Bauli - -      | - -            | - -    |                                                                                                                                         |
|                |        | Kamishli-Bash - -  | - -            | - -    | { Along the N.E. shore of the Aral Sea.                                                                                                 |
|                |        | Andreevskaya - -   | - -            | - -    |                                                                                                                                         |
|                |        | Sappak - -         | - -            | - -    |                                                                                                                                         |
| 790            | 521½   | ARAL SEA - -       | 972            | 641½   | { The line here runs over the Great and Little Borsuki Sands—desert steppes.                                                            |
|                |        | Kontu - -          | - -            | - -    |                                                                                                                                         |
|                |        | Saksaulskaya - -   | - -            | - -    |                                                                                                                                         |
|                |        | Altin - -          | - -            | - -    |                                                                                                                                         |
|                |        | Kara Chokat - -    | - -            | - -    |                                                                                                                                         |
|                |        | Tuguz - -          | - -            | - -    |                                                                                                                                         |
|                |        | Jilan - -          | - -            | - -    |                                                                                                                                         |
|                |        | Biryuk - -         | - -            | - -    |                                                                                                                                         |
| 600            | 396    | Chelkar - -        | 1,162          | 767    | { At the 486th verst from Orenburg the line crosses the Mugadshar range by the Kum Asu pass; a difficult piece of engineering.          |
|                |        | Ulpán - -          | - -            | - -    |                                                                                                                                         |
|                |        | Solenaya - -       | - -            | - -    |                                                                                                                                         |
|                |        | Kauldjir - -       | - -            | - -    |                                                                                                                                         |
|                |        | Karaganda - -      | - -            | - -    |                                                                                                                                         |
|                |        | Rodniki - -        | - -            | - -    |                                                                                                                                         |
|                |        | Mugadsharskaya - - | - -            | - -    |                                                                                                                                         |
|                |        | Kirgizskaya - -    | - -            | - -    |                                                                                                                                         |
|                |        | EMBA (YEMBA) - -   | - -            | - -    | {                                                                                                                                       |
|                |        | Kuduk - -          | - -            | - -    |                                                                                                                                         |



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APPENDIX F.—continued.

| From Orenburg. |        | Stations, &c.           | From Tashkend. |        | Remarks.                                                                                                                              |
|----------------|--------|-------------------------|----------------|--------|---------------------------------------------------------------------------------------------------------------------------------------|
| Versts.        | Miles. |                         | Versts.        | Miles. |                                                                                                                                       |
|                |        | Ker . . . . .           | —              | —      | At the 486th verst from Orenburg the line crosses the Mugadshar range by the Kum-Asu pass; a difficult piece of engineering.          |
|                |        | Temirskaya . . . . .    | —              | —      |                                                                                                                                       |
|                |        | Kandagach . . . . .     | —              | —      |                                                                                                                                       |
|                |        | Ak-Kemir . . . . .      | —              | —      |                                                                                                                                       |
|                |        | Tamdi . . . . .         | —              | —      |                                                                                                                                       |
|                |        | Bish-Bamak . . . . .    | —              | —      |                                                                                                                                       |
| 255            | 168½   | AKTIUBINSK . . . . .    | 1,507          | 994½   | Line runs on left bank of the River Ilek.                                                                                             |
|                |        | Kuralli . . . . .       | —              | —      | At the 213th verst from Orenburg the line crosses the River Ilek by a bridge, 735 feet long, and follows the right bank of the river. |
|                |        | Kara Tugai . . . . .    | —              | —      |                                                                                                                                       |
|                |        | Ak-Su . . . . .         | —              | —      |                                                                                                                                       |
|                |        | Yaisan . . . . .        | —              | —      |                                                                                                                                       |
|                |        | Yaksha . . . . .        | —              | —      |                                                                                                                                       |
|                |        | Ak-Bulak . . . . .      | —              | —      |                                                                                                                                       |
|                |        | Grigorevskaya . . . . . | —              | —      |                                                                                                                                       |
| 72             | 47½    | Iletsk . . . . .        | 1,690          | 1,115½ | A branch line from here runs to the Iletsk salt mines, 2½ miles away.                                                                 |
|                |        | Mayachnaya . . . . .    | —              | —      |                                                                                                                                       |
|                |        | Donguskaya . . . . .    | —              | —      |                                                                                                                                       |
|                |        | Mienovoi Dvor . . . . . | —              | —      | Iron bridge over the Ural River, 1,120 feet long.                                                                                     |
| —              | —      | OENBURG . . . . .       | 1,762          | 1,168  | Terminus of branch line of the Zlatousk-Samara railway.                                                                               |

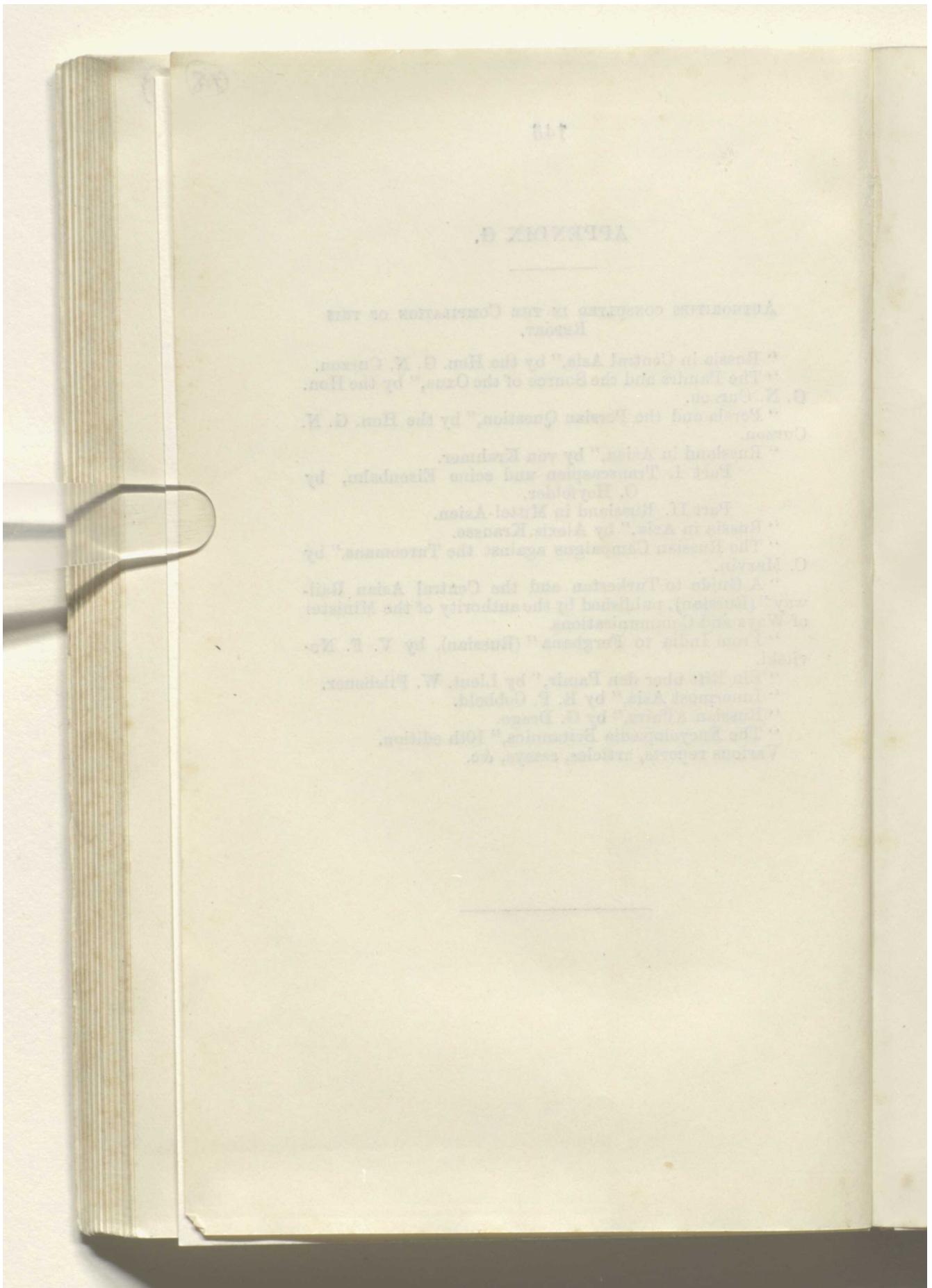
The details given above are in accordance with the original plans prepared in 1900, and are still, in the main, correct. In course of construction, however, certain modifications and improvements have been introduced, chiefly with a view to reducing earthwork and the total length of line. The actual length of line constructed between Orenburg and Tashkend has been reduced by nearly 16 miles, a saving which has been almost equally distributed throughout its length, making the length of line as constructed 1,152 miles.

APPENDIX G.

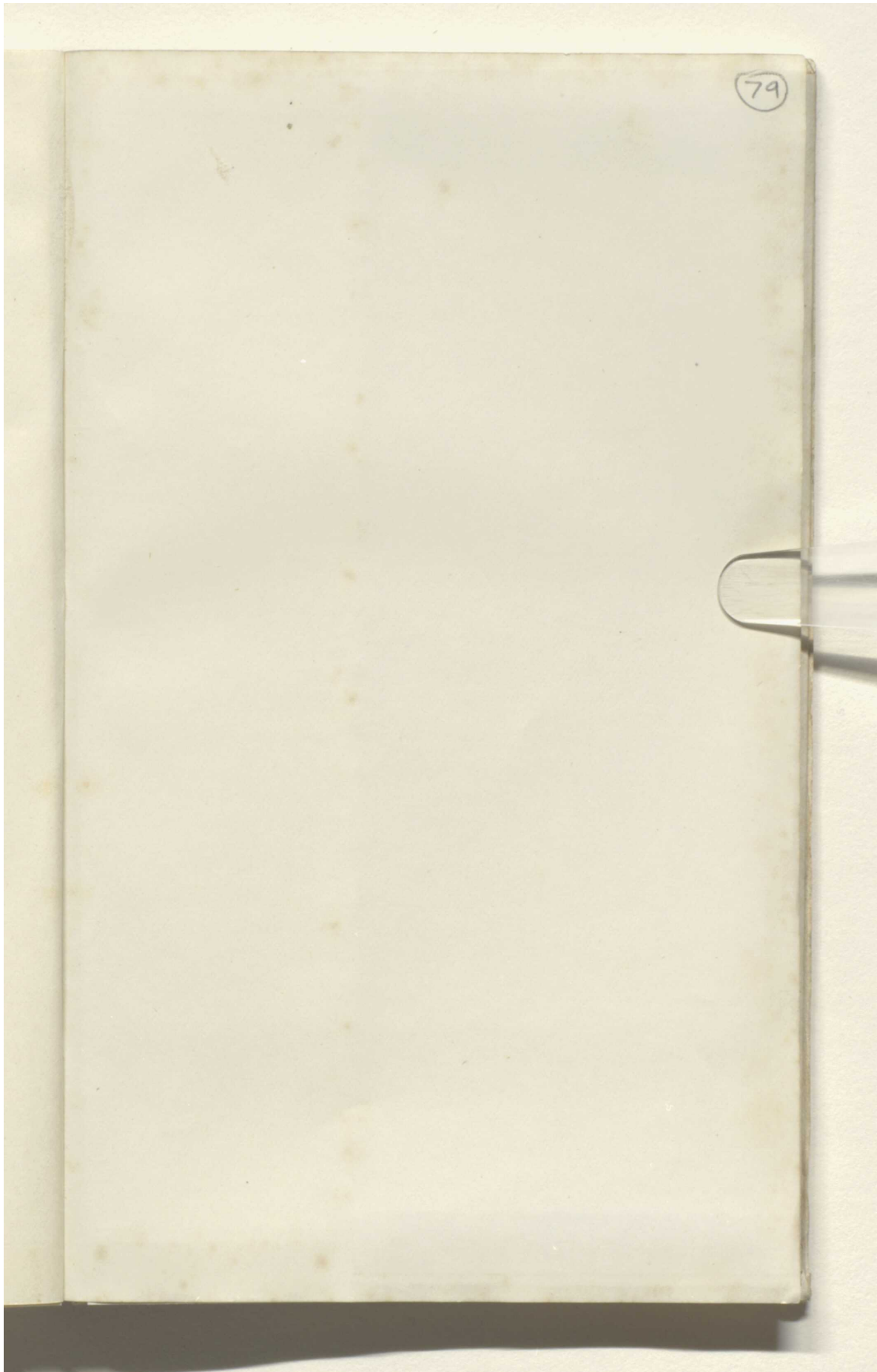
AUTHORITIES CONSULTED IN THE COMPILATION OF THIS  
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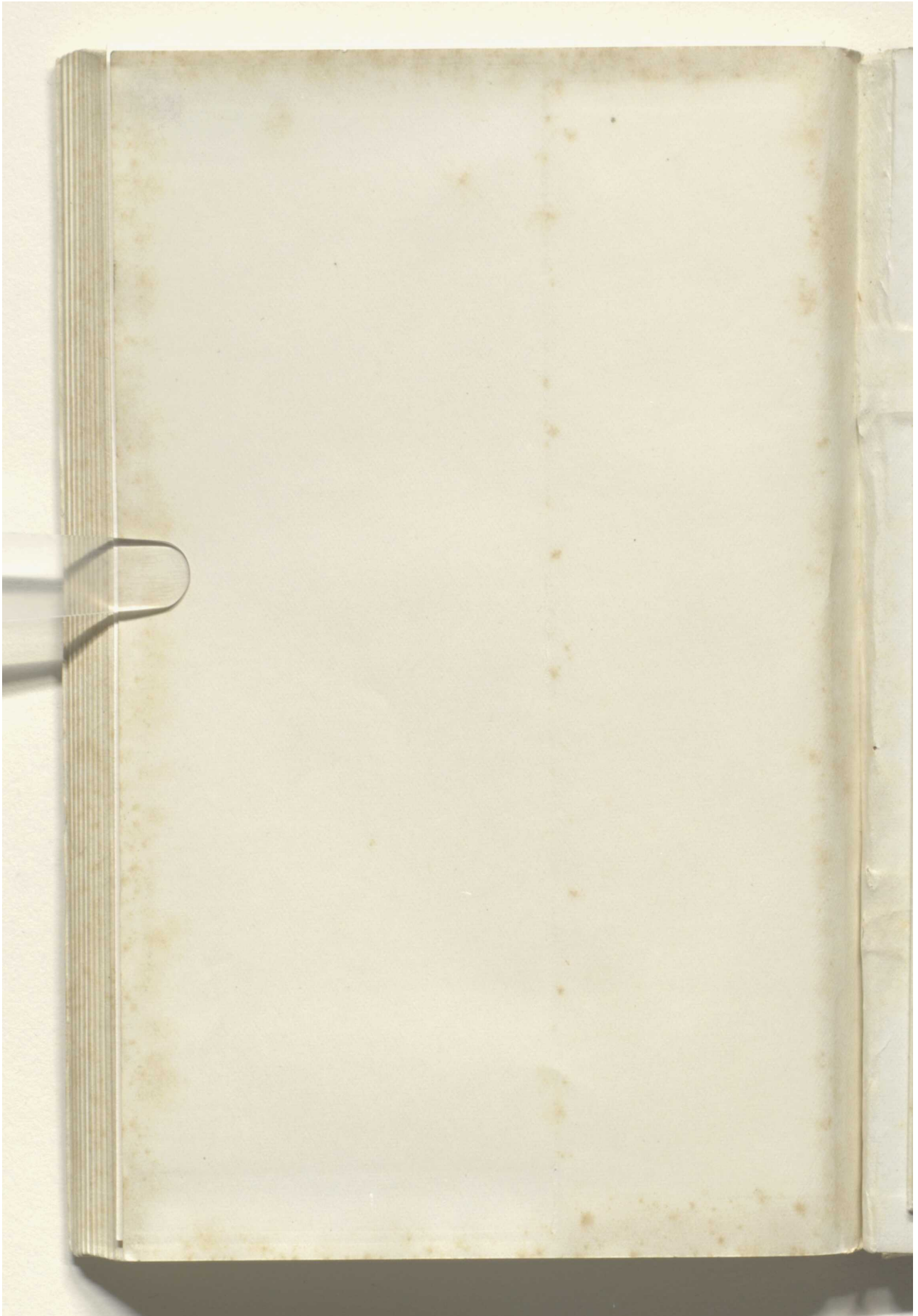


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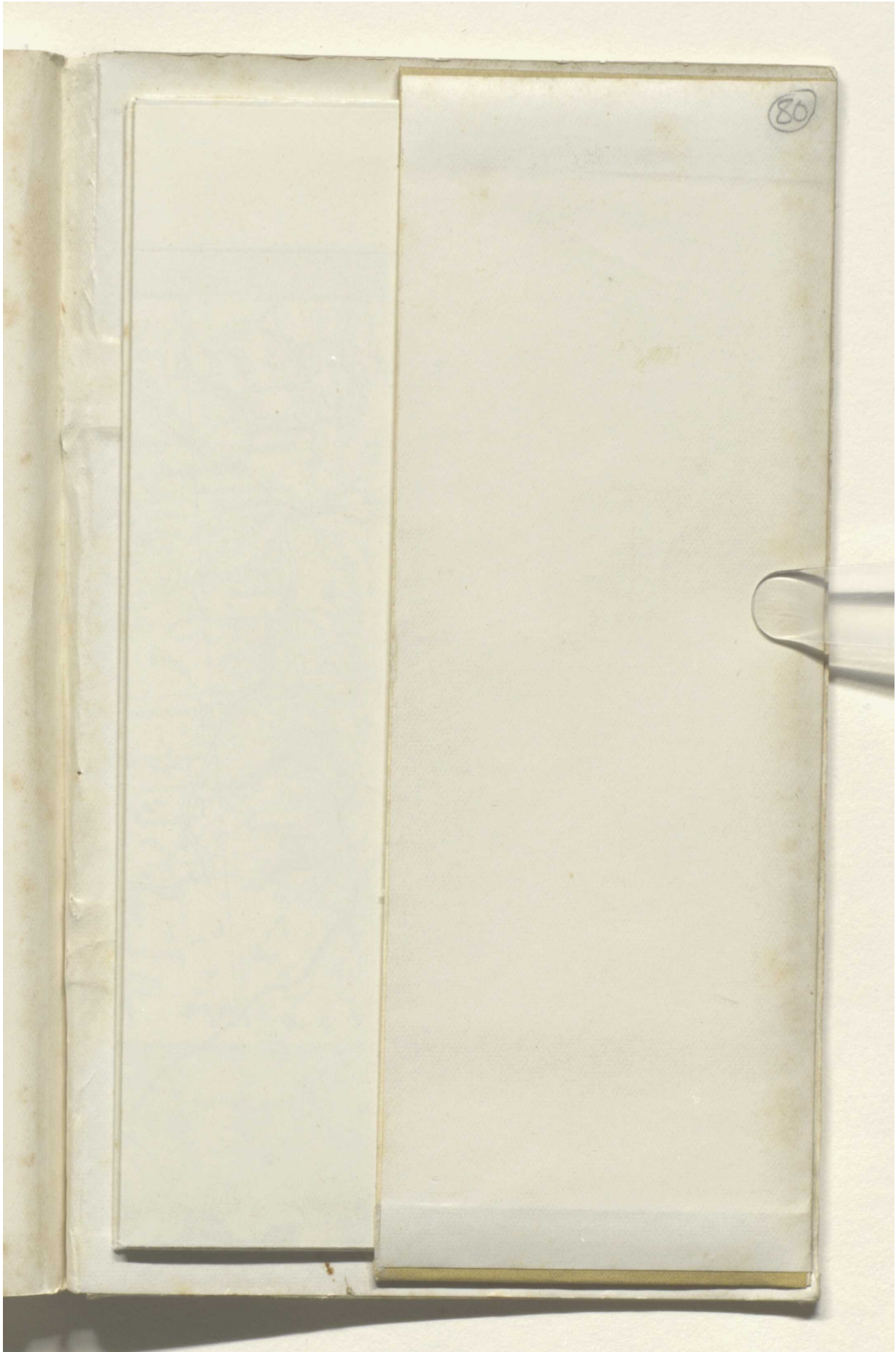




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