

## Descriptive, Statistical and Historical.

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rapidly increasing territory under the sway of the Sikh Maharaja. In the year following, the Talooquas of Furooka and Kálowal fell into his hands, together with the remainder of the country which had been subject to the authority of the Syal chiefs of Jhung. of the Jhelum is annexed.

80. There remained now only the possessions of the Mullicks of Mittha Tiwana, and these too must share the common fate, for the ambition of the Sikh chief will be content with nothing less than the dominion of the whole of the land of the five rivers, and it is only the inhospitable nature of the country, and perhaps some remembrance of the friendship which formerly existed between its chief, Mullick Khan Mahomed, and the Maharaja's own father, that have so long yarded off the impending stroke. It falls however at last. A well equipped force is despatched under Misser Dewan Chund in 1816. The Tiwana Mullick retires to Noorpoor, in the heart of the Thull, thinking that the scarcity of water and supplies may prevent the Sikh army from effecting its object. But all obstacles disappeared before the energy of the Sikh commander, who sinks wells as he advances, so that after a time the Tiwanas, finding resistance hopeless, abandon the place and take refuge with their old enemy the Nawab of Dera Ismael Khan, who has not the generosity, however, to forget their former rivalry in pity for the fallen fortunes of the Tiwana chiefs, but plunders and turns them out. Mittha Tiwana and Noorpoor are taken in 1816.

81. After this, for nearly two years, Mullick Khan Mahomed and his sons wandered from place to place, subsisting on the charity of their neighbours, but finding this kind of life insupportable, they determined on making an attempt to recover their former possessions. An appeal made to their fellow clans-men was heartily responded to, and, armed with this irregular force, they appeared suddenly before the walls of their native town. The Sikh garrison, completely taken by surprise, abandoned the place and fled, and the Mullicks were once more masters of the land of their ancestors. Their triumph was however but short-lived; in the early part of 1818, the ousted governor returned with a strong force, and the Mullicks were a second time compelled to fly. The possessions of the Tiwana chiefs were then given in jageer to the famous Hurree Sing Nulwa, and were held by him till his death at Peshawur on the 30th April 1837. The Mullicks recover possession of Mittha Tiwana. But lose it again in 1818.

✓ 82. The whole of the expanse of country comprised within the limits of the Shahpoor district having now passed into the hands of Ranjeet Sing, the record of political changes Reasons for continuing the history of certain families.

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would here end, but before altogether leaving the subject it will perhaps be well to follow the fortunes of the chiefs of Mittha Tiwana and Saiwâl, as thereby light will be thrown on matters reserved for discussion in another part of this report. ✓

The Tiwana chief tenders his submission and receives a jageer.

83. The attempt made by Khan Mahomed served to convince Runjeet Sing that it would be bad policy to drive the Tiwanas to desperation; when therefore the Mullick repaired to Lahore to tender his submission he was well received, and a liberal provision made for the support of the family. Villages on the left banks of the Jhelum, yielding ten thousand rupees a year, were assigned in jageer, and several of the chief's relations and dependants were taken into the service of the State.

No change takes place till the death of Hurree Sing.

84. Matters remained in this state, the elders living quietly on their jageer, while the younger members of the family with their contingents served with the army whenever called on to do so, till the death of Hurree Sing before Jumrood. In the interim the old Mullick, Khan Mahomed, and his elder son Ahmed-yar Khan had died, and Mullick Khodayar Khan, the younger son, with his nephew Kadir Buksh, were thus left as the representatives of the family. The former had had the good fortune, some time before, to place Raja Goolab Sing under a deep obligation, which resulted in a close friendship between them, and was the means of introducing the Mullick at Court, where, befriended by the Raja and the latter's brother, the prime Minister, Khodayar Khan and his son, the well known Futteh Khan, soon rose to positions of great favor.

When Futteh Khan obtains the farm of Mittha Tiwana and Noorpoor.

85. Futteh Khan was thus favorably situated when the news of the death of Hurree Sing reached Lahore. He lost no time in obtaining from his patron, in his own name, the farm of the ancestral Talooquas of Mittha Tiwana; and his father dying about the same time, he was left the acknowledged head of the tribe. From this time till the unprovoked aggressions of the Sikh army led to the first Sikh war, Futteh Khan took a prominent part in the politics of the country, and his love of intrigue found ample scope for indulgence, in the confusion into which the affairs of the State were thrown after the deaths, in rapid succession, of Runjeet Sing, his son, and grandson.

Futteh Khan retires to Runnoo on the death of Dhyen Sing.

86. For some time Futteh Khan remained faithful to the side of his patron Raja Dhyen Sing, and reaped the reward of his attachment in ever increasing grants of territory in farm. But ere long the prime minister was assassinated,

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and suspicion of complicity in the deed having fallen on the Mullick, he retired to Bunnoo to escape the vengeance of Raja Heera Sing, the son of the murdered man. Soon after, emerging from his retreat, the restless Mullick created a diversion in favor of Sirdar Jowahir Sing, to whose party he had now attached himself, by raising an insurrection in his native country and making himself master of Mittha Tiwana; but the expedition failed, and Futteh Khan, being ejected from the town by a Sikh force under Sirdar Mungul Sing, was forced to take refuge in Bhawalpoor, where he remained, till the death of Heera Sing in 1844 allowed him to come forth from his asylum.

He raises an insurrection and takes Mittha Tiwana.

But is ejected and retires to Bhawalpoor.

87. The rest of the Mullick's story is soon told. During Jowahir Sing's brief tenure of power, Futteh Khan enjoyed unbounded authority, the services of so unscrupulous a partisan being, in the existing state of affairs, beyond price. But bad times were coming for the Mullick. His patron was put to death by the army, and his enemies, headed by Rajas Teja Sing and Deena Nath, succeeded to power, and were not slow in gratifying their malice. He was called on to give an account of his stewardship, how he had expended the revenues of the large tracts of country of which he had held the management, and was brought in a defaulter to the extent of several lacs of rupees. Unable to meet this heavy demand, he was thrown into prison, where he remained till Lieutenant (now Sir Herbert) Edwardes, thinking he would be of use on the frontier, obtained his liberation and ultimately, when the Mooltan rebellion broke out, sent him to relieve Lieutenant Taylor of the charge of Bunnoo. The Sikh troops, soon after, broke out into open mutiny, and besieged Futteh Khan with his Mahomedan levies in the fort. The Mullick held out bravely, till the supply of water failed, when, seeing that the defence could be no longer protracted, he came out and was shot down while boldly challenging the best man of the Sikhs to meet him in single combat. Such was the fitting end to the career of a man who had in cold blood taken the lives of perhaps more of his fellow creatures than any other of his time.

The remainder of the Mullick's story.

His death.

88. When this occurred, Mullick Futteh Sher Khan, the son of Futteh Khan, and Mullick Sher Mahomed Khan, the son of the deceased Mullick's first cousin Kaair Buksh, were serving under Major Edwardes' orders before Mooltan. Both did good service; the former remaining with Major Edwardes, while the latter was detached to follow on the tracks of the Bunnoo force, then in full march to join

The services of his son and of Mullick Sher Mahomed Khan Tiwana.

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Notice of  
Mullick Sahib  
Khan Tiwana.

Sher Sing, and to endeavour to restore order in his native district. In the execution of this commission, Sher Mahomed Khan drove out the Sikh garrisons, and made himself master in rapid succession of the principal towns and strongholds in this part of the country, beginning with Mittha Tiwana and ending with Saiwâl; and added to his other services, by collecting a portion of the revenue and remitting it to Major Taylor, who was then employed in restoring order along the frontier. Nor must the services of Mullick Sahib Khan, the uncle of Sher Mahomed Khan, and a gallant member of this family, be forgotten. He too served with Major Edwardes' Irregulars, and was afterwards employed with Sirdar Lungur Khan of Saiwâl and others, in putting to flight the force headed by the rebel Bhai Maharaj Sing, and in reducing Chineot. In short, this family has always shown itself actively loyal in seasons of disturbance, and it is only in times of peace, when the naturally jealous dispositions of its members have full play, that their internal feuds render them a source of annoyance to all around them.

Disputes re-  
garding suc-  
cession to the  
chiefship of  
the tribe.

89. But peaceful times came, Mooltan fell, the Sikhs were finally overthrown at Goojrat, and the Punjab annexed. The Tiwana Mullicks had now time to look about them, they knew that they were to be rewarded, but the question was, who was to receive the lion's share as the head of the tribe? Sher Mahomed Khan claimed the turban, as the descendant of the elder branch, while Futteh Sher Khan rested his title on the acknowledged pre-eminence of his father Futteh Khan. The dispute was eventually settled through the mediation of friends. It was decided, that in point of rank they should be on an equality, one with the other, and that in all the material benefits, that might accrue to them as representatives of the tribe, both should share alike, and this agreement has since been acted on.

Rewards for  
loyalty and  
good service  
conferred on  
the Tiwana  
Mullicks.

90 The Tiwana Mullicks have been well rewarded. Soon after annexation they preferred a claim to a fourth of the revenues of the Noorpoor and Mittha Tiwana Talooquas, and in consideration of their loyalty and good services the claim was admitted, and villages yielding 6,000 rupees a year were granted in jageer to each, to be held by them and their heirs in perpetuity. In addition to these grants, life pensions of Rs. 5,000 and Rs. 3,240 were conferred respectively on Mullick Futteh Sher Khan and Sher Mahomed Khan; a pension of 480 rupees a year was, at the same time, granted to Mullick Sahib Khan. Lastly, for their services during



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the mutinies, the Mullicks obtained the following rewards : Mullicks Futteh Sher Khan and Sahib Khan, life jageers of twelve hundred rupees each, and Mullick Sher Mahomed Khan one of six hundred rupees. To all these substantial gifts was annexed the much coveted and highly prized title of Khan Bahadoor.

91. It is now time to return to Sirdar Futteh Khan of Saiwâl, whom we left a prisoner at Lahore. In accordance with his usual custom, Runjeet Sing after a while released his prisoner, giving him a jageer first in Jhung and then in Ahmedabad, near Pind Dadun Khan, stipulating however, that Futteh Khan was to remain at Court. But, after a life of independence, the Beloch chief was ill fitted to play the courtier, his proud spirit chafed at the confinement, and, like the Tiwana Mullick, he was tempted to strike a blow for independence. He applied to the Nawab of Munkeyra for assistance ; the request was favorably entertained, and the two chiefs, with their combined forces, actually started to attempt the recovery of Saiwâl. But fear of the consequences to himself of failure, overcame the Nawab's desire to assist his fellow clansman, and abandoning Futteh Khan to his fate, he precipitately retreated to his stronghold of Munkeyra. Futteh Khan, seeing that he had committed himself beyond power of recall, and that now he had nothing to hope for from Runjeet Sing, fled to Mooltan and soon after took refuge in Bhawalpoor, where he died in 1819.

Continuation  
of the history  
of the Saiwal  
chiefs.

92. Lungur Khan, the son of the deceased chief, a lad of fourteen years of age, was left a pensioner on the bounty of the Nawab, and remained at Bhawalpoor till 1822, when Runjeet Sing hearing, while on a visit at Mooltan, that Futteh Khan was dead, sent for Lungur Khan, and gave him a jageer of two thousand rupees a year, with a personal allowance of three rupees a day. The jageer was afterwards (in 1838) increased to three thousand rupees, and the allowance to five rupees a day. Lungur Khan with his men formed part of the Sikh contingent which, under Captain (afterwards Sir H.) Lawrence, accompanied General McCaskill's division in Pollock's advance on Cabool. Lungur Khan also served with distinction under Major Edwardes' orders during the Mooltan rebellion. After annexation, as a reward for these services, the family jageer, valued at three thousand rupees a year, was released in perpetuity, and a life pension of twelve hundred rupees granted to Lungur Khan. This chief died in 1853, and was followed to his grave in 1862, by the eldest of his three sons, Mahomed Hayat Khan, a very

The same.

Sirdar Lungur Khan's services.

How rewarded.

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promising young man. The second son, Mobaruk Khan, is now the representative of the family.\*

Historical  
section com-  
pleted.

93. There is yet one set of circumstances to be referred to, and then the history of the principal families of this part of the country may be said to be complete. It will be remembered, that, on Ahmed Shah's final retirement, the Sookur-Chukkias, under the grand-father of Runjeet Sing, possessed themselves of the greater part of the Salt Range. The status in this respect remained undisturbed till 1827, when the members of this confederacy, among whom the conquered tract had been originally parcelled out, having fallen out among themselves, Runjeet Sing resumed their shares and divided them among his favorites; the Soon Taloosqua falling to the share of Hurree Sing, by whom it was held till his death in 1837. On the occurrence of this event, it was given by the Maharaja to his old friend and playfellow, and afterwards one of the most successful of his generals, Sirdar Goormookh Sing Lambha, and it was one of the few gifts of which this brave old man had not been despoiled by the envy and hatred of the Jummoo family, when we took the country. The majority of the villages constituting the Taloosqua were then resumed, but the estate of Nowshera, worth rather more than four thousand rupees a year, was released in perpetuity. Sirdar Goormookh Sing died in 1853, and was succeeded by his son Uttur Sing, the present representative of the family, who resides in the Goojrat district, where he holds other jageers.

The Soon  
Taloosqua  
conferred in  
jageer on Sir-  
dar Goormookh  
Sing Lambha.

At annexa-  
tion all but  
the village of  
Nowshera re-  
sumed.

Chief towns  
and villages.

94. The principal towns and villages of the district will be found arranged according to their\* sizes in the sub-joined table, to which I shall add a brief description of the more important :—

\* On my arrival in the district in 1862 I found this young man nearly overwhelmed with a legacy of debt left by his improvident father, sunk in sloth, and immoderately addicted to indulgence in intoxicating liquors and drugs. It is a source of gratification to me to be able to record that I succeeded in rousing him to a sense of what was due to his position as head of one of the foremost families of the district, and in weaning him from habits which were undermining his health and ruining his intellect; at the same time arrangements were made with his creditors which in a few years will completely free him from debt. Since then, some addition has been made to Mobaruk Khan's income and position in the district, by his being elected to represent Sawai, a town founded by one of his ancestors, and their head-quarters during the days of their independence.

Number.	Names of towns and villages.	No. of HOUSES.			NUMBER OF PERSONS.						Grand Total.	REMARKS.
		Pucca.	Kuchcha.	Total.	Hindoo.			Mussulman.				
					Agricultural.	Non-agricultural.	Total.	Agricultural.	Non-agricultural.	Total.		
1	Bhera, ... ..	3,764	1,292	5,056	1,208	4,785	5,943	2,033	5,997	8,030	✓13,978	The purely agricultural towns and villages in this statement will be easily distinguished by the larger proportion of their inhabitants being classed under the head of agriculturals, such as "Jubbee," "Nullee," &c.
2	Mianee, ... ..	1,766	1,041	2,807	286	3,144	3,430	637	1,938	2,575	✓6,005	
3	Saiwāl, ... ..	146	3,006	3,152	233	5,156	5,389	955	3,136	4,091	✓9,480	
4	Khoshab, ... ..	1,111	2,416	3,527	41	1,951	1,992	1,121	4,148	5,279	✓7,261	
5	Mitta Tiwana, ... ..	4	1,079	1,083	54	788	842	2,492	1,860	4,352	✓5,194	
6	Bhudrar, ... ..	...	880	880	45	90	135	1,713	365	2,078	2,213	
7	Shahpoor, ... ..	141	1,784	1,925	42	1,859	1,901	871	1,945	2,816	4,717	
8	Noorpoor, ... ..	...	649	649	26	1,692	1,718	253	1,207	1,460	3,178	
9	Jubbee, ... ..	...	703	703	67	267	334	1,994	873	2,867	3,201	
10	Jhawriyan, ... ..	4	1,456	1,460	...	749	749	1,245	1,073	2,318	3,067	
11	Bukkhur, ... ..	4	633	637	15	616	631	945	1,042	1,987	2,618	
12	Hudalee, ... ..	...	444	444	3	386	389	1,360	623	1,983	2,372	
13	Gilot, ... ..	21	441	462	15	824	839	413	978	1,391	2,230	
14	Nowshera, ... ..	3	633	636	43	215	258	1,309	654	1,963	2,221	
15	Nullee, ... ..	...	538	538	17	184	203	1,174	724	1,898	2,099	
16	Midh, ... ..	16	1,142	1,158	72	952	1,024	319	622	941	1,965	

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Bhera, the  
old town.

95. One of the most ancient, and at the same time the largest, towns is Bhera, situated on the left bank of the Jhelum river, thirty miles east of the civil station. The original town of this name stood on the right bank of the river, and in the days of the Emperor Baber must have been a place of considerable note, for, in his autobiography, when speaking of his designs on Hindoostan, he talks of the countries of Bhera, Khoshab, &c.\* and again, in describing Hindoostan itself, he defines the limits of the empire as extending from *Bhera* to Behar.\* Some idea of its size may also be gained from the fact that it paid so large a sum as two lacs of rupees † to purchase its safety, when the troops under Baber, disappointed of expected plunder in Bajour, arrived before it in 1519. Soon after this, says tradition, the adjoining hill tribes descended and destroyed the city.

The new  
town.

96. The new town of Bhera was founded in the year 1540, ‡ during the reign of Sher Shah, near a spot where a holy man, calling himself Peer Kaya Nath, had for some time been established, and where his descendants are still residing round the tomb of their spiritual father.§ The place appears rapidly to have attained to its former size and importance, as it is one of the few places mentioned by name in the description of the Lahore Sooba given in the Aieen-i-Akburee, from which we also learn, that it was the centre of a mahal which paid a revenue of nearly five lacs of rupees, || and was one of the few spots in the whole empire where money was coined. After being plundered and laid waste by Noorooddeen, as mentioned before, the town was repopulated by the chiefs of the Bhungee misl, to whose share it fell in the division of the territory acquired by these Sikhs. Bhera is the best looking town in the district, being built of pucca bricks throughout; it is a place of considerable trade, but inferior in this respect to both Pind Dadun Khan and Khoshab. A large colony of Khojas and Pirachas, Mahomedan converts from Hindooism, are settled here, and carry on a traffic with Cabool and the countries beyond it. The ironsmiths of Bhera excel as

\* See pages 285 and 310 of Erskine's translation.\*

† Four hundred thousand Shah-rookhs. A Shah-rookhi was worth about a shilling.

‡ The date of the founding of the town is commemorated in the phrase بطویل شیر شاه which according to the "Abjad" system of notation gives 947 as the Hijree year of the founding of the city.

§ The shrine is known as the "Than (Sthān) Peeran," and is a place of great sanctity.

|| Page 290 of Gladwin's translation, the sum given is nearly twenty millions of dams, of which forty went to the rupee.



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stone-cutters, and in the manufacture of weapons and articles of cutlery. Bhera has also a reputation for its manufacture of felt, and soap, the former especially is made on a very large scale.

97. (Mianee is said to have been founded by two Hindoo traders, Madhoo Dass and Shib Ram, during the reign of Shah Jehan. Like Bhera, the town grew and prospered till the decline of the Moghul monarchy, and like Bhera it was plundered by Noorooddeen;) but it appears never to have entirely recovered this visitation, for the descendants of the families which then abandoned the place and took refuge in the adjoining villages, are still to be found in the latter. Mianee is an ill-built town of narrow lanes and bazaars, the upper stories of the houses and shops almost touching each other. A plan for remedying the inconveniences caused by over-crowding, by removing the old Sikh fort to the east of the town, and rendering a portion of the site available for dwelling houses, is being carried out, and when complete will be a great relief to the towns-people. (This town is the great mart for the trade in salt and the commodities (sugar, rice, &c.) for which the mineral is exchanged. It cannot boast of any particular manufactures.)

Mianee.

98. (Saiwâl, if we may believe the prevailing tradition, was founded by Gool Bahluk, one of the ancestors of the Beloch chiefs of this place, and received its name from the manager of the property, a man of the name of "Sâi" of the Jhummut caste. The town is badly built, and badly situated, being for the most part composed of a collection of mud and sun-dried brick structures, perched on a raised piece of ground, around which collects the surface drainage of the country for many miles. Great efforts are being made to provide means of exit for the mass of stagnant water which has hitherto rendered the town so unhealthy, and at the same time to reclaim sufficient space round the town to provide for the wants of the growing population. Judging from the results already obtained, there is reason to hope that ere long these objects may be realized, though at a considerable expenditure of money. (Saiwâl carries on a brisk trade in cotton, grain, and ghee, with Mooltan and Sukkhur, and its traders are also largely mixed up, as bankers, in transactions with the agricultural population of the neighbourhood, indeed many cultivate largely on their own account. The only manufactures for which Saiwâl has a name are hard-ware, and turnery in ivory and wood.

Saiwâl.

99. (There are no data for fixing with any degree of exactness the year of the founding of Khoshab, but it

Khoshab.

must be one of the oldest towns in this part of the Punjab, as it was a flourishing place in the time of Baber, and is frequently mentioned by him in his memoirs.\* It is favorably situated on the right bank of the Jhelum, about eight miles from the civil station; very little however of the old town remains, for the last fifty years the river has been gradually cutting away its right bank at this spot, and with it have disappeared the gardens of the good Ahmedyar Khan,† the fort built by Jiaffer Khan Beloch, and nine-tenths of the older houses. Under the auspices of the Municipal Committee a new town is rapidly rising, which with its bazaar thirty feet wide, and more than half a mile in length, and its open streets, promises fair to surpass in beauty and commodiousness the former one, provided only that the plans for effecting these improvements be persistently and intelligently carried out, and funds do not fail. (Khoshab is the great mart for the surplus grain of the Salt Range, and the tracts lying beyond those hills; its trade in this commodity and cotton, with Sukkhur, is very large. It is famous for its loongees; and its manufacture of coarse cloth for export to Afghanistan, gives employment to no less than six hundred weaving establishments.

Trade.

100. After what has just been written, and also in the paragraphs devoted to an account of the chief products of the district, a very few words will suffice to convey a general idea of the character of its trade. (With the exceptions of opium and sujje, which are bought up by traders from Rawulpindee, Sealkote, Cashmere, and the eastern districts, and salt, which finds its way in every direction, all the surplus produce of the district, consisting of grains of all kinds but rice, cotton, wool, ghee, and saltpetre, is sent down the river in country boats to Mooltan and Sukkhur, and in exchange for these commodities sugar of every description, rice, English piece goods, the precious metals, iron, copper and zinc, are imported; the first two from Sealkote, Goordaspoor and the tracts comprised in the Jullundhur and Umballa divisions, and the remainder by the river route from Kurrachee and Sukkhur. In addition to the above, during the cold season, mujeeth (madder), dried fruits, spice, gold coins, &c., are brought down by travelling merchants from Afghanistan, and are bartered chiefly for coarse cloth, the produce of

\* Indeed, from the manner in which Khoshab is mentioned, it is clear that the town was in existence when Baber's ancestor Tamerlane invaded Hindoostan, in which case Khoshab must be at least five hundred years old.

† The Nawab was governor of Khoshab in Mahomed Shah's time. His tomb, about a mile to the south west of the new town, is visited as a holy shrine.

the looms of Khoshab and Girôt, and, in a lesser degree, those of Bhera, Mianee and the other large towns of the district.

101. To trade naturally succeeds the subject of communications, one of the chief means by which its operations are developed. The district is now well provided with roads. The two most important lines are, (1) the road from Lahore to the frontier towns of Dera Ismail Khan and Bunnoo, traversing the civil station and the town of Khoshab; and (2) the line which, passing along the left bank of the Jhelum by the towns of Mianee, Bhera and Saiwâl, forms a link in the communications between Mooltan and Jhung on the one side, and Pind Dadun Khan, Jhelum and Goojrat on the other. Both these are good fair-weather roads, and without any great expenditure of money the former might be rendered passable by troops all the year round, a consummation which good policy certainly demands, seeing that this is the most direct route from the seat of Government to the frontier. Inferior in importance to these, but still useful in a commercial point of view, are (1) the roads which open up the Salt Range, and connect Shahpoor and Khoshab with the rich grain producing tracts about Tallagung, (2) the lines joining Kadirabad and Ram Nuggur with Mianee and the salt mines of Pind Dadun Khan, and (3) the road between the Warchha mines and Khoshab; the traffic on all these is very large, and with regard to the hill roads (which have all been planned and constructed within the last four years) it may be added, that their existence is the greatest boon to the zemindars of the Salt Range, as enabling them to carry their grain to market on their own cattle, and permanently increasing its value. The other district roads are valuable only as aids to administration, and need no special notice. The whole system of communications can be seen at a glance in the several maps that are appended in illustration of this report.

Communica-  
tions.

102. As a branch of the foregoing subject, it may not perhaps be out of place to show here what has been done to provide for the comfort of travellers. In 1862 the only shelter of any kind to be found along the roads consisted of two miserable serais, and the local committee of the district was officially condemned for its supineness in this matter. Since then systematic efforts have been made by it to free itself from the reproach of indifference to this important branch of its duties, and with such success that it may be confidently asserted that there are now few districts

Accommo-  
dations for  
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in the Punjab where better arrangements exist for lessening the inconvenience of travel. On the two principal roads a commodious serai, containing a well and ample supplies of food, will be found at every stage of ten miles, and on the Lahore road, where it crosses the Bar, intermediate wells of fairly drinkable water at every five miles distance.

## Local Funds.

103. It may be useful for reference to add here the estimated annual income under each heading of the several Local Funds, as follows :—

*Estimated income.*

1. Road fund,	.. 4,000	} liable to fluctuation.
2. Ferry fund,	.. 7,000	
3. Local agency fund,	.. 4,000	gradually decreasing.
4. Prison labor fund,	.. 720	fixed.
5. Municipal fund,	.. 20,000	liable to fluctuation.

The income of No. 3, consisting as it does entirely of the sale proceeds of nuzool land and buildings, must gradually lessen till it ceases altogether; but the decrease under this head will probably be more than made up by the slow but steady increase in the income of the other principal funds, and as the more expensive works required in the district have been completed, there will still be an abundance of money for the gradual execution of such necessary undertakings as raising and bridging the most important lines of roads, and the completion of the series of works begun for the embellishment and conservancy of the chief towns and villages.

## Education.

104. The educational institutions of the district demand also a passing notice. These consist of (I) Government Schools, (II) Indigenous Establishments. The following statement gives the details of the former, with reference to which it may be remarked that, excepting the large towns of Bhera, Mianee, Kloshab and Saiwâl, and the Salt Range generally, there is little love of learning or appreciation of its benefits, in any part of the district; in the Bar the feeling in this respect is little short of aversion, and all attempts to overcome it have hitherto failed; the lawless habits of the population of this part, are doubtless sufficient of themselves to explain this, as, in the Salt Range, owing to the almost absolute freedom from crime of the people, and their strong religious instincts, the opposite effect is seen.



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[ Part I ]

Tehseel.	Zillah School.	Town Schools.	Village Schools.				Total.	Monthly Expenditure.	Number of pupils.	Remarks.
			Female Schools.	1st Class.	2nd Class.	3rd Class.				
Bhera, ...	1	1	...	1	2	4	5	14	Rs. 348	747
Khoshab, ...	1	1	1	2	5	3	7	19	184	632
Shahpoor, ...	2	2	1	...	2	7	14	212	501	
Total, ...	1	4	3	4	7	9	19	47	741	1,880

The number of the schools it will be seen is greatest in Khoshab. The larger number of pupils in Bhera is owing to the existence of the zillah school in Bhera, and a large town school in Mianee, the pupils at these two institutions numbering 268.

105. Among the appendices will be found a statement exhibiting the state of indigenous education in the district. The character of this education is almost entirely religious; wherever there is a Musjid or Dhurmsala, there is to be found a school for teaching: in the former the Korân and other works relating to religion (Fiqua Hudees, &c.); and in the latter, "Jupjee," a portion of the "Grunth," and certain works on science and morals. The Moolla attached to the Musjid, and the Bhai of the Dhurmsala are paid chiefly in presents and fees; for instance, when a boy or girl has finished the reading of the Korân, the father gives the teacher a present, varying from five to thirty rupees, and a smaller sum on the completion of other less important works. In addition to these precarious offerings, the Moollas receive their "Wuzeefa" or daily bread, from all who can afford it, in the shape of small thick cakes, called "Gôgee." These men also officiate at births, marriages, and deaths, taking their fees according to the custom of the place. The same system, *mutatis mutandis*, is followed in the remuneration of the Dhurmsâlêeâs. In none of these indigenous schools does the teacher receive a fixed salary, or regular fees from the parents of the pupils. The land shown in column 16 of the statement referred to, consists of endowments for the support of the Musjids, and the proceeds are appropriated by the "Imâm," as the resident Moolla is called.

Indigenous education.

106. This leads me to another subject, not altogether devoid of interest, both in a statistical point of view, and from the light it throws on the character and habits of feeling of the population. I speak of their superstitious

Shrines and fairs.

107. I shall close this part of the report with a few words on the antiquities of the district. They are but few, a list of all that deserve the name will be found in appendix No. V. Of these by far the most interesting are the ruins at Umb, of what was probably a Boodhist temple, enclosed within a fort built on the summit of a hill, at the foot of which, a clear stream of water issues from a passage, lined with masonry, constructed evidently by the same hands which raised the imposing structure above. The ruins of a massive masonry dam at the entrance of the Kutha pass, evidently built to economize and distribute the waters of this torrent, are suggestive of what might be done again with advantage. This and two large "bâolees" at Bola and Wân Kyla are attributed to Sher Shah, and the tradition is not improbably true, as he is known to have passed a great part of his brief reign in the Punjab.

Antiquities.

## Part I ]

## Descriptive, Statistical and Historical.

reverence for the holy dead, their periodical pilgrimages to the tombs of saintly characters, and their belief in the efficacy of prayers offered up and vows registered on these occasions. The following table gives a list of the principal shrines, the dates on which large gatherings, or Melas as they are called, take place, and an approximate estimate of the numbers present at each of these half religious, half festive, meetings.

Number.	Locality where Shrine is situated or Fair held.	Name of Shrine.	Date and duration of fair or gathering.	Approximate attendance.		REMARKS.
				Pilgrims.	Idle Spectators.	
1	Toortepore, (6 miles south-west of Bhera.)	Peer Adhum Sooltan.	13th, 14th and 15th of Sawun.	1,000	3,000	By far the most largely attended of these, it will be seen, are the fair of Shah Shums (the ancestor of the Syuds of Shahpoor) and of Deál Bhāwan at Girôt. The meeting at the Shrine of Shah Shums of Sheikhpore is so far peculiar that the individuals composing it nearly all undergo bleeding at the hands of the Nais of Bhera, who possess the privilege of officiating on this occasion; the sick and ailing from all parts of the Punjab flock to this shrine at the appointed time, firmly convinced that the operation of blood-letting will, through the blessing of the presiding Saint, cure them of every evil.
2	Nubbee Shah (close to the above).	Shah Shalabul.	From 15th to 20th Asarh, ...	2,000	1,000	
3	Sheikhpore, (adjoins Bhera).	Shah Shums.	Two last Sundays in Cheyt and two first Sundays in Baisakh, ...	3,500	500	
4	Hazara (on the Banks of the Chenab).	Shah Shahamudee.	5th Baisakh, ..	4,000	1,000	
5	Bhera.	Peer Kayanath.	15th Phagoon, ...	1,300	200	
6	Shahpoor.	Shah Shums.	23rd, 24th & 25th of Cheyt, ...	5,000	10,000	
7	Dhreyma (10 miles south east of Civil Station).	Sooltan Hubeeb.	From 25th to end of Runzan, ...	1,000	4,000	
8	Nihung (10 miles south of Saiwāl).	Punj Peer.	1st Magh, ...	1,000	4,000	
9	Peer Subz, (6 miles north of Saiwāl).	Peer Subz.	13th Cheyt, ...	500	2,500	
10	Jehannea Shah, (close to Nihang).	Jehannea Shah.	6th and 7th Asarh,	500	2,500	
11	Girôt.	Deál Bhāwan.	30th Cheyt and 1st Baisakh, ...	4,000	8,000	
12	Khooshab.	Hafiz Deewan.	20th Cheyt, ...	2,000.	6,000	

Part II ]

The Settlement.

PART II.

THE SETTLEMENT.

108. I now come to the second division of this report, an account of the manner in which the revision of the land revenue (including grazing tax) has been effected, with all the other incidents of what is technically known as a settlement.

The Settlement the work of two officers.

109. It will be as well, perhaps, to remind the reader here, that the work has been chiefly done by two officers, at different periods, and to refer him to the introduction, where he will learn the exact share taken by each.\*

Sketch of operations under Mr. Ouseley.

110. Regular settlement operations were commenced in 1854, and vigorously prosecuted till the breaking out of the mutinies in 1857, when the establishments were much reduced and the business in this department restricted greatly. This state of affairs continued till the middle of the following year, when attention was again seriously turned to the subject, and from this time forth, until Mr. Ouseley's departure on furlough to Europe, in March 1860, the work was pushed on with energy. By that time the settlement of the three Tehseels of Bhera, Kaloowāl and Saiwāl may be said to have been completed, with the exception of the judicial business arising out of the attestation of the khuteonees of the Trans-Jhelum Talooqas of the Shahpoor Tahseel (the assessment of which Mr. Ouseley had announced only a month or two before his departure) and the completion of the record of rights of the same tract.

First portion of the work completed in 1860-61.

111. The work left unfinished by Mr. Ouseley was completed by Extra Assistant Commissioner Pundit Motee Lal, but no attempt was made to put the finishing stroke to the settlement, by extending its operations to the tracts of country transferred to this district from the districts of Leia and Jhelum, till July 1862, when this duty was entrusted to me, with instructions to report also on Mr. Ouseley's share of our joint task.

Arrangement of this part of the report.

112. It was necessary to premise the few foregoing observations to render clear what is about to follow; and I am now in a position to explain that, in giving effect to the latter part of my instructions, I shall avail myself largely of a memorandum, explanatory of the principles on which his settlement was made, kindly furnished by Mr. Ouseley at my request. The following extract refers to the assessment; it will be followed by an account of my own operations for completing the revision of the assessment of the district:

\* See para 7 of the introduction and the note at foot of the page.



## The Settlement.

## [ Part II ]

after which will come the remainder of Mr. Ouseley's memo, wherein he treats of the judicial work of the settlement and the formation of the record of rights and liabilities; and the report will close with such additional remarks as I may have to make on the same subjects, explanatory, both of the work carried on under my own orders, and of that supervised by Mr. Ouseley. In following out this programme, I shall endeavour to supply such deficiencies in the memorandum as were unavoidable, owing to the distance from all sources of information at which it was written, and the time which has elapsed since the matters with which it deals have been disposed of.

## FIRST EXTRACT FROM MR. OUSELEY'S MEMORANDUM.

113. "Previous to the establishment of the Lahore residency, that portion of the Jutch-Doab, in which the Shahpoor district is situated, used to be farmed out by the Sikh Durbar to different Kardars of more or less note. Golab Sing, subsequently the Maharajah of Kashmere, for some years held the lease of Bhera. Khuruck Sing, afterwards for a short time Maharajah of the Punjab, used to have the direct charge of the Saiwāl Tahseel, and Deewan Sawun Mull of Mooltan sometimes took the farm of the Kaloowāl Tahseel. These magnates were succeeded, in the years immediately preceding the Sutlej campaign, by men of less note, who had smaller tracts of country entrusted to them. But both they and their predecessors, as a rule, collected their rents by 'buttai,' (or division of the harvest when reaped and thrashed), or by 'kunkoot,' (appraisement of the standing crops), or by under-leasing a few villages, here and there, for a certain cash payment to some person possessing a little local importance, who again made his own arrangements for collecting his rents according to one of the above described modes. As the principal lessee held his lease subject to renewal annually, of course any contracts entered into by him were only for a similar period.

Revenue administration under Sikh Government

Farmers collected their rents by "buttai" or "kunkoot."

114. "The result of these arrangements was, that the officers who first attempted to introduce the system by which the collection of the revenue was made in cash, had very little reliable data to guide them.

Hence difficulty experienced in fixing cash assessment at annexation.

115. "It is true, that the archives of the Durbar could furnish them with the gross amount which used to be received into the Sikh treasury during a certain year for a certain tract of country; and so, again, the accounts rendered annually by the subordinate contractors seemed to show

The Sikh Durbar records uncertain guides.

## The Settlement.

[ Part II

" of twenty per cent was to be allowed. Of course, if particular circumstances seemed to require a large reduction, the English officers had the power to afford it.

119. " The term of this settlement expired in the Shahpoor district with the Sikh year Sumbut 1907, corresponding with A. D. 1850.

Term of 1st summary settlement.

120. " Mr. Lewis Bowring, an officer who produced a very favorable impression on the people of Shahpoor, and whose name was constantly in their mouths for years after his connection with the district ceased, fixed the assessments of the Bhera and Saiwâl portions of the district. The Kaloowâl portion was assessed I believe by Mr. Cocks, that gentleman's name at least was on the puttahs granted to the zemindars, but I am under the impression that he did not personally visit the district, and that owing to press of work he had to fix his assessments at Lahore.\*

Officers by whom made.

121. " The Government demand was I believe paid in full for Sumbuts 1904 and 1905, A. D. 1848 and 1849. The collections were still made from individuals in kind, but they were paid during the former year into the Sikh, and during the latter year into the English treasury in cash. In 1850 a few balances accrued, but still, owing to the high price of grain, and to other causes which have been fully explained in other settlement reports bearing on the same period, the zemindars were able to pay the greater part of the Government demand during that year, and also during the succeeding year. But towards the close of 1851, a great cry of distress arose throughout the district, and as the period of the settlement made in Sumbut 1904 had expired with the year Sumbut 1907, ( A. D. 1850 ), it was considered absolutely necessary that a revision of the demand should be at once effected.

For two years collections made without difficulty.

In the third year distress arise.

And by the close of fourth year much distress felt.

122. " As Major Birch, the Deputy Commissioner at the time, had no assistant, and the necessity was pressing, Mr. E. Thornton, the Commissioner, determined to revise the demand for the Kaloowâl Tahseel, where the distress was the greatest. He accordingly, in the course of his tour, went to the village of Mângnee in that Tahseel, and reduced the Government demand from one lac to 75,000 rupees. This assessment was commenced and finished in three days, and

The Commissioner revises the assessments of the Kaloowâl Tahseel.

\* I find on enquiry from the zemindars that although the assessments were made by Mr. Cocks at Lahore, that gentleman had previously visited the district and made himself personally acquainted with its condition. W. G. D.

## Part II ]

## The Settlement.

The cause.

"in detail the proportions in which the payments were to be credited to each village. But these accounts purported to show payments on account of revenue, and were no clue to the gross rental of each village; and when the Settlement Officer came to try and verify the accounts, by ascertaining what portion of the Government revenue had been paid by each proprietor or cultivator, the untrustworthy nature of the figures, purporting to give the Government demand in its money value, became apparent,—for it transpired that the rent of the village was taken either by 'battai,' or 'kunkoot,' the rate, by which individuals paid varying in the same village from 50 to 25 per cent of the gross output. In very few cases was I able to procure trustworthy papers, exhibiting these payments in kind, partly because it was not the custom to keep them, and partly, when they did happen to have been preserved, because the possessors were afraid to show them.

Argument continued.

116. "The grain thus collected was often made over by the sub-lessee, who had agreed to pay so much for the year's revenue of a village, to the Kardar at something under its market value. The Kardar again often received credit in the Durbar Treasury for the payment in cash of a certain sum on account of one or more villages, by complying with an order to pay certain troops stationed in the neighbourhood, their arrears of pay for a certain number of months. As these troops had been living on credit, the Kardar settled with them, by giving so much in grain to the bunnias to whom the troops were indebted for food, and so much to the troops in cash.

117. "Seeing that the value of grain is continually fluctuating, it is obvious that when the payments made in that commodity travelled round so large a circle, the figures, which in the Sikh record exhibited the revenue of a village in money, were not of much assistance to the officer who had eventually to assess the revenue.

No other data available.

118. "However, when the residency was first established, no better data than these 'jummabundees,' as they were called by the Sikh Durbar, were procurable; and, as it was absolutely necessary that the land revenue demand should be fixed for the current year, English officers were deputed all over the country, to assess the revenue of each village separately. The Government demand was to be fixed in cash, and each village was invited to enter into an engagement for a period of three years. The assessments were to be based on the Sikh returns, on which a reduction

## The Settlement.

## [ Part II ]

"ment Officer of Goojrat. Subsequently, I was placed  
 "in charge, and Mr. G. Thomson, Extra Assistant Commis-  
 "sioner, was added to the strength of the Settlement Staff.  
 "I had however still to perform my duties as Assistant  
 "Commissioner, and before long almost the whole of the  
 "revenue work of the district, comprising all the judicial  
 "work, was transferred to the Settlement department.

126. "The first step was the demarcation of bounda-  
 "ries. This measure was carried out in the cultivated  
 "portions of the district (that is to say, for a space averaging  
 "in breadth perhaps about 7 or 8 miles from the banks of  
 "the Jhelum and Chenâb) according to the principles de-  
 "fined in the "Directions to Settlement Officers." As no  
 "revenue survey had ever taken place, and this was the first  
 "attempt to define boundaries, and as the people are  
 "very litigious, there were very numerous disputes, the  
 "great majority of which were settled by Judicial officers  
 "in person. In those parts of the district under notice,  
 "the boundaries were erected without more expense than  
 "the first introduction of a measure of this nature, and the  
 "number of disputes to which it necessarily gave rise might  
 "be reasonably expected to entail. Water was always  
 "procurable, and labor, so the earthen pillars 'boorjees'  
 "and the masonry tri-junction points 'silhuddas' were  
 "erected without undue expenditure. I mention this,  
 "because the item for demarcation of boundaries is a VERY  
 "HEAVY one in the costs of the settlement, but the heavy  
 "expense arose in the marking out of village boundaries in  
 "the Bar, or small tree jungle, situated in the centre of the  
 "Doâb between the Chenâb and Jhelum, and in the 'Thull'  
 "or sandy desert on the west side of the Jhelum, which  
 "was transferred from Leia to Shahpoor.

Demarcation  
 of boundaries.

Effected with-  
 out trouble in  
 the well culti-  
 vated tracts.

127. "The demarcation of boundaries in the Bar  
 "jungle gave great trouble, not only on account of the  
 "difficulty of procuring labor and water in that thinly  
 "populated and arid tract of country, but owing to the pre-  
 "posterous claims set up by the turbulent inhabitants of  
 "the petty villages or hamlets which are to be found in it,  
 "generally at considerable distances from each other.

But atten-  
 ed with great  
 difficulties in  
 the Bar.

128. "Prior to annexation no regular recognized  
 "village boundaries existed in the Bar jungle. The tract  
 "so called, may be described as some 60 miles in length,  
 "stretching from the borders of Goojrat to the Feroka  
 "ilaqua (which formerly belonged to Jhung), and about 40  
 "miles broad at its widest part. Throughout this expanse,  
 "villages inhabited by various Mahomedan tribes, whose

General des-  
 cription of the  
 Bar.



## Part II ]

## The Settlement.

"was, humanly speaking, the means of speedily restoring  
"an almost ruined and deserted tract of country to a  
"flourishing condition.

Mr. Ouseley  
those of Bhera  
and Saiwāl.

123. "Early in 1852, I was appointed as assistant to  
"the district, and was ordered to revise the Government de-  
"mand in the Saiwāl and Bhera Tahseels. My instructions  
"were, to make the settlement for the years 1851-52, or  
"until such time when the regular settlement demand should  
"be determined; that as the year 1851 had expired, any in-  
"crease in the Government demand was to be collected from  
"1852 only, whereas any remission that was considered  
"necessary was to have retrospective effect; I was also told  
"to have the revision completed in time for the first rabbee  
"instalment.

Results of  
the revisions.

124. "Having reported at the time, on this settle-  
"ment and also on the revision made by me of the Kaloowāl  
"Tahseel demand in 1853, I need say nothing further now of  
"the difficulties which had to be overcome. It will be suffi-  
"cient, if I remark that the Government demand throughout  
"the district was by these operations reduced from Rs.  
"3,42,492 to Rs. 2,67,455,\* that this demand was collected  
"without difficulty until the regular settlement assessment  
"was determined, and that, when that assessment was  
"determined, it was found that so far from a reduction on  
"the summary settlement demand being necessary an in-  
"crease on it could be taken."

Regular  
Settlement  
operations  
commenced.

125. "In 1854 regular settlement operations were  
"commenced in Shahpoor, under the direct management of  
"Extra Assistant Mahomed Buksh, subordinate to the con-  
"trol of Mr. Temple, the Deputy Commissioner and Settle-

\* The results of the three summary settlements are shown in the following table:—

Number.	Tahseel.	Jumma of 1st summa- ry settle- ment.	Jumma of 2nd summa- ry settle- ment.	Jumma of 3rd summa- ry settle- ment.	De- crease.	Remarks.
1	Bhera, ...	1,25,164	1,14,941	1,07,579	17,585	The revenue of the Khoshab and Furooka Talooquas, transferred to Shahpoor from the districts of Leia and Juang in the years 1853 and 1854, and added to the Saiwāl Tahseel, have been excluded, so as not to disturb the comparison.
2	Saiwāl, ...	1,18,350	99,945	96,138	22,212	
3	Kaloowāl, ...	98,978	75,617	63,788	35,240	
	Total, ...	3,42,492	2,90,503	2,67,455	75,037	

Part II ]

The Settlement.

"chief wealth consisted in cattle, were to be found, very  
"often, at distances of 10 to 12 miles apart from one  
"another. Very little agriculture, and a good deal of cattle-  
"lifting, were practised by the denizens of this dry and un-  
"fertile wilderness.

Evidences of  
former pros-  
perity.

Depression  
in the water-  
level cause of  
its gradual de-  
population.

129. "Judging from the numerous mounds of earth  
"covered by loose bricks, and brittle fragments of what  
"once apparently were earthen vessels, it seems reasonable  
"to believe that at one time the Bar jungle was thickly  
"populated.\* At some remote period, the date of which  
"I could never satisfactorily ascertain, the depth at which  
"water was to be found increased considerably. There are  
"now spots in the Bar, where the brick-work of old wells  
"does not exceed 25 feet, and now, in the same places water  
"cannot be obtained within 60 feet of the surface. But the  
"increased depth at which water was to be met with, was not  
"the only hardship against which the residents of the Bar  
"had to contend; the water when found, often proved so  
"brackish that it could not be used by man or beast. There  
"is a tract now, some 18 miles in length, between the  
"Masur' well and Mangnee, on the straight road to Lahore,  
"where sweet water is not to be found.† Consequent on  
"this failure of the chief source of fertility in this country, the  
"Bar became comparatively deserted, and villages remained  
"only in those spots where sweet water was procurable.

\* There are no less than two hundred and seventy of these mounds scattered about the "Bar." It would be an interesting study for one, who had the time and taste for the enquiry, to endeavour by internal and other evidence, approximately to fix the period when all the prosperity of which these remains are indications existed. There is little doubt that the desertion of these old sites was due to gradual subsidence of the water level, as mentioned in the text. But it is not so clear when and how this occurred. Local tradition points to the time of Akbur as the period of greatest prosperity, and a similar tradition exists regarding the same state of things in the adjoining district of Rojranwalla. On the other hand, the appearance of the mounds themselves, speaks of a more remote period, and it is well known that in the time of the Greeks the whole country was richly cultivated, the author of the history of Alexander's expedition speaking of it as "teeming with population." One of the more immediate and recent causes of the depression of the water level, may be the changes which are known to have taken place in the course of the rivers Jehlum and Chenab, both having flowed, speaking with reference to this "Doab," much further inland than they now do, but this would only help to explain the effect noticed in its relation to this district, whereas the same phenomenon has been observed in many other parts of the Punjab. It is probable therefore that a general depression in the water level has taken place throughout the province, and if so the fact adds one more to the list of proofs already obtained that volcanic and other agencies are working great and constant changes in the relative levels of land and water in all parts of the globe. W. G. D.

† A new line has lately been adopted and the road made to deviate to the south, passing through Dhreyima and Mitha Luk, whereby this water difficulty has been overcome. W. G. D.

## The Settlement.

## [ Part II

120. "Owing partly to the scarcity of well water, and to the dearth of rain, which is a characteristic of the Shah-poor climate, and to the presence of trees and shrubs, on which camels feed, and to there being during some months of the year (if the fall of rain has been at all favorable) an abundance of grass,—the Bar people carried on very little agriculture, but kept up large flocks and herds.

And conversion into pasture grounds for cattle.

131. "As the villages were few and far apart, disputes about grazing ground were of rare occurrence. There was land enough for all. But sometimes a dispute took place about the right of watering cattle at a certain pond or natural tank. Two villages situated a dozen miles apart, would perhaps in a season of drought, both assert a claim to water their cattle at a tank equidistant between their villages. In the endeavour to enforce their fancied rights, a fight would ensue, and the victors would probably build a few grass huts for themselves and their cattle, in which they would reside for a couple of months and then desert the place for some better locality.

Disputes relating to right to use of water more common than claims to possession of land.

132. "The defeated party of one year often turned the tables on their adversaries in the year after, and took possession of the disputed water. Might was right, in the Bar, and beyond actual possession, there was no test by which to judge as to what lands ought to be considered as within the boundaries of any particular village.

Actual possession the only test of right.

133. "When regular settlement operations commenced, the country having been annexed some five years, and the people having had such preparatory instruction as two summary settlements could afford, the Bar zemindars, knowing our respect for prescriptive rights, determined to divide the Bar jungle among themselves. They accordingly established little out-posts, with a few men and a few head of cattle in each of them, at distances of several miles round the parent village, and proposed to encircle them all in one ring-fence which was to represent their village boundary. Had this arrangement been permitted, the result would have been, that the whole Bar jungle, which may hereafter become valuable property to the State, would have been appropriated by a few thousand cattle grazers, whose annual contribution of revenue does not in the aggregate exceed 40,000 rupees.\*

Clever expedients resorted to by the people to obtain large grazing grounds.

134. "To show how preposterous were some of the claims raised, I may mention that the present area of

Instance of exaggerated claim.

\* The actual sum is 33,472 rupees. W. G. D.

## Part II ]

## The Settlement.

“ Mouza Luk, after converting large tracts (originally included by the zemindars in their boundary) into Government rukhs, still amounts to 40,000 acres.

The principle for defining boundaries determined on.

135. “ After much deliberation, it was arranged, with the sanction of Mr. E. Thornton the Commissioner, that the demarcation of boundaries in the Bar, should be carried out on the same principle as had been adopted in Goojranwala. The villages were called on to state how many head of cattle they possessed, and they were allowed a certain quantity of waste land (I think four acres) per head.

How applied in practice.

136. “ The quantity of land that each village was entitled to being once settled, every effort was made to draw out boundaries with a due regard to existing possession, and where possession did not exist to prevent it, the village area was made of as compact a shape as was feasible.

The work obstructed by the Bar men.

137. “ But so averse were the Bar men to this arrangement, that they threw every obstacle in the way of the persons employed for the demarcation of their boundaries, and the native establishments were unable, during the months of June, July and August, to traverse the long distances, and to endure the great exposure to heat and thirst, which this duty required; the work therefore progressed slowly, had often to be done twice and thrice over, and cost a great deal of money.

Putwarees' circles.

138. “ While the Hudbust operations were still in progress, the ‘Hulkabundee,’ or arrangement of villages into circles for putwarees, was carried out. This prepared us to commence the measurements.

Error of employing strangers in the measurements.

139. “ And here I beg to be allowed to observe, that no greater error can be committed in the course of a settlement, than to have villages measured by any one except the village putwaree.

Reasons for preferring the village putwaree.

140. “ If he is acquainted with the villages to which he has been appointed, so much the better; even if he is a stupid man, his local knowledge will save him from falling into errors which the sharpest Ameen is unable always to guard against.

141. “ But even if he is a man totally unacquainted with the village, it is better to have all the village papers, shujrah, khusras, khuteonee and khewut, prepared by one man or by two men, putwarees of neighbouring circles, than to have them drawn up by different persons.



## The Settlement.

## [ Part II

142. "Under the one system responsibility can be enforced. Under the other it cannot. The putwaree knows that he will have to work the papers he is preparing, that he will have to explain them constantly in Court, and be ever liable to be called to account for any wilful mistakes, which may at any time come to light in the papers which he prepared; but when papers are prepared, some by one and some by another person, and then handed over to the putwaree at the completion of the settlement, the result is always unsatisfactory. In the first place, the putwaree does not understand the papers, and when an error is discovered, it transpires that the man who made the wrong entry in the *khusra*, or who understated the cultivated area, has left the Punjab for Oudh, whilst the person who made the false entry regarding the ownership of a certain field, was the putwaree of a village some sixty miles away, and could not be expected to know who was, and who was not, the proprietor.

143. "In appointing the putwarees, care was taken to select men who could read and write "*Oordoo*," and rupees 100 per annum was as a rule fixed as their minimum salary.\* This was levied by a rate of three (3) per cent. on *malgoozaree*. It would have been better if this three per cent had been calculated on the net assets of the village.

Putwarees  
how selected,  
and the rate  
of remunera-  
tion fixed.

144. "In the Bhera tahseel the work of measurement was commenced by collecting all the putwarees at one corner of the tahseel. They were told off into pairs: over every three measuring parties, was an *ahilkar*, on Rs. 15 per month; over every three *ahilkars* a *moonserim* on Rs. 30; and over the whole tahseel a *sudder moonserim* on Rs. 60 per mensem. But after a while the system not being found to answer, the putwarees of two neighbouring circles were made to measure the villages in their own circles, and the result, I am confident, is that as much accuracy was secured as could be expected, when the nature of the agency, the state of ignorance of the agricultural population, and the novelty of the work to be executed, are taken into consideration. The supervising agency continued on the scale which I have just described.

Measure-  
ments how  
conducted.

\* There are 76 putwarees in the two tahseels of Bhera and Shahpoor, their salaries amount altogether to 8143 rupees, or an average of 107 rupees to each. The highest pay received by any one putwaree is 154 rupees, and the lowest rupees 85. W. G. D.

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## The Settlement.

145. "The survey and measurement were of course made on the plane table.\*

The tests to which they were subjected in the field.

146. "Every ahilkar was obliged to test a certain number of fields in each village, and to file with the 'khusrah' the list of these fields, and all particulars regarding them, which he had ascertained by his own measurement and enquiry, and each moonserim had to test the 'purtal' lists furnished by the ahilkars. In addition to this, the officers in charge of settlement operations, frequently drew a line across the shujrah, and made the moonserim test the entries regarding each field traversed by that line; subsequently, the supervising officer tested some of these fields on the spot, and so ascertained if the moonserim's 'purtal' was bonâ fide or otherwise.

The results are collated.

147. "As soon as the villages were measured, the total area, showing in detail the amount of each sort of land, whether cultivated, uncultivated, fit for cultivation but lying waste for a short or long period, sterile, &c. &c. was drawn up, and forwarded to me. And now I was able to subject them to a test which is of great value, and which is only available in districts where the revenue and unprofessional survey are carried on simultaneously.

With the revenue survey maps.

148. "I compared my shujrahs and totals with the revenue maps and totals, which I had got from the surveyor direct, and which I never allowed any one else to see until I had made my comparison. Where I found the two agree, or no greater discrepancy to exist than three or four per cent in jungle land, I passed the putwaree's work.

Other tests applied to ensure accuracy.

149. "But the above was merely a general test, a detailed test was carried out in the vernacular office, by what is called the 'muhâz meelân,' which operation consists in comparing each entry in the khusrah, to ascertain if the sides constituting the common boundaries between adjoining fields correspond. The entry respecting the east side of one field, was compared with the corresponding entry regarding the west side of the adjoining field, and so on for each side of every field.

\* The shujras were drawn to a scale of 50 kurms to the inch in the Bhera pergunnah, and 60 kurms to the inch in the Shahpoor pergunnah. The latter, equivalent to 5 chains, is the more convenient as being exactly four times the scale on which the revenue survey village maps are executed. I cannot refrain from remarking here on the beautiful finish of these maps, and as far as I have had occasion to examine them, their correctness. W. G. D.

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150. "After this, the 'suffawar mizans' and the 'jins-war' totals having been prepared, the assessment statistics, materials for which were collected during the progress of the measurements, were thrown into a tabular form, a specimen of which can be found in the appendices to this report. I need only state here, that in addition to the usual details regarding area and means of irrigation, it also contained particulars regarding the number of ploughs, and of houses in each village.

Assessment statistics how prepared.

151. "Before stating the considerations which chiefly guided me in making my assessments, I will allude to certain points to which I believe considerable importance is attached under certain circumstances, and my disregard of which requires therefore some explanation.

152. "First as regards soils. Having at that time been between four and five years in the district, during which period I had been twice employed in revising the summary settlement, and had had almost all the revenue work of the district placed in my hands, I ascertained that the people recognized as a rule no differences of soil except such as were based on the existence or otherwise of irrigation, and on the capacity which each kind of soil possessed of retaining water for a longer or shorter period.

Popular classification of soils.

153. "This mode of distinction was in vogue both in a general way of speaking, and in making more detailed comparisons. Thus, the popular opinion divided the whole land of the district, as regarded its agricultural capabilities, into three great classes, viz. 'hitar' or the low lands liable to the inundations of the rivers; 'ootâr,' or the high land in the 'Bar' jungle, where the water was from 60 to 90 feet from the surface; and 'nukka,' or that strip of land situated between the very low and the very high land.

The recognized main divisions.

"Hitar."

"Ootâr."

154. "So again in separate villages, the lands were classed as either 'sailaba' land, subject to the inundations of the river, 'chahêe' land, that dependent on wells for its irrigation, and 'baranee,' or land on which the crop was dependent on the fall of rain.

Sub-divided into "sailaba" "chahêe" "baranee."

155. "Knowing that this was the case, I thought that if the distinctions of soil then in fashion amongst Ameens, and native settlement agency in general, were allowed to be introduced amongst people who did not understand them, and were not influenced in their own transactions by them, that I should be opening the door

Reasons for adopting this classification.

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The Settlement.

"for a good deal of petty chicanery, and fraud. Consequently, I had the lands entered in the 'khusrah' and assessment papers, only under the heads of 'sailaba,' 'chahee' and 'baranee.' The chahee was divided into two classes 'chahee sailaba,' i. e. land irrigated by wells, but also having the advantage of being subject to inundations from the river; and, 'chahee khālus,' or land irrigated *only* from wells.

Produce jummas.

156. "I must now refer to the non-preparation of what are called 'jinswar,' or produce jummas.

Mode of obtaining them in vogue.

157. "These papers are, I believe, prepared by multiplying a certain number of acres by a certain number of maunds of grain or other produce of the soil, and then converting the total so obtained into its equivalent money value at the average market rate of the produce, spread over a certain number of years.

Reasons for abandoning this test.

158. "But when it is remembered that, however careful may be the scrutiny and calculation on which the average produce of an acre of ground is fixed, still it is quite possible that the result thus obtained is not quite correct, that it is in all probability a few seers over or under the proper mark, that it is not improbably as much as one-sixth or one-eighth wide of the mark, and that this error, which appears trifling when viewed in connection with one acre, swells to very great and serious error when it is multiplied by thousands of acres—and that this grave error is likely to be still further magnified, when it is multiplied by a sum professing to represent the average price of a certain article over a period of say 20 years, and which sum it is more than probable is an anna or two in the rupee wide of what it ought to be, I think it will be allowed that the preparation of produce jummas involves more trouble than they are worth, and is apt to effect more harm than good.

Difficulty of obtaining reliable data.

Argument contained.

159. "As far as my experience extends, I have found that the Ameens very soon understand the amount which produce jummas ought to exhibit, and that these papers are more cooked than any other that are turned out during the course of the settlement.

The importance of ascertaining average produce of land admitted.

160. "But although I did not allow these elaborate and voluminous calculations, which are supposed to represent the net assets of a village in kind, to be drawn up, I was not unmindful of the necessity of ascertaining, as nearly as I could, the probable out-turn of an acre of



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"good, bad, and middling land. I tried to attain this end, both by incessant verbal enquiries, and by actual experiment. It would appear that in a district where the system of 'kunkoot' was well understood by most of the village 'dhurwaeis,' although it is condemned on religious grounds by the stricter Mahomedans, that I ought to have been able to obtain, easily, tolerably accurate information as to the average out-turn of each description of soil; yet it was not so, natives are very nervous regarding the subject of such enquiries, and I could only get vague answers, the result of which was a sort of general admission on the part of my informants, that if the soil was very good, and the harvest very excellent, twelve maunds of wheat or barley might be got out of a 'beegah' of land.

Difficulties experienced in the search for this information.

161. "I succeeded in getting hold of some authentic kunkoot and buttai papers of villages, with the soil of which I was well acquainted, and from examining these, I was able, as the papers shewed the transactions of five or six successive years immediately preceding the annexation, to form a not untrustworthy estimate of the average out-turn of land situated in certain localities, with reference to capability for being irrigated.

Assistance obtained from old village records.

162. "It was a fortunate circumstance in making my calculations, that the local beegah is as nearly as possible half an English acre. The weights and measures gave a little trouble, for it often happens, that the 'topa' or 'chowbeena' differs not only in different Taliseels but in the villages of the same Taliseel.\*

Fortunate coincidence between local and English measures of area.

163. "On two occasions, I had the ripe wheat contained in a beegah of land reaped, threshed, and divided between the cultivator and proprietor after deduction of the usual cesses, before my eyes, as I never quitted the spot from the time when the first sickle was put in, until the time that the division was effected, I can rely on the result of my experiment on each of those occasions. The

Actual trial instituted with same object.

\* The "topa" is a wooden measure containing nominally 2 seers, but as Mr. Ouseley remarks its actual capacity varies very much. In the Bhera Talooqua it holds exactly two seers, in the Bar Moosa Talooqua  $1\frac{1}{2}$  seers. In the Kuloowal, Moosa Choocha, and Midh sub-divisions, 1 seer 10 chitaks is the average capacity. In the Mianee Talooqua  $1\frac{1}{2}$  seers. In the Lukchawa Talooqua 1 seer 14 chitaks. But throughout the Shahpoor Purgunnah, with a few exceptions, two seers is the rule. All agricultural transactions are regulated by this standard of measurement, of which the following is a complete table :—

4 Purôpees=1 Topa.  
4 Topas=1 Paiec.  
5 Paiecs=1 Maund.

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“ zemindars were very averse to my testing the out-turn of  
 “ a beegah with a good crop on it, so I allowed them to  
 “ select the field themselves. My object was not to try and  
 “ find out how much could be got out of a ‘ beegah ’ of land,  
 “ but rather what was the *minimum* out-turn of a bad beegah  
 “ of ‘ chahee ’ land in my best ‘ chuck ’ or assessment division.  
 “ Possessed of this knowledge, I was pretty well guarded  
 “ against the danger of over-assessment, and as the highest,  
 “ which is equivalent to saying the *worst*, ‘ chahee ’ in the  
 “ best chuck was equal to the ordinary chahee of the  
 “ nukka chuck, or belt of land lying between the ‘ Hitar ’  
 “ and ‘ Ootar ’ chucks, I was able to form a tolerably accu-  
 “ rate estimate of what the out-turn of a beegah of land  
 “ in that chuck ought to be.

Data so ob-  
 tained receiv-  
 ed due consi-  
 deration.

164. “ This explanation will, I hope, show that  
 “ although I did not prepare intricate and alarmingly elab-  
 “ orate arrays of figures, professing to represent the net  
 “ assets of a purgunnah, and of each village in that pur-  
 “ gunnah, in kind, and in the money equivalent for the  
 “ produce shown, still the importance of obtaining reliable  
 “ information regarding the average out-turn of a acre of  
 “ each class of soil, was not under-estimated by me, and  
 “ that the information so collected had a due share in the  
 “ considerations which influenced me in fixing my assess-  
 “ ment rates.

The result of  
 these enqui-  
 ries.

165. “ The result of these enquiries was to show me,  
 “ that ‘ after deducting the usual cesses, such as ‘ huq-  
 “ malikana,’ ‘ huq-kummeena,’ ‘ wuzunkushee,’ ‘ huq-ool-  
 “ meerasee wa oolimâ,’\* there still remained close upon  
 “ four maunds of grain. Taking one-fourth of this as repre-  
 “ senting the Government share, and converting it into  
 “ money at the low rate of one maund of wheat for the  
 “ rupee, I got a produce rate of one rupee per beegah for  
 “ the worst chahee land, in the best chuck, and for the  
 “ ordinary chahee land of the rest of the district.

Rent-rate not  
 generally as-  
 certainable.

166. “ Having obtained a produce rate, I endeavoured  
 “ to ascertain rent rates for each kind of soil. Owing to the  
 “ tenures being almost entirely bhyachara, and it being the  
 “ custom for proprietors to take rent in kind from their  
 “ tenants, I was unable to collect such a mass of data

\* Note—This allowance is sometimes called “ yulk rusool,” and consists of two “ topahs ” in the maund, separated off before the division of the produce between the proprietor and cultivator takes place. The perquisite being only claimable by the family meerasee of the original founder and his descendants, its receipt is looked upon as a infallible test of the hereditary title of the family of which the recipient is a dependant. W. G. D.

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"regarding prevailing rent-rates, as would have justified me in making a wide and general application of such rates to large areas, but still I was able to collect waifs and strays of information here and there, which guided me towards forming an idea of what the annual rent of each particular kind of land would probably be, were money rents to be generally substituted for payments in grain.

Approximation to rent-value of land nevertheless obtained.

167. "The chief sources whence I gathered information on these points, were the summary suits between co-sharers, and between land-lords and tenants, and *vice versa*, in the investigation of which I was largely employed during my residence at Shahpoor. There is also a tenure in Shahpoor, which is to be found in Jhung, and Mooltan, by which parties who have no share in the proprietorship of the village and are not admitted to an audit of the village accounts, hold a plot of land at a money rate, which was fixed by the Kardar in charge of the ilaqua, and was not subjected to variation without his sanction. After the summary revision of the Government demand, it often became a question, how much the holders of these plots of land, called puttadars, ought to contribute, and of course this could not be determined without arriving at some conclusion as to the rates which might be considered fair and equitable in that neighbourhood. Lastly, there are a great number of these puttai wells in the neighbourhood of the cities of Bhera and Saiwāl. Many of these are held by rent free holders, who rented them out to farmers.\* I was unable to ascertain the terms of some of these leases, and after making due allowance for the vicinity of a large city, and the description of crops grown in consequence thereof, I was enabled to arrive at conclusions, which I think were not incorrect, regarding the equitable rent-rate for each description of land.

Sources whence information gathered.

168. "Feeling however, as I have hinted above, that my information regarding rent-rates was not collected from

Insufficient of itself.

\* In a subsequent letter to my address Mr. Ouseley writes as follows "of these tenures :—"The assessment of the puttai wells gave me a great deal of trouble. In villages where only one or two of these wells were to be found, their owners were allowed to pay by revenue rates, subject to a malikana if it appeared that they had been in the habit of paying any malikana. But they were told that their tenure in the land in case they paid malikana would only last as long as their well lasted. If the well from any cause should cease to exist then their connection with the land would cease also." The above refers only to those cases where the proprietor of the well and of the land were different persons, besides these there were a great number of wells for which the proprietors during the Sikh rule paid a fixed sum in cash, this arrangement was allowed to remain undisturbed until the regular settlement, when the puttai was cancelled and the wells came under assessment on the same footing as the rest of the village lands. W. G. D.

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Hence another process tried.

Villages classified with reference to facilities of irrigation.

Incidence of existing assessment ascertained.

Revenue rates deduced therefrom.

" a sufficient number of instances to warrant my deducing revenue rates from them, and from them only, I determined to try and get my revenue rates by another process, keeping the blue which I had obtained, respecting rent-rates, as a guide and check on the result of my other calculations.

169. " Having been several years in the district, I found no difficulty in classifying the villages of each tahseel under the heads of 'hethar,' 'nukka' and 'ootar.' This was not done merely from the map, but from frequent personal observation of the situation of each village.

170. " This classification being made, I selected (as from my intimate knowledge of them I was easily able to do) a fair number of villages representing each of the above descriptions of land, which I knew paid the Government demand with ease and punctuality, and observed at what rate the demand fell on the malgoozaree area. I also noticed the rate at which the Government demand fell on the malgoozaree area of those villages which were notoriously under and over-assessed.

171. " From these calculations, made separately for each Tahseel, I deduced revenue rates, particulars regarding which will be found in the subjoined tabular statement :—

Name of Tahseel.	Name of Chuck.	RATE PER ACRE OF						REMARKS.
		Chahee.				Sailab.	Baranee.	
		Sailab.	Khalis.	Sailab.	Baranee.			
Bhera, ...	Hethar, ...	2 8	1 12	1 12	...	...	34 villages of this Tahseel have since been transferred to Shahpoor and 131 villages received from Tahseel Kalowāl.	
	Nukka, ...	...	1 10 to 1 12	...	...	8		
	Ootar, ...	...	1	...	...	8		
Saiwal (now Shahpoor),	Hethar { 1st class,	2 4	1 12	1 12	...	...		
	2nd ,,	2	1 8	1 4	...	...		
	Nukka, ...	...	1 10 to 1 12	...	...	8		
	Ootar, ...	...	1	...	...	8		
Kaloowal, ...	Hethar { 1st class,	2 4	1 12	1 8	...	...	This Tahseel has since been broken up, part going to Bhera, the rest (138 estates) being transferred to Jhung.	
	2nd ,,	2	1 8	1 4	...	...		
	Nukka, ...	...	1 12	...	...	8		



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172. "But these revenue rates having been ascertained, the results which they gave for each village were not blindly accepted. The rates were considered merely as a reasonable method for arriving at an approximately fair Government demand. That demand was not fixed, until it had been tested by the light of the produce and rent-rates, by the number of ploughs and wells in each village, by the quantity of land which, though entered as cultivated because it was ploughed up, was nevertheless, according to the agricultural practice prevailing in certain parts of the district, allowed to lie fallow for a year, by the number of cultivators in each village, and generally by the circumstances and status of the inhabitants of each village, facts with which, owing to my long residence in the district and continued employment in the revenue work connected with it, I was well acquainted.

Results so obtained not implicitly relied on.

173. "In order to explain how I worked out my jummas, I will take the first village on the Tahseel Saiwâl, Hethar chuck register, Mouza Bukkhur. This village contained a cultivated area amounting to 1,916 acres, thus :  
"In the 'Boord Buramed' chuck, 21 acres (being trifling in amount I applied no rate to this)

Mode of working out jummas explained.

" Chahee sailab	" 181 acres × 2½ Rs. =	452
" Chahee khalis	" 954 " × 1½ " =	1,668
" Sailab	" 760 " × 1½ " =	1,330

Total Rs. 3,450

"But I knew that the jumma shown by this process was much too low. I knew that before the annexation the village used to pay Rs. 4,736 and Rs. 4,425, and that since the annexation it had paid regularly and easily Rs. 4,000. I also knew that there was a large amount of Bela land, (waste land on the bank of the river), which owing to disputes could not be broken up, but which would be cultivated immediately that the settlement papers were ready. This land situated in the 'Hethar' chuck amounted to some 867 acres. I knew that most of the area said to be under cultivation was actually under crop during the year, and that only some 261 acres had remained fallow during the year. I also knew that the village was famous for its fine crops of poppy. Lastly, the Tahseeldar, and Extra Assistant Commissioner Motee Lall, speaking independently of each other, thought the Government demand ought to be Rs. 4,500 per annum. Putting all these considerations together, I fixed the demand at

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"Rs. 4,400. This explanation will I trust, with the help of the different papers, explain the 'Hethar' and 'Nukka' 'Chuck' assessments. But the Bar jummas require something further to be said about them.

Peculiar circumstances that influenced assessments in the Bar.

174. "In the Sikh time the Bar jungle villages paid a lump assessment, which was composed of a land tax, cattle tax and house tax.\* The inhabitants used also to pay another cess called 'Furohee.' The amount of this tax was very variable, and indeed its collection, as far as I could ascertain, was accompanied with trouble. It was supposed to represent 25 per cent of the value of the property annually stolen by the inhabitants of any particular village. However this was an irregular source of income for the Kardar, and was not included in the official jumma-bundee, consequently it formed no part of the data on which the assessments of the summary and regular statements were fixed.

System pursued during first summary settlement.

175. "When I made the first summary settlement of the Bar villages in 1852-53, Mr. E. Thornton, the Commissioner, instructed me to assess what was fair on their cultivated area, and then to number their cattle, and dem and 'tirnee' or grazing tax for them, at certain rates for each different kind of cattle. It was the Commissioner's wish, that the cattle having been once numbered, and the amount assessable on them having been ascertained, by the application of certain fixed rates, the sum demandable from any one village should be estimated in the lump, and on condition of a village engaging for the payment of its grazing tax for three years, that 18 or 20 per cent was to be deducted from the sum so ascertained in order to allow for losses by death, straying, stealing, &c. The village cattle owners having engaged with the Government collectively were to be left to lay their 'bachh' amongst themselves as they thought best.

Reliable enumeration of cattle found impracticable.

176. "But when it came to the point, it was found to be most difficult, if indeed it were not impossible, to make a tolerably reliable enumeration of the cattle of each village. The Bar villagers are almost all connected with each other by relationship or marriage, and they used to shift their cattle, not only into each other's villages, but even into the neighbouring districts of Jhung and Googaira. Their account of the mode in which their revenue used to be

\* Practically this is still the case, as the proprietors in distributing the jumma fixed by Mr. Ouseley have assigned a portion to each of these three headings. For further particulars relating to this subject see para 283 of this report.

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" collected, was to the effect, that in the rubbee they had to  
 " pay Rs. 21 per well for the land cultivated on each different  
 " well, and grazing tax at the rates of—

Rupee 1-0-0 per head of buffaloes.

" 0-8 ans. „ of cows.

" 1-0-0 per 14 head of sheep or goats.

" In the khureef they paid one rupee per beegah, *not on*  
 " *all the land which they might have sown with seed*, but on all  
 " the land which produced crops fit for cutting, and they  
 " paid a house tax varying from one to four rupees per  
 " house, according to circumstances.

177. " It became apparent to me, that if I fixed the  
 " amount demandable on account of land, at revenue rates  
 " suitable for the land of the Bar jungle, Government  
 " would be great losers; and, accordingly, I determined to  
 " reduce the original jummas, only so far as according to  
 " the result of my local enquiries seemed to be necessary,  
 " and to call the amount so fixed a lump assessment, the  
 " distribution of which over land, cattle, and houses was  
 " left to the villagers.

The alterna-  
 tive adopted.

178. " When the regular settlement came to be fixed,  
 " it was necessary to face this question of the separation of  
 " land revenue from grazing tax; but, owing to the extent of  
 " area within each village having been definitely ascertained  
 " by the demarcation of boundaries, a solution presented  
 " itself.

Separation  
 of land reve-  
 nue from tir-  
 nee necessary.

179. " The Bar villages had been told, that in mark-  
 " ing out their boundaries they would receive grazing land  
 " proportioned to the number of their cattle.

How this  
 was effected.

180. " When the time for assessment came round,  
 " they were told that their cultivated area would be assessed  
 " at a certain rate, which would determine their contribu-  
 " tion to the land revenue, whereas their jungle area would  
 " be taxed at another rate, which although it might be  
 " called land revenue, would more strictly represent what  
 " they paid on account of the number of cattle which they  
 " possessed. If they had as much cattle as they professed  
 " to have, they could easily pay for their jungle area. If  
 " they had not cattle proportioned to their jungle land, I  
 " told them to keep as large an area of jungle as they felt  
 " inclined to pay for at my rates, and that any land in  
 " excess of what they so paid for should be excluded from  
 " the area of their village and converted into a Govern-  
 " ment rukh.

Explanation  
 continued.

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Rates adopted.

181. "To the best of my recollection, I fixed the revenue rate for chahee land in the Bar at one rupee per acre, and I assessed the jungle land at one rupee for every 20 acres.

Assessment statements to be referred to for particulars.

182. "What I have written will I hope explain the object with which each of my tabulated statements were prepared, and an examination of these statements, will I trust throw light on the reasons which guided me in fixing the assessment of any particular village; but these papers must be looked on as a whole, and too much weight must not be attached to any one of them viewed by itself: for instance, if it appears that the jumma for any village as deduced by the revenue rates is much higher or lower than the jummas ultimately fixed, let the paper which shows the number of wells and ploughs in each village, the average quantity of land cultivated on each well, the number of cultivators, the previous demand, the ease or difficulty with which that demand was realized, &c. &c., be looked into, and the desired explanation will probably be found in some or other of them.

Illustrations.

183. "Thus, if the cultivated area of two contiguous and similarly situated villages, be shown to be 100 acres each, the number of wells in one 10, and in the other 6, the chances are, (particularly if there was formerly a difference in the amount of revenue paid by each) that I should fix the jumma of one village at a lesser figure than I should assess on the other; for this reason that, though the cultivated area appeared to be equal, still it was most probable that the crops produced on the 10 wells would be stronger and better than the crops produced on an equal quantity of land watered from only six wells.

Apology for absence of more detailed information.

184. "I have now explained the principles by which I was guided in making my assessments. If this exposition of them sounds general and vague, I can only say that at this distance of time and place, and pressed as I am for leisure by the nature of my present duties, it is impossible for me to be more precise or minute; and as I am obviously (owing to the time which has elapsed since my connection with the Shahpoor district ceased) writing under disadvantages, I hope I may be allowed to reap any benefits that the lapse of time may have created in my favor.

General result of the re-

185. "The Government demand as fixed by me at the regular settlement showed an increase on the summary



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"settlement demand.\* This was not the case with regard vision of as-  
 "to most of the settlements effected at that period. I am sessment.  
 "not aware that the assessments framed by me have to any  
 "considerable extent been found erroneous, or that the  
 "measurement papers and record of rights on which pains  
 "were bestowed, have in many instances been found  
 "incorrect."

186. Here ends that portion of Mr. Ouseley's memo. Observations  
 which is devoted to a description of the settlement operations on general  
 as far as the determination of the Government demand; but character of  
 before proceeding to explain how my share of the same work Mr. Ouseley's  
 was done, I may add my testimony, to which four year settlement.  
 experience in the district will perhaps lend some weight, that  
 the assessment made by Mr. Ouseley is a fair one, and that,  
 if he erred at all, it was on the side of leniency, more especi-  
 ally in the Bar, from which no doubt double the existing  
 revenue could be obtained without much difficulty; it must  
 not however be forgotten, that, when Mr. Ouseley made his  
 assessment, the country was not in the prosperous condition  
 in which it now is, and that the small fixed revenue obtained  
 from this tract is supplemented by the annually increasing  
 income from grazing leases in the rukhs, which were for the  
 first time created during his settlement.

187. It will contribute materially to a clear under-  
 standing of what follows, if I now show what portions of the  
 district, as it is now constituted, remained unsettled when  
 Mr. Ouseley left it in 1860.

\* The following are the figures in continuation of the information con-  
 tained in the tabular statement at foot of page 59.

No.	Tahseel.	Jumma of sum- mary set- tlement.	Jumma of regu- lar set- tlement.	Increase.	Decrease.	REMARKS.
1	Bherna, ...	1,07,579	1,04,658	...	2,921	Balancing these last two columns gives an increase of Rs. 3,386. The increase was caused chiefly by the formation of new estates, the decrease was due to reduction of jumma in existing villages.
2	Shahpoor,	96,138	1,02,120	5,682	...	
3	Kaloowāl,	63,738	64,363	625	...	
	Total,	2,67,455	2,71,141	6,307	2,921	

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Details of  
tracts remain-  
ing to be set-  
tled.

188. The various changes that took place during the period that Mr. Ouseley remained at the head of affairs, and in the two years following his departure, have been detailed in paras. 8 to 12 of the introduction. It resulted from these, that when I took charge, the work of revision had to be extended to the following tracts, all in the Khooshab Tahseel :—

## IN THE SALT RANGE.

The Soon Talooqua,	19 villages, jumma	Rs. 30,910
The Khubbukkee „	6 „	„ 9,134
Part of the Noorpoor „	6 „	„ 6,801
Do. of Mitta Tewana	3 „	„ 1,525 48,370

## IN THE PLAINS AT FOOT OF SALT RANGE.

The Kutha Talooqua,	19 villages, jumma	Rs. 10,800
Part of Ahmedabad „	6 „	„ 11,224
The Mitta Tewana „	21 „	„ 30,578
The Noorpoor „	18 „	„ 8,769 61,371

Grand Total Rs., 1,09,741

The previous history of these tracts has been given in the first part of this report, but a few words may here be devoted to describing the revenue administration during the same period.

These tracts  
by whom held  
during Sikh  
rule.

189. The Mitta Tewana, Noorpoor and Soon Talooquas, as before explained, formed part of the jageer of Hurree Sing Nulwa. After the death of this leader, the two former were transferred in farm to Mullick Futteh Khan Tewana, and were held by him, with but few interruptions, till his death in 1848. At the same time, the Soon Talooqua was for a year or two given in farm to Raja Goolab Sing, who, at this time, held the contract for the greater part of the district, and afterwards transferred in jageer to Sirdar Goormookh Sing Lamba, as described in para 93.

The same  
continued.

190. The Khubbukkee and Kutha Talooquas were, for many years, the jageer of Hurree Sing Muzbee, from whom they passed to Maharaja Khurruck Sing; the former in 1822 and the latter in 1825. On Khurruck Sing's elevation to the throne they were given to Sirdar Shumsher Sing Sindhanwaleea as part of his jageer, and so remained till annexation.

The same  
continued.

191. The Talooquas of Ahmedabad and Noorpoor Sehti, went through many hands, among others Raja Goolab

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Sing held the contract of the former for ten years from 1833 to 1843; and from 1844 to 1846, it formed part of Raja Heera Sing's jageer, while the latter for nineteen years, viz. from 1818 to 1837, constituted the jageer of Sirdar Ram Sing Billee, a native of Bhagpoor in the Manjha.

192. The management in all cases was identical; the jageerdars, being foreigners, seldom resided on the spot, hence everything was left to the resident manager or kardar, and as his tenure of office was often very precarious, he generally extorted as much from the zemindars as he could. The collections were made by that most iniquitous of systems, appraisement of the standing crop, or "tip" as it used to be called here, by which the heaviest share of the common burden was nearly always made to fall on the shoulders least fitted to bear it, because forsooth, the owners were unable to bribe the kardar or his underlings into making a favorable estimate of the probable out-turn of their fields, as their richer brethren did. 'Battai,' a far fairer mode of collection, was only resorted to in favor of individuals whom the kardar wished to humour, or in respect of lands, of which some portion of the state or jageerdar's share of the produce, had been temporarily alienated as a concession to the leading members of the agricultural community.

Revenue administration during the same period.

193. The first summary settlement was made by Mr. L. Bowring, and, seeing what insufficient and unreliable data he had to work with, the rapidity with which the assessments had to be made, and how obviously it was the interest of the jageerdars, whose income would be affected by the arrangements made, to mislead, it is rather a matter of surprise that the first settlements worked so well, than that considerable inequalities in the assessments were subsequently discovered. Other causes also which, after all that has been written on the subject, it is unnecessary to repeat, combined to render revision necessary before long; and this was accordingly effected in 1852 by Major C. Browne for the talooquas afterwards received from Jhelum; and in the following year, by Mr. David Simson for those which then formed part of the Leia district. The result of these revisions was a considerable reduction in the assessments of the hill talooquas, but more especially in regard to the jummas of the villages lying along the north of the Soon valley. The assessment of the Mitha talooqua was also somewhat reduced, while that of Noorpoor was raised by nearly thirty per cent.

First summary settlement.

194. This second summary settlement worked tolerably well; but still it was known that the assessment of the

Second summary settlement.

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Salt Range villages was somewhat oppressive, and, from time to time relief was given in the most glaring cases. This settlement was ostensibly made for two years only, but soon after this term had expired, the mutinies broke out, and before the finances of the country had recovered themselves sufficiently to allow of measures entailing extraordinary expenditure being undertaken, the Leia district was broken up, which led to further delay, and thus it was that no steps were taken for some time to place the assessment and the rights of property on a sound basis. It must not however be omitted from mention that Mr. Parsons in 1860 revised the Government demand in the Noorpoor talooqua; the result was a slight reduction; but a more important change was made in allowing the proprietary body in each village to engage separately for their own revenue, instead of the plan which had been in force up to that time, by which the Tiwana Mullicks had alone been responsible for the payments of the whole talooqua.

Demarcation  
of boundaries  
in the Salt  
Range.

195. The demarcation of boundaries preliminary to regular settlement operations had been completed everywhere but in the Noorpoor talooqua when I took charge of the district and settlement. In the tracts received from Jhelum this important operation had been carried out under the orders of Mr. A. Brandreth, by Gholam Hussun, one of his superintendents, as described by the former officer in paras 85 to 89 of his admirable report, where the principles on which this work was done are also fully explained.

In Mitha  
Tiwana.

196. In Mitha Tiwana the same work was commenced in 1856 by one Rowshun Ali, but owing partly to the state of parties in this tract, and partly to the breaking out of the mutinies, it was not completed till Mr. Ouseley put the finishing stroke to the operation during the cold season of 1858-59. An extract from a letter written by him at the time may be appropriately introduced here, as showing the difficulties experienced by him, and the plan advocated and ultimately adopted for their removal.

Description  
of Mitha Ti-  
wana ilaqua.

197. "The inhabitants of these villages cultivate but little land, as the soil is poor, and they have to depend entirely on the fall of rain for its irrigation; but they keep large numbers of camels and herds of cattle, and for these they pay tirnee, or grazing tax.

No recog-  
nized bounda-  
ries prior to  
annexation.

198. "Before the commencement of our rule, there existed no regularly defined, or universally acknowledged, boundary lines between those villages which were situated in the Thull or desert: might was right, and everybody



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"grazed his cattle wherever he could do so. But owing to the lawlessness of the times, however far parties took their cattle from the villages during the day, they brought them back to the protection of the village for the night. Since annexation people have become bolder. Small parties of men who would formerly have been afraid to have separated themselves so far from the main village, have during the past few years, sunk a kutchra well, and built a hut or two, at some spot favorable for pasturage, five or ten miles from their village. More than this, since the people began to learn the weight which is attached by us to possession (kubza) they have taken to ploughing up and sowing small patches of ground, not equal in size to a quarter of acre, at distances of from three to ten miles from their villages, the object being to try and make good their title to all the intermediate grazing land between these patches and their village sites."

Change since  
that time.

199. "Last year when at Mitha Tiwana, I had to visit a spot which was the subject of dispute between the zemindars of Mitha and Ookleymohlan. I found that the disputed boundary was nearly ten miles from one village and seven miles from the other. The dispute itself extended over five or six miles of desert, and before I left the spot the zemindars of Roda in the Leia district came up, and declared that the land which I had been looking at belonged to their village, which was six or seven miles away. During my ride I was taken, by one party or other, to see the marks of their 'kubza,' which were little patches of ground of the size of a quarter of an acre or so, scattered over distances of a mile or more from each other, in which somebody had sown a few seeds of 'bajra,' which had never ripened owing to want of rain. The existence of these spots appeared to be only known to a few men on either side; and from the recriminations which used to follow on their being brought to notice, I believe they were ploughed up and the seed cast in secretly at night, and then neglected altogether, as the object was not to attract the attention of the opposite party to the progress that was being made in securing ground until the settlement ahilkars should commence operations."

Illustration.

200. Mr. Ouseley then asked for instructions as to the principles on which the demarcation of boundaries should be conducted, and after stating that, in his opinion it would not answer to apportion only a certain quantity of land to each village, calculated according to the number of cattle in the village, and to call the superfluous area Rukh Sirkaree, because it would be difficult to put up and keep up bounda-

Plan pro-  
posed by Mr.  
Ouseley.

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His proposal sanctioned.

Noorpoor Talooqua remained un-demarcated.

Necessity for boundaries here also.

ries; he asked for permission to mark out the boundaries arbitrarily according to the best of his judgment, as to the rights and requirements of each village, and without going through the process of taking evidence as to ancestral rights and possession, as the lands in dispute really belonged to no one in particular, and owing to the contending parties being the Mullicks of Mitha Tiwana and the neighbouring zemindars, the process of taking evidence would lead to a great deal of false swearing and endless delay. The Commissioner Mr. Roberts, concurring in the view taken by Mr. Ouseley, sanctioned his proposals, and the boundaries that remained unsettled were marked out accordingly.

201. There still remained Noorpoor, and it was one of the earliest questions I had to decide, whether boundaries should be put up in this wild region, or not. I was, at first, inclined to think with Mr. Ouseley, that it would be difficult to put up and keep up boundary marks,\* and that as the greater part of the revenue was derived from tirnee, which practically ignores boundaries, it would be better to leave matters as they were; but a tour through the Thull during the cold season of 1862-63, during which I gave the subject the fullest consideration, aided by the light of information in regard to the habits of the population, their past history and future prospects, acquired on the spot, led me to alter my original opinion, and I came to the conclusion that it was in every way advisable to put up boundaries, and after making liberal provision for the requirements of the inhabitants in respect of grazing, to mark off all superfluous waste as the property of the state. The reasons that influenced me in arriving at this conclusion were these :—

202. First and foremost, there was the difficulty, not to say, impossibility, of carrying out any satisfactory measurement without them. The enormous extent of the talooqua, (nearly 800 square miles) precluded the possibility of put-warees surveying and mapping it in one piece. It was known that cultivation had greatly increased since the first assessments were made, but the patches of land used for the purpose were so scattered, that without the close scrutiny that the preparation of a shujra ensures, there would be no security that many of these plots would not be overlooked : and again, even supposing that the whole came under measurement, how unsatisfactory, not to say useless, as a foundation on which to base a record of rights, would be a

\* This was stated by Mr. Ouseley as an argument only against creating government rukhs, but if it possessed any force it was an argument against demarcating the boundaries of villages also.

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register of fields without a field map. Such a register is but a blind guide, even in a well tilled country, where field succeeds field without intermission, but here in the Thull, where the patches of cultivation are often miles apart, such a document would be next to worthless.

203. Secondly, there was no doubt that there was much more waste land in Noorpoor than the population could lay claim to; to this Government had a recognized right, and this was the only time to assert it. It was reasonable to suppose, that land would become more valuable each year, and it would not therefore be wise to relinquish for ever, the right of the state in so large a tract of country, wild though it was.

Policy of re-  
serving waste  
land.

204. Moreover it appeared to me, that it would be far better to substitute for the direct tax on cattle, which the *tinnee* is, a grazing tax properly so called, that is, to assess the *area* assigned as grazing ground to each village, instead of the *cattle*. This was the system adopted by Mr. Ouseley in the Bar, and it had been found to work admirably. Once fixed, it lasts unchanged as long as the settlement, and gives no trouble in collecting, whereas the system of raising revenue by a direct tax on cattle, gives endless trouble, owing to the erratic habits of the owners. Asamees are constantly leaving one village to settle in another, and as, when this occurs, they carry their quota of the tax with them, endless enquiries and references are the result. This was especially the case in regard to Noorpoor and Mitha Tewana, owing to the fact that the boundaries of four districts met in this part of the Thull.

Advisability  
of assessing  
land in place  
of cattle.

205. Further, I anticipated this good result from the change, viz. the removal of all inducement to fraud in concealing the actual numbers of cattle, which the *tinnee* system holds out, and the comparative ease with which reliable information on this subject would be obtained; and although to a certain extent I was disappointed in this hope, still, I feel sure that the data obtained was far nearer the truth, than any which would have followed on actual enumeration: indeed I may say that this latter would have been a hopeless operation, considering the enormous extent of the pasture grounds, and the fact that here, contrary to the custom which prevails elsewhere, herds are never brought back to the village at night.

Advantages  
of this plan.

206. Lastly, it seemed to me, that in the plan I had formed there lay the germ of still surer gain. Our rule, in giving increased security to property, had already borne good fruit in these wilds, in engendering among the people

Argument  
continued.

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more settled habits. This was admitted by themselves, and further evidenced by the gradual increase of cultivation. It was clearly our policy to foster this good tendency, and by developing the inclination to till the soil, induce habits of industry, and curb the tendency to rove, which is the bane of the population of these parts. Nothing, it appeared to me, was better calculated to effect this than to keep them within fixed limits.

The proposal is approved of.

207. The plan met with favor, and I was authorized to carry it out in both Noorpoor and Mitha Tiwana. Hudbust operations were accordingly started in the September following, and brought to a close in a little over two months, by my energetic superintendent, Bukhtawar Lall, with whom, the Tahseeldar of Bukkhur was associated, in determining the boundaries common to villages of this district, and Dera Ismael Khan. The internal boundaries gave little trouble, not so however the line between the two districts, the adjustment of which roused old party feelings, and led to a great deal of litigation. These lines of demarcation were professionally surveyed during the cold season immediately succeeding, and during 1864 masonry pillars were erected to mark the exterior limits of the district, in this direction.

Measurements commenced in September 1862.

208. I have shown that when I took charge of the district in July 1862, all preliminary disputes had been disposed of everywhere but in Noorpoor. I was thus enabled to start the measurements as soon as the agency for the performance of this work had been organized, and here, too, no difficulties were experienced, as the putwarees who were to be employed, had received a thorough training under Mr. Ouseley, and both as surveyors and draftsmen were unsurpassed by any officials of the kind I had ever met with.

The agency employed.

Sketch of operations.

209. Forty putwarees were told off into pairs, one to write the register, while the other made the map of the village lands, and over these was placed a small supervising establishment consisting of five ahilkars and a moonserim. They broke ground on the 15th September, the villages of the "Mohar" and "Dunda" being the first to undergo measurement. By the end of the cold season, the work here was finished, and the measuring parties then advanced into the hills. Before the close of the rains the khusra survey here also was over, and the business of testing the khuteonees and preparing the statistics for the assessment commenced. The demarcation of boundaries in Noorpoor caused some delay, but not much time was lost; parties were despatched to complete this stage of the settlement operations in December, and by the end of February 1864 they had



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brought their work to an end. With a large establishment, the whole of the measurements might have been done in three months, but economy was an object held in view; and having charge of the district at the same time I was glad of the leisure afforded by the slow rate of progress, to move about this part of the district, and pick up information which would be of assistance when the time came to make the assessments.

210. The system of testing the correctness of the measurements, was precisely that described by Mr. Ouseley in his memorandum, and therefore nothing more need be said regarding it, but some slight variations in the details of the procedure adopted, to suit the peculiar circumstances of the several tracts to be surveyed, require notice.

Measure-  
ments how  
tested.

211. The scale on which the maps of the previously settled portions of the district were drawn, being found to be too small to show distinctly the somewhat minute plots into which land is divided for cultivation in the Salt Range, was increased to four chains to the inch, which is exactly five times the scale on which the revenue survey maps are delineated. In the Mohar and Dunda villages the scale adopted was five chains, but in the Thull with its enormous pasture grounds, and widely scattered patches of cultivation, a map on this scale would have been unwieldy and useless to the last degree; it was determined, therefore, to reduce the scale by one half, which of course reduced the size of the maps, superficially, to one-fourth of what they would otherwise have been.

Modifications  
required to  
suit circum-  
stances of tracts  
surveyed.

212. The plan of laying down the fields of the shujra on separate sheets of paper, of the same size, and putting these together when the measurement of the village is completed, described by Mr. Brandreth in his report on the Jhelum settlement, was introduced by me here. It was first devised I believe by Mr. Monckton, and its great advantages had been seen by me while the settlement of the Jhung district was in progress. It is the only plan by which the original field map, a document of the greatest importance, can be preserved fit for use; otherwise, when the settlement is over, a tracing from the original (by this time in pieces) has to be supplied to the putwaree, and it will readily be seen, how inevitably errors must creep into a copy, of which the original perhaps contains several thousand separate fields.

Maps plot-  
ted on sepa-  
rate sheets.

213. A great deal of attention was also paid to another point which early asserted its claims to notice, viz.

Hill streams  
carefully deli-  
neated.

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the correct delineation of the various channels, by which the surface drainage of the hills is conducted into the valleys of the Salt Range and the plains below, and the necessity for minutely recording the mode in vogue for distributing the water of these torrents. The importance of this will best be appreciated when I come to describe the recognized distinctions in the soils of this part of the district, but a few words may advantageously be said, explanatory of the actual methods of distribution in use. These are two: first, by shares, the right to the water often residing exclusively in certain families; secondly, by means of dams thrown across the beds of torrents. In the former case, spurs are thrown out, and so made as to carry into the sharer's private duct, as much of the entire volume of water brought down by the stream, as is due to his share. In the latter case, when the person entitled to a share in the water has irrigated his fields, the bund is cut away by those whose lands lie lower down the stream; and water, in this comparatively dry climate, is of so much value, that not a drop of the precious element is ever allowed to be wasted, or to pass off into the fields of those not entitled to participate in its benefits.

Modes of  
distributing  
water in force.

214. Where the first mode of distribution prevailed, all that was necessary, was to show, who was entitled to share in the water, the extent of each share, the points at which the water due to the several quotas is taken off, and the channels by which it is conveyed into the several fields to be so irrigated; all this has been carefully exhibited in the shujra, and further, as often as the drainage waters pass from the fields of one proprietor to those of another, the points of exit have been delineated in red lines on the map, and a corresponding entry made in the column of remarks of the field register. But in the case of irrigation by means of dams, it was thought best to have a separate plan of the torrent prepared, showing the exact spots at which it was allowable to erect bunds, and also the fields entitled to participate in the irrigation. These details could not have been shown in the shujra (field map) without greatly disfiguring it. It is believed, that these separate plans will be of the greatest use in the future decision of disputes connected with the right to the use of the water of these hill streams, disputes that are so common throughout these tracts, but which, without the assistance of good plans, are almost impossible of decision except on the spot.

The assess-  
ment.

215. I have now arrived at the assessment, in describing which, I shall quote largely from the letter in which

I reported the completion of this work, explained the principles on which it had been based, and asked for permission to announce the new jummas.

216. The physical features of the tract of country, to which my operations were confined, have been described in paras 9 to 19 of Part I of this report, and elsewhere in the same section information will be found bearing on the following points, which had to be taken into consideration in fixing the assessment, viz. the supply of irrigation; the prevailing character of the husbandry, and the crops grown; the thermal conditions of the two most important natural divisions, as they affect the degree of moisture required to bring crops to maturity, and determine the choice of staples; and the relative densities of the population in each. To this I now propose to add, a somewhat minute account of the distinguishing characteristics of soil throughout, coupled with remarks on any other topics that may suggest themselves, as having influenced me in estimating the paying capabilities of the several tracts that formed the subject of my inquiries. These for purposes of assessment were divided into five circles: (1) the hill circle, (2) the "Mohar" circle, (3) the "Dunda" circle, (4) the "Thull" circle, and (5) the river circle.

Reference to  
previous description.

Additional  
matters to be  
treated of.

### I. THE HILL CIRCLE.

217. A knowledge of the constitution of the Salt Range would tell us, apart from actual experience, how fertile must its soil be, for it is well known that the rich loams of England, and its best wheat soils, are formed by the gradual admixture of the constituents of limestone and sandstone-rocks, with clay, where these are found in contact; and the Range here abounds in all these ingredients of a rich soil. Among them, lime prevails largely, and to its presence is doubtless owing the unusually large average yield per acre of wheat, obtained as the result of numerous experiments in different parts of these hills. In appearance the soil closely resembles the alluvium deposited by the rivers, but is perhaps a degree lighter. It preserves the same character throughout this portion of the range, the only marked variation being in the flat table land to the east about Jaba and Pael, where it is more sandy and less fertile. But although speaking in general terms the soil must be pronounced very fertile, yet its productive powers differ greatly in the several villages, and even in the same village, according as its situation places it more or less in the way of receiving the fertilizing deposits brought down by the hill torrents after rain. Through the area of one village, will flow three or four

Soil of the  
Salt Range.

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distinct streams, laden with the riches gathered during a course of many miles, while another will be dependent for its supply of moisture on the surface drainage from a few low hills alone. The former will be able, on all the land within the immediate influence of the stream, to raise a double crop, each as good as the one that preceded it, and, so on from year to year; while the lands of the other, after yielding an inferior crop, will have to lie fallow for a year to recover its strength.

How classified.

218. It is this state of things which has led to the popular classification of soils into "hail," or land directly irrigated by a torrent; "maira," or that which receives only the surface drainage from a few low hillocks, or land lying above it; and "rukkur," soil which is dependent for its moisture on the rains and dews of heaven alone. The texture of the soil called "maira" is as a rule, looser and lighter than "hail," while "rukkur" is characterized by being more stony than either. These distinctions were recorded by the putwaries together with the measurements. As may be supposed, where so much depended on the class to which each particular field was assigned, numerous fraudulent entries were made, but repeated testing, in which I took a personal share, gradually eliminated the errors, and before the work of assessment commenced, as much accuracy, in this respect, was attained as could well be looked for.

System of irrigation.

219. The mode of utilizing the drainage waters is too well known to need much description. The fields are laid out in gradually descending terraces, surrounded each with an embankment or bund, till the lowest level is reached. To those who have seen much of this kind of cultivation it is not difficult to distinguish, at a glance, the more valuable "hail" from the inferior "maira" lands:—The former are, as a rule, near to some torrent, and to enable them to benefit fully from the large volumes of water that come rushing down these drainage channels after heavy rain, the "bunds" that surround the fields must be both high and strong; where this is the case, the soil becomes well saturated, and at the same time receives a rich deposit of alluvium. The bunds of the "maira" fields not being required to withstand any great pressure of water, are much lower, so that if there were no other guide, the class to which any particular field belongs might be roughly judged of by the size of the embankment surrounding it.

Supply of irrigation.

220. There is little or no artificial irrigation in these hills. There are, it is true, a few wells, but they are invariably made over to "muliares," or market gardeners, who content



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themselves with growing a few acres of vegetables round each. For the rest, the soil is dependent for its supply of moisture on the periodical rains alone. All that need be said further in the matter of natural irrigation is, that the Soon valley is by far the best supplied; the high hills to the south and west act as vast receivers, and the rain falling on them is discharged through numerous channels, in large volumes, of which the villages along those sides monopolize the greater part. The estates lying in the centre and on the opposite (north) side of the valley are less favoured in this respect, and their lands are, as a consequence, not so fertile. In the next rank comes the Khubbukkee valley; to this succeed the smaller valleys scattered throughout the broken ridges on the southern side of the Range, and last of all, at a considerable distance, follow the flat table lands of the eastern division.

221. The agricultural population of these hills, if distributed over the *whole area*, would appear to be far from dense. The result so obtained would however be entirely delusive, as a test whereby to judge of the pressure of the assessment, so far as the density or otherwise of the population affects the sum to be paid by it as *land revenue*. For this purpose we require to know what relation the population bears to the cultivated and culturable area. Now, the land which comes under these two denominations is considerably less than one seventh of the whole area of the Range. In actual numbers it only amounts to 46,000 acres, while the inhabitants number 28,607 souls, so that in place of a thin population, we have the very dense one of 400 to the square mile. The fact is, that land throughout the Salt Range is very minutely divided, and is barely sufficient for the support of its inhabitants. Little attention appears to have been paid to this fact in making former assessments, for I have generally found, that where the people have been most tightly packed, there they have had to pay at the highest rates. It is needless to say that the revenue was not, and could not, be paid from the produce of the land on which it was assessed, but had to be made good from the profits of tillage in other villages more lightly taxed.\*

Population.

Apparently scanty.

Really dense

\* It was objected at the time, that I had allowed myself to be too much influenced by this consideration, and there is no doubt that, carried too far, it would lead to unnecessary sacrifice of revenue, because the only remedy, emigration, owing to the peculiar tenacity with which people cling to their paternal acres, is one that is never seen to result from pressure of taxation. But I contend that we must respect the feeling that stands in our way, and that until Government changes its policy, and in imitation of its predecessors, the Sikhs, allow the love of rupees to outweigh in its estimation the contentment of its subjects, this is a point that a settlement officer can never overlook. W. G. D.

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Range of prices. 222. Prices, too, had to be considered; they had risen greatly, and there seemed no tendency to revert to the cheap rates prevalent before the famine wrought such changes. Wheat, which in the early years of our rule had sold for a maund and a half, had never since those hard times fetched less than a rupee for thirty seers. No definite conclusions could of course be formed on the returns of such a limited period, but there were many signs, such as the rapid extension of trade, the opening out of improved means of communication, the large influx of silver from Europe going on, etc., which seemed to indicate that prices would not fall so low again, or rather that the *average level* would be much higher, and subsequent experience points to the same conclusion. In making the assessments, while attention was paid to this point, care was taken to guard against the effects of possible large fluctuations.

Reasons for lengthened description. 223. I have treated thus fully of this division, both on account of its intrinsic value as paying, relatively to the area under cultivation, the largest revenue of any part of the district, and also because it possesses many exceptional features which are not generally known; the remaining circles will be disposed of more briefly, as being in every way of less importance.

## 2. THE "MOHAR" CIRCLE.

Soil of the "Mohar." 224. The soil in this circle is a stiff marl, only second in fertility to the best soils of the Salt Range. With a good supply of water, the crops grown on it are splendid, but then the fact has to be borne in mind that the actual supply is both precarious and insufficient. In one respect, however, the villages here possess an immense advantage over those of the Salt Range. They have land more than sufficient for their requirements, for, whereas the culturable area in the hills is only a seventh of the area actually under tillage, the land available for this purpose here, is more than double the land already taken up for cultivation. Thus the zemindars of this circle are enabled to change the site of their cultivation nearly every year, and to allow the abandoned land to lie fallow at least two years, and such is the custom. The quality and texture of the soil may be said to be practically the same throughout the circle, the only circumstance which here, as in the Salt Range, lends a varying value to it in the several estates, is the greater or less supply of drainage irrigation which it receives in each, and this point, more than any other, has influenced the classification of villages, and the sum to be demanded in each case. The division of soils into "naladar" and "rurheerda" has also reference to the

How classified.