
IRRIGATION REVENUE REPORT

OF THE

BOMBAY PRESIDENCY,

EXCLUDING SIND,

1899-1900.

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	31	Nilgund do.	Do.
Belgaum ...	32	Gadikeri do.	Do.
Dhárwár ...	33	Dámbal do.	Do.
	34	Medleri do.	Do.
	35	Madag do.	Do.
	36	Asundi do.	Do.
	37	Mávinkop do.	Do.
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Nos. 3 and 4, or Chankápur and Maládevi Tanks, are not included, as the works were not in operation; the former has been suspended and the latter has not yet been approved. No. 38—Gokak Canal, 2nd Section—is in abeyance.

2. The total capital outlay during and up to the end of the year was as follows:—

Main Heads.	To end of 1898-99.	During 1899-1900.	To end of 1899-1900.
<i>A.—Direct Charges.</i>			
	Rs.	Rs.	Rs.
I.—Works	2,02,74,438	2,15,724	2,04,90,162
II.—Establishment... ..	45,72,068	49,438	46,21,506
III.—Tools and Plant	4,91,335	—3,638	4,87,697
IV.—Suspense ... ..	.....	.....	.....
Profit and Loss ... ..	.....	.....	.....
Total A ...	2,53,37,841	2,61,524	2,55,99,365
Deduct—Receipts on Capital Account.	36,131	57	36,188
Net Total, A.—Direct Charges ...	2,53,01,710	2,61,467	2,55,63,177
<i>B.—Indirect Charges.</i>			
Capitalization... ..	5,91,350	878	5,92,228
Loss by Exchange ... ..	.....	.....	.....
Leave and Pension Allowances ...	8,10,741	6,922	8,17,663
Total, B.—Indirect Charges ...	14,02,091	7,800	14,09,891
Grand Total, A and B ...	2,67,03,801	2,69,267	2,69,73,068

3. The following abstract shows the details of the above:—

	Number of Works.	EXPENDITURE, 1899-1900.			Total Expenditure, Direct and Indirect, to end of 1899-1900.	Amount of sanctioned Estimates.	
		Direct.	Indirect.	Total.			
<i>Major Works.</i>							
Protective Works ...	In operation ...	2	90	979	1,069	77,53,711	78,11,383
	Under construction.	3	1,33,994	3,499	1,37,493	4,59,230	24,93,687
	Total ...	5	1,34,084	4,478	1,38,562	82,17,941	1,03,05,070
Productive Works .	In operation ...	7	27,524	714	28,238	1,09,78,486	1,10,10,738
Minor Works ...	In operation ...	26	89,860	2,349	92,209	62,63,355	62,93,436
	Under construction.	...	...	...	...	.....	.....
	In abeyance ...	1	...	...	...	1,90,284	1,91,995
	Total ...	27	89,860	2,349	92,209	64,59,639	64,85,431
Provincial Works. Minor	In operation ...	1	9,999	259	10,258	*13,17,002	13,90,853
	Grand Total ...	40	2,61,467	7,800	2,69,267	2,69,73,068	2,91,92,142

* Including expenditure charged to 35.—Construction of Protective Irrigation Works.

The capital expenditure was principally on the Nira Canal and the Máládevi and the Shetphal Tanks (Protective Works), the Mutha Canals (a Productive Work), the Khári Cut Canal (an Imperial Irrigation Minor Work), and the Gokák Canal (a Provincial Minor Work). A small outlay was incurred on the Chankápur Tank (a Protective Work) and on the Kadva River Works (Productive Works).

The expenditure on the Nira Canal (Bhatghar Dam) was incurred on finishing the extension of the third training wall below the north waste weir commenced in the previous year. A few minor works were also carried out on the Main Canal and distributaries.

On the Máládevi Tank the expenditure was on earth-work in connection with the excavation of the puddle trench, waste weir and embankment, &c. The work is situated in the Akola Táluka of the Ahmednagar District and was started as a relief work. The complete project is under revision in the Superintending Engineer's Office.

The Shetphal Tank was re-opened for famine relief on 29th November 1899 and was carried on as a test work till 3rd January 1900, when it was converted into a regular relief work. The work was carried on partly on the piece-work system and partly on the code system of task-work, and the items carried out were puddle filling, earthen dam and excavation in rock. A complete project for the tank has now been sanctioned by the Government of India.

On the Mutha Canals the expenditure was on altering and improving the lower service mains of the Poona water-supply and on certain minor works such as constructing canal boundary walls and extending parapets of over-bridges on the Mutha Right Bank Canal intended for the protection of the canal water up to Poona from pollution.

The work of altering and improving the water-supply mains in the Poona Cantonment was completed during the year and water from the new filter was for the first time supplied to the houses in the Cantonment Bazar.

Sanction to the Chankápur Tank Project, which has been submitted to the Government of India, is deferred pending submission of certain information on points noted by the Inspector-General of Irrigation, which is awaited from the Superintending Engineer, Central Division.

On the Khári Cut the expenditure incurred was on the extension of 22 miles of additional canals, commanding an area of about 7,000 acres. The Chandola Reservoir has also been considerably extended and its full supply raised 2 feet, while the Malekshaban and the Kankeria Tanks have been connected with the

system to serve as additional reservoirs. Several other smaller tanks, which serve as service reservoirs, have been deepened and improved. These tank works have all been carried out with famine labour.

The expenditure on the Kadwa River system was principally on the Inspection Bungalow at the Ojhar Tambat Canal, while that on the Gokak Canal was on account of land compensation for the 25 feet weir and for extending Distributary No. 1 (Shindi Nala extension) and constructing a service road and Patkaris' chaukis.

Interest Account. 4. The Interest Account to end of the year stands as follows :—

	AMOUNT.				AMOUNT.		
	Protective Works.	Productive Works.	Total.		Protective Works.	Productive Works.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Total Interest charges to end of 1898-99	44,86,077	1,05,63,638	1,50,49,715	Net Revenue realised to end of 1898-99	2,09,729	26,82,859	28,92,588
Do. during 1899-1900...	3,09,810	4,18,781	7,27,591	Do. during 1899-1900 ...	98,048	2,68,317	3,66,365
					3,07,777	29,51,176	32,58,953
				Balance net Interest charges to end of 1899-1900	44,87,110	80,31,243	1,25,18,353
Total to end of 1899-1900 ...	47,94,887	1,09,82,419	1,57,77,306	Total ...	47,94,887	1,09,82,419	1,57,77,306

5. The gross revenue realized from all sources during the year, after deducting refunds of revenue (Rs. 709), was Rs. 7,25,564, of which Rs. 7,11,131 were direct and Rs. 14,433 indirect receipts. The net revenue actually realized was Rs. 3,70,920. The gross revenue shows an increase of Rs. 28,788 and the net revenue an increase of Rs. 10,940.

6. The gross area under command was 884,491 acres and the irrigable area at present is 316,425 acres.

* Area under command and irrigable area.

7. The financial results of the year by main heads were as follows :—

	Areas irrigated.	REVENUE REALIZED.			Working Expenses.	Net Revenue.
		Direct Receipts.	Share of Land Revenue.	Total.		
	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Class I.—Works for which Capital and Revenue Accounts are kept.</i>						
Major Works... {						
Protective Works...	40,856	1,73,930	...	1,73,930	75,882	98,048
Productive Works ...	26,371	4,21,915	7,349	4,29,264	1,60,947	2,68,317
Total ...	67,227	6,95,845	7,349	6,03,194	2,36,829	3,66,365
Minor Works	30,179	79,937	7,084	87,021	1,11,039	—24,018
Provincial Minor Works	8,424	35,349	...	35,349	6,776	28,573
Total, Class I ...	106,830	7,11,131	14,433	7,25,564	3,54,644	3,70,920

The area shown as irrigated includes 1,206 acres, on which a consolidated land and water assessment is levied. This is derived from old works on which expenditure on improvements only has been incurred.

8. The figures showing areas irrigated, revenue assessed and realised, and working expenses, as compared with former years, are as follows:—

Years.	Area irrigated.	REVENUE.		Working Expenses.
		Assessment.	Realisation.	
		Rs.	Rs.	
	Acres.			Rs.
1889-90	85,550	4,49,838	4,22,859	2,47,123
1890-91	74,852	4,44,291	4,60,813	2,39,615
1891-92	96,025	5,76,586	5,12,072	2,85,893
1892-93	65,487	4,79,042	5,45,542	3,07,778
1893-94	79,950	5,91,487	5,73,746	2,87,418
1894-95	84,237	5,93,737	5,63,482	3,50,926
1895-96	74,923	6,32,211	5,98,839	2,94,287
1896-97	118,004	6,92,848	5,58,395	3,59,944
1897-98	126,516	6,68,762	6,35,807	4,03,893
1898-99	103,849	6,59,841	6,96,776	3,36,796
1899-1900	104,624	7,40,129	7,25,564	3,54,644

There was an increase of 775 acres in the total area irrigated as compared with the previous year, distributed over the several classes of works as follows:—

	Acres.
Protective Works	+ 395
Productive "	-1,018
Minor " Imperial	- 571
Do. Provincial	+1,969
Total	+ 775

Distribution of area.

9. The total area irrigated was distributed as follows:—

	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.
1893-99	51,156	52,693	103,849
1899-1900	53,757	50,867	104,624

The kharif areas show an increase and the rabi areas a decrease.

The variations in the areas irrigated by individual works are remarked upon by the Superintending Engineers as follows:—

Central Div. m.

Under Protective Works while the decrease is principally on the Nira Canal in both the kharif and rabi seasons, the Mhaswad Tank shows increase in both, the net increase under this head being 395 acres.

Under Productive Works all works show increase in the kharif irrigation. In the rabi season, with the exception of the Ekruk Tank, there are decreases on almost all works. The increase under the Ekruk Tank is 999 acres and the net increase under this head 610 acres.

The works under "Minor Works and Navigation," with a few exceptions, show decreases in almost all cases. The Jámda Canals and the Mhaswa and the Ashti Tanks show satisfactory increases, that under the Ashti Tank being particularly noticeable.

The large decrease on the Nira Canal in both the kharif and rabi seasons was due to insufficiency of supply in the Storage Reservoir.

On the Mhaswad Tank the abnormal increase of 7,555 acres was principally due to failure of rabi rains.

The decrease on the Lower Pánjhra River Works, principally in the rabi season, was due to limited storage and consequent refusal of water for rabi irrigation in the dry crop lands.

The Pálkhed, Ojhar-Tambat and Wadáli Canals comprised in the Kadva River system show increases in kharif and decreases in the rabi season. The former was due to failure of rain and consequent demand for canal water, and the latter to the fact that the supply in the Wághad Tank ran short and applications for water had consequently to be rejected.

The increase on the Láksh Canal in both the seasons was due to want of rain.

On the Mutha Canals the increase is chiefly in sugarcane.

The increases on the Ekruk, Koregaon and Asbti Tanks in the Sholápur District were chiefly due to failure of rabi rainfall.

The Hartála Tank was empty and consequently there was no irrigation.

Only 4 acres were watered by lift from the little water there was in the tank below the sluice. Similarly the Kásurdi Tank in the Poona District was dry all the year through.

The area irrigated from the Mhaswa Tank is reported to be the largest since its construction and all the available supply was principally utilized in saving the food-grain crops.

The increase in kharif on the Jámda Canals is due to larger cultivation of monsoon dry crops owing to scarcity of rainfall throughout the monsoon, and decrease in rabi to the irrigation being confined to the upper reaches of the canals, as owing to the very precarious river-supply, water could not be sent down beyond the 15th mile of the Left Bank Canal.

Under the Parsul Tank there was only kharif irrigation and the increase in that season was due to larger areas of fodder, sugarcane and ground-nut crops having been irrigated. For rabi irrigation there was no water in the tank.

The increase in kharif on the Ojhar Canal was too small to require any explanation, that on the Bhatodi Tank was due to short rainfall. In the rabi season both these works show decreases, that on the former was due to deficiency of river-supply and that on the latter to insufficient supply of water in the tank.

The decreases on the Matoba, Shirsuphal and Bhádalwádi Tanks was due to failure of supply. That on the Bhádalwádi was mainly in the monsoon and rabi crops.

Southern Division.

Under Productive Works, *i.e.*, on the Krishna Canal, the increase of 2,541 acres is made up of an increase of 3,365 acres in kharif due to deficiency in rainfall and good supply of water in the river and a decrease of 824 acres in rabi due to insufficient water-supply in the river.

Under Minor Works, *Provincial*, the increase of 1,969 acres is due to the increased demand for water and the large increase of area irrigated during the rabi season owing to the failure of the monsoon rainfall.

Under Minor Works, the slight decrease of 212 acres, which is made up of decreases on some works and increases on others, does not call for any remark.

Northern Division.

The serious decrease in the area irrigated for both the kharif and rabi seasons on the Hâthmati Canal was due to the almost complete failure of rain.

10. The area irrigated was in excess of the area applied for, the figures being 104,624 and 94,317 acres, respectively.

The area irrigated includes 1,762 acres of the permanent garden irrigation under the Lower Pânjhra River Works. Eliminating these figures, it is reduced to 102,862 acres. The excess in the measured area over that applied for was largest on the Nira Canal; the difference was mainly due to the cultivators having entered in their applications the minimum area they could be charged for, while in most cases they irrigated much more. In a few cases, however, the areas irrigated were short owing to insufficiency of supply in the river and tank due to failure of rainfall.

11. The following table contrasts the distribution of rainfall in each month for the last five years:—

	I.—Works having an unfailing supply.					II.—Works dependent on local rainfall.				
	1895-96.	1896-97.	1897-98.	1898-99.	1899-1900.	1895-96.	1896-97.	1897-98.	1898-99.	1899-1900.
<i>Khariſ.</i>	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
June	5·24	8·20	3·20	4·71	5·70	2·31	5·11	1·94	3·50	2·56
July	5·36	12·70	4·74	6·70	·92	4·18	5·81	3·31	4·31	·23
August	3·09	4·35	4·35	2·39	·83	2·30	3·55	2·64	1·24	·51
September	8·73	0·96	10·12	8·42	3·02	11·60	0·31	9·50	8·12	6·86
Total ...	22·42	26·21	22·41	22·22	10·47	20·39	14·78	17·39	17·17	10·16
<i>Rabi.</i>										
October	3·65	0·15	4·77	1·82	·39	3·80	0·15	4·14	2·35	·16
November	0·49	0·62	...	0·95	·03	0·59	1·70	...	0·45	...
December ... ..	...	0·25	...	0·32	...	...	0·50	...	0·02	...
January ... ..	...	...	...	...	·02	...	...	...	...	·01
Total ...	4·14	1·02	4·77	3·09	·44	4·39	2·35	4·14	2·82	·17
Total, Khariſ and Rabi	26·56	27·23	27·18	25·31	10·91	24·78	17·13	21·53	19·99	10·33

The average in the two seasons, taking all the works together, was 10·7 inches, as compared with 22·15 inches in 1898-99.

12. The state of the collections was as follows:—

	Rs.
Balance of demands unrealized at the commencement of the year .	1,64,083
Demand of the year—	Rs.
Rabi, 1898-99	1,43,198
Khariſ, 1899-1900	4,14,214
Miscellaneous receipts	1,78,955
	7,36,367
Remissions	Total ... 9,00,450
	—13
Amount unrealized at the close of the year	Net Total ... 9,00,463
Actual receipts of the year ... ..	... 1,88,623
<i>Add—</i>	Actual receipts of the year ... 7,11,840
Share of Land Revenue ... ..	... 14,433
	7,26,273
<i>Deduct—</i>	Refunds of Revenue ... 709
Revenue realized as per paragraphs 5, 7 and 8	7,25,564

The remissions and refunds together amount to Rs. 696.

The amount, Rs. 1,88,623, unrealized at the close of the year, shows an increase; this total is made up of the following :—

	Rs.
Mutha Canals	67,673.
Krishna Canal	27,073
Kadva River Works	17,884
Ojhar Canal	11,305
Matoba Tank	7,475
Upper Man River Works	7,019
Mhaswad Tank	6,561
Ekrak Tank	5,651
Lower Panjhra River Works	5,231
Khari Cut	4,754
Nira Canal	4,413
Bhatodi Tank	3,346
Yerla River Works	3,042
Jamda Canal	3,025
Revani Canal	2,479
Parsul Tank	2,880
Maini Tank	1,232
Madag Tank	1,106
Gokak Canal	1,103
Ashti Tank... ..	1,101
Dámbal Tank	1,098
Other Works	3,661
Total	<u>1,88,623</u>

The explanation furnished by the Superintending Engineers is as follows :—

Central Division,

The outstanding balance on the Mutha Canals, which is the highest, includes Rs. 15,537 on account of town and cantonment water-supply assessments. This large balance is due to the fact that assessments for March 1900 are accounted for in 1899-1900, while more than half its recovery is effected in 1900-1901. Over Rs. 15,000 of this has, it is reported, been since recovered. Omitting this item the balance, Rs. 52,678, represents mostly the unrealized amount on account of water rates; out of this Rs. 33,566 have since been recovered, and steps are being taken for the recovery of the balance.

The next heavy balance is on the Páلكhed Canal and is reported to be due to the failure of crops for want of rain during the year, and the local Revenue Authorities are taking measures for its recovery.

The cause of the outstanding on the Ojhar Canal is attributed to the famine, and the local Revenue Authorities are taking steps for the recovery of the same.

Of the unrealized balance on the Matoba Tank, Rs. 6,976 have since been recovered, and steps are being taken for recovering the balance, which is very small, only Rs. 499.

Out of the unrealized balance on the Mhaswad Tank, Rs. 2,031 have been recovered, and steps for the recovery of the balance are being taken.

Out of the unrealized balance of Rs. 5,651 on the Ekrak Tank, Rs. 1,951 is on account of water-supply to mills, &c. All this has since been recovered. Deducting this from the total outstanding, the balance, Rs. 3,700, is on account of Irrigation water-rates. Of this Rs. 1,921 have been recovered, and steps are being taken for the recovery of the balance. The outstanding is attributed to famine.

Out of the unrealized balance on the Nira Canal, Rs. 1,598 have since been recovered, and the Revenue Authorities are taking steps to recover the balance.

No explanation of the non-recovery of arrears on the other works has been received, but they seem to be in most cases principally due to inability of the parties concerned to pay the irrigation dues on account of the famine.

Rs. 4,567 is made up of small balances on the other works.

Southern Division.

The amount Rs. 39,416 unrealized at the close of the year shows an increase of Rs. 13,530 as compared with last year. This heavy unrealized balance is principally due to famine and plague.

Northern Division.

Out of the total outstanding of Rs. 272-12-0 on the Háthmati Canal and Rs. 4,754-4-7 on the Khári Cut, no recoveries were made up to 31st March last on account of severity of famine. Since the close of the official year recoveries as noted in the margin have been effected.

Háthmati 23
Khári Cut Canal 113

13. The total working expenses for the year amounted to Rs. 3,54,644, against Rs. 3,36,796 in the previous year, showing an increase of Rs. 17,848 distributed as follows :—

		1898-99.	1899-1900.	Difference.
		Rs.	Rs.	Rs.
Major Works—				
Protective Works	... ..	77,321	75,882	—1,439
Productive Works.	... ..	1,56,381	1,60,947	+4,566
	Total ...	2,33,702	2,36,829	+3,127
Minor Works and Navigation				
Minor Works and Navigation	... ..	96,483	1,11,039	+14,556
Provincial Minor Works	... ..	6,611	6,776	+165
	Grand Total ...	3,36,796	3,54,644	+17,848

All classes of works show an increase, with the exception of Protective Works.

The increases and decreases are explained by the Superintending Engineers as follows :—

Central Division.

The working expenses of the Nira Canal amounted to Rs. 63,342, as compared with Rs. 63,872 in the previous year. With 96 miles of main canal in operation this gives a rate of 659-81 per mile, including the maintenance of 132 miles of distributaries. The cost of maintenance per acre irrigated shews an increase due to a larger area of high-rated crops which are on the ground longer, require more water and supervision and are also more expensive to measure than cereals and other low-rated crops. The rate per acre was Rs. 2-33, against Rs. 1-86 in the previous year.

The small increase on the Lower Pánjhra River Works is on account of the construction of a new hut for the chaukidár at the Mukti Tank and the completion of the repairs to Japi Channel.

The increase in the working expenses of the Láksh Canal is due to special repairs to an escape in mile No. 18.

The expenditure on account of working expenses of the Mutha Canals, excluding refunds of Revenue, amounted to Rs. 87,035 against Rs. 83,143, in the

previous year, including all charges. Out of Rs. 87,035, Rs. 34,397 are debitable to maintenance of the Poona Water Supply, and the balance Rs. 52,638 to maintenance of Irrigation. The noticeable increase is in expenditure on Tools and Plant chiefly due to the purchase of new meters and component parts for old ones.

The small increase in the working expenses of the Hartala Tank is due to certain repairs to a masonry bridge and the bank.

The Jámnda Canals show a large increase due to the special work of silt clearance of the Right and Left Bank Canals having been commenced during the year to give relief to the famine-stricken people. The expenditure has served the double purpose of giving relief and putting the canals in good order.

It is satisfactory that the other works show improvement in working charges, as compared with the figures for the previous year.

Southern Division.

Under Productive Works—Krishna Canal, the excess in working expenses is due to silt clearance.

Under Minor Works the increase in working expenses is mostly due to the normal cost of Pingli Tank berm undertaken for Famine Relief having been debited to the Revenue Account of the Upper Mán River Works.

14. The following table contrasts the charges under the principal heads with those of the two previous years:—

	1897-98.	1898-99.	1899-1900.
	Rs.	Rs.	Rs.
Works	24,975	2,357	9,700
Repairs	1,44,988	1,28,035	1,38,248
Establishment	1,77,210	1,51,101	1,48,032
Tools and Plant	5,628	6,401	9,126
Total in the Public Works Department ...	3,52,801	2,87,894	3,05,106
Collection charges	26,249	27,748	28,813
Indirect charges	24,848	21,154	20,725
Total ...	4,03,898	3,36,796	3,54,644

The establishment charges, divided between "Direction and Accounts" and "Executive," compare as follows with those for the previous year:—

	1898-99.	1899-1900.	Difference.
	Rs.	Rs.	Rs.
Direction and Accounts	26,082	27,221	+1,139
Executive	1,25,019	1,20,811	—4,208
Total ...	1,51,101	1,48,032	—3,069

15. The following table gives the details of the working expenses of some of the principal works:—

Name of Work.	Average incidence of water-rate per Acre.	COST OF MEASUREMENT.		WORKING EXPENSES TOTAL IN THE PUBLIC WORKS DEPARTMENT.	
		Total Cost.	Per Acre.	Per mile of Main Canal.	Per Acre Irrigated.
	Rs.	Rs. a. p.	Rs. a. p.	Rs.	Rs.
<i>Canals.</i>					
Nira Canal	5.40	1,946 0 0	0 1 2	544	1.92
Háthmati Canal	0.55	7 12 6	0 1 2	316	60.28
Kádva River Works	4.67	285 0 0	0 1 10	519	4.97
Pravara River Works—Lákh Canal	1.12	67 0 0	0 1 0	631	13.77
Mutha Canals	18.36	674 0 0	0 1 3	830	8.38
Krishna do.	9.10	660 0 0	0 1 6	311	3.05
Jámda do.	2.09	58 0 0	0 0 6	734	6.34
Pravara River Works, Ojhar Canal	1.61	197 0 0	0 1 1	811	4.16
Gokák Canal, 1st Section	2.94	512 0 0	0 1 0	422	0.81
Upper Mán River Works	3.14	111 0 0	0 1 0	565	5.55
Revári Canal	17.94	154 0 0	0 15 3	365	12.75
Chikhli do.	7.11	3 0 0	0 1 1	143	20.73
Khari Cut ... ..	...	.....	.....	...	...
<i>Tanks.</i>					
Mhasvad Tank	2.42	729 0 0	0 0 10	180	0.79
Ekrúk do.	3.40	550 0 0	0 1 9	168	1.62
Bhátodi do.	3.11	.....	.....	1,484	7.63
Mátoba do.	10.38	62 0 0	0 0 10	145	2.03
Shirsuphal do.	2.30	20 0 0	0 0 10	249	7.80
Bhádálvádi do.	3.06	43 0 0	0 0 10	240	2.83
Maini do.	2.81	208 0 0	0 1 8	344	1.60

In the Central Division the cost of measurement per acre in several cases was less than in the last year. There was, however, a slight increase in the rate in the case of the Nira and Ojhar Canals, Kadva River Works and the Shirsuphal and Bhádálvádi Tanks. The high rate on the Nira Canal was due to increase in the area of high-rated crops such as sugarcane, which are more expensive to measure. In the case of the Kadva River Works it is reported that applications for water were received at long intervals and detached areas had to be measured. On the Ojhar Canal and the Shirsuphal Tank the higher rate was due to smallness of the area irrigated in detached plots. Owing to deficiency of water in the Bhádálvádi Tank the area irrigated was smaller and the cost of measurement proportionately higher than last year. No measuring charges were incurred on the Bhátodi Tank as almost all the area under command has been sub-divided into pôt numbers for irrigation purposes, and the small area which is not sub-divided was measured by canal Inspectors with the assistance of the canal chaukidars.

The Superintending Engineers of other Divisions make no remarks.

16. The indirect receipts, as shown in Statements I—C, IV—C and II—E were Rs. 14,433. If Rs. 3,904 plus Rs. 41,328 on account of supply to the Poona City = Rs. 45,232, being the difference between the value of water issued from the Mutha Canals at normal rates and the value of water supplied at special reduced rates or gratuitously, be taken credit for in the revenue returns of the work as a book credit and be added to the above amount, the total earnings of the year will be Rs. 7,85,361.

17. The net assessed revenue of the year, after deducting working expenses, including indirect and all other charges, and neglecting the items, amounting to Rs. 45,232 referred

The net assessed Revenue.

to in the preceding paragraph, was Rs. 3,85,485 as compared with Rs. 3,23,045 in 1898-99.

The details of the assessment were as follows :—

	DIRECT REVENUE.			Indirect Revenue.	Total.
	Water Rates.	Other Receipts.	Total.		
<i>Major Works.</i>	Rs.	Rs.	Rs.	Rs.	Rs.
Protective Works	1,80,068	7,206	1,87,274	...	1,87,274
Productive Works	2,59,301	1,50,541	4,09,842	7,349	4,17,191
Total	4,39,369	1,57,747	5,97,116	7,349	6,04,465
Minor Works	82,585	6,551	89,136	7,084	96,220
Provincial Minor Works	24,787	14,657	39,444	...	39,444
Grand Total	5,46,741	1,78,955	7,25,696	14,433	7,40,129

18. The water-rates in force during the year are shown in Statement I—F, in the remarks column of which the orders sanctioning them are quoted. In case of the Gokák Canal revised rates have been sanctioned for a period of two years, with effect from 1st April 1898.

19. The average water-rates per acre of land actually irrigated were—

	1898-99.	1899-1900.
Protective Works	3.21	4.41
Productive Works	8.40	9.75
Minor Works	3.44	2.85
Provincial Minor Works	3.12	2.94
Average of all taken together	4.64	5.22

20. The water-rate assessments and other receipts compare with those of previous years as under :—

	1898-99.	1899-1900.
	Rs.	Rs.
Water-rates	4,81,718	5,46,741
Other Receipts—		
Plantations	1,798	2,277
Water-power	16,473	16,473
Water-supply to towns	1,19,939	1,29,271
Miscellaneous	25,260	30,934
Share of land revenue... ..	1,63,468	1,78,955
	14,655	14,433
	1,78,123	1,93,388
	6,59,841	7,40,129

The above comparison shows an increase under all heads, except the share of land revenue. The receipts on account of water-power remain the same.

The remarks of the Superintending Engineers are as follows :—

Central Division.

The increase under water-rates is principally due to larger area of perennial and 4 months Irrigation. That under "water-supply to towns" is chiefly on the Poona water-supply due to increased demand for water by the Poona Municipality which, owing to the failure of the Katraj Tank, required a larger supply than usual.

Out of the total increase under "Miscellaneous" the Mhasvad Tank alone contributes Rs. 4,825 on account of sale of right of fishing and of lands on the tank margin for cultivation. The balance is the result of small increases and decreases on other items of miscellaneous revenue pertaining to several works in the Division.

Northern Division.

The serious decrease in the assessment on the Háthmati Canal was due to the almost complete failure of rain.

21. The principal crop acreages irrigated during 1898-99 and 1899-1900 were as follows:—

	1898-99.	1899-1900.	Increase or Decrease.
	Acres.	Acres.	Acres.
Gardens and orchards	3,046	3,411	+365
Sugar-cane	8,048	11,494	+3,446
Wheat	16,702	5,170	-11,532
Rice	8,649	3,793	-4,856
Maize	3,121	3,808	+687
Jowári	21,999	42,580	+20,581
Bájri	15,043	14,595	-448
Gram, &c.	8,418	4,145	-4,273
Ground-nuts	9,257	7,036	-2,221
Condiments	3,505	3,403	-102
Fodder	1,538	1,065	-473

The explanations furnished by the Superintending Engineer, Central Division, are as follows:—

With the exception of gardens and orchards, sugar-cane, maize and jowár, all other crops show decrease, the most noticeable being under wheat and gram.

Of the total decrease of 9,922 acres under wheat, the Nira Canal alone is responsible for 3,717 acres and the Lower Pánjra River Works and the Ojhar Canal for 1,286 and 881 acres respectively, due principally to insufficiency of water.

The net decrease in the area of gram, &c., was 2,560 acres, the Nira Canal contributing 1,140 and the Ojhar Canal 807 acres respectively.

The increase in jowár was chiefly on the following works, and is satisfactory:—

	Acres.
Mhasvad Tank	7,006
Ekruk Tank	1,182
Ashti Tank	4,928

The other Superintending Engineers have no remarks to offer.

The total estimated value of crops is shown as Rs. 48,15,824 against Rs. 42,40,228 in the previous year and Rs. 54,31,072 for the year 1897-98. But these estimated crop values must be regarded as only roughly approximate, there being no uniform method of estimating them.

22. In Statement I—E the duty of water on each work, as well as the bases on which the duties were calculated, &c., are shown. The results vary very much; but, as observed in previous years, this is to be expected, as the conditions also vary considerably, and in most of the canals it is necessary to maintain a much larger discharge than is necessary for the area under irrigation, owing to the bulk of the land irrigated being usually situated at the tails at a distance from the head-works.

Details of the duty obtained on each canal are given in the body of the report and are generally estimated from the daily discharge observations and the known area of the miscellaneous crops under irrigation during the period.

I-A.

Statement of Canals in the Bombay Presidency, including Sind.

Source of Supply of Water.	(1) Nira Canal.	(6) Hathmati Canal.	(7) Kádva River Works.			(8) Lákh Canal.	(11) Krisheo Canal.	ft.	(15) Jamda Canal.	(17) Ojhar Canal.	(25) Revári Canal.	(28) Chickhlí Canal.	(29) Gokák Canal, 1st Section, and Storage Works.
	River Nira and Reservoir at Bhatghar.	Háthmati River.	Páikhed Canal.	Ojhar Támbat Canal.	Wádali Canal.	Pravara River.	River Krishna and Rainfall.		Girna River.	Pravara River.	River Warna and Rainfall.	River Nánd-l and Rainfall.	River Ghatprabha and Storage Works.
Minimum discharge per second. { C. feet per second...	K. 1,318 R. 34 H.W. 5	K. 3 R. 3 H.W. 3	K. 9-38 R. 8-42 H.W. 6-55	K. 0-11 R. 0-30 H.W. 0-70	K. 6-46 R. 4-02 H.W. 5-27	K. 8-34 R. 0-00 H.W. 0-20	K. 2-32 R. 11-52 H.W. 2-32	K. 35 R. ...5 H.W. 9	April and May 1899. 52-17 K. 16-96 R. 15-93 H.W. 4-37	K. 19-52 R. 5-10 H.W. 8-40	K. 1-05 R. 1-42 H.W. 1-05	K. 0-12 R. 0-12 H.W. 0-12	K. 215 R. 80 H.W.
Maximum discharge of canal. { " " ...	456	191	45-50	7-76	7-98	42-24	112-36	156	April and May 1900. Left Bank 54-98 Right Bank 18-70 K. 23-18 R. 12-17 H.W. 13-77	44-19	6-13	7-20	Canal. MILS { K. 76 68 R. 59 68 H.W. 28 68.
Average annual rainfall ... Inches.	2,182	K. 36-16 R. 0-51	28-88	20-86	20-86	23-79	25-66	K. 35-29 R. 1-21	26-13	23-86	28-64	23-28	{ Dhupdal 25-71 Gokák 23-13
Gross area commanded ... Acres.	274,447	44,744	28,832	8,055	3,486	29,913	28,327	17,300	27,122 9,166	23,724	8,813	1,871	18,668
Culturable do. ... "	227,670	2-840	26,280	7,421	2,729	25,536	26,453	11,500	33,124 7,061	21,155	3,624	1,478	17,827
Area irrigable by complete project. ... "	113,280	11,836	23,466	6,824	2,433	22,760	12,320	11,500	3,500 1,500	20,088	1,920	1,478	7,200
Do. at present ... "	113,280	8,000	9,837	2,367	2,433	11,280	12,320	8,000	8,500 1,500	14,763	1,920	1,478	7,200
Sanctioned Estimate—													
Direct charges ... Bs.	57,34,656	5,89,705	2,38,087	14,541	29,771	3,75,189	8,29,067	1,91,019	10,27,238	3,25,902	56,324	53,803	13,14,081
Indirect charges ... "	3,69,780	30,000	15,761	833	1,540	20,277	48,216	1,823	61,402	22,309	3,124	8,612	76,772
Interest during construction ... "	28,44,872	2,37,687	2,12,554	2,411	32,150	3,65,298	7,83,613	...	.....	.....	.....	.....	1,44,865
Total, Estimate ... "	89,49,307	8,57,392	4,66,402	17,785	63,461	7,60,764	16,60,896	2,02,842	10,88,640	3,48,211	59,448	57,415	15,36,718
Expenditure to end of 1899-1900. {													
Direct charges ... Rs.	53,55,585	4,90,925	2,24,870	6,829	27,955	3,52,446	8,18,545	2,60,344	9,91,158	3,09,635	56,771	53,803	12,72,214
Indirect charges ... "	3,27,715	27,081	15,475	621	2,390	19,445	46,347	12,177	49,911	20,640	3,040	8,639	44,788
Interest during construction ... "	32,25,289	4,91,661	2,45,268	2,858	36,329	4,39,992	8,13,470	...	.....	.....	.....	.....	2,89,207
Total, Expenditure ... "	89,08,569	10,10,667	4,85,613	10,308	66,614	8,11,883	17,78,362	5,72,521	10,41,069	3,30,275	59,811	57,442	16,06,209
Works as now sanctioned—													
Main Canals, Irrigation... Miles.	100-23	21	11	8	8-62	23	35-25	16	39	19	5-66	6-50	4-10
Branch Canals, do. ... "	.....	.....	.....	.....	.....	.....	26-25	7	75	25	5-25	.....	12
Distributaries ... "	132-48	25	21-50	.....	.....	11	.....	7	.....	.....	.....	.....	27-50
Of above—													
Navigable channels ... Miles.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Works completed at end of—													
Main Canals, Irrigation ... Miles.	96	21	11	450	8-62	23	35-25	16	39	19	5-00	6-50	4-10
Branch Canals, do. ... "	.....	.....	.....	.....	.....	.....	28-62	7	75	21	5-25	.....	12
Distributaries ... "	132-46	30	14-36	.....	.....	9-87	.....	8	.....	.....	.....	.....	27-80
Of above—													
Navigable channels ... Miles.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

STATEMENT II—A.

Statement of Reservoir Projects in the

Source of Supply.	(1)	(2)	(3)	(7)	(5)	(10)	(13)	(14)	(16)	(18)	(19)	(20)
	Bhūthgar Reservoir, Nira Canal.	Mhaswad Tank.	Lower Panjra River Works and Mukti Tank.	Kidva River Works (Waghad Tank).	Mutha Reservoir, Lake Fite.	Ekruk Tank.	Hartla Tank.	Mhaswa Tank.	Parul Tank.	Phitodi Tank.	Mātoba Tank.	Kāsurdi Tank.
	Yelwandi River and Ghat Catchment.	Mān River and Rainfall.	Local Streams.	Kolvan River.	Mutha River and Rainfall.	Adhela River and Rainfall.	Local Streams.	Local Streams.	Parul River.	Mehkri River.	Nala Rain-fall and surplus water from Mutha Right Bank Canal.	Kāsurdi Nala and Rain-fall.
If supplied by rainfall. { Area of catchment. Sq. miles ...	128	(g) 490	34.2	29	196	159	6.90	13.40	17.33	64	10.00	6.00
{ Average annual rainfall Inches ...	145	23.41	22.27	50.66	32.46	31.15	24.63	23.44	20.87	24.64	17.37	19.44
Contents of tanks between levels of surface of full supply and sill of canal head sluice ...	{ Millions of cubic feet. } 5,500	2,633	342.3	606	{ 1) 2,679.65 (2) 3,263.30	3,310	134.9	158.6	118.70	154	229	14.5
Area of surface at full supply ...	{ Acres and decimals. } 3,584	4013.80	509	778	{ (1) 3,299.24 (2) 3,629.78	4,640	473	421	161	316.13	477.46	37.93
Gross area commanded Acres	No Irrigation direct from the Reservoir.	129,045	13,117	(e) ...	94,087	17,152	584	4,647	3,337	15,126	10,700	697
Culturable do. "		106,214	12,627	(e) ...	49,800	16,941	527	4,076	3,197	13,637	7,133	478
Area irrigable by complete project "		24,800	12,627	(e) ...	16,800	(f) 16,941	415	1,700	1,000	12,124	3,250	150
Do. at present "		24,800	12,627	(e) ...	16,800	16,941	415	1,700	1,000	12,124	3,250	150
Wells supplied by tanks No.		12	...	...	22	...	...	...	...	...	...	...
Sanctioned Estimate—												
Direct charges Rs.	(a).....	20,24,327	4,44,486	4,67,662	62,14,206	12,23,243	48,590	1,29,813	2,15,366	3,51,787	1,93,000	40,613
Indirect charges "	(a).....	1,03,947	22,774	16,635	2,40,697	1,06,687	26,160	10,203	6,246	26,511	17,500	4,778
Interest during construction "	(a).....	6,56,222	5,07,519	2,17,233	34,30,296	8,00,650	...	...	...	...	...	...
Total, Estimate Rs.	(a).....	27,84,496	9,74,779	7,01,730	98,85,199	21,35,590	75,040	1,40,016	2,23,612	3,78,278	2,10,500	46,590
Expenditure to end of 1899-1900												
Direct charges Rs.	(a).....	19,86,812	4,45,382	4,61,626	64,26,385	12,22,117	47,949	1,28,781	2,08,007	3,52,683	1,88,148	40,613
Indirect charges "	(a).....	88,599	23,234	12,311	2,36,261	1,12,269	26,434	10,175	6,998	27,022	13,274	4,778
Interest during construction "	(a).....	13,65,946	5,07,519	2,67,046	64,17,030	14,70,014	...	...	...	...	...	...
Total, Expenditure Rs.	(a).....	34,41,357	9,76,135	7,61,183	1,30,79,696	28,10,400	73,382	1,38,956	2,14,995	3,79,707	2,01,422	46,590
Works as now sanctioned—												
Dam (earth or masonry)	Masonry.	Earth.	Barth.	Earth.	Masonry.	Earth.	Earth.	Earth.	Earth.	Masonry.	Earth.	Earth.
Total height... .. Feet.	b.127 (c.109)	79.79	65	95	97.84	76	51.50	64	62.27	50	49.41	33.45
Canals... .. Miles.	Vide—State-ment I—A.	(h) 60.25	...	(f)...	88	49	...	...	...	4.50	...	...
Distributaries "		34	45	(f)...	70	...	5.5	7	4.75	5.50	17	1.75
Works completed at end of 1899-1900—												
Dam (height completed) Feet.	(d).....	79.79	65	93	97.84	76	51.50	64	62.27	50	49.41	33.45
Canals... .. Miles.	Vide—State-ment I—A.	(h) 60.25	...	(f)...	89	48	...	...	...	4.50	...	...
Distributaries "		34	45	(f)...	67	...	5.5	7	4.75	5.50	17	1.75

(1) 243.32 is the reduced level
(2) 245.7 is the height to which water is annually impounded at

Capital Account of Irrigation Works in Deccan

Name of work.	DURING YEAR.								
	Direct Charges.						Indirect Charges.		
	Works.	Establishment.	Tools and Plant.	Total.	Deduct Receipts on Capital Account.	Total.	Capitalization.	Leave and Pension Allowances.	Total.
1	2	3	4	5	6	7	8	9	10
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
IMPERIAL MAJOR WORKS.									
35.—PROTECTIVE IRRIGATION WORKS.									
<i>In Operation.</i>									
1. Nira Canal	3,107	718	-3,735	90	...	90	118	101	219
2. Mhasvad Tank ... ..	...	...	...	...	...	...	760	...	760
Total	3,107	718	-3,735	90	...	90	878	101	979
<i>Under Construction.</i>									
2A. Shetphal Tank... ..	43,905	10,055	...	53,960	23	53,937	...	1,408	1,408
3. Chankapur do.	523	75	...	698	34	564	...	10	10
4. Maladevi do.	64,629	14,864	...	79,493	...	79,493	...	2,081	2,081
Total	1,09,057	24,994	...	1,34,051	57	1,33,994	...	3,499	3,499
Total, Protective Irrigation Works	1,12,164	25,712	-3,735	1,34,141	57	1,34,084	878	3,600	4,478
49.—IRRIGATION WORKS.									
PRODUCTIVE WORKS.									
<i>In Operation.</i>									
5. Hâtanati Canal... ..	...	...	...	...	...	...	...	...	...
6. Lower Pánjhra River Works ... ..	...	...	...	...	...	...	...	...	...
7. Kadva River Works	1,531	343	...	1,874	...	1,874	...	49	48
8. Pravara River Works—Lákh Canal ... ..	...	...	...	...	...	...	...	...	...
9. Mutha Canals	20,894	4,756	...	25,650	...	25,650	...	666	666
10. Ekruk Tank ... ..	...	...	...	...	...	...	...	...	...
11. Krishna Canal ... ..	...	...	...	...	...	...	...	...	...
Total, Productive Works	22,425	5,099	...	27,524	...	27,524	...	714	714
Total, Major Works	1,34,589	30,811	-3,735	1,61,665	57	1,61,008	878	4,314	5,192
43. MINOR WORKS AND NAVIGATION.									
<i>In Operation.</i>									
12. Khári Cut	73,077	16,776	...	89,853	...	89,853	...	2,349	2,349
13. Hartala Tank ... ..	...	...	...	...	...	...	...	...	...
14. Mhasva do. ... ..	...	...	...	...	...	...	...	...	...
15. Jámda Canals ... ..	...	...	...	...	...	...	...	...	...
16. Parsul Tank ... ..	...	...	...	...	...	...	...	...	...
17. Pravara River Works—Ojhar Canal... ..	...	...	...	...	...	...	...	...	...
18. Bhátodi Tank ... ..	...	...	...	...	...	...	...	...	...
19. Mátoba do. ... ..	...	...	...	...	...	...	...	...	...
20. Kásurdi do. ... ..	...	...	...	...	...	...	...	...	...
21. Shirsuphal do. ... ..	...	...	...	...	...	...	...	...	...
22. Bhádalvádi do. ... ..	...	...	...	...	...	...	...	...	...
23. Koregaon do. ... ..	...	...	...	...	...	...	...	...	...
24. Ashti do.	7	...	...	7	...	7	...	...	...
25. Revári Canal ... ..	...	...	...	...	...	...	...	...	...
26. Upper Mán River Works ... ..	...	...	...	...	...	...	...	...	...
27. Yerla River Irrigation Works ... ..	...	...	...	...	...	...	...	...	...
28. Chikhli Canal ... ..	...	...	...	...	...	...	...	...	...
29. Maini Tank ... ..	...	...	...	...	...	...	...	...	...
30. Muchkundi do. ... ..	...	...	...	...	...	...	...	...	...
31. Nilgund do. ... ..	...	...	...	...	...	...	...	...	...
32. Gadikeri do. ... ..	...	...	...	...	...	...	...	...	...
33. Dámbal do. ... ..	...	...	...	...	...	...	...	...	...
34. Medleri do. ... ..	...	...	...	...	...	...	...	...	...
35. Madag do. ... ..	...	...	...	...	...	...	...	...	...
36. Amndi do. ... ..	...	...	...	...	...	...	...	...	...
37. Mávinkop do. ... ..	...	...	...	...	...	...	...	...	...
Total	73,084	16,776	...	89,860	...	89,860	...	2,349	2,349
<i>In Abeyance.</i>									
38. Gokák Canal, 2nd Section ... ..	...	...	...	...	...	...	...	...	...
Total, Minor Works and Navigation	73,084	16,776	...	89,860	...	89,860	...	2,349	2,349
PROVINCIAL MINOR WORKS AND NAVIGATION.									
<i>In Operation.</i>									
39. Golák Canal, 1st Section and Storage Works	8,051	1,851	97	9,999	...	9,999	...	259	259
GRAND TOTAL	2,15,724	49,439	-3,638	2,61,524	57	2,61,467	878	6,922	7,500

*Including expenditure charged to

B.

and Gujarat for, and to end of 1893-1900.

TO END OF YEAR.

Grand Total.	Direct Charges.					Indirect Charges.				Grand Total.
	Works.	Establishment.	Tools and Plant.	Total.	Deduct Receipts on Capital Account.	Total.	Capitalization.	Leave and Pension Allowances.	Total.	
11	12	13	14	15	16	17	18	19	20	21
Ra.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
309	42,13,827	10,26,672	1,23,099	53,63,598	8,013	53,55,585	1,66,709	1,61,006	3,27,715	56,83,300
760	15,83,170	3,42,322	62,793	19,88,285	1,473	19,86,812	35,544	53,055	88,599	20,75,411
1,069	57,96,997	13,68,994	1,85,892	73,51,883	9,486	73,42,397	2,02,253	2,14,061	4,16,314	77,58,711
55,345	1,82,090	86,184	—36	2,18,238	231	2,18,007	259	5,067	5,326	2,23,333
574	60,495	24,441	7,168	92,104	427	91,677	21	4,062	4,083	95,760
81,574	1,02,449	81,371	1,456	1,35,276	68	1,35,208	...	4,929	4,929	1,40,137
1,37,493	3,45,034	91,906	8,588	4,45,618	726	4,44,892	280	14,058	14,338	4,59,230
1,38,562	61,42,031	14,60,990	1,94,480	77,97,501	10,212	77,87,289	2,02,533	2,28,119	4,30,652	82,17,941
...	3,83,636	99,517	9,060	4,92,213	1,288	4,90,925	7,083	19,830	26,913	5,17,838
...	3,67,303	74,888	3,228	4,45,419	87	4,45,382	8,689	14,545	23,234	4,68,616
1,922	5,60,468	1,44,136	17,016	7,21,620	140	7,21,480	5,674	25,063	30,737	7,52,217
...	2,64,529	68,611	19,477	3,52,647	201	3,52,446	5,824	13,621	19,445	3,71,891
26,316	53,38,616	9,82,945	1,17,050	64,38,611	12,226	64,26,385	52,781	1,83,480	2,36,261	66,62,646
...	10,07,089	2,12,509	9,713	12,29,311	1,194	12,28,117	69,948	42,321	1,12,269	13,40,386
...	6,74,654	1,42,209	1,882	8,18,545	...	8,18,545	18,516	27,831	46,347	8,64,892
28,238	85,96,295	17,24,845	1,77,226	1,04,98,366	15,086	1,04,83,280	1,68,515	3,26,691	4,95,206	1,09,78,486
1,06,800	1,47,38,326	81,85,835	3,71,706	1,82,95,867	25,298	1,82,70,569	3,71,048	5,54,810	9,25,858	1,91,96,427
92,202	2,12,247	49,745	2,133	2,64,125	181	2,63,944	6,350	8,073	14,423	2,78,367
...	33,437	11,936	2,579	47,962	4	47,948	23,052	2,382	25,434	73,322
...	1,01,259	26,309	1,129	1,28,787	6	1,28,781	5,026	5,149	10,175	1,38,956
...	7,89,213	1,91,837	13,129	9,91,179	21	9,91,158	12,015	37,896	49,911	10,41,069
...	1,62,423	42,832	2,823	2,08,078	71	2,08,007	972	6,018	6,988	2,14,995
...	2,30,067	75,184	4,528	3,09,779	144	3,09,635	5,832	14,808	20,640	3,30,276
...	2,73,838	70,183	9,354	3,53,375	690	3,52,685	13,023	13,999	27,022	3,79,707
...	1,49,237	35,982	2,937	1,88,156	8	1,88,148	6,274	7,000	13,274	2,01,422
...	81,433	8,425	884	40,812	...	40,812	3,079	1,699	4,778	45,590
...	1,71,148	38,190	2,861	2,12,199	...	2,12,199	5,137	7,232	12,369	2,24,568
...	1,57,001	53,403	2,621	2,13,115	...	2,13,115	4,067	10,240	14,307	2,27,422
...	30,044	7,661	218	37,923	...	37,923	...	1,266	1,266	39,189
7	6,09,243	1,45,084	8,122	7,62,449	5,392	7,57,057	52,311	26,730	79,041	8,36,098
...	47,057	9,693	21	56,771	...	56,771	1,259	1,781	3,040	59,811
...	3,07,544	93,456	6,782	4,07,782	241	4,07,541	5,801	17,354	23,155	4,30,696
...	5,42,133	1,13,410	8,065	6,63,608	2,365	6,61,243	22,513	21,136	43,649	7,04,892
...	39,984	13,611	208	53,803	...	53,803	917	2,722	3,639	57,442
...	2,65,538	98,303	3,315	3,67,156	540	3,66,616	3,875	19,158	23,033	3,89,649
...	1,11,830	26,300	2,294	1,40,484	267	1,40,217	14,386	4,104	18,490	1,58,707
...	6,938	1,700	130	8,768	...	8,768	...	259	259	9,027
...	7,020	1,755	140	8,915	...	8,915	13	351	364	9,279
...	49,262	10,769	878	60,909	62	60,847	1,034	2,099	3,133	63,960
...	61,881	15,324	1,155	78,360	6	78,354	213	2,795	3,038	81,392
...	1,26,596	31,841	2,825	1,61,292	14	1,61,248	...	6,350	6,350	1,67,698
...	48,805	10,881	1,055	60,741	...	60,741	12,536	1,718	14,254	74,995
...	21,665	5,762	823	27,750	138	27,612	2,083	1,152	3,235	30,847
92,209	45,83,843	11,89,866	80,509	58,54,238	10,150	58,44,088	2,01,798	2,23,469	4,25,267	62,69,855
...	92,036	70,024	14,246	1,76,306	...	1,76,306	710	13,238	13,978	1,90,284
92,209	46,75,879	12,59,910	94,755	60,30,514	10,150	60,20,394	2,02,538	2,36,707	4,39,245	64,59,639
10,258	10,75,957	1,73,761	21,236	12,72,954	740	12,72,214	18,642	26,146	44,788	*13,17,002
2,69,267	2,04,90,162	40,21,506	4,87,697	2,55,99,365	36,188	2,55,63,177	5,92,228	8,17,663	14,09,891	2,69,73,068

Statement showing the Financial Results of Irrigation Works in

Realizations under Main Heads of

Name of Work.	REVENUE (ACTUAL RECEIPTS).										Revenue	
	Irrigation.			Navigation.	Plantations.	Water-power.	Miscellaneous.	Total.	Refunds of Revenue.	Gross Revenue, less Refunds.	Estab.	
	Water-rates directly paid.	Share of Land Revenue.	Total.								Direction.	Executive.
	1	2	3	4	5	6	7	8	9	10	11	12	13
IMPERIAL.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
MAJOR WORKS.												
35.—Protective Irrigation Works.												
1. Nira Canal	1,46,593	...	1,46,593	...	...	...	1,607	1,48,200	26	1,48,174	4,545	15,881
2. Mhasvad Tank	20,137	...	20,137	...	481	...	5,138	25,758	...	25,756	986	2,573
Total	1,66,730	...	1,66,730	...	481	...	6,745	1,73,956	26	1,73,930	5,531	18,454
49.—IRRIGATION WORKS.												
Productive Works.												
5. Hathmati Canal	4,600	...	4,600	...	555	...	253	5,408	...	5,408	19	83
6. Lower Pánjhra River Works	8,476	6,566	15,042	...	36	...	512	15,590	...	15,590	523	1,994
7. Kádva River Works	6,793	594	7,387	...	167	...	754	8,308	...	8,308	934	5,773
8. Pravara River Works— Lakh Canal	1,304	147	1,451	...	53	...	64	1,568	...	1,568	627	10,390
9. Mutha Canals	1,90,402	42	1,90,444	...	87	2,160	1,28,279	3,20,970	547	3,20,423	6,020	17,825
10. Ekrak Tank	18,105	...	18,105	...	213	...	...	30,743	36	30,707	717	1,961
11. Krishna Canal	46,239	...	46,239	...	...	...	1,027	47,266	6	47,260	227	1,679
Total	2,75,919	7,349	2,83,268	...	1,111	2,160	1,43,314	4,29,853	569	4,29,284	9,067	39,705
Total Major Works	4,42,649	7,349	4,49,998	...	1,592	2,160	1,50,059	6,03,809	615	6,03,194	14,596	58,159
43.—MINOR WORKS AND NAVIGATION.												
12. Khári Cut	4,022	...	4,022	...	212	...	730	4,964	45	4,919	...	...
13. Hartála Tank	58	...	58	...	...	...	204	262	...	262	14	23
14. Mhasva do.	426	...	426	...	17	...	770	1,213	...	1,213	69	355
15. Jámda Canals	8,581	...	8,581	...	135	...	162	8,878	...	8,878	2,555	7,955
16. Parsul Tank	980	...	980	...	8	...	12	1,000	...	1,000	69	500
17. Pravara River Works— Ojhar Canal	3,996	76	4,072	...	7	...	272	4,351	4	4,347	642	11,185
18. Bhátodi Tank	2,812	1,351	4,163	...	2	...	694	4,859	...	4,859	203	4,632
19. Mátoba do.	11,154	...	11,154	...	...	...	106	11,260	...	11,260	214	645
20. Kásurdi do.	177	...	177	...	...	...	...	177	...	177	36	55
21. Shiruphal do.	3,199	...	3,199	...	...	...	81	3,280	...	3,280	277	646
22. Bhádalvádi do.	3,212	...	3,212	...	...	...	321	3,533	...	3,533	205	540
23. Koregaon do.	518	...	518	...	...	...	13	531	...	531	55	220
24. Ashti do.	4,490	...	4,490	...	229	...	472	5,191	...	5,191	352	583
25. Bevári Canal	6,455	...	6,455	...	...	...	84	6,539	...	6,539	26	234
26. Upper Man River Works...	2,705	...	2,705	...	...	...	194	2,899	31	2,868	85	477
27. Yerla River Irrigation Works	10,034	...	10,034	...	...	...	259	10,293	...	10,293	112	888
28. Chikhli Canal	1,604	...	1,604	...	...	...	67	1,671	...	1,671	12	91
29. Maini Tank... ..	4,932	...	4,932	...	...	...	400	5,332	...	5,332	48	500
30. Muchkundi Tank	93	...	93	...	50	...	120	263	...	263	...	...
31. Nilgund do. ... ..	...	...	...	...	...	...	...	...	...	...	...	...
32. Gaikori do. ... ..	...	1,987	1,987	...	...	...	...	1,987	...	1,987	...	...
33. Dambal do.	962	981	1,943	...	...	...	317	2,290	...	2,290	10	281
34. Medleri do.	664	...	664	...	...	...	...	664	...	664	10	306
35. Madag do.	2,253	...	2,253	...	25	...	80	2,358	...	2,358	24	516
36. Asundi do.	559	632	1,191	...	...	...	57	1,218	...	1,218	69	1,123
37. Mávinkop do. ... ..	...	2,057	2,057	...	...	...	1	2,058	...	2,058	...	...
Total	73,886	7,084	80,970	...	685	...	5,416	87,101	80	87,021	5,167	32,015
PROVINCIAL.												
43.—Minor Works and Navigation.												
39. Gakák Canal, First Section and Storage Works	20,771	...	20,771	...	...	14,313	279	35,363	14	35,349	98	1,441
GRAND TOTAL	5,37,306	14,433	5,51,739	...	2,277	16,473	1,55,784	7,26,273	709	7,25,564	19,853	91,615

Notes.—(1) The Irrigation share of Land Revenue Assessments relates to the Revenue year 1899-1900.

(2) The division of Establishment Charges between "Revenue Management" and "Maintenance and Repairs" is made

cecan and Gujardt for the year ending 31st March 1900.

Revenue and Working Expenses.

WORKING EXPENSES.															
Management.			Maintenance and Repairs.										Indirect Charges.	Grand Total Working Expenses.	Net Revenue.
Department.		Total Revenue Management.	Establishment.				Works.	Repairs.	Sundries.	Tools and Plant.	Plantations.	Total Cost of Maintenance.			
Navigational.	Civil Officers.		Direction.	Executive.	Medical.	Total.									
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
...	7,330	27,756	1,369	4,785	253	6,412	...	23,989	...	800	628	31,829	3,757	63,342	84,832
...	1,013	4,572	398	1,041	...	1,439	...	5,580	...	71	178	7,268	700	12,540	13,216
...	8,343	32,323	1,767	5,826	258	7,851	...	29,569	...	871	806	39,097	4,467	75,832	98,048
...	230	332	201	899	...	1,100	...	4,136	589	43	263	6,131	168	6,631	-1,223
...	1,303	3,820	144	650	...	694	1,709	1,487	...	...	231	3,471	450	7,741	7,849
...	340	7,047	159	979	...	1,138	...	4,431	...	131	123	5,823	1,098	13,968	-5,660
...	80	11,097	40	654	...	694	...	2,775	...	19	...	3,488	1,610	16,225	-14,657
...	9,445	33,290	2,145	6,351	...	8,496	321	32,921	-15	6,232	1,262	49,217	4,528	87,036	2,33,388
...	906	3,584	277	757	...	1,034	180	3,492	...	85	607	5,398	520	9,502	21,205
...	2,842	4,748	335	2,479	...	2,814	28	10,693	152	185	561	14,436	661	19,815	27,415
...	15,146	63,918	3,301	12,669	...	15,970	1,638	59,885	726	6,695	3,050	87,964	9,065	1,60,947	2,68,317
...	23,489	96,246	5,068	18,435	258	23,821	1,638	89,454	726	7,566	3,856	1,27,061	13,522	2,33,829	3,66,365
...	201	201	200	535	...	735	1,041	2,712	...	26	260	4,774	103	5,078	-159
...	5	102	3	14	...	17	...	70	...	...	...	87	16	205	57
...	21	435	10	61	...	71	...	196	...	50	90	407	68	910	303
...	429	10,939	865	2,694	...	3,559	...	14,314	...	180	62	18,115	1,970	31,024	-22,146
...	49	618	10	72	...	82	...	327	...	50	2	461	91	1,170	-170
...	208	12,035	39	670	...	709	80	2,757	...	38	...	3,584	1,755	17,374	-13,027
...	263	5,378	17	295	...	312	...	1,249	...	4	...	1,565	760	7,703	-2,844
...	558	1,417	74	226	...	300	...	1,018	...	100	131	1,599	162	3,178	8,082
...	9	100	24	88	...	62	...	248	...	100	...	410	21	531	-354
...	160	1,083	126	293	...	419	...	1,662	...	100	15	2,196	188	3,467	-187
...	161	906	82	216	...	298	...	1,193	...	100	1	1,592	146	2,644	889
...	26	301	14	58	...	72	...	239	...	15	...	376	49	726	-195
...	104	1,039	226	375	...	601	...	2,323	...	49	82	3,055	215	4,309	862
...	323	583	28	244	...	272	...	1,050	...	48	39	1,409	74	2,066	4,473
...	135	697	263	1,468	...	1,731	4,000	2,714	...	155	240	6,840	321	9,858	-6,990
...	502	1,502	142	1,121	...	1,266	2,025	2,643	...	155	400	6,489	317	8,308	1,985
...	80	183	18	125	...	141	...	527	...	10	38	716	34	933	738
...	247	795	38	394	...	432	442	1,179	...	98	106	2,257	137	3,189	2,143
...	5	5	33	125	...	153	474	192	...	10	...	834	22	861	-598
...	199	199	5	18	...	23	...	100	...	...	...	123	3	325	1,662
...	157	418	2	59	...	61	...	243	...	...	...	304	49	801	1,489
...	83	349	2	58	...	60	...	211	...	...	...	301	53	703	-39
...	113	653	6	143	...	149	...	597	...	...	...	716	96	1,495	863
...	91	1,283	29	462	...	491	...	1,965	...	...	...	2,456	236	3,975	-2,727
...	206	206	...	...	...	...	...	...	...	...	...	...	...	206	1,852
...	4,285	41,457	2,754	9,767	...	12,021	8,062	39,809	...	1,288	1,516	62,696	6,856	1,11,039	-24,018
...	1,039	2,578	46	676	...	722	...	2,721	...	272	166	3,881	317	6,776	28,573
...	28,813	1,40,281	7,368	28,938	258	36,564	9,700	1,3,984	726	9,126	5,538	1,93,638	20,725	3,54,644	3,70,920

in accordance with the orders contained in Government of India No. 88-A. I., dated 18th August 1884.

S. TOMKINS,
for Examiner, Public Works Accounts.

II-C.

Statement showing the Financial Results of Irrigation Works in Deccan and Gujard for the year 1899-1900 based on actual receipts.

Principal Results of Operations for the year ended 31st March 1900.

Irrigation Works.	Direct and Indirect Capital Outlay to end of 1899-1900.	Gross Receipts, Direct and Indirect, from all sources.	Working Expenses, Direct and Indirect.	Net Revenue (excluding Charges for Interest).	Percentage of net Revenue on Capital Outlay to end of the year.	Interest at 4 per cent. on Direct Capital Outlay at commencement of year and at 2 per cent. on Outlay during year.	SURPLUS REVENUE AFTER PAYING INTEREST ON DIRECT CAPITAL OUTLAY.		EXCESS CHARGES, INCLUDING INTEREST ON DIRECT CAPITAL OUTLAY.	
							Amount.	Percentage on total sum at charge.	Amount.	Percentage on total sum at charge.
1	2	3	4	5	6	7	8	9	10	11
IMPERIAL.										
MAJOR WORKS.										
33.—PROTECTIVE IRRIGATION WORKS.										
<i>In Operation.</i>										
1 Nira Canal	56,83,800	1,46,174	63,342	64,873	1.49	2,14,222	---	---	1,29,890	1.63
2 Nhaswad Tank	20,75,411	25,756	12,540	13,116	0.64	79,473	---	---	66,256	1.96
Total	77,59,211	1,73,930	75,882	98,048	1.26	2,93,694	---	---	1,96,146	1.66
<i>Under Construction.</i>										
3 Shetphal Tank	2,23,333	---	---	---	---	1,643	---	---	7,642	3.28
4 Chankipar do.	95,760	---	---	---	---	3,656	---	---	3,656	2.58
5 Maldevi do.	1,40,137	---	---	---	---	3,818	---	---	3,818	2.39
Total	4,59,230	---	---	---	---	15,116	---	---	15,116	2.63
Total, Protective Irrigation Works	82,17,941	1,73,930	75,882	98,048	1.19	3,08,810	---	---	2,10,762	1.70
49.—IRRIGATION WORKS.										
<i>Productive Works.</i>										
<i>In Operation.</i>										
6 Hathmati Canal	5,17,838	5,408	6,631	-1,223	0.24	19,637	---	---	20,860	1.95
7 Lower Panjra River Works	4,68,616	15,590	7,741	7,649	1.67	17,915	---	---	9,966	1.27
8 Kadva River Works	7,52,217	8,308	13,968	-5,660	0.75	28,523	---	---	34,422	2.64
9 Pravara River Works—Lakh Canal	3,71,891	1,593	16,255	-14,657	3.94	14,098	---	---	29,755	2.96
9 Mutha Canal	66,62,646	3,23,423	67,035	2,33,838	3.50	2,56,842	---	---	23,154	0.23
10 Ekrük Tank	13,49,386	30,707	9,502	21,345	1.63	49,125	---	---	27,920	0.97
11 Krishna Canal	8,64,592	47,260	19,945	27,415	3.17	32,743	---	---	5,327	0.54
Total, Productive Works	1,09,78,436	4,29,264	1,00,947	2,68,317	2.44	4,18,781	---	---	1,50,464	0.90
Total, Major Works	1,91,96,427	6,03,194	2,36,529	3,66,365	1.91	7,27,591	---	---	3,61,226	1.16
45.—MINOR WORKS AND NAVIGATION.										
<i>In Operation.</i>										
12 Khari Cut	2,78,367	4,919	5,078	-151	0.05	8,761	---	---	8,930	2.64
13 Bartala Tank	73,362	262	395	47	0.08	1,918	---	---	1,961	1.70
14 Mhasva do.	1,38,956	1,213	910	303	0.23	5,151	---	---	4,843	1.64
15 Jamsa Canal	10,41,089	9,878	31,024	-22,145	2.13	39,646	---	---	61,793	2.52
16 Parsul Tank	2,14,965	1,000	1,170	-170	0.03	8,321	---	---	8,491	2.68
17 Pravara River Works—Ojhar Canal	3,30,275	4,347	17,374	-13,027	3.04	12,385	---	---	25,412	3.67
18 Bhatodi Tank	3,79,707	4,659	2,703	-3,844	0.75	14,107	---	---	16,951	2.18
19 Matoba do.	2,01,422	11,260	3,178	6,082	4.01	7,536	556	0.21	---	---
20 Kasmudi do.	45,560	177	531	-354	0.73	1,633	---	---	1,987	1.77
21 Shirsuphal do.	2,24,598	3,240	3,497	-187	0.08	8,438	---	---	8,675	2.19
22 Ehadavadi do.	2,27,422	3,533	2,644	889	0.39	8,525	---	---	7,636	1.84
23 Koregon do.	9,189	531	728	-155	0.50	1,617	---	---	1,712	2.37
24 Ashti do.	8,36,069	5,191	4,909	682	0.11	30,232	---	---	29,400	2.04
25 Revari Canal	59,611	6,530	2,066	4,473	7.48	2,271	2,202	2.33	---	---
26 Upper Man River Works	4,30,646	2,568	9,553	-6,990	1.62	16,302	---	---	23,292	2.86
27 Yera River Irrigation Works	7,04,992	10,203	8,348	1,945	0.29	26,450	---	---	24,465	1.12
28 Chikhli Canal	57,442	1,871	933	738	1.29	2,152	---	---	1,414	1.15
29 Mamb Tank	3,99,649	5,332	3,189	2,143	0.55	14,665	---	---	12,523	1.65
30 Muchkund Tank	1,58,707	263	861	-533	0.38	5,640	---	---	6,297	2.43
31 Nilgund do.	9,027	---	---	---	---	351	---	---	351	2.35
32 Gadikeri do.	9,279	1,987	325	1,652	17.91	367	1,305	---	---	---
33 Lambal do.	63,950	2,240	801	1,449	2.33	2,434	---	---	945	0.92
34 Medleri do.	61,392	64	703	-39	0.05	3,134	---	---	3,173	2.17
35 Madag do.	1,67,595	2,358	1,445	663	0.61	6,450	---	---	5,557	1.46
36 Asundi do.	74,985	1,243	3,975	-2,727	3.64	2,430	---	---	5,157	4.37
37 Mavinkop do.	30,847	2,058	208	1,652	6.00	1,104	743	2.08	---	---
Total	62,69,355	87,021	1,11,039	-24,018	0.35	2,31,969	---	---	2,55,987	2.19
<i>In abeyance.</i>										
38 Gokak Canal, Second Section	1,90,254	---	---	---	---	7,052	---	---	7,052	2.07
Total, Minor Works and Navigation	64,59,609	87,021	1,11,039	-24,018	0.37	2,39,021	---	---	2,63,039	2.18
PROVINCIAL.										
43.—MINOR WORKS AND NAVIGATION.										
<i>In Operation.</i>										
39 Gokak Canal, First Section and Storage Works	13,17,002	35,342	6,776	29,573	2.17	59,699	---	---	22,116	1.30
GRAND TOTAL	2,69,73,068	7,25,864	3,54,644	3,70,920	1.38	10,17,301	---	---	6,46,391	1.44

* The sum at charge being minus, no percentage can be calculated.

S. TOMKINS,
for Examiner, Public Works Accounts.

III—C.

Demands and Realizations during the year 1899-1900, in Deccan and Gujarat.

Irrigation Works.	Balance of Demands unrealized at commencement of year.	DEMANDS OF THE YEAR (a).				Total, including Balance at commencement of year.	Deduct Remissions, not including Cash Refunds.	Net Total.	Deduct Amount unrealized at close of year.	Actual Realizations of the year.
		Rabi 1899-99.	Kharif 1899-1900.	Miscellaneous Receipts.	Total.					
1	2	3	4	5	6	7	8	9	10	11
IMPERIAL.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
MAJOR WORKS.										
35.— <i>Protective Irrigation Works.</i>										
1. Nira Canal	3,410	43,869	1,03,753	1,587	1,49,209	1,52,619	...	1,52,619	4,419	1,48,200
2. Mhasvad Tank	5,921	7,506	13,271	5,619	26,396	32,317	...	32,317	6,561	25,756
Total	9,331	51,375	1,17,024	7,206	1,75,605	1,84,936	...	1,84,936	10,980	1,73,956
49.—IRRIGATION WORKS.										
<i>Productive Works.</i>										
5. Háthmati Canal	107	4,706	60	808	5,574	5,681	...	5,681	273	5,408
6. Lower Pánjhara River Works.	713	(c) 5,235	7,759	543	13,542	14,255	...	14,255	5,231	9,024
7. Kádvá River Works	7,922	6,514	10,199	963	17,676	25,598	...	25,598	17,884	7,714
8. Pravara River Works—Lákh Canal	(b) 500	1,069	605	117	1,791	2,291	...	2,291	870	1,421
9. Mutha Canals... ..	91,371	7,054	1,56,180	1,34,001	2,97,235	3,88,606	...	3,88,606	67,678	3,20,928
10. Ekruk Tank	7,700	4,446	11,392	12,856	28,694	36,394	...	36,394	5,651	30,743
11. Krishna Canal	11,723	8,652	52,716	1,248	62,616	74,339	...	74,339	27,073	47,266
Total	1,20,036	37,676	2,38,911	1,50,541	4,27,128	5,47,164	...	5,47,164	1,24,660	4,22,504
Total, Major Works	1,29,367	89,051	3,55,935	1,57,747	6,02,733	7,32,100	...	7,32,100	1,35,640	5,96,460
43.—MINOR WORKS AND NAVIGATION.										
12. Khári Cut	3,769	7	...	942	949	9,718	...	9,718	4,754	4,964
13. Hartála Tank... ..	...	59	3	573	635	635	...	635	373	262
14. Mhasva do. ... ..	...	399	517	787	1,703	1,703	...	1,703	490	1,213
15. Jámda Canals... ..	797	4,665	6,144	257	11,106	11,903	...	11,903	3,025	8,878
16. Paraul Tank	593	1,905	862	20	2,787	3,380	...	3,380	2,360	1,000
17. Pravara River Works—Ojhar Canal	2,758	8,797	3,715	310	12,822	15,580	...	15,580	11,305	4,275
18. Bhátodi Tank	1,886	2,372	1,888	708	4,963	6,854	...	6,854	3,346	3,508
19. Mátoba do.	3,525	2,523	12,576	106	13,210	18,735	...	18,735	7,475	11,260
20. Káaurdi do.	62	285	...	...	285	347	...	347	170	177
21. Shirsuphal do.	34	2,244	923	81	3,243	3,282	...	3,282	2	3,280
22. Bhdalvádi do.	59	2,811	567	321	3,699	3,758	...	3,758	225	3,533
23. Koregaon do. ... ..	...	495	147	13	655	655	...	655	124	531
24. Ashti do.	2,025	1,765	1,793	709	4,267	6,292	...	6,292	1,101	5,191
25. Revári Canal	734	5,309	2,891	84	8,284	9,018	...	9,018	2,479	6,539
26. Upper Mán River Works ...	4,460	2,632	2,632	194	6,458	9,918	...	9,918	7,019	2,899
27. Yerla River Irrigation Works.	1,764	8,533	2,779	259	11,571	13,335	...	13,335	3,042	10,293
28. Chikhli Canal	1,558	161	262	67	490	2,048	...	2,048	377	1,671
29. Máini Tank	1,011	2,136	3,017	400	5,553	6,564	...	6,564	1,232	5,332
30. Muchkandi do. ... ..	...	1	105	170	276	276	...	276	13	263
31. Nilgund do. ... ..	...	...	...	...	...	...	...	...	...	...
32. Gadikeri do. ... ..	...	...	...	...	...	...	...	...	...	...
33. Dambal do.	819	143	1,093	347	1,588	2,407	...	2,407	1,098	1,309
34. Medleri do.	245	43	559	...	602	847	...	847	183	664
35. Madag do.	434	948	1,977	105	3,030	3,464	...	3,464	1,106	2,358
36. Asundi do.	307	247	566	57	870	1,177	...	1,177	561	616
37. Mávinkop do. ... ..	...	...	...	1	1	1	...	1	...	1
Total, Minor Works and Navigation	31,810	48,485	45,021	6,551	1,00,057	1,31,897	...	1,31,897	51,880	80,017
PROVINCIAL.										
43.—MINOR WORKS AND NAVIGATION.										
39. Gokák Canal, First Section and Storage Works	(b) 2,876	5,662	13,258	14,657	33,577	36,453	-13	36,466	1,103	35,363
Grand Total	1,64,083	1,43,198	4,14,214	1,78,955	7,96,367	9,00,450	-13	9,00,463	1,89,623	7,11,840

(a) Exclusive of Irrigation share of consolidated assessments.

(b) Difference of Rupee 1 is due to annas and pies.

(c) Inclusive of Rs. 1,819 on account of Rabi of 1899-1900, shown in Canal Return No. IX.

S. TOMKINS,
for Examiner, Public Works Accounts.

IV-C.

Statement showing the Financial Results of Irrigation Works in Deccan and Gujarát for the year ended 1533-1900 based on the Assessment of the year.

Principal Results and Operations for the year ended 31st March 1900.

Irrigation Works.	Capital Outlay (direct and indirect) to end of year.	REVENUE ASSESSED DURING THE YEAR.									Working Expenses, direct and indirect.	Net Assessed Revenue of the year.	
		Direct Assessed Revenue (a).							Indirect Revenue—(Land Revenue due to Operation of Canal). (b).	Grand Total.			
		Occupier's rate.	Owner's rate.	Plantations.	Water-power.	Navigation.	Miscellaneous.	Total.					
1	2	3	4	5	6	7	8	9	10	11	12	13	
IMPERIAL.													
MAJOR WORKS.													
35.—Protective Irrigation Works.													
1	Nira Canal	56,83,300	1,46,952	...	...	...	1,587	1,45,539	.....	1,49,539	63,842	85,197	
2	Mhasvad Tank	20,76,411	33,118	...	491	...	...	8,138	38,735	.....	38,735	12,543	26,196
	Total ...	77,68,711	1,90,069	...	491	...	...	6,725	1,87,274	.....	1,87,274	75,862	1,11,392
49.—IRRIGATION WORKS.													
Productive Works.													
3	Háthmati Canal	5,17,788	60	...	555	...	...	253	868	.....	868	6,631	-5,782
4	Lower Pánjra River Works	4,68,616	9,910	...	36	...	...	513	10,468	6,696	17,024	7,741	9,283
5	Káda River Works	7,52,217	11,783	...	187	...	...	798	13,746	594	13,340	13,983	-623
6	Pravara River Works—Láksh Canal	3,71,691	1,179	...	63	...	...	64	1,296	147	1,443	16,235	-11,782
7	Mutha Canals	66,62,646	1,60,166	...	87	2,160	...	1,81,764	2,94,167	43	2,94,209	67,036	3,07,174
8	Ekrak Tank	13,40,386	16,971	...	213	...	...	12,643	29,827	.....	29,827	9,502	20,325
9	Krishna Canal	8,64,892	59,232	...	...	...	...	1,216	60,450	.....	60,450	19,845	40,605
	Total ...	1,09,78,468	2,59,301	...	1,111	2,160	...	1,47,270	5,09,842	7,349	4,17,191	1,60,947	2,56,244
	Total Major Works ...	1,87,37,197	4,39,369	...	1,592	2,160	...	1,53,996	5,97,116	7,349	8,04,406	2,36,829	5,67,576
43.—MINOR WORKS AND NAVIGATION.													
10	Khátri Cut	2,78,867	...	...	212	...	...	730	642	.....	642	5,078	-4,138
11	Harála Tank	73,382	6	...	...	...	...	573	579	.....	579	2-6	374
12	Mhasra do.	1,84,856	1,815	...	17	...	...	770	2,602	.....	2,602	910	1,692
13	Jánda Canals	10,41,089	9,440	...	135	...	...	182	9,737	.....	9,737	31,024	-21,287
14	Parul Tank	2,14,895	862	...	8	...	...	12	882	.....	882	1,170	-288
15	Pravara River Works—Ojhar Canal	3,30,275	5,965	...	7	...	...	3-3	6,276	76	6,351	17,374	-11,023
16	Bhátdol Tank	3,79,707	2,706	...	2	...	...	706	3,414	1,351	4,765	7,7-3	-2,938
17	Mátoha do.	2,01,422	12,676	...	...	...	...	106	12,682	.....	12,682	3,178	9,5-4
18	Kásurul do.	45,590	...	...	...	...	...	...	...	.....	...	531	-5-1
19	Shirunphal do.	2,24,568	923	...	...	...	...	81	1,0-4	.....	1,0-4	3,467	-2,463
20	Bhádalwádi do.	2,27,422	2,828	...	...	...	...	321	2,849	.....	2,849	2,644	2-5
21	Koregaon do.	39,189	859	...	...	...	...	13	672	.....	672	726	-54
22	Ashul do.	8,38,098	12,944	...	229	...	...	480	13,653	.....	13,653	4,3-9	9,344
23	Bevári Canal	59,811	2,907	...	...	...	...	84	2,991	.....	2,991	2,066	925
24	Upper Mán River Works	4,30,896	5,696	...	...	...	...	194	5,7-2	.....	5,7-2	9,858	-4,066
25	Yerla River Irrigation Works	7,04,892	11,751	...	...	...	...	25-3	12,010	.....	12,010	6,8-8	5,7-2
26	Chikhlí Canal	57,442	420	...	...	...	...	67	3-7	.....	3-7	833	-616
27	Maini Tank	3,89,640	5,618	...	...	...	...	400	6,016	.....	6,016	3,189	2,827
28	Mochkundi Tank	1,58,707	2-6	...	50	...	...	120	376	.....	376	31-6	-485
29	Nilgund do.	9,027	...	...	...	...	...	...	...	.....	...	...	...
30	Gadikeri do.	9,279	...	...	...	...	...	...	1,987	.....	1,987	325	1,662
31	Dambal do.	63,990	1,252	...	...	...	...	347	1,599	981	2,589	601	1,779
32	Medleri do.	81,392	782	...	...	...	...	...	7-2	.....	7-2	703	59
33	Madag do.	1,67,698	2,888	...	25	...	...	80	2,981	.....	2,981	1,4-5	1,4-6
34	Asundi do.	74,996	863	...	...	...	...	67	920	632	1,552	3,975	-2,423
35	Mávinkop do.	30,847	...	...	...	...	...	1	1	2,057	2,058	2-6	1,5-2
	Total Minor Works and Navigation ...	62,09,255	62,685	...	695	...	...	5,666	69,136	7,094	96,220	1,11,039	-14,819
PROVINCIAL.													
43.—MINOR WORKS AND NAVIGATION.													
36	Gokak Canal, First Section, and Storage Works	13,17,002	24,787	...	...	14,313	...	344	39,444	.....	39,444	6,776	32,668
	GRAND TOTAL ...	2,93,23,554	5,46,741	...	2,277	16,473	...	1,80,206	7,25,636	14,433	7,40,129	3,54,644	3,85,486

(a) Excluding remissions shown in Canal Returns No. V of 1899-1900.

(b) Irrigation share of land revenue assessment.

S. TOMKINS,
for Examiner, Public Works Accounts.

STATEMENT I-E.

IV-C.

Statement showing the Financial Results of Irrigation Works in Deccan and Gujarat for the year ended 1930-31 based on the Assessment of the year.

Principal Results and Operations for the year ended 31st March 1930.

Irrigation Works.	Capital Outlay (direct and indirect) to end of year.	REVENUE ASSESSED DURING THE YEAR.									Working Expenses, direct and indirect.	Net Assessor Revenue of the year.
		Direct Assessed Revenue (a).							Indirect Revenue—(Land Revenue due to Operation of Canal). (b).	Grand Total.		
		Occupier's rate.	Owner's rate.	Plantations.	Water-power.	Naviga-tion.	Miscel-laneous.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	13
IMPERIAL.												
MAJOR WORKS.												
35.—Protective Irrigation Works.												
1	Nira Canal	56,63,300	1,44,952	...	...	...	1,687	1,43,539	...	1,48,539	63,942	85,19
2	Mhasvad Tank	20,75,411	33,116	...	481	...	5,139	38,785	...	38,785	12,543	26,11
	Total ...	77,58,711	1,80,068	...	481	...	6,725	1,87,374	...	1,87,374	75,882	1,11,80
49.—IRRIGATION WORKS.												
Productive Works.												
4	Háthmati Canal	5,17,538	60	...	555	...	353	868	...	868	6,631	-5.78
6	Lower Pánjra River Works ...	4,68,816	9,910	...	38	...	612	10,458	6,566	17,024	7,741	9.32
7	Kádra River Works	7,52,217	11,783	...	167	...	798	12,746	594	13,340	13,368	-62
8	Pravara River Works—Lákh Canal.	3,71,691	1,178	...	63	...	64	1,443	147	1,590	16,225	-14.78
9	Mutha Canals	66,62,846	1,60,166	...	...	2,160	1,31,754	2,94,167	42	2,94,209	57,035	2,07,17
10	Ekrak Tank	13,40,386	16,971	...	219	...	12,643	29,827	...	29,827	9,632	20.32
11	Krishna Canal	8,64,892	59,232	...	...	...	1,248	60,480	...	60,480	19,845	40.63
	Total ...	1,09,78,498	2,59,301	...	1,111	2,160	1,47,270	4,09,842	7,349	4,17,191	1,60,947	2,56,24
	Total, Major Works ...	1,87,37,197	4,39,369	...	1,592	2,160	1,59,995	5,97,116	7,349	6,04,405	2,36,829	3,07,63
43.—MINOR WORKS AND NAVIGATION.												
12	Khári Cut	2,78,367	...	...	212	...	730	942	...	942	5,078	-4.13
13	Hartáda Tank	73,382	6	...	...	...	573	579	...	579	2.5	87
14	Mhasva do.	1,36,936	1,915	...	17	...	770	2,602	...	2,602	910	1.69
15	Jánda Canals	10,41,999	9,440	...	135	...	162	9,737	...	9,737	31,024	-21.28
16	Parul Tank	2,14,598	892	...	8	...	12	893	...	893	1,170	-25
17	Pravara River Works—Ojhar Canal.	3,30,275	5,965	...	7	...	303	6,275	79	6,354	17,374	-11.03
18	Shátdi Tank	3,79,707	12,576	...	2	...	708	3,414	1,551	4,965	7,733	-2.93
19	Mátoba do.	2,01,423	2,708	...	...	...	108	12,682	...	12,682	3,178	9.50
20	Káurdi do.	45,580	...	...	...	...	...	...	...	...	631	-53
21	Shirunphal do.	2,54,688	923	...	...	...	91	1,064	...	1,064	3,467	-2.46
22	Bhádalwádi do.	2,37,423	2,528	...	...	...	321	2,849	...	2,849	2,044	20
23	Koregaon do.	39,189	659	...	...	...	13	672	...	672	720	-5
24	Ashú do.	8,36,086	12,944	...	229	...	480	13,663	...	13,663	9,858	9.84
25	Revári Canal	59,611	2,907	...	...	...	84	2,991	...	2,991	2,066	92
26	Upper Mán River Works	4,30,696	5,595	...	...	...	194	5,722	...	5,722	9,858	-4.06
27	Yerla River Irrigation Works ...	7,04,692	11,751	...	...	...	259	12,010	...	12,010	8,338	3.70
28	Chikhli Canal	57,442	320	...	...	...	67	327	...	327	933	-54
29	Maini Tank	3,89,749	5,618	...	...	...	400	6,016	...	6,016	3,169	2.82
30	Muchhundi Tank	1,58,707	206	...	50	...	120	378	...	378	561	-48
31	Nálgund do.	9,027	...	...	...	...	...	...	...	...	...	...
32	Gadikeri do.	9,279	...	...	...	...	...	...	1,987	1,987	325	1.66
33	Dambal do.	63,940	1,252	...	...	...	347	1,599	881	2,480	601	1.77
34	Medleri do.	81,392	792	...	...	...	...	702	...	702	703	5
35	Madag do.	1,67,698	2,886	...	25	...	80	2,991	...	2,991	1,495	1.40
36	Asundi do.	74,996	863	...	...	...	67	820	632	1,452	3,975	-2.42
37	Mávinkep do.	30,547	...	...	...	...	1	1	2,057	2,058	2.6	1.8
	Total, Minor Works and Navigation.	62,69,555	62,535	...	655	...	5,666	88,136	7,094	96,220	1,11,039	-14.81
PROVINCIAL.												
43.—MINOR WORKS AND NAVIGATION.												
38	Gokák Canal, First Section, and Storage Works	13,17,002	24,787	...	...	14,813	...	344	...	39,444	6,776	32.60
	GRAND TOTAL ...	2,63,23,554	5,46,741	...	2,277	10,473	1,60,205	7,25,696	14,433	7,40,129	3,54,044	3,85,48

(a) Excluding remissions shown in Canal Returns No. V of 1929-30.

(b) Irrigation share of land revenue assessment.

S. TOMKINS,
for Examiner, Public Works Accounts.

STATEMENT I-E.

Statement of Area irrigated by Irrigation Works in the Bombay

No.	Name of Canal.	AREA IRRIGATED IN ACRES.							AVERAGE DISCHARGE, CUBIC FEET PER SECOND.				
		Kharif.	Rabi.	Total.	Flow.	Lift.	Double-cropped.		At Head.		Utilized.		
							Area irrigated.	Percentage of Total Area.	Kharif.	Rabi.	Kharif.	Rabi.	
1	2	3	4	5	6	7	8	9	10	11	12	13	
MAJOR WORKS.													
<i>Protective Works.</i>													
1	Nira Canal	12,808	14,392	27,200	27,060	140	...	...	169	188	152	188
2	Mhāsvad Tank	4,242	9,414	13,656	13,270	386	851	6.23	54.99	110.60	54.99	110.60	
	Total	17,050	23,806	40,856	40,330	526	851	2.08	...	...	...	...
<i>Productive Works.</i>													
5	Hāthmati Canal	110	...	110	110	...	...	...	30.75	2.37	12.50	1.18
6	Lower Pánjra River Works ...	1,704	754	2,458	2,448	10	29	1.18	13.55	21.61	13.55	21.81	
7	Kādva River Works. {	Wāghad Tank ... ..	...	...	...	...	...	...	...	...	...	...
		Paikhed Canal	1,498	158	1,656	1,645	11	56	3.33	23.05	17.68	17.06	13.08
		Ojhar Tāmbat Canal	437	26	463	456	7	11	2.37	2.50	4.49	1.90	3.40
8	Pravara River Works—Lākh Canal.	348	53	401	399	2	28	6.48	7.72	5.08	5.10	3.35	
9	Mutha Canals	477	576	1,053	999	54	10	.95	32.71	9.60	26.99	9.60	
10	Ekrak Tank	8,119	606	8,725	8,639	86	698	8	168.48	131.63	Not available being run into Matoba Tank.		
11	Krishna Canal	2,358	2,641	4,994	4,951	43	265	5.30	31.95	45.36	27.35	39.64	
	Total	5,369	1,142	6,511	5,524	987	43	0.66	47.54	35.50	37.27	34.75	
	Total, Major Works ...	20,415	5,956	26,371	25,171	1,200	1,133	4.31	...	...	...	...
	Total, Major Works ...	37,465	29,762	67,227	65,601	1,728	1,989	2.95	...	...	...	...
MINOR WORKS AND NAVIGATION.													
12	Khāri Cut ... ..	...	...	...	...	...	...	...	0.25	...	(a) 0.86	...
13	Hartāla Tank	1	3	4	...	4	...	...	...	...	...	...
14	Mhāsava do.	287	612	899	893	6	109	12.12	1.28	1.91	1.28	1.91	
15	Jāmda Canals	2,919	1,506	4,515	4,516	...	409	9.06	27.70	11.89	27.70	11.89	
16	Parsul Tank	172	...	172	172	...	...	...	1.95	1.36	1.95	1.36
17	Pravara River Works—Ojhar Canal.	2,249	1,452	3,701	3,574	127	378	10.21	38.68	12.64	35.25	12.64	
18	Bhātodi Tank	553	317	870	839	31	40	4.80	6.38	7.68	6.98	7.68	
19	Mātoba do.	1,211	...	1,211	1,211	...	...	...	8.79	7.53	8.79	7.53
20	Kasurdi do. ... ..	...	...	...	...	...	...	...	...	...	...	...
21	Shirsuphal do.	400	...	400	400	...	...	...	5.73	...	5.73	...
22	Bhādāvādi do.	151	675	826	821	5	...	...	3.61	6.26	3.61	6.26
23	Koregaon do.	56	256	312	311	1	...	...	1.77	1.80	1.51	1.54
24	Ashti do.	515	5,508	6,023	6,004	19	130	2.18	9.05	27.21	7.68	23.45	
25	Revāri Canal	151	11	162	161	1	...	...	2.28	1.06	2.26	1.06
26	Upper Mān River Works ...	540	1,241	1,781	1,774	7	186	10.44	0.68	2.84	0.81	2.73	
27	Yerla River Irrigation Works.	218	3,908	4,126	4,067	59	13	0.31	1.92	11.17	1.34	5.21	
28	Chikhli Canal	87	8	95	95	...	...	...	0.48	0.24	0.40	0.21
29	Maini Tank	834	1,164	1,998	1,952	46	357	17.86	2.40	7.95	2.40	7.95	
30	Muchkundi Tank	17	47	64	64	...	...	...	...	...	...	...
31	Niḡund do. ... ..	...	...	...	...	...	...	...	...	...	...	...
32	Gadikeri do.	*337	...	*337	...	...	...	...	...	...	...	...
33	Dāmbal do.	{ 184 } { *144 }	{ 55 } { ... }	{ 239 } { *144 }	{ 236 } { ... }	{ 3 } { ... }	{ ... } { ... }	{ ... } { ... }	{ 3.45 } { 3.67 }	{ 3.67 } { 2.20 }	All utilized except leakage in the Canal.		
34	Medleri do.	49	89	138	123	15	...	...	0.70	2.20	...	...
35	Madag do.	950	364	1,314	1,253	61	...	...	4.69	8.86	...	...
36	Asundi do.	119	{ 54 } { *185 }	{ 173 } { *185 }	{ 165 } { ... }	{ 8 } { ... }	{ ... } { ... }	{ ... } { ... }	{ 0.47 } { 1.96 }	{ 1.96 } { ... }	...	...
37	Māvinkop do.	*540	...	*540	...	...	...	...	...	...	...	...
	Total ... {	11,618 *1,021	17,360 *185	28,973 *1,206	28,580	893	1,622	5.69	...	...	...	...
PROVINCIAL.													
39	Gokāk Canal, 1st Section ...	4,679	3,745 *1,144 4,889	8,424	8,108	360	...	...	37.55	27.11	Approximately all.	
	GRAND TOTAL ... {	53,757 *1,021	50,867 *185	104,624 *1,206	102,189	2,479	3,611	3.45	...	...	...	...

E.

Presidency, excluding Sind, during the year 1899-1900.

AREA IRRIGATED PER CUBIC FOOT PER SECOND.				BASE TO WHICH THE DUTIES OF WATER ARE CALCULATED.		REMARKS.	
Discharged at Head.		Utilized.		Kharif.	Rabi.		
Kharif.	Rabi.	Kharif.	Rabi.				
14	15	16	17	18	19	20	
75.79 77	105.50 85	84.26 77	105.50 85	16th January to 15th October.	16th October to 15th January.		
...		
3.76 125.76	... 34.57	8.80 125.76	... 34.57	1st June to 30th September... 1st April to 15th October ..	1st October to 31st January. 16th October to 15th January.		
63.99 174.80	8.94 5.82	87.81 230.00	12.08 7.85	1st June to 15th October ...	16th October to end of February.	On the Wadali Canal, the areas of kharif and rabi mamul irrigation were 223, and 135 acres, respectively. The loss by evaporation and absorption in the Palkhed, Ozar, Tambat and Wadali Canals is assumed to have been the same as in the previous year, viz. 26, 24 and 34 per cent. respectively.	
73.96 14.58	37.01 60.00	111.96 17.67	56.12 60.00	June to September ...	October to January.		
48.90 74 112.94	40.14 58 32.17	Not available. 86 144.06	... 67 32.86	16th January to 15th October. 15th January to 14th October.	16th October to 15th January. 15th October to 14th January.		
...		
...		
...	July to October ...	November to February ...		(a) Water was given gratis for fodder cultivation owing to famine.
225 105.38 88.20 58.01	320.42 134.23 ... 114.87	225 105.38 88.20 63.49	320.42 134.23 ... 114.87	1st April to 15th October.	16th October to 15th January.		
79.23 137.77	41.28 65.60	79.23 137.77	41.28 65.60	June to September...	October to January.		
69.81 41.88 32 57 66.23 613.64 113.54 77.08 347.50	... 118.69 142 202 10.38 436.97 349.87 33.83 146.42	69.81 41.83 37 67 66.81 666.67 162.69 92.50 146.42	... 118.69 166 235 10.38 454.58 745.80 33.33 146.42	16th January to 15th October. 15th January to 14th October.	16th October to 15th January. 15th October to 14th January.		
...	...	...	...	No experiments made.	No experiments made.
...		
95 70 203 340	63 63 57 123	Not known.	...	16th January to 15th October.	16th October to 15th January.	* Area under consolidated assessment.	
...		
124.61	180.34	124.61	180.34	16th January to 15th October.	16th October to 15th January.	† During the rabi season perennial and 8 months' crops are irrigated. The area of these, 1,144 acres, is included in kharif, but must be added to rabi area to get the duty of water.	
...		

Statement showing Incidence of Working Expenses and Assessed Water Revenue

No.	Name of Work.	Average Discharge of the year at Canal Head in Cubic feet per Second.	WATER-RATE ASSESSED.					Gross assessed Revenue from all Sources.	Working expenses, Direct and Indirect.	
			Occupier's.	Owner's.	Total Direct.	Indirect.	Total Direct and Indirect.			
MAJOR WORKS.										
<i>Protective Works.</i>										
1	Nira Canal	174	Rs. 1,46,952	...	Rs. 1,46,952	Rs. ...	Rs. 1,46,952	Rs. 1,48,539	Rs. 63,342	
2	Mhasvad Tank	68.89	33,116	...	33,116	...	33,116	38,735	12,540	
	Total ...	...	1,80,068	...	1,80,068	...	1,80,068	1,87,274	75,882
<i>Productive Works.</i>										
5	Hathmati Canal	11.04	60	...	60	...	60	868	6,631	
6	Lower Panjra River Works ...	14.74	9,910	...	9,910	6,566	16,476	17,024	7,741	
7	Kadva River Works. {	Waghad Tank ... ..	...	...	...	...	...	754	1,770
		Palkhed Canal	20.86	8,306	...	8,306	594	8,900	9,093	6,364
		Ojhar Tambat Canal	3.48	2,283	...	2,283	...	2,283	2,286	4,213
8	Pravara River Works—Lakh Canal	Wadali Canal	6.40	1,194	...	1,194	...	1,194	1,208	1,621
		...	20.39	1,179	...	1,179	147	1,326	1,443	16,225
9	Mutha Canals	150.15	1,60,166	...	1,60,166	42	1,60,208	2,94,209	87,035	
10	Ekrak Tank	35.80	16,971	...	16,971	...	16,971	29,827	9,503	
11	Krishna Canal	44.53	59,232	...	59,232	...	59,232	60,480	19,845	
	Total ...	...	2,59,301	...	2,59,301	7,349	2,66,650	4,17,191	1,60,947
	Total, Major Works ...	...	4,39,369	...	4,39,369	7,349	4,46,718	6,04,465	2,36,829
MINOR WORKS AND NAVIGATION.										
12	Khari Cut	0.57	...	...	...	...	...	942	5,078
13	Hartala Tank ... ..	...	6	...	6	...	6	579	205
14	Mhasva Tank	1.40	1,815	...	1,815	...	1,815	2,602	910	
15	Jamda Canals	20.58	9,440	...	9,440	...	9,440	9,737	31,024	
16	Parsul Tank	1.85	862	...	862	...	862	882	1,170	
17	Pravara River Works—Ojhar Canal	20.71	5,965	...	5,965	76	6,041	6,351	17,374	
18	Bhatodi Tank	5.76	2,706	...	2,706	1,351	4,057	4,765	7,703	
19	Matoba do.	8.16	12,576	...	12,576	...	12,576	12,682	8,178	
20	Kasurdi do. ... ..	...	...	...	...	...	...	...	531
21	Shirsuphal do.	5.73	923	...	923	...	923	1,004	3,467	
22	Bhadalwadi do.	4.50	2,528	...	2,528	...	2,528	2,849	2,644	
23	Koregaon do.	1.78	659	...	659	...	659	672	726	
24	Ashti do.	13.59	12,944	...	12,944	...	12,944	13,653	4,309	
25	Revári Canal	1.98	2,907	...	2,907	...	2,907	2,991	2,066	
26	Upper Man River Works ...	1.41	5,598	...	5,598	...	5,598	5,792	9,858	
27	Yerla River Irrigation Works ...	4.43	11,751	...	11,751	...	11,751	12,010	8,308	
28	Chikhli Canal	0.49	320	...	320	...	320	387	933	
29	Maini Tank	5.06	5,616	...	5,616	...	5,616	6,016	3,189	
30	Muchkundi Tank	Not known.	206	...	206	...	206	376	861	
31	Nilgund do. ... ..	...	...	...	...	...	...	...	...
32	Gadikeri do. ... ..	...	...	...	...	1,987	1,987	1,987	325
33	Dambal do.	3.50	1,252	...	1,252	981	2,233	2,580	861	
34	Medleri	1.08	762	...	762	...	762	762	703	
35	Madag	5.73	2,886	...	2,886	...	2,886	2,991	1,406	
36	Asundi	0.85	863	...	863	632	1,495	1,552	3,975	
37	Mavinkop ... ..	...	...	...	...	2,057	2,057	2,058	206
	Total ...	...	82,585	...	82,585	7,084	89,669	96,220	1,11,039
PROVINCIAL.										
38	Gokak Canal, 1st Section, and Storage Works	32.33	24,787	...	24,787	...	24,787	39,444	6,776	
	GRAND TOTAL ...	...	5,46,741	...	5,46,741	14,433	5,61,174	7,40,129	3,54,644

E.

on Canals in the Bombay Presidency, excluding Sind, during the year 1899-1900.

Area irrigated during the year 1899-1900.	WORKING EXPENSES.			OCCUPIER'S RATE.		TOTAL, WATER-RATE, DIRECT AND INDIRECT.		REMARKS.
	Per cent. on Gross Revenue.	Per Acre irrigated.	Per Cubic foot per Second of Discharge at Canal Head.	Per Acre irrigated.	Per Cubic foot per Second of Discharge at Canal Head.	Per Acre irrigated.	Per Cubic foot per Second of Discharge at Canal Head.	
Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
27,200	42.64	2.33	364.02	5.40	845	5.40	845	
13,656	32	0.92	182	2.42	481	2.42	481	
40,856	40.52	1.85	.....	4.41	.....	4.41	.....
110	763.94	60.28	600.63	.55	5.43	.55	5.43	
2,158	45.47	3.15	525	4.03	672	6.70	1,118	
...	235	...	.....	...	.....	...	.....
1,556	70	3.84	313	5.02	403	5.37	437	
403	184	9.10	1,211	4.93	656	4.93	656	
401	134	4.04	253	2.98	187	2.98	187	
1,053	1,124	15.41	796	1.12	57.82	1.26	65.03	
8,725	29.59	9.98	579.65	18.36	1066.70	18.36	1,066.70	
4,994	32	1.91	270	3.40	481	3.40	481	
6,511	32.81	3.05	446	9.10	1,330	9.10	1,330	
26,371	38.57	6.10	...	9.75	.....	10.11	.....
67,227	39.17	3.52	...	1.85	.....	6.64	.....
...	539.06	...	...	...	.....	...	.....
4	35.40	51.25	...	1.75	.....	1.75	.....
899	34.96	1.01	650	2.02	1,296	2.02	1,296	
4,515	318.58	6.87	1,507	2.09	458	2.09	458	
172	132.65	6.80	632	5.01	466	5.01	466	
3,701	274	4.70	839	1.61	288.03	1.63	291.69	
870	162	8.85	1,337	3.11	469.79	4.66	704.34	
1,211	25.06	2.62	389.46	10.38	1,541	10.38	1,541	
...	
400	345.66	8.67	605.07	2.30	161.09	2.30	161.09	
826	92.80	3.20	537.55	3.06	562	3.06	562	
312	108	2.32	408	2.11	370	2.11	370	
6,023	31.66	0.72	317.07	2.15	952	2.15	952	
162	69.02	12.75	1,043	17.94	1,468	17.94	1,468	
1,781	170.20	5.53	7,013	3.14	3,970	3.14	3,970	
4,126	69.20	2.01	1,854	2.84	2,623	2.84	2,623	
45	241.09	20.73	1,904	7.11	653	7.11	653	
1,998	53.01	1.60	630	2.81	1,110	2.81	1,110	
64	223	13.45	Discharge unknown,	3.22	Not known.	3.22	Not known.	
...	
*337	16.35	0.96	...	...	.....	...	.....
239	...	3.35	...	...	.....	...	.....
*144	31.05	2.09	229	5.24	358	5.83	638	* Area on which consolidated assessment is levied.
138	92.26	5.09	651	5.62	706	5.52	706	
1,314	50.00	1.14	261	2.20	504	2.20	504	
173	256.12	22.98	4,677	5.00	1,015	4.18	1,759	
*135	...	11.10	...	...	.....	...	.....
*540	10.01	0.38	...	...	.....	3.81	.....
28,973	115.40	3.83	...	2.85	.....	3.9	.....
*1,206	...	...	...	...	.....	...	.....
8,424	17.22	0.81	210	2.94	766	2.94	766	
1,04,624	47.91	3.38	...	5.22	.....	5.36	.....
*1,206	...	...	...	...	.....	...	.....

III—E.

Statement of Quantity and Value of Crops irrigated in the Bombay Presidency, excluding Sind, during the year 1899-1900.

	(1) NIRA CANAL.		(2) MHASVAD TANK.		(5) HATHMATI CANAL.		(6) LOWER PANJIRA RIVER WORKS.		(7) KADVA RIVER WORKS.						(8) PRATARA RIVER WORKS—LAKH CANAL.		(9) MUTHA CANALS.		
	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	
Gardens and Orchards { Vegetables ...	102	3,813	152	12,365	...	...	135	605	94	683	29	232	13	130	54	187	256	11,625	
Orchards { Fruit and other trees ...	147	16,723	44	3,775	...	...	425	4,908	26	122	7	28	2	10	22	8	594	42,147	
Sugarcane ...	8,613	7,01,179	199	39,210	28	270	155	3,332	249	6,540	83	3,320	5	250	8*	...	3,303	5,87,462	
Cereals... {	Wheat ...	760	80,716	330	9,932	...	...	441	3,988	98	2,840	6	120	31	744	20*	...	75	1,849
	Barley ...	13	496	71	663	...	...	...	...	...	...	...	...	...	...	...	...	6	86
	Rice ...	590	19,937	211	8,276	35	...	41	146	41	1,215	...	...	...	...	...	...	503	8,418
	Maize ...	161	4,429	517	15,450	...	...	38	28	2	10	1	5	2	20	8	27	60	604
	Jowar ...	12,880	8,28,116	8,979	1,57,827	47	940	6	1	60	600	10	100	11	110	459	12	852	12,576
	Chino, Ragi, Rala, Vara ...	7	58	150	1,870	...	...	1	8	7	55	...	...	...	...	2*	...	13	76
Bajri ...	6,433	2,16,512	971	11,350	...	...	249	1,804	282	3,567	69	828	168	2,520	340	6,174	2,090	18,175	
(Miscellaneous ...)	...	...	...	...	...	...	...	...	22	220	6	60	3	33	...	...	40	900	
Pulses ... {	Gram, Udid, Mug ...	714	24,373	363	4,458	...	...	6	20	72	824	34	306	37	407	43*	...	153	1,962
	Tur ...	81	3,265	38	474	...	...	8	1	...	...	...	...	...	...	...	...	...	...
	Pence ...	...	...	...	...	...	...	59	101	...	25	...	...	...	...	...	...	3	13
	Ground-nut ...	1,259	52,208	1,849	54,040	...	...	791	3,005	476	10,600	118	2,200	94	1,830	1*	...	90	1,664
(Miscellaneous ...)	19	1,080	3	16	...	...	...	...	19	190	1	5	...	...	...	...	2	86	
Fodder Crops... {	Fodder ...	89	2,737	112	1,757	...	...	29	229	...	...	...	...	...	...	...	...	67	1,305
	Lucerne, &c. ...	...	...	...	...	...	...	1	...	1	20	...	...	...	...	...	...	265	38,543
Fibres ... {	Cotton ...	...	...	...	...	...	...	87	136	...	...	...	...	...	...	...	...	...	...
	Tåg (Hemp) ...	28	1,057	...	...	...	...	...	...	118	776	47	188	22	132	...	...	58	575
Dyes ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Drugs and Narcotics. {	Tobacco ...	6	215	12	635	...	...	5	25	...	...	...	...	1	25	12	21	1	15
	Bhang ...	1	89	...	...	...	...	...	...	...	...	...	...	...	9	43	...	...	...
Oil-seeds ... {	Mustard, Sesam ...	2	60	31	244	...	...	2	...	...	...	...	...	...	...	...	...	...	...
	Linseed, Castor-oil ...	...	...	6	70	...	...	2	...	2	12	1	12	...	...	...	...	...	...
Condiments ... {	Chilly and Onions ...	239	11,963	163	11,362	...	...	20	40	46	1,343	44	748	3	60	18	186	101	2,879
	Garlic, Turmeric and Mothi ...	...	...	1	400	...	...	12	11	12	897	5	85	1	22	...	...	8	220
Miscellaneous ...	56	119	...	...	...	...	...	...	28	230	7	70	8	80	...	...	93	2,560	
Land insufficiently irrigated ...	...	...	60	216	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
							Ploughing	5	...	...	...	...	...	...	...	...	...	...	...
Total ...	27,200	20,08,005	13,656	3,34,393	110	1,210	2,458	17,283	1,656	30,819	463	8,367	401	6,426	1,053	7,040	8,725	7,35,657	
Area on which consolidated assessment is levied ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* These crops have been reported to have yielded nothing.

	(10) EKRU'K TANK.		(11) KRISHNA CANAL.		(12) KHARI CUT.		(13) HARTALA TANK.		(14) MHASVA TANK.		(15) JAMDA CANALS.		(16) PARRUL TANK.		(17) PRAVARA RIVER WORKS—OJHAR CANAL.		(18) BHATODI TANK.		(19) MATOBA TANK.			
	Area irrigated.	Estimat- ed Value.	Area irrigated.	Estimat- ed Value.	Area irrigated.	Estimat- ed Value.	Area irrigated.	Estimat- ed Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.	Area irrigated.	Estimated Value.		
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.		
Gardens and Orchards. { Vegetables	48	480	...	...	...	...	...	...	32	155	76	1,048	1	17	39	456	7	57	19	760
Orchards. { Fruit and other trees	75	375	...	...	...	...	...	...	6	315	40	1,941	11	320	67	2,040	...	...	6	300
	Mangotrees No. 1620	81,000	344	5,160	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sugarcane	503	75,450	1,703	3,40,600	...	...	...	...	23	1,505	158	8,550	23	3,417	192	2,117	14	350	450	45,000
Cereals	Wheat	286	5,720	252	7,560	2	10	356	6,995	1,305	10,216	216	4,276	18	268	
	Barley	2	2	
	Rice	642	12,840	813	32,520	4	45	127	857	4	4	5	15	...	89	2,225
	Maize	81	155	116	2,320	25	192	1	20	39	309	8	40	
	Jowar	1,776	26,640	1,812	1,40,944	144	1,475	1,545	14,867	758	9,100	238	3,570	1	33	
	Chino, Ragi, Kala, Vara	71	355	53	1,060	1	2	13	7	...	105	
Bajri	47	...	176	7,040	...	...	...	...	19	205	495	7,084	47	568	1,856	8,809	64	480	530	10,600
Miscellaneous ... ..	...	...	40	1,122	...	...	...	...	...	...	Shaloo 8	98	...	...	8	39	4	60	8	35
Pulses	Gram, Udid, Mung	528	10,520	108	2,164	...	...	...	203	3,430	191	943	...	...	412	5,976	96	679	75	1,200
	Tur	28	...	...	...	...	...	...	9	36	1	4	...	...	2*	...	...	...	2	10
	Pease	2	10	...	...	...	...	...	4	37	16	114	...	...	...	...	...	...	...	...
	Ground-nut	723	7,230	431	6,465	10	28	3	52	16	497	18	78	309	4,635	4	22	
Miscellaneous ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...
Fodder Crops... { Fodder	97	485	94	3,076	...	...	...	...	...	...	8	43	64	734	37	75	2	20	...	...
	Lucerne, &c. ... ..	...	...	4	120	...	...	...	...	...	1	2	...	...	5	109	...	...	...	...
Fibres { Cotton ... ..	...	...	...	...	...	...	...	...	70	660	348	4,767	7	88	...	...	...	...	...	...
	TAg (Homp)	5	...	63	1,260	...	...	...	...	...	73	646	1	9	6	11	...	...	...	...
Dyes ... .. { ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		
Drugs and Nar- cotics. { Tobacco	4	...	13	1,040	...	...	...	...	...	...	3	41	...	...	...	...	12	120	...	...
	Bhang	3	...	14	700	...	...	...	...	...	...	...	...	...	8	42	65	6,500	...	...
Oil-seeds ... { Mustard, Sesam	3	...	...	...	...	...	...	...	4	45	22	213	1	13	7	61	10	40	1	2
	Linseed, Castor-oil ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Condiments ... { Chilly and Onions	79	1,185	354	16,694	...	...	...	...	1	14	57	1,147	...	...	23	383	5	26	19	950
	Garlic, Turmeric and Mothi	8	80	94	6,640	...	...	...	...	...	6	56	...	...	...	...	...	...	...	...
Miscellaneous	Waste water 85	...	27	...	...	...	...	...	...	...	...	...	...	...	...	...	7	700	...	...
Laud insufficiently irrigated ... ..	...	...	...	...	...	...	...	...	Wetting fields 14	...	Ploughing Waste 2 5	...	...	...	3	...	...	...	...	...
Total	4,994 No. 1620	2,23,527	6,511	5,75,485	...	...	4	30	899	14,945	4,515	52,821	172	5,683	3,701	33,898	870	17,571	1,211	61,241
Area on which consolidated assessment is levied ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* These crops have been reported to have yielded nothing.

	(20) KASURDI TANK.		(21) SHIRSUPHAL TANK.		(22) BHADALVADI TANK.		(23) KORGAON TANK.		(24) ASHITI TANK.		(25) BEVARI CANAL.		(26) UPPER MAN RIVER WORKS.		(27) YERRA RIVER IRRIGATION WORKS.		(28) CHIKHLI CANAL.		
	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Estimated Value.	Area irri- gated.	Estimated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	
Gardens and Orchards. {																			
Vegetables ... ..	...	...	1	87	2	75	6	30	1	5	1	2	...	...	...	...	...	...
Fruit and other trees ...	...	...	35	1,575	3	135	...	...	12	422	10	490	38	525	87	1,365	...	...
Sugarcane ... ..	...	...	101	22,725	58	8,700	1	20	70	10,300	134	20,800	66	13,200	118	23,600	10	2,000
Cereals	Wheat ... ..	...	...	...	10	165	13	100	184	5,560	1	43	181	4,465	341	8,840	4	120
	Barley ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rice	4	180	23	172	14	70	140	4,535	34	510	1	15
	Maize ... ..	...	...	...	...	2	30	3	15	54	1,620	...	...	...	...	...	...	...
	Jowar	3	168	659	49,425	219	1,050	5,089	1,10,128	...	255	894	23,820	2,871	1,14,810
	Chino, Bāgi, Rala, Vara Bājri Miscellaneous	2 237	60 13,330	21 57	80 427	7 ...	63 100	24 152	240 2,280	7 9	70 180
Pulses	Gram, Udid, Mug Tur	8	360	7	105	4	235	8,816	2	67	102	1,530	291	5,805
	Pease ... ..	...	...	...	...	...	...	...	...	76	1,819	...	...	5	90	...	...	...
	Ground-nut ... ..	...	...	...	...	...	10	150	95	5,010	3	165	89	890	268	2,680	...	...
	Miscellaneous ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fodder Crops {	Fodder ... ..	...	2	90	...	...	...	...	6	209	...	...	151	2,265	30	800	...	...
	Lucerne, &c. ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fibres	Cotton ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tāg (Hemp) ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dyes ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Drugs and Narcotics. {	Tobacco ... ..	...	...	...	...	...	...	...	...	...	...	...	2	70	2	50	...	...
	Bhāng ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Oil-seeds	Mustard, Sesam Linseed, Castor-oil ... ..	...	...	...	...	...	2	4	3	90	...	...	...	...	...	...	...	...
	
Condiments . {	Chilly and Onions ... ..	...	7	525	5	150	11	50	46	1,400	2	70	24	860	50	1,520	14	700
	Garlic, Turmeric and Methi... ..	...	...	...	...	...	8	500	...	...	...	...	...	...	25	750	16	900
Miscellaneous ... ..	...	...	...	...	...	...	...	...	...	...	...	...	5	...	21	...	...	...
Laud insufficiently irrigated ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ... ..	...	...	400	39,050	826	59,384	312	2,069	6,023	1,50,077	162	27,892	1,781	54,025	4,126	1,60,040	45	3,800
Area on which consolidated assessment is levied ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

III—E—concluded.

9-1992

	(29) MAINI TANK.		(30) MOCHKUNDI TANK.		(32) GADIKERI TANK.		(33) DAMBAL TANK.		(34) MEDLEBI TANK.		(35) MADAG TANK.		(36)§ ASUNDI TANK.		(37) MAVINKOP TANK.		(39) GOMAK CANAL, 1ST SECTION, AND STORAGE WORKS.		TOTAL.		
	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	Area irri- gated.	Esti- mated Value.	
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	
Gardens and Orchards. { Vegetables	29	450	5	84	...	...	24	1,160	10	124	33	1,270	{ 3 } { 39 }	48	...	...	75	397	1,286	36,295	
Gardens and Orchards. { Fruit and other trees	17	200	11	409	...	...	{ 15 } { 2 }	1,452	34	7,719	1	156	{ 3 } { 3 }	469	...	...	38	760	2,125	1,73,849	
Sugarcane	41	8,200	2	86	...	...	{ 71 } { 2 }	14,200	11	1,320	10	1,500	5	300	...	...	85	1,700	11,494	20,43,233	
Cereals	Wheat	124	3,370	...	...	...	...	...	...	...	...	...	...	...	...	...	116	348	5,170	1,07,645	
	Barley ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	92	1,250	
	Rice	6	300	...	...	...	...	...	...	...	...	...	...	...	...	...	...	55	275	3,793	1,01,838
	Maize	19	285	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,728	6,942	3,808	32,501
	Jowar	914	13,650	46	558	...	...	33	822	57	4,560	8	480	5	290	...	...	2,795	5,937	42,580	15,25,763
	Chino, Rági, Rála, Vara	14	140	...	...	...	...	10	254	12	540	88	3,370	7	168	...	...	560	560	1,066	9,163
Báji	262	2,620	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31	31	14,595	3,15,184
Miscellaneous	28	560	...	...	...	...	3	45	...	...	...	...	2	24	...	...	...	...	189	3,479	
Pulses	Gram, Udid, Mug	211	3,165	...	...	...	...	13	270	...	...	...	...	...	...	...	...	234	702	4,145	78,072
	Tur	29	435	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	274	6,134
	Pease ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	88	315
	Ground-nut	283	11,320	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7,036	1,65,784
Miscellaneous ... ..	...	...	...	...	...	...	...	...	...	...	...	1	25	...	...	...	...	...	...	49	1,352
Fodder Crops { Fodder ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	788	13,325
	Lucerne, &c. ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	277	38,794
Fibres ... { Cotton ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	127	338
	Tág (Hemp) ... ..	...	...	...	...	...	...	...	...	...	...	...	...	1	24	...	...	...	...	24	48
Dyes ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Drugs and Narcotics. { Tobacco	4	80	...	...	...	...	...	...	1	32	...	...	...	...	...	...	...	...	...	2	4
	Bláng ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	100
Oil-seeds ... { Mustard, Sesam	...	...	...	...	...	...	...	...	...	...	...	...	...	2	96	...	...	...	...	6	14
	Linseed, Castor-oil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	4
Condiments { Chilly and Onions	15	435	...	...	...	...	53	1,292	6	280	161	27,185	57	3,165	...	...	...	...	850	4,199	
	Garlic, Turmeric and Methi	2	30	...	...	...	...	12	252	2	110	688	30,870	{ 34 } { 1 }	1,330	...	...	...	13	39	
Miscellaneous ... ..	...	...	...	...	...	...	1	...	4	...	17	...	4	...	...	...	...	...	585	1,989	
Land insufficiently irrigated	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	91	216
Total	1,998	45,140	64	1,087	...	...	239	19,827	138	14,760	1,314	74,066	173	6,220	...	...	8,424	24,887	104,624	43,15,824	
Area on which consolidated assessment is levied	...	...	...	...	337	...	144	...	...	...	...	...	185	...	540	...	...	...	...	1,206	...

* Young trees.

† Crops spoiled to certain extent: hence less value.

‡ Crops spoiled.

§ Under this tank many of the crops withered for want of sufficient irrigation, and hence of no value in some cases, and in others less value.

CC

Comparative Statement of Irrigation and Rainfall for the years 1895-1899 and

Civil District.	OF THE CIVIL DISTRICT.			WORKS SUPPLYING IRRIGATION.		Culturable area commanded by the Irrigation Works in Column 6 in Acres.
	Total area in Acres.	Culturable area in Acres.	Cultivated area in Acres.	No.	Name.	
1	2	3	4	5	6	7
	Acres.	Acres.	Acres.			Acres.
Ahmedabad ...	2,443,608	1,958,545	290,373	1	Hathmati Canal	28,840
				2	Khari Cut	11,500
					Total ...	40,340
Foona ...	3,423,669	2,502,754	1,593,850	3	Nira Canal	227,670
				4	Mutha Canals	49,800
				5	Matoba Tank	7,133
				6	Kasurdi do.	478
				7	Shirsuphal do.	2,500
				8	Bhadalvadi do.	2,400
					Total ...	289,981
Khandesh ...	6,424,965	3,546,529	3,294,492	9	Lower Panjira River Works... ..	12,627
				10	Hartala Tank	527
				11	Mhaswa do.	4,075
				12	Jamda Canals... ..	40,185
					Total ..	57,414
Nasik ...	3,742,899	1,813,098	1,183,417	13	Kadva River Works. { Waghad Tank	26,280
					{ Pakhed Canal	7,421
					{ Ojbar Tambat Canal	2,729
					{ Wadali Canal	3,197
				14	Parsul Tank	3,197
					Total ..	39,627
Ahmednagar ...	4,214,387	3,245,004	2,603,566	15	Pravara River Works—Lath Canal .	25,536
				16	Do. Ojbar Canal	21,155
				17	Bhatodi Tank	13,657
					Total ...	60,348
Sholapur... ..	2,906,383	2,479,224	1,932,760	18	Mhasvad Tank... ..	102,400
				19	Ekrak do.	16,941
				20	Koregaon do.	Not known
				21	Ashti do.	16,825
					Total ..	1,36,166
Satara ...	3,087,854	2,153,164	1,431,811	18(1)	Mhasvad Tank ..	3,814
				22	Krishna Canal... ..	20,453
				23	Bewari do.	3,624
				24	Upper Man River Works	7,623
				25	Yerla River Irrigation Works	10,680
				26	Chikhli Canal	1,478
				27	Maini Tank Canal	4,025
					Total ...	58,297
Bijapur ...	3,628,527	3,227,077	2,483,277	28	Muchkundi Tank	5,417
				29	Nilgund do. ... ..	...
					Total ...	5,417
Belgaum... ..	2,813,145	2,195,086	1,707,756	30	Gadikeri Tank... ..	Not known
				31	Gokak Canal, 1st Section, and Storage Works	17,627
					Total ...	17,627
Dharwar... ..	2,945,398	2,412,321	1,923,550	32	Dambal Tank	2,500
				33	Medleri do.	830
				34	Madag do.	1,345
				35	Asundi do.	1,011
					Total ...	5,686
Kanara ...	2,524,897	388,244	235,125	36	Mavinkop Tank	755
	33,155,732	25,426,046	18,679,977		Grand Total ...	711,058

E.

1899-1900 in the Bombay Presidency, excluding Sind.

Area at present estimated as annually irrigable by the works specified in Column 8.	AREA IRRIGATED IN ACRES.						RAINFALL.		REMARKS.
	1898-99.			1899-1900.			1898-99.	1899-1900.	
	Kharif.	Babl.	Total.	Kharif.	Babl.	Total.			
8	9	10	11	12	13	14	15	16	17
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Ins. cts.	Ins. cts.	
8,000	1,800	2,479	4,279	110	...	110	42.33	3.08	
3,000	2,800	5	2,805	...	...	...	35.77	4.66	
11,000	4,600	2,484	7,084	110	...	110			
113,280	16,465	17,895	34,360	12,808	14,392	27,200	18.67	9.84	
16,800	6,831	1,214	8,045	8,119	606	8,725	21.33	9.46	
3,250	1,257	882	2,139	1,211	...	1,211	15.67	7.12	
150	62	127	189	...	...	...	19.63	4.99	
1,800	239	951	1,190	400	...	400	15.38	7.83	
2,000	580	1,228	1,808	151	675	826	13.19	10.21	
187,230	25,434	22,297	47,731	22,689	15,673	38,362			
12,627	1,265	2,328	3,593	1,704	754	2,458	24.40	4.20	
415	1	29	30	1	3	4	24.65	6.66	
1,700	17	201	218	287	612	899	20.29	9.98	
5,000	325	2,260	2,585	2,919	1,596	4,515	26.97	9.48	
19,742	1,608	4,818	6,426	4,911	2,965	7,876			
...	
9,837	454	1,449	1,863	1,498	158	1,656	29.36	16.53	
2,367	224	231	455	437	26	463	20.90	4.92	
2,433	93	248	341	348	53	401	16.34	6.90	
1,000	94	456	550	172	...	172			
15,637	865	2,344	3,209	2,455	237	2,692			
11,280	443	536	979	477	576	1,053	24.14	11.66	
14,763	2,161	3,311	5,472	2,249	1,452	3,701	24.48	12.73	
12,124	25	718	743	553	317	870	18.20	9.32	
38,167	2,629	4,565	7,194	3,279	2,345	5,624			
24,300	3,047	2,671	5,718	4,133	8,627	12,760	13.61	8.79	
16,941	2,222	1,642	3,864	2,353	2,641	4,994	33.92	11.80	
1,050	5	242	247	56	256	312	24.09	11.40	
11,780	620	696	1,316	515	5,508	6,023	26.30	13.90	
54,071	5,894	5,251	11,145	7,057	17,032	24,089			
500	259	124	383	109	787	896	13.61	8.79	
12,320	2,004	1,966	3,970	5,369	1,142	6,511	24.45	13.84	
1,920	186	1,381	1,567	151	11	162	26.87	14.14	
2,080	653	917	1,570	640	1,241	1,731	19.64	11.06	
5,480	656	3,203	3,859	218	3,908	4,126	17.41	11.82	
1,478	414	54	468	37	8	45	12.54	14.55	
4,625	628	923	1,551	834	1,164	1,998	14.78	15.24	
28,403	4,800	8,568	13,368	7,258	8,261	15,519			
15	3	1	4	17	47	64	19.67	19.25	
...	
15	3	1	4	17	47	64			
337	337*	...	337*	337*	...	337*	No gauge.	No gauge.	
7,200	4,583	1,872	6,455	4,679	3,745	8,424	20.10	11.62	
7,537	4,583	1,872	6,455	4,679	3,745	8,424			
	337*	...	337*	337*	...	337*			
1,000	141	30	171	184	55	239	25.14	11.07	
	144*	...	144*	144*	...	144*			
600	93	6	99	49	89	138	31.30	13.47	
1,345	429	404	833	950	304	1,314	29.70	16.90	
1,011	77	53	130	119	54	173	27.34	8.07	
		185*	185*	...	185*	185*			
3,956	740	493	1,233	1,302	562	1,864			
	144*	185*	329*	141*	185*	329*			
617	540*	...	540*	540*	...	540*	No rain		
							nge.		
316,425	51,156	52,693	103,849	53,757	50,867	104,624	22.15	10.7	
	1,021*	185*	1,206*	1,021*	185*	1,206*			

Area on which consolidated assessment is levied.

F.

Statement showing the Operation of Irrigation Works in the Deccan and Gujarat for the year 1899-1900.

No.	Names of Works.	AMOUNT DUE, 1899-1900.		REMISSIONS.		TOTAL.		Grand Total.	Re- marks.
		Kharif.	Rabi.	Kharif.	Rabi.	Kharif.	Rabi.		
1	2	3	4	5	6	7	8	9	10
	MAJOR WORKS.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	
	<i>Protective Works.</i>								
1	Nira Canal	1,03,753	43,199	..	...	1,03,753	43,199	1,46,952	
2	Mhaswad Tank	13,271	19,845	...	...	13,271	19,845	33,116	
	Total ...	1,17,024	63,044	...	...	1,17,024	63,044	1,80,068	
	<i>Productive Works.</i>								
5	Háthmati Canal	428	...	368	...	60	...	60	
6	Lower Pánjhra River Works ...	7,759	2,151	...	...	7,759	2,151	9,910	
	Wághad Tank ... ..	...	...	...	...	...	...	...
	Páikhed Canal	7,186	1,120	...	...	7,186	1,120	8,306	
7	Kádva River Works. { Ojhar Tambat Canal	2,135	148	...	...	2,135	148	2,283	
	Wadáli Canal	878	316	...	...	878	316	1,194	
8	Pravara River Works—Lákh Canal	605	1,395	...	821	605	574	1,179	
9	Mútha Canals	1,56,180	3,986	...	...	1,56,180	3,986	1,60,166	
10	Ekrák Tank	11,392	5,579	...	...	11,392	5,579	16,971	
11	Krishna Canal	52,716	6,516	...	...	52,716	6,516	59,232	
	Total ...	2,39,279	21,211	368	821	2,38,911	20,390	2,59,301	
	Total, Major Works ...	3,56,303	84,255	368	821	3,55,935	83,434	4,39,369	
	MINOR WORKS AND NAVIGATION.								
12	Khári Cut... ..	...	...	...	...	...	...	...
13	Hartála Tank	3	3	...	...	3	3	6	
14	Mhasva do.	517	1,298	...	...	517	1,298	1,815	
15	Jánda Canals	6,144	3,296	...	...	6,144	3,296	9,440	
16	Paraul Tank	862	...	...	...	862	...	862	
17	Pravara River Works—Ojhar Canal	3,901	3,932	186	1,682	3,715	2,250	5,965	
18	Bhátodi Tank	1,888	1,001	...	183	1,888	818	2,706	
19	Mátoba do.	12,576	...	...	...	12,576	...	12,576	
20	Kásurdi do. ... ..	...	...	...	...	...	...	...
21	Shiruphal Tank... ..	923	...	...	...	923	...	923	
22	Bhádaivádi do.	567	1,961	...	...	537	1,961	2,528	
23	Koregaon do.	147	512	...	...	147	512	659	
24	Ashti do.	1,793	11,151	...	...	1,793	11,151	12,944	
25	Revári Canal	2,911	50	20	34	2,891	16	2,907	
26	Upper Mán River Works ...	2,632	2,066	...	...	2,632	2,966	5,598	
27	Yerla River Irrigation Works ...	2,779	8,978	...	6	2,779	8,972	11,751	
28	Chikhli Canal	262	58	...	...	262	58	320	
29	Maini Tank	3,017	2,599	...	...	3,017	2,599	5,616	
30	Muchkundi Tank... ..	105	101	...	...	105	101	206	
31	Nilgund do. ... ..	...	...	...	...	...	...	...
32	Gádkeri do. ... ..	...	...	...	...	...	...	...
33	Dámbal do.	1,098	154	...	...	1,098	154	1,252	
34	Medleri do.	559	203	...	...	559	203	762	
35	Madag do.	1,977	909	...	...	1,977	909	2,886	
36	Asundi do.	566	297	...	...	566	297	863	
37	Mávinkep do. ... ..	...	...	...	...	...	...	...
	Total ...	45,227	39,469	206	1,905	45,021	37,564	82,585	
	PROVINCIAL.								
39	Gokák Canal, 1st Section, and Storage Works	13,258	11,529	...	...	13,258	11,529	24,787	
	GRAND TOTAL ...	4,14,788	1,35,253	574	2,726	4,14,214	1,32,627	5,46,741	

I-F.

Statement showing Water-rates per acre in force during 1899-1900 on Irrigation Works in the Bombay Presidency, excluding Sind.

No.	Name of Works.	WATER-RATES.						Occupier's Rate.	Owner's Rate.	Water advantage.	REMARKS.
		Class I.	Class II.	Class III.	Class IIIA.	Class IV.	Class V.				
		Perennial.	Eight months.	Four months.	Superior rabi crops.	Monsoon dry.	Special hot weather.				
1	2	3	4	5	6	7	8	9	10	11	12
	MAJOR WORKS.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.				
	Protective Works										
1	Nhra Canal*	(A. 25 B. 16 C. 12 Pán gardens dens 30)	4 8 0	2 4 0	.....	1 0 0	6 0 0				* Revised rates sanctioned—vide Government Resolution No. 1 A. I.—1, dated 2nd January 1896.
2	Mhasvad Tank†	10	4 0 0	2 0 0	.....	0 12 0	4 0 0				† In force for 4 years from 15th January 1896—vide Government Resolution No. 702, dated 19th May 1896 and Government Resolution No. 50 A. I.—312, dated 27th February 1899.
	Productive Works.										
3	Hastmati Canal (A)	10	3 0 0	2 0 0	.....	1 0 0	6 0 0				(A) Rates sanctioned in Government Resolution No. 1112, dated 12th July 1894.
4	Lower Pánjhra River Works (B)	18	4 0 0	2 0 0	.....	1 0 0	6 0 0				(B) In force for 5 years from 1st April 1896—vide Government Resolution No. 21 A. I.—207, dated 10th February 1896. These rates are for new irrigation.
7	Kádra River (Pálkhd Canal Ojhar Tánba Works (C), Wadali Canal	72 12 12	4 0 0 4 0 0 4 0 0	3 0 0 3 0 0 3 0 0	..... ..... .....	1 0 0 1 0 0 1 0 0	6 0 0 6 0 0 6 0 0				(C) Revised rates sanctioned for 5 years from 1st April 1896—vide Government Resolution No. 258 A. I.—1546, dated 3rd October 1895.
8	Pravara River Works—Lákh Canal (D)	8	4 0 0	2 0 0	.....	0 8 0	4 0 0				(D) Sanctioned for 5 years from 1st April 1898—vide Government Resolution No. 129 A. I.—90, dated 20th June 1899.
	Within the Poona City and Suburban Municipal and Cantonment limits or within one mile of those limits.	A. 60									(E) Revised rates sanctioned in Government Resolution No. 229 A. I.—1662, dated 11th October 1894 and Government Resolution No. A. I.—520, dated 3rd March 1900.
9	Mutha Canals.† On all remaining land commanded by both the canals. Pán gardens wherever situated throughout the canals. All lands commanded by both Canals. Do. ...	A. 40 A. 30 B. 18 C. 12	5 0 0	2 8 0	.....	1 8 0	6 0 0				(F) In force for 5 years from 1st April 1895—vide Government Resolution No. 807, dated 30th March 1895.
10	Ekrak Tank (E)	13	4 0 0	2 0 0	.....	0 12 0	6 0 0				(G) In force for 5 years from 15th October 1895—vide Government Resolution No. 898, dated 7th June 1895.
11	Krishna Canals	25	5 0 0	3 0 0	.....	1 0 0	8 0 0				** Revised rates sanctioned in Government Resolution No. 40 A. I.—253, dated 7th February 1895.
	MINOR WORKS AND NAVIGATION.										
12	Khári Cut (A)	14	7 0 0	5 0 0	.....	1 0 0	6 0 0				§ In force for 5 years from 1st April 1895 to 31st March 1900—vide Government Resolution No. 30 A. I.—179, dated 29th January 1895.
13	Hartala Tank (B)	10	4 0 0	2 0 0	.....	1 0 0	4 0 0				(i) For Káram) In force for 5 years Bagáyat land) from 15th October at Soudana.) 1894—vide G. R. No. 913, dated 25th June 1896.
14	Mhasva Tank (B)	10	4 0 0	2 0 0	.....	1 0 0	4 0 0				(ii) For new irrigation.
15	Jámá Canals (B)	16	4 0 0	2 0 0	.....	1 0 0	4 0 0				(F) In force for 5 years from 1st April 1895—vide Government Resolution No. 807, dated 30th March 1895.
16	Parsul Tank	(i) 13 (ii) 10	(i) 8 0 0 (ii) 8 0 0	(i) 5 0 0 (ii) 4 0 0	..... .....	(i) 2 0 0 (ii) 1 0 0	(i) 8 0 0 (ii) 6 0 0				(G) In force for 5 years from 15th October 1895—vide Government Resolution No. 898, dated 7th June 1895.
17	Pravara River Works—Ojhar Canal (F)	10	4 0 0	2 0 0	3 0 0	0 8 0	4 0 0				** Revised rates sanctioned in Government Resolution No. 40 A. I.—253, dated 7th February 1895.
18	Bhátodi Tank (G)	12	4 0 0	3 0 0	.....	1 0 0	4 0 0				§§ In force up to 31st March 1900—vide Government Resolution No. 206 A. I.—1795, dated 7th December 1898.
19	Mátoha Tank**	(A. 25 B. 12 C. 10 Pán gardens dens 30)	6 0 0	2 8 0	.....	1 8 0	6 0 0				§ From 15th June to 15th February.
20	Kásonli Tank**	(A. 16 B. 12 C. 10)	4 0 0	2 0 0	.....	0 12 0	6 0 0				¶ 15th October to 15th June.
21	Shirsapal Tank**	10	4 0 0	2 0 0	.....	0 12 0	4 0 0				¶¶ 15th October to 15th June or from 1st August to end of March.
22	Bhádavádi do. **	10	4 0 0	2 0 0	.....	0 12 0	4 0 0				¶¶ 15th June to 15th October.
23	Koregaon do. (E)	8	2 0 0	2 0 0	.....	2 0 0	2 0 0				¶¶ 15th October to 15th June or from 1st August to end of March.
24	Ashti do. (E)	12	4 0 0	2 0 0	.....	0 12 0	4 0 0				¶¶ 15th June to 15th February.
25	Revári Canal || ... ..	20	5 0 0	3 0 0	.....	1 0 0	8 0 0				¶¶ 15th October to 15th June or from 1st August to end of March.
26	Upper Man River Works || ... ..	18	4 0 0	2 0 0	.....	1 0 0	8 0 0				¶¶ 15th June to 15th February.
27	Yerla River Irrigation Works || ... ..	18	4 0 0	2 0 0	.....	1 0 0	8 0 0				¶¶ 15th October to 15th June or from 1st August to end of March.
28	Chikhli Canal || ... ..	20	4 0 0	2 0 0	.....	1 0 0	8 0 0				¶¶ 15th June to 15th February.
29	Máni Tank || ... ..	18	4 0 0	2 0 0	.....	1 0 0	8 0 0				¶¶ 15th October to 15th June or from 1st August to end of March.
30	Munchkundi Tank§§	8	4 0 0	2 0 0	.....	1 0 0	4 0 0				¶¶ 15th June to 15th February.
31	Nilgund do. ... ..	.....	.....	.....	.....	.....	.....				¶¶ 15th October to 15th June or from 1st August to end of March.
32	Gadikeri do. ... ..	.....	.....	.....	.....	.....	.....				¶¶ 15th June to 15th February.
33	Dambal do. (1)	10	4 0 0	2 0 0	.....	0 8 0	4 0 0				¶¶ 15th October to 15th February.
34	Medleri do. (2)	14	4 0 0	2 0 0	.....	1 0 0	6 0 0				(1) and (2) In force up to 31st March 1900—vide Government Resolutions Nos. 115 A. I.—1007 and 60 A. I.—412, dated respectively 18th June 1898, and 17th March 1898.
35	Madag do. (1)	10	4 0 0	2 0 0	.....	0 8 0	4 0 0				
36	Asundi do. (2)	14	4 0 0	2 0 0	.....	1 0 0	6 0 0				
37	Mávinokop ... ..	.....	.....	.....	.....	.....	.....
	PROVINCIAL.										
38	Gokák Canal, 1st Section, and Storage Works (h.)	20	(a) 6 0 0 (b) 7 0 0	(c) 2 4 0 (d) 3 0 0	.....	1 0 0	8 0 0				(H) In force for 2 years from 1st April 1898 to 31st March 1900—vide Government Resolution No. 29 A. I.—235, dated 7th February 1898.

Note.—1—For lift irrigation half the ordinary rates are charged.
2—Double the ordinary rates are charged as penal rates for taking water without permission.
3—Leakage or percolation rates are the same as ordinary rates.

Statement showing Areas and Water-rate Assessment during 1899-1900 according to the System of Classification adopted in fixing the Scale of Water-rates.

Number.	Name of Works.	CLASS I.— PERENNIAL.		CLASS II.— 8 MONTHS.		CLASS III.— 4 MONTHS.		CLASS IIIA.— SUPERIOR RAZI CROPS.		CLASS IV.— MONSOON DEY.		CLASS V.— SPECIAL HOT WEATHER.		MISCELLA- NEOUS.		GRAND TOTAL.		REMARKS.	
		Acres.	Assess- ment.	Acres.	Assess- ment.	Acres.	Assess- ment.	Acres.	Assess- ment.	Acres.	Assess- ment.	Acres.	Assess- ment.	Acres.	Assess- ment.	Acres.	Assess- ment.		
MAJOR WORKS.																			
<i>Protective Works.</i>																			
1	Nira Canal	3,890	88,344	1,753	8,178	14,258	41,434	...	...	7,253	8,002	186	787	61	207	27,300	1,46,952	
2	Ahvasad Tank	242	2,416	2,124	8,918	9,754	19,545	...	...	1,304	1,207	113	547	69	92	13,668	33,116	
	Total	3,932	90,760	3,877	17,094	14,012	61,282	...	...	8,617	9,299	299	1,334	120	299	40,866	1,80,068	
	Average rate ... ..	...	23'08	...	4'41	...	2'55	...	...	1'08	...	4'48	...	2'49	...	...	4'41	
<i>Productive Works.</i>																			
3	Hstmatl Canal	28	9	35	...	...	...	...	...	47	51	...	...	...	...	110	80	
4	Lower Panjra River Works... ..	117	1,863	339	1,307	138	283	...	...	81	61	33	119	...	...	698	3,712	New Irrig.
5	Kádva River (Palkhed Canal	275	3,400	823	2,592	240	1,476	...	...	442	500	41	300	29	38	1,650	8,306	
6	Ojhar Tambat Canal	89	1,068	120	684	52	324	...	...	138	139	8	6	6	12	463	2,283	
7	Wadali Canal	7	84	104	416	74	444	...	...	24	27	4	28	8	10	401	1,185	
8	Pravara River Works—Lakh Canal... ..	30	238	36	137	601	621	...	...	334	184	...	...	2	1	1,063	1,179	
	Within the Poona City Suburban Municipal and Cantonment limits or within one mile of those limits	546	26,111	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Mutha Canals. On all the remaining land commanded by both canals	2,742	1,05,606	338	2,752	1,613	4,962	...	...	2,306	3,496	...	...	20	80	8,725	1,60,166	
	* Pan * gardens wherever situated throughout the canals	21	612	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	All lands commanded by both canals	707	13,442	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Do. do.	332	4,255	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	Ekrak Tank	402	6,090	1,018	4,065	2,610	5,220	...	...	634	476	106	642	124	532	4,994	18,971	
11	Krishna Canal	1,708	41,428	1,995	8,572	2,337	7,245	...	...	330	409	54	525	27	63	6,511	59,232	
	Total	7,104	2,03,148	4,656	21,535	7,831	20,568	...	...	4,406	5,453	239	1,676	216	682	24,611	2,63,104	
	Average rate ... ..	...	28'59	...	4'63	...	2'59	...	...	1'22	...	7'04	...	3'15	...	...	10'28	
MINOR WORKS AND NAVIGATION.																			
12	Khari Cut ... ..	...	...	2	6	2	2	...	...	...	...	...	...	...	...	4	7	
13	Hartala Tank ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	Mhasra do.	29	211	43	173	503	1,148	...	...	294	285	...	...	...	...	899	1,816	
15	Jamda Canals	198	3,099	130	609	1,548	3,123	...	...	2,623	2,670	16	48	...	...	4,615	9,440	
16	Parauli Tank	34	363	17	117	1	8	...	...	68	68	64	316	...	...	172	862	
17	Pravara River works—Ojhar Canal	268	2,465	89	292	452	716	1,004	1,639	1,907	973	11	39	3	1	3,701	5,968		
18	Bhatodi Tank	20	233	389	1,584	237	729	...	...	155	156	...	...	...	...	870	2,700	
19	Mastoba do.	462	11,200	32	194	97	253	...	...	619	927	...	...	1	2	1,211	12,576	
20	Kásurdi do. ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	Shirsuphal do.	136	679	8	34	3	5	...	...	252	198	...	...	1	7	400	923	
22	Bhadalvadi do.	60	465	8	39	672	1,940	...	...	84	83	...	...	3	1	826	2,528	
23	Koregaon do.	9	61	25	50	252	504	...	...	26	52	...	...	...	2	312	659	
24	Ashti do.	61	975	219	720	5,400	11,052	...	...	219	164	5	33	...	...	6,233	12,944	
25	Revadi do.	145	2,838	4	23	12	40	...	...	...	...	1	6	...	...	162	2,907	
26	Upper Man River Works	67	1,218	333	1,347	1,131	2,310	...	...	240	230	35	483	5	10	1,781	5,536	
27	Yerla River Irrigation Works	128	2,300	592	2,330	8,364	6,771	...	...	18	25	18	263	21	42	4,128	11,751	
28	Chikhli Canal	10	151	34	168	1	1	...	...	...	...	...	...	...	...	45	321	
29	Maini Tank	88	1,33	471	1,914	1,155	2,910	...	...	314	314	2	65	...	...	1,099	5,916	
30	Muchkundi do.	12	96	...	...	62	110	...	...	...	...	...	...	...	...	64	208	
31	Nitgund do. ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Gadikeri do. ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
33	Dambal do.	90	554	59	243	57	106	...	...	29	31	1	4	4	14	239	1,252	
34	Medleri do.	45	579	14	92	4	11	...	...	71	76	...	...	...	...	4	148	762
35	Madag do.	11	101	178	655	1,017	2,063	...	...	81	190	2	6	17	16	1,214	2,885	
36	Asundi do.	11	159	98	537	45	130	...	...	15	15	...	...	...	...	173	863	
37	Mavinkop do. ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total	1,871	29,090	2,711	10,961	16,222	33,276	1,004	1,639	6,953	6,337	150	1,206	62	117	28,973	82,585		
	Average rate ... ..	...	15'54	...	4'04	...	2'06	...	1'53	...	0'01	...	8'43	...	1'88	...	2'86	
PROVINCIAL.																			
38	Gokak Canal, 1st Section, and Storage Works	124	2,478	1,022	5,116	4,833	13,117	...	...	1,629	1,629	31	259	686	1,099	6,424	24,787	* Exclusive 1,700 acres Mamlu Es. area, and 6,198 ahar water-rate old works the Lo Panjra ver system.
	Grand Total	13,031	3,25,471	12,266	54,756	52,995	1,28,240	1,004	1,639	21,965	22,918	717	4,633	998	3,087	102,864*	5,40,544*		
	Average rate ... ..	...	24'97	...	4'46	...	2'41	...	1'53	...	1'04	...	9'32	...	3'14	...	5'26	

Note.—The difference between the figures of total areas and assessments in this statement and those in Statements I—E to IV—E is due to difference in treatment of fracti in some cases, and in others to the fact that the figures in this statement are more or less hypothetical and are arrived at on the assumption that certain areas are assessed certain rates.

Statement showing Operations of the year 1899-1900.

No.	Name of Works.	Amount of Estimate, Direct and Indirect.		CAPITAL OUTLAY, DIRECT AND INDIRECT.		LENGTH OF (AS EXECUTED).		AREA UNDER COMMAND.		Rain-fall.	Discharge of Canal at head, cubic feet per second.	AREA.		Amount of gross Assessment.	Realizations.	Working Expenses.	Net Revenue.	REMARKS.
		During 1899-1900.	To end of 1899-1900.	During 1899-1900.	To end of 1899-1900.	Canal.	Distributaries.	Gross.	Irrigable at present.			Applied for.	Irrigated.					
		Rs.	Rs.	Rs.	Milcs.	Miles.	Acres.	Acres.	Inches.		Acres.	Acres.	Rs.	Rs.	Rs.	Rs.		
MAJOR WORKS.																		
Protective Works																		
1	Nira Canal	20,49,307	309	56,83,800	96	132.46	274,447	119,280	9.84	174	21,492	27,200	1,48,539	1,49,174	63,312	84,832		
2	Mhasvad Tank	27,81,496	760	20,75,511	60.25	34	139,046	24,800	8.79	68.89	12,423	18,656	36,735	25,756	12,540	13,216		
	Total	1,17,33,603	1,069	77,59,711	156.26	168.46	403,492	138,080	...	...	33,914	46,856	1,87,274	1,73,930	75,882	98,048	* Include interest charges.
Productive Works																		
5	Hathmati Canal	8,87,592	.....	5,17,838	21	30	44,744	8,000	3.08	11.04	583	110	868	5,408	6,631	-1,223	
6	Lower Panhra River Works	9,74,779	.....	4,98,616	.....	45	13,117	12,927	4.20	14.74	671	2,468	17,024	16,590	7,741	7,849	
7	Kadva River Works... Waghad Tank Palkhed Canal Ojhai Tambat Canal Wadhli Canal	7,01,730 4,66,402 17,785 63,461	60 1,840 13	4,74,137 2,40,345 7,450 30,285	..... 11 4.50 8.62	..... 14.36 ..... .....	..... 28,832 8,055 3,488	..... 9,837 2,367 2,433	16.63 4.92 6.40	20.36 3.48 3.23	..... 1,282 483 401	..... 1,856 483 323	..... 9,002 2,288 1,208	..... 5,644 1,275 635	..... 6,364 4,213 1,621	..... -730 -2,938 -98	
8	Pravara River Works—Lakh Canal	7,60,764	.....	3,71,801	23	9.37	29,013	11,260	11.66	20.39	1,053	1,053	1,443	1,508	16,225	-14,667	
9	Mutha Canals	98,85,109	29,316	66,02,649	88	67	16,800	16,800	9.46	150.15	7,331	8,725	2,91,209	3,20,423	87,035	2,33,368		
10	Ekrak Tank	21,36,540	.....	13,40,886	48	.....	17,152	16,841	11.89	35.30	3,308	4,904	29,827	30,707	9,802	31,295	
11	Krishna Canal	16,60,890	.....	8,64,892	63.37	.....	29,327	13,320	13.84	44.53	5,958	6,511	60,490	47,260	19,545	27,416	
	Total	1,75,23,988	28,238	1,08,78,488	267.99	165.73	267,713	92,605	...	...	22,016	26,371	4,17,191	4,29,264	1,60,947	2,68,317	
	Total, Major Works	2,92,57,791	29,307	1,87,37,197	424.24	332.19	671,205	230,685	...	...	56,930	67,227	6,04,466	6,03,194	2,30,929	5,66,365	
MINOR WORKS AND NAVIGATION.																		
12	Kharl Cut	10,10,667	92,203	2,79,307	23	6	17,300	3,000	4.66	0.57	95	.....	942	4,919	5,074	-169	
13	Hartals Tank	75,040	.....	73,382	.....	6.50	684	415	6.86	.....	5	4	579	262	205	67	
14	Mhasva Tank	1,40,015	.....	1,39,950	.....	7	4,647	1,709	9.93	1.40	752	899	2,682	1,213	810	130	
15	Jamda Canals	10,89,640	.....	2,14,858	39	7.75	40,289	6,000	9.48	20.53	4,127	4,515	9,737	8,737	31,024	-23,146	
16	Paraul Tank	2,23,612	.....	3,34,858	.....	4.75	3,337	1,000	6.90	1.85	109	889	1,000	1,170	.....	-170	
17	Pravara River Works—Ojhar Canal	3,43,211	.....	3,39,376	19	21	23,724	14,763	13.73	20.71	6,869	3,701	6,351	4,347	17,374	-18,027	
18	Bhatodi Tank	5,78,273	.....	3,79,707	4.50	5.50	15,128	12,124	9.32	5.76	1,014	870	4,705	4,859	7,703	-2,844	
19	Matoba do.	2,19,500	.....	2,01,423	.....	17	10,400	3,250	7.12	8.18	1,142	1,211	12,682	11,200	3,178	8,063	
20	Kasurdi do.	45,680	.....	45,680	.....	1.75	587	160	4.99	.....	.....	.....	.....	177	631	-354	
21	Shirsuphal do.	2,22,282	.....	2,24,503	.....	13.50	4,500	1,800	7.83	6.73	301	400	1,004	3,280	3,467	-187	
22	Bhadalvadi do.	2,28,724	.....	2,27,424	.....	9.75	3,000	2,000	10.21	4.50	481	820	2,949	3,533	2,544	809	
23	Koregaon do.	42,049	.....	39,189	.....	3.75	Not known.	1,050	11.40	1.78	288	312	672	631	726	-195	
24	Aethi do.	8,34,927	7	6,38,098	27.50	2	17,882	11,780	13.90	5.772	6,023	13,653	5,191	4,309	802	4,309		
25	Rovari Canal	59,448	.....	59,211	10.25	.....	3,413	1,920	14.14	1.93	143	162	2,991	6,639	2,060	4,473	
26	Upper Man River Works	4,44,531	.....	4,30,096	17.50	6.50	8,443	2,080	11.06	1.41	1,751	1,781	5,792	2,868	9,858	-6,990	
27	Yerin River Irrigation Works	7,45,314	.....	7,04,592	28.60	4.00	11,234	5,480	11.82	4.48	3,507	4,126	12,010	10,293	8,308	1,906	
28	Chikhli Canal	57,415	.....	57,442	6.50	.....	1,871	1,478	14.65	0.49	187	45	387	1,071	833	738	
29	Maini Tank	3,90,492	.....	3,89,619	9.25	7.59	4,878	4,825	15.34	5.06	1,084	1,998	6,016	8,332	3,189	2,143	
30	Muchandi do.	1,68,430	.....	1,68,707	5.50	.....	5,570	10	19.25	Not known	74	64	376	363	861	-598	
31	Nigand do.	9,023	.....	9,027	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
32	Gadikeri do.	9,238	.....	9,279	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
33	Dambal do.	64,906	.....	63,980	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
34	Medleri do.	81,705	.....	81,393	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
35	Madag do.	2,49,497	.....	1,67,598	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36	Awundi do.	80,485	.....	74,960	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
37	Mavinkop do.	31,817	.....	30,847	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total	72,40,735	92,209	62,68,355	203.35	203.85	194,018	78,540	...	...	30,460	11,208	96,220	87,021	1,11,039	-24,018	
PROVINCIAL.																		
38	Gokak Canal	15,35,718	10,258	13,17,092	16.10	27.90	18,668	7,200	11.62	32.33	7,927	8,424	89,444	36,340	6,776	28,573		
	GRAND TOTAL	3,80,31,244	1,31,774	2,63,23,554	643.69	568.84	884,491	316,425	10.7	...	84,317	1,04,624	7,40,129	7,25,604	3,64,694	3,70,929		

Statement showing Areas and Water-rate Assessment during 1899-1900 according to the System of Classification adopted in fixing the Scale of Water-rates.

Number.	Name of Works.	CLASS I.—PERENNIAL.		CLASS II.—8 MONTHS.		CLASS III.—4 MONTHS.		CLASS IIIA.—SUPERIOR RABI CROPS.		CLASS IV.—MONSOON DRY.		CLASS V.—SPECIAL HOT WEATHER.		MISCELLANEOUS.		GRAND TOTAL.		REMARKS.	
		Area.	Assess-ment.	Area.	Assess-ment.	Area.	Assess-ment.	Area.	Assess-ment.	Area.	Assess-ment.	Area.	Assess-ment.	Area.	Assess-ment.	Area.	Assess-ment.		
		Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.		
MAJOR WORKS.																			
Protective Works.																			
1	Nira Canal	3,890	88,344	1,753	8,178	14,258	41,434	...	...	7,253	8,002	186	787	61	207	27,900	1,46,952	
2	Mhasvad Tank	243	2,416	2,124	8,916	9,754	19,841	...	...	1,364	1,297	113	547	59	92	13,656	33,116	
	Total	3,932	90,760	3,877	17,094	24,012	61,284	...	...	8,617	9,299	298	1,334	120	299	40,556	1,80,068	
	Average rate ... ..	...	23.08	...	4.41	...	2.55	...	...	...	1.06	...	4.48	...	2.49	...	4.41	
Productive Works.																			
5	Hathmati Canal	28	9	35	...	...	...	...	...	47	51	...	...	...	...	110	60	
6	Lower Pánjhra River Works	117	1,862	339	1,367	134	283	...	...	81	61	23	119	...	...	698	3,712	New Irrig.
7	Kádva River Pákhed Canal	275	3,400	623	2,532	244	1,476	...	...	492	500	41	300	29	38	1,656	8,306	
	Ojhar Tántat Canal	89	1,068	120	684	52	324	...	...	138	139	8	56	6	12	483	2,243	
	Wádali Canal	7	84	104	416	74	444	...	...	204	207	4	28	6	16	401	1,195	
8	Pravara River Works—Lákh Canal	30	236	36	137	601	621	...	...	394	184	...	...	2	1	1,063	1,179	
	Within the Poona City Suburban Municipal and Cantonment limits or within one mile of those limits	546	26,111	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	Mutha Canals. On all the remaining land commanded by both canals	2,742	1,06,606	338	2,752	1,813	4,962	...	...	2,306	3,496	...	...	20	30	6,723	1,80,166	
	'Pan' gardens wherever situated throughout the canals	21	612	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	All lands commanded by both canals	707	12,442	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Do. do.	332	4,255	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10	Ekrak Tank	502	6,030	1,018	4,065	2,610	5,220	...	...	634	476	108	644	124	532	4,994	16,971	
11	Krishna Canal	1,708	41,428	1,985	8,572	2,397	7,245	...	...	330	408	54	525	27	53	6,511	59,232	
	Total	7,104	2,03,148	4,658	21,535	7,931	20,565	...	...	4,406	5,463	239	1,676	216	682	24,611	2,53,104	
	Average rate ... ..	...	28.59	...	4.63	...	2.59	...	...	...	1.22	...	7.04	...	3.15	...	10.23	
MINOR WORKS AND NAVIGATION.																			
12	Khári Cut ... ..	...	...	2	...	2	...	...	...	...	...	...	...	...	...	4	...	7
13	Hartala Tank ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14	Mhasva do.	29	211	43	173	503	1,146	...	...	264	285	...	...	...	...	599	1,615	
15	Jámda Canal	198	3,099	139	509	1,648	3,123	...	...	2,623	2,670	16	48	...	...	4,515	9,440	
16	Parsul Tank	34	363	17	117	1	8	...	...	68	68	84	316	...	...	172	662	
17	Pravara River works—Ojhar Canal	266	2,465	59	232	452	716	1,004	1,539	1,907	973	11	39	3	1	3,701	5,865		
18	Bhatodi Tank	30	233	398	1,589	297	729	...	...	155	156	...	...	...	...	870	2,706	
19	Matoba do.	462	11,200	32	194	97	253	...	...	619	927	...	...	1	2	1,211	12,576	
20	Kásurdi do. ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21	Shirsuphal do.	136	679	8	34	3	5	...	...	252	193	...	...	1	7	400	823	
22	Bhádvalvadi do.	60	465	8	39	872	1,940	...	...	84	63	...	...	2	1	826	2,526	
23	Koregaon do.	9	51	25	50	252	504	...	...	26	62	...	...	2	312	659	...	
24	Ashli do.	61	975	219	720	5,499	11,052	...	...	219	164	5	33	...	...	6,233	12,941	
25	Revári do.	145	2,638	4	23	12	40	...	...	...	...	1	6	...	...	162	2,907	
26	Upper Mán River Works	67	1,218	333	1,347	1,131	2,310	...	...	210	230	35	493	5	10	1,781	5,539	
27	Yerla River Irrigation Works	128	2,300	592	2,330	3,364	6,771	...	...	18	25	18	263	21	42	4,128	11,751	
28	Chikhli Canal	10	151	34	168	1	1	...	...	...	...	...	...	...	...	45	329	
29	Maini Tank	68	1,333	471	1,914	1,185	2,310	...	...	314	314	2	45	...	...	1,988	5,616	
30	Machkundi do.	12	96	...	...	52	110	...	...	...	...	...	...	...	...	64	206	
31	Nilgrud do. ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Gadikeri do. ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
33	Dambal do.	90	654	58	243	57	108	...	...	29	31	1	4	4	14	239	1,252	
34	Medleri do.	45	579	14	92	4	11	...	...	71	76	...	...	4	4	119	762	
35	Madag do.	11	101	176	655	1,017	2,003	...	...	91	100	2	8	17	18	1,314	2,885	
36	Asundi do.	11	159	88	537	45	136	...	...	15	16	...	...	4	16	173	803	
37	Mávinkop do. ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total	1,671	29,000	2,711	10,961	16,222	33,276	1,004	1,539	8,953	6,337	160	1,206	62	117	28,973	62,585		
	Average rate ... ..	...	15.54	...	4.04	...	2.05	...	1.53	...	0.91	...	8.43	...	1.98	...	2.86	
PROVINCIAL.																			
38	Gokák Canal, 1st Section, and Storage Works	124	2,478	1,022	5,116	4,833	13,117	...	...	1,829	1,529	31	258	535	1,959	6,424	24,787	* Exclutiv 1,760 acr Marnul l area, an 6,100 enb water-rat old worl the I Panjhra vor syater
	Grand Total	13,031	3,25,471	12,266	54,766	52,989	1,28,240	1,004	1,539	21,866	22,916	717	4,533	983	3,057	102,664	5,40,544		
	Average rate ... ..	...	24.97	...	4.46	...	2.41	...	1.53	...	1.04	...	6.32	...	3.14	...	5.25	

Note.—The difference between the figures of total areas and assessments in this statement and those in Statements I—E to IV—E is due to difference in treatment of free in some cases, and, in others to the fact that the figures in this statement are more or less hypothetical and are arrived at on the assumption that certain areas are assessed certain rates.

DETAILED REPORTS BY LOCAL OFFICERS.

MAJOR WORKS.

PROTECTIVE IRRIGATION WORKS.

(1)—NIRA CANAL.

23. The under-sluices were opened on 9th July, and, as the monsoon showed early indications of failure, they were closed on 30th idem, or 11 days earlier than in any previous year. Replenishment—Bhátghar Lake. Notwithstanding the early closure, the highest level which water attained during the monsoon was only 74.50 feet, or 6 inches below sill of waste-weir sluices. This occurred on 9th October, and the storage impounded amounted to 3,640 millions cubic feet against 5,313 millions cubic feet when the lake is full. For the first time since the construction of the lake, the supply fell short of the demand and careful regulation was necessary.

Area irrigated. 24. The total area irrigated was 27,200 acres.

The following table gives a comparison of the figures of the previous five years with those of the present year:—

Years.	Kharif.	Rabi.	Total.	Water-rate assessment.
	Acres.	Acres.	Acres.	Rs.
1894-95	12,349	16,021	28,370	90,864
1895-96	9,953	13,500	23,453	86,786
1896-97	9,144	33,409	42,553	1,17,493
1897-98	17,527	30,047	47,574	1,32,552
1898-99	16,465	17,895	34,360	1,11,846
1899-1900	12,808	14,392	27,200	1,46,952

25. The total area irrigated was 7,160 acres less than in the previous year. The decrease in kharif area was 3,657 acres in ground-nut and monsoon dry-crops. The decrease in rabi was 3,503 acres, mainly in the area under wheat, and is due to insufficiency of water in the lake.

There was, however, a great improvement in perennial crops, the area of which was 3,690 acres against 2,083 acres of the previous year. The area under sugar-cane rose to 3,613 acres from 1,986 in the previous year, showing an increase of 82 per cent. Sugar-cane cultivation has regained the position it held before the famine of 1896-97.

26. The following is the comparison of areas irrigated and applied for. The excess of the measured area above that applied for was 5,708 acres as shown in the following table:—

Season and year.					Area applied for.	Area irrigated.	Difference.	Percentage of difference on area applied for.	
<i>Kharif.</i>					Acres.	Acres.	Acres.		
1898-99	...	...	...	...	13,873	16,465	2,592	.....
1899-1900	...	...	...	...	10,352	12,808	2,456	.....
<i>Rabi.</i>									
1898-99	...	...	...	...	12,595	17,895	5,300	.....
1899-1900	...	...	...	...	11,140	14,332	3,252	.....
Total ...					1898-99 ...	26,468	34,360	7,892	29.82
					1899-1900 ...	21,492	27,200	5,708	26.56

The difference, though proportionately less than in the previous year, is large, and is due to the practice of the cultivators to irrigate larger areas than they apply for.

27. The figures of rainfall compare with those of the two previous years as under:—

Years.					Kharif.	Rabi.	Total.
					Ins.	Ins.	Ins.
1897-98	...	...	...	...	13.82	5.08	18.90
1898-99	...	...	...	...	14.26	4.61	18.87
1899-1900	...	...	...	...	9.74	0.10	9.84

The following table shows in inches the total rainfall of the kharif and rabi seasons at different stations along the canal:—

Stations.					1899-1900.		
					Kharif.	Rabi.	Total.
					Ins.	Ins.	Ins.
Pimpra	...	...	...	9.47	0.29	9.76
Wadgaon	...	...	...	10.32	0.05	10.37
Pandhara	...	...	...	5.96	Nil.	5.96
Báramati	...	...	...	7.43	0.41	7.84
Sansar...	...	...	...	8.06	Nil.	8.06
Haturna	...	...	...	13.46	0.04	13.50
Nimbgaon	...	...	...	9.80	Nil.	9.80
Banda...	...	...	...	13.42	...	13.42
Total ...					77.92	0.79	78.71
Average ...					9.74	0.10	9.84
Bhátghar Bungalow	...	...	...	21.13	0.93	22.06
Virwádi	do.	...	...	9.63	0.61	10.24
Indápur	do.	...	...	13.45	0.03	13.48

The kharif rainfall was scanty and rabi fall a total failure.

Discharge.

28. The monthly average discharge at the head of the canal is given below :—

Month	Average actual discharge taken on number of days.	Mean discharge taken on full number of days of month.
1899.		
April	145	112
May	148	148
June	144	144
July	252	252
August	234	234
September	247	247
October	214	214
November	227	227
December	154	129
1900.		
January	152	127
February	90	90
March	80	80
Total ...	2,087	2,004
Monthly average ...	174	167

The first column shows the average struck on the number of days the canal was actually open, while the second column gives the mean average discharge for the month.

Working expenses.

29. The following table shows the comparison between the working expenses of 1898-99 and 1899-1900 :—

Name of Work.	Main-tenance and Repairs.	ESTABLISHMENT.		Tools and Plant.	Refunds of Revenue.	Leave and Pension Allowance.	Share of Collection Charges.	Total.
		Executive.	Direction.					
1898-99.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Nira Canal ...	23,185	23,007	6,142	422	29	4,081	7,035	63,901
1899-1900.								
Nira Canal ...	24,617	20,924	5,914	800	26	3,757	7,330	63,368

With 96 miles of main canal in operation, this gives a rate of Rs. 659.81 per mile, including the maintenance of 132 miles of distributaries.

The cost of maintenance per acre irrigated is Rs. 2.33 per acre against Rs. 1.86 per acre last year. This is due to the increase in the area of high-rated crops which are on the ground longer, require more water and supervision, and are also more expensive to measure than cereals and other low-rated crops.

30. The gross revenue from all sources amounted to Rs. 1,48,539, made up of Rs. 1,46,952 from water-rates assessed on the total irrigated area of 27,200 acres and Rs. 1,587 from other sources. The canal received no credit for water supplied to Shetphal Tank Relief Work. The rate of assessment works out to Rs. 5.40 per acre irrigated against Rs. 3.25 of the previous year. Deducting Rs. 63,342 for working expenses and Rs. 5 for refunds sanctioned during the year, the net revenue amounted to Rs. 85,192, or Rs. 35,496 more than that of the previous year. The revenue was the largest on record.

31. The cost of measuring the irrigated area was Rs. 1,946, giving a rate of 1 anna and 2 pies per acre against 11 pies in the previous year. The increase in rate was due to increase in the area of high-rated crops like sugar-cane which are more expensive to measure.

(2)—MHASVAD TANK.

32. The figures in Statement I. E. show the average of all sorts of crops actually irrigated per cubic foot of discharge at the head of canal for the two seasons. No special experiments on the duty of water were carried out during the year, as establishment could not be spared for the purpose.

Duty of water.

33. The total area under command was 1,83,862 acres and of this 7·00 per cent. was irrigated during the kharif and 7·82 per cent. during the rabi season.

34. The trees in the Vir basin which were counted at the end of the year numbered 20,565. The total numbers along the whole canal were 1,01,200 babul and 440 miscellaneous trees.

Plantation.

(2)—MHASVAD TANK.

35. The rainfall of the year under report was 8·79 inches (kharif 8·41 and rabi 0·38) against 13·61 inches (kharif 9·62 and rabi 3·99) of the previous year. The rainfall was very slight at the commencement of the monsoon, but the heavy falls in September 1899 filled the tank to overflowing.

Rainfall.

36. The lowest level of water in the tank, prior to first replenishment, was R. L. 1,928·78 on 29th May 1899. The first replenishment came on 30th May when R. L. rose to 1,929·05. The water level fell again, until it receded to 1,919·48 on 8th September 1899. From this date it rose steadily up to 13th September 1899 when the waste weir began to overflow and continued to do so for nine days. The greatest depth of water on the waste weir was 1·70 feet.

Replenishment.

37. The area irrigated during the year was 13,656 acres (kharif 4,242 acres and rabi 9,414 acres) against 6,101 acres (kharif 3,306 and rabi 2,795) of the previous year. The abnormal increase of 7,555 is due to the failure of rabi rains during the year under report. The area applied for during the year was 12,422 acres. The area actually irrigated is more than that applied for by 1,234 acres. The difference is due, as usual, to the cultivators not being able to estimate even approximately the area they propose to irrigate.

Area irrigated.

38. The assessment on account of water-rates amounted to Rs. 33,116 against Rs. 18,193 of the previous year. The gross revenue from all sources was Rs. 38,735 against Rs. 18,763 of the last year, and Rs. 18,720, the average of the past three years.

Gross assessed Revenue.

39. The following is a comparative statement showing areas irrigated, revenue realized and the working expenses incurred since the opening of the canals:—

Years.	Kharif.	Rabi.	Total.	Water-rate Assessment.	Gross Revenue from all sources.	Working Expenses.
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.
1886-87	617	727	1,344	1,030	1,825	11,812
1887-88	1,717	2,144	3,861	5,897	6,883	15,618
1888-89	2,965	3,139	6,104	12,733	12,875	13,269
1889-90	4,074	2,718	6,792	14,969	16,327	12,285
1890-91	4,081	3,025	7,106	13,541	14,241	12,729
1891-92	3,544	4,760	8,304	25,457	26,104	12,633
1892-93	3,561	1,436	4,997	19,997	20,613	15,121
1893-94	3,907	1,376	5,283	21,492	22,490	22,060
1894-95	1,207	3,019	4,226	13,869	16,134	28,460
1895-96	1,233	2,248	3,481	12,570	15,196	15,822
1896-97	2,297	5,250	7,547	20,436	23,232	14,670
1897-98	217	5,916	6,133	13,866	14,164	34,091
1898-99	3,306	2,795	6,101	18,193	18,763	13,449
1899-1900	4,242	9,414	13,656	33,116	38,735	12,540

The incidence of water-rate per acre irrigated was Rs. 2.42 against Rs. 2.98 of the last year.

Remissions. 40. No remissions were sanctioned during the year under report.

41. The rainfall over 480 square miles of the catchment area of the tank was gauged at 5 stations. The average rainfall from the date of first monsoon rainfall to the date of overflow of waste-weir was 8.77 inches, which gave 9779.74 millions of cubic feet of water on the catchment of the tank. The run-off during the above period works out to 0.189.

Working expenses. 42. The working expenses of the tank and the canals, including indirect charges, amounted to Rs. 12,540 against Rs. 13,449 of the previous year. The maintenance and repairs charges amounted to Rs. 5,758 against Rs. 6,298 during the last year. The total length of the canals and distributaries is 94 miles. The charge for maintenance and repairs per mile is, therefore, Rs. 61 against Rs. 67 of the previous year.

Measuring charges. 43. The area irrigated was measured at a cost of Rs. 729, which gives a rate of 10 pies per acre irrigated.

Duty of water. 44. No special experiments were made during the year on this tank to ascertain the duty of water.

Plantation. 45. No new plantation was made. The numbers of trees on the tank and canals at the end of March 1900 were as under.

Name of tree.	Above 5 feet.	Below 5 feet.
Babul	42,938	12,036
Nimb	4,719	492
Bori	1,774	857
Mango	484	51
Guava	22	6
Sandal	41	24
Sindi	83	1
Tamarind	25	5
Khair	39	102
Pomegranate	73	6
Pimpri	205	22
Jambul	865	77
Miscellaneous	1,908	502
Total	53,176	14,181
Grand Total	67,357	

Evaporation and absorption. 46. The following figures show the storage and loss of water by evaporation and absorption.

Contents of the tank on 1st April 1899	Millions of cubic feet.	1,410.35
Replenishment up to date on which the waste weir overflowed		3,370.89
	Total	4,781.24
<i>Deduct—</i>		
Quantity of water discharged through canals and leakage measured		2,089.52
Balance in tank on 31st March 1900		527.37
		2,616.89
Total loss by evaporation		2,164.35

PRODUCTIVE PUBLIC WORKS.

(5)—HATHMATI CANAL.

47. The rainfall was 2·96 inches in the kharif and 0·12 inches in the rabi season against 41·93 inches and 0·40 inches, respectively, in the previous year, the average of the last five years being as follows:—

				Inches.
Kharif	...	...	...	36·16
Rabi	...	...	...	0·51

48. The areas irrigated in 1899-1900, compared with those of the previous year, were—

	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.
1898-99...	1,800	2,479	4,279
1899-1900	110	...	110

49. The assessments after deducting remissions were as follows:—

	Kharif.	Rabi.	Total.
	Rs.	Rs.	Rs.
1898-99 ...	5,726	4,706	10,432
1899-1900	60	...	60

50. The serious decrease in area and assessment was due to the almost complete failure of rain.

51. Of the total of Rs. 368 shown in the accounts as remissions, nothing was on account of free grants.

52. The areas applied for and irrigated were as follows:—

	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.
Applied for ...	583	...	583
Irrigated ...	110	...	110

On account of the failure of rain and consequent insufficient water in the canal cultivators could not irrigate the full area applied for.

53. The miscellaneous revenue realized during the year amounted to Rs. 808 against Rs. 982 in the previous year.

54. The areas irrigated were measured by the ordinary revenue establishment employed on the canal at a total cost of Rs. 7-12-6, or about Rs. 0-1-2 per acre irrigated, against nearly 6 pies per acre during the previous year, the increased incidence being due to the abnormally small area irrigated.

55. The cost of establishment debited to revenue management was as shown below.

Year.	Cost of Establishment debited to Revenue Management.	Percentage the cost bears to the gross Assessed Revenue.	Incidence of cost per acre irrigated.	REMARKS.
			Rs. a. p.	
1898-99... ..	526	5.04	0 1 11	
1899-1900	190	316.66	1 11 8*	*The excessively high incidence is due to the abnormally small area irrigated.

56. The average water-rate per acre irrigated during the year was Rs. 0.55 as compared with Rs. 2.44 during the previous year. The large decrease in the water-rate was due to the large remissions given owing to failure of crops.

57. The working expenses of the year as compared with those of 1898-99 were as follows:—

Years.	Extensions and Improvements.	Maintenance and Repairs.	Establishment including indirect Charges.	Tools and Plant.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
1898-99 ... ..	.....	4,990	2,552	68	7,610
1899-1900 ... ..	.....	4,988	1,600	43	6,631

58. The cost of working expenses per acre irrigated was Rs. 60.28 for the year under report against Rs. 1.78 in the previous year, showing an increase of Rs. 58.50.

59. The cause of decrease in the cost of establishment debited to Revenue Management and of that in the working expenses as compared with the previous year was due to the almost complete failure of rain.

60. The average amount spent on silt clearance from the commencement, including the year under report, was Rs. 622, or Rs. 12.20 per mile on the total length of 51 miles of the canal and distributaries.

61. No reliable data can be given regarding the duty of water. The canal has been gauged for a series of years and the result shows that about 50 per cent. of the water is lost by absorption and evaporation in the first 10 miles where there is practically no irrigation. The average discharge gauged at the head during the kharif season was 30.75 cubic feet per second; out of this only 15.37 cubic feet per second may be assumed to have reached the first distributary. On this discharge the duty was 7 acres per cubic foot per second against 52 acres in the previous year. In the rabi season the average discharge at the head for the year was 2.37 cubic feet per second, which was quite insufficient for any irrigation.

62. The following table compares the sugar-cane cultivation for the past three years:—

	Acres.
1897-98	80
1898-99	64
1899-1900	27

63. The amount of outstanding balances at the close of the year for the kharif was Rs. 272-12-0, out of which no realizations were effected up to 31st March 1900 on account of the severity of the famine. Since the close of the official year Rs. 23 have been recovered.

(6)—LOWER PA'NJHRA RIVER WORKS.

(6)—LOWER PA'NJHRA RIVER WORKS.

64. These works have been in operation now for 28 years.

Gross and irrigable area. 65. The gross area under command is 13,117 acres, of which the area irrigable at present is 12,627 acres.

Source of water-supply. 66. These works are mainly fed by the Pánjhra River supply supplemented by the Mukti Tank Storage.

67. The river supply was extremely limited, owing to the scarcity of rainfall, and the irrigation had greatly to depend upon the tank supply, which had to be let out for 120 days in all, during the year under report. Had it not been for this supply, the crops in mámul bágáyat land even would not have come to maturity. The utility of the tank is thus seen, but owing to the want of proper replenishment during the monsoon it has not been able to perform satisfactorily the duty expected from it.

Tank storage. 68. The full supply contents of the tank amount to 342·3 millions cubic feet of water. At the commencement of the year under report, the storage amounted to 247 millions cubic feet, which, serving the irrigation in the hot weather of perennial and other crops, was reduced to 162·87 millions cubic feet by the 10th of June 1899 (at the commencement of the monsoon). On the subsequent day the tank had its first replenishment, and two days afterwards the contents of water rose to 167·22 millions cubic feet and then there was no replenishment throughout the monsoon. It was on this quantity of water that the irrigation had to depend, and water had to be let out at a discharge varying from 6·30 cubic feet per second minimum to 30·89 cubic feet per second maximum. At the end of the year the contents in the tank were 2·27 millions cubic feet.

69. The smallness of the tank contents, as well as the greatness of the demand for water, required a great deal of economy in letting out water. This was, however, a very difficult task because in the first place there was land classed as "permanently irrigated," distributed in 8 villages along the river, having their own bandháras and channels to take water from the river, to their irrigated land, all having equal rights to the water. Secondly, the tank supply to all the irrigation had to pass along the river, and the abstraction of water by the villages out of turn could not be properly controlled. On account of these two reasons the arrangement of economical supply, by means of rotation, commencing from lower villages upwards, could not effectually succeed, and water had to be let out in sufficient quantity to meet all demands. This soon emptied the tank, and so water had to be refused to rabi crops on dry-crop land. The káyam bágáyat land was fully served with the requisite supply, but the tank could do no service to other lands, which it would have done as in 1896 if it had had at least half its usual replenishment.

70. The irrigation during the year is tabulated below by seasons, and in comparison with that of the previous year both in mámul bágáyat and in jiráyat land.

	Kharif.		Rabi.		Total.	
	1898.	1899.	1898.	1899.	1898.	1899.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Mámul	1,021	1,155	741	605	1,762	1,760
Jiráyat	244	549	1,587	149	1,831	698
Total	1,265	1,704	2,328	754	3,593	2,458

The area under the *mámul bágáyat* is fixed, and pays a consolidated rate for water. The dry-crop area is dependent principally upon the nature of the year's rainfall. In the rabi season a larger area would have been irrigated, but the limited storage necessitated the refusal of water to rabi irrigation in dry-crop land, as explained in paragraph 6, and hence rabi area is smaller.

71. The rainfall gauged in the tank catchment during the year under report was 83 per cent. less than that of the previous year, and the lowest on record, *viz.*, 4.20, against 24.40 inches in the previous year.

72. The year's fall is shown, by seasons, in the following table, compared with the same in the previous year:—

	Kharif.		Rabi.		Total.	
	1898.	1899.	1898.	1899.	1898.	1899.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Sadgaon	28.46	4.49	0.00	0.00	28.46	4.49
Dahiana	20.34	3.90	0.00	0.00	20.34	3.90
Total ...	48.80	8.39	0.00	0.00	48.80	8.39
Average ...	24.40	4.20	0.00	0.00	24.40	4.20

The deficient monsoon was the cause of the tank storage being very limited.

73. The scale of water-rates during the year under report was the same as in the previous year, and the following table compares the irrigation in *jiráyat* land with that of the previous year:—

	Area Irrigated.		Revenue Assessed.	
	1898.	1899.	1898.	1899.
	Acres.	Acres.	Rs.	Rs.
Perennial	53	117	829	1,862
Eight-months	267	339	1,067	1,367
Four do.	1,407	138	2,857	283
Monsoon, dry	98	81	169	81
Special hot weather	6	23	30	119
Total ...	1,831	698	4,952	3,712

At the beginning of the year the tank storage was ample, and the irrigators took an opportunity of sowing sugar-cane, plantain, ground-nut and sweet-potato crops, and hence an increase in the perennial and eight-months crops is seen. Fodder was also irrigated in the hot season for the use of cattle.

(6)—LOWER PA'NJHRA RIVER WORKS.

Gross Revenue. 74. The gross revenue assessed during the year amounted to—

		Rs.
Water-rates—		
Old irrigation or káyam bágáyat land ...	...	12,764
New irrigation or dry-crop land ...	...	3,712
		16,476
Miscellaneous ...	...	548
		Total ... 17,024

against Rs. 18,461 of the previous year. The decrease is due to the limited rabi irrigation in dry-crop land.

Remissions. 75. There were no remissions granted during the year under report.

Realizations. 76. The realizations amounted to—

		Rs.
Water-rates on old irrigation ...	...	4,446
Irrigation share of land revenue ...	...	6,566
Water-rates on new irrigation...	...	4,030
		Total, Water-rates ... 15,042
Revenue from other sources ...	...	548
		Total ... 15,590

77. The unrealized balance of water-rates on dry-crop land is Rs. 3,397 and of water-rates on old land Rs. 1,834, total Rs. 5,231, due to the inability of the irrigators to pay owing to famine pressure. The rabi demands of the year on dry-crop land, Rs. 332, were sent for realization after the close of the year. These being added to the arrears shown above, the total outstanding amounts to Rs. 5,563.

78. The average rates per acre were—

		Rs. a. p.
Old irrigation ...	...	7 4 0
New irrigation ...	...	5 5 1

The increase in the rate on new irrigation is due to the increase in the cultivation of high-rated crops in jiráyat land.

Area applied for and irrigated. 79. The following table contains a comparison of the areas for which applications for water were received and the areas actually irrigated in the dry-crop land :—

		Kharif.	Rabi.	Total.
		Acres.	Acres.	Acres.
Applied for ...	...	537	134	671
Irrigated ...	...	549	149	698
	Difference ...	12	15	27

The difference is due mostly to the people having watered more land than applied for, as the rains failed.

Measuring crops. 80. The cost of measurement of crops irrigated in dry-crop land during the year was Rs. 23-10-9 against Rs. 49-4-10 for the previous year, and the rate per acre 6 pies against 5 pies.

Working expenses.

81. The working expenses of the year amounted to Rs. 7,741 as under.

	1898-99.	1899-1900.	Difference, Increase or decrease.
<i>Direct Charges.</i>	Rs.	Rs.	Rs.
Original Works	39	1,109	+ 1,070
Repairs	2,194	1,668	—526
Establishment —			
Direction	592	637	+75
Construction	2,659	2,544	—115
Tools and Plant	100	...	—100
<i>Indirect Charges.</i>			
Leave and Pension Allowance .	455	450	—5
Collection Charges	1,516	1,303	—213
Total	7,555	7,741	+186

The increase under original works is due to the cost of construction of a new hut for the Chaukidar at the Mukti Tank and the completion of the repairs to Japi Channel.

Duty of water.

82. Owing to the failure of water in the Mukti Tank no observations of the duty of water were taken during the year.

Evaporation and absorption.

83. The following figures represent the calculated loss by evaporation and absorption from the Mukti Tank :—

	Fect.
Kharif season—	
April to September 1899, 110 days	2.25
Rabi season—	
October, November, December 1899 and January 1900, 114 days	1.99
Hot season—	
February and March 1900, 59 days	0.85
	Total ... 5.09
Daily average loss	0.018

84. The number of trees on this work has been reduced from 8,660 in the previous year to 7,840 during the present year, owing to deaths of young plants and trees from excessive heat of the sun. The expenditure on plantations during the year was Rs. 231, which raises the total expenditure on this head up to the end of the year to Rs. 8,191.

(7)—KADVA RIVER SYSTEM.

85. The Waghad Tank has now been in operation for 15 years. In 1898-99

Waghad Tank.

a masonry wall had been constructed across the cut in the waste weir with sill at R. L. 114, and it was intended that, by the use of plank shutters, the water-level in the tank should be raised to R. L. 118.00. Owing to the failure of the autumn rains, however, water never rose to this height.

86. Some of the storage details are given below.

Serial No.	Nature of Storage.	Reduced Levels, B. L.	Contents, millions cubic feet.	REMARKS.
1	2	3	4	5
1	Designed F. S. L.	128	605.55	*Full supply up to R. L. 118 could not be secured owing to the failure of the autumn rains. The shutters were closed on the 5th of October.
2	F. S. L. before wall was built ...	110	197.64	
3	F. S. L. after construction of the wall.	114	262.35	
4	Additional F. S. L. with plank shutters.	118	338.95	
5	Storage effected this year ...	114.25*	266.849	

87. Proposals for constructing a waste weir, so as to secure the designed F. S. storage, are under consideration. Revised plans and estimates for completing the project, with a view to closing the Capital Account of this system, will be taken in hand after the famine is over.

88. The outlet was kept open from the 1st of April to the 13th of June 1899, but the tank supply was needed for the canal only up to 7th June, as afterwards the natural supply in the river sufficed for all requirements. The total expenditure of water (from 1st April to 7th June) from the tank was 91.231 millions cubic feet against the total outlet discharge of 83.613 millions cubic feet, showing a deficit of 7.618 millions cubic feet. This gives 0.743 of a foot as depth on the mean area of the tank 10.246 millions square feet, or about 0.13 of an inch per day as loss by evaporation and absorption.

89. Adding the supply from the river, 2.720 millions cubic feet to the outlet discharge, the total quantity of water utilized comes to 86.333 millions cubic feet, and thus the area irrigated being 412 acres, and the canals having been in operation for 68 days, the duty was 28.04 acres per cubic foot per second.

90. Of the 86.333 millions cubic feet, 78.657 millions passed into the canal, showing a loss of 7.676 millions cubic feet, *i.e.*, 8.89 per cent. in 14 miles, or 0.63 per cent. per mile of the total discharge.

91. The lowest level of the tank, R. L. 97.71, occurred on the 14th of June 1899, when the tank storage was 66.304 millions cubic feet, or sufficient for irrigation of 304 acres of hot weather crops under the Palkhed Canal, allowance being made for 2 feet minimum depth above the sill and for loss in transit.

92. There was no replenishment to the tank during the hot weather. On the 12th July 1899 the waste weir began to overflow, the rainfall at Wághad from the 1st of June up to date having been 11.33 inches, and continued to overflow until the 5th of October 1899, when the planks were inserted.

93. After the monsoon the outlet from the tank was open on the following dates:—

- From 6th to 31st October 1899.
- Do. 1st to 7th and 12th to 30th November 1899.
- Do. 1st to 28th December 1899.
- Do. 2nd to 31st January 1900.
- Do. 1st to 8th, 12th to 24th, 27th to 28th February 1900.
- Do. 4th to 17th March 1900.

The discharge from the tank in cubic feet per second varied from 10.30 on 6th October 1899 to 25.40 on 23rd November 1899.

94. The year's rainfall in the tank catchment was 16.19 inches as compared with an average of 50.66 inches for 23 years. Over the irrigated area the rainfall was 10.72 inches,

the average for the past 25 years being 24·84 inches. The distribution, according to seasons, was as under.

Locality of gauge.			Kharif, 1st June 1899 to 30th September 1899.	Rabi, 1st October 1899 to 31st December 1899.	Total.
Palkhed	...	...	16·53	0·00	16·53
Niphád...	...	...	4·83	0·09	4·92
Total			21·36	0·09	21·45

95. The following table shows the areas of the principal crops for the year under review compared with the average of the previous five years:—

Crops.	For the year 1899-1900.	Average of five years, 1894-95 to 1898-99.	Increase.	Decrease.	REMARKS.
1	2	3	4	5	6
	Acres.	Acres.	Acres.	Acres.	
Wheat ...	135	848	...	713	The decrease in the first three crops was due to insufficient rainfall and consequent small supply in the river. The increase in sugar may be attributed to its higher market price, which induced the irrigators to raise more sugar-cane.
Ground-nut ...	683	986	...	303	
Gram ...	143	236	...	93	
Sugar-cane ...	337	257	80	...	

96. The total assessment and the amount realized during the year were as under:—

			Rs.	a.	p.
Assessment during the year	...	...	12,746	2	6
Unrealized rabi assessment for 1898-99	...	...	6,514	2	0
Do. balance from previous year	...	...	7,827	6	6
Do. miscellaneous receipts	...	...	94	12	0
		Total	27,182	7	0
<i>Deduct—</i>					
Total realizations during the year 1899-1900	...	...	7,714	3	1
		Balance unrealized	19,468	3	11

97. The above figures include direct receipts as noted below, but do not include a sum of Rs. 594 for enhancement of land assessment.

			Rs.	a.	p.
1. Receipts from plantations	...	...	167	7	0
2. Do. from other canal produce	...	...	739	0	0
3. Alluvial Galper land above Palkhed weir, 1899-1900	...	...	41	4	0
4. Miscellaneous for surplus stores sold and transferred	...	...	14	13	6
		Total	962	8	6

(7)—KADVA RIVER SYSTEM.

Working expenses.

98. The figures in the following table compare working expenses of the year with the averages of the previous five years:—

Canals.	CHARGES FOR 1899-1900.				AVERAGES OF FIVE YEARS 1894-95 TO 1898-99.			
	Maintenance and Repairs.	Establishment.	Tools and Plant.	Total.	Maintenance and Repairs.	Establishment.	Tools and Plant.	Total.
	2	3	4	5	6	7	8	9
1	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Palkhed	1,912	3,575	131	5,618	2,166	5,754	76	7,996
Wadali	466	986	...	1,452	482	1,398	14	1,894
Ojhar Tambat	1,484	2,338	...	3,822	605	1,713	16	2,334
Waghad Tank	692	946	...	1,638	752	1,740	30	2,522
Total	4,554	7,845	131	12,530	4,005	10,605	136	14,746

The heavy charges for working expenses are nearly all due to the system by which part of the establishment of the district is charged off to non-irrigational works in progress at specified percentages, the balance, which forms by far the greater part, being debited to irrigation. This system was introduced in 1894-95.

99. The total maintenance charges on the three canals and the Waghad Tank during the year amounted to Rs. 13,968 as detailed below.

I.—Maintenance and Repairs	Rs. 4,554
II.—Establishment	7,845
III.—Tools and Plant	131
IV.—Share of collection Charges	340
V.—Indirect Charges	1,098
VI.—Refund of Revenue ... ..	...

Total ... 13,968

100. The crops were measured at a cost of Rs. 285 for 2,520 acres, which gives a rate of one anna ten pies per acre. The rate was higher than in last year as applications for water were received at long intervals and detached areas had to be measured.

101. The following statement shows the irrigation and assessment of the year as compared with the average of the previous five years.

Canal.	1899-1900.									AVERAGE OF FIVE YEARS, 1894-95 TO 1898-99.									REMARKS.
	Areas applied for.			Areas actually irrigated.			Assessment.			Areas applied for.			Areas actually irrigated.			Assessment.			
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	
Palkhed	1,282	...	1,282	1,496	168	1,666	7,186	1,120	2,306	603	1,107	1,710	885	1,350	1,936	3,031	4,322	7,968	Incidence of water-rate per acre for this year is Rs. 4-05 against Rs. 4-04, the average for the previous five years.
Wadali	322	...	322	348	53	401	879	316	1,196	144	229	373	104	291	395	460	929	1,869	
Ojhar Tambat	394	...	394	437	26	463	2,135	148	2,283	211	277	488	191	364	555	1,065	1,236	2,301	
Total	1,998	...	1,998	2,283	237	2,520	10,200	1,584	11,784	968	1,618	2,571	890	2,005	2,866	5,156	6,497	11,653	

NOTE:—(a) The difference between columns 4 and 7 is due to the incorrect estimates by the cultivators.

(b) The increase in the areas shown in column 6 as compared with those in column 14 is due to the failure of the rains and consequent demand for Canal water.

(c) The decrease in column 6 against column 15 is due to the fact that the supply in the tank ran short and applications for water had consequently to be rejected.

102. The Pálkhed and Wadáli Canals were closed 4 and 6 times, respectively, for periods aggregating 22 and 31 days. The Ojhar Támbat Canal runs dry generally with the Pálkhed Canal.

103. The following statement shows the duty as per actual irrigation for the year 1899-1900 :—

Details of Supply.	Reference to notes.	Unit.	Hot weather, 1st April 1899 to 1st June 1899.			Rabi season, 16th October 1899 to 28th February 1900.		
			Pálkhed Canal.	Wadáli Canal.	Ojhar Támbat Canal.	Pálkhed Canal.	Wadáli Canal.	Ojhar Támbat Canal.
1	2	3	4	5	6	7	8	9
Quantity gauged at head ...	(a)	M. c. f.	69712	32804	10034	149957	47583	28879
Deduct— { Tail discharge...	(b)	Do. ...	10044	...	...	33161	...	...
{ Loss in transit...	(c)	Do. ...	24399	9513	3111	38988	16178	6931
Total deduction ...	...	Do. ...	34443	9513	3111	72149	16178	6931
Net total utilized ...	...	Do. ...	35239	23291	6923	77808	31405	21948
Area irrigated ...	...	Acres ...	316	139	96	1,062	330	235
Duty per cubic foot per second ...	...	Do. ...	47.22	31.45	73.08	160	124	152
Do. do. for 1898-99 ...	...	Do. ...	37.70	27.13	39.49	136	143	185

Notes.—(a) Total for the Pálkhed Canal was 187415 M. C. F., 9474 being from the river and 177941 from the tank and that for the Ojhar Támbat Canal was 33161 M. C. F. obtained entirely from the Pálkhed Canal. The difference between the total supply and that used in the Canals was in both cases due to loss of percolation.

(b) The greater portion of the tail discharge of the Pálkhed Canal was utilized on the Ojhar Támbat Canal.

(c) The loss in transit has been assumed to be the same as that ascertained by experiment in the previous year, namely, 35, 29 and 31 per cent. of the discharge at the mouth of the Pálkhed, Wadáli and Ojhar Támbat Canals, respectively, for the hot weather season and 26, 34 and 24 per cent. for the rabi season.

104. Special observations were not made to ascertain the duty of water irrigating crops of different kinds.

105. From observation made in March 1900, the loss by evaporation and percolation on the Pálkhed Canal in the hot weather Leakage experiments. was found to be 35 per cent. of the discharge at the head.

106. The total number of trees standing on the canals at the close of the year was 12,176, distributed among the principal kinds Canal plantation, as shown below.

No.	Names of trees.	Number of trees.
1	Bábul ...	9,453
2	Mango ...	1,079
3	Nimb... ...	477
4	Moho... ...	645

(8)—PRAVARA RIVER WORKS.

LA'KH CANAL.

107. The area irrigated during the year was 1,053 acres (kharif 477 and rabi 576) against 979 acres (kharif 443 and rabi 533) Area irrigated. in the previous year. The increases are due to want of rain.

108. The following table compares the areas irrigated under each class of crop with those of the Comparison of area irrigated under each class of crop. previous year :—

(8)—PRAYARA RIVER WORKS—LÁKH CANAL.

Year.	Class I— Perennial.	Class II— 8 months.	Class III— 4 months.	Class IV— Monsoon dry.	Class V— Special hot weather.	Miscella- neous.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1893-99 ...	29	63	672	207	8	...
1899-1900 ...	30	36	601	384	...	2

The increase under class I is trifling and calls for no explanation and that under class IV is due to want of rain. The decrease under classes II and III is due to insufficiency of river supply.

Area applied for and irrigated. 109. The area applied for compares as below with the actual irrigation.

	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.
Area applied for ...	1,887	66	1,953
Do. actually irrigated ...	477	576	1,053
Difference ...	-1,410	+510	-900

Applications for rabi crops were received during the kharif season, but the area in question was not irrigated during that season because of insufficiency of the river supply and hence the difference in the kharif season figures. The area irrigated during the rabi season is apparently greater than that applied for, because part of the land for which water was applied for during the kharif season was irrigated during the rabi season. The fact that 900 acres were short irrigated on the whole is ascribable to insufficiency of river supply.

Refusal of water applications. 110. Applications for 633 acres were refused owing to insufficiency of river supply.

Water rate assessments. 111. During the year the water rate assessments amounted to Rs. 1,179 (kharif Rs. 605 and rabi Rs. 574) against Rs. 1,953 (kharif Rs. 884 and rabi Rs. 1,069) in the previous year. The decrease is chiefly due to remissions.

Remissions. 112. Remissions amounting to Rs. 821 were granted during the year owing to deficiency of river supply and consequent failure of crops.

Comparison of area irrigated. 113. The following table compares the area irrigated and the revenue derived during the previous three years with the figures of the year under report:—

Year.	Area irri- gated.	Revenue from water rates.	Rainfall from 1st April to 31st March.
	Acres.	Rs.	Inches.
1896-97 ...	1,674	3,889	19.07
1897-98 ...	950	1,409	21.07
1898-99 ...	979	1,953	24.59
1899-1900 ...	1,058	1,179	12.75

The increase in the area irrigated is due to want of rain. The decrease in the revenue from water rates has been explained in paragraphs 5 and 6 above.

114. The incidence of water rate per acre was Rs. 1.12 against Rs. 1.99 in the previous year. The decrease is due to remissions.

Working expenses. 115. The working expenses amounted to Rs. 16,225 as detailed below against Rs. 14,248 in the previous year:—

	Rs.
Maintenance and repairs	2,775
Share of establishment	11,711
Tools and plant	19
Share of collection charges	80
Indirect charges	1,640
Total ...	16,225

The rate of working expenses per mile of main canal open was Rs. 705.43 and per acre irrigated Rs. 15.41.

The increase under maintenance and repairs is due to special repairs to an escape in mile No. 18; that under share of establishment is due to the increase in the maintenance and repair charges, and that under indirect charges is due to the increase in establishment charges. The decrease under tools and plant is due to short expenditure on repairs to tools and that under collection charges to short collection effected.

116. The total cost of measuring 1,053 acres during the year was Rs. 67, or one anna per acre, as compared with one anna and six pies per acre last year. The decrease in cost is due to the areas irrigated being more concentrated than usual.

117. The duty per cubic foot per second of water admitted into the canal was 14.58 acres in the kharif and 60 acres in the rabi season. That of water actually utilized was 17.67 acres in the kharif and 60 acres in the rabi season.

118. The rainfall as gauged at Malunja was 11.66 inches, all in the kharif season. The following statement gives a comparison of rainfall from June to December for 10 years, including the year under report:—

Months.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
June	4.79	4.98	6.89	7.72	3.35	3.45	10.22	4.34	3.56	8.90
July ... ..	...	1.75	2.51	0.30	5.60	4.77	5.32	1.67	3.00	0.16
August	3.42	3.50	9.74	4.01	0.10	1.13	1.24	1.69	0.82	0.41
September	3.95	4.10	7.55	4.44	11.85	7.02	1.22	10.95	15.05	2.19
October	1.75	2.69	5.34	0.95	4.24	0.41	...	2.42	0.73	...
November	0.10	...	...	1.35	...	0.58	0.21	...	0.63	...
December	0.93	...	...	...	...	0.02	0.36	...	0.35	...
Total ...	14.94	17.02	32.03	18.77	25.64	17.38	18.57	21.07	24.14	11.66

119. On the 1st April 1899 the discharge of the river was 4.68 cubic feet per second. The first large flood occurred on the 5th June 1899. The river supply was not sufficient to meet the requirements of the cultivators during either the kharif or the rabi season. The river discharge began to fall off rapidly at the end of September 1899, and on 13th November the river ran dry.

120. The number of trees on the canal on the 31st March 1900 was as under :—

Plantations.					
Bábul	...	13,006	Bor	...	547
Nimb	...	1,482	Bakan	...	66
Sandal	...	101	Lemon	...	1
Tamarind	...	14	Divi-divi	...	20
Melingtonia	...	25	Jambul	...	828
Moho	...	3	Mango	...	594
Siras	...	33	Miscellaneous	...	2,834
Bamboo	...	145			
Nimbhára	...	49			
			Total	...	19,748

The number of trees on the 31st March 1899 was 19,976. The decrease in the number of trees is partly due to want of water owing to insufficiency of river supply and partly to stormy weather. Some of the bábul and miscellaneous trees, the shade of which was injurious to the growth of other valuable trees, were cut down and sold by public auction.

121. The following table compares the figures of Assessed revenue. revenue from all sources with those of the previous year :—

Particulars.	1898-99.	1899-1900.
	Rs.	Rs.
Water rates from irrigation ..	1,953	1,179
Plantations ...	107	53
Other canal produce ...	174	53
Rent of buildings ...	2	11
Revenue from "Gálper" land treated as land revenue— <i>vide</i> Government Resolution No. 1829, dated 21st November 1893 ...	147	147
Total ...	2,383	1,443

The decrease under water rates from irrigation has been explained in paragraph 5 of the report; that under plantation is due to the mango and Jambul trees not yielding fruit as in the previous year, while that under other canal produce is due to grass along the canal banks, aloe leaves and bábul pods not having been sold during the year owing to the famine. The increase under rent of buildings is, of course, ascribable to the fact that the buildings were occupied for a greater number of days than in the previous year.

122. The canal was closed twice for silt and weed clearance for periods aggregating 8 days. It was also closed for 18 days on account of rain and for 13 days for increasing storage.

(9)—MUTHA CANALS.

123. On the 1st April 1899 the water in Lake Fife was 18.83 feet above the sill of canal sluices and the minimum level was reached on 17th June when the depth was 9.75 feet. On the 19th the lake began to rise and it filled to overflowing on the 30th.

The highest flood of the year occurred on the 10th July when the water rose to R. L. 245.02 or 1.70 feet above crest of waste weir.

The standards and planks were fixed on the weir in the middle of September and on the 29th September the water stood at 3.10 feet above the crest. The draw-off from the storage commenced on 2nd October or about a month earlier than usual, and on 31st March 1900 the level of the water was 15.53 feet above the sill of the sluices, or 3.46 feet lower than on the same date in the previous year.

124. The area irrigated during the year was 8,725 acres, of which 8,119 were kharif and 606 rabi. The total shows an increase of 680 on the area of the previous year. The increase is chiefly in the cultivation of sugarcane, the area of which was 660 acres more as compared with the previous year and 1,050 more as compared with the year 1897-98.

125. During the year under review the assessment amounted to Rs. 2,94,127 as noted below.

	Rs.
Water-rates	1,60,166
Salcs of water	2,095
Water supply of towns	1,24,011
Plantations	87
Water power	2,160
Receipts from other canal produce	798
Rents of buildings	168
Miscellaneous	4,600
Irrigation share of enhanced revenue due to irrigation from the Mutha Canals in the villages of Warze-Shiwane and Koudhwe-Dhawade, Taluka Haveli, as per Canal Return No. VIII	42
Total	2,94,127

This is Rs. 34,240 more than the total of the previous year, and the highest revenue realized with the exception of that of the year 1895-96 when the supply in the lake was much more abundant than in the year under report. The increase is chiefly due to increase in the area of sugarcane.

126. The revenue derived from the Poona water-supply amounted to Rs. 1,24,011 as compared with Rs. 1,14,150 in the previous year, or an increase of Rs. 9,861. The increase is chiefly due to increased demand for water by the Poona City Municipality, which, owing to the failure of Kátraj Tank, required a larger supply than usual, and for the temporary camps and hospitals erected during plague. The private gardens also consumed more water on account of scanty rainfall.

The new settling tanks, filter beds and pumping machinery were in good working order. The quantity of water supplied by the new works during the year amounted to 345,925,712 gallons, or an average of 947,742 gallons daily.

The quantity supplied from the old Sholápur Bázár filter from 1st April up to 26th December 1899 is estimated approximately at 82,200,000 gallons, or an average of 225,205 gallons daily for the whole year.

The average supply throughout the year from settling tanks, filter beds and Sholápur Bázár filter amounted to 1,172,947 gallons a day.

The use of the Sholápur Bázár filter was discontinued from 26th December 1899, from which date the whole of the native bázár and houses derive their supply, about 300,000 gallons daily, from the new filters.

127. The working expenses of the year, including Rs. 547 for refunds of revenue, amounted to Rs. 87,582 as compared with Rs. 85,721 in the previous year.

The following table shows the analysis of the charges :—

Names of Works.	Maintenance and Repairs.	Establishment.	Tools and Plant.	Refunds of Revenue.	Suspense Account.	Leave and Pension Allowances.	Share of Collection charges.	Total.
1899-1900.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.
Mutha Canals ...	20,421	D 4,832 C 14,025	779	547	—15	3,151	9,445	53,185
Poona Water-supply ...	14,083	D 3,333 C 10,151	5,453	...	...	1,377	...	34,997
Total ...	* 34,504	32,341	6,232	547	—15	4,528	9,445	87,582
1898-1899.								
Mutha Canals ...	19,167	D 4,703 C 14,872	452	2,578	15	3,249	6,512	51,548
Poona Water-supply ...	14,495	D 3,557 C 11,379	3,159	...	...	1,583	...	34,173
Total ...	33,662	34,511	3,611	2,578	15	4,832	6,512	85,721

D = Direction.

C = Construction.

* Inclusive of Rs. 321 on extensions and improvements.

On the Mutha Canals the cost as shown above, excluding charges on Poona water-supply and refunds of revenue, represents a rate for maintenance, administration, &c. of Rs. 598.16 per mile (the total mileage in operation being 88 miles) and Rs. 6.03 per acre irrigated (the total acreage being 8,725).

The expenditure under maintenance and repairs amounted to Rs. 20,421 as compared with Rs. 19,167 in the previous year. The increased expenditure under tools and plant is chiefly due to the purchase of new meters and component parts for old ones.

128. Deducting the total net working expenses Rs. 87,035 plus Rs. 499, the amount of refunds sanctioned during the year, from the total earnings of Rs. 2,94,127, the net profits from the works amount to Rs. 2,06,593 or Rs. 3.10 per cent. on Rs. 66,62,646 the entire capital outlay to end of the year, against Rs. 1,73,800 or Rs. 2.62 per cent. in the previous year.

129. The areas irrigated were ascertained by actual measurements, the greater part of which was taken by measurers specially Cost of measurements. entertained for the purpose assisted occasionally by the Canal Inspectors.

The cost of measurements amounted to Rs. 674 or a rate of 1 anna and 3 pies per acre as compared with 2 annas and 2 pies in the previous year.

130. The rainfall of the year was scanty along the whole canal. The maximum was 10.53 inches at Hadapsar and the minimum 3.45 inches at Urali, distributed as under :—

	Kharif.	Babi.	Total.
Hadapsar ...	9.30	1.23	10.53
Urali ...	3.10	0.35	3.45

The lowest rainfall at Hadapsar during the previous 16 years was 12.11 inches in 1891, and that at Urali 8.63 inches in the same year.

131. A statement is appended giving the particulars of the water issued gratis, or at reduced rates to various institutions in accordance with the orders of Government. It will be seen from the statement that local institutions have received water during the year at Rs. 3,904 less than the normal rates.

Area actually irrigated compared with area applied for.

132. The following is the comparison of areas applied for and those actually irrigated :—

	AREA APPLIED FOR.			AREA IRRIGATED.			MORE.		LESS.	
	Khārif.	Rabi.	Total.	Khārif.	Rabi.	Total.	Khārif.	Rabi.	Khārif.	Rabi.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Mutha Left Bank Canal ...	1,003	22	1,025	829	41	870	...	19	174	...
Mutha Right Bank Canal ...	6,240	366	6,606	7,290	565	7,855	1,050	199	...	...
Total ...	7,243	388	7,631	8,119	606	8,725	876	218	...	...

The increase both in kharif and rabi is due to the areas entered in the water applications being approximate.

133. No remissions were sanctioned during the year. The refunds amounting to Rs. 499 made up as follows :—

Rebate on account of canal closure for 23 days and supply short of 60 H. P. for 28 days during 1899 to the Indian Paper Mills at Khadakwāsla	...	...	...	302
To Mr. Balaji Madhyrao Phadnavis for use of surplus water from Nāna Phadnavis Conduit for Irrigation during 1899, as per Government Resolution No. 119 W.-I.—1437 of 2nd October 1898	...	...	...	165
Erroneous assessments refunded to certain cultivators	...	...	...	32
Total Rs.	...	...	...	499

134. Gaugings to ascertain evaporation and leakage from Lake Fife were taken for broken periods in the months of April to June 1899 and October 1899 to March 1900, or a total number of 226 days. During the period the loss amounted approximately to 449 millions cubic feet, or about one-seventh of the total capacity of lake above outlet level.

135. The following statement shows the duty of water on the Mutha Right Bank Canal for those months during which correct figures regarding the discharge and area under irrigation were available, that is, during those months in which there was no rainfall :—

Months.	Discharge of canal utilized. Cubic feet per second.	AREA UNDER IRRIGATION ACRES.				Duty per cubic foot per second.
		Perennial.	Eight months.	Four months.	Total.	
1899... { April ...	101.58	2,745	69	66	2,880	28.35
... { May ..	121.58	3,423	65	42	3,530	29.03
1900... { January ..	91.52	2,745	73	274	3,092	33.78
... { February ..	58.16	1,531	47	156	1,734	29.81

136. At the end of the year the number of trees on this Canal was 45,871 against 40,446 in the previous year. The increase is chiefly in bábul and shindi trees. The numbers of the principal kinds were:—

Bábul	...	...	...	...	35,552
Jambhul	...	...	...	...	519
Bore	...	...	...	...	674
Shindi	...	...	...	...	3,697
Mango	...	...	...	...	1,964
Shiris	...	...	...	...	191
Umbar (wild figs)	...	...	...	...	494
Nimb	...	...	...	...	616
Sandal	...	...	...	...	193
Hiwar	...	...	...	...	159
Saundad	...	...	...	...	442
Tamarind	...	...	...	...	149
Banian	...	...	...	...	577
Khair	...	...	...	...	78
Ain	...	...	...	...	35
Nandruk	...	...	...	...	36
Miscellaneous	...	...	...	...	687
Total					45,871

POONA WATER-SUPPLY.

Statement showing Water-supplied gratuitously or at reduced rates during 1899-1900.

To whom supplied.	Quantity supplied.	Amount paid.	Value at 6 annas per 1,000 gallons.	Difference between 4 and 3.	REMARKS.
1	2	3	4	5	6
		Rs. a. p.	Rs. a. p.	Rs. a. p.	
The Civil Surgeon, Sassoon Hospital	1,895,140	355 5 5	710 10 10	355 5 5	
Do. do.	1,254,095	235 2 3	470 4 7	235 2 3	
Superintendent, Byramji Jijibhoy Medical School	6,36,990	119 7 0	238 13 11	119 7 0	
Superintendent, Lunatic Asylum	7,52,691	141 2 1	282 4 2	141 2 1	
Secretary, Cantonment Committee:—					
New Modikhana	1,848,400	346 9 2	693 2 5	346 9 2	
Beef Market	1,926,260	361 2 9	722 5 7	361 2 9	
Malcolm Tank	2,091,932	392 3 11	784 7 11	392 3 11	
Mutton Market	1,338,340	250 15 0	500 14 0	250 15 0	
Asurkhana	1,428,000	267 12 0	535 8 0	267 12 0	
Butler Mohola	1,444,000	270 12 0	541 8 0	270 12 0	
Convent School	3,65,340	68 8 0	137 0 0	68 8 0	
Jamsetji Fountain	1,111,970	6 5 10	416 15 10	410 0 0	
Honds in Booty Street	1,825,000	.....	684 6 0	684 6 0	
				3,903 15 7	

(10)—EKBUK TANK.

137. The rainfall for the year under report was 11·80 inches (kharif 11·80 and rabi 0·00 inches), against 33·92 inches (kharif 30·68 and rabi 3·24 inches) of the previous year.

138. The lowest level of water in the tank was R. L. 190·36, prior to the first replenishment, and the depth of water over the sill of the main or perennial canal was 24·61 feet. The waste weir did not overflow during the year, the highest water level attained being R. L. 194·35 on 19th September 1899.

139. The following table shows the area irrigated during the year under report, as compared with that of the previous year.

Year.	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.
1898-99	2,222	1,642	3,864
1899-1900	2,353	2,641	4,994

The increase of 1,130 acres, which is chiefly in rabi, is due to the failure of rabi rainfall. The area applied for was 3,205 acres (kharif 1,717 and rabi 1,488), or 1,789 acres less than the area actually irrigated. This difference is, as usual, due to the fact that the irrigators are unable to estimate, even approximately, the area they wish to irrigate.

140. The assessment of water rates amounted to Rs. 16,971 against Rs. 14,118 of the previous year, and the gross assessed revenue from all sources amounted to Rs. 29,827 against Rs. 25,552 of the last year. The increase is due to the increase in irrigated area.

The details of revenue from sources, other than water rates, are as under.

Number.	Source.	Amount.
		Rs.
1	Plantations	213
2	Other canal produce	1,745
3	Sales of water to—	
	(a) Sholapur Municipality	5,040
	(b) G. I. P. Railway Company and three mills at Sholapur	5,563
	(c) Distillery	60
	(d) Miscellaneous	15
4	Miscellaneous (including rents of build- ings)	220
	Total	12,856

Remissions.

141. No remissions were sanctioned during the year.

Comparison with previous years.

142. The following table compares the figures of irrigated area, assessment and working expenses with those of the previous 10 years:—

Year.	Kharif.	Rabi.	Total.	Water-rate assessment.	Gross revenue from all sources.	Working expenses.
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.
1889-90	1,335	1,199	2,534	9,441	18,532	13,231
1890-91	1,835	763	2,598	10,188	23,516	13,824
1891-92	1,935	1,202	3,137	13,125	27,470	13,770
1892-93	2,425	613	3,038	14,760	23,830	27,043
1893-94	2,247	612	2,889	14,364	24,357	26,411
1894-95	1,830	1,462	3,292	13,463	29,551	12,050
1895-96	1,671	918	2,589	12,291	25,576	15,461
1896-97	1,930	2,030	3,960	14,931	25,278	18,613
1897-98	1,996	1,551	3,547	12,389	25,408	33,730
1898-99	2,222	1,642	3,864	14,118	25,552	13,534
1899-1900... ..	2,353	2,641	4,994	16,971	29,827	9,502

The incidence of water rate per acre irrigated was Rs. 3.40 against Rs. 3.65 of the last year.

The area irrigated and water-rate assessment, &c., on each canal.

143. The area irrigated by each canal and the water-rate assessment thereon were as under.

Name of Canal.	Average discharge per day during the year in cubic feet per second.	Area irrigated.						E. L. of water in tank on.	
		Kharif.		Rabi.		Total.		R. L. on 5th June 1899.	Height of water over outlet sill in feet.
		Area in acres.	Assessment in rupees.	Area in acres.	Assessment in rupees.	Area in acres.	Assessment in rupees.		
		Acres.	Rs.	Acres.	Rs.	Acres.	Rs.		
Left Bank Low Level Canal ...	25.08	1,849	8,458	2,448	5,765	4,297	13,623	135.15	29.40
Left Bank High Level Canal ...	6.47	343	2,197	82	162	425	2,359		4.57
Right Bank High Level Canal ...	3.75	161	737	111	252	272	989		4.63
Total ...	...	2,353	11,392	2,641	5,579	4,994	16,971	...	...

144. Working expenses, including indirect charges, amounted to Rs. 9,502, against Rs. 13,534 of the previous year. Rs. 150 were spent in erecting a self-registering rain gauge in the catchment of the tank. This is intended to furnish more reliable data as regards run-off, &c., as the present gauge is near the dam, and the rain gauged by it is therefore of little use for calculating the run-off. Special repairs which consisted of raising the dam to its original level where it had sunk lower, and widening it to 6 feet in top width where it had become narrower, were carried out during the year at a cost of Rs. 2,453. The expenditure on maintenance and repairs, including the above special repairs, was Rs. 4,248. The total length of canals maintained was 48 miles. This represents a charge of Rs. 88.5 per mile against Rs. 145 of the past year. The establishment charges, direct and indirect, amounted to Rs. 3,712 against Rs. 5,698 of the previous year.

145. The area irrigated was measured at a cost of Rs. 550, which gives a charge of 1 anna and 9 pies per acre.

146. The rainfall over the catchment area of the tank, which is 159 square miles, was gauged at one place, and amounted to 12.50 inches from the date of first monsoon rainfall to the date of highest level of water attained in the tank. The run-off into the tank was 0.044 of the rainfall up to 19th September 1899, when the tank attained the highest water level in the year.

147. The revenue realized from this source was Rs. 213. The number of trees on 31st March 1900 on the tank contour and on the canals was as under.

Trees.			Above five feet.	Below five feet.
Babul ...	...	...	48,050	47,518
Nimb ...	...	...	1,525	198
Mango ...	...	...	597	225
Jambul ...	...	...	109	8
Tamarind...	...	...	200	38
Siras ...	...	...	92	4
Bori ...	...	...	43	15
Sandal ...	...	...	137	21
Bamboo ...	...	...	138	1
Guava ...	...	...	47	3
Moho ...	...	...	6	1
Sindi ...	...	...	42	44
Nimboni ...	...	...	43	1
Miscellaneous	...	...	805	198
Total ...			51,834	48,275
Grand Total ...			100,109	

148. The following calculations show the storage and the loss of water by Evaporation and absorption, evaporation and absorption during the year:—

		Millions of cubic feet,
Contents of tank on 1st April 1899	...	2,293·34
Replenishment received into the tank	...	839·05
Total		3,132·39
<i>Deduct—</i>		
Quantity of water passed through canals and leakage	...	931·97
Quantity in the tank on 31st March 1900	...	810·35
		<u>1,742·32</u>
Loss by evaporation and absorption	...	<u>1,390·07</u>

(11)—KRISHNA CANAL.

149. The total Capital outlay, direct and indirect, remained at Rs. 8,64,892. No new works were carried out during the year under report.

150. The rainfall was gauged at Retre Budruk (16th mile of the canal, about the centre of the system) and is compared with the average of previous five years in the following table:—

				Average of five years.	1898-99.	1899-1900.
Kharif	...	...	...	21·97	21·09	10·22
Rabi	...	...	...	5·15	3·36	3·62
Total			...	27·12	24·45	13·84

The rainfall in both the seasons was deficient.

151. The hot-weather flow of the river in 1899 (April and May) was good; after that date it was sufficient till November, and then it commenced to diminish gradually and became insufficient for all requirements.

152. The area irrigated and water-rate assessment, as compared with the previous five years, were as follows:—

Years.	Area irrigated.			Assessment.		
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.
1894-95	2,689	1,982	4,671	36,957	7,420	44,377
1895-96	1,719	1,485	3,204	31,402	7,063	38,465
1896-97	3,542	3,022	6,564	41,611	12,137	53,748
1897-98	2,581	1,740	4,321	40,036	8,572	48,608
1898-99	2,004	1,966	3,970	36,145	8,652	44,797
Total	12,535	10,195	22,730	186,151	43,844	229,995
Average	2,507	2,038	4,545	37,230	8,769	45,999
1899-1900	5,369	1,142	6,511	52,716	6,516	59,232

As compared with the average of previous five years, there is an increase of 2,862 acres in kharif and a decrease of 896 acres in rabi. In assessment there

is an increase of Rs. 15,486 in kharif and a decrease of Rs. 2,253 in the rabi season. The increase in kharif season is due to deficiency in rainfall and good supply of water in the river, and decrease in rabi is due to insufficient water supply in the river. The total area irrigated in the present year has only been exceeded in 1896-97, and the assessment is the highest yet recorded.

153. The average water-rate per acre was Rs. 9.10, as compared with 11.29 of the previous year. The decrease is due to increase of low-rated crops, especially Jowari, of which 1,812 acres were irrigated.

154. The realizations of the year amounted to Rs. 47,266 against Rs. 50,834 in the previous year, and the outstandings were Rs. 16,852, due to famine in the district.

155. Miscellaneous revenue from other sources amounted to Rs. 1,028 against Rs. 2,070 of the previous year. The sale of babul trees was less than last year on account of plague and famine.

156. The working expenses, including direct and indirect charges, compare as under for the last five years:—

Year.	Works.	Estab- lishment.	Tools and Plant.	Refund of Revenue.	Collection Charges.	Leave and Pension Allowances.	Total.	
1895-96	...	7,036	3,050	68	...	1,506	427	12,087
1896-97	...	7,557	4,013	98	...	2,452	562	14,682
1897-98	...	7,025	3,412	100	14	3,522	492	14,565
1898-99	...	8,208	3,617	99	...	2,634	506	15,064
1899-1900	...	11,437	4,720	185	6	2,842	661	19,851

157. The cost of working per mile of canal and per acre irrigated is as under for the past five years.

Years.	Per mile of Canal.	Per acre irrigated.
1895-96	189	3.77
1896-97	230	2.24
1897-98	228	3.37
1898-99	235	3.82
1899-1900	311	3.05

The cost per acre of irrigated area is less than last year as more area was irrigated. The cost per mile is more than last year on account of increased expenditure incurred on silt clearance. A better comparison would be between the working expenses and the total revenue as follows:—

Year.	Gross Revenue assessed.	Working Expenses.	Per cent.	Surplus Revenue.
1895-96	39,976	12,087	30.20	27,889
1896-97	55,504	14,682	26.45	40,822
1897-98	50,760	14,565	28.69	36,195
1898-99	46,867	15,064	32.14	31,803
1899-1900	60,260	19,851	32.94	40,409

The percentage of working expenses is higher than last year as a larger amount was spent in silt clearance. The surplus revenue of Rs. 40,409, represents a return of 4.94 per cent. on the direct Capital outlay of Rs. 8,18,545. The interest charge against the work was Rs. 32,742, so that after paying the interest of the year there remains a surplus of Rs. 7,667.

158. The cost of crop measurement was Rs. 660, equivalent to Rs. 0-1-6 per acre against Rs. 457, equal to Rs. 0-1-11 per acre for the previous year.

159. The average duty of water obtained was 144 acres in the kharif season and 33 acres in the rabi. These large duties are due to the large demand for water which necessitated economical distribution.

160. The number of trees of all classes on the canal at the beginning of the year was 19,615 and in addition 245 new saplings were planted. The number of trees cut or sold during the year was 609, the balance at the close of the year was 19,251. The net revenue from plantation was Rs. 984. Nearly half the amount is from sale of aloe leaves; the remainder is from babul and other trees.

161. Silt was cleared from mile No. 5 to the end of mile No. 24 and of 11 branch channels and from some nálas which were silted so as to block up the water-way under the drainage works. A separate estimate was sanctioned for the same.

MINOR WORKS AND NAVIGATION.

(12)—KHARI CUT.

162. The rainfall was 4.66 inches in the kharif and *nil* in the rabi season, against 35.28 inches and 0.49 inches, respectively, in the previous year, the average of the last five years being as follows :—

	Inches.
Kharif	35.29
Rabi	1.21

163. The areas irrigated in 1899-1900 compared with those of the previous year are as follows :—

Years	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.
1898-99	2,800	5	2,805
1899-1900	...	...	...

Owing to the almost complete failure of rain during the year no irrigation was possible.

164. There was a small quantity of water in the Chandola Tank, which was given gratis to the Mahajan of Ahmedabad for producing fodder for cattle. The fodder, however, was more or less a failure owing to the scarcity of water.

165. The gross revenue during the year was Rs. 941 against Rs. 15,720 of the previous year, and was entirely realized by the sale of babul trees, &c., growing on the banks of feeder and tanks.

166. The working expenses of the year amounted to Rs. 5,123 against Rs. 5,168 in the previous year.

167. The area under irrigation being *nil*, no measurements of crops were taken.

168. The amount of outstanding balances at the close of the year for the kharif season was Rs. 4,754-4-7, out of which no realizations were effected up to 31st March 1900 on account of the severity of famine. Since the close of the official year Rs. 113 have been recovered.

(13)—HAKTA'LA TANK.

169 This tank has been in operation now for 27 years. It commands a gross area of 584 acres in the village of Hartála, of which 415 acres are irrigable by the tank when it is full.

170. During the year under report the tank remained empty, and there was consequently no irrigation under it. Only 4 acres were watered by lift, from what little water there was in the tank below the sluice, to grow food-grain, viz., one acre in the kharif and three in the rabi season.

171. The rainfall was the lowest on record in the revenue history of this tank, being 6.66 inches only in the kharif season against 24.65 inches in the previous year, and 25.10 inches, the average of the last 26 years.

172. This abnormally low rainfall accounts for non-replenishment of the tank during the year and consequent failure of irrigation. In the famine year of 1876 the total rainfall was more than that of the year under report, viz., 9.54 inches.

173. The yield of the 4 acres of crops watered by lift is valued at Rs. 30 by the Revenue Department. They consisted of 2 acres of melons and 2 of wheat, and did not flourish much by the watering.

174. The assessed gross revenue from the tank amounted to Rs. 579-5-6. Of this, water-rates on the lift irrigation amounted to Rs. 6-8-0 and the remainder is made up of the rent derived from the letting out the tank bed for cultivation of food-grain and of the proceeds due to the levy of the protective rate of Re. 1 per acre of the irrigable land under command.

175. The incidence of water-rates was Rs. 1-10-0 only against Rs. 2-2-1 of the previous year.

176. The realizations of revenue from all sources amounted to Rs. 261-8-0, as under:—

			Rs.	s.	p.
Water-rates	...	...	58	10	0
Miscellaneous cultivation of tank-bed	...	...	156	6	0
Protective rate	...	...	46	8	0
Total	...	...	261	8	0

against Rs. 835 in the previous year. The unrealized balance of revenue amounted to Rs. 377, as shown below:—

	Rs.
Water-rates, inclusive of the rabi demand of the previous year.	7
Protective rate	370
Total	377

This was due to the inability of the irrigators to pay owing to famine.

177. No remissions were granted during the year.

178. The working expenses of the year under report amounted to Rs. 200 in the Public Works Department, and Rs. 5 in the Civil Department, total Rs. 205, against Rs. 170 of the previous year. The small increase was due to certain repairs to a masonry bridge and the bank. These charges compared with the revenue assessed and realized exhibit a profit of Rs. 374 by assessment and Rs. 56 by realizations.

Measurement of crops irrigated.

179. The smallness of irrigation did not require any elaborate measurement, which was easily done by the canal establishment.

(14)—MHASVA TANK.

180. This tank has been in operation for 23 years. It commands an area of 4,647 acres, of which 1,700 acres are irrigable by the tank when full.

181. At the commencement of the year under report the depth of water in the tank was 14.55 feet above the sill of sluice, and the level fell to 11.15 feet after the close of the hot season on the 8th of June. From the following day the replenishment began, and by the 19th June the highest depth of 19.95 feet was reached. This was 2.05 feet short of the full supply depth of 22 feet. The storage was, by very careful and economic arrangement of rotation, made to suffice for all demands of water for irrigation, which, however, consisted of only a little more than half the irrigable area of 1,700 acres under command.

182. The rainfall gauged at the tank site during the year amounted to 9.98 inches, all in the kharif season, against the total fall of 20.29 inches of the previous year, and 28.13 inches, the average of the past 22 years. The scanty rainfall in the kharif and the total absence of rabi rains led to great increase in the demands for water and thus proved the great utility of the tank.

183. The area irrigated during the year was—

Area irrigated.					Acres.
Kharif	...	...	...	...	287
Rabi	...	...	...	...	612
				Total	899

and is the largest on record since the construction of the tank.

Towards the close of the kharif season the need for water to save the food-grain crops became very acute, and the irrigators began to demand water in large quantities. But the discharge from the tank was from time to time regulated and water was allowed by strict rotation, and the proper feeding of all the irrigated crops was accomplished without any complaint of shortness of supply or claim for remission.

184. The revenue assessed from all sources amounted to—

				Rs.
Water-rates	...	...	...	1,815
Miscellaneous	...	...	...	788
			Total	2,603

against Rs. 819 of the previous year, *i.e.*, more than treble the amount.

185. The incidence of water-rate per acre was less than that of the previous year, namely, Rs. 2-0-3 against Rs. 2-6-8, and this was due to increase having occurred in low-rated crops.

186. The revenue realized during the year was as under.

				Rs.
From Water-rates	...	...	...	426
„ Other sources	...	...	...	788
			Total	1,214

against Rs. 917 in the previous year. The unrealized balance was Rs. 1,768 as under.

Outstanding	...	...	...	...	Rs.
Rabi demands sent for realization after the close of the year	...	...	...	...	490
					1,298
				Total ...	1,788

Arrangements are being made to recover the amount of outstandings.

Remissions. 187. There were no remissions during the year.

Working expenses. 188. The following table contains the details of the year's working expenses in contrast with those of the previous year :—

	1898-1899.	1899-1900.	Difference.
	Rs.	Rs.	Rs.
<i>Direct Charges.</i>			
Works	...	...	...
Repairs	314	286	28
Establishment—			
Direction ..	89	69	20
Executive ..	535	416	119
Tools and Plant	50	50	...
Total Direct Charges	988	821	167.
<i>Indirect Charges.</i>			
Leave and Pension Allowances	87	68	19
Collection Charges	31	21	10
Total Indirect Charges	118	89	29
Grand Total	1,106	910	196

The above comparison shows that the expenses of the year under report were nearly 17 per cent. less than those of the previous year.

189. The cost of measuring the area irrigated was Rs. 37-1-5, which gives a rate of 8 pies per acre against 7 pies in the previous year.

Area applied for and irrigated. 190. The actual area irrigated compares as shown below with the area applied for.

	Kharif.	Rabi.	Total.
Area irrigated	287	612	899
„ applied for	213	509	752
Difference	44	103	147

The difference is due partly to inaccuracy in the estimates for water applications and partly to extensive cultivation of food-grain.

191. The scale of water-rates during the year under report was the same as in the previous year, and the following table shows the classification of crops and the revenue assessed under that scale :—

Water-rates.

Crops..				Area irrigated.	Rate per Acre.	Assessment.
				Acres.	Rs.	Rs.
Perennial	...	...	...	29	10	211
Eight months	...	...	...	43	4	173
Four "	...	...	...	563	2	1,146
Monsoon dry	...	...	...	264	1	285
Special hot weather	...	...	...	...	4	...
Total ...				899		1,815

The above area includes 6 acres of lift-irrigation assessed at half the sanctioned rate.

Duty of water. 192. The duty of water is shown in Statement I—E. attached to this report. No special observations were made:—

Loss by evaporation and absorption. 193. The loss by evaporation and absorption was as follows:—

	Feet.
<i>Kharif-Season.</i>	
April, May and June to September, 152 days, exclusive of rainy days... ..	4.79
<i>Rabi Season.</i>	
October to December 1899 and January 1900, 123 days.	5.67
<i>Hot Weather.</i>	
February and March 1900, 59 days	2.30
Total ...	12.76
Daily average loss ...	0.382

(15)—JA'MDA CANALS.

194. These canals have been in operation for 33 years. They command a gross area of 46,288 acres, of which the area irrigable by the works, as completed, is 5,000 acres only.

195. The canals derive their supply of water from the Girna River. During the year under report the minimum discharge of the river in different seasons was as under in contrast with that of the previous year

Seasons.	Minimum River discharge in 1898-99.	Minimum River discharge in 1899-1900.
Hot weather, April and May ...	17.86	52.17
Kharif, June to October 15th ...	13.11	16.96
Rabi, 16th October to 15th January	91.40	15.93
Hot weather, 16th January to March	61.75	4.37
Do. April and May ...	52.17	0.00

Just before the commencement of the rains the river supply was better than that of the previous year, and it encouraged the irrigators to a great extent

in the cultivation of food-grain and cotton crops. But in the monsoon the river supply was much below the mark. In the rabi and in the ensuing season irrigation had to be restricted to the areas to which the water-supply could be delivered. The rapid fall in the river discharge made it impracticable to send the canal water down to the lower reaches.

Rainfall.

196. The rainfall is gauged at the three stations named below, and compares as follows:—

Stations.	Kharif.		Rabi.	
	1898.	1899.	1898.	1899.
<i>At Canal Head.</i>	Inches.	Inches.	Inches.	Inches.
Jámda Bungalow	25·62	9·48	1·35	0·00
<i>About Middle of Canal.</i>				
Kolgaon Chowki	23·14	9·12	0·31	0·12
<i>At Tail of Canal.</i>				
Bhadgaon Kacheri	27·08	9·92	0·03	0·00

From the above table it will be seen that the rainfall in the year under report was considerably less than that of the previous year. The paucity of the kharif rainfall increased the cultivation of monsoon dry-crops, which was nearly double what it was in 1896-97 and more than half of the whole irrigable area. The rains having failed almost entirely in the rabi season, the river supply became very precarious and could not be sent down properly beyond a limited length of both the canals, and hence the rabi irrigation has been less than that of the previous year.

Area irrigated.

197. The irrigation during the year amounted to—

				Acres.
Kharif	...	...	...	2,919
Rabi	...	—	...	1,596
			Total	4,515

or slightly more than four-fifths of the whole irrigable area commanded by the canals against 2,585 acres of the previous year, and compares, as shown below, by seasons and classification of crops:—

	Kharif.		Rabi.		Total.	
	1898.	1899.	1898.	1899.	1898.	1899.
Perennial	182	196	5	2	187	198
Eight months	45	85	31	45	76	130
Four months	11	36	2,222	1,512	2,233	1,543
Monsoon dry	65	2,591	2	32	67	2,623
Hot weather	22	11	...	5	22	16
Total	325	2,919	2,260	1,596	2,585	4,515

198. The gross revenue assessed during the year amounted to Rs. 9,733 against Rs. 9,122 in the previous year. Of this, water-rates amounted to Rs. 9,440 and miscellaneous revenue to Rs. 298. The increase is confined to water-rate assessment only, miscellaneous

revenue showing a great diminution on account of the sale of babul wood and mango fruits being limited.

Remissions. 199. There were no remissions during the year.

Realizations. 200. The realizations during the year amounted to—

				Rs.	a.	p.
Water-rates	...	...	...	8,580	11	0
Miscellaneous	...	...	...	297	10	2
			Total	8,878	5	2

or Rs. 2,265 less than the amount realized last year.

The unrealized balance of assessed water-rates is Rs. 3,025 in addition to the rabi assessment of Rs. 3,296 sent for realization after the close of the year. The famine pressure has caused this outstanding.

201. The incidence of water-rate assessment per acre during the year was Rs. 2-1-5 against Rs. 3-1-3 in the previous year. The decrease in the rate, notwithstanding the increase in incidence of water-rates. irrigation, is due to the cultivation of low-rated crops.

202. The following table contains the details of the year's working expenses in contrast with those of the previous year:—

				1898-99.	1899-1900.	Increase.
				Rs.	Rs.	Rs.
<i>Direct Charges.</i>						
Original works	...	...	...	...	...	...
Repairs	...	...	...	3,066	14,376	11,310
<i>Establishment.</i>						
Direction	...	...	...	809	3,420	2,611
Construction	...	...	...	4,929	10,649	5,720
Tools and Plant	...	...	...	200	180	—20
Refund of Revenue...	...	...	...	12	...	—12
<i>Indirect Charges.</i>						
Leave and pension allowance	...	...	...	803	1,970	1,167
Collection charges	...	...	...	499	429	—70
			Total	10,318	31,024	20,706

The increase in the cost of working was due to the special work of silt-clearance of the Jamda Left and Right Bank Canals having been commenced during the middle of the year with a view to give relief to the famine stricken, and the expenditure thus served the double purpose of giving relief as well as putting the canals in good order. This latter object could not have been achieved in ordinary times as the canals yield a very limited revenue.

203. The cost of measurement of crops irrigated during the year is as given below.

		Area irrigated.	Area measured.	Cost of measurement.	Rate per Acre.
		Acres.	Acres.	Rs. a. p.	Rs. a. p.
Left Bank	...	3,462	1,623	49 13 6	0 0 6
Right Bank	...	1,053	229	8 2 1	0 0 7

showing that 41 per cent. of the area irrigated had to be measured; 59 per cent. of the irrigated area was in the land sub-divided for irrigation purposes, or in whole fields. The cost is calculated according to the time devoted by the canal establishment to this work.

Area applied for and actually irrigated.

204. The area assessed compares with that applied for as follows :—

		Kharif.	Babi.	Total.
Area irrigated	... ..	2,919	1,596	4,515
„ applied for	... ..	2,781	1,346	4,127
Difference	... ..	138	250	388

The difference is due to the areas entered in applications for water being under-estimated.

205. The scale of water-rates during the year under report was the same as in the previous year, and the following table shows the classification of crops and the revenue assessed under that scale :—

		Area irrigated.	Rate per Acre.	Assessment.
		Acres.	Rs.	Rs.
Perennial...	... ..	198	16	3,099
Eight months	... ..	130	4	500
Four months	... ..	1,548	2	3,123
Monsoon dry	... ..	2,623	1	2,670
Hot weather	... ..	16	4	48
Total	... ..	4,515		9,440

206. Owing to the failure of water in the Girna River after the close of the kharif season, no observations of the duty of water were taken during the year.

Duty of water.

207. The expenditure on plantations during the year was Rs. 62, which raises the total expenditure under this head to end of the year to Rs. 16,537. The number of trees on the canals has fallen from 11,512 in the previous year to 10,359 during the year owing to deaths of young mango and other plants and trees from excessive heat. Arrangements are being made to replace the loss by new plantation.

Plantations.

(16)—PARSUL TANK.

208. This tank has been in operation for the past 11 years. It commands a gross area of 3,337 acres, of which only 1,000 acres are irrigable by the works as completed and full supply storage available.

Gross and irrigable area.

209. The full supply depth of the tank is 35 feet, equivalent to a storage of 118.70 millions cubic feet of water. At the commencement of the year the depth of water in the tank was 18.40 feet above the sill of sluice which fell to 9.15 feet after the close of the hot season, *i.e.*, on 10th of June, and from the following day the replenishment began. By the 18th of June 1899 the highest depth of 11.85 feet was reached, rising to R. L. 1,853.23, and being 23.15 feet below the full supply level. This served almost all demands of water in the kharif season. By the 22nd of November following the tank became quite empty.

Tank supply.

210. The rainfall gauged at the tank site during the year was 6.90 inches only in the kharif season against 16.34 inches in the previous year, and 21.46 inches, the average of the past 17 years.

Rainfall.

211. The area irrigated during the year by villages under command is shown in the following table in contrast with that of the previous year :—

Villages.	Kharif.		Rabi.		Total.	
	1898.	1899.	1898.	1899.	1898.	1899.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Umrána	66	114	242	...	308	114
Soundána	14	30	157	...	171	30
Nandgaon	14	28	57	...	71	28
Total	94	172	456	...	550	172

There was only kharif irrigation this year and the increase under it is due to larger areas of fodder, sugarcane, and ground-nut crops having been irrigated. The area of monsoon dry crops was nearly the same as that irrigated in the last kharif season.

In the month of September owing to scanty kharif rainfall heavy demands for water arose, but owing to insufficient storage of water in the tank many water applications from the villagers of Umrána for bájri and other monsoon dry-crops had to be rejected. As the perennial and eight-months crops already irrigated had to be well served, there was no water in the tank for the rabi crops, and hence there was no rabi irrigation this year.

212. The assessed revenue during the year amounted to—

Gross revenue.			Rs.
Water rates	...	...	862
Miscellaneous	...	...	20
		Total	882

against Rs. 2,296 of the previous year. The decrease is due to the falling off in the revenue derived from water rates.

213. The realizations during the year amounted to—

Realizations.			Rs.
Water rates	...	...	980
Miscellaneous	...	...	20
		Total	1,000

against Rs. 2,601 of the previous year. The decrease is due to large outstanding owing to the straitened circumstances of the cultivators.

The outstanding balance of Rs. 2,380 remains to be realized, and steps are being taken in the Revenue Department to recover the same.

214. There were no remissions during the year under report.

215. The working expenses amounted to—

Working expenses.			Rs.
In the Public Works Department	...	...	1,121
In the Civil Department	...	...	49
		Total	1,170

against Rs. 1,207 of the previous year. Owing to the decrease in the share of collection charges, the year's working expenses were 3 per cent. less.

(17)—PRAVARA RIVER WORKS, OJHAR CANAL.

216. The scale of water rates during the year under report was the same as that of the previous year, and the following table shows the classification of crops and the revenue assessed under that scale :—

	Area.	Assessment.
	Acres.	Rs.
Perennial	34	363
Eight months... ..	17	117
Four months... ..	1	8
Monsoon, dry	56	58
Special hot weather	64	316
Total	172	862

217. The cost of measurement of crops irrigated during the year was Rs. 6-6-0, which gives a rate of 7 pies per acre against 5 pies in the previous year. The increase in rate is due to the increase in perennial fodder and eight-months crops.

218. The area applied for amounted to 166 acres, whereas the actual irrigation was 172 acres. The difference is too slight to need any explanation.

219. It is not considered advisable to give the calculation of evaporation and absorption from this tank, as considerable leaks have been discovered which could not be gauged systematically without great expense.

(17)—PRAVARA RIVER WORKS, OJHAR CANAL.

220. The area irrigated during the year was 3,701 acres (kharif 2,249 and rabi 1,452) against 5,472 acres (kharif 2,161 and rabi 3,311) of the previous year. The increase in the kharif season is small and calls for no explanation. The decrease in the rabi season is due to deficiency of river supply.

221. The following table compares the figures of area irrigated under each class of crop with those of the previous year :—

Year.	Class I— Perennial.	Class II— 8 months.	Class III— 4 months.	Class IIIA— Special Rabi crops.	Class IV— Monsoon dry.	Class V— Special hot weather.	Miscel- laneous.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1898-99... ..	190	102	1,231	2,094	1,708	111	36
1899-1900	265	59	452	1,004	1,907	11	3

The increase under class I is chiefly due to the increase in the area of sugar-cane crop and that under class IV is due to want of rain. The decrease under classes II, III and III A is due to deficiency of river supply and that under class V is partly due to the increase in the area of sugar-cane crop and partly to sufficiency of fodder with the cultivators.

222. The area applied for compares as below with the actual irrigation,

	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.
Area applied for ...	4,916	1,953	6,869
Area actually irrigated ...	2,249	1,452	3,701
Difference ...	-2,667	-501	-3,168

The difference is due to deficiency of river supply during both the seasons.

223. Applications for 683 acres were refused owing to deficiency of river supply.

224. During the year the water-rate assessments amounted to Rs. 5,965 (kharif Rs. 3,715 and rabi Rs. 2,250) against Rs. 12,508 (kharif Rs. 3,711 and rabi Rs. 8,797) in the previous year. The increase in the kharif season is trifling and calls for no explanation. The decrease in the rabi season is due to deficiency of river supply.

225. Remissions amounting to Rs. 1,868 were granted during the year owing to deficiency of river supply and consequent failure of crops.

Refunds.

226. Rs. 4 were refunded during the year on account of erroneous assessment during the rabi season of 1896-97.

Comparison of area irrigated and revenue.

227. The following table compares the area irrigated and the revenue derived during the previous three years with the figures of the year under report:—

Year.	Area irrigated.	Revenue from Water-rates.	Rainfall from 1st April to 31st March.
	Acres.	Rs.	Inches.
1896-97 ...	4,890	14,254	19.41
1897-98 ...	6,068	13,096	22.64
1898-99 ...	5,472	12,508	24.48
1899-1900 ...	3,701	5,965	14.18

The decreases in the area irrigated and in the revenue from water-rates are due to insufficiency of river supply owing to short rainfall.

228. The incidence of water-rate per acre was Rs. 1.61 against Rs. 2.29 in the previous year. The decrease is partly due to the remissions and partly to the decrease in the area of 8 months and hot weather crops.

229. The area irrigated per mile of main canal alone was kharif 118.37 and rabi 76.42 acres against 113.74 and 174.26 acres in 1898-99, and that of main canal and distributaries together was kharif 56.22 and rabi 36.30 acres against 51.02 and 82.77 acres in 1898-99. The increase in the kharif season is trifling and the decrease in the rabi season has been explained above.

Working expenses.

230. The working expenses amounted to Rs. 17,378 as detailed below against Rs. 21,304 in the previous year:—

(17)—PRAVARA RIVER WORKS, OJHAR CANAL.

Extensions and Improvements	...	...	80
Maintenance and Repairs	...	...	2,757
Share of Establishment	...	...	12,536
Tools and Plant	...	...	38
Share of Collection Charges	...	...	208
Indirect Charges	...	...	1,755
Refund of Revenue	...	...	4
Total			17,378

The rate of working expenses per mile of main canal open was Rs. 914.63 and per acre irrigated Rs. 4.70.

The increase under extensions and improvements is due to three additional openings having been provided to escape Nala No. 14 in mile 7. The decrease under maintenance and repairs is trifling and calls for no explanation; that under share of establishment is due to famine works which reduced the establishment charges on Irrigation works, while short expenditure on repairs to tools accounts for the decrease under tools and plant. The decrease under share of collection charges is the result of short collection effected during the year; that under indirect charges is due to the decrease in the establishment charges and that under refunds of revenue to correct way of assessment on crops.

231. The total cost of measurement of 2,884 acres (excluding 817 acres subdivided) during the year was Rs. 197 or one anna and one pie per acre as compared with one anna per acre last year. The increase in cost is due to the decrease in area irrigated.

232. The duty per cubic foot per second of water admitted into the canal was 58.29 acres in the kharif and 114.87 acres in the rabi season. That of water actually utilized was 63.80 acres in the kharif and 114.87 acres in the rabi season.

233. The rainfall as gauged at Ashvi Bungalow was 12.73 inches and fell altogether in the kharif season.

Rainfall. The following statement shows the comparison of rainfall from June to December for 10 years, including the year under report:—

Months.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
June ...	6.98	4.57	5.46	8.01	3.24	3.91	7.75	1.43	4.39	10.66
July ...	0.41	2.60	5.61	1.26	6.92	5.00	7.69	2.48	1.73	0.45
August ...	2.15	1.44	6.98	5.53	0.10	0.83	2.47	1.61	1.38	0.00
September ...	5.57	3.78	11.58	0.84	10.03	12.99	1.10	14.77	13.93	1.62
October ...	6.01	2.82	4.70	0.89	4.00	1.70	0.40	2.35	2.05	0.00
November ...	1.96	0.21	0.21	0.24	...	0.14	...	0.00	0.90	0.00
December ...	1.68	...	...	...	...	...	...	0.00	0.10	0.00
Total ...	24.76	15.42	34.54	16.77	24.29	24.57	19.41	22.64	24.48	12.73

River-supply. 234. On the 1st April 1899 the discharge of the river was 10.60 cubic feet per second. The first large flood occurred on the 6th June 1899. The river supply proved altogether insufficient to meet even the ordinary requirements of the cultivators after the middle of October 1899. Water was distributed by rotation during both the seasons. In the rabi season an intermittent supply to the first seven miles only of the canal was given and even this was stopped on the 1st February 1900. On the 31st March 1900 the discharge of the river was 1.49 cubic feet per second against 10.73 on the same date of the previous year.

235. The number of trees on the canal on the 31st March 1900 was 13,208 as under.

Plantation.					
Bábul ...	...	...	...	...	10,510
Orange	...	...	...	...	14
Bor ...	...	...	...	...	102
Siras ...	...	...	...	...	15
Jámbul	...	...	...	...	183
Nimb	...	...	...	...	1,397
Kyene	...	...	...	...	2
Mango	...	...	...	...	748
Do. grafts	...	...	...	...	22
Moho ...	...	...	...	...	4
Bakan	...	...	...	...	32
Sandal	...	...	...	...	69
Bámboo	...	...	...	...	45
Miscellaneous	...	...	...	...	47
					13,208

The number of trees on the 31st March 1899 was 13,611. The decrease in the number of bábul trees is due to the fact that they were cut down and used for making handles for picks, phávrás and hammers, and that in the number of other trees is partly due to white ants and partly to want of water.

236. The following statement compares the revenue from all sources with that of the previous year:—

Particulars.	1898-99.	1899-1900.
	Rs.	Rs.
Water-rates from irrigation ...	12,508	5,965
Sale of water ...	1	...
Plantations ...	13	7
Other canal produce ...	220	109
Rents of buildings ...	1	1
Fines ...	42	32
Miscellaneous receipts ...	161	161
Enhanced land revenue per Government Resolution No. 275, dated 17th July 1880 ...	76	76
Total ...	13,022	6,351

The decrease under water-rates from irrigation is chiefly due to the deficiency of river supply during the rabi season; that under sale of water arises from the fact that water was not taken for building purposes or for threshing floors owing to the famine; that under plantation is ascribable to the fact that mango trees did not yield fruit, and the amount realized by the sale of jámbul fruit was less than in the previous year; that under other canal produce is partly due to the fact that, owing to want of rain, grass did not grow on the canal banks and was consequently not sold, and partly due to the amount realized by the sale of bábul pods having been less than in the previous year; and that under fines is because the cases of waste of water were less numerous than in the previous year.

237. The canal was closed 3 times for silt and weed clearance for periods aggregating 12 days. It was also closed for 10 days on account of rain and for 92 days for increasing storage.

(18)—BHATODI TANK.

238. The area irrigated during the year was 870 acres (kharif 553 and rabi 317) against 743 acres (kharif 25 and rabi 718) of the previous year. The increase in area in the kharif

season is due to short rainfall. The decrease in the rabi season is due to the insufficiency of tank supply.

239. The area applied for compares as below with the actual irrigation.

	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.
Area applied for	617	337	1,014
Area actually irrigated ...	553	317	870
... Difference ...	-64	-80	-144

Applications for rabi crops were received in the first fortnight of October 1899, but the area applied for was not irrigated; this leads to the difference between the area applied for and that irrigated during the kharif season. The difference in the rabi season is due to insufficiency of tank supply.

240. The following table compares the areas irrigated under each class of crop with those of the previous year :—

Year.	Class I— Perennial.	Class II— 3 months.	Class III— 4 months.	Class IV— Monsoon dry.	Class V— Special hot weather.
	Acres.	Acres.	Acres.	Acres.	Acres.
1898-99	21	182	538	...	2
1899-1900	20	398	297	155	...

The decrease under classes I and V is trifling and needs no explanation and that under Class III is due to insufficiency of tank supply. The increase under Class II has been explained in paragraph one above and that under Class IV is due to want of rain.

241. During the year the water rate assessments amounted to Rs. 2,706 (kharif Rs. 1,888 and rabi Rs. 818) against Rs. 2,628 (kharif Rs. 256 and rabi Rs. 2,372) in the previous year. The increase in the kharif season and the decrease in the rabi season have been explained above.

242. Remissions amounting to Rs. 183 were granted owing to insufficiency of tank supply in the rabi season and consequent failure of crops.

243. The following table compares the areas irrigated and the revenue derived during the previous three years with the figures of the year under report :—

Year.	Area irrigated.	Revenue from water rates.	Rainfall from 1st April to 31st March.
	Acres.	Rs.	Inches.
1896-97	1,896	5,009	18.16
1897-98	1,400	4,318	21.78
1898-99	743	2,628	18.40
1899-1900	870	2,706	10.52

The increase in area irrigated is due to the increase under 8 months and monsoon dry crops owing to greater demand in the kharif season, and that in the revenue from water rates is chiefly due to increase in the area of 8 months' crops.

244. The incidence of water rate per acre was Rs. 3.11 against Rs. 3.54 in the previous year. The decrease is due to the increase in the area of low-rated crops.

Working expenses. 245. The working expenses amounted to Rs. 7,703 as detailed below, against Rs. 9,568 in the previous year:—

	Rs.
Maintenance and repairs	1,249
Share of establishment	5,427
Tools and Plant	4
Share of collection charges	263
Indirect charges	760
Total ...	7,703

The rate of working expenses per mile of main canal open was 1,711.78 and per acre irrigated 8.85. The decrease under maintenance and repairs is small and calls for no explanation; that under share of establishment is due to the famine works which reduced the establishment charges on irrigation works; that under tools and plant is due to the decrease in the number of tools requiring repairs; that under collection charges is due to the amount collected during the year having been less than in the previous year; and that under indirect charges to the decrease in the establishment charges.

246. The duty per cubic foot per second of water admitted into the canal and actually utilized was 79.23 acres in the kharif season and 41.28 in the rabi season.

247. No expenditure was incurred in measuring crops. Almost all the area under command of the canal is subdivided into irrigation pot numbers. The small area that is not subdivided was measured by the canal Inspector with the assistance of the canal Chaukidárs and Pátkaries.

248. The rainfall as gauged at the Bhatodi Tank bungalow was 9.32 inches, all in the kharif season. The following statement gives a comparison of the rainfall from June to December for 10 years, including the year under report:—

Months.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
June	7.55	4.64	16.75	5.98	1.40	3.97	9.21	3.60	3.65	3.17
July	0.77	2.42	5.65	0.82	5.54	6.82	5.70	2.12	3.35	0.00
August	3.72	4.38	6.17	5.38	2.46	1.50	1.41	1.65	0.75	1.30
September	2.58	5.72	7.87	6.65	12.94	11.22	0.04	12.60	10.10	4.85
October	1.66	3.14	4.82	5.01	2.61	0.70	0.10	1.71	0.35	0.00
November	2.57	0.00	0.76	0.60	0.00	0.40	1.35	0.00	0.00	0.00
December	2.84	0.00	0.00	0.00	0.00	0.04	0.20	0.00	0.00	0.00
Total ...	21.69	20.30	42.02	24.39	24.95	24.65	18.01	21.68	18.20	9.32

249. On the 1st April 1899, the water level stood at R. L. 82.18 against 81.12 on the same date in the previous year. Replenishment commenced on the 6th June 1899 and the water attained its maximum height during the year on the 5th July 1899, the R. L. of the water surface on that date being 90.92, i.e., 1.58 feet below the crest of waste weir. The tank ran dry on the 24th November 1899.

(19)—MATOBA TANK.

250. The number of trees on the canal on the 31st March 1900 was as under.

Plantations.	...	...	...	...	...
Mango	...	...	...	...	812
Do. grafts	...	...	...	...	38
Bor	...	...	...	...	216
Orange	...	...	...	...	18
Bábul	...	...	...	...	8,336
Jámbul	...	...	...	...	102
Nimb	...	...	...	...	406
Sandal	...	...	...	...	243
Siras...	...	...	...	...	102
Tamarind	...	...	...	...	36
Miscellaneous	...	...	...	...	1,146
Total ...					11,457

The number of trees on the 31st March 1899 was 11,495. The decrease was due to white ants and short supply of water in the tank.

251. The following statement compares the figures of revenue from all sources with those of the previous year :—

Particulars.	1898-99.	1899-1900.
	Rs.	Rs.
Water rates from irrigation...	2,628	2,706
Plantation	4	2
Other canal produce	362	38
Rent of buildings	7	5
Fines	20	52
Miscellaneous receipts ... ..	...	611
Revenue on land irrigated by percolation per Government Resolution No. 1757, dated 16th October 1891... ..	1,205	1,205
Increased land revenue per Government Resolution No. 203, dated 30th March 1878	146	146
Total ...	4,372	4,765

The increase under water rates from irrigation is due to short rainfall. The decrease under plantation is due to the decrease in the amount realized by the sale of mango fruits; that under other canal produce is partly due to non-receipt of revenue from aloe plants and partly to the amount on account of the sale of the right of cultivating and grazing certain lands having been treated as miscellaneous receipts; and that under rent of buildings is due to the bungalow having been less frequently occupied owing to absence of Shikár. The increase under fines is due to the increase in the number of cases of waste of canal water and that under miscellaneous receipts to the recovery of the amount due for the years 1899-1900 and 1900-1901 for the right of cultivating and grazing certain lands during the year.

(19).—MATOBA TANK.

252. This tank has a catchment area of only 10 square miles and is filled from the surplus water of the Mutha Right Bank Canal during the monsoon.

On the 1st April 1899, the water level stood at 16.34 feet above sill of outlet against 16.40 feet on same date in 1898. The tank commenced to be replenished from 5th June and

Tank supply.

on 18th September the level was 19.15 feet above sill of outlet. The total monsoon rainfall was 7.12 inches. On 29th November the water level fell to 4.00 feet above outlet sill. In December and up to 15th January the tank was replenished from Lake Fife to save the standing crops, chiefly sugarcane. The quantity of water supplied is estimated at 27 millions cubic feet, valued at Rs. 2,700, at Re. 1 per 10,000 cubic feet.

253. The area irrigated from the tank was 1,211 acres of kharif crops. There was no rabi irrigation for want of water. There was an increase of 137 acres in sugarcane, but on the whole there was a decrease of 928 acres as compared with the area of the previous year, which is due to failure of supply.

The assessment of water rates amounted to Rs. 12,576 and the miscellaneous revenue to Rs. 106, making a total of Rs. 12,682 against Rs. 12,472 in the previous year. This revenue is mostly due to replenishments from Lake Fife. Had it not been for this supply, the standing crops would have died for want of water and the revenue would have greatly suffered.

254. The cost of measurements amounted to Rs. 62 for an area of 1,211 acres, or at the rate of 10 pies per acre.

255. The working expenses amounted to Rs. 3,178, which represents a rate of Rs. 186.94 per mile of canal in operation and of Rs. 2.62 per acre irrigated.

256. The following statement shows the duty of water ascertained from observations of discharge and area actually under irrigation during the months referred to:—

Months.					Average discharge cubic feet per second.	Area irrigated.	Duty in acres per cubic foot, per second.
1899...	...	...	April ... ..	...	6.12	445	72.71
			May ... ..	...	7.45	455	61.07
			December ... ..	...	7.00	467	66.71
1900...	...	...	January ... ..	...	4.66	292	62.66

257. The following is the comparison of areas irrigated and applied for:—

AREA APPLIED FOR.			AREA IRRIGATED.			MORE.		LESS.	
Kharif	Rabi	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Kharif.	Rabi.
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1,142	...	1,142	1,211	...	1,211	69	...	...	...

The increase is due to the areas entered by the cultivators in their water applications being approximate.

(20).—KA'SURDI TANK.

258. This tank received no replenishment during the year under report. The rainfall between 1st June and 31st October was only 4.99 inches, or less than half the minimum fall in the same period during the previous five years. The tank was dry on 1st April 1899 and remained so till 31st March 1900.

Area irrigated and assessment. 259. There was no irrigation and no assessment of water-rates or miscellaneous revenue during the year.

Working expenses. 260. The working expenses amounted to Rs. 531, of which Rs. 248 represent the actual charge on maintenance and repairs, the balance being book debits for establishment, &c. As, the tank was dry, no special repairs were necessary.

(21).—SHIRSUPHAL TANK.

Tank supply. 261. On the 1st April 1899 the water level stood at R. L. 72.73, that is, 12.73 feet above outlet or 3.77 feet lower than on same date in 1898. Slight replenishments were received in June and September 1899 and the highest level reached was R. L. 76.00 on the 14th June 1899. The tank became dry on 22nd November 1899. The total rainfall of the year was 9.03 inches against an average annual fall of 19.14 inches.

Area irrigated and assessments. 262. The area irrigated was 400 acres of kharif crops. Owing to scanty replenishment, there was no rabi irrigation during the year. The decrease in the total irrigated area as compared with the previous year was 790 acres, which was due entirely to failure of supply.

The assessment of water rates amounted to Rs. 923 and the miscellaneous revenue to Rs. 80, making a total of Rs. 1,003 against Rs. 3,328 in the previous year.

Cost of measurements. 263. The cost of measurements amounted to Rs. 20 for an area of 400 acres, or at the rate of 10 pies per acre. The rate as compared with the previous year is high owing to the area irrigated being small and in detached plots.

Working expenses. 264. The working expenses, excluding refunds of revenue, amounted to Rs. 3,467, which represents a rate of Rs. 277.36 per mile of canal in operation and Rs. 8.67 per acre irrigated.

Area applied for and irrigated. 265. The following is the comparison of areas irrigated and applied for:—

AREA APPLIED FOR			AREA IRRIGATED.			MORE.		LESS.	
Kharif.	Babi.	Total.	Kharif.	Babi.	Total.	Kharif.	Babi.	Kharif.	Babi.
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
301	...	301	400	...	400	99	...	...	...

The increase is due to the practice among the cultivators to enter minimum areas only in the applications and to take water for larger areas afterwards if the character of the season made it necessary and the water-supply was found sufficient.

Evaporation and leakage. 266. To ascertain the loss by evaporation and leakage from the tank, gaugings were taken for broken periods from 1st April till the tank dried up on 22nd November 1899, for a total number of 218 days. During the period the loss amounted to 30 millions cubic feet, or nearly $\frac{1}{12}$ th of the total capacity of the tank above outlet level.

Plantation. 267. At the end of the year there were 4,245 babul trees on the canal.

(22)—BHA'DALWADI TANK.

Tank supply. 268. On the 1st April 1899 the water level stood at R. L. 45.60 or 12.40 feet above sill of outlet and 10.90 feet lower than in the previous year.

Slight replenishments were received in April and June 1899 and the tank became dry on 7th August 1899 and remained so till 11th September following, when fresh replenishments occurred. The highest level reached was on 19th September 1899, when the water stood at R. L. 55.20, or 22 feet above sill level. Deducting 10 feet of silt the depth of water available for irrigation was 12 feet only, corresponding to a storage of about 64 millions cubic feet. The supply lasted for 3½ months, viz., till 25th December 1899, when the tank again became dry.

269. The areas irrigated were 151 acres of kharif and 675 acres of rabi making a total of 826 acres against 1,808 acres in the previous year. The decrease is mainly in monsoon and rabi crops and is due to the failure of the monsoon and short supply of water in the tank.

The assessment of water-rates amounted to Rs. 2,528 and miscellaneous revenue to Rs. 321, making a total of Rs. 2,849 against Rs. 4,095 in the previous year.

270. The cost of measurements amounted to Rs. 43 for an area of 826 acres, or at the rate of 10 pies per acre. Owing to deficiency of water-supply the area irrigated was smaller and the cost of measurement proportionately higher than last year.

271. The working expenses, excluding, refunds of revenue, amounted to Rs. 2,644, which represents a rate of Rs. 271.18 per mile of canal in operation and Rs. 3.20 per acre irrigated.

272. The following is the comparison of area irrigated and applied for:—

AREA APPLIED FOR.			AREA IRRIGATED.			MORE.		LESS.	
Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Kharif.	Rabi.
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
137	344	481	151	675	826	14	331	...	...

The increase is due to the practice among the cultivators to enter minimum areas only in the applications and to take water for larger areas afterwards if the character of the season made it necessary.

273. To ascertain the loss by evaporation and leakage from the tank gaugings were taken for broken periods from 1st April till the tank dried up on 25th December 1899 for a total number of 193 days. During the period the loss amounted to 61 millions cubic feet, or about ¼th of the total capacity of the tank above outlet level.

274. At the end of the year there were 10,000 babul trees and 300 bamboo clumps on this canal. About 400 bamboo clumps were cut for use of the Shetphal Tank relief work and the value was credited under miscellaneous revenue.

(23)—KOREGAON TANK.

275. The rainfall for the year under report was 11.40 inches (kharif 11.40 and rabi 0.00) against 24.09 inches (kharif 22.49 and rabi 1.60 inches) of the previous year.

276. The lowest level of water in the tank, prior to first replenishment, was R. L. 86.00, i.e., 6 feet over the sill of the outlet, on 13th June 1899. The water level began to fall after

the first replenishment, till it went down to R. L. 81·10 on 7th September 1899. It began to rise from 8th September till it attained the highest level of the year, namely, R. L. 87·80 on 18th September 1899. The waste weir did not overflow during the year.

277. The area irrigated during the year was 312 acres (kharif 56 and rabi 256) against 247 acres (kharif 5 and rabi 242) of the previous year. The increase of 65 acres is due to the failure of rabi rainfall. The area applied for was 288 acres against 312 acres actually irrigated. The difference of 24 acres is slight and is, as usual, due to the inability of the cultivators to estimate correctly the area they propose to irrigate.

278. The assessment on account of water-rates was Rs. 659 against Rs. 511 of the last year. The gross revenue from all sources amounted to Rs. 671, as compared with Rs. 537 of the previous year. The increase in both cases is due to the increase in area irrigated during the year.

279. The following table gives a comparison of the figures of area irrigated, assessment and working expenses with those of the previous 10 years:—

Years.	Kharif.	Rabi.	Total.	Water-rates.	Gross revenue.	Working expenses.
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.
1889-90	13	323	336	743	746	895
1890-91	121	99	220	590	599	773
1891-92	66	363	429	1,061	1,073	836
1892-93	47	255	302	769	773	1,087
1893-94	94	258	352	1,006	1,015	822
1894-95	85	306	391	1,150	1,175	730
1895-96	51	292	343	850	890	815
1896-97	43	125	168	369	450	633
1897-98 ... ..	...	324	324	656	656	731
1898-99	5	242	247	511	537	813
1899-1900	56	256	312	659	671	726

280. The working expenses, including indirect charges, were Rs. 726. Rs. 289 were spent during the year on maintenance and repairs, which, on a total length of 3·75 miles of the channel, represent a charge of Rs. 77 per mile against Rs. 87 of the previous year.

281. The area irrigated was measured at a cost of Rs. 34 or anna 1 and pie 9 per acre, as compared with annas 2 per acre of the last year.

282. The rainfall over 4·40 square miles of the catchment area of the tank was 11·30 inches from the date of first monsoon rainfall to the date of the highest water level attained by the tank during the year. This rainfall gives a quantity of 115·51 millions of cubic feet on the whole catchment. The run-off up to 18th September 1899, on which date the highest water level was attained, was 0·222 of the rainfall.

283. The following table shows the number of existing trees on the tank margin and on the channel on 31st March 1900:—

Names of trees.						Above 5 feet.	Below 5 feet.
Bábul ...	...	...	...	...	...	1,925	450
Mango ...	...	...	...	...	...	1	...
Nimb ...	...	...	...	...	...	10	3
Bor ...	...	...	...	...	...	33	5
Jámbul...	...	...	...	...	...	5	1
Tamarind	...	...	...	...	...	13	1
Hiwar ...	...	...	...	...	...	19	1
Umbar...	...	...	...	...	...	35	20
Miscellaneous	...	...	...	...	...	119	32
Total						2,160	513
Grand Total						2,673	

284. No experiments were made during the year to ascertain the duty of water.

285. The following figures show the storage of water and loss by evaporation and absorption during the year:—

		Millions of cubic feet.
Quantity of water in the tank on 1st April 1899	...	51.53
Quantity that flowed into the tank	... ..	34.45
		<u>85.98</u>
<i>Deduct—</i>		
Discharge through the channel and leakage	... 24.56	
Quantity of water in the tank on 31st March 1900.	...	<u>24.56</u>
Loss by evaporation and absorption	... ..	61.42

(24)—ASHTI TANK.

286. The rainfall during the year was 13.90 inches (kharif 12.55 and rabi 1.35) against 26.30 inches (kharif 23.20 and rabi 3.10) of the previous year.

287. The lowest level of water in the tank, prior to the first replenishment, was R. L. 223.00 on 7th June 1899. The water level began to fall again on 11th June 1899, till it went down to R. L. 220.25 on 7th September 1899. Replenishment again commenced on 8th September, and continued till 19th September, when the highest level of water was attained in the tank, the maximum height being R. L. 230.20, i.e., 1.60 feet above the cut in the waste weir, which commenced overflowing on 17th September 1899.

288. The area irrigated during the year was 6,023 acres (kharif 515 and rabi 5,508) against 1,316 acres (kharif 620 and rabi 696) of the past year. The decrease of 105 acres in kharif is due to difficulties in getting manure, and the increase of 4,812 acres in rabi is due to the failure of rabi rain. The area applied for was 5,772 acres, and the difference of 251 acres between this and the area actually irrigated is due to the fact that the cultivators took water for greater areas than applied for at the close of the rabi season, after all hopes of rain had vanished.

289. The assessment on account of water-rates was Rs. 12,944 against Rs. 3,360 of the previous year. The gross revenue from all sources amounted to Rs. 13,653 against Rs. 3,831 of the last year. The increase is due to the increased irrigation under rabi.

290. The following table compares the results of the year under report with those of the previous 10 years:—

Year.	Kharif.	Babi.	Total.	Water-rates.	Gross Revenue.	Working Expenses.
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.
1889-90	829	618	1,447	4,523	5,068	5,774
1890-91	576	548	1,124	3,284	4,294	5,151
1891-92	559	1,143	1,702	4,610	6,200	5,333
1892-93	677	437	1,114	4,176	4,697	7,528
1893-94	711	487	1,198	3,860	4,207	5,440
1894-95	645	814	1,459	4,717	5,136	3,953
1895-96	486	837	1,323	3,977	4,545	3,918
1896-97	618	1,934	2,552	5,993	8,122	4,133
1897-98	599	1,191	1,790	4,457	5,030	4,200
1898-99	620	696	1,316	3,360	3,831	4,110
1899-1900... ..	515	5,508	6,023	12,944	13,653	4,309

291. The working expenses, including direct and indirect charges, amounted to Rs. 4,309 against Rs. 4,110 of the previous year. Maintenance and repair charges, including silt clearance from Right Bank Canal and Right Bank Branch Canal, amounted to Rs. 2,405. The length of the canals and branch canals is 29½ miles. The maintenance and repairs thus cost Rs. 82 per mile against Rs. 74 of the past year.

292. No measuring charges were incurred, as the lands under command have been subdivided into suitable pôt numbers for irrigation purposes.

293. The rainfall over the 92 square miles of the catchment area of the tank was gauged at two stations, and the average rainfall of the two stations was 12·05 inches, which gave 2,575·50 millions of cubic feet of water on the catchment area, and the run-off to the date of overflow of waste weir was 0·212.

294. The number of trees on the tank contour and canals at the end of the year was as under:—

Names of trees.	Above 5 feet.	Below 5 feet.
Mango	541	69
Jámbal	235	8
Bábul	29,250	9,500
Bori... ..	79	3
Orange	70	..
Tamarind	73	..
Nimb	2,002	78
Guava	16	..
Sindi	255	85
Miscellaneous	740	8
Total	33,261	9,751
Grand Total	43,012	

Evaporation and absorption. 295. The following figures show the storage of water and loss by evaporation and absorption during the year.

	Millions of cubic feet.
Quantity of water in the tank on 1st April 1899 ...	913.86
Quantity of water that flowed into the tank during the year	891.67
Total ...	<u>1,805.53</u>
<i>Deduct—</i>	
Discharge through canals over waste-weir and leakage	422.11
Actual quantity of water in tank on 31st March 1900	385.06
	<u>807.17</u>
Loss by evaporation and absorption	<u>998.36</u>

(25)—REWARI CANAL.

New works. 296. No new works were carried out during the year.

Rainfall. 297. The rainfall gauged at Rewari near the head-works is shown in the following table:—

Year.	Kharif.	Rabi.	Total.
1898-99	23.07	3.80	26.87
1899-1900	18.99	0.15	19.14
Average of 5 years ...	25.62	6.17	31.79

The rainfall in both seasons was deficient.

Area irrigated and assessment. 298. The area irrigated, assessment, working expenses and average water-rate as compared with the average of previous five years are as follows:—

Year.	Kharif.		Rabi.		Total.		Average water-rate.	Working expense.
	Area.	Assessment.	Area.	Assessment.	Area.	Assessment.		
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Rs.	Rs.
1894-95	342	3,011	1,199	3,523	1,541	6,534	4.24	1,938
1895-96	141	1,600	1,083	4,017	1,224	5,617	4.64	3,464
1896-97	127	1,888	1,750	6,886	1,877	8,774	4.71	1,848
1897-98	196	2,708	1,451	5,610	1,647	8,318	5.05	2,217
1898-99	186	2,899	1,381	5,308	1,567	8,207	5.23	2,796
Total	992	12,106	6,864	25,344	7,856	37,450	23.87	12,263
Average	193	2,421	1,373	5,069	1,571	7,490	4.77	2,453
1899-1900	151	2,911	11	50	162	2,961	18.28	2,066
Increase ... ..	...	490	...	...	...	...	13.51	...
Decrease	47	...	1,362	5,019	1,409	4,529	...	387

As compared with the average of previous five years, there is a decrease both in area and assessment in the rabi season which is due to insufficient supply in the river. The area in kharif season is less by 47 acres, but the assessment is more by Rs. 490, which is due to higher rated crops having been cultivated.

299. The area irrigated was 4 per cent of the culturable area under command and 13 per cent. more than that applied for.

300. The working expenses, including direct and indirect charges, amounted to Rs. 2,066 against Rs. 2,796 in the previous year and are 68 per cent. of the gross revenue. The rate per mile of canal was Rs. 413 and the rate per acre irrigated 12.75 as compared with Rs. 559 and Rs. 1.78 respectively for the previous year. The rate per acre is much more than last year on account of less area irrigated.

301. The operations of the year show a net profit of Rs. 927 or 2 per cent. on the direct capital outlay on improvements of Rs. 56,771. This being an old native work the whole cost of construction is not included in the capital outlay. The profits of this little canal, which usually pays 9 per cent., have materially decreased owing to the deficient supply in the river.

302. The cost of measurement and revenue establishment was Rs. 1-11-9 per acre as compared with Re. 0-2-11 of the previous year. The cost of crop measurement alone was Re. 0-15-3 against Re. 0-1-5 of the previous year.

303. The average duty of water obtained was, for the kharif season 67 acres per cubic foot per second, and for the rabi 10 acres. The increased duty in kharif was due to the necessity of economising water. The decrease in rabi is probably due to the absorption in canal being excessive in proportion to the water passed down, owing to the available supply being very small.

(26)—UPPER MA'N RIVER WORKS.

304. No new works were carried out during the year under report.

305. The rainfall as gauged at Gondauli about the centre of the irrigated area is shown in the following table:—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1898-99	13.99	5.65	19.64
1899-1900	10.95	0.11	11.06
Average of past 5 years ...	13.75	5.02	18.77

The rainfall in both the seasons is less than that of last year.

306. The supply in the tank in the 1st quarter was good as compared with the previous year and sufficient water was given to kharif crops. The tank filled on the 19th September.

307. The area irrigated, assessment, working expenses and average water-rate as compared with the averages of the previous five years were as follows:—

Year.	Kharif.		Rabi.		Total.		Average water-rate.	Working expenses.
	Area.	Assessment.	Area.	Assessment.	Area.	Assessment.		
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Rs.	Rs.
1894-95	614	4,264	680	2,411	1,294	6,675	5.24	4,239
1895-96	723	4,072	912	2,592	1,635	6,664	4.08	5,193
1896-97	936	4,048	990	2,657	1,926	6,705	3.48	4,174
1897-98	557	1,802	1,465	3,821	2,022	5,623	2.78	4,009
1898-99	653	2,516	917	2,632	1,570	5,148	3.28	4,901
Total	3,483	16,702	4,964	14,113	8,447	30,815	18.86	22,516
Average ..	696	3,340	993	2,823	1,689	6,163	3.77	4,503
1899-1900 ...	540	2,632	1,241	2,966	1,781	5,598	3.14	9,889
Increase ...	...	...	248	143	92	...	...	5,386
Decrease ...	156	708	...	...	...	565	0.63	...

As compared with the average of previous five years there is a decrease in the kharif area and assessment and increase in rabi area and assessment. The increase in rabi is due to deficient rainfall.

308. The area irrigated was 23 per cent. of the culturable area under command and 1.51 per cent. in excess of that applied for.

Miscellaneous revenue. 309. The revenue from all other sources amounted to Rs. 199, bringing the gross revenue of the year to Rs. 5,797.

Working expenses. 310. The working expenses, including direct and indirect charges, amounted to Rs. 9,889 against Rs. 4,901 for the previous year. The rate per mile of canal was 5.65 and per acre irrigated Rs. 5.55. The expenses amounted to 170 per cent. of the gross revenue.

Net profit. 311. After deducting working expenses from the gross revenue there was a deficit of Rs. 4,092.

Cost of measurement. 312. The cost of measurement, including revenue establishment, was Re. 0-6-5 per acre as compared with Re. 0-5-2 of the previous year, while the cost of crop-measurement alone was Re. 0-1-0 as compared with Re. 0-1-4 for the previous year.

Duty of water. 313. The average duty of water obtained for kharif was 667 acres per cubic foot per second and for rabi 455 acres.

(27).—YERLA RIVER IRRIGATION WORKS.

314. The construction estimate of this canal was closed on 31st March 1895, *vide* Government Resolutions Nos. 117-W. I.—1457 and 103-A. I.—666, dated respectively 10th September 1894 and 6th May 1896, and the completion report was approved in Government Resolution No. 96-W. I.—1022, dated 3rd July 1897.

315. No expenditure on capital account was incurred by ordinary labour, but some works were commenced at the end of the year by famine labour.

Rainfall. 316. The rainfall, as gauged at Khatgun near the head of the irrigable area, is shown in the following table :—

(27)—YERLA RIVER IRRIGATION WORKS.

Year.	Kharif.	Babi.	Total.
	Inches.	Inches.	Inches.
1898-99	14.75	2.66	17.41
1899-1900	11.82	...	11.82
Average of five years.	20.89	5.97	26.86

The rainfall was deficient in both the seasons.

317. The supply and replenishments in the Nehr Tank were not satisfactory; however, water was given to perennial and hot weather crops economically. The supply began to improve from 8th September 1899, and the R. L. of water rose to 2659.18 = 336.32 millions cubic feet on the 25th September, by which time the kharif season was nearly over.

*Area irrigated, water-rate assessment, &c.

318. The area irrigated, assessment, working expenses and average water-rate, as compared with the averages of the previous five years, were—

Year.	Area irrigated.			Assessment.		
	Kharif.	Babi.	Total.	Kharif.	Babi.	Total.
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.
1894-95	147	2,238	2,385	1,694	7,034	8,728
1895-96	773	1,834	2,607	4,166	4,907	9,073
1896-97	1,224	2,015	3,239	5,759	4,918	10,677
1897-98	596	2,776	3,372	2,740	7,904	10,644
1898-99	656	3,203	3,859	3,537	8,533	12,070
Total....	3,396	12,066	15,462	17,896	33,296	51,192
Average ...	679	2,413	3,092	3,579	6,659	10,238
1899-1900. ...	218	3,908	4,126	2,779	8,978	11,757

The kharif area is less than the average by 461 acres, but the rabi area is the largest on record. The increase in the rabi area is due to deficient rainfall during that season.

Average water-rate per acre.

319. The average water-rate per acre irrigated was 2.85 as compared with 3.13 of the previous year.

*Realizations and outstandings.

320. The realizations of the year were Rs. 10,293 against Rs. 10,944 of the previous year. The outstandings were only Rs. 2,944.

Miscellaneous revenue.

321. Miscellaneous receipts amounted to Rs. 254 as compared with Rs. 639 in the previous year.

Working expenses.

322. The following table compares the working expenses, direct and indirect, with those of the previous five years;—

Year.	Works.	Establishment.	Tools and plant.	Refund of revenue.	Collection charges.	Leave and pension allowances.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1894-95... ..	17,513	5,084	112	...	331	712	23,752
1895-96... ..	3,752	1,795	62	...	558	251	6,418
1896-97... ..	2,896	1,425	98	6	525	199	5,149
1897-98... ..	4,266	2,065	150	...	368	289	7,138
1898-99... ..	4,994	2,446	48	...	515	342	8,345
1899-1900. ...	5,068	2,266	155	...	502	317	8,308

Cost of working per mile of canal and per area irrigated.

323. The cost of working is given below for the last five years.

Year.			Per mile of canal.	Per acre irrigated.
			Rs.	Rs.
1895-96...	...	...	224	2.46
1896-97...	...	...	180	1.59
1897-98...	...	...	249	2.12
1898-99...	...	...	292	2.16
1899-1900	...	...	290	2.01

The cost of working (Rs. 8,308) was 69.20 per cent. of the gross revenue of Rs. 12,005.

Cost of measurement.

324. The cost of crop measurement was Rs. 572, equal to Rs. 0-2-2 per acre, against Rs. 246, equal to Re. 0-1-0 for the previous year.

Duty of water.

325. The average duty of water obtained was for kharif 163 acres per cubic foot per second and for rabi 746 acres.

326. The number of trees was 23,505, of which nearly half the number is labul, and the other half contains mango, jambhul, sandal, cashurina, jack and karanj, &c.

(28)—CHIKHLI CANAL.

Rainfall.

327. The rainfall as gauged at Chikhli near the head of the irrigated area is shown in the following table:—

Year.				Kharif.	Rabi.	Total.
				Inches.	Inches.	Inches.
1898-99...	...	...	...	9.49	3.05	12.54
1899-1900	...	...	...	14.44	0.11	14.55
Average of past five years				16.29	4.94	21.23

328. The area irrigated, assessments, working expenses, and average water-rate as compared with the averages of the previous five years were as follows:—

Year.	Kharif.		Rabi.		Total.		Average Water-rate.	Working Expenses.
	Area.	Assessment.	Area.	Assessment.	Area.	Assessment.		
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.		
1895-96...	322	1,462	55	194	377	1,656	4.39	967
1896-97...	466	2,071	160	381	626	2,452	3.92	1,969
1897-98...	344	1,490	180	661	524	2,151	4.10	984
1898-99...	414	2,262	51	162	468	2,424	5.18	1,375
1899-1900	37	262	8	58	45	320	7.11	933

There is a very large decrease of area and assessment in both the seasons on account of insufficient supply of water in the river.

329. The revenue from other sources was Rs. 67 and gross revenue amounted to Rs. 387. The receipts are more by Rs. 16 on account of sale of aloe leaves.

Gross revenue.

330. The working expenses, including direct and indirect charges, were Rs. 933. The expenses amounted to 241 per cent. on the gross revenue and were equal to Rs. 144 per mile of canal open and Rs. 20·73 per acre irrigated. The operations of the year show a deficit of Rs. 546, due to decrease in area irrigated on account of insufficient water-supply.

Working expenses.

Duty of water.

331. The average duty of water obtained was for the kharif 92 acres and for rabi 33 acres per cubic foot per second.

Cost of measurement.

332. The cost of crop measurement was Re. 0-1-1 per acre as compared with Re. 0-1-3 per acre of the previous year.

(29)—MAINI TANK.

Rainfall.

333. The rainfall gauged at Maini at the head of the irrigated area is shown in the following table :—

Year.				Kharif.	Rabi.	Total.
1898-99	...	...	...	11·54	3·24	14·78
1899-1900	...	...	...	14·84	·40	15·24
Average of past five years				13·14	4·32	17·46

334. There was not much water in the tank at the commencement of the year; the height of water on the 31st March last was 5·90 and this was gradually reduced. The replenishment commenced in June and the tank was full on the 12th of September, and then was gradually reduced till the end of February, when the supply in tank was exhausted.

Area irrigated and assessment.

335. The area irrigated, assessment, working expenses and average water-rate, as compared with the averages of the previous four years, were as follows :—

Year.	Kharif.		Rabi.		Total.		Average Water-rate.	Working Expenses.
	Area.	Assessment.	Area.	Assessment.	Area.	Assessment.		
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.		
1895-96	705	3,496	493	1,229	1,198	4,725	3·94	3,320
1896-97	1,014	4,399	152	340	1,166	4,739	4·06	2,915
1897-98	862	2,651	784	2,054	1,646	4,705	2·86	2,890
1898-99	628	2,166	923	2,136	1,551	4,302	2·77	4,800
1899-1900	834	3,017	1,164	2,599	1,998	5,616	2·83	3,189

The total area and assessments are more than those of last year, which is due to deficient rainfall.

Gross revenue.

336. The revenue from other sources amounted to Rs. 400 and the gross revenue to Rs. 6,016.

337. The working expenses, including direct and indirect charges, amounted to Rs. 3,189. Their percentage on gross revenue was Rs. 53 and they were equal to Rs. 345 per mile of canal.

The operations of the year show a net profit of Rs. 2,825.

Cost of measurement.

338. The cost of crop measurement was Re. 0-1-8 against Re. 0-1-4 per acre for the previous year.

(30)—MUCHKUNDI TANK.

339. This is the only work in operation in the Bijápur District.

Rainfall.

340. The rainfall of the year compares with that of the previous year as under.

				Kharif.	Rabi.	Total.
				Inches.	Inches.	Inches.
1899-1900	...	...	...	18.67	0.58	19.25
1898-1899	...	...	...	13.43	6.24	19.67
Average of 10 previous years			..	11.65	6.12	17.77

341. There were small replenishments during the year under report from 13th May to 22nd September 1899. The depth of water in the tank on 13th May 1899 was 4 feet above sill of sluice and on the 22nd September 1899 it was 14 feet 4 inches above sill of sluice which was the maximum depth reached during the year.

Tank supply.

342. The total area irrigated during the year under report was 64 acres assessed at Rs. 206, of which 17 acres were irrigated in the kharif season, assessed at Rs. 105, and 47 acres in the rabi season assessed at Rs. 101.

Irrigation.

Distribution of areas and assessment.

343. The total area irrigated and the revenue assessed during the last three years were distributed as follows :—

Year.	Area irrigated.			Assessment.		
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.
1897-88	2	3	5	4	6	10
1898-99	3	1	4	23	1	24
1899-1900	17	47	64	105	101	206

The above table shows an increase of 60 acres in the total area irrigated during 1899-1900 as compared with the previous year.

The reasons for the increase are briefly as follows :—

(1) There being more water in the tank during the kharif season than that in the previous year, more applications were received ; this is also due to the endeavours having been made to induce the cultivators to avail themselves of the water.

(2) Owing to the failure of October rainfall, cultivators were inclined to take water for rabi jowári crops and cotton.

The increase in the assessment of 1899-1900 as compared with that of 1898-99 is due to increase in the irrigation as explained above.

Difference between area applied for and area irrigated during 1899-1900.

344. The total areas applied for and irrigated during 1899-1900 were 74 and 64 acres respectively. The difference is due to the practice of entering more land in the applications for water than could be irrigated.

345. Miscellaneous receipts amounted to Rs. 170 against Rs. 332 of the previous year. The decrease was due to less realization on account of sale of grass than in the previous

Revenue.

year. The total assessed revenue, including the water-rate assessment of Rs. 206, was (Rs. 170+206) Rs. 376. Working expenses were Rs. 861, so that there was a loss of Rs. 485 on the year's operations. The working expenses during the year under report were Rs. 861 against Rs. 257 of the previous year. The increase is due to certain extensions and improvements, which consisted in providing a drain at a cost of Rs. 474 under the canal at the railway crossing near Bágalkot.

(32)—GADIKERI TANK.

346. The management of this tank is in the hands of the Revenue Department.

347. The area irrigated was 337 acres, and the irrigation share of the consolidated revenue amounted to Rs. 1,987.

348. The working expenses, direct and indirect, amounted to Rs. 325, as detailed below, against Rs. 347 in the previous year.

	Rs.
Works	100
Establishment	23
Leave and Pension allowance	3
Share of collection charges	199
	<hr/>
Total	325

349. After deducting working expenses, the net revenue amounted to Rs. 1,662, which represents a return of 17·91 per cent. on the gross capital outlay of Rs. 9,279.

(33)—DAMBAL TANK.

350. The rainfall gauged was 11·07 inches (10·27 inches during kharif and 0·80 inches during the rabi season) against 25·14 inches of the previous year, the average total fall of the previous 10 years being 19·45 inches. The rainfall, therefore, was very considerably below the average.

351. The water level in the tank stood at R. L. 140·45, *i.e.*, 6·45 feet above tank bed, on 1st April, the waste weir crest being R. L. 145·30. During the month of April the tank received a replenishment and the water level rose to R. L. 143·08, after which it sank gradually to 141·13 on the 4th June. On the 5th the supply was considerably replenished, the waste weir over-flowing from 5th to 8th June. The level then sank gradually till it was 141·50 early in September, after which there were slight replenishments and it rose to nearly 144·00 towards the end of the month. Subsequently the level commenced to sink permanently and the tank was dry from the 4th March. The supply of water was insufficient for the irrigation of lands under the tank towards the close of the year. This especially affected the perennial irrigation.

352. The following table gives figures of areas irrigated, assessment, average water-rate and working expenses as compared with the two previous years:—

Years.	Kharif.		Rabi.		Total.		Average Water-rate.	Working Expenses.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.		
1897-98 ...	371	1,042	69	148	440	1,190	2·7	862
1898-99 ...	141	819	30	143	171	962	5·63	802
1899-1900 ...	184	1,068	55	154	239	1,252	5·24	801

The increase in area irrigated, and, therefore, in revenue also, as compared with the figures of the previous year, is due to ample supply of water in the tank in the beginning of the season, and a large increase (double of last year) in the area of sugarcane cultivation. The insufficient supply at the close of the year was, therefore, particularly unfortunate. The increase in rabi is due to the scanty rainfall and it would have been larger if water had not had to be kept for the perennial irrigation.

353. The area of irrigated lands, assessed at consolidated rates, was 144 acres, which yielded an irrigation revenue of Rs. 981, giving an average of Rs. 6·81 per acre.

Old irrigation.

354. The revenue on account of miscellaneous receipts, such as sale-proceeds of canal produce realized by this department, was Rs. 136-14-0 and on account of grass sold by the Revenue Department, Rs. 210-3-0. The total revenue from all sources amounted to Rs. 2,580.

Miscellaneous receipts and total revenue.

355. The amount of working expenses (Rs. 801) is the same as that for the previous year.

Working expenses.

356. Deducting working expenses the operations of the year show a net revenue of Rs. 1,779, equal to 2·92 per cent. on the direct capital outlay of Rs. 60,847.

Net profit.

357. The average duty per cubic foot per second was during the kharif season 95 acres and during the rabi season 63 acres.

Duty of water.

(34)—MEDLERI TANK.

358. The rainfall gauged was 13·47 inches (13·47 during kharif and nothing during the rabi season) against 31·30 inches of the previous year, the average total fall of the previous 10 years being 20·75 inches. The rainfall, therefore, was very considerably below the average.

Rainfall.

359. The water-level in the tank stood at R. L. 172·52, *i.e.*, 7·52 feet above the outlet sill on the 1st April, the waste weir crest being R. L. 180. Except for trifling rains in April and May, the level continued to sink until the tank became dry on 11th August and remained so until 8th September. The tank then received some good replenishments, reaching R. L. 178 during the latter portion of the month, after which the level commenced to sink permanently and the tank was dry from the 21st March. On the whole, the supply of water was insufficient for the irrigation of lands under the tank during the greater portion of the kharif season and again towards the close of the year.

Tank supply.

360. The following table gives figures of area irrigated, assessment, average water rate and working expenses, as compared with the two previous years:—

Years.	Kharif.		Rabi.		Total.		Average water rate.	Working expenses.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.		
1897-98 ...	59	541	13	52	72	593	8·24	848
1898-99 ...	93	680	6	43	99	723	7·30	728
1899-1900 ...	49	559	89	203	138	762	5·52	703

Comparing with the figures of the previous year, the decrease in area of kharif is due to the insufficiency of supply, while the increase in rabi is due to

the scarcity of rainfall, and there would have been a still larger increase on this account had there been a larger supply in the tank; as it is, there is some increase in the total revenue in spite of the falling off in kharif. The average water-rate is low, as chiefly low-rated crops were irrigated.

361. The amount of working expenses—Rs. 703—is a little less than that of the last year, the decrease being due to larger expenditure on second class tanks.

Working expenses.

362. Deducting the working expenses, the operations of the year show a net revenue of Rs. 59, equal to .07 per cent., on the direct capital outlay of Rs. 78,354. Last year the profit was a minus quantity.

Net profit.

363. The average duty of water per cubic foot per second during the kharif season was 70 acres and during the rabi season 63 acres.

Duty of water.

(35)—MADAG TANK.

364. The rainfall gauged was 16.99 inches (12.78 inches during the kharif and 4.21 inches during the rabi season) against 29.70 inches of the previous year, the average total fall of the previous 10 years being 28.84 inches. The rainfall, therefore, was very considerably below the average.

Rainfall.

365. The water-level in the tank stood at R.L. 48.80, i.e., 3.80 feet above the outlet sill on the 1st April, the waste weir crest being at R.L. 50.00. During the months of April and May the tank received slight replenishments, which raised the level up to waste weir crest. During June and July it received large replenishments, and the waste weir, which is only 5 feet above the outlet sill, continued flowing from 13th June to 30th November. The level then subsided, and was only R.L. 45.25, or 0.25 above outlet sill, on the 31st March. A fair supply of water was maintained until near the close of the year, when it was insufficient for the irrigation of lands under the tank.

Tank supply.

366. The following table gives figures of area irrigated, assessment, average water-rate and working expenses, as compared with the two previous years:—

Years.	Kharif.		Rabi.		Total.		Average water-rate.	Working expenses.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.		
1897-98 ...	414	970	330	957	744	1,927	2.59	2,049
1898-99 ...	429	906	404	948	833	1,854	2.23	1,674
1899-1900 ..	950	1,976	364	903	1,314	2,885	2.20	1,495

The large increase over last year in area irrigated and, therefore, in revenue is chiefly due to the unusually scanty rainfall.

367. The revenue on account of water-rates was Rs. 2,885 and miscellaneous receipts on account of sale-proceeds of grass and trees, &c., amounted to Rs. 105. The total revenue thus amounted to Rs. 2,990, which is higher than it has ever been before.

Miscellaneous receipts and total revenue.

368. The amount of working expenses—Rs. 1,495—is less than that of the previous year, the decrease being due to funds being required for a larger expenditure on second class tanks.

Working expenses.

369. Deducting working expenses, the operations of the year show a net revenue of Rs. 1,495, equal to 0·93 per cent., on the direct capital outlay of Rs. 1,61,248.
- Net profit.
370. The total number of trees above 8½ inches in girth is 3,265; these consist chiefly of babul, mango, nimb, tamarind and sandal.
- Plantation.
371. The average duty per cubic foot per second was during the kharif season 203 acres and during the rabi season 57 acres.
- Duty of water.

(36)—ASUNDI TANK.

372. The rainfall gauged was 8·07 inches (6·90 inches during the kharif and 1·17 inches during the rabi season) against 27·34 inches of the previous year, the average total fall of the previous 10 years being 23·79 inches. The rainfall, therefore, was very considerably below the average.

Rainfall.

373. The water-level in the tank stood at R. L. 102·92, *i.e.*, 3·92 ft. above the tank bed on the 1st April, the waste weir crest being R. L. 107. During the months of April, June and July the tank received slight replenishments, which kept the level of the tank about the same. On July 8th the level was R. L. 103·02, from which level it sank gradually, with the exception of a small rise on the 20th September, until on the 2nd October the tank was dry. A fair replenishment occurred on the 10th, raising the level above 102 during the middle of October, after which the level fell rapidly owing to the needs of the irrigation, and the tank was dry from the 26th November. The supply of water was insufficient for the irrigation of lands under the tank, both in the kharif and rabi seasons.

Tank supply.

374. The following table gives figures of area irrigated, assessment, average water rates and working expenses, as compared with the two previous years:—

New irrigation.

Years.	Kharif.		Rabi.		Total.		Average water rate.	Working expenses.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.		
1897-98 ...	84	473	27	115	111	588	5·30	2,704
1898-99 ...	77	329	53	247	130	576	4·43	4,340
1899-1900 ...	119	566	54	297	173	863	5·00	3,975

The increase in area and, therefore, in revenue is due partly to sufficiency of water in the tank during the first part of the kharif season, which led to sugar-cane cultivation, while there was none the year before, and partly to an increase in all crops, due to the unusually scanty rainfall. The tank being dry so early was particularly unfortunate, causing, as it did, the ruin of the perennial crops.

375. The area of irrigated lands, bearing a consolidated assessment, was 185 acres, which yielded an irrigation revenue of Rs. 632, giving an average of Rs. 8·42 per acre.

Old irrigation.

376. The revenue on account of miscellaneous receipts, such as sale-proceeds of canal produce, &c., was Rs. 57-8-0. The total revenue from all sources amounted to Rs. 1,552.

Miscellaneous receipts.

377. The working expenses consist of maintenance and repairs Rs. 275 and special repairs Rs. 1,690 (providing pitching, muram, &c.), total Rs. 1,965. The executive establishment

Working expenses and loss.

and other indirect charges are also heavy in consequence of the large outlay on special repairs. The difference between the revenue and working expenses shows a loss of Rs. 2,423.

Duty of water. 378. The average duty of water per cubic foot per second during the kharif season was 340 acres and during the rabi season 123 acres.

(37).—MAVINKOP TANK.

379. This tank is situated on the western border of the Dhárwár District. It irrigates lands of Tatwani and Jogankop villages in the Kánara District, which are assessed at consolidated rates. The area thus irrigated was 540 acres and the consolidated assessment Rs. 2,321. The irrigation share calculated on this amount is Rs 2,057 as entered in the Canal Return No. VIII.

Miscellaneous receipts and total revenue. 380. Rs. 6-8-0 have been realized as miscellaneous receipts on account of a certain piece of land in tank-bed let out for cultivation. The total revenue from all sources, therefore, amounted to Rs. 2,064.

Working expenses and profit. 381. Deducting the working expenses—Rs. 206—from the total revenue, the net revenue amounts to Rs. 1,858, equal to 6·73 per cent. on the direct capital outlay of Rs 27,612.

(39).—GOKA'K CANAL, 1ST SECTION, AND STORAGE WORKS.

382. The capital expenditure, including direct and indirect charges, incurred during the year was Rs. 10,258, and the total up to the end of the year was—

				Rs.
As per completion report	...	...	...	12,60,450
Open Capital Account...	...	...	...	56,552
			Total	13,17,002

against the estimated amount of Rs. 13,90,853. The principal items of the year's outlay on the works were—

				Rs.
Extending Distributary No. 1 (Shindi Nala Extension)	...	...	...	5,496
Constructing Patkaris' Chaukis	...	...	...	1,818
Constructing Service Road	...	...	...	762
Land compensation, 25 feet weir	...	...	...	—25
			Total	8,051

383. The rainfall gauged at the head of the canal compares with the average of the last ten years and with the fall of 1898-99 as under :—

Rainfall.			Rs.		
Season.	Average of ten years,	1898-99.	1899-1900.		
	Inches.	Inches.	Inches,		
Kharif... ..	11·39	10·27	9·82		
Rabi	6·66	9·83	1·80		
Total	18·25	20·10	11·62		

384. The storage reached its lowest level during the hot weather of 1899 on 14th April, when the tank level was 16·36 feet above the sill of the under-sluices. The tank filled and began to overflow on the 14th June 1899. The storage began to be drawn upon on the 24th November 1899, or more than a month earlier than usual, on account of the exceptional dryness of the season.

385. The maximum flood occurred on the 17th June 1899, rising to 1.84 feet above the weir crest, representing a volume of 24,000 cubic feet per second and a run-off of 0.034 inch per hour from the catchment basin (1,080 square miles).

386. The total discharge of the river between 1st July and 31st October 1899 amounted to 33,154 millions cubic feet, representing a run-off of 13 inches from the catchment basin.

387. The under-sluices were finally closed on the 6th November 1899.

388. The following table compares the areas irrigated and the water-rate assessments of the year with the average of the last eight years, *i.e.*, since the works were completed in 1891:—

Years.	AREA IRRIGATED.			ASSESSMENT.		
	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.
	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.
1891-92...	3,629	2,371	6,000	6,160	5,281	11,441
1892-93...	2,821	1,027	3,848	7,139	2,218	9,357
1893-94...	3,014	1,223	4,237	8,509	3,120	11,629
1894-95...	3,038	1,325	4,363	8,507	3,408	11,915
1895-96...	3,550	914	4,464	8,690	2,334	11,024
1896-97...	2,977	2,588	5,565	7,321	6,843	14,164
1897-98...	5,086	1,770	6,856	11,236	4,519	15,755
1898-99...	4,583	18,72	6,455	14,482	5,661	20,143
Average ...	3,587	1,636	5,223	9,005	4,173	13,178
1899-1900 ...	4,679	3,745	8,424	13,258	11,529	24,787

The area irrigated was 8,424 acres as compared with 6,455 acres during the previous year, showing an increase of 1,969 acres, or 30 per cent., due to the larger demand for water. The large increase of area irrigated during the rabi season was the result of the failure of the monsoon rainfall.

The area irrigated (8,424 acres) amounted to 48 per cent. of the culturable area (17,627 acres) under the canal as at present constructed.

A remission of Rs. 4-3-2 was granted on account of 21 gunthas of land erroneously included in the measurements of land irrigated during the kharif season.

The water rate assessment amounted to Rs. 24,787, showing an increase of 23 per cent. over the previous year, chiefly due to the large area irrigated during the rabi season.

389. The average water rate per acre irrigated was Rs. 2.94 against Rs. 3.12 during the previous year.

The decrease is due to a larger proportion of low-rated crops having been irrigated than was the case last year.

390. The realizations of the year amounted to Rs. 35,363, including Rs. 14,313 paid by the Gokak Water-power and Manufacturing Company, Limited. The outstanding balance of Rs. 985 is due to the prevalence of famine and plague.

Realizations and outstandings.

Total assessed revenue.

591. The total assessed revenue of the year was distributed as follows :—

	Rs.
Water-rates	24,787
Water-power	11,313
Water consumption	209
Canal produce, &c.	135
	Total
	33,444

These figures show a total increase of Rs. 4,472 in the assessed revenue as compared with that of the previous year, due to the large area irrigated during the rabi season.

392. The working expenses, including direct and indirect charges, compare as under for the last nine years, that being the period during which the present works have been in operation.

Years.	Works.	Establishment.	Tools and Plant.	Refund of Revenue.	Collection.	Leave and Pension Allowances.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1891-92	2,626	1,501	199	10	837	210	5,383
1892-93	2,654	1,650	302	14	867	231	5,718
1893-94	2,439	1,587	282	...	1,522	222	6,052
1894-95	2,416	1,859	300	24	827	260	5,686
1895-96	2,466	2,348	299	3	1,140	329	6,585
1896-97	3,049	2,389	287	...	1,092	334	7,151
1897-98	2,716	2,382	296	...	1,566	333	7,293
1898-99	2,880	2,447	123	...	818	343	6,611
1899-1900... ..	2,887	2,261	272	14	1,039	317	6,790

Cost of working per mile of Canal.

393. The cost of working the canal in the several years compares as follows :—

Years.	Per mile of Canal.	Per Acre irrigated.
	Rs.	Rs.
1891-92	368	0.89
1892-93	331	1.49
1893-94	414	1.43
1894-95	389	1.30
1895-96	409	1.47
1896-97	444	1.28
1897-98	453	1.06
1898-99	411	1.02
1899-1900... ..	422	0.81

The total length of canal taken into account is the same as last year *viz.*, 16.10 miles.

The increase in the cost per mile is due to the collection charges on the increased assessment, and the decrease in the cost per acre is due to the large area irrigated during the year under report.

394. The cost of measurement was Rs. 512-6-2, equal to about Re. 0-1-0 per acre irrigated, against Re. 0-1-4 per acre of the previous year. The decrease is chiefly due to the large area irrigated during the year.

Cost of measurement,

395. The cost of establishment debited to the revenue management, &c., during the year under report was as noted below.

	Rs.	a.	p.
Measurer and Khalásis' pay	568	14	6
Share of pay of gauge Kárkún and Pátkaris	672	0	0
Subordinate establishment on revenue management	356	0	0
Total Rs.	1,596	14	6

The percentage of the above on the assessed revenue was 4·05 against 8·86 in the previous year. This reduction is due to the abnormally large area irrigated during the rabi season.

The cost of establishment per acre of the total area irrigated was Re. 0·3·0 against Re. 0·4·5 in the previous year.

396. The average discharge of the canal was during the kharif season 37·55 cubic feet per second, and during the rabi season 27·11 cubic feet per second, the duty thus being—

Kharif 124·61 acres per cubic foot.
Rabi 180·34 do. do.

The decrease of 2·94 in the duty for kharif is trifling and calls for no remarks, but the high duty of 180·34 for the rabi season represents an increase of 86·87, which is due to two causes, *viz* :—

(a) The exceptional dryness of the season which diminished the storage in the reservoir available for irrigation.

(b) The unusually large area irrigated and the exceptional care taken to economize the water in the canal, the supply being reduced to the minimum.

397. The trees planted along the canal chiefly consist of babul, and number over 7,500, of which about 1,700 are under 6 feet in height.

398. The following table compares the gross assessed revenue with the working expenses for the last nine years :—

Years.	Gross Assessed Revenue.	Working Expenses.	Per cent.	Surplus Revenue.
	Rs.	Rs.		Rs.
1891-92	19,317	5,383	27·9	13,934
1892-93	19,340	5,718	29·6	13,622
1893-94	21,665	6,052	35·8	15,613
1894-95	21,987	5,686	25·9	16,301
1895-96	22,067	6,585	29·84	15,482
1896-97	26,951	7,151	26·53	19,800
1897-98	29,754	7,293	24·51	22,461
1898-99	34,972	6,611	18·90	28,361
1899-1900	39,444	6,790	17·22	32,654

The surplus of Rs. 32,654 represents a net return of 2·56 per cent. on the whole direct capital outly of Rs. 12,72,214 incurred to the end of the year under report.

399. A constant supply of 68 cubic feet per second was given to the Gokák Mills Company and the average monthly consumption of water by the Southern Marátha Railway Company was 139,000 gallons.

PART II.

COMPRISING WORKS FOR WHICH ONLY REVENUE
ACCOUNTS ARE KEPT.

GENERAL REMARKS.

400. The following gives a general comparison of the figures for the year under report with those for 1898-99:—

	1898-99.	1899-1900.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Area irrigated	146,364	131,908	...	14,456
	Rs.	Rs.	Rs.	Rs.
Revenue Receipts	5,66,937	5,61,760	...	2,177
Expenditure	2,27,271	2,18,706	...	8,565
Net Revenue	3,39,666	3,46,054	6,388	...

The area irrigated shows a decrease of 14,456 acres. The revenue receipts show a decrease of Rs. 2,177 and the expenditure a decrease of Rs. 8,565, the result being an increase under net revenue of Rs. 6,388.

401. The details of expenditure for the two years compare as below.

	EXPENDITURE.		COMPARISON.	
	1898-99.	1899-1900.	Increase.	Decrease.
	Rs.	Rs.	Rs.	Rs.
Extensions and Improvements	33,535	24,742	...	8,793
Maintenance and Repairs	64,283	73,174	8,891	...
Establishment	71,036	60,894	...	10,142
Tools and Plant	1,905	3,547	1,642	...
Total	1,70,759	1,62,357	...	8,402
Share of Collection Charges	56,512	56,349	...	163
Total	2,27,271	2,18,706	...	8,565

402. The following table shows by districts the area irrigated and the consolidated revenue assessed during the year 1899-1900 in respect of Irrigation Works for which only Revenue Accounts are kept:—

Collectorate.	Number of Works.	Area irrigated.	REVENUE.			REMARKS.
			Irrigation share.	Land share.	Total.	
1	2	3	4	5	6	7
		Acres.	Rs.	Rs.	Rs.	
Punch Maháls ...	1	25	1,212	317	1,529	
Ahmedabad ...	86	10,783	21,830	28,809	50,639	
		8,445	46,789	39,356	(a) 86,145	(a) Inclusive of Salámi Rs. 7,447 and Inámdárs' Revenue Rs. 31,131.
Kaira ...	2	122	565	323	(b) 888	(b) Inclusive of Salámi Rs. 2 and Inámdárs' Revenue Rs. 5.
Surat ...	288	12,288	46,800	1,16,543	1,63,343	
Broach ...	28	885	3,315	4,277	7,592	
Khándesh ...	82	(c) 8,477	57,822	12,879	(c) 70,701	(c) The figures of the " Tápti River Minor Tributaries " are for 1898-99, those for 1899-1900 not being available.
Násik ...	80	11,538	81,404	14,052	95,456	
	191	16,341	80,810	25,998	1,06,808	
Ahmednagar ...	2	147	353	132	485	
Poona ...	3	481	2,857	1,015	3,872	
Sátára ...	1	110	683	455	1,138	
Belgaum ...	67	9,910	33,049	8,255	41,304	
Dhárwár ...	473	49,567	1,73,027	43,255	2,16,282	
Bijápur ...	17	1,440	5,924	1,474	7,398	
Ratnágiri ...	4	1,349	3,664	2,798	6,462	
Kánara ...	...	...	...	...	...
Total ...	1,305	1,31,908	5,60,104	2,99,938	8,60,042	

403. The actual expenditure and receipts for the year 1899-1900 on all Irrigation Works in the Deccan and Gujarát for which only Revenue Accounts are kept were as follows:—

Collectorate.	EXPENDITURE.								ACTUAL RECEIPTS.							
	Direct Charges.								Direct Receipts.			Indirect Receipts.		Grand Total, Direct and Indirect Receipts.	Less Refunds of Revenue.	Gross Receipts less Refunds.
	Extens-ions and Improve-ments.	Main-tenance and Repairs.	Establishment.		Tools and Plant.	Total.	Share of Collec-tion Charges.	Grand Total.	Water rates from Irriga-tion.	Miscel-laneous.	Total Direct Receipts.	Share of Consoli-dated Revenue.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	
Panch Maháls ...	...	...	...	...	...	...	121	121	...	...	...	1,212	1,212	...	1,212
Ahmedabad ...	...	3,400	...	...	...	...	2,183	21,830	...	...	...	21,830	21,830	...	21,830
Kaira ...	(a) 210	4,688	405	1,474	46	(c) 10,225	4,679	17,087	...	114	114	43,789	46,903	...	46,903	
Surat ...	...	25	...	...	...	...	56	56	...	...	...	565	565	...	565
Broach ...	...	5,397	271	1,181	79	(d) 6,953	4,697	11,971	...	77	77	46,800	46,877	...	46,877
Khándesh ...	18,319	2,413	...	...	...	...	5,805	57,822	...	...	...	3,315	3,315	...	3,315
Násik ...	(b) 8,649	124	6,365	15,949	645	(e) 49,685	8,216	68,686	233	...	233	57,822	59,055	...	59,055	
Ahmednagar ...	94	170	64	299	129	756	8,081	8,837	763	85	818	81,444	82,213	...	82,213	
Poona ...	...	...	...	...	...	...	35	35	8	28	28	80,810	80,839	...	80,839
Sátára ...	...	1,581	380	574	...	2,535	859	2,894	3	228	738	353	681	...	681
Belgaum ...	...	9,929	499	1,788	230	12,436	68	68	...	...	...	833	833	...	833
Dhárwár ...	370	41,888	2,097	23,739	2,333	75,327	3,306	16,743	...	78	78	33,042	33,127	...	33,127	
Bijápur ...	...	1,082	63	194	47	1,374	17,465	92,792	324	2,027	2,351	1,73,027	1,75,378	...	1,75,378
Ratnágiri ...	...	1,845	93	333	27	2,296	366	2,662	...	...	...	5,924	5,924	...	5,924
Kánara ...	...	633	32	114	9	788	...	788	...	...	...	3,664	3,664	...	3,664
Total ...	24,742	78,174	10,258	50,639	3,547	1,62,387	56,349	2,18,706	2,046	2,010	4,656	5,60,104	5,64,760	...	5,64,760	

* Represents charges in Civil Department not adjusted in the Finance Accounts.

- (a) Expenditure and Revenue on account of works in charge of the Executive Engineer, Ahmedabad District.
 (b) Do. do. do. Khándesh Irrigation District.
 (c) Exclusive of Rs. 2,75,610 on account of outlay on 23 Famine Relief.
 (d) Do. Rs. 2,18,660 do.
 (e) Do. Rs. 11,124 do.

Comparison with previous years.

404. The total amount of revenue realized and the expenditure incurred on this class of works during the past three years are given below :—

	1897-98.	1898-99.	1899-1900.
	Rs.	Rs.	Rs.
Revenue realized	5,64,797	5,66,937	5,64,760
Expenditure	1,75,011	2,27,271	2,18,706
Net Revenue	3,89,786	3,39,666	3,46,054
Percentage of Expenditure to Revenue	30.98	40.09	38.72

Contributions and Pátphála cess.

405. The expenditure from contributions and Pátphála Fund during the year 1899-1900 was as follows :—

Collectorate,	EXPENDITURE.			REMARKS.
	Contributions,	Pátphála Fund,	Total,	
1	2	3	4	5
	Rs.	Rs.	Rs.	
Ahmedabad	469	...	469	
Kaira ... ..	...	...	...
Surat and Broach	341	...	341	
Násik ... ..	...	576	576	
Khándesh ... ..	...	419	419	
Ahmednagar ... ..	...	...	...
Poona ... ..	...	...	...
Sátára ... ..	...	...	...
Belgaum	2,281	...	2,281	
Dhárwár	1,850	...	1,850	
Bijápur	148	...	148	
Ratnágiri ... ..	...	...	...
Total	5,089	995	(a) 6,084	(a) Accounted for in the Finance Accounts under Agricultural—"Works for which neither Capital nor Revenue Accounts are kept".

DETAILED REPORTS BY DISTRICT OFFICERS.

AHMEDABAD DISTRICT.

Khari Irrigation sluices.

406. The works of importance that were carried out during the year under this head were as follows :—

(1). *Silt clearance from Pinglaj to Sluice No. 17.*—This special repair work, which was commenced in the previous year, was in progress, the expenditure during the year being Rs. 2,914 and the total expenditure Rs. 3,792 against the sanctioned estimate of Rs. 4,652.

(2). A cross sluice across the flood or escape channel near the Pad Tank of Naika in Mátar Táluka, estimated to cost Rs. 927, was commenced and a sum of Rs. 202 was spent in completing the concrete, the balance of allotment having been surrendered owing to famine.

407. The receipts for the year amounted to Rs. 61,719 and were derived from the following sources:—

	Acres.	Assessment.
		Rs.
I.—Irrigation above the Kalambandi villages	1,290	7,771
II.—Irrigation from Tanks fed by the River Khári	199	1,467
III.—Irrigation below the Kalambandi villages	124	677
IV.—Irrigation from Khári Sluices proper (<i>i.e.</i> , Kalambandi villages).	7,220	51,804
Total	8,833	61,719

I.—There has been an increase of 29 acres in the irrigated area above the Kalambandi villages due to more lifts having been used.

II.—Irrigation from tanks fed by the river Khári has remained the same as last year.

III.—Irrigation below the Kalambandi villages has also remained the same as last year.

IV.—There has been a decrease of 66 acres in the area irrigated from the Khári sluices proper on account of famine.

408. The mean rate of assessment was Rs. 6-0-5 on land irrigated above the Kalambandi villages, Rs. 7-5-11 on land irrigated from the tanks fed by the Khári River, and Rs. 5-7-4 on land irrigated below the Kalambandi villages. On lands under the Khári sluices proper, *i.e.*, "Kalambandi villages," the rates are consolidated, the average share per acre for the land and for water privileges being as under.

	Land share.	Water share.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Government land	4 12 5	6 8 4	11 4 9
Alienated land	4 8 4	6 1 7	10 4 11
Inámi land, consolidated... ..	.....	.....	7 15 2
Jiráyat land .. ... ..	.....	.....	.....

409. The working expenses during the year, exclusive of charges for revenue collection, amounted to Rs. 896, the amount of the previous year being Rs. 925.

Working expenses.

410. The old works in this district were fully described in the report for the year 1892-93. During the year under report five irrigation tanks were repaired in the Dholka Táluka from Imperial funds, assisted by contributions from villages, and a sum of Rs. 2,367 was spent.

Old works.

411. In addition to the above, 16 works of improving and deepening irrigation tanks were opened as famine relief works in the Daskroi, Dholka and Sánand Tálukas, and a total sum of Rs. 2,62,744 was spent thereon up to 31st March 1900.

412. The total area irrigated and revenue assessed on lands under irrigation tanks in the Ahmedabad District were as under.

Area irrigated	Acres	10,783
Revenue { Irrigation share	Rs.	21,830
{ Land share	Rs.	28,809
Total		50,639

KAIRA AND PANCH MAHA'LS.

413. *Chanvaya Tank*.—No repairs were carried out to this tank during the year. The consolidated revenue derived from this tank amounted to Rs. 888, of which Rs. 565 was irrigation share and Rs. 523 land share.

Tanks.

Tank at Malao, Revenue Survey No. 260, in Kálol Táluka.—No repairs were done to this tank during the year except as famine work for about Rs. 329. The consolidated revenue derived from this tank amounted to Rs. 1,529, of which Rs. 1,212 was irrigation share and Rs. 317 land share.

SURAT AND BROACH.

414. During the year 7 tanks were repaired at a cost of Rs. 5,571, of which a sum of Rs. 341 was contributed by the rayats. All these tanks are situated in the Surat District. In the previous year 17 irrigation tanks and 3 irrigation wells were repaired at a total cost of Rs. 10,014, of which a sum of Rs. 2,184 was contributed by the villagers interested.

Tanks.

415. A sum of Rs. 171 was spent during the year in making surveys for the preparation of plans and estimates for repairs.

416. The total area irrigated and the consolidated revenue assessed on lands under irrigation tanks in Surat and Broach Districts, as reported in Canal Return No. VIII by the respective Collectors, were as under.

District.				Area.	Net consolidated assessment.	Irrigation share.	Land share.
				Acres.	Rs.	Rs.	Rs.
Surat...	...	...	...	12,288	1,63,343	46,800	1,16,543
Broach	...	...	...	885	7,592	3,315	4,277
Total ...				13,173	1,70,935	50,115	1,20,820

The management of irrigation tanks rests entirely with the Revenue Department, and no separate establishment is entertained on this account. The receipts also are realized by the Revenue Department.

417. Besides the tanks noted above, the following tanks have been cleared or deepened as famine relief works during the year. The exact information about lands, &c., under them is not available and will be shown in the next year's statement :—

Name of tank.	Amount expended during the year.	REMARKS.
<i>Surat District.</i>		
	Rs.	
1. Tank at Amalsár, R. S. Nos. 1 and 7	11,947	These tanks are used for domestic as well as for irrigation purposes.
2. Gam Tank, R. S. No. 676, at Párdi	17,864	
3. Dhed Tank at Pallan, S. No. 188...	12,592	
4. Do. at Oud, S. No. 408 ...	19,699	
5. Motu Tank at Barbodhan, S. No. 258	33,720	
6. Gam Tank, R. S. No. 183, at Karanj	4,102	
7. Nava Tank, R. S. No. 190, at Karanj	29,910	
8. Dharamnu talao, R. S. No. 98, at Botwada	3,483	
<i>Broach District.</i>		
9. Gam Tank at Chanchwell	50,794	This tank is used for domestic as well as for irrigation purposes.
Total	1,84,111	

NASIK DISTRICT.

418. The area under permanent Bágayat is 16,341 acres paying a consolidated assessment of Rs. 1,06,808, of which the irrigation share is Rs. 80,810 representing about Rs. 5 per acre.

419. The works were maintained at an expenditure of Rs. 94 on extensions and improvements and of Rs. 171 on repairs.

420. The following statement shows the details of expenditure incurred on these works :—

No.	Name of work or Bandhara.	Place.	Táluka.	IMPROVEMENTS.			REPAIRS.			REMARKS.
				Allotment.		Outlay.	Allotment.		Outlay.	
				Im-perial.	Contri-bution.		Im-perial.	Contri-bution.		
5	6	7	8	9	10	11				
				Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1	Constructing a Siphon across Munja Ohol.	Sinnar ...	Sinnar ...	Unfinished	...	52	...	...	...	Completed.
2	Constructing slab-drain, Niphád-Pachora Road.	Niphád-Pachora	Niphád...	works from last year.	...	35	...	...	...	Do.
3	Surveys ...	Godáwari Bas-in.	Násik District.	80	...	7	115	...	5	Do.
4	Old Vadál Canal ...	Vadál...	Niphád...	...	...	...	164	...	166	Do.
			Total ...	80	...	94	279	...	171	

421. The following statement shows the area assessed as irrigated and the consolidated revenue on 2nd class Irrigation works during 1899-1900 :—

No.	Táluka.	Area irrigated.	REVENUE.			REMARKS.
			Irrigation share.	Land share.	Total.	
1	2	3	4	5	6	7
	<i>Násik Collectorate.</i>	Acres.	Rs.	Rs.	Rs.	
1	Násik Táluka	1,280	8,585	4,258	12,843	
2	Sinnar do.	4,457	21,988	6,470	28,458	
3	Dindori do.	3,054	15,628	4,603	20,231	
4	Niphád do.	4,562	21,056	7,177	28,233	
5	Chándor do.	2,812	13,126	3,413	16,539	
6	Yeola do.	176	427	77	504	
	Total ...	16,341	80,810	25,998	1,06,808	

KHANDESH IRRIGATION DISTRICT.

422. The following table gives a summary of the area irrigated and the revenue derived from old irrigation works for which only Revenue Accounts are kept :—

	Khândesh.	Násik.	Total
<i>Area irrigated.</i>			
	Acres.	Acres.	Acres.
Area irrigated at consolidated rates ...	9,502	11,538	21,040
Area irrigated at separate water rates ...	6	301	307
Total area irrigated ...	9,508	11,839	21,347
<i>Revenue realized.</i>			
	Rs.	Rs.	Rs.
Consolidated revenue ...	72,096	95,456	1,67,552
Irrigation share ...	60,733	81,404	1,42,137
Revenue from separate water rates...	233	753	986
Total irrigation revenue ...	60,966	82,157	1,43,123
Miscellaneous Revenue ...			55
Total Gross Revenue ...			1,43,178
Total of previous year ...			1,41,891

The above figures are exclusive of the old irrigation under the Lower Pánjhra system.

423. During the year under report these works did not receive the attention usually bestowed upon them owing to the establishment having had to attend to famine relief works in this district, and therefore the expenditure incurred on them during the year amounted to Rs. 49,665 only, as under:—

	Rs.
Improvements ...	24,170
Repairs ...	2,536
Establishment ...	22,314
Tools and Plant ...	645
Total ...	49,665

against Rs. 67,538 in the previous year.

424. Besides the sum of Rs. 49,665 from Imperial Funds there has been an expenditure from Pátphála cess balance on small repairs and improvements desired by the irrigators as detailed below.

	Rs.
Improvements ...	794
Repairs ...	201
Total ...	995

The cess has been abolished and the accumulations are being gradually utilized. Local Fund money amounting to—

	Rs.
Works ...	1,516
Establishment ...	23
Tools and Plant ...	5
Total ...	1,544

for communication, bridges, &c., has also been spent during the year under report.

AHMEDNAGAR DISTRICT.

425. The only two works of this class are situated in the Akola Táluka :

1. Sávargaon Bandhára. | 2. Gárdáni Bandhára.

426. The following table shews the area irrigated and the consolidated revenue assessed during the year :—

Name of Bandhára.	Area irrigated.	REVENUE.		
		Irrigation share.	Land share.	Total.
	Acres.	Rs.	Rs.	Rs.
Sávargaon	76	200	61	261
Gárdáni	71	153	71	224
Total	147	353	132	485

POONA DISTRICT.

427. The following are the works in this Collectorate, for which only Revenue Accounts are kept :—

1. Dam at Kasur. | 4. Dam at Náráyangaon.
 2. Do. Vadaj. | 5. Tank at Pátas.
 3. Do. Agar. | 6. Do. Wadhána.

The description of these works has been given in the Revenue Report for the year 1881-1882.

428. During the year 1899-1900 a sum of Rs. 1,135 was expended on repairs to Náráyangaon Bandhára and Rs. 447 on repairs to Vadaj dam and channel.

429. The area irrigated by these works was 742 acres, paying a consolidated assessment of Rs. 4,553, of which the irrigation share was Rs. 3,538.

BELGAUM DISTRICT.

430. The total number of second class tanks, irrigating over 50 acres each in this district, is 67, with an irrigation area of 9,910 acres, paying a consolidated assessment amounting to Rs. 41,304, of which the irrigation share is Rs. 33,049.

Expenditure. 431. The following table shows the progress made in repairing and improving these small tanks during the year :—

Nature of Tanks.	COMMENCED IN PREVIOUS YEAR.		COMMENCED AND COMPLETED DURING THE YEAR.		COMMENCED BUT NOT COMPLETED DURING THE YEAR.		TOTAL.	
	Number of Tanks.	Cost.	Number of Tanks.	Cost.	Number of Tanks.	Cost.	Number of Tanks.	Cost.
		Rs.		Rs.		Rs.		Rs.
Irrigating over 50 acres	2	839	...	...	8	7,628	10	8,467
Irrigating less than 50 acres	1	164	...	...	2	1,118	3	1,282
Total	3	1,003	...	...	10	8,746	13	9,749

432. A sum of Rs. 750 was expended during the year on surveying some of these tanks for future repair.

433. Complete lists of the small irrigation tanks in the district have already been drawn up and submitted.

DHA'RWA'R IRRIGATION DISTRICT.

434. The expenditure, Rs. 42,158, incurred on the 2nd class tanks during the year under report is considerably more than that of the previous year, which was Rs. 28,026. It was expected that a still larger amount could be profitably spent owing to the distress at that time anticipated by the Collector, and further allotment of Rs. 5,000 was obtained accordingly; but the distress proved to be much less acute and some Rs. 8,000 from the total allotment therefrom remained unspent. This was also due to works being delayed at first on account of the special measures that were taken to ensure their utility for relieving distress.

435. The following table shows the number of tanks repaired and the expenditure incurred on them :—

Nature of Tanks.	COMMENCED IN THE PREVIOUS YEAR.		COMMENCED AND COMPLETED DURING THE YEAR.		COMMENCED BUT NOT COMPLETED DURING THE YEAR.		TOTAL.	
	Number of Tanks.	Cost of Works.	Number of Tanks.	Cost of Works.	Number of Tanks.	Cost of Works.	Number of Tanks.	Cost of Works.
		Rs.		Rs.		Rs.		Rs.
Irrigating over 50 acres	20	13,379	3	2,248	24	28,186	47	43,813
Irrigating less than 50 acres	3	387	...	...	2	572	5	959
Total	23	13,766	3	2,248	26	28,758	52	*44,772

* Includes rayats' contribution of Rs. 1,850.

436. The area under large tanks assessed at consolidated rates is 65,801 acres and that cultivated during the year was 49,567 acres. The consolidated assessment is Rs. 2,16,282, the irrigation share of which is Rs. 1,73,027 and the land share Rs. 43,255 as entered in Canal Return No. VIII. An area of 12,979 acres remained uncultivated owing to insufficient supply of water in the tanks due to the abnormal falling off in the rainfall. There is, however, no decrease in assessment, except Rs. 74 in Hāngal Tāluka, due to 15 acres of land having been given up by the owner.

Miscellaneous Receipts. 437. In addition to the above the following amounts represent revenue realized on account of miscellaneous receipts :—

Water rates... ..	...	...	Rs.	a.	p.	by Revenue Department.
Other canal produce, viz., sale of grass, trees, &c. ... ..	...	...	1,297	12	9	do. do..
			723	8	3	by Public Works Department.

Total ... 2,345 9 6

The decrease in miscellaneous receipts is due to fewer trees being sold, the value being Rs. 844 less. There is no diminution in the grazing proceeds.

BIJAPUR DISTRICT.

438. There are altogether 17 irrigation works in charge of the Public Works Department. The area irrigated was 1,440 acres and the irrigation share of the consolidated assessment was Rs. 5,924.

439. During the year under report Rs. 1,080 were spent from Imperial Funds on survey and repairs to 3 tanks and Rs. 147 from rayats' contribution.

RATNA'GIRI DISTRICT.

440. There are only 4 irrigation tanks in this district. Ordinary repairs to two of them were executed during the year at a cost of Rs. 133. In addition to the ordinary repairs, special repairs were done to one of the two at a cost of Rs. 1,537, of which the rayats contributed Rs. 153-12-10. A drain on a road was rebuilt near Dhámápur Tank at a cost of Rs. 365-10-6, of which the rayats' contribution amounted to Rs. 36-11-2.

KOLA'BA DISTRICT.

441. Annual repairs to the dam at Borvi were carried out at a cost of Rs. 36.

AGRICULTURAL WORKS.

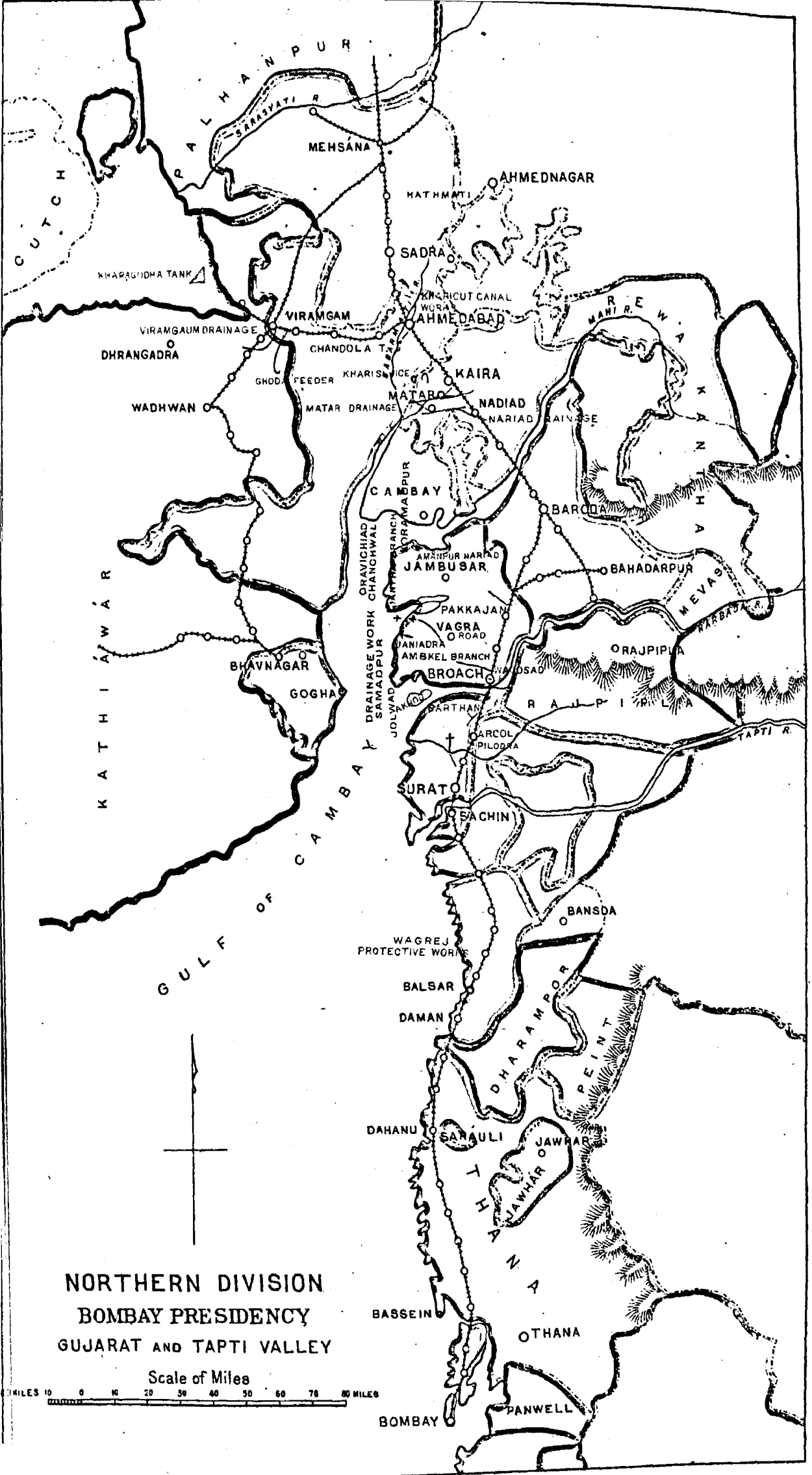
442. The following table shows the financial result of the several drainage channels constructed in the Broach District:—

Names of Channels.	Expenditure during the year.	Total cost up to date.	Receipts from sale of occupancy right.	Balance against Capital.	Area assessed under settlement.	Land taken up for cultivation.	Assessment of land taken up for cultivation.	Irrigation share.	Percentage of Revenue on Capital.	RE-MARKS.
	Rs.	Rs.	Rs.	Rs.	Acres.	Acres.	Rs.	Rs.		
<i>A'mod Taluka.</i>										
1. Kalvan Itola ...	4,967	...	...	...	35.23	35.23	200.4	...	...
<i>Jambusar Taluka.</i>										
2. Kora-Madfar and Jantram Drainage Channel ...	...	16,008	2,376	13,627	2,750	1,356	4,935	...	36.21	
3. Amanpur Nadiá Channel ...	...	14,401	2,104	12,297	980	717	2,958	...	24.06	
4. Sindhav do. ...	...	1,238	...	1,238	63	...	...	...	...
<i>Ankleshear Taluka.</i>										
5. Adol-Hajat Channel.	...	12,296	3,528	8,768	663	490	1,967	...	22.43	
<i>Wágra Taluka.</i>										
6. Samadpur-Panidra Channel ...	...	7,072	3,800	3,272	495	477	1,006	...	30.74	
7. Pakhajan-Ambhel Channel ...	65	27,224	8,393	18,831	1,251	663	1,660	...	8.62	
8. Nadida-Akhod Channel ...	...	6,334	...	6,334	56	...	...	...	...
9. Johva Channel ...	...	881	...	881	...	...	...	...	...
10. Ora-Vichad-Badapura Channel ...	17,053	29,820	...	...	...	...	...	...	...
Total ...	22,085	1,15,269	20,201	65,248	6,233.23	3,733.23	12,726.4	...	19.50	

443. There were no receipts from sale of occupancy right during the year, as no fresh land was taken up for cultivation.

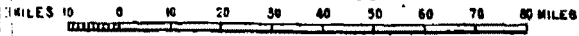
411. Besides the channels noted above, the following drainage channels and reclamation works have been carried out as famine relief works during the year. The exact information about lands, &c., on them is not available and will be given in the next year's report as stated in the remarks column of the Canal Return No. VIII of the year 1899-1900, forwarded by the Collector of Broach:—

Names.	Amount expended during the year.	Remarks.
	Rs.	
1. Hansot Reclamation Works	73,299	
2. Asarsa do. do.	30,733	
3. Ora-Vichiad Channel	28,586	
4. Nobar-Umra-Kotesar Drainage Channel	11,556	
5. Rahad Drainage Channel	2,827	
3. Ninam do.	533	
7. Wagusar Channel	17,379	
8. Ghamrad do.	414	

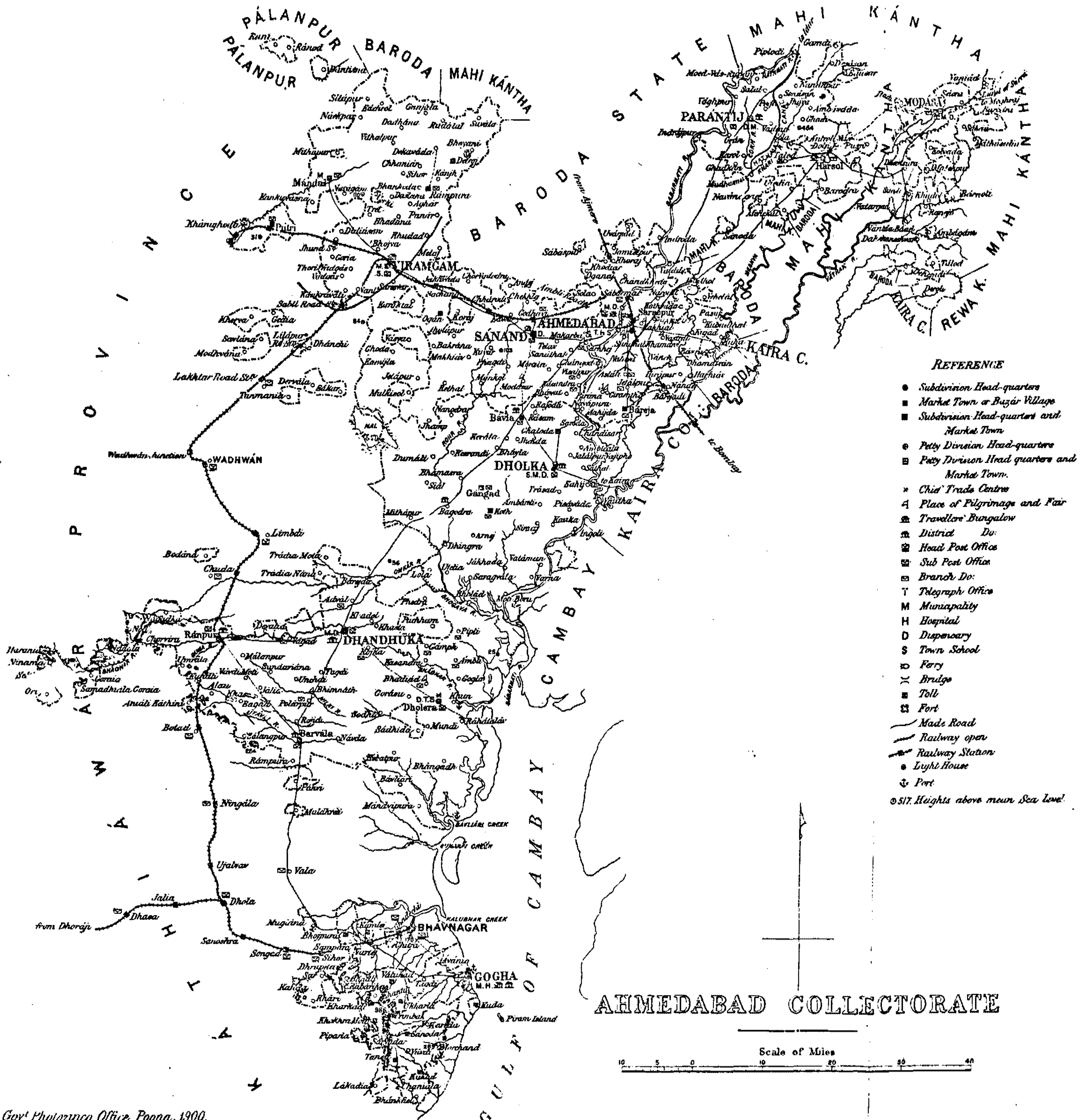


**NORTHERN DIVISION
BOMBAY PRESIDENCY
GUJARAT AND TAPTI VALLEY**

Scale of Miles



Reduced to Scale from a Tracing.



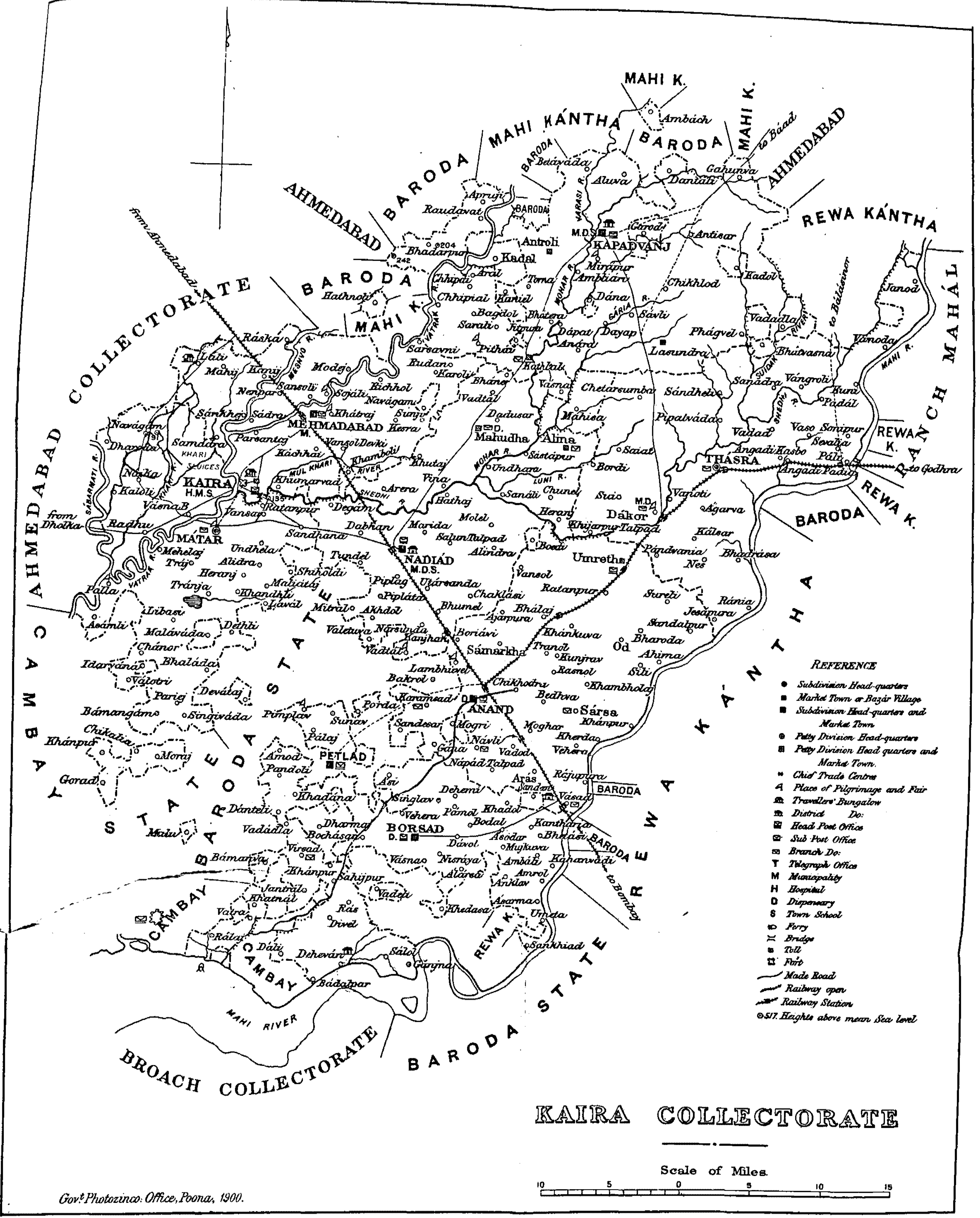
REFERENCE

- Subdivision Head-quarters
- Market Town or Bazar Village
- Subdivision Head-quarters and Market Town
- Petty Division Head-quarters
- Petty Division Head quarters and Market Town.
- * Chief Trade Centre
- △ Place of Pilgrimage and Fair
- ⊠ Travellers' Bungalow
- ⊞ District Do.
- ⊞ Head Post Office
- ⊞ Sub Post Office
- ⊞ Branch Do.
- T Telegraph Office
- M Municipality
- H Hospital
- D Dispensary
- S Town School
- Ferry
- Bridge
- Toll
- ⊞ Fort
- Made Road
- Railway open
- Railway Station
- Light House
- ⊞ Port
- 517. Heights above mean Sea level.

AHMEDABAD COLLECTORATE

Scale of Miles



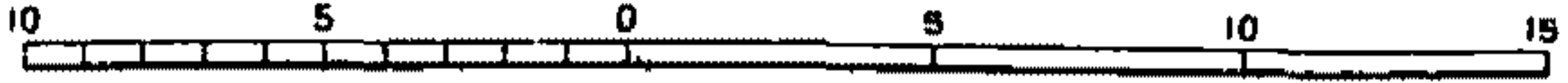


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- Railway open
- Railway Station
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KAIRA COLLECTORATE

Scale of Miles.



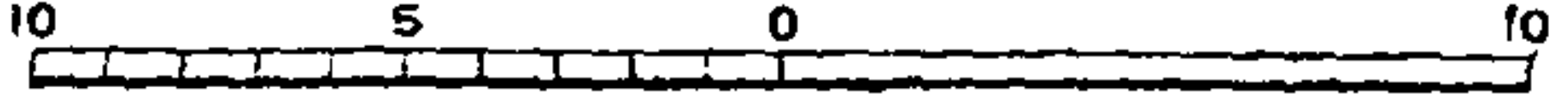
REFERENCE

- Subdivision Head-quarters
- Market Town or Bagar Village
- Subdivision Head-quarters and Market Town
- Petty Division Head-quarters
- Petty Division Head-quarters and Market Town
- * Chief Trade Centres
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- Made Road
- Railway open
- Railway Station
- Light House
- ⚓ Port
- S.T. Heights above mean Sea level



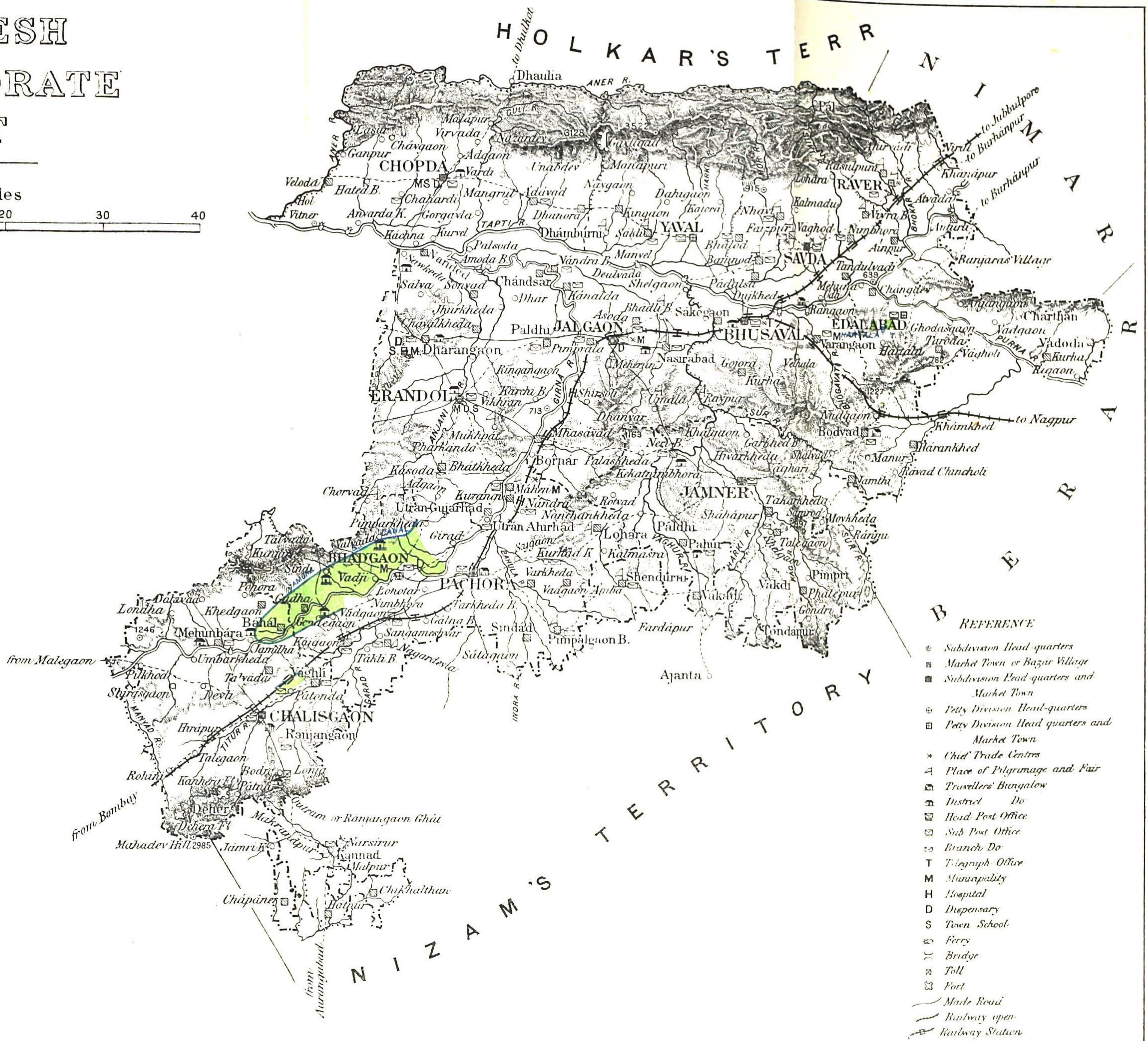
BROACH COLLECTORATE.

Scale of Miles



KHANDESH COLLECTORATE EAST

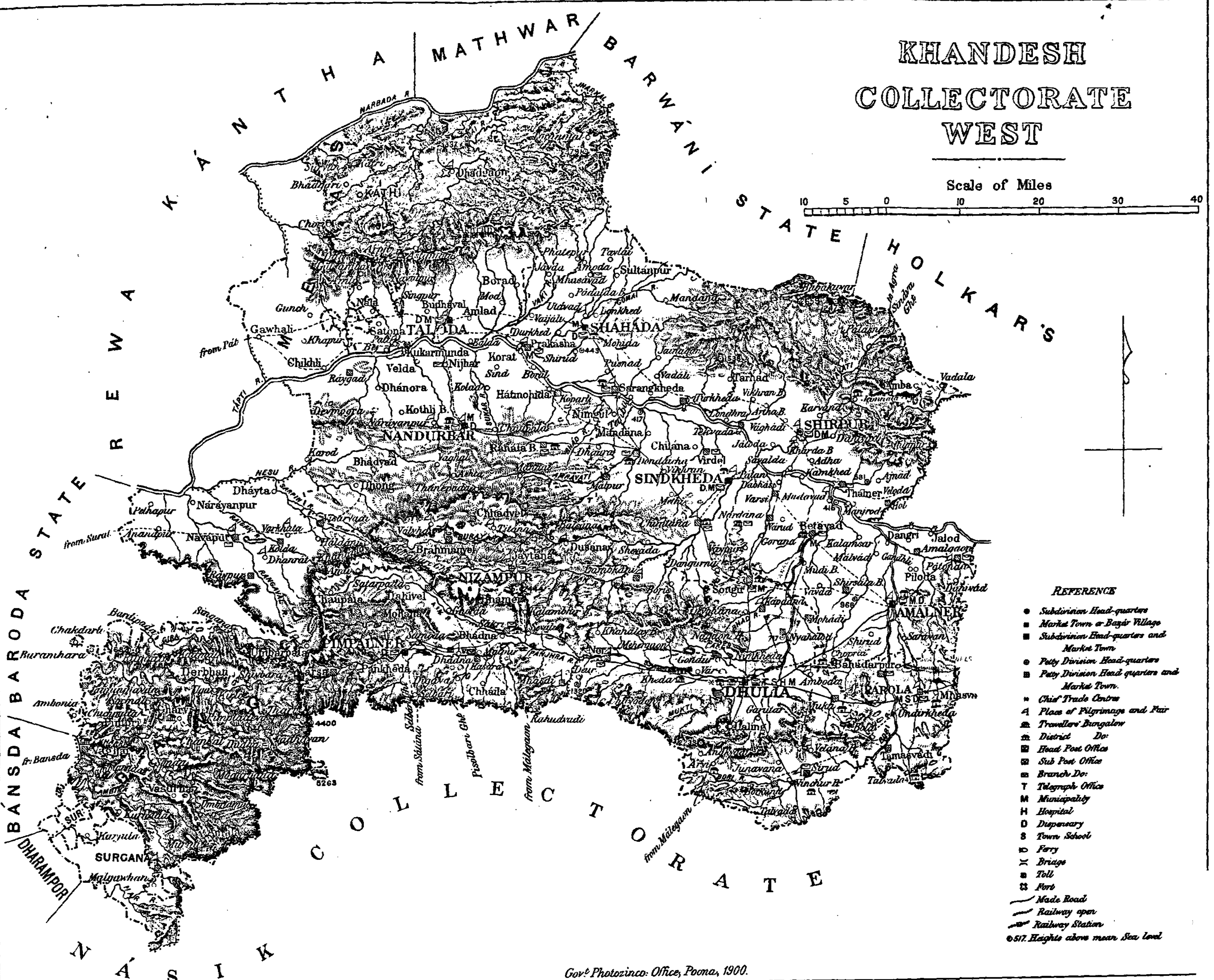
Scale of Miles



- REFERENCE**
- Subdivision Head-quarters
 - Market Town or Bazar Village
 - Subdivision Head-quarters and Market Town
 - ⊙ Petty Division Head-quarters
 - ⊙ Petty Division Head-quarters and Market Town
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 - (Bridge
 - ⊘ Toll
 - ⊘ Fort
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 - Railway Station

KHANDESH COLLECTORATE WEST

Scale of Miles

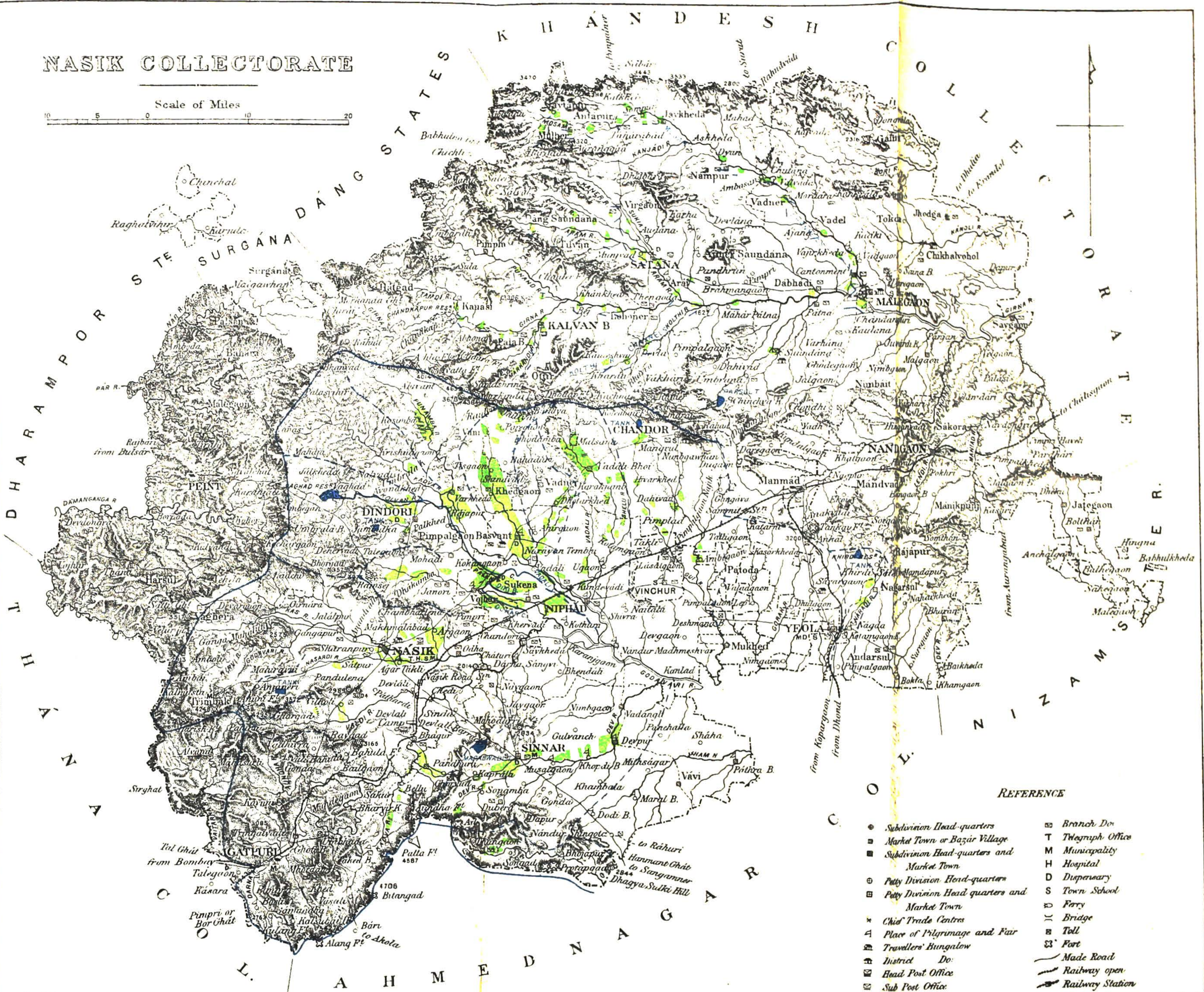
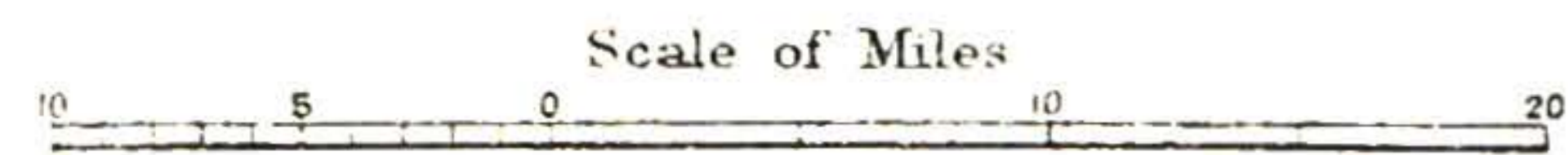


REFERENCE

- Subdivision Head-quarters
- Market Town or Bazar Village
- Subdivision Head-quarters and Market Town
- Petty Division Head-quarters
- Petty Division Head-quarters and Market Town
- Chief Trade Centre
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© 517. Heights above mean Sea level

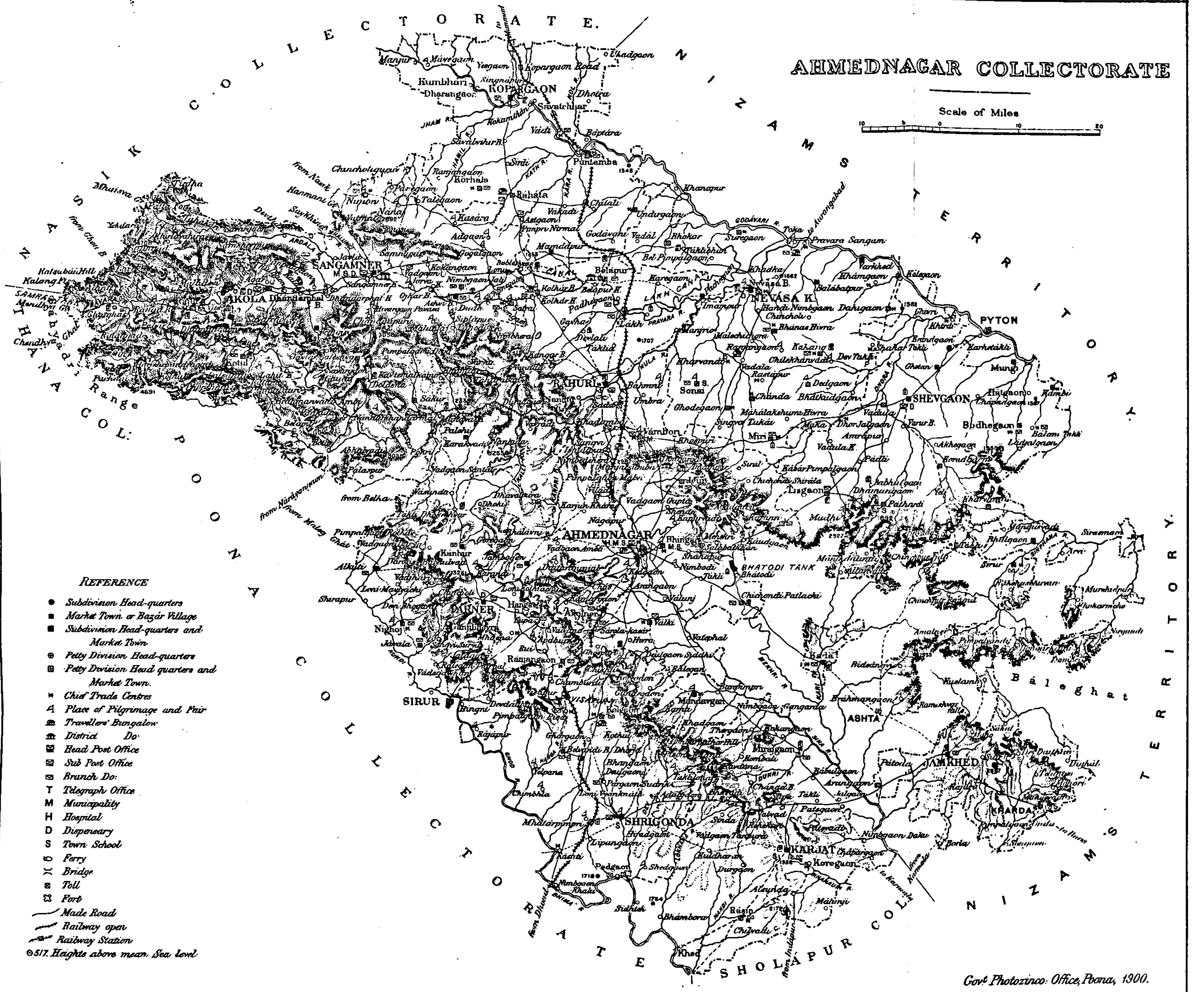
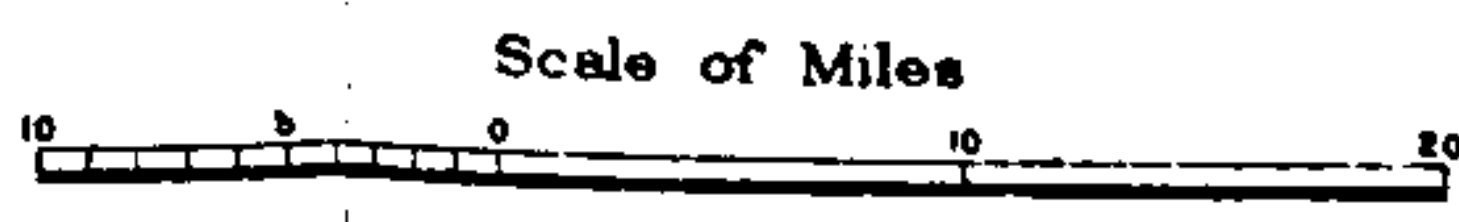
NASIK COLLECTORATE



REFERENCE

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- Market Town or Bazar Village
- Subdivision Head-quarters and Market Town
- ⊙ Petty Division Head-quarters
- ⊙ Petty Division Head-quarters and Market Town
- ✱ Chief Trade Centres
- ⌄ Place of Pilgrimage and Fair
- 🏠 Travellers' Bungalow
- 🏠 District Do.
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- ⌒ Toll
- 🏰 Fort
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- Railway open
- 🚂 Railway Station

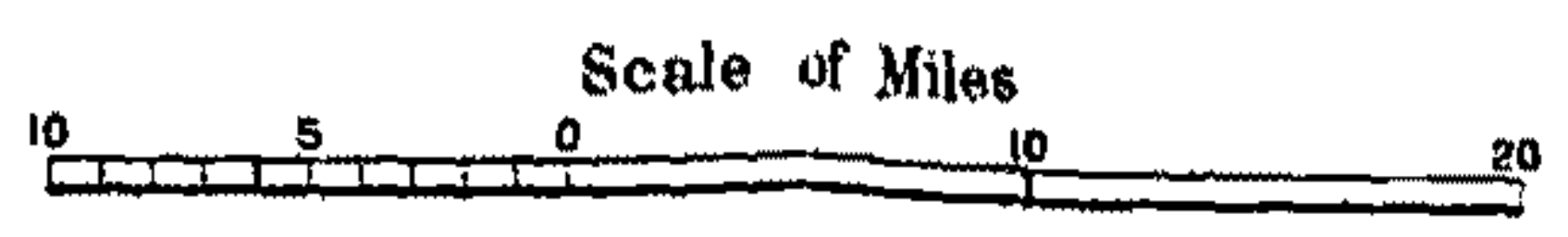
AHMEDNAGAR COLLECTORATE



REFERENCE

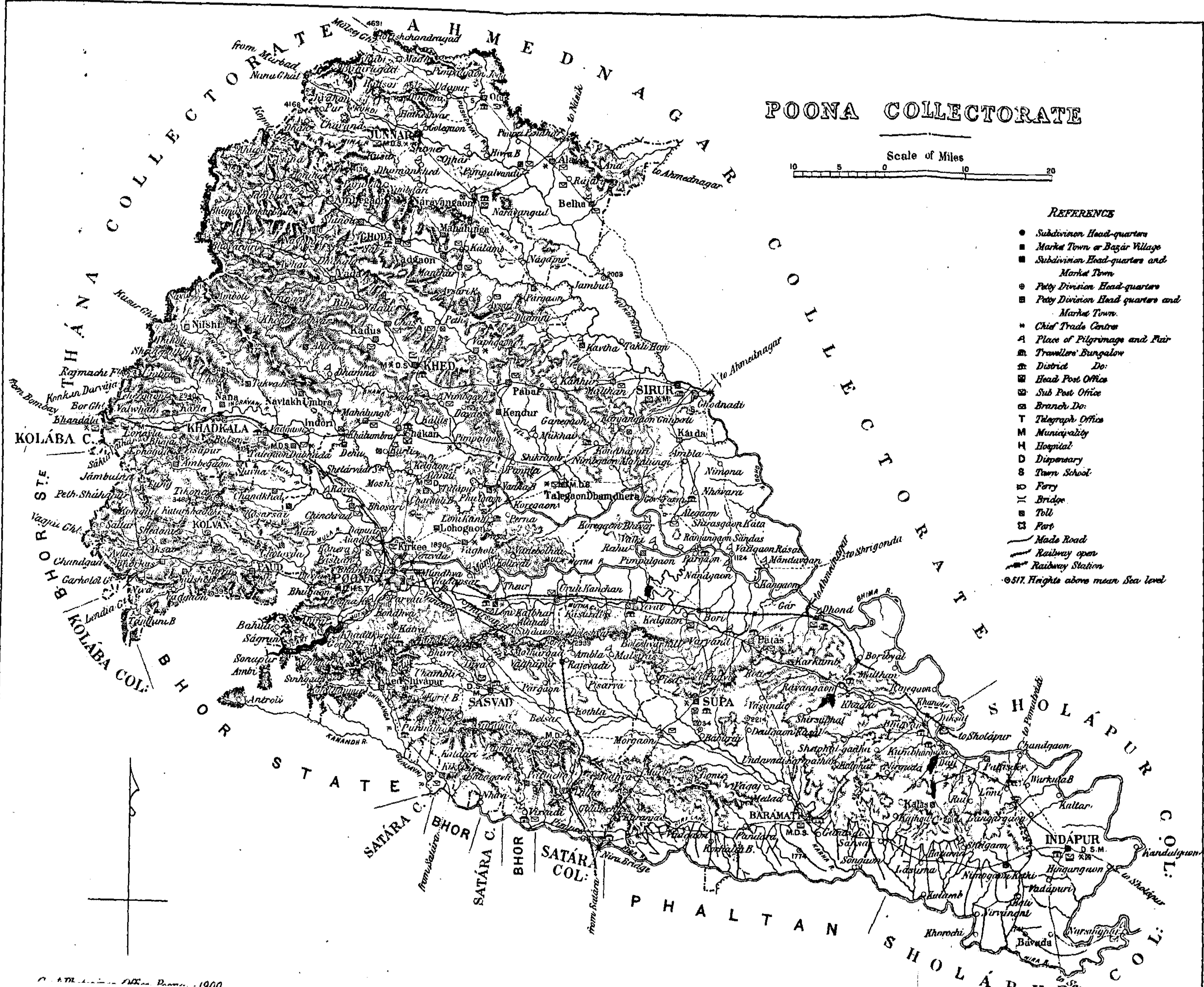
- Subdivision Head-quarters
- Market Town or Bazar Village
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- Petty Division Head-quarters
- Petty Division Head-quarters and Market Town
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POONA COLLECTORATE

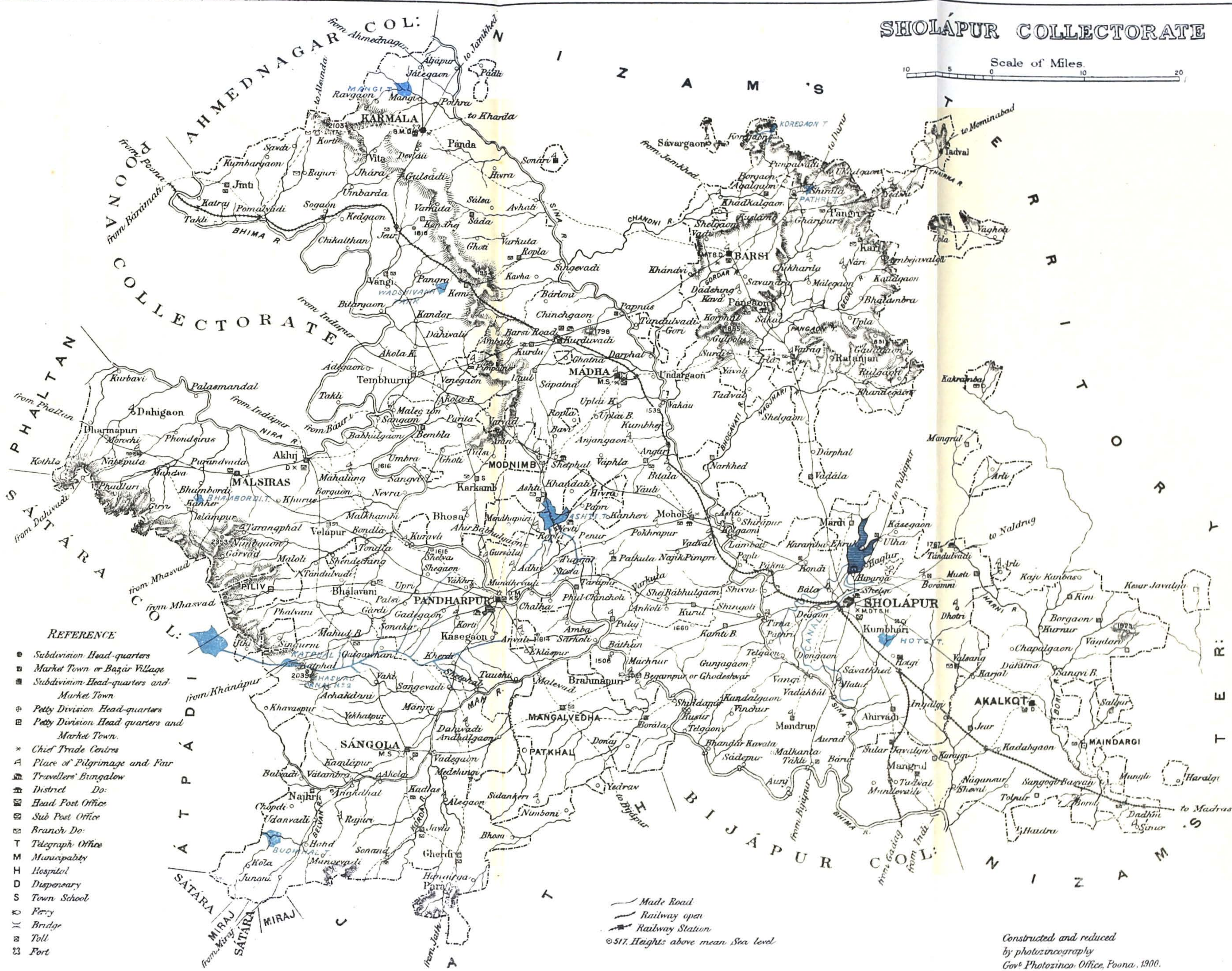
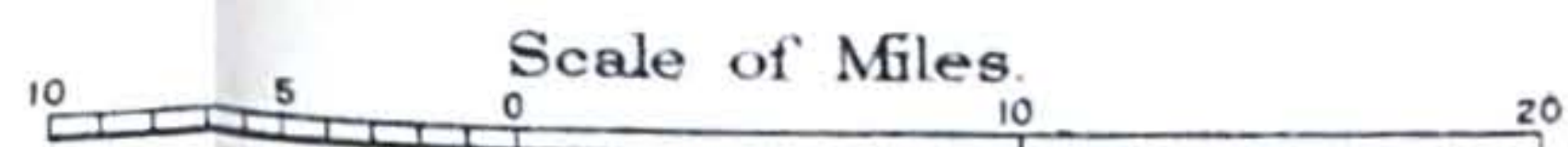


REFERENCE

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- Subdivision Head-quarters and Market Town
- Petty Division Head-quarters
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- Chief Trade Centres
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SHOLAPUR COLLECTORATE



REFERENCE

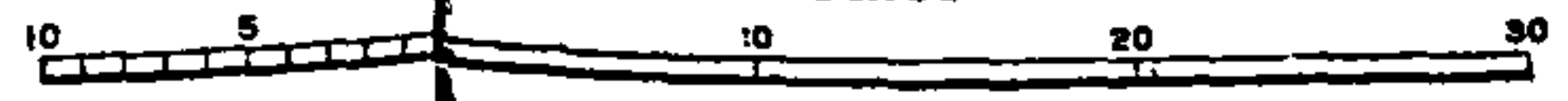
- Subdivision Head-quarters
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- ⊞ Fort

— Made Road
 — Railway open
 — Railway Station
 ○ 517. Heights above mean Sea level

Constructed and reduced by photozincography Govt Photozinc. Office, Poona, 1900.

SÁTARA COLLECTORATE

Scale of Miles



REFERENCE

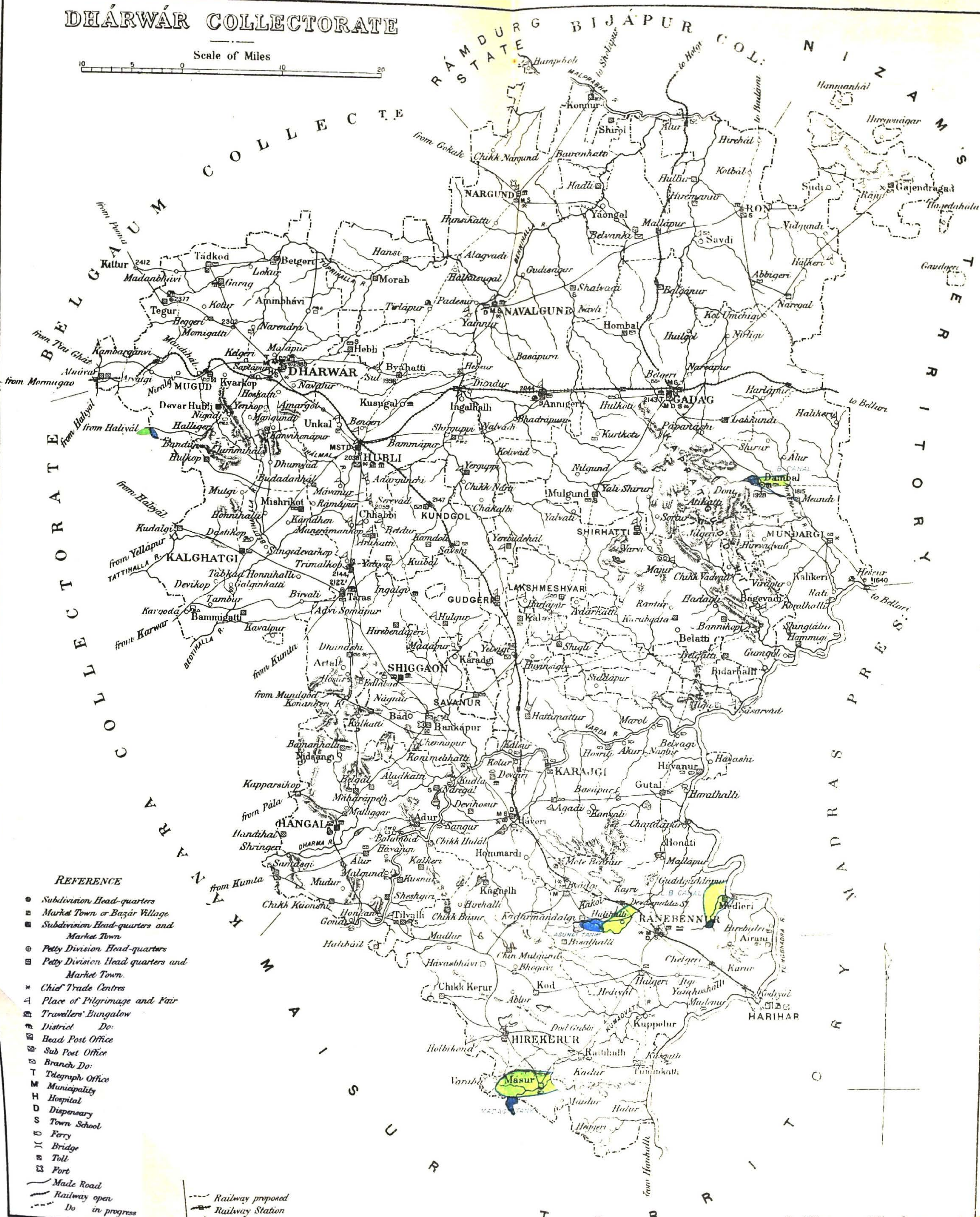
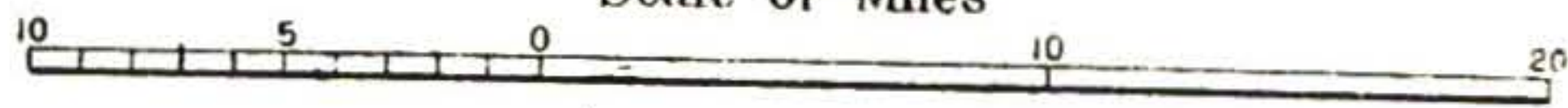
- Sub-division Head-quarters
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517. Heights above mean Sea level



DHARWAR COLLECTORATE

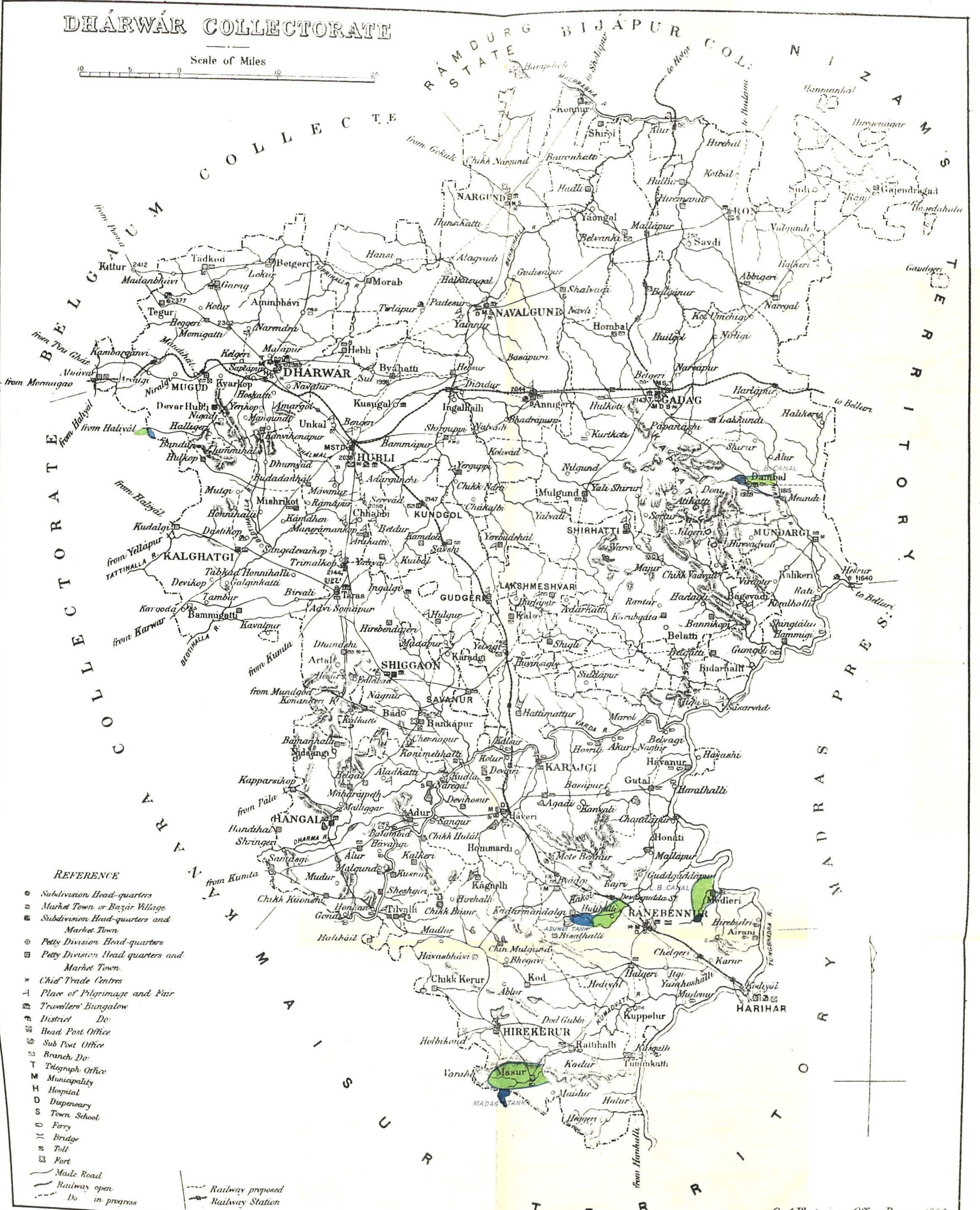
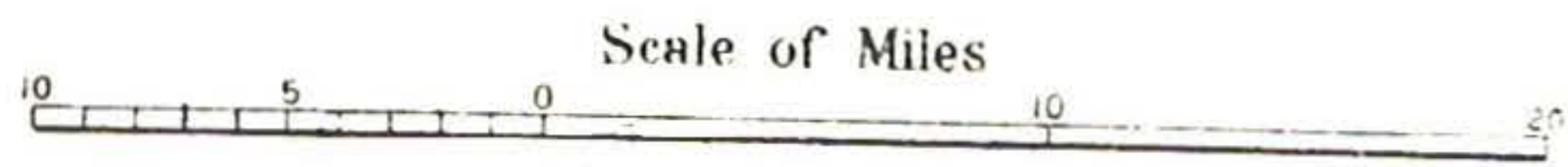
Scale of Miles



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DHARWAR COLLECTORATE



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*Revenue Report of Irrigation Works in the
Bombay Presidency, excluding Sind, for
1899-1900—Review of the.*

No. W. I.—410 OF 1901.

Public Works Department.

Bombay Castle,
27th February 1901.

Letter from the Superintending Engineer, Southern Division, No. 3250, dated 15th September 1900.

Forwards the Revenue Report of Irrigation Works in his Division for 1899-1900.

Letter from the Superintending Engineer, Northern Division, No. 6499, dated 3rd October 1900.

Forwards the Revenue Report of Irrigation Works in his Division for 1899-1900.

Letter from the Superintending Engineer, Central Division, No. 8137, dated 4th October 1900.

Forwards Revenue Reports in respect of certain Irrigation Works in his Division for 1899-1900.

Letter from the Superintending Engineer, Northern Division, No. 6638, dated 8th October 1900.

Letter from the Examiner of Public Works Accounts, No. B-3—1458, dated 12th October 1900.

Letter from the Superintending Engineer, Central Division, No. 8502, dated 18th October 1900.

Letter from the Superintending Engineer, Central Division, No. 8657, dated 26th October 1900.

Letter from the Superintending Engineer, Central Division, No. 8701, dated 27th October 1900.

Letter from the Superintending Engineer, Central Division, No. 8782, dated 30th October 1900.

Letter from the Superintending Engineer, Central Division, No. 8806, dated 31st October 1900.

Letter from the Superintending Engineer, Central Division, No. 9034, dated 8th November 1900.

Letter from the Superintending Engineer, Northern Division, No. 7373, dated 9th November 1900.

Letter from the Examiner of Public Works Accounts, No. B-3—1651, dated 10th November 1900.

Letter from the Superintending Engineer, Central Division, No. 9462, dated 23rd November 1900.

Letter from the Superintending Engineer, Central Division, No. 9916, dated 13th December 1900.

Memorandum from the Superintending Engineer, Central Division, No. 9984, dated 17th December 1900.

RESOLUTION.—There has been no change in the number of works in operation included in Part I. The Capital expenditure, Direct and Indirect, on these works amounted to Rs. 2,69,267, and was principally incurred on the Khari Cut, Mutha and Gokák Canals. An expenditure of Rs. 1,33,994 is shown against "Works under construction," representing mainly the normal cost of work done on the Shetphal and Maladevi Tanks in connection with famine relief. The entire Capital outlay to the end of the year amounted to Rs. 2,69,73,068, including expenditure on works under construction and in abeyance.

2. The total area irrigated was 104,624 acres against 103,849 acres of the previous year showing an increase of 775 acres which is explained in the general remarks.

3. The principal crops irrigated were jowári (42,580 acres), bajri (14,595 acres), sugarcane (11,494 acres), ground-nuts (7,036 acres), wheat (5,170 acres), gram (4,145 acres) and rice (3,793 acres), under all of which, except jowári and sugarcane, there are decreases. The increase of 20,581 acres under jowári is very noticeable.

4. The assessed revenue amounted to Rs. 7,40,129 against Rs. 6,59,841 in the previous year. The increase is principally under water-rates, and is due to a greater area of perennial and four months' crops having been irrigated. The total revenue realised amounted to Rs. 7,25,564 only. At the close of 1898-99 the unrealized balance was Rs. 1,64,081 which during the year under report has risen to Rs. 1,88,623. The causes have been explained in the general remarks. It is noted that of the total amount shown as unrealized at the close of the financial year, nearly one-third has since been recovered.

5. The net revenue of the year was :—

	Rs.
(1) On basis of assessment	... 3,85,485
(2) Do. realizations	... 3,70,920
	<hr/>

as compared with Rs. 3,23,045 and Rs. 3,59,980 respectively in 1898-99.

6. Although the working expenses show an increase of Rs. 17,848, the net realizations of the year were Rs. 10,940 more than in 1898-99, which is satisfactory.

7. The Protective Works show a net revenue of Rs. 98,048 against Rs. 86,266 in the previous year. Productive Public Works show a net revenue of Rs. 2,68,317 against Rs. 2,27,346 in 1898-99. The corresponding figures for Minor Works, Imperial and Provincial, are Rs. -24,018 and Rs. 28,573 as against Rs. 21,782 and Rs. 24,856 in the previous year.

8. Under Part II—Works for which only Revenue Accounts are kept, the revenue receipts show a decrease of Rs. 2,177 and the expenditure a decrease of Rs. 8,565, the result being an increase under net revenue of Rs. 6,388. Looking to details of expenditure it appears that, while there was a decrease of Rs. 8,793 under Extensions and Improvements, there was an increase of Rs. 8,891 under Maintenance and Repairs. On "Agricultural Works" the high rate of profit has been fairly maintained.

9. Copies of the report and of this review should, as usual, be forwarded to the Government of India and the Secretary of State.

D. W. HERBERT,
Under Secretary to Government.

To

The Revenue Department, Secretariat.
The Financial Department, Secretariat.
The Commissioner, N. D.
The Commissioner, S. D.
The Commissioner, C. D.
The Survey Commissioner and Director of Land Records and Agriculture.

The Superintending Engineer, N. D.
 The Superintending Engineer, S. D.
 The Superintending Engineer, C. D.
 The Chief Engineer, Indus Right Bank Division.
 The Superintending Engineer, Indus Left Bank Division.
 The Examiner of Public Works Accounts.
 All Executive Engineers having charge of Irrigation Works.
 The Government of India.
 The Secretary of State for India. } By letter.
 The Editors' Table.

Class A.

Exd. C. S. P.

No. of 1901,

Copy forwarded for information and guidance to