New No. Sectt. I (i)-1—Old No. M.R.O. 1—10,006—10-6-68.

(1) Number of pages 8.

(2) Date of repair 20.2.70

(3) Initials of the Referencer

MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

G.O. No.	1664	~~Press~~
~~B.P.~~ No.		Mis.
Dated 17-7-1876		~~196~~ .

Not to be folded or roughly handled

No. 341. Read the following endorsement of the Chief Engineer for Irrigation, dated Ootacamund, 27th May 1876, No. 25 :—

From J. H. LATHAM, Esq., Chief Engineer and Manager of the Madras Irrigation and Canal Company, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Ootacamund, 25th May 1876, No. 48.

April Reports.

I HAVE the honor to forward, herewith, copies of the Upper and Lower Divisions Reports, together with my own, for the month of April 1876.

MADRAS IRRIGATION AND CANAL COMPANY, UPPER DIVISION.

Monthly Report for April 1876.

1. *Water.*—The head sluices were closed and the under sluices opened on the 1st of May, but on the 26th the water had fallen below the cill of head sluice. Water has fallen very low at Lockinsula, and will in a day or two altogether subside. The timely rains of March have saved nearly all the crops in my division.

2. The *weather* has been distressingly hot, and the severe outbreak of cholera in the villages round Kurnool and in the Nundicotkur Taluq have had a most retarding effect on all the preparations which were to have been made for the *one month* during which the canal is without water. In consequence of this the whole of the earth work on the four bridges above Kurnool have been delayed, together with many other important works, which will, I fear, have to be curtailed in extent if water is let in on the 1st of June.

3. *Irrigation.*—The following statement has been prepared to show the amount of this year's irrigation :—

Taluq.	At 1 R. per Month per Acre.	At 1½ R. per Month per Acre.	At 2 Rs. per Acre.	At 3 Rs. per Acre.	At 4 Rs. per Acre.	At 5 Rs. per Acre.	At 6 Rs. per Acre.	At 12 Rs. per Acre.	Total Area of Columns 2 to 9.
1	2	3	4	5	6	7	8	9	10
	A. C.	A. C.	A. C.	A. C.	A. C.	A. C.	A. C.	A. C.	A. C.
RAMALACOTA TALUQ.									
1st Crop ...	14 81	0 00	3 00	122 23	148 14	12 23	366 92	0 00	667 33
2nd ,, ...	21 93	2 57	0 75	24 52	99 28	0 23	71 90	0 00	221 18
Total ...	36 74	2 57	3 75	146 75	247 42	12 46	438 82	0 00	889 51
NUNDICOTKUR TALUQ									
1st Crop ...	0 00	0 00	41 97	826 57	876 44	551 07	516 85	0 75	2,813 66
2nd ,, ...	97 06	16 94	14 01	62 66	141 52	8 11	27 80	0 00	368 10
Total ...	97 06	16 94	55 98	889 21	1,017 96	559 18	544 66	0 75	3,181 76
NUNDIAL TALUQ.									
1st Crop ...	0 00	0 00	5 45	544 97	199 87	90 59	63 69	0 00	904 57
2nd ,, ...	95 14	1,051 32	1 93	103 93	79 99	26 34	16 42	0 00	1,375 07
Total ...	95 14	1,051 32	7 38	648 90	279 86	116 93	80 11	0 00	2,279 64
Grand Total ...	228 94	1,070 83	67 11	1,684 88	1,545 24	688 57	1,063 59	0 75	6,349 91

4. *Tanks.*—About 815 acres of Nundial Government tank lands have been irrigated from the canal during the last month. As soon as the water in this tank fell below the level of a sluice cill, channels were directed to the sluice through the dry bed of the tank, so as not to

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interfere with the original supply. Water has also been supplied to Canalla and Billalapooram lands in a similar manner.

5. *Settlement.*—The Special Deputy Collector in charge of Irrigation is deputed to hold the settlement towards the end of the month, after settling some of the Lower Division Taluqs with Mr. Dunphy.

6. *Repairs.*—It is hoped that during the month the head works will be put in order; also a new pair of deep sluices will be built in Calinguls No. 1 to replace the old under sluices which were not well adopted to the work. Several important repairs will be made on account of navigation; of these, the heaviest will be the repairs to the lock gates and fittings which have been standing five years untouched, except the occasional cleaning and tarring.

7. *Constructions.*—On Capital account the chief works are Singavaram and Moochoomurry bridges. In the former the piers can now be commenced as water had subsided. At the latter I hope to get up the centrings by the end of the month.

8. *Health.*—No important cases have occurred fortunately; only one banker died of the epidemic.

9. The staff were paid from the 8th to 18th April 1876.

(Signed) C. H. WILKS,
Conservancy Engineer.

MADRAS IRRIGATION AND CANAL COMPANY, LOWER DIVISION.

Report for the month of April 1876.

On the 30th April the head sluices at Rajoly and Adimapully were closed, in accordance with the advertisements inserted in the District Gazettes, for the purpose of commencing the repairs to the locks, culverts and aqueducts, and for the removal of silt.

2. The latter work cannot be commenced before the 10th of May, the silt being too wet to work at present, but every thing necessary is in readiness, and I hope to complete it before the heavy rains.

3. Several of the masonry waterways which excited suspicion have been examined and found requiring repair, especially those where the water has a drop. One of these, the Canagoodoor culvert, 138 miles 9 chains, after constant and fatiguing baling with baskets day and night, to get rid of the water which flows constantly throughout the year, was found to be in such a state, that immediate repair was necessary to render it safe to pass an ordinary flood. The floor was not only carried away, but the natural soil in the middle of the arches was scoured out to an average depth of 3 feet below the foundation, and in some places the masonry of the piers were over-hanging 8 inches, of one place 1 foot 9 inches, and at another the masonry was completely undermined.

4. The drop walls were in places carried away, and it is owing to this principally that the injury was so great.

5. With the exception of the floors which are hardly necessary, the needful repairs and additions have been carried out.

6. There are two other similar culverts under which the water is standing to a depth of over 5 feet, which from soundings appear unsafe. The great difficulty to contend with is the water.

7. One of these, which beyond doubt should not be neglected another season, I am unable to examine and repair at present, owing to a bund having been placed across the outlet to dam

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Proceedings of the Madras Government, Public Works Department,
20th June 1876. *No.* 1,535.

up the water for gardens; and until arrangement can be made with the gardeners, the water cannot be drained off from the culvert.

8. The repairs to other culverts now being carried out are comparatively light and consist of pointing, slight masonry repairs.

9. The removal of silt from arches, &c., is being carried out; from one 3-arch culvert 9 feet span, as much as 312 yards were cleared out in order to leave a fair waterway.

10. I am glad to say that the foundations of the large aqueducts—the Vakilar, Punkala Wunka, and Peechapaud—are found to be perfectly sound and uninjured.

11. The anicuts and head works at Rajoly and Adimapully have been examined, and found in no need of repair beyond pointing.

12. The locks are now undergoing repairs, and before the water is again let into the canal, I hope to have the masonry repaired, and every necessary bolt supplied.

13. The raising of banks, particularly at the 177th mile, is nearly completed. For a distance of 44 chains the banks require raising an average of 1 feet 6 inches, and the width increased from about 3 feet to 6 feet.

14. The banks were not originally made to the normal dimensions.

15. At the 176th mile the banks are in a similar condition, and must be raised.

16. Side drains to carry off standing water are being made, and existing ones are being cleared out, the latter work being chiefly done by bankers.

17. This month the bankers have been principally engaged in stopping cracks in the banks, which in some soils, particularly the black cotton, are very troublesome, and require constant attention until the rains commence.

18. Several of the main channels are undergoing repairs, and since the water has ceased flowing in the channels, several bridges have been commenced, the material having been collected some time ago.

19. *Irrigation.*—I enclose my monthly statement, showing the entire season's irrigation. Up to the end of the month the Ameen's attached to the 10th Section have been busy recording and measuring, as the applications for indigo have been very numerous during even the month of April.

20. There is a great increase of applications for water for this crop in the Cuddapah and Prodatoor Taluqs, and it should extend to the Sirwell Taluq, and will I think.

21. The Lower Division were paid between the 7th and 13th April 1876.

Dhoor,
7th May 1876.

(Signed) J. O. DUNPHY,
Acting Conservancy Engineer.

IRRIGATION RETURN IN ACRES UP TO END OF APRIL 1876.

Lower Division.

Name of Tank.	Sirvell Taluq.		Kolkanda Taluq.		Jamboolmadugu Taluq.		Pradasoor Taluq.		Divisional Total Areas in Acres.		Total Amount, 1876.	Total Amount, 1875.	Remarks.
	1876.	1875.	1876.	1875.	1876.	1875.	1876.	1875.	1876.	1875.	Rs. A. P.	Rs. A. P.	
1st crop or half double crop.													
Rs.													
6	359·68		55·21		...		193·33		934·70		...		
5	245·19		51·34		...		206·65		647 80		5,608 3 3		
4	...		...		...		...		...		...		
3	409·30		74·62		17·80		809·73		2,337·56		9,350 3 10		
2	626·16		66·89		29·10		330·88		1,078·88		3,236 10 3		
1½	...		...		...		...		...		...		
1	6·08		...		1·13		65·71		182·77		333 8 8		
¾	...		...		...		110·02		118·54		177 13 0		
½	...		...		...		98·90		198·19		198 9 5		
Other Dispatch	...		...		...		...		...		...		
Total	685·68		9·20		41·03		21·94		90·00		*360 5 0		* At Rs. 4 per acre. Sub-soil leakage.
	2,334·69		248·96				1,734·26		6,279·66		22,196 0 4		
2nd crop or half double crop.													
7½	...		...		...		6·47		6·47		48 3 4		
6½	60·89		20·00		...		16·86		37·04		181 9 9		
5½	...		...		...		25·01		111·57		669 6 5		
5	98·19		13·49		...		62·43		62·43		312 3 10		
4½	...		...		...		...		175·68		538 6 5		
4	235·11		51·51		...		116·85		118·36		532 9 10		
3½	161·03		19·65		...		14·55		271·17		1,084 19 11		
3	...		...		...		346·97		457·95		1,373 13 7		
2½	10·73		...		...		...		41·98		102 15 10		
2	29·39		...		...		374·81		388·60		771 3 2		
1½	171·04		81·72		29·41		7·13		93·45		139 11 7		
1	...		...		...		197·96		1,929·71		1,929 11 4		
Other Dispatch	4·83		...		...		...		...		...		
Total ...	705·27		97·37		29·41		1,158·83		4,463		7,705 1 4		Subsoil leakage.
Grand Total ...	3,040·16	1,691·16	345·43	267·67	63·44	53·12	2,893·09	3,216·33	8,503·47	8,163·80	30,201 1 8	25,144 15 10	

(Signed) J. O. DUNPHY,
Acting Conservancy Engineer.

The above agrees with my Office Records,

MADRAS IRRIGATION AND CANAL COMPANY.

Chief Engineer's Report to accompany the Divisional Reports for April 1876.

THE irrigation under the canal, as shown in the lists of the Company's Officers prepared for the settlement now pending, is —

2. 16,246·63 acres, at Rupees 53,239 water-rate, so that the income of the canal will be about Rupees 60,000. Had it not been for the unusual fresh at the end of last month, the amount would have been much lower. This fresh both saved a good deal of crop, and so prevented remission, and also supplied much new crop, and filled several tanks. This, however, did not prevent the season being on the whole a bad one, for the early cessation of water in January made the ryots justly cautious about sowing any second crop dependent on irrigation if they could avoid it.

3. The irregular practices in the Lower Division have received careful attention. Modifications of the rules, in order to make them more simple and effective, have been agreed upon by the Acting Collectors of Kurnool and Cuddapah; and it is intended that further issues for adoption or discussion shall be decided upon at the settlement now commenced, so that the whole may be shortly submitted to Government. Mr. Gribble has invited me to meet him to discuss this subject, and I hope to do so next week. Mr. Foster is also starting presently to satisfy himself personally about the matter.

4. The character of the works now in hand is shown in the divisional reports. The season has been hot; but it is now only 93° in a closed house, and there is usually a nice breeze. Yet cholera is still severe, and I thought it well to visit the canal, and see that every provision and arrangement is made for smoothing the progress of repairs and enabling the Engineers to work with the least possible anxiety and correspondence. I shall see Mr. Dunphy's culverts next week.

5. Except once at Kurnool, there was nothing to call a shower during the month.

6. I am glad to report that cholera seems to have almost entirely avoided the Company's Staff; perhaps they are no great eaters of melons and mangoes. I believe the bad fruit (due to the bad season), such as I have seen exposed for sale in a very unsatisfactory condition, is found by the medical authorities here to be the apparent cause of many attacks of a choleraic kind.

7. The usual table of rainfall accompanies this report.

(Signed) J. H. LATHAM,
Chief Engineer and Manager.

KURNOOL,
17*th May* 1876.

Register of Rainfall in Inches and Decimals of the following Stations during the month of April 1876 *at* 6 A.M. *daily.*

Month and Date.	Soonkasala.	Kurnool.	Jupaud.	Veelupanoor.	Jutoor.	Ayaloor.	Chintacoonta.	Rajoly.	Dhoor.	Adimapully.
1st April 1876 ...	...	...	...	...	...	...	...	...	...	...
2nd " " ...	...	...	...	...	...	...	...	...	...	...
3rd " " ...	...	0·63	...	...	...	...	...	...	...	...
4th " " ...	...	...	...	...	...	...	...	...	...	...
5th " " ...	...	...	...	...	...	...	...	...	...	...
6th " " ...	...	...	...	...	...	...	...	...	...	...
7th " " ...	...	...	...	...	...	...	...	...	...	...
8th " " ...	...	...	...	...	...	0·23	...	...	...	...
9th " " ...	...	...	...	...	...	...	...	...	...	...

Register of Rainfall in Inches and Decimals of the following Stations, &c.—(Concluded.)

Month and Date.	Soonkasala.	Kurnool.	Jupand.	Veelapanore.	Jutoor.	Ayaloor.	Chintacoonta.	Rayly.	Dhote.	Adinapully.
10th April 1876 ...	...	0·34	...	0·30	...	...	...	...	...	...
11th " " ...	...	...	...	...	...	...	...	...	...	...
12th " " ...	...	...	...	...	...	...	...	...	...	...
13th " " ...	...	...	...	...	...	...	...	...	...	...
14th " " ...	...	...	...	...	...	...	...	...	...	...
15th " " ...	...	...	...	...	...	...	...	...	...	...
16th " " ...	...	...	...	...	...	...	...	...	...	...
17th " " ...	...	...	0 10	...	...	...	...	...	0·25	...
18th " " ...	...	...	...	...	...	...	...	...	...	...
19th " " ...	...	...	...	...	...	...	...	...	...	...
20th " " ...	...	...	...	...	...	...	...	...	...	...
21st " " ...	...	...	...	...	...	...	...	...	...	...
22nd " " ...	...	...	...	...	...	...	...	...	...	...
23rd " " ...	...	...	...	...	...	...	...	...	...	...
24th " " ...	...	...	...	...	...	...	...	...	...	...
25th " " ...	...	...	...	...	...	...	...	...	...	...
26th " " ...	...	...	...	...	...	...	...	...	...	...
27th " " ...	...	...	...	...	...	...	...	...	...	...
28th " " ...	...	...	...	...	...	...	...	...	...	...
29th " " ...	...	...	...	...	...	...	...	...	...	...
30th " " ...	...	...	...	...	...	...	...	...	...	...
Total ...	...	0·97	0·10	0·30	...	0·23	...	...	0·25	...

KURNOOL,
17*th May* 1876.

(Signed) J. H. LATHAM,
Chief Engineer and Manager.

SUBMITTED for the information of Government.

A memorandum of proposed revision of the rules, with explanatory notes of the Chief Engineer and Manager, was received a short time ago, and arrangements had been made for printing the existing and proposed rules and the remarks side by side for submission to Government; as it now appears however that further revision is contemplated, the submission of the papers to Government will be postponed.

With letter, No. 37, dated 4th May 1876.

2. It is not understood in connection with the foregoing remarks how the conclusion is arrived at, in paragraph 5 of the Report of the Lower Division, that flooring to the culvert referred to is hardly necessary. If the floor was carried away as mentioned in paragraph 3, not only is such a protection apparently necessary, but it needs to be constructed more substantially than before.

3. Paragraphs 14 and 15 show that the low banks referred to in a former report* were not originally properly completed.

* That for March 1876, G.O., No. 1,123, 8th May 1876.

4. It will be seen that the Chief Engineer's estimate of irrigation for 1875-76, based upon the Canal Officer's returns, is—

Acres	16,246
Rupees	53,239

Proceedings of the Madras Government, Public Works Department,
20th June 1876. *No.* 1,535.

and from the Divisional Reports this is distributed as follows:—

		ACRES.	RS.
Upper Division		6,349·91	23,038*
Lower "		9,896·80	30,201
		16,246·71	53,239

* Not stated in the Upper Division Report; balance entered.

(Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

No. 342. ORDER THEREON, 20th June 1876, No. 1,535.

IRRIGATION, No. 23-AA.

RECORDED. The attention of the Chief Engineer and Manager will be drawn to paragraph 2 of the endorsement by the Chief Engineer for Irrigation.

(True Extract.)

Colonel,
Offg. Under Secy. to Govt., P.W.D.

To the Chief Engineer for Irrigation.
" " and Manager, Irrigation and Canal Company.
" Revenue Department.

Exd. A. Grubert.
Spare Copies

No. 2551
Revenue 1876 Depart.

Govt. of {1876} Madras.

PUBLIC WORKS.

To

THE CHIEF ENGINEER FOR IRRIGATION,

&c., &c., &c.

Dated June 20th,

Issued

Recd. 14 July /76 Encl.

G. O., 20th June 1876, No. 1,535.

14 Feb. Board of Rev. Dist. July

JUNE.

Nos. 341-342.

Madras Irrigation and Canal Company.—The Report of the Chief Engineer and Manager on the Upper and Lower Divisions of the — for the month of April 1876, recorded. No. 1664

communicated to the Bd of Rev

17 July 1876