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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

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Not to be folded or roughly handled

No. 176. Read the following endorsement of the Chief Engineer for Irrigation, dated Ootacamund, 2nd August 1876, No. 127-W:—

No. 176-A. From J. H. LATHAM, Esq., Chief Engineer and Manager, Madras Irrigation and Canal Company, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Camp at Dhooor, 19th July 1876, No. 67.

May Reports.

I HAVE the honor to forward, per book post, the copies of the Upper and Lower Divisional Engineers' Reports, together with my own, for the month of May 1876.

MADRAS IRRIGATION AND CANAL COMPANY.

UPPER DIVISION.

Monthly Report for May 1876.

WATER had stopped running into the canal before the first of this month. The head sluices were shut and under sluices opened according to the notification given in the "Kurnool Gazette" in compliance with the rules.

In the river, water has been very low, and the inconvenience to the people of Kurnool must have been very great, so much so that the idea of constructing a tank to contain a supply for one or two months during the absence of canal water has been seriously entertained, I believe, by the Municipality. It is to be hoped they will carry it out before long.

2. The weather has been excessively hot, not only do Europeans complain, but many Natives have died from the effects of the extreme heat. Only one slight shower of rain fell on the 23rd at Kurnool. The absence of rain in May is uncommon.

3. *Repairs to Canal on Capital Account.*—The third-class bridge at Nidjood (now converted into a second-class) is completed, except the northern approach; but land will be given over immediately and the work finished off.

The bridge at Moongalpand similarly altered is completed for traffic.

The bridge at Massoommusjeed is also finished except some metalling; bandies are making use of the crossing.

The bridge at Bollavaram has been commenced. A masonry wall was here necessary to retain the earth of the upper approach. The foundations of this wall are built, and it is raised 2 feet above bed. The teak rails and cross pieces are on their way to the bridge. The heavy work of both approaches is about seven-eighths finished.

It is necessary to explain paragraph 5 of my report for March, in order to show that there was no delay in the construction of the bridge there referred to. In this paragraph I wrote, "The two new bridges (Singaram and Muchumurry) have been built up as far as possible," i.e., those portions of the bridges which were not in the canal itself. They could not be built above the springing level until the arches were turned, and the arches could not be turned till the piers had been built; the piers could not be put in (without useless expense) until water was out of the canal and the bed sufficiently dry for excavating. This it was thought would not occur till May, but as it has turned out the whole of Singaram bridge is completed to springing level and has been ready for centring for some days. At Muchumurry bridge all the arches have been completed and the centring is ordered to Singaram. This bridge will be completed in June; the former (Singaram) in July, except the lower roadway. This cannot be undertaken until we know the exact position of the road which the Local Fund Board intend to make to join the bridge to the village. Considering that the staff is not organized especially for construction, but principally for the distribution of water, it appears to me that we are fortunate in getting so much done at a critical time and with a staff so seriously reduced.

4. *Repairs charged to Revenue.*—The repairs to the anicut coping and to the under sluice and head sluice shutters were nearly completed. Two new head sluice shutters are being made, and the raising gear is expected from Madras.

The leak in the 6th mile, mentioned in my March report, occurred at water level; all leaks seem to start at that level now; scarcely a case of importance has been found to proceed from below the normal bed level of canal. It is therefore probable that, if water remained in the canal throughout the year, no leaks would occur.

Ten chains of the 6th mile tank (Yeddroor) have had a puddle foreshore placed in front and carried up to 7 feet above bed level. This work cannot now delay the progress of water.

At calingulah No. 1, two large vents are being built in place of the three narrow sluices originally put in. Each new vent is 5 feet wide and 4 feet high, the new floor of the vent being 5 feet below canal bed level.

The shutters for these are being made in the workshop, and raising gear partly from Madras and partly made here will before long be erected.

The foundations are just ready for masonry. These works are protected by a bank against any sudden fresh from the country above.

The bulk of the silt extending from 6 miles 69 chains to the 16th mile stone has been cleared, and in a few days all will be taken out. The work of my office and Amins has been so heavy lately, that I have not been able to get out the quantities.

From Kurnool downwards, with the exception of a raised roadway or tow-path 48 chains long 8 feet top width, and averaging 4 feet high in front of calingulahs 10 and 11, there are only small works going on in the 2nd and 3rd sections.

Loose stones and some rocks above bed level are being taken out of the canal in order to leave a clear course for boats. Some plastering and repairs to walls, sluices, and bridges are being done.

At Nagatoor the sluice built last year to supply the old tank ayacut has to be lengthened, and the next sluice below the bridge No. 83 having shown signs of weakness has been pulled down and will be rebuilt. The old chunam was very faulty; it was built before 1864-65.

At Terrigopully a bad leak occurred in April when the water again filled the canal. As usual it was at water level. The repairs to this had been only partially made. Full directions have been given, since my late inspection, as to the completion of the work. Stone for groynes at the outer slope was collected during the dry weather.

As water is never required in the canal between Lockinsula and Jutoor until August, there is more time to complete repairs in the 6th section, and I hope to report more fully on the same next month.

The locks have to be put in order, and new balance beams fitted to the gates. Seventy teak beams have been ordered for this work.

In the 7th section or Nundial taluq range, the principal work has been the construction of a tunnel for irrigation under Chabole bridge approach on the west and lengthening the old culvert under the east approach. This work was commenced, but was much delayed by cholera, and the unavoidable changes in the staff caused by dismissal of one Overseer and his Amin, and other subsequent changes.

5. *The water-rate settlement* was commenced in Kurnool on the 30th May, and will occupy nearly a fortnight of my time, and seriously interfere with the office work. The illness both of myself and of the Deputy Collector, A. Ramachandra Row, who was appointed on the part of Government, prevented our making arrangements for an earlier meeting. My settlement report will be written in a few days, when the accounts have been compared and abstracted. I would only remark generally that it is a great advantage to have the settlement conducted by this officer on account of his well-known experience in these matters, and, as the new rules are more generally understood by the Revenue Officers as well as our own staff, the settlement work has become much more satisfactory.

6. *Irrigation.*—It is too early to form an estimate of what the coming season's irrigation will be. Unfortunately we have to do with the most backward people in the Madras Presidency. The villagers are the most bigoted conservatives; remarkable only for gross ignorance and low cunning.

This is perhaps the main reason why the spread of irrigation has been so slow, and I think this will be borne out by nine-tenths of the European or Native Officers who have been employed in the Kurnool district.

7. One banker is reported to have died of cholera at Velapanoor. No other cases, and very little sickness has occurred on the staff, although the epidemic has been flying about the district for the last year.

8. The staff were paid from 4th to 16th May 1876.

Register of rain gauge during May 1876 registered at 6 A.M. daily.

Month and Date.	Soonkesala.	Kurnool.	Jupaud.	Velapanoor.	Jutoor.	Aysloor.
1st May 1876 to	...	...	...	...	...	...
24th May "	...	...	...	...	...	0.38
25th " "	...	...	...	...	...	...
26th " " to	...	...	...	...	...	...
31st " "	...	...	...	...	...	...

KURNOOL,
16th June 1876.

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

LOWER DIVISION.

Report for the Month of May 1876.

OWING to the late date at which the water was cut off from the canal, nothing could be done towards the bottoming of the canal near the head sluices at Rajoly and Adimayapully until the 10th; and then the labor was very great, owing to the silt not being sufficiently dry to allow of the free use of tools. Owing to the unusual and fortunate absence of rain, considerable progress has been made in the removal of the silt.

2. From the 10th section at the end of the month nearly 20,000 cubic yards were excavated and thrown on the outer slopes—a distance requiring five carriers to one digger.

3. In the 9th section, commencing from Rajoly, rather more progress has been made, labor being more plentiful, and the coolies being not quite so indolent and indifferent to their interests as to refuse to work, except on unreasonable terms, as is often the case in the Cuddapah taluq.

4. A new Overseer and Tindal have been appointed to the sluices for the 10th section; they have been supplied with instructions on paper, as to how to manage the sluices under any circumstances, and have been given to understand that the slightest deviation from them will not be passed over.

By these means I hope in a great measure to prevent a rapid accumulation of silt. The men do not understand the purpose of the under sluices, or how to use them. Those formerly in charge, by their ignorance, were actually hastening the deposit in the canal.

5. The high banks near Pichapad (170th mile), along the toe of which runs the district road, have been raised and widened to normal proportions; 3,000 cubic yards have been thrown on them at 1 Anna per yard.

6. At the 168th mile, near the Bainapully aqueduct, the banks have been rendered safe by throwing on them about 2,890 cubic yards at 17 yards per Rupee.

7. The banks near mile 177 have been nearly completed (they were only 3 feet top width), the estimate for which amounts to 7,500 cubic yards at 15 yards per Rupee.

8. Other minor earthworks are being pushed on.
9. These banks are in very good condition; here and elsewhere they are carefully attended to by the bankers.
10. The slight repairs to the Penner anicut were finished before the end of the month.
11. The locks, with the exception of four, are nearly completely ready for the water; a great deal of the masonry having been carried on by the staff, and is still in their hands.
12. An invert is being turned under the footings of culvert No. 16; the condition of which has already been noticed in my last report.
13. The bridges, aqueducts, culverts, and channels and other works are receiving attention.
14. Owing to the Lower Division Irrigation Settlements occurring at a time when the canal repairs and foundation inspections should occupy a good deal of my time, I experienced some little difficulty in starting the numerous works, distributed as they are over the whole length of the Lower Division. Although the time until the water will be required is very short, I think every contemplated work will be completed without delaying the opening of the canal.
15. *Irrigation.*—Water was greatly needed this month for indigo, as the month was an unusually dry one.
The crops required a flooding about every eight days, and, as they received no moisture at all, many have perished or greatly suffered.
16. This season the canal has been instrumental in saving directly the crops under several tanks.

Chintacoonta tank, Sirwell taluq; a part of the ayacut under Dhoor tank, Maidoor tank, Palem tank, Sivapooram tank (part of ayacut), Prodatoor taluq; and Soonkesala tank, Nagala Coonta, Palampully tank, part of ayacut of Uppalapully tank, part of ayacut of Dooganapully tank, Cuddapah taluq, were all supplied with canal water.

The crops under several other tanks suffered considerably from want of water. The Patha Cuddapah tank greatly needed water. I understand that an application would have been made had there not been doubt as to the possibility of running in a supply.

17. On the 9th May I met the Nundial Deputy Collector at Chintacoonta for the purpose of settling the irrigation demand for the Koilkuntla and Sirwell taluqs. Nine whole days were expended on this work, and, with the exception of one or two isolated cases of surreptitious irrigation, nothing was done with the mass of this description of irrigation, nearly 1,000 acres, as the Deputy Collector required proof by eye witnesses, and I was unprepared to prove that Amins had seen anything beyond the canal water standing on the fields or found evidences of recent flooding. With so many cases occurring almost at the same time during the unusual absence of rain and so widely separated, I felt sure that each individual case could not be discussed in order to prove, (1) that the ryot had taken the water, and (2) how it had been taken, without the support of the evidence of the Revenue Authorities; especially so long after the occurrences. For some cases the Company's Officers were driven off the fields, and so prevented from gathering those minute details which at settlement it was considered necessary to be provided with, in order to establish a claim for the water.

As the Deputy Collector had no accounts of this class of irrigation, I could only produce my statements and claim the water-rate on the grounds that canal water had daily been seen on fields consisting of wet crops, depending upon no other source except rain-fall, which was unusually small; that similar crops had in the same villages received water on application; that the plots were in almost every case contiguous to *bond fide* wet crops and the irrigation channels, and before the existence of the canal were never sown; and that, in the opinion of the Overseers and Amins, water had been freely taken. All the statements produced by the Overseers at settlement were signed as correct by the Curnum, who it is supposed should know something of these cases. At settlement they were neither disposed to support the Overseer nor to attach much importance, if any, to their signatures.

Under these circumstances, I thought it desirable to refer the matter to the Chief Engineer, as I could not find time to discuss each case; especially as there was no evidence to prove that water had not been taken, except the ryots' denial.

I think it has been pointed out that surreptitious irrigation has nearly doubled in the Sirwell taluq.

The claims for remission for second crop were exceedingly numerous. Each individual cultivator came, apparently schooled in the belief that he should and would get remission if only partial, because the water in the Toombudra ran unusually low for a short time. The water certainly ceased to run to one or two villages for eight days, but this occurred more than four months after the crops had been sown and could not seriously injure them. In the other villages the supply was constant.

The Overseers and Amins were provided with the usual particulars of claims for remission; but in addition the Revenue Inspector had provided himself with a long roll of estimated extent of crop stated to have suffered from want of water. Without the company of the Overseers, he had inspected the crops, not at the time the water is said to have failed, but after the closing of the canal and at times when the water was plentiful. He had carefully calculated the proportion of the crop that had suffered from want of water, and it was always his opinion that his estimate of loss was owing to failure of water, and so submitted these proportions to the Deputy Collector. Of one field, levelled and banded, of the extent of 0.58 acre in Pathacondacoar, Sirwell taluq, it was his opinion that the rate on half the crop should be remitted as it had suffered from want of water. In another case he calculated that one thirty-second part of the crop only was good and should be charged.

The Overseer's opinion in not a single instance coincided with the Revenue Inspector's.

18. I am not yet prepared to give the demand* for these taluqs, as the statements are not yet complete. The amount will be considerably larger than last year's.

19. On the 22nd May I met the Acting Deputy Collector of Cuddapah at Adimayapully to settle the irrigation demand for the Cuddapah district; this was completed in five days.

The Collector, Mr. Gribble, also came down specially to make himself acquainted with this mode of settlement, to ascertain how the rules had worked, to lend his aid in the event of any difference of opinion, and to ascertain what obstacles there were to the spread of irrigation, so that he might take steps to remove them.

20. The area was much larger on this district than that I had to deal with previously; but in nearly every case of remission, the Overseers and Revenue Inspectors had visited the spots together by appointment, and each was provided with a statement which was prepared on their mutual opinions at the time of inspection.

Nearly all the cases of unapplied irrigation were supported by the Revenue Inspector's testimony, and in some cases by the village authorities.

I give below an abstract from the final demand for the season for the Cuddapah district, being an increase of Rupees 1,448 for these taluqs on last season's demand:—

Cuddapah District, Season 1875-76.

							Area.	Demand.
							ACRES.	RS. A. P.
Cuddapah taluq	...	...	...	...	...	...	2,759.05	8,956 14 10
Prodatoor do.	...	...	...	...	...	...	3,106.45	10,361 6 7
Jummalamadoogoo	...	...	...	...	...	...	63.44	164 6 8
Total ...							5,928.94	19,482 12 1

*Proceedings of the Madras Government, Public Works Department,
7th August 1876. No. 2,033.*

21. The staff were paid by me in camp from 1st to 16th May.
22. Health has not been very good at Dhoor; elsewhere it is generally good.

COONOR,
8th June 1876.

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

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

THERE has been no rain during the month in either division, except a shower at Ayaloor on the 25th, and at Yaloor on the 27th. This has been favorable for the excavation of silt. So far as I can understand, the quantity of silt in the Upper Division had been over estimated. Ail seems to have been cleared out, and the water has reached the 28th mile of canal; there, owing to the Toombudra falling below the sill of the head sluices, its progress will for a time be checked. The Lower Division is likely to be ready for the water whenever it should arrive.

2. I visited Kurnool and Soonkesala in the middle of the month, counted the Upper Division cash, finding it all right, and also the cash in the Chief Accounting Office; there I found a discrepancy of a Rupee and some Annas due, it was explained, to some imperfectly booked payments on post letters. I left all arrangements for repairs and construction in a satisfactory state.

3. On the 22nd I met Mr. Gribble, Mr. Dunphy, and the Deputy Collector, at Adimayapully, that being the first day of the settlement for Cuddapah district, and the interpretation of the present, and proposals for future, rules for water-supply were discussed.

4. The staff of the Revenue Department and of the canal in contact with the ryots was probably never in such good working order as now in any part of the canal. It is a matter of secondary importance that some Revenue Inspectors in the south of Kurnool district have been irregular (see Mr. Dunphy's reports) in not reporting crops when suffering for want of water. It involves an area of some 50 acres only, I am informed. The first thing is to ensure, within reach of every ryot, some officer, whether a Curnum or Canal Amin, to whom he can apply for water with a certainty of civil attention and accurate advice; and to that great end the heads of the department have, with encouraging success, hitherto worked. As to remissions, there will be no harm if a little more time can be allowed to convincing the Canal Overseers and Amins that, within the rules, the Company desires to be liberal in remissions. Here and there are some who do not understand, or remember, this, and this may have led to the misunderstanding on the part of the Inspectors.

5. Mr. Wilks has suffered from fever during the month. I may add that (during this month June) both Mrs. Wilks and her infant son have been for days in danger, and have required constant attention. This, no doubt, has been one cause of the delay of Mr. Wilks' report. I remove my head-quarters to Kurnool during the course of next week.

6. Referring to G.O., No. 1,123, of 8th May, Mr. Wilks' report explains what is being done to the canal bank in the 6th mile and to the bridges. In the Lower Division, the left bank of the 9th section was constructed only 3 feet wide at the top, 3 feet above full water. Where the banks are lofty, as at the approaches to aqueduct and to the upper side of locks in the navigable part of the canal which has not been in use, they had sunk very much where of bad earth, and it is time to make them fully up again.

7. At no time has any water been taken from the Penner which had not been brought into it from the Toombudra, so far as could be calculated.

OOTACAMUND,
23rd June 1876.

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

SUBMITTED for the information of Government.

(Signed) JOHN MULLINS, Lt.-Col., R.E.,
Chief Engineer for Irrigation.

*Proceedings of the Madras Government, Public Works Department,
7th August 1876. No. 2,033.*

No. 177.

ORDER THEREON, 7th August 1876, No. 2,033.

IRRIGATION, No. 16.

ORDERED to be recorded.

(True Extract.)

[Signature] Colonel
Offg. Under Secy. to Govt., P.W.D.

To the Chief Engineer for Irrigation.
" and Manager of Madras Irrigation and Canal Company.
" Examiner of Irrigation Company's Accounts.
" Revenue Department.

Exd. E. C. Shunker.

24 Spare Copies.

Communicated to the
Govt

26 August 1876