M.R.O. 1—77,006—8-6-51.

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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 2212-13 Press
2214-217 Mis.

Dated 25 9 1871.

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 25th September 1871.

Read the following papers :—

No. 414. Endorsement of the Under Secretary to Government in charge of Office of the Chief Engineer for Irrigation, dated Fort St. George, 11th August 1871, No. 63.

From the Agent and Manager of the Madras Irrigation and Canal Company, to the Acting Chief Engineer for Irrigation and Under Secretary to Government, dated Madras, 4th August 1871, No. 340.

THE Order of Government No. 1,975, of the 27th July, having been communicated to me, I have the honour to request that you will do me the favour to submit to the Right Honourable the Governor in Council the following representations :—

2. It is said that the Government cannot acquiesce in the propriety of the "Company's proceedings in deferring, or, more correctly speaking, dispensing with "that test which the Government in the strongest terms prescribed the necessity "for, and which has been dispensed with on the pretext that it would alarm the "ryots and injuriously affect the prospects of irrigation."

3. I beg most respectfully to assure His Excellency in Council that, on behalf of the Company, I have taken no proceedings whatever; in other words, the Company has taken no proceedings whatever.

4. It will, I imagine, be conceded that a work cannot be tried, or tested, until it is executed; and the Company was required by the supplementary contract to execute the Kurnool-Cuddapah Canal *by the 1st July* 1871.

5. *Before* that day Captain Scott, by order of Government, inspected the works and reported that, even in the middle of June, "the canal and its appurtenances "might be considered to be completed in reference to the *sanctioned plans*."

6. As explained in another communication, I never did, nor do I now, believe it to be my duty on behalf of the Company to take the initiative in any proceedings for *offering* to Government proofs of the completion of the *canal*. I think you will find that it has always been customary upon the passing of any order by the Government which required the Agent to take any action or to afford information, it has, I think, been the invariable custom for the Consulting Engineer to communicate to me *by letter* the directions or queries of the Government, and although I have in *some* cases anticipated such communication, yet I have never been expected to act until so advised. As an illustration permit me to refer to your No. 107 of the 1st instant.

No. 321 of 22nd July.

7. The test "which the Government prescribed the necessity for" is a process of a purely professional character, and one which, I imagine, demands a certain amount of care and professional skill to carry out, and I submit that I was fully justified by the nature of the case in assuming that the Government would intimate to me the *time* when the prescribed test should be applied, and in assuming also that they would make arrangements for being represented by some officers who would, on their behalf, watch the process.

8. I have never, on behalf of the Company, been called upon to direct the application of the test "which the Government prescribed the necessity for," and I trust that His Excellency in Council will perceive that the Company is guiltless

of having knowingly or willingly taken any proceedings at variance with the views expressed by Government, much less has it been the intention of the Company to seek a "*pretext*" for evading any of its liabilities. I have read the correspondence which took place between Captain Scott and Mr. Latham, and I can detect in the letter written by the latter nothing but an honest, straight-forward and *bona fide* desire that the ryots (although they are the special charge of the Government, not the Company,) should run no risk of damage, and a perfect readiness to test the canal whenever, upon a due consideration of the attendant circumstances and of the various interests at stake, the Government should see fit to direct the operation.

9. His Excellency in Council will, I trust, concede to me that the action (or, to speak more correctly, inaction,) of the Company having been misunderstood and called in question, it is my duty, without delay, to offer such explanations as will, I hope, place the matter in its true light.

10. But there is another point in which I respectfully submit the Government have been misled. It is stated in the same paragraph 5, that because "the amount "of Rupees 43,974 is so insignificant," therefore "they cannot acquiesce in the "propriety of the Company's proceedings in deferring that test which the Govern-"ment prescribed the necessity for."

11. It will, I presume, be admitted that, if the premise is shown to be erroneous, the sequence of necessity falls to the ground. But, in arriving at the *sum* which forms the basis of this syllogism, a serious error has been fallen into: the water-rate fixed by the Government is *Rupees* 6, not Rupees 4, nor Rupees 2. The amount therefore instead of being only Rupees 43,974 should be Rupees 70,630, taking the estimates of the *Revenue Officer of the Government* as shown in paragraph 9 of Captain Scott's report.

12. It does not come within my province to offer any remarks upon the *professional* points upon which objections are raised, but there are one or two observations, in reference to the state of the works reported on, upon which, without trenching upon professional ground, I feel it my duty to comment.

13. In paragraph 2 it is said that—

(1.) "The earthern banks have not been satisfactorily formed;
(2.) "That there is a general absence of consolidation; and,
(3.) "That their satisfactory appearance from neat trimming is delusive.
(4.) "That in other portions the banks are formed of bad soil,
(5.) "And being loosely thrown up and at random are
(6.) "Further deficient in the protection that a covering of grass would "afford."

14. With regard to (2) consolidation, I submit that banks contracted to be *finished* by the 1st July could hardly be expected to be *consolidated* early in June, consolidation being only attainable by time. But the nearest approach to instantaneous consolidation is obtained by (3) *trimming* which, I infer from the language used by Captain Scott in paragraph 2 of his report, would tend to present the "guttering by rain" to which (5) banks loosely thrown up are liable. But while the latter are condemned without qualification, the former are condemned as "delusive."

15. With regard to (4) *bad soil*, I presume that the only reason for using it was that nature had refused good soil on the spot, and that the estimates sanctioned by Government did not admit of the costly alternative of sending to a distance for that which would have been better. (6.)—The absence of grass, I imagine, is to be accounted for in a somewhat similar manner. I know that the encouragement of vegetation on the canal banks is a subject that has always been kept in view; but it will be remembered that climate and the vicissitudes of the seasons have to be contended with, and when the peculiarly severe conditions of the supplemental contract are considered, and the extraordinarily short period allowed to the Company to complete a gigantic work, it is obvious that but little time could have been left for the Engineer's to devote to this secondary work.

16. I trust, therefore, that His Excellency in Council will bear with me if I venture to submit that, whatever may be the force and purview of the contract read in its strict literal sense, its *spirit* can surely never have contemplated instantaneous consolidation and vegetation as indispensable or essential conditions of completion.

17. It scarcely falls within my province to go further into the essential questions raised by the order of Government. Those will be fully discussed by His Grace the Secretary of State with the Directors of the Company; but it has seemed to me imperative that I should, without delay, enter on behalf of the Company this preliminary protest on minor but salient points, and I trust to the candour of His Excellency in Council to accept with indulgence and favour what I have ventured to submit.

SUBMITTED to Government.

The remarks made by the Agent relative to the action of the Company's officers on the question of testing the canal do not appear to call for any remark from me.

2. The rates taken in my report as leviable for the water supplied from the canal were derived from the letter of the Consulting Engineer to Government, dated 21st April 1871, No. 13, which gives a statement of probable revenue for 1871-72 very similar to my own. Under the orders quoted in the margin this statement was forwarded to the Government of India.

15th May 1871, No. 1,339.

The latest decision of Government, however, on the question of the water-rate to be credited to the Company, rules that Rupees 6 per acre per crop should be charged to the cultivators, and unquestionably that rate should be adopted in each estimate of revenue for the current year. I therefore lose no time in bringing to the notice of Government the correction in the amount of *possible* revenue entered in my statement, which is thereby necessitated; but it will be admitted that, in framing an estimate of this kind, the probable remissions should be taken into consideration; now this was not done in the account objected to by the Agent, and as I find that, while the full demand since the season of 1865 has been Rupees

1st June 1866, No. 1,348.

41,078, the net demand, or demand less remissions, was only Rupees 31,515; it is obvious that about one-fourth of the full assessment is generally lost. I have made the necessary deduction, and the account as corrected will stand thus:—

	Rs.
8,883 Acres, 1st crop, at 6 Rupees	53,298
2,221 „ 2nd „ 6 „	13,326
	66,624
Deduct average remissions, 25 per cent.	16,656
	49,968
Probable net demand	4,000
Add Kurnool town supply	53,968
Probable revenue, 1871-72	

This amount is less than one-third per cent. on the expenditure incurred of capital and interest thereon, and Government will probably not agree with the Agent that there is now ground for modifying the terms used in the G. O. on my report, which describes the calculated revenue as an insignificant return on that expenditure.

Moreover, it must be borne in mind that the abstract of acreage to be irrigated during the present season is simply based on verbal statements made by curnums and ryots. The villagers assert in each case that if water is available they will bring into wet cultivation certain fields, but as they do not make formal applications for water there is no guarantee whatever that they will act up to their present declared intentions; and taking into consideration a number of facts conveying concurrent testimony, I shall be much surprised if more than from one-half to two-thirds of the areas supplied by the Deputy Collectors is taken up for irrigation.

3. Government will no doubt at once perceive that the Agent of the Company misconceives the deductions which my remarks on the general condition of the canal embankments should lead to. I should hardly have imagined that the subject was so technically alluded to as to be at all unintelligible to a non-professional reader, but perhaps I had better explain that the great defect in the earthwork, at least so far as regards the great mass of it, is an entire want of method in laying it; a disregard in fact of the ordinary rules acknowledged by Engineers as necessary to be observed in the formation of embankments to resist the pressure of water.

7. The ground on which the bank was to rest should have been cleared of vegetation and broken up and the earth laid in even layers. It was thrown at random.

8. The layers should be tamped or watered and the better soil selected and placed next to the water. The earth was not compressed at all or watered, and there was no arrangement of soil. The outside of the banks has in most cases been sloped and trimmed and patted down neatly enough, but it can hardly be necessary to point out to any one that, that kind of thing cannot be safely substituted for the method of formation, layer by layer, under a rammer. In short the care and precautions necessary in forming embankments in all soils, but especially necessary in soil of bad quality, have been admittedly neglected, and it will require time and the

thorough saturation of the banks by water cautiously admitted into the canal as well as large additions of earth to compensate for their sinking, to bring them into anything approaching a satisfactory state.

(Signed) A. deC. SCOTT, Captain, R.E.,
Under Secretary to Government,
In charge of Office of the Chief Engineer for Irrigation.

No. 415. Endorsement of the Officiating Chief Engineer for Irrigation and Joint Secretary to Government, dated Fort St. George, 31st August 1871, No. 71.

From the Agent and Manager of the Madras Irrigation and Canal Company, to the Acting Chief Engineer for Irrigation and Under Secretary to Government, dated Madras, 29th August 1871, No. 369.

I HAVE the honour to forward the Chief Engineer's Report for the month of July 1871.

Chief Engineer's Report to accompany Divisional Reports for July 1871.

THE rainfall in July and, so far, in August (24th) has been below the average, and the crops, which were got in unusually early in the light showers, suffering from drought, yet the Toombuddra, and especially the Kistna, have not been unusually low.

2. By about the middle of July the Conservancy Engineers had fully taken over charge, and began to carry out channels wherever there was reasonable hope of the water being taken up this or next season. In a great number of cases, probably the majority, the ryots seem to have decided against waiting for water, and took advantage of the fine, cloudy weather for getting in dry crops. They are suffering for this, and, in some cases, doubtless regretting it. No doubt reports tending to produce doubt and uncertainty as to the working of the canal under uniform management during the whole season have existed; and I do not see how they should not decide ryots in favour of postponing the experiment of irrigation until the supply should have been proved trustworthy. Notwithstanding a few trials of flooding* which have been successfully tried by ryots, I anticipate a smaller extent of irrigation than has been estimated. It is difficult yet even to estimate the probable extent of wet cultivation. It is daily increasing and may double.

* About 500 odd acres.

3. I have urgently impressed on all Engineers the immense importance of keeping a *constant* flow through all channels. A decrease of flow alarms a ryot lest it fail altogether; whereas an increase of flow is apt to breach his little banks and cause him trouble, if not loss. The work to be done is very extensive, each of the four Engineers has an area of about half the size of Oxfordshire or Berkshire. His length of 50 miles of canal is the full length of those counties, and has irrigating channels of a few miles in length, only, until it gets near the water-shed of the country, and it then irrigates right and left for a breadth of 7 to 12 miles. Hence the shape of the country in the Engineer's charge is very much as if one of those counties were reduced to half its actual breadth at every point, but the length left unaltered. Within this area the Engineer is to be prepared to supply water on any field that requires it, and not only that but if he is to get any water taken he must convince the ryots that they may rely upon his supplying the water.

4. The progress made in supplying water since the middle of July has, I consider, been very creditable, but the ryots need experience ; and I was painfully amused to see the profound, as well as joyful, surprise with which they found the water actually reach their fields. Their belief that it would ever do so seems to have been very low, and their offers to irrigate may have been often rather made in bravado. Large meetings of ryots were being held near the 115th mile on the question whether to irrigate or no. The way in which a whole village turns out to see the first field or two flooded also shows the stir and interest awakened by the presence of water in their villages.

5. No accidents have occurred. The canal banks seem to have stood well. In some straight reaches in the 9th section the wind has been blowing very strong for days in the direction of the reach, but I saw no banks cut up to an extent of more than about one-twelfth of a cubic yard per yard run, washed down half a yard. The small works by which drainage is to cross channels are being made so capacious as to prevent the breaching of channels by floods, but the process is tentative, and, in some places, works are omitted for this season.

6. It has been impossible to get returns of the number of acres actually irrigated under 2,000, I fear.

KURNOOL,
24th August 1871.

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

SUBMITTED to Government.

With the above letter the Agent and Manager forwards a copy of the Chief Engineer's report for the month of July.

2. It will be observed that that Officer now estimates that the extent of land actually irrigated from the canal is under 2,000 acres, and it is to be feared that at this advanced period of the season but little more will be taken up.

3. The fact that the water has been so far retained by the works would be more satisfactory if the announcement could be accompanied by information that the depth of water admitted was anything approaching that which represents the full supply, but there is no information whatever on this point.

(Signed) A. deC. SCOTT, Captain, R.E.,
Offg. Chief Engr. for Irrigation.

No. 416. ORDER THEREON, 25th September 1871, No. 2,442.

IRRIGATION, No. 23.

THE Agent of the Madras Irrigation and Canal Company will be referred to the report of the Company's Chief Engineer for May printed with G. O., No. 1,897, 18th July 1871, and to that gentleman's letter to Captain Scott, dated 16th June 1871, printed with G. O., No, 1,975, dated 27th idem. The error in the rates on which the calculation of possible revenue for the current year is based, and which were adopted by Captain Scott from a report by the late Consulting Engineer, is to be regretted, but the Government are not of opinion that the amount of revenue that will be realized this year will prove greater than the sum already estimated.

2. These Proceedings will be communicated to the Secretary of State and to the Government of India.

(True Extract.)

(Signed) J. CARPENDALE, Colonel, R.E.,
Secretary to Government.

No. 417. (DOCKET No. 2,443, dated 25th September 1871.)

COPY of the above forwarded to the Government of India, in continuation of docket, No. 1,976, dated 27th July 1871.

(True Extract.)

(Signed) J. CARPENDALE, Colonel, R.E.,
Secretary to Government.

Exd. S. T. Augustin

Madras Irri: and Canal Co.

No. 340.

Madras 4th August 1871.

From.

The Agent and Manager.
M. I. and C. C.

To.

The Acting Chief Engineer
for Irrigation and
Under Secretary to Government.
Madras.

Sir,

The Order of Government No. 1975
of the 27th July having been Communica-
ted to me, I have the honor to request
that you will do me the favor to
submit to the Right Honorable the
Governor in Council the following
Representations.

2. It is said that the Government can-
not acquiesce in the propriety of
the Company's proceedings in deferring
or more correctly speaking dispensing
with that Test, which the Government
in the strongest terms prescribed the
necessity for, and which has been
dispensed with on the pretext that
it would alarm the Ryots and injur-
iously affect the prospects of irrigation.

3. I beg most respectfully to assure
the

His Excellency in Council that on behalf of the Company I have taken no proceedings whatever;- in other words the Company has taken no proceedings whatsoever.

4. It will I imagine be conceded that a work cannot be tried or tested until it is executed, and the Company was required by the Supplementary Contract to execute the Kurnool Cuddapah Canal by the 1st July 1871.

5. Before that day Captain Cotton by order of Government inspected the works and reported that, even in the middle of June the Canal and its appurtenances might be considered to be completed in reference to the Sanctioned Plans.

6. As explained in another communication (No 321 of 22 July) I never did nor believe it to be my duty on behalf of the Company to take the initiative in any proceedings for affording to Government proofs of the completion of the Canal. I think you will find that it has always been customary upon the passing of any order by the Government which required the Agent to take any action or to afford information - it has I think been the invariable custom for the Consulting Engineer to communicate to me by letter the directions or queries of the Government and although I have in some cases anticipated such communication, yet I have never been expected to act until so advised. As an illustration permit me to refer to paragraph No 10 of the 1st instant.

7. The Test which the Government prescribed the necessity for is a process of a purely professional character, and one which I imagine demands a certain amount of care and professional skill to carry out - and I submit that I am fully justified by the nature of the case in assuming that the Government would intimate when the time when the prescribed Test should be applied, and in assuming also that they would make arrangements for being represented by some Officers who would on their behalf watch the process.

8. I have never on behalf of the Company been called upon to direct the application of the Test which the Government prescribed the necessity for and I trust that His Excellency in Council will perceive that the Company is guiltless of having knowingly or wilfully taken any proceedings at variance

variance with the views expressed by Government - much less has it been the intention of the Company to seek a pretext for evading any of its liabilities. I have read the correspondence which took place between Captain Scott and Mr Pattison, and can detect in the letter written by the latter nothing but an honest straightforward and bona fide desire that the Rajah (altho they are the Company) should run no risk of damage to the Canal whenever upon a due consideration of the attendant circumstances and the various interests at stake the Govt. should see fit to direct the operation.

9. His Excellency in Council will I trust concede to me that the action (or to speak more correctly inaction) of the Company having been misunderstood and called in question, it is my duty without delay to offer such explanations as will shape aright the matter in its true light.

10. But there is another point in which I respectfully submit the Government have been misled. It is stated in the same para 5 that because the amount Rupees 43,974 is so insignificant therefore they cannot acquiesce in the propriety of the Company's proceedings in deferring that test which the Government prescribed the necessity for.

11. It will I presume be admitted that if the premise is shown to be erroneous the sequence of necessity falls to the ground. But in arriving at the sum which forms the basis of the syllogism a serious error has been fallen into - The water Rate fixed by the Government is Rupees 5 not Rupees four or Rupees two. The amount therefore instead of being only 43,974 Rupees should be 70,630 Rupees taking the Estimate of the Revenue Officers of the Government as shown in para 9 of Captain Scott's Report.

12. It does not come within my province to offer any remarks upon the professional points upon which objections are raised. But there are one or two observations in reference to the state of the works reported on, upon which without trenching upon professional ground I feel it my duty to comment.

13 In para 2, it is said that
(1.) the earthen banks have not been

satisfactorily formed.

(2.) That there is a general absence of consolidation and

(3.) That their satisfactory appearance from neat trimming is delusive.

(4.) That in other portions the banks are formed of bad soil

(5.) And being loosely thrown up and of

(6.) Further deficient in the protection that a covering of grass would afford;

14. With regard to (2.) Consolidation I submit that banks contracted to be finished by the 1st July could hardly be expected to be consolidated early in June, consolidation being only attainable by time. But the nearest approach to instantaneous consolidation is obtained by (3.) trimming which I infer from the language used by Captain Scott in para 2. of his report would tend to prevent the "settling in" to which (5.) banks loosely thrown up are liable. But while the latter are condemned without qualification the former are condemned as delusive.

15. With regard to (4.) bad soil I presume that the only reason for using it was that nature has refused good soil on the spot and that the Estimates sanctioned by Government did not admit of the costly alternative of sending to a distance for

that

that which would have been better.

16. (6.) The absence of grass I imagine is to be accounted for in a somewhat similar manner I hope that the encouragement of vegetation on the Canal Banks is a subject that has always been kept in view - but it will be remembered that Climate and the vicissitudes of the seasons have to be contended with - and when the peculiarly severe conditions of the supplemental contract are considered and the extraordinarily short period allowed to the Company to complete a gigantic work it is obvious that but little time could have been left for the Engineers to devote to this secondary work. I trust therefore that His Excellency in Council will bear with me if I venture to submit that whatever may be the force and provisions of the Contract read in its strict literal sense - its spirit can surely never have contemplated instantaneous consolidation and Vegetation as indispensable or essential conditions of completion.

17. It scarcely falls within my province to go further into the essential questions raised by the Order of Government - those will be fully discussed by this Office the Secretary of State with the Directors of the Company - but it has seemed to me imperative that I should without delay

delay under on behalf of the Company this preliminary protest on minor but salient points - and I direct to the conduct of His Excellency in Council to accept with indulgence and favor what I have ventured to submit.

I have the honor to be
Sir
Your Most obedt Servant.
H. Mantell Hearn Cox
Agent and Manager.

No 340 Public Works Dept
From The Govt Madras
To The Agent & Manager
Madras Irrigation & Canal Co
Dated Fort St George 15th May 1871

Read & Recorded by
Division Engineer
Kistna Project

To Submit for the Consideration
of Government
a Comment on Captain
Scott's letter on the
Company's Works
G.O. No 1970 dated 27th July 1871

Received 29th May 1871

No 63.

From the Agent and Manager Madras Irrigation and Canal Company Dated 4th August 1871.
No 340.

Submitted to Government.

The remarks made by the Agent relative to the action of the Company's Officers in the question of testing the Canal Sluices appear to call for any remark from me.

The gates taken in measuring the discharge through the sluices were derived from the letter of the Consulting Engineer to Government dated 27th April 1871 No 13 which gives an Estimate of probable Revenue for 1871-72. very similar to my own. Under the orders quoted in the margin this statement was forwarded to the Government of India.

15th May 1871 No 1339

1st June 1866. No 1348

The latest decision of Government however on the question of the Canal sale to be credited to the Company rules.

that Rs 8. per acre per crop should be charged to the cultivators and unquestionably that rate should be adopted in each Estimate of Revenue for the current year. I therefore lose no time in bringing to the notice of Government the Corrections in the amount of possible Revenues stated in my statement, which is thereby necessitated: but it will be admitted that in framing an Estimate of this kind the probable remissions should be taken into Consideration, and this was not done in the case of the Estimate by the late Agent. And as I find that while the full demand since the season of 1865 has been Rs 41078 the nett demand or demand less remissions has only Rs 31.615; it is obvious that a fourth of the full assessments is generally lost. I have made the necessary deduction but the accounts as corrected will stand thus.

8883 Acres 1st Sort at 6 Rs 53,298.
3221 " 2d " 6 " 13,326
66624
Deduct Average remissions 25% 16,656
Probable nett demand — 49,968.
Add Municipal Town supply — 4000
Probable Revenue 1871-72 53968

This amount is less than one third per Cent on the expenditure incurred of Capital and interest thereon and Government will probably not agree with the Agent that there is now ground for modifying the terms used in the G.O. on my report which describes the Calculated revenue as an insignificant return on that expenditure.

Moreover it must be borne in mind that the Abstract of Acreage to be irrigated during the present season is simply based on verbal Statements made by Cummums and by the Villagers assent in each case that as much water is available they will bring into wet Cultivation certain fields, but no they do not make formal applications for water there is no guarantee whatever that they will act up to their present declared intentions and taking into Consideration a number of facts conveying concurrent testimony

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I shall be much surprised if more than from one half to two-thirds of the Areas supplied by the Deputy Collectors is taken up for irrigation

3 Government into no doubt at once perceive that the Agent of the Company misconceived the deductions which my remarks on the general condition of the Canal embankments should lead to. I should hardly have imagined that the subject was to technically alluded to as to be at all unintelligible to a non-professional reader but perhaps I had better explain that the great defect in the earth work at least so far as regards the great main of it is an entire want of method in laying it, a disregard in fact of the ordinary rules acknowledged by Engineers as necessary to be observed in the formation of embankments to resist the pressure of water.

The ground on which the bank

had to rest should have been cleared of vegetation and broken up and the earth laid in even layers. It was thrown at random

The layers should be tamped or watered and the better soil selected and placed next to the water. The earth was not compressed at all or watered and there was no arrangement of soils. The outside of the banks has in most cases been sloped and trimmed and patted down neatly enough but it can hardly be necessary to point out to any one that that kind of thing cannot be safely substituted for the method of formation layer by layer under a rammer. In short the care and precautions necessary in forming embankments in all soils but especially necessary in soil of bad quality have been admittedly neglected. The Engineer trusted to the thorough saturation of the banks by water admitted gradually into the

Cautiously

Canal as well as large additions of earth to compensate for their sinking to bring them into anything approaching a satisfactory state.

Alex. Scott
Capt. R.E.
Under Secy to Govt. in charge of office

Office of the Ch. Engr. & Secy to Govt.
Fort St. George 11 Aug. 1871

To
The Secretary to Government
Public Works Department

No. [illegible]

Chief Engineer's Office
Kurnool 24th August 1871

Chief Engineer's Report to accompany Divisional Reports for July 1871.

The rainfall in July and so far in August (24th August) has been below the average, and the crops, which were got in unusually early in the light showers, suffering from drought yet the Toombuddra and especially the Kistna have not been unusually low.

By about the middle of July the Conservancy Engineers had fully taken over charge, and began to carry out channels wherever there was reasonable hope of the water being taken up this or next season. In a great number of cases probably the majority the ryots seem to have decided against waiting for water, and took advantage of the fine cloudy weather for sowing in dry crops. They are suffering for this, and in some cases doubtless regretting it. No doubt reports tending to produce doubt and uncertainty as to the working of the Canal under uniform management during the whole season have existed; and I do not see how they should not decide ryots in favor of postponing the experiment of irrigation until the supply should have been proved trustworthy. Notwithstanding a few trials of flooding[*] which have been successfully tried by ryots I anticipate a smaller extent of irrigation than has been estimated. It is difficult yet, even to estimate the extent of wet cultivation. It is daily increasing

[*] About 800 acres

canal as well as larger additions of earth to compensate for their sinking to bring them into anything approaching a satisfactory state.

Alex Scott
Capt. R.E.

Office of the Ch. Eng.
for Irrign. & Devt.
Secy to Govt.
Fort St. George 11 Aug. 1871

Audit [illegible] Secy to Govt.
in charge of office
of Ch. Eng. for Irrign.

To
The Secretary to Government
Public Works Department

20 June/66 No. 422-[illegible]
15 May/70 — 277-279

P. W. S[illegible] dated
11 Octr. No. 22 of 1871

P. W. 1871 Dept.
From
[illegible] No. 3852.
The Under Secretary
to Government P.W.D.

To
The Secretary to
Govt. P.W.D.

Dated 11th August
Recd [illegible]

No. 63
Enclo: one

Submits with remarks a letter from the Agent commenting on his Report on the Company's works.

No. 414
[illegible] 17 Aug 1871

No. 2442-2443-25 Sept. /71

No. [illegible]
12

Chief Engineer's Office
Kurnool 24th August 1871

Chief Engineer's Report to accompany Divisional Reports for July 1871.

The rainfall in July and so far in August (24th August) has been below the average, and the crops, which were got in unusually early in the light showers, suffering from drought yet the Toombuddra and especially the Kistna have not been unusually low.

By about the middle of July the Conservancy Engineers had fully taken over charge, and began to carry out channels wherever there was reasonable hope of the water being taken up this or next season. In a great number of cases probably the majority the ryots seem to have decided against waiting for water, and took advantage of the fine cloudy weather for getting in dry crops. They are suffering for this, and in some cases doubtless regretting it. No doubt reports tending to produce doubt and uncertainty as to the working of the canal under uniform management during the whole season have existed, and I do not see how they should not decide ryots in favor of postponing the experiment of irrigation until the supply should have been proved trustworthy. Notwithstanding a few trials of flooding* which have been successfully tried by ryots

* About 500 acres

I anticipate a smaller extent of irrigation than has been estimated. It is difficult yet, even to estimate the probable extent of wet cultivation. It is daily increasing

increasing, and may double.

I have urgently impressed on all Engineers the immense importance of keeping a constant flow through all channels. A decrease of flow alarms a ryot; let it fail altogether; where as an increase of flow is soft to his land his little banks and cause him trouble, if not loss. The work to be done is very extensive each of the four Engineers has an area of about half the size of Oxford Shire or Berk Shire. His length of 80 miles of canal is the full length of those counties, and has irrigating channels a few miles in length, only, until it gets near the watershed of this country; and it then irrigates right and left for a breadth of 7 to 12 miles. Hence the shape of the country in the Engineer's charge is very much as if one of those counties were reduced to half its actual breadth at every point but the length left unaltered. Within this area the Engineer is to be prepared to supply water on any field that requires it: and not only that, but if he is to get any water to flow he must convince the ryots that they may rely upon his supplying the water.

The progress made in supplying water, since the middle of July, has been very creditable but the ryots need experience; and I was painfully annoyed to see the profound as well as joyfull surprise with which they fields. Their belief that it would ever do so seems to have been very low, and their offers to irrigate may have been often rather made in braggadocio. Large meetings of ryots were being held near the 11th mile on the question whether to irrigate or no. The way in which a whole village turns out to see the first field to

two flooded also shows the strength and interest awakened by the presence of water in their villages.

No accidents have occured. The canal banks seems to have stood well. In some straight reaches in the 9th Section the wind has been blowing very strong for days in the direction of the reach but I saw no banks cut up to an extent of more than about ½ of a cube yard per yard run, washed down half a yard. The small works by which drainage is to cross channels are being made so capacious as to prevent the breaching of channels by floods but the proofs is tentative, and in some places works are omitted for this season.

It has been impossible to get returns of the number of acres actually irrigated under 2000 Spear.

[Signed] J. H. Latham
Chief Engineer

[True copy]
[Signed] C. D. Mathews
Asst to Chief Engineer

No 369

Mc. Laurie. Esq.
Madras 29th August 1841

From,
The Agent and Manager
Mc. Laurie. Esq.

To,
The Secretary to Chief Engineer for Irrigation
and Under Secretary to Government.

Sir,

I have the Honor to forward the Chief Engineer's Report for the Month of July 1841.

I have the Honor to be
Sir,
Your Most Obedient Servant
F. Mantell Rous Cox
Agent and Manager.

No 71.

From Agent and Manager Madras Irrigation and Canal Company - No 369. - 29th August 1871.

Submitted to Government.

With the above letter the Agent and Manager forwards a copy of the Chief Engineers report for the month of July.

It will be observed that that officer now estimates that the extent of land actually irrigated from the Canal is under 2000 Acres and it is to be feared that at this advanced period of the season but little more will be taken up.

The fact that the water has been so far retained by the works would be more satisfactory if the announcement could be accompanied by information

That the depth of water admitted was anything approaching that which re-presents the full supply but there is no information whatever on this point.

Office of the Chief Engr. & Supt. Leeyes Govt.
Fort St. George 31st Aug. 1871

Capt R.C.
Offg. Chief Engr. & Supt. Leeyes Govt.

To
The Secretary to Government
Public Works Department.

R. W. Sealy Acting Clerk
11th Oct. 1871

No 2443.

Proceedings of the Madras Government

Public Works Department

No. 71.

No. 4144.

From
The Offg. Chief Engr. & Supt. Leeyes Govt.

To The Secy to Govt
P.W. Dept

Dated 31st Aug. 1871

Rec'd 2nd Sept. 71.

Encls- 2

Submits with remarks the Report of the Chief Engineer & C.C. for the month of July 1871.

No 415
6 Oct 71 Left

P.W.D. 2/9/71

No. 2443.

for 1871.

following

11 Aug 1871

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No. 1897

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No. 1975 d/ 27th

Item - The error in the notes on which the calculation of possible revenue for the current year

that the depth of water admitted was anything approaching that which re-
presents th
information

Office of
Engrs & Surv
Ent. 5th Au

To
Th

Public Works Dept

No 2448.

Proceedings of the Madras Government
3852 Under date the 25th September 1871.
Read the following
4144

From the Under Secy to Govt. Genl. Here enter No 634 of 11th Augt 1871

From the Offg Chief Engineer for Irrign & Canal Secy to Govt. Here enter 7th Sept "

The Agent of the Madras Irrigation and Canal Company will be referred to the report of the Company's Chief Engineer for May print. ed with G.O. No. 1897 18th July 1871 and to that gentleman's letter to Captain Scott dated 16th June 1871 printed with G.O No 1975 dated 27th Idem - The error in the notes on which the calculation of possible revenue for the current year

year is based / and ob-
-tained while surveys explored
by Captain Scott
from a report by the late
late Consulting Engr
to the Govt. of India,
the Government are
not of opinion that
the amount of revenue
that will be realized
the year will prove
greater than the sum
already estimated.

These proceedings
will be communicated
to the Secretary of
State / and to the
Govt.

Govt of India—

To The Ch. Engineer for Irrigation
" Agent & Manager do.

Despe 5/10/71 Docket No. 2443 dated 25 Sept/71

Copy of the above
forwarded to the Govt.
of India in continuation
of Docket No. 1976,
dated 27 July 1871

Despe 5/10/71 with 30 enclosures

Govt of India

P. W. Sate Engrs Circular No
Cctr. No 22 of 1871

C. No. 3852 Ytd 1871

Govt. of {1871} Madras.

PUBLIC WORKS.

To The Chief Engr for Irrigation and to the Secretary to the Govt of India

Dated

Recd. Encl. 3

G. O., 25 Sept 1871, No. 2442-2443.

Nos. 414 & 416 & 417

D.

Dated / Forwarding to the Govt. of India the Proceedings ordering an Establishment for the Agents' remarks on the Agents' letter commenting upon the report on the Irrigation & Canal Company's works.

Forwarding to the Govt. of India the Proceedings ordering an Establishment for the Agents' remarks on the Agents' letter commenting upon the report on the Irrigation & Canal Company's works.