M.R.O. 14—13,000—27-9-24

MADRAS RECORD OFFICE.

Government of Madras.

Revenue **DEPARTMENT.**

G.O. No. 1932 Press ~~Mis.~~

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Dated 2 — 8 — 1866.

Not to be folded or roughly handled

Proceedings of the Madras Government, Revenue Department,
2nd August 1866.

No. 41. Read the following Proceedings of the Madras Government in the Public Works Department :—

Communicating, in continuation of previous order, papers containing report on the experiment to ascertain the quantity of water required for paddy cultivation, and explanation of the delay in the submission of the whole of the required information on the subject. } Here enter 24th July 1866, No. 2,333.

No. 42. ORDER THEREON, 2nd August 1866, No. 1,932.

Land Revenue.

Recorded, with reference to G. O., 28th June last, No. 1,583, Revenue Department.

(True Extract.)

(Signed) J. GROSE,
Under Secretary to Government.

To the Public Works Department,
„ the Board of Revenue, } With Proceedings Public Works Department, No. 2,333.

Exd. T. O'Connor.

Proceedings of the Madras Government, Public Works Department,
24th July 1866.

No. 546. Read the following Endorsement of the Officiating Superintending Engineer, 4th Division, dated Madras, 12th July 1866, No. 1,021 :—

Read the following letter from the Acting Sub-Engineer, No. 3 Range, Madras, to the Officiating Superintending Engineer, 4th Division, dated Poonamallee, 11th June 1866, No. 42.

1. I have the honor to forward result of the observations made on the "Experiment to ascertain the quantity of water required for paddy cultivation." The whole information is embodied in the forms recommended by the Consulting Engineer Irrigation and Canal Company, to which I have appended a preliminary report only, as the "Experiment" in its second part will be completed in a few days, when I will be in a position to report more fully, and furnish more reliable data.

1 Preliminary Report.
1 Experimental observations, Form A.
1 Particulars of water supply, Form B.
1 Original Memorandum from the Secretary to Government in Public Works Department, No. 198 of 25th May 1866.

2. I am sorry my attention had to be called so frequently to the furnishing of this report. The survey of the ground taken up for the experiment, and which ought to have been made before the observations commenced was not executed till but a few days ago. I did not anticipate being called on to furnish the report before I had observed the experiment throughout, so allowed the survey to lie over ; when the call was made, I could not well survey the plot, as from its peculiar position there is no access to it, for surveying purposes, without injuring the cultivation greatly. I was however necessitated, on receipt of your Reminder No. 356* of 31st ultimo, to work over the ground as carefully as possible, to prevent damage to the crop which was ready for harvesting. This occasioned the delay to a great extent; and again, the observations for "Temperature" had not been registered all along, as the late Range Officer purposed procuring them from some source, which I could not command, as I found out when too late. I was necessitated therefore to look about me for this information also, which occupied time. I trust therefore you will, under the circumstance above stated, overlook the apparent neglect of duty.

* Enclosure herewith returned.

Particulars of water supply to 222 Acres of land in the Kunnumbille village, Sydapett Táluq, Madras District.

Month and date.	Water supply.	Rain-fall.	Mean temperature.	Mean evaporation.	Direction.	Clear or cloudy.	Soil.	Remarks.
	Cubic feet.	In. Cents.	Degrees.					
1st Aug. 1865.	900	4 25	96	...	West.	Cloudy		
2nd ,, ,,	450	... ...	96	...	Do.	Do.		Puddling a piece of ground 24½ feet × 18 for ploughing for Nursery.
3rd ,, ,,	450	... ...	96	...	Do.	Clear		
4th ,, ,,	450	... ...	96	...	Do.	Do.		
5th ,, ,,	450	2 75	94	...	Do.	Cloudy		Seed sown in Nursery.
6th ,, ,,	450	... ...	96	...	Do.	Clear		
7th ,, ,,	.....	... ...	98	...	Do.	Do.		
8th ,, ,,	.....	... ...	98	...	Do.	Do.		
9th ,, ,,	225	3 90	93	...	Do.	Raining and cloudy		Watered Nursery.
10th ,, ,,	.....	1 42	95	...	Do.	Do. ...		
11th ,, ,,	.....	... 65	96	...	Do.	Do. ...		
12th ,, ,,	225	2 12	95	...	Do.	Do. ...		Do.
13th ,, ,,	.....	... 82	97	...	Do.	Do. ...		
14th ,, ,,	.....	... 68	97	...	Do.	Do. ...		
15th ,, ,,	.....	1 34	96	...	Do.	Do. ...		
16th ,, ,,	225	... 80	97	...	Do.	Do. and clear ...		Do.
17th ,, ,,	.....	... 29	97	...	Do.	Cloudy and clear.		
18th ,, ,,	.....	... ...	97	...	South W	Clear		
19th ,, ,,	.....	... ...	96	...	Do.	Do.		
20th ,, ,,	225	... ...	96	...	Do.	Do.		Do.
21st ,, ,,	.....	... ...	96	...	Do.	Do.		
22nd ,, ,,	.....	... ...	96	...	Do.	Do.		
23rd ,, ,,	.....	... ...	96	...	Do.	Do.		
24th ,, ,,	.....	... ...	96	...	Do.	Do.		
25th ,, ,,	450	... ...	96	...	Do.	Do.		Do.
26th ,, ,,	.....	... ...	98	...	Do.	Do.		
27th ,, ,,	.....	... ...	98	...	Do.	Do.		
28th ,, ,,	.....	... ...	98	...	Do.	Do.		
29th ,, ,,	450	... ...	98	...	Do.	Do.		Do.
30th ,, ,,	.....	... ...	98	...	Do.	Do.		
31st ,, ,,	.....	... ...	98	...	Do.	Do.		
1st Sept. ,,	.....	... ...	96	...	Do.	Do.		
2nd ,, ,,	450	... ...	96	...	Do.	Do.		Do.
3rd ,, ,,	...	... ...	96	...	Do.	Do.		
4th ,, ,,	...	... ...	96	...	Do.	Do.		
5th ,, ,,	...	... ...	96	...	Do.	Do.		
6th ,, ,,	450	... ...	96	...	Do.	Do.		
7th ,, ,,	...	... ...	96	...	Do.	Do.		Do.
8th ,, ,,	...	... ...	97	...	Do.	Do.		
9th ,, ,,	...	... ...	97	...	Do.	Do.		
10th ,, ,,	450	... ...	97	...	Do.	Do.		
11th ,, ,,	...	... ...	97	...	Do.	Do.		Do.
12th ,, ,,	...	... ...	97	...	Do.	Do.		
13th ,, ,,	1,800	... ...	97	...	Do.	Do.		
14th ,, ,,	900	... ...	97	...	Do.	Do.		Puddling ground for ploughing.
,, ,, ,,	1,800	... ...	...	...	...	... ...		Watered Nursery.
15th ,, ,,	1,800	... ...	97	...	Do.	Do.		Puddling ground for ploughing.
,, ,, ,,	1,800	... ...	...	...	Do.	Do.		Watered above ploughed ground.
16th ,, ,,	2,700	... ...	97	...	Do.	Do.		Puddling ground for ploughing.
,, ,, ,,	900	... ...	...	...	...	... ...		Watered above ploughed ground.
17th ,, ,,	1,575	... ...	97	...	Do.	Do.		Puddling ground for ploughing.
,, ,, ,,	1,800	... ...	...	...	...	... ...		Watered above ploughed ground.
,, ,, ,,	450	... ...	...	...	...	... ...		Puddling ground for ploughing.
18th ,, ,,	2,475	... ...	97	...	Do.	Do.		Watered Nursery.
19th ,, ,,	900	... ...	97	...	West.	Do.		Watered ploughed ground.
,, ,, ,,	2,250	... ...	...	...	...	... ...		Puddling ground for ploughing.
20th ,, ,,	1,800	... ...	97	...	Do.	Do.		Watered above ploughed ground.
,, ,, ,,	2,250	... ...	...	...	...	... ...		Puddling ground for ploughing.
21st ,, ,,	3,600	... ...	97	...	North Wes	Do.		Watered above ploughed ground.
22nd ,, ,,	2,250	... ...	97	...	Do.	Do.		Watered ploughed ground.
,, ,, ,,	900	... ...	...	...	...	... ...		Puddling ground for ploughing.
23rd ,, ,,	3,150	... ...	97	...	Do.	Do.		Watered ploughed ground.
,, ,, ,,	450	... ...	...	...	...	... ...		Watered Nursery.
24th ,, ,,	3,600	... ...	97	...	Do.	Do.		Puddling ground for ploughing.
25th ,, ,,	4,050	... ...	97	...	Do.	Do.		Watered above ploughed ground.
26th ,, ,,	1,800	... ...	97	...	North	Do.		Puddling ground for ploughing.
,, ,, ,,	1,800	... ...	...	...	...	... ...		Watered above ploughed ground.
27th ,, ,,	3,600	... ...	97	...	Do.	Do.		Puddling ground for ploughing.
28th ,, ,,	900	... ...	97	...	Do.	Do.	Rich clay loam.	Watered above ploughed ground.
,, ,, ,,	3,600	... ...	...	...	...	... ...		Puddling ground for ploughing.
29th ,, ,,	4,500	... ...	97	...	Do.	Do.		Watered above ploughed ground.
30th ,, ,,	3,600	... ...	97	...	Do.	Do.		Puddling ground for ploughing.
,, ,, ,,	1,350	... ...	...	...	...	... ...		Watered above ploughed ground.

Particulars of water supply to 222 Acres of land in the Kunnumbe village, Sydapett Táluq, Madras District.—(*Continued.*)

Month and date.	Water supply.	Rain-fall.	Mean temperature.	Mean evaporation.	Direction of wind.	Clear or cloudy.	Soil.	Remarks.
	Cubic feet.	In. Cents.	Degrees.					
1st Oct. 1865.	4,500	... ...	97	...	North ...	Clear. ...		
2nd ,, ,,	2,700	... ...	97	...	Do. ...	Do. ...		Watered ploughed ground.
,, ,, ,,	450	... ...	...	...	... ...	... ...		Watered Nursery.
3rd ,, ,,	2,700	... ...	97	...	Do. ...	Do. ...		Watered ploughed ground.
4th ,, ,,	1,800	... ...	97	...	Do. ...	Do. ...		Watered 1½ Cawny transplanted this day.
,, ,, ,,	1,800	... ...	...	...	... ...	... ...		Puddling ground for ploughing.
,, ,, ,,	1,350	... ...	...	...	... ...	... ...		
5th ,, ,,	3,600	... ...	97	...	Do. ...	Do. ...		Watered ploughed ground.
,, ,, ,,	900	... ...	...	...	... ...	... ...		Puddling ground for ploughing.
6th ,, ,,	4,500	... ...	97	...	Do. ...	Do. ...		Watered ploughed ground.
7th ,, ,,	4,500	... ...	98	...	Do. ...	Do. ...		
8th ,, ,,	4,500	... ...	98	...	Do. ...	Do. ...		Puddling ground for ploughing.
9th ,, ,,	4,500	... ...	98	...	Do. ...	Do. ...		Watered ploughed ground.
10th ,, ,,	900	... ...	98	...	Do. ...	Do. ...		Watered ¼ Cawny transplanted to-day.
,, ,, ,,	2,700	... ...	...	...	... ...	... ...		
11th ,, ,,	3,600	... ...	98	...	Do. ...	Do. ...		
12th ,, ,,	3,600	... ...	98	...	Do. ...	Do. ...		
13th ,, ,,	3,600	... ...	98	...	Do. ...	Do. ...		
14th ,, ,,	3,600	... ...	98	...	Do. ...	Do. ...		
15th ,, ,,	3,600	... ...	98	...	Do. ...	Do. ...		
16th ,, ,,	3,600	... ...	98	...	Do. ...	Do. ...		
17th ,, ,,	3,600	... ...	98	...	Do. ...	Do. ...		
18th ,, ,,	3,600	... ...	97	...	Do. ...	Do. ...		
19th ,, ,,	4,275	... ...	97	...	Do. ...	Do. ...		
20th ,, ,,	3,825	1 ...	96	...	Do. ...	Do. ...		
21st ,, ,,	...	1 ...	95	...	Do. ...	Do. and cloudy ...		Irrigated throughout.
22nd ,, ,,	2,250	... ...	95	...	Do. and north-east	Do. do. ...		
23rd ,, ,,	2,700	... ...	95	...	North-East ...	Clear ...		
24th ,, ,,	2,250	... 20	94	...	Do. ...	Do. ...		
25th ,, ,,	2,475	... 42	94	...	Do. ...	Do. and cloudy ...		
26th ,, ,,	...	... 20	94	...	Do. ...	Do. do. ...		
27th ,, ,,	3,150	... ...	95	...	Do. ...	Do. do. ...		
28th ,, ,,	3,600	... ...	95	...	Do. ...	Clear ...		
29th ,, ,,	4,050	... 30	94	...	Do. ...	Do. ...		
30th ,, ,,	1,800	... 75	94	...	Do. ...	Do. do. ...		
31st ,, ,,	1,800	... ...	94	...	Do. ...	Do. do. ...		
1st Nov. ,,	3,600	... ...	92	...	Do. ...	Clear and cloudy.		
2nd ,, ,,	1,800	... ...	92	...	Do. ...	Do. ...		
3rd ,, ,,	2,700	... ...	92	...	Do. ...	Do. ...		
4th ,, ,,	1,800	... ...	92	...	North ...	Do. ...		
5th ,, ,,	3,600	... 35	92	...	Do. ...	Do. ...		
6th ,, ,,	1,350	... 41	92	...	Do. and north-east.	Do. ...		
7th ,, ,,	...	... 18	92	...	Do. ...	Do. ...		
8th ,, ,,	3,150	... ...	92	...	North ...	Do. ...		
9th ,, ,,	2,700	... ...	93	...	Do. ...	Clear. ...		
10th ,, ,,	3,600	... ...	93	...	Do. ...	Do. ...		
11th ,, ,,	3,600	... ...	93	...	Do. ...	Do. ...		
12th ,, ,,	3,600	... ...	93	...	Do. ...	Do. ...		
13th ,, ,,	3,600	... ...	93	...	Do. ...	Do. ...		
14th ,, ,,	3,600	... ...	93	...	Do. ...	Do. ...		
15th ,, ,,	4,050	... ...	93	...	Do. ...	Do. ...		
16th ,, ,,	3,600	... ...	93	...	Do. ...	Do. ...		
17th ,, ,,	3,150	... ...	92	...	Do. ...	Do. ...		
18th ,, ,,	3,150	1 10	89	...	Do. ...	Do. and cloudy...	Rich clay loam.	Irrigated throughout.
19th ,, ,,	3,150	... 20	89	...	Do. ...	Cloudy ...		
20th ,, ,,	...	... 35	89	...	Do. ...	Do. ...		
21st ,, ,,	1,800	... 15	89	...	Do. ...	Clear and do. ...		
22nd ,, ,,	3,600	... ...	89	...	Do. ...	Clear. ...		
23rd ,, ,,	3,600	... ...	89	...	Do. ...	Do. ...		
24th ,, ,,	3,600	... 10	89	...	Do. ...	Do. and cloudy ...		
25th ,, ,,	...	3 50	86	...	Do. and north-east	Raining... ...		
26th ,, ,,	...	4 9	84	...	Do. ...	Do. ...		
27th ,, ,,	...	... 80	87	...	Do. ...	Clear and cloudy.		
28th ,, ,,	...	... ...	86	...	Do. ...	Clear		
29th ,, ,,	...	... ...	85	...	Do. ...	Do. and cloudy...		
30th ,, ,,	...	... ...	85	...	Do. ...	Do.		
1st Dec. ,,	...	... ...	85	...	North ...	Cloudy		
2nd ,, ,,	...	... ...	85	...	Do. ...	Do. ...		
3rd ,, ,,	900	... 30	84	...	Do. ...	Do. and Raining.		
4th ,, ,,	900	2 56	83	...	Do. ...	Raining ...		
5th ,, ,,	...	... ...	85	...	Do. ...	Cloudy ...		
6th ,, ,,	...	... 75	84	...	Do. ...	Raining ...		
7th ,, ,,	...	... ...	85	...	Do. ...	Cloudy and clear.		
8th ,, ,,	...	... ...	85	...	Do. ...	Do. ...		
9th ,, ,,	...	... ...	85	...	Do. ...	Do. ...		

Particulars of water supply to 222 Acres of land in the Kunnumbille village, Sydapett Táluq, Madras District.—(*Continued.*)

Month and date.	Water supply.	Rain-fall.	Mean temperature.	Mean evaporation.	Direction of wind.	Clear or cloudy.	Soil.	Remarks.
10th Dec. 1865.	Cubic feet.	In. Cents.	Degrees.					
11th ,, ,,	...	... ...	85	...	North	Cloudy and clear.	Rich clay loam.	Irrigated throughout.
12th ,, ,,	1,800	... ...	85	...	North-east	Do. ...		
13th ,, ,,	2,700	... ...	85	...	Do.	Clear ...		
14th ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
15th ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
16th ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
17th ,, ,,	2,700	... ...	85	...	Do.	Do. ...		
18th ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
19th ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
20th ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
21st ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
22nd ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
23rd ,, ,,	2,700	... ...	85	...	Do.	Do. ...		
24th ,, ,,	3,600	... ...	83	...	Do.	Do. ...		
25th ,, ,,	2,700	... ...	83	...	Do.	Do. ...		
26th ,, ,,	3,600	... ...	83	...	Do.	Do. ...		
27th ,, ,,	3,600	... ...	83	...	Do.	Do. ...		
28th ,, ,,	3,600	... ...	83	...	Do.	Do. ...		
29th ,, ,,	2,700	... ...	83	...	Do.	Do. ...		
30th ,, ,,	4,050	... ...	83	...	Do.	Do. ...		
31st ,, ,,	3,600	... ...	83	...	Do.	Do. ...		
1st Jan. 1866.	3,600	... ...	83	...	Do.	Do. ...		
2nd ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
3rd ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
4th ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
5th ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
6th ,, ,,	3,600	... ...	85	...	Do.	Do. ...		
7th ,, ,,	3,600	... ...	86	...	Do.	Do. ...		
8th ,, ,,	3,600	... ...	86	...	Do.	Do. ...		
9th ,, ,,	3,600	... ...	86	...	East	Do. ...		
10th ,, ,,	3,600	... ...	86	...	Do.	Do. ...		
11th ,, ,,	...	... ...	86	...	Do.	Do. ...		
12th ,, ,,	...	... ...	86	...	South-east	Do. ...		
13th ,, ,,	...	... ...	86	...	Do.	Do. ...		
14th ,, ,,	...	... ...	86	...	Do.	Do. ...		
15th ,, ,,	...	... ...	86	...	Do.	Do. ...		
16th ,, ,,	...	... ...	86	...	Do.	Do. ...		
17th ,, ,,	...	... ...	86	...	Do.	Do. ...		
18th ,, ,,	...	... ...	86	...	Do.	Do. ...		
19th ,, ,,	...	... ...	87	...	Do.	Do. ...		
20th ,, ,,	...	... ...	87	...	Do.	Do. ...		
21st ,, ,,	...	... ...	87	...	Do.	Do. ...		
22nd ,, ,,	...	... ...	87	...	Do.	Do. ...		
23rd ,, ,,	...	... ...	87	...	Do.	Do. ...		
24th ,, ,,	...	... ...	87	...	Do.	Do. ...		
25th ,, ,,	...	... ...	87	...	Do.	Do. ...		
26th ,, ,,	...	... ...	87	...	Do.	Do. ...		
27th ,, ,,	...	... ...	89	...	Do.	Do. ...		
28th ,, ,,	...	... ...	89	...	Do.	Do. ...		
29th ,, ,,	...	... ...	89	...	Do.	Do. ...		
30th ,, ,,	...	... ...	89	...	Do.	Do. ...		
31st ,, ,,	...	... ...	89	...	Do.	Do. ...		
1st Feb. ,,	...	... ...	89	...	Do.	Do. ...		
2nd ,, ,,	...	... ...	89	...	Do.	Do. ...		
3rd ,, ,,	...	... ...	91	...	Do.	Do. ...		
4th ,, ,,	...	... ...	91	...	Do.	Do. ...		
5th ,, ,,	...	... ...	91	...	Do.	Do. ...		
6th ,, ,,	...	... ...	91	...	Do.	Do. ...		Irrigation ceased from 11th January and crop allowed to ripen. It was reaped on 6th February 1866.
Total ...	3,48,975	37 73	17,468	...				

POONAMALLEE,
11th June 1866.

(Signed) S. OTTMANN,
Acting Sub-Engineer, No. 3 Range, Madras District.

Proceedings of the Madras Government, Public Works Department, 24th July 1866.

G. O. No. 350, dated 7th February 1865.
Do. No 1,636, ,, 17th June ,,
Memorandum No. 198, dated 25th May 1866.

1. Submitted to Government with reference to their Orders as per margin.

2. In explanation of apparent inattention in this Division to the orders of Government, it has to be stated that there was a misapprehension as to the time when a report on the observations ordered to be made, was to be sent, the Sub-Engineer in charge No. 3 Range, Madras District, in which range the experiment was directed to be instituted, not having expected that a report would have been called for, until after the results through a second crop of cultivation had been noted.

3. The necessary measures for sending in the report were therefore not taken until after the receipt of reminders from Government on the subject. A survey of the ground selected, which had been omitted to be prepared before the observations were commenced, had then to be made and this consumed some time.

4. The experiment was commenced in August 1865, and concluded in its first part on the 6th February 1866. It has been continued through a second crop also, and has now been completed. A further report on this will shortly be furnished.

5. The result of the experiment shows nearly $2\frac{3}{4}$ cubic yards to be required per acre per hour, which is above all the calculations the Officiating Superintending Engineer has heard of.

The [illegible] incurred during the last official year amounted to Rupees 376-4-0; but a part of this will be recovered in this year by the sale of the bullocks purchased for carrying out the experiment which has been authorized.

(Signed) J. GODDARD, Captain, R. E.,
Officiating Superintending Engineer, 4th Division.

Preliminary Report on the experiment, in its first part, for ascertaining the quantity of water required for Paddy cultivation.

1. The ground selected for the experiment, as reported some time ago, is an isolated piece in the village of Kunnumbilly, a hamlet of Poonamallee, and measuring 2·22 acres. The soil is rich clay loam. The irrigation is effected by means of a fine well, the water of which is raised in the usual manner, but in order to place the irrigation at advantage, in connection with the experiment, a proper lift, worked by bullocks, as also a cistern (gauged to every foot) containing 900 cubic feet have been provided, at Government cost. The Mirasidar to whom the land belongs was very obliging in allowing us to experiment thereon, and agreed to defray the whole working cost of the experiment, viz., the feeding of bullocks, the payment of driver and coolies, and other incidental expenses; and under these arrangements the experiment has been observed. From the particulars given in column of Remarks, of Form B., it will be observed, that the experiment, in its first part, commenced on the 1st August 1865, and was completed on 6th February 1866, in all 190 days. The ground was begun to be prepared from 1st August, for a nursery; on the 6th of the same month seed (Samba paddy) was sown; between this and 4th October, when the transplanting commenced, the ground was under preparation for receiving the young plants: the method of preparation, as will be seen from the observations, consists in puddling the ground frequently by watering and ploughing at the same time; this process was gone over five times; the transplanting was completed on the 10th October, after which the irrigation was continuous more or less till 10th January 1866, when the crop had attained that maturity to require no more water. The crop was allowed to stand in this state till 6th February, when it was harvested. There was rain on 31 days during the period of observation: the amount of rain gauged was 37·73 inches. The quantity of water

supplied through the medium of the cistern, during the same period of observation, was 12,925 cubic yards, which together with the rain-fall, computed at 10,889 cubic yards, gives 65 cubic yards per acre per diem, as the result of the experiment, as far as can be realized just now. In computing the quantity per diem, I have included the period from 1st August to 10th January. The yield of the crop was 240 mercals of paddy, which, with the straw realized, may be valued at present market rates, at Rupees 122-8-0. The assessment on the land experimented upon is Rupees 21 per annum.

2. The cistern (constructed to regulate the supply) above referred to, occupies two hours in filling, and is discharged in ten minutes; the discharging orifice being 42 square inches in area.

POONAMALLEE,
11th June 1866.

(Signed) S. OTTMANN,
Acting. Sub-Engineer, No. 3 Range,
Madras District.

No. 547. ORDER THEREON, 24th July 1866, No. 2,333.

CIVIL WORKS, No. 81.

Communicated to the Revenue Department, in continuation of the Order of Government No. 1,836, dated the 12th June 1866.

(True Extract.)

Colonel, R. E.,
Secretary to Government.

To the Revenue Department.
,, Superintending Engineer, 4th Division.

Exd. S. T. Augustin.

Pro. P.W. Dept. 1st Sept. 1866 and 2983.

1866 Sept. 13th Letter P.W. Dept. to Govt. with Report

A. 41 1/42

P. Vienna 1866 Oct. Pro. of Govt for August No. 2219.

Proceedings of the Madras Govt. in the P.W. Department

Dated 24th July.
Received 26th " 1866.
No. 2333.

Communicating in continuation of previous order papers containing Report on the Experiment to ascertain the quantity of water required for paddy cultivation, & explanation of the delay in the submission of the whole of the required information on the subject.

2nd 1932.

Recorded in Reference to P.D. Letter dated 28th June last No 1503. RD. 2nd Aug.