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MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No. 2476 Press ~~Mis.~~

379-380

Dated 22—12—1864.

Not to be folded or roughly handled

Read the following papers : —

No. 379. From T. CLARKE, Esq., Member of the Board of Revenue, Fort Saint George, to J. D. BOURDILLON, Esq., Secretary to Government, Revenue Department, Fort Saint George, dated Madras, 25th October 1860.

SIR,

I have the honor to enclose the report required by the orders of Government of the 14th May last. I regret it should have been so long delayed, but I have waited for replies to queries to the Collector of Nellore and information required from that District. The Collector, after a diligent search of his records, has not been able to comply with my requisitions; I fear, therefore, my report is not so complete as it might have been.

From T. CLARKE, Esq., Member of the Board of Revenue, Fort Saint George, to J. D. BOURDILLON, Esq., Secretary to Government, Revenue Department, Fort Saint George, dated Madras, 25th October 1860.

SIR,

1. In compliance with the orders of Government conveyed in their Proceedings of the 14th May last, I have the honor to report, that I left Madras on the night of the 31st of that month, and proceeded to Ennore. I examined the Salt works of the five villages in that vicinity, and then proceeded to Pulicat, where I awaited the arrival of the Deputy Collector C. Narrainsami Mudaliar. He joined me on the 11th June, and on the same evening I proceeded to Púngolam, one of the Salt-manufacturing villages of the Madras Collectorate. I was occupied, inquiring into the system pursued in the manufacture and sale of Salt in this and the three neighbouring villages, till the evening of Saturday the 16th of June. Early on the morning of Monday, the 18th June, I entered the Nellore District at Rámápuram, and was engaged in it till the evening of the 12th July, when I proceeded to Chinnaganjam, where I remained two days.

2. The five villages,* which supply the Madras Depôt, with Salt, are situated, at from $8\frac{1}{4}$, to above 16 miles north of Madras, on a low flat plain immediately to the west of the sandy tract along the coast. This plain is divided by a lagoon or backwater. The Ennore Pans lie about two miles from the sea, between the sand and the Ennore backwater. All the other Pans lie along the west bank of the backwater. The country to the west of the Pans is also flat and open, with villages interspersed, and, in spots, laid out with Paddy fields.

* *Vallúr.*
Attipat.
Ennore.
Puludivákam.
Vóyalúr.

3. The first village, reached from Madras, is Vallúr, which, lying low, is liable, in the monsoon, to be inundated by the Kortaliár river: it is, therefore, of importance that the Salt, manufactured in it, should be early carried to Madras, before the floods come down.

4. The whole area, devoted to the manufacture of Salt in this village, is one square mile, Kánis 200, and four grounds. The greater portion of this space is already covered with Pans, the waste ground is gradually being taken up, and soon, the whole tract will be one net work of Salt Pans; but I found several Pans not worked, and was told the owners had not means to carry on the manufacture. Many of the Pans are mortgaged, and the manufacturers as a body are a poor people.

5. Eight canals running east and west, and two running north and south, intersect the tract. These canals answer the double purpose, of supplying the manufacturers with water, from which to manufacture their Salt; and of enabling them to carry the Salt, when made, to the backwater. The whole mileage of these canals, which have been excavated at the sole expense of the manufacturers, amounts in the village of Vallúr, to 4 miles and 352 feet.

6. To the south, and immediately adjoining the village of Vallúr, lies the village of Attipat. This is the principal village of the five. The largest quantity of Salt is produced in it, and the Salt Kacheri is located in it. The area devoted to making Salt in this village, measures one mile, 195 Kánis, 13 grounds and 1,600 square feet. A portion of it was lying waste, and several Pans were not worked, because a canal had silted up, and the manufacturers were not disposed to undertake the expense of repairing it. There are nine canals measuring $3\frac{3}{4}$ miles, of which five run east to west, and four north to south. This village, though on a higher level than Vallúr, is also liable to be inundated in the high freshes and wet weather.

7. Opposite to Attipat, are the Pans of the village of Ennore, which cover an area of 227 Kánis, 15 grounds, and 800 square feet: being 8,800 feet in length, and 1,490 feet in breadth. This tract is intersected by two canals running east to west, $\frac{1}{2}$ of a mile in length.

8. On the north of the village of Attipat lies the village of Puludivákam; the Salt-making tract of this village is separated, from that of Attipat, by a strip of waste ground, measuring 300 feet in breadth. The Salt ground of this village covers an area of one mile, 265 Kánis, 23 grounds, and 1,600 square feet, and is intersected by two canals of $2\frac{5}{8}$ miles in length.

9. Beyond Puludivákam, and immediately adjoining it, lie the new and old Pans of Vóyalúr. The tract, on which the new Pans have been formed, measures 4,692 feet in length and 5,250 in breadth. This strip of land is separated, by a piece of high ground of 4,050 feet wide, from the old Salt Pans, which are formed on a block of land measuring 8,275 feet long and 4,650 feet broad. The whole area, assigned to the works, measures 2 miles 143 Kánis and 1,125 feet, and is intersected by ten canals of about 6 miles in length.

10. The Pans of this village are on high ground, and are not usually submerged by floods.

11. There are $3{,}988\frac{1}{4}$ Salt Pans, in these five villages, the particulars of which are shown in the margin.* The Pans are, generally, of one uniform size, i. e. half a Káni each. One half of the Pan is given up to the reservoir, into which the water of the backwater is baled, by the common native picotah, or, by a hollowed palmirah; the remainder of the Pan is divided into twelve or more water beds, and the same number of Salt beds.

	Pans.
* 1. *Vallúr*	$971\frac{7}{8}$
2. *Attipat*	$891\frac{5}{8}$
3. *Ennore*	$351\frac{5}{8}$
4. *Puludivkam*	$790\frac{5}{8}$
5. *Vóyalúr*	983
Total...	$3{,}988\frac{1}{4}$

12. The reservoir is a shallow bed of from twelve to eighteen inches deep, and is used for condensing the water. The water stands from six to nine inches deep, and is retained for various periods, according to the nature of the season and the state of the atmosphere. In the early part of the year, the water remains in the reservoir from ten to fifteen days, after which it is drawn off into the side beds, where it is kept for a similar period. It is then let into the evaporating beds.

13. When I visited the Pans, in the beginning of the month of June, a strong dry westerly wind was blowing, the bar was closed, there had been no rain, nor any accession of fresh water in the backwater since December; many of the manufacturers considered the water of the lagoon sufficiently salt to allow them to dispense altogether with the use of the reservoir and side bed, and they scraped up the Salt every fourth or fifth day; the consequence was the Salt was very inferior. It was deposited in flakes, was friable, and the crystals ill-formed.

14. The Salt that I examined, in the heaps on the high ground, was not at all of a uniform quality. Some was very good, white, large grained and hard, but much was very inferior: it easily crumbled, or was already in a powdered state, and was discolored. The discoloration arose from the violent way in which the Salt was scraped up. The upper crust of the Pan was broken, and dirt and mud was scraped up and mixed with the brine and Salt. The inferior quality of the Salt is to be attributed to the use of insufficiently condensed brine, to the retention of it in insufficient quantities, and for insufficient periods, in the evaporating beds, and to the repeated and continual scrapings disturbing the process of crystalization, and not permitting the crystals to arrive at perfection.

15. The early part of the season, the most favorable for making Salt, is often lost from the manufacturers attending to their agricultural or mercantile pursuits, or from other more legitimate causes, and this leads, in the remainder of the year, to the several processes of the manufacture being hurried over.

16. No system, as far as I could learn and see, was observed in making Salt, but each man followed his own plan. In May last, the Collector issued a paper of instructions, culled from Major DeHavilland's Report. If these rules be duly enforced and carried out, I doubt not, the Salt obtained at the Attipat and other Pans will be very superior.

17. The manufacture should commence at as early a date as practicable. Care should be taken that the brine introduced into the salt beds be highly concentrated, that it be let in in sufficient quantities and retained there a sufficient time to allow of perfect crystals being formed, that scraping take place as seldom as possible, only once in fourteen days, that it be gently and carefully performed, and that the slime and other impurities be always removed, from the bed, after the Salt has been gathered. No doubt, the character of the season, the moisture or dryness of the atmosphere, as well as the nature of the soil, and the locality and position of the Pans, very much affect the quality of the Salt produced, but, I believe that the inequalities, arising from these natural causes, might be greatly reduced, if not entirely overcome, by care.

18. Some of the Pans that I saw in these villages, were well made, and kept clean and in good order, others were extremely foul.

19. No inferior Salt should, on any account, be received; if this rule were strictly enforced, the manufacturers would soon, practically, learn the necessity of attending to the instructions issued

with a view of improving the manufacture. As long as they find the Government Officers more eager and anxious about the quantity than the quality of Salt to be delivered, they will take no trouble to produce a good article.

20. Generally speaking, the Salt manufactured in these villages, especially the Salt of Vóyalúr, is of very fair kind, and some I collected was very superior.

21. In the early part of the season, the Salt is long in forming, and the out-turn of the scraping is small, but the Salt is good. As the season advances evaporation takes place more rapidly, the water used becomes denser and more impregnated with Salt, but the scrapings are too frequent, and though the yields are more abundant, the Salt is not equally good.

22. It was estimated that an old Pan would, at a scraping, in the middle of the season, yield from $\frac{1}{4}$ to $\frac{1}{2}$ a garce, and during the whole season about six garces. The new Pans yield from $\frac{1}{3}$ to $\frac{2}{3}$ of this quantity. This difference arises, very much, from the superior position and soil of the old Pans, the imperviousness of the floors of the beds, but partly also from the new Pans being carelessly constructed. The level of the flooring not being properly laid, or the floor itself being leaky and porous from the want of sufficient tamping.

23. After the Salt has been scraped, it is placed on the ridges which separate the waterbeds from the Salt beds, and which are about from two to three feet wide. Every day, in the afternoon; at 2 or 3 o'clock, a Nevisindah is expected to go round, with a Peon, and take an account, by estimate, of the Salt scraped. The Peon stamps the Salt with a seal. This account is written, roughly, on an unstamped cadjan leaf. It shows, how much Salt has been scraped, the number of Pans from which it was produced, and the party to whom it belongs. The account is afterwards copied on a cadjan leaf, stamped with the Collector's name, and from it a ledger is drawn out, which is sent with the daily account to the Deputy Collector's Office.

24. It is obvious that the taking of this account, and the sealing, can prove no very great checks to fraud, unless the servants, who are charged with the duties, are faithful to their trust and regular and accurate in the discharge of it. The account is but an estimate, and heavy rains not only obliterate the seals, but wash away large quantities of Salt. It is always easy to plead that Salt has been washed away, by rain, when it has been lost by other means, especially where it is kept for months, as it is in these villages, exposed to the action of the weather, and offering a temptation, of no ordinary character, to the cupidity of hundreds. After the Salt has remained for two or three days on the ridges, it is removed, by the manufacturers, in baskets, toraised or high ground near the edge of the canals or of the backwater, where it is kept, in heaps, till it can be transported in boats to Madras.

25. Eighty-seven Peons are employed, as detailed in the margin,* in watching the Pans. Watching huts are placed at selected spots, distant from 273 to 353 yards, around the Pans. On the western side which is the most exposed, the largest number of huts is found. A certain number of Pans, varying from 60 to 53, is placed under each Peon, and he is supposed to guard them, and prevent the abstraction of any Salt from them, or from the heaps belonging to them.

Villages.	*Peons.*
* 1. *Vallúr*	18
2. *Attipat*	21
3. *Ennore*	12
4. *Puludivákam*	15
5. *Vóyalúr*	21
Total...	87

These Peons are employed, during the day, in seeing that the manufacturers are at work, in ascertaining the cause of the absence of any, in procuring the attendance of the absentee, in attending to the lading of the boats, in stamping the heaps of Salt, on the ridges and on the high ground, in carrying out any order the Amín or his subordinates may give them, and sometimes, some are detailed to proceed to Madras, in charge of the Salt boats, when their places are supplied by the Peons of the neighbouring beats. It is hardly to be expected that, Peons, with comfortable watching huts and beds, and who have been hard-worked during the day, should be very watchful and alert at night, especially on wet or dark nights; but it is to their vigilance, that the large quantities of Salt, outlying in these villages, (and when I was there, there was no less than $5\frac{1}{4}$ lacs of maunds,) are entrusted. If, under such circumstances, smuggling does not take place, immunity, from it, can hardly be ascribed to the perfection of the system, devised and in operation, for preventing it.

26. It is also a pregnant fact, that little or no Salt is sold at the Salt stores of Chunámbukolam, and the neighbouring stores, for the consumption of the villages in the vicinity of the Madras Pans, during the manufacturing season, while I heard it loudly asserted, that large quantities of Salt are, privately and surreptitiously, disposed of, by the manufacturers, and the boatmen.

27. Had it not been proposed to substitute the Constabulary for revenue Peons, in guarding the Salt works in future, I should have deemed it my duty to offer some suggestions for improving the organization of the Preventive service guards. I trust, that the Police and Salt

establishments will be found to act as a mutual check on each other, and that the contraband trade, which is now carried on, will be effectually put a stop to, and the Salt revenues be greatly improved.

28. Mr. D. Rozario, the brother of the Superintendent of the Canal, has entered into a contract to supply 70 boats, of 16 tons each, to convey the Salt to Madras. Mr. Rozario has not failed in his contract, and has even supplied a larger number of boats than was stipulated for. The quantity of Salt to be manufactured at these five villages, during the present season, was 14,00,000 Indian Maunds or 11,666⅔ garces, which at 4¼ tons per garce, would require a tonnage of 49,583 tons for its carriage to Madras. Supposing Mr. Rozario to act up to his agreement, and that it occupied but four days to go to and fro, and to lade and unlade, six months would be consumed in carrying the Salt of the season to Madras under present arrangements; but I found, on inquiry, that the whole of the Salt, manufactured in these villages, is seldom brought to Madras before the end of the December and often later.

29. The delay, in the removal of the Salt from the Pans, not only opens the door and offers temptation to fraud and peculation, but it subjects the manufacturers to unfair risks and heavy pecuniary burthens, for they are not paid for the Salt they make, but for what they deliver at the Depôt. As the season advances, they are subjected to the expense of covering the Salt at the Pans, and to severe losses from wastage, which, I am told, is sometimes very great, from rain and floods.

30. The manufacturers are paid 10 Rupees a garce for their Salt. They complained it was insufficient, and dwelt at much length on the great increase which, had of late years, taken place, in the price of labor, wood, and all the necessaries of life. They pointed out that they had to bear the cost of forming and keeping in order the Pans, subsidiary canals, wells, and picotahs; of raising water; of manufacturing the Salt; and keeping it till it was received at the Depôt; of carrying it from the Pans to the drying ground; and of placing it on the boats. In proof of the insufficiency of the price paid them they advanced the fact, that most of the manufacturers were in debt, and a large proportion of their Pans mortgaged. The manufacturers, at the Madras Pans receive a higher price for their Salt than those of the villages at the north of Ennore, and of the District of Nellúr, where they are paid 7 Rupees and 15 Annas per garce, and have further to bear the cost of storing the Salt, of furnishing the materials for covering it and the labor of covering it, of measuring it when sold and of keeping the platforms in order. At present, I believe, the manufacturers remunerate themselves, by smuggling, but when this source of illicit gain is closed, as I hope it shortly will be by the vigilance and activity of the new Police, the outcry for an enhanced price will be more general and urgent. The subject of remunerating the Salt manufacturers is under the consideration of Mr. Pelly, I, therefore, am not called on to discuss it, but it is one, which deserves to be dealt with, in a just, if not a liberal, spirit, as affecting the future interests and well-being of a considerable and industrious class, who contribute, very largely, to the resources of the Government. Should it be determined to require the manufacturers to store and cover Salt, as well as produce it, they should be made clearly to understand what price is paid for the Salt, and what for the additional labor contributed, by them, towards carrying, storing, covering and measuring it and towards keeping the platform in order.

31. In May last, the Board paid a visit to the Madras Depôt, and observing the delay, which occurred, in receiving the Salt by manual labor, called on Mr. Cunliffe to report, whether it would not be desirable to substitute mechanical appliances for unlading the boats and weighing the Salt. In reply to this call, Mr. Cunliffe has reported, that when the branch line to connect the Salt store with the main line of the South West Railway is completed, the Railway Company agree to lay down side lines to the canal and ditch, with turn tables and weighbridges. If it be not in the power of the Railway Company immediately to carry out their proposal, it appears to me that Government should undertake to do so and to construct landing places so as to facilitate the delivery of the Salt. As I have said above, when I was at Ennore, no less than 5¼ lacs of maunds were lying along the banks of the canal, 7½ lacs having been previously shipped to Madras. Owing to the difficulty of obtaining labor at Madras, the Salt could not be received into store, and the Deputy Collector was compelled to issue orders to suspend the further transmission of it. This order was in force for a week. The manufacturers complained of it, and urged, that the Salt was not only deteriorating from exposure to the action of the atmosphere, and from the wind driving dust into it; but that it was also liable to be washed away, by the rains, which were, then, daily expected and to be carried away by boatmen and others; and they begged that a larger number of boats might be employed, and greater despatch insisted on, in the transport of their Salt to Madras.

32. But, in addition to the want of boats to carry to, and of labor to receive at, the Depôt, the Salt manufactured at the villages, the shallowness of the water, in the Canal, from the closing of the bar, acts as an impediment to its early removal from the Pans. It becomes a matter of importance that some method of removing this last difficulty should be devised, and that the Canals should be kept full; for, should the sales of Salt at Madras continue to increase, at the ratio of the last few years, as shown in the margin,* and there is every probability, before many years, when the Railroad to the West and its branches to Bangalore and Bellary are completed, and when the Pier is opened, that they will attain a magnitude of which no conception can at present be formed, and should existing impediments to the early removal of the Salt to Madras not be removed, traders will be compelled to seek for their supply of it, from some other quarter.

* *Faslis.*	*Maunds.*	*Rupees.*
1265...	5,46,042	4,97,416
1266 ..	8,90,994	6,04,218
1267...	8,56,183	6,72,752
1268...	7,32,209	6,55,141
1269...	10,66,569	8,97,847
Total...	40,91,997	33,27,374
Average..	8,18,399	6,65,475

33. The following table will show the increasing use that has been made of the rail, for the carriage of Salt into the interior, during the last five years. In 1857, only 1,22,878 maunds were carried by rail, last year the quantity had increased to 3,46,409 maunds, and during the first four months of this year, it exceeded the quantity carried in the first year by 25 per cent:—

Memorandum showing the quantity of Salt carried by Rail from October 1856 *to March* 1860.

	1856.		1857.		1858.		1859.		1860.	
	Maunds.	Amount.	Maunds.	Amount	Maunds.	Amount.	Maunds.	Amount.	Maunds.	Amount
January	..	..	2,859	272 0 9	24,917	2,732 12 4	42,205	4,951 1 0	36,600	4.171 9 0
February....	..	..	6,731	665 7 4	23,415	2,551 9 1	22,431	2,685 11 5	31,930	4,097 4 0
March.....	..	..	7,335	725 1 6	31,020	3,477 7 10	27,316	3,152 6 10	42,134	5.718 11 9
April.....	..	..	6,924	684 4 1	20,820	2 221 6 3	21,302	2,575 4 4	36,731	4,940 6 0
May..	..	..	6.975	761 10 7	19,555	2,137 4 7	21,348	2,487 8 6		
June	..	..	8,079	902 12 9	21,482	2,326 13 11	27,808	3,151 12 10		
July	..	..	12,542	1,406 0 11	18,780	2,146 14 2	25,312	3,042 14 0		
August.....	..	..	14,823	1,646 10 11	15,797	1,792 3 5	26,467	3,024 4 11		
September ...	..	..	12,081	1,301 10 10	21,028	2,398 0 10	27,328	2,997 2 1		
October.....	352	26 5 8	10,189	1,141 9 6	14,518	1,679 7 0	42,996	4,990 14 0		
November ...	114	7 13 0	16,464	1,806 4 3	21,377	2,500 8 0	21,055	2,395 15 1		
December ..	375	24 13 4	17,576	1,909 13 2	31,474	3,665 4 4	40,941	4,737 14 4		
Total..	841	59 0 0	1,22,878	13,223 6 7	2,64,183	29,629 11 9	3,46,409	40,192 13 4	1,47,395	18.927 14 9
Average..	240	19 10 8	10,240	1,101 15 3	22,015	2,469 2 4	28,867	3,349 6 5	36 849	4.731 15 8

34. There has been very great difficulty in obtaining boats, at Madras, for the carriage of Salt to ships; this difficulty will be removed by the opening of the Pier, and I doubt not, that, when the facilities, which it will afford, for the shipment of Salt have become known and appreciated, there will be, with the general increase in the trade of the port, a commensurate increase in the shipments of Salt to Bengal and other places.

Years.	Estimated quantity of Salt scraped.	Estimated quantity of Salt measured into Store.	Wastage.	Per centage.
	Ind. Mds.	Ind. Mds.	Ind. Mds.	Ind. Mds.
1856...	10,94,284	10,07,786	86,498	7¾
1857...	11,85,500	10,60,396	1,25,104	10½
1858...	12,28,890	10,89,401	1,39,489	11⅓
1859...	8,29,530	7,48,174	81,356	9

35. The statement, in the margin,* shows the difference which is found, in the accounts, to exist between the quantity of Salt estimated to have been taken from the Pans, and that actually received into Store, during the four years from 1856 to 1859 inclusive. The deficiency varies, from 7¾ to 11⅓ per cent., in from 11 to 12¼ lacs of maunds of Salt computed to have been scraped.

36. At present, the Salt is forwarded to Madras, from the Pans, in open boats, which are divided into three or more compartments, in order, that where there may not be sufficient Salt belonging to one manufacturer to fill the boat, Salt belonging to two or more persons may be carried. Until the Salt has been measured and received at the Depôt, it is entirely at the

manufacturer's risk. When the boats arrive at the village, the Péshkár determines whose Salt shall be forwarded. Great delays, in the delivery of the Salt, and the consequent risks to the manufacturer, make it worth his while to purchase the good will of the Péshkár, and procure the early transmission of his Salt. The Salt is carried, from the heaps, in baskets, by the manufacturer, and placed on board the boat. He employs as many relatives and laborers as he can muster. A Peon watches the Salt being shipped. As soon as the boat is filled, a pass, called a boat chit, is written out, showing the estimated quantity of Salt shipped, and when it may belong to more than one party, the part of the boat in which each party's Salt is placed, the quantity of Salt left at the Pans belonging to the shipper, the number and tonnage of the boat, the name of the boatmen and of the Peon sent in charge of it. When there may be less than ten boats, one Peon is sent in charge of them. When the boats may exceed this number, two Peons are despatched. When only one Peon goes, he is placed in the last boat, and the boats are required to keep together. When two Peons go, one is placed in the first and one in the last boat. The boats are often two days or more, in reaching the Depôt, and it is not a rare occurrence, early in the morning, or at nights, to find these boats moored in the canal with no one in them, the boatmen and Peons having all landed. It would be surprising if such opportunities of smuggling or theft were neglected. I think it is very desirable that the boats employed to carry the Salt should be covered ones, the top being fastened down and locked. With such boats, the early removal of the Salt to the Depôt, and an efficient and trustworthy Police *cordon* round the Pans, I doubt not that smuggling may be greatly repressed.

* Villages.	Quantity estimated.	Quantity measured.	Deficiency.	Excess.
	Ind. Mds.	Ind. Mds.	Ind. Mds.	Ind. Mds.
Vallúr.....	2,31,720	2,05,810	25,998	87
Attipat.....	1,52,590	1,46,660	6,563	634
Ennore.....	90,610	86,407	4,473	269
Puludivakam.	59,090	55,114	4,353	378
	5,34,010	4,93,991	41,387	1,368
		Deduct...	1,368	
		Net...	40,019	

37. It will be seen from the table in the margin,* that of 5,34,010 maunds of salt estimated to have been shipped for Madras, between the 23rd March and 24th June, only 4,93,991 maunds were measured into store, showing a loss of 40,019 maunds, or 7½ per cent., in the quantity shipped, and this occurred during a peculiarly dry season, when no rain fell.

38. In his letter of the 12th June 1860, Mr. Cunliffe assigns as a reason for the practice of storing, at the Madras Kotar, by the merkal of good measure not struck, that the Salt usually imbibes moisture during its conveyance down the canal, and that if the merkal was struck in storing, an excess, on the 5 per cent. of wastage allowed by the Board, would be the result. This large loss of 7½ per cent. is hardly, I think, to be attributed to fair wastage by liquefaction. I believe it will be found, in part, to represent the quantities abstracted from the boats in transit, but, from whatever cause it may arise, the manufacturer has to bear it.

39. The Establishment, at present, employed, in these five villages, for manufacturing, guarding and shipping the Salt, is shown in the margin.* The Salt tract on the one side of Cochrane's Canal extends over eight miles, and on the other about 1½ miles. There are 3,988 Pans. 10,172 maunds of Salt are on an average scraped every day from 239 Pans: the tract is intersected by innumerable canals, impeding the passage from one part of the works to the other: 1,924 laborers are daily employed in making Salt: and on an average 17 boats are daily loaded for Madras. As soon as the Salt is scraped, an account of it is required to be kept, and every boat has to be provided with a chit; besides this, numerous periodical accounts have to be transmitted to the Division Kacheri at the Madras Depôt.

* 1 *Amín.*
1 *Deputy Péshkár, temporary.*
5 *Nevesindas.*
6 *Dy. do. temporary.*
1 *Daffadar do.*
107 *Peons, 79 of these are temporary.*
7 *Tom-tom beaters do.*
1 *Water Pendal Brahmin do.*
129

40. In order that the work of supervision should be efficiently performed, that the manufacturers be prevented from bringing in inferior Salt, that they be carefully instructed in making good Salt, that the numerous accounts be duly and regularly kept, and that the Salt be carefully and early transmitted to Madras, I conceive it will be necessary that there should be allowed to each of the large villages, two Nevesindás or Amíns on 14 Rupees each, and one for Ennore and six Peons and three Vettyáns to the larger villages, and two Vettyáns and four Peons to Ennore. I do not think that less than two Amíns will suffice for each of the larger villages, considering the tract of country to be gone over and the number and variety of the duties to be attended to. At present this number is employed.

41. Vettyáns are required to attend to the ferry boat, in constant use to carry parties over from one part of the works to the other, to call the manufacturers to their work, and to see that they leave the Pans at the proper time. Not less than four Peons to each village are required to accompany the Salt boats to Madras, and two at least are wanted to attend the Amíns of the larger villages, and one at Ennore, to seal the heaps, watch the shipment of Salt, and to perform the many numerous duties daily occurring.

Tinnevelly.....	3,35,031
Madura.....	3,89,598
Tanjore.....	4,97,880
South Arcot.....	3,40,245
	15,62,750
Madras.....	14,00,000.

When it is recollected that the quantity of Salt manufactured, in these five villages, is nearly equal in amount, to that made in the four most southern Districts of this Presidency, I think it will be admitted that the Establishment proposed, by Mr. Pelly is wholly insufficient. His complement is five Amíns on 14 Rupees each and 18 Vettyáns on 3½ Rupees each.

42. The Establishment of Amíns and Vettyáns allowed for the four Districts, named above, amounts to 33 Amíns and 134 Vettyáns.

43. I think that the Deputy Péshkar, provided by Mr. Pelly, for these villages had better, during the manufacturing season, live in them and superintend the works.

	1856.		1857.		1858.		1859.	
	Retail.	Wholesale.	Retail.	Wholesale.	Retail.	Wholesale.	Retail.	Wholesale.
July.....	8,817	49,200	12,439	60,000	8,493	40,800	9,450	43,200
August.....	8,345	37,200	11,969	54,000	8,770	40,800	10,078	48,000
September...	10,363	38,400	10,299	52,800	9,050	43,200	10,861	62,400
October.....	10,742	30,000	9,626	33,600	8,613	43,200	14,514	81,600
November...	9,405	37,200	9,974	48,000	7,716	31,200	7,883	38,400
December....	37,146	.....	11,187	49,200	10,413	60,000	11,156	62,400
January.....	10,782	32,400	8,642	60,000	8,771	64,800	10,348	55,200
February.....	10,227	38,400	8,253	28,000	9,867	38,400	11,056	48,000
March	11,120	38,400	9,367	48,000	10,428	57,600	10,888	57,600
April	11,207	39,600	9,802	39,600	9,125	40,800	10,376	45,600
May	12,170	42,000	9,028	40,800	10,968	45,600	11,915	72,000
June.....	45,099	8,400	9,575	43,200	10,762	55,200	10,327	64,800
Total...	1,85,423	3,91,200	1,20,161	5,57,200	1,12,976	5,61,600	1,28,852	6,79,200
Average...	15,452	32,600	10,013	46,433	9,415	46,800	10,738	56,600

44. At the Madras Depôt, the greater quantity of the Salt is now sold by heaps. The margin will show the quantity sold monthly and annually, by retail and wholesale. The wholesale sales are nearly six times as large as the retail, and, while the former have, during the last three years, increased by half; the retail sales, in 1859, are more than one-fifteenth less than they were in 1856. I think, therefore, it becomes a question whether the Government may not, in the Madras Depôt, withdraw entirely from retail selling, and leave the petty dealers to obtain their Salt, from the wholesale merchants.

45. In the month of May, with the other Members of the Board, I visited the Madras Depôt, but I was unable, at that time, to examine thoroughly into the arrangements and practice of storing and issue. Neither on my return, from Chinnaganjam, had I the means of doing so, before I was ordered to resume the duties of my office. I am not, therefore, in a position to report on the system pursued at this Depôt.

46. At about 10 miles west of Pulicat, and at about 35 miles north of Madras, lies the village of Uppunelvoy. The Pans of this village are formed on the skirt of a large swamp on the edge of the Pulicat backwater; the water for the manufacture is brought a distance of four miles, by an artificial channel leading from the backwater. The soil, on which the Pans are formed, is a soft adhesive clay: and Salt is quickly produced from it. The ground is not, as in other places, ploughed and tamped, it is simply made smooth by lightly drawing the scraper over it. The Pans are divided by a channel, which is supplied by a picotah from the main channel. The water is conveyed by the minor channel to a reservoir, and thence is drawn off into the Pan. The Salt is said

to be much liked, by Lambádis, from its lightness. What I saw was of a very inferior kind, and was much discolored. It is clear that no pains are taken, by the manufacturers, or the Government servants, to produce a good Salt. There are but 40 Pans, in this village, held by 24 persons. The Pans vary much in size; some are ¼ and some are ¾ a Káni in size. The pans were not well formed, or kept; some were not, even when I visited them in June, in working order. The Collector had ordered 158 garces. and 108 merkals of Salt to be manufactured this year, in this village. At the time of my visit, only 93 garces, and 250 merkals of this quantity had been made. Close to the Pans, at the south, was a platform capable of containing 300 garces of Salt: 83 garces and 250 merkals had during the season been received into store; the remaining 10 garces were lying about the platform and on the ridges. The floor of the platform was said to be above the level of the floods, but it was very uneven, the heaps were badly covered and badly sloped. The palmirah leaves, of which the covering was composed, were lightly fastened down at the corners of the heaps, and were covered at the top with ridges of earth: but, in a gale, the covering would be easily blown off. There were no drains at the foot of the heaps to carry off the water, and the heaps were not placed in any order. The platform was guarded, by two Peons at night, and by one during the day; I fear that this rule is not strictly observed, and that the Peons even when on watch sleep through the night.

47. Besides the traders, who live in the neighbourhood, and purchase Salt, merchants from Kálástri and parts of the Cuddapah District, who have carried goods to Madras, bring their empty bandies to this store for Salt. Considering the absence of all roads, the quality of the Salt, and distance to be travelled over, I cannot but believe that there are some grounds for the current rumours that the merchants are attracted to this Kottár by the illicit advantages held out to them.

48. There are no roads to the platform, which is only accessible over heavy sand and swampy ground.

49. I had no reliable means of ascertaining, except from the servants, how the sales were conducted in these villages; they of course declared them to be regularly carried on, according to the rules laid down for their guidance. I heard that much Salt is illicitly sold below the fixed price, and that large excess of wastage is shown in the returns. The establishment employed in this Kottár is included in the establishment of the village of Púngolam, to which Uppunelvoy is attached. The Salt Kacheri is at Púngolum, three miles distant.

50. The manufacture in this village is often closed for two or more years consecutively.

51. The sales are very trifling. The Salt is not good. The manufacture is badly conducted and superintended, and the Kottár bears a bad name for smuggling. On these grounds I would recommend that it be closed.

52. The village of Púngolam is situated three miles to the north of the village of Uppunelvoy. The Salt works of this village are also situated on the bank of the Pulicat backwater and lie from about ½ to 1½ miles from the Salt Kacheri of the village.

53. There are three platforms attached to this village, distant ¼ mile the one from the other. The Pans which supply these platforms are excavated out of the sand, and must have cost the manufacturers much labor. Some of the Pans are three feet below the level of the surrounding plain. The water is brought to the works by channels from 2 miles to ¼ mile in length. These main channels were originally constructed and are yearly kept in repair, at the common cost of the manufacturers. I am informed it employs 20 men, at the beginning of each year, ten days, to clear out each of these channels; opposite each set of Pans and about 50 yards from them is the platform called a gate. These were, I presume, formerly well protected enclosures. There appear to have once existed a good broad ditch, a hedge and a gate with doors. At present nothing is to be seen but three raised mounds, with a few heaps of Salt upon them; and two posterns standing on the north side of each mound. The sides of the platform had been lately repaired, by the Department of Public Works, but the work does not appear likely to last. The surface of the platforms was very uneven, the Salt heaps lying about in no order. The first platform is supplied from 19 Pans, the second from 20 Pans and the third from 24 Pans. The Pans vary much in size.

54. I was very much struck with the slovenly and disorderly manner in which things appeared to be conducted at this Kottár. The Pans are ill-formed and ill-kept. The quantity of Salt ordered to be manufactured in this village, this year, was 91¾ garces, being at the rate of 1½ garce from each Pan-holder, and though this quantity could have been furnished, in April without any difficulty, I found that only 43¼ garces had been conveyed to the platforms by June. Salt was lying about on the ridges and near the platforms unstored. The Salt was not good, the platforms ill-kept, the heaps ill-formed, and ill-covered, and the whole exhibited an ill-managed and ill-cared for concern.

55. It is said there is much smuggling in these villages; it would be surprizing if it were not so. The servants do not bear high characters; several, if not all, have come under the displeasure of the Collector for the excessive wastage shown in the Returns, and been required to make good the excess. They did not impress me favorably either as regard their intelligence, their habits of business, or the manner in which the Salt works were conducted. The quantity of Salt required from the manufacturers was so small as not to be remunerative. The Salt Peons are, many of them, old men, and wholly unfit for their work. Both by land and by water, salt might be easily carried away without detection, and no supervision is exercised over these villages.

56. These villages have till very lately belonged to the Collectorate of Chingleput. They are far removed from the Collector's office, and are situated at an inconvenient and out-of-the-way corner of his District. There are no roads at all to them; a heavy sandy track is all that is to be traced. Each of the platforms is flanked by villages, and the last is in the neighbourhood of thick scrub. Near the village of Reddipolliem, is a Salt-water creek, where spontaneous Salt is produced. I examined the creek; it extends almost to the village. I was not able to find any of the Salt. Late rains, it was said, had destroyed it. The Salt has not hitherto been utilized, but I see no reason why it should not be collected and sold. This might easily be done. I am told, about 30 or 40 garces are produced annually. The accounts show that the wastage in this village is excessive. This excess attracted the attention of the late Collector, who, from time to time, adopted measures to check it, but the only effectual check, a respectable and well organized establishment, carefully selected and really superintended, has not been found practicable.

57. A temporary Supervisor is, annually, deputed to watch the manufacture in these four villages and report any irregularities which may occur, to the Collector. He receives a salary of 6 Rupees per mensem, and his Office is abolished at the close of the season. I could not learn that the Officer appointed this year had been of the slightest use; and self interest would point out, that his most prudent course was, when he became cognizant of any extensive fraud, to take part in it rather than divulge it. These temporary spies are a species of Officers, who, I conceived, were reprobated in any well ordered establishment. Any information they may give comes from a tainted and suspicious source, and they are often found to be the fomenters and originators of the evils they are appointed to repress.

58. At about I mile or 1¼ beyond the village of Púngolam, lie the villages of Obasamúdram and Chunnámbúkolam; the latter is styled in the Gentu language "Sunnapuguntah." There are attached to these villages three platforms.

59. The first and second platforms attached to the village of Obasamúdram and situated at a distance of quarter of a mile from one another are supplied from 60 Pans, and the third which is a quarter of a mile to the west of the second platform, is supplied from 40 Pans. If possible, the control and superintendence in these villages were less satisfactory and efficient than in those of Púngolam and of Uppunelvoy. The Pans were very slovenly constructed. They were not levelled, the flooring was very uneven, and ill-tamped; the water used was foul with scum and slime, and no system was pursued in making the Salt, which was inferior to that of the other villages.

60. The Pans showed that no pains had been taken to lay them out or level or form them. A large ferry was situated close to the Pans, which was very inefficiently guarded. The platforms were exposed, and ill-kept. There was no hedge or ditch round them, the gate posts and the remains of the hedge showed that the platforms had once been places of safety, but these enclosures had fallen into ruin. One of the platforms, No. 3, was situated near the village, and paddy fields were carried close up to it. The Salt was badly stored, the heaps ill-made, and ill-covered.

61. The servants appeared to be under no control. It was with difficulty that I could get any attention paid to my wishes or instructions. I ordered that arrangements should be made for examining a heap of Salt at 5 A.M., but it was a long time before the servants could be collected, though I had given my orders to the Peshkar the night before. The heap was found to contain 11 garces, 137 merkals, but I believe its real contents was 11½ garces being 15 per cent. in excess of the prescribed quantity. The Superintendent explained that the excess was to be attributed to careless storing; I believe it was intentional.

62. Adverting to the position of the four villages, their distance from Madras, and the difficulty which the Collector of Madras or his Deputy must experience, in exercising an efficient control over them, my first impression was that the works had better be closed, and this I find was the conclusion arrived at by the Collector, who remarks that "as but a small quantity "of Salt is manufactured and disposed of at the two most northern stations of Sunnapaguntah "and Púngolam, and as from their distances they have been very inefficiently supervised, and "would for the same reason, continue to be so, and as the neighbouring country can well be "supplied from the adjacent large store at Taddai in the Nellúr District, I would propose to

"abolish these two stations." But, considering the large and populous tract of country lying to the south of the four villages, and which is dependent for its supply of Salt on these Pans (I mean that portion of country lying to the east of the great northern road, and to the north of Pulicat and Ennore), and adverting to the necessity of being able to check the misappropriation of the spontaneous Salt produced in the creek, near the village of Reddipolliem, and in the shell pits, it appears to me that it would be better to retain one of the Kottárs, transferring it to the District of Nellár, and placing it under the care of the Superintendent at Taddai. I would recommend that the second platform of Obasamúdram should be selected; it is about half a mile from the village of Chunnámbúkolam, which is a place of some importance in these parts, and where there is a bazar and a brisk trade in shells carried on. There is also a cross country road or track from Chunnámbúkolam to Pulicat. The platform would be 11 miles from Bodilingálapádú, where the Taddai Superintendent holds his Kacherí, and is accessible from it by land as well as by water. It is about three quarters of mile from the creek where the spontaneous Salt is produced, and is near the shell pits; and if the manufacturers were assured that a remunerative quantity of Salt would be taken from them, and warned that, if the article produced was not of a better quality than that now furnished, the Pans would be closed, I doubt not that great improvement would take place in the manufacture. If a larger quantity of Salt were required than the present Pans could produce, the fresh Pans to be opened, should be first offered to the Pan-holders of the closed works. If this arrangement were adopted, the manufacturers of Púngolam and Uppunelvoy as well as those of Obasamúdram might, as the trade increases, be accommodated with Pans; and by there being but one store, and one set of Pans in its immediate vicinity, the whole could be overlooked and efficiently guarded by a small body of Police. The Salt establishment should be of the strength of that suggested by me for all the outlying stations of the Nellúr District, and a good road should be formed to Pulicat and the great northern road from the store.

63. There is a good Salt Kacherí at Chunnámbúkolam, which has lately been put into repair. That at Púngolam is much out of order.

64. I found eight heaps of 10 garces each, stored in Uppunelvoy, three heaps of the same contents stored in Obasamúdram, and one heap in Chunnámbukolam. The storage had not long been completed. The accounts of Kudiváram due to the manufacturers, had been sent into the Collector, but his sanction had not been received for their settlement.

65. The Salt, after it is placed on the platform, is not immediately received into store, but is kept at the charges of the manufacturers, till it suits the convenience of the Superintendent of the Kottár to commence the storing. If the storage be completed, early in the month, the account of Kudiváram is required to be submitted on the 15th idem; if the Salt is received after the 15th the Statement is to be forwarded on the last day of the month, but these dates are not strictly observed. The account is not sent till the 20th or 25th instead of the 15th, and on the 8th or 10th of the following month instead of on the 30th or 31st of the month in which the Salt was delivered. There is also delay in the Collector's Office in passing the accounts. This delay often arises from unavoidable causes. The absence of the Collector, or the Deputy Collector of Salt, from the head quarters, mistakes and errors appearing in the statements, and requiring their retransmission to the Office in which they were framed for explanation and correction. Should the account not require correction, the Salt is seldom paid for earlier than three months after delivery. The provisions in the rules laid down in the Salt Manual, appear to me sufficient to ensure early payment, if they were duly attended to, and enforced, and carelessness in the preparation of the accounts properly checked.

66. To recapitulate I would recommend:—

I. That rules be laid down for the manufacture of Salt, that these rules be strictly enforced, and that none but really good Salt, be received from the manufacturers.

II. That measures be taken for the early removal of the Salt, from the villages where it is produced, to Madras; firstly, by always keeping a sufficiency of water in the Canal to allow of laden boats plying to Madras; secondly, by securing the service of a sufficient number of boats, and thirdly by substituting, at the Depôt, mechanical appliances for the manual labor now employed in receiving, weighing and storing the Salt brought down in boats.

III. That covered boats be substituted for the open ones now in use.

IV. That the Establishment be re-modelled; that the Deputy Péshkár recommended by Mr. Pelly to be appointed to these villages be required to live in them during the time of manufacture. That two Amíns, six Peons and three Vettyáns be appointed to each of the large Districts and one Amín, four Peons and two Vettyáns to Ennore.

V. That the Kottárs of the villages of Uppunelvoy, Púngolam and Chunnámbukolam and one of Obasamúdram be closed. That the Pans and platforms belonging to the 2nd gate of Obasamúdram be retained, and if necessary the platform be enlarged and the number of Pans

increased, and that the Kottár be transferred to the Collectorate of Nellúr, and placed under the superintendence of the Tada Superintendent.

VI. That an Establishment consisting of a Deputy Superintendent on 35 Rupees a month, a manufacturing Amín on 14 Rupees a month, a Shroff on 7 Rupees, two Measurers on 5 Rupees each, three Peons on 5 Rupees each and a Mashálchi on 3 Rupees per mensem each, be appointed to these Kottárs and good roads formed to Pulicat, and the great northern road.

VII. That the spontaneous Salt generated in the creek near Reddipolliem and in the shell-pits be collected and utilized.

67. I beg here to acknowledge the assistance afforded me by the Collector Mr. Cunliffe, and the Deputy Collector Mr. A. Smith, who furnished me with early replies to all my queries and supplied me with much valuable information. I am also glad to have it in my power to report that I was informed that the Deputy Collector repeatedly visits the villages and is very active in correcting abuses.

Nellúr District.—68. The District of Nellúr possesses a sea-board of about 120 miles. On the low lands lying near the coast, there are 15 Salt Kottárs. There are also six Kottárs on the Pulicat backwater, making in all 21 Kottárs. A Kottár in Nellúr includes the Pans where Salt is manufactured and the platforms where it is stored and sold. Sometimes two or three sets of Pans a mile or two apart with two or more platforms constitute a Kottár. Some Kottárs have only one platform, while others have four or five attached to them. There are 52 platforms in the Nellúr District. These platforms are divided into two classes; 1st platforms on which Salt to be exported is stored, and 2nd platforms on which Salt reserved for inland and home sales is kept. There are 11 of the former class and 41 of the latter.

69. The Export platforms are at some distance from the Pans, and are so located as to meet the convenience of the shipping, being either on or near the beach, or on the bank of an estuary opening into the sea.

70. The Salt, stored on the Export platform, is called white Salt, and is generally of a superior kind. That, sold for inland consumption, is called brown or red Salt. Some of the brown Salt, except in color, is equal to the white Salt, but a good deal of it is very inferior in quality, being small grained, and full of impurities, and more resembling sand, than Salt. The brown and white Salt are taken from the same Pans, and beds; the latter owes its whiteness to the care observed, when scraping the Salt from the Pans, not to break the upper crust of the flooring, nor disturb the under-lying mud and other impurities.

71. The accompanying table A. shows the names of the several Kottárs, the order in which they stand, commencing at the most southern one and proceeding northward; the distance of each Kottár from the one next in order; the number of Salt beds and platforms attached to each, distinguishing the export from the inland platforms; the average quantity of Salt stored in each Kottár during the last six years, the average sales, and the average quantity of Salt exported during the same period, also the date of my arrival and departure from each Kottár.

72. The Kottárs are divided into six divisions, each of which, comprising from two to five Kottárs, is placed under a Superintendent on a salary of 30 or 40 Rupees per mensem. There are three Superintendents on the former scale and three on the latter.

73. The Superintendent resides at the head quarters of the Division, where there is a Division Katcheri and Treasury, and usually the most important and largest Kottár. At the head quarters, the Superintendents are assisted by Gumáshtas, Nevisindáhs, Shroffs, Akburnevises, Peons and measurers termed Vettyans.

74. To each large Kottár is attached a Gumáshta, a Nevisindá, a Shroff and Peons.

75. The small Kottárs are superintended by Officers deputed from the Division Kacherí. In such cases the number of Nevisindás attached to the Division is two or three instead of one.

76. The Superintendent is expected to visit, frequently, the Kottárs under his care, and is responsible for their being efficiently managed.

77. The sale proceeds of Salt sold at the subordinate Kottárs are daily sent to the Division Treasury, and the monthly and periodical accounts submitted to the Collector are prepared at the Division Office.

78. The Gumáshtás, who originally seem to have been appointed to prepare the accounts, are employed indiscriminately with the Nevesindás, at the Division Kacherí, and subordinate Kottárs in this work, as well as in superintending the manufacture, storing, and sale of Salt.

79. The Shroff receives the price of the Salt sold from the purchasers, examines the coin, and keeps regular accounts of the receipts and disbursements of his Treasury.

80. The Akburnevis's duty is to watch the conduct of all the other servants, and bring any irregularities or particular circumstances to the notice of the Collector, and to stand by when the sales are going on, to see that the measurements are correctly made.

81. The Naik is the Head Peon of the Treasury guard, in the Division Kacherí.

82. The Pygust is the Head Peon at the Kottár; he sees that the Peons attached to the Kottárs are at their several posts, and attentive to their duties.

83. Some of the Peons are employed in guarding the Treasury, some in watching the Pans and platforms, some in carrying out the orders of the Superintendents.

84. Vettyáns are engaged in watching and measuring the Salt, making any slight repairs to the platforms, and performing any other trifling duties connected with the preservation and security of the Salt in store.

85. The enclosed Statement B shows the Divisions, the Kottárs attached to each, the establishment of each Division, and each Kottar, and the salary of each servant.

86. In the Nellár District, no account is taken of the Pans, but, the number of Salt beds, held by each proprietor, is brought to account. The number of beds forming a Pan, as well as the size and cubical contents of the beds, differ greatly, both at different places of manufacture, as well as at the same Kottár.

87. The Pans are not ranged in any order. Sometimes they are so placed as to form a large parallelogram. Sometimes they are extended in a long straggling line, not always a very straight one. In some places the Pans are close to each other, and with their reservoirs cover the whole area of ground under occupation; in other places patches of waste land are found lying between groups of pans. The yield of some Pans is larger than that of others.

88. The quantity as well as the quality of the Salt produced, is sometimes to be traced to natural causes, such as the difference in the size of the Pans, the density and saltness of the water of the wells, and supplying channels, the locality of the Pans, the nature of the soil and the character of the season; but I fear that disregard to rule and the careless way in which the manufacture is carried on, each man being permitted to follow his own devices, has very much more to do with the deficiency of the supply and inferiority of the Salt produced.

89. The water let into the evaporating beds is seldom sufficiently concentrated. It is let in either in too large or too small quantities, and is not permitted to remain in the beds a sufficient time to allow of the crystals being perfected before it is disturbed by scraping. The beds are so roughly and violently scraped, that mud and dirt are raked up, and mixed with the brine, and the beds are not always kept free of slime and other impurities. The earlier and most favorable season for the manufacture is usually lost, the manufacturers being enagaged at the beginning of the year in agricultural or other pursuits; and in order to make up for the lost time, they hurry through the operations in the latter part of the year.

90. The Deputy Collector is fully alive to these defects, which mar the production of a purer and finer Salt; and is anxious and careful to introduce improvements, but he has much to contend against in the carelessness and neglect of his subordinates.

91. It is required, by the Manual, that a Register should be kept of the Pans. This rule has not hitherto been observed, but the present Deputy Collector among the improvements he is introducing into the administration of the Salt Department of this District, is endeavouring to correct this omission. He has also enforced attention to the taking an agreement from the manufacturer at the commencement of the season, and to the careful preparation of the accounts, and has suggested that the Pans be surveyed and made of one uniform size, as well as registered.

92. The Pans are looked on as private property, are mortgaged, sold and inherited. The prices of the pans vary very much. At some Kottárs they realize only from 10 to 30 Rupees, in others as much as 300 or 400 Rupees each. The price is apparently and ostensibly regulated by the quantity of the Salt ordinarily allotted for manufacture and the regularity and certainty of the demand. Some Pans are only worked once in two or three years, and the quantity of Salt required to be made at them, is very variable; such Pans naturally command a lower price than those at which large supplies are annually ordered; but the facilities for illicit trade enter into the calculation and help to regulate the price. The Collector determines each year, the quantity of Salt required, the Kottárs at which and the proportions in which it shall be made. The quantities allotted to each Kottár, are apportioned by the Superintendent among the several Pan-holders rateably according to the number of beds held by them; but as the beds differ greatly in size, this apportionment is not exact. No claim to manufacture Salt annually appears to exist, nor does any right seem invaded, nor is compensation looked for where Pans are closed. During my tour, the manufacturers frequently and strongly deprecated the closing of their Pans, and prayed for an

extension of the manufacture on the plea that they had no other means of living; but no claim of right was ever advanced. I was informed that Pans have been closed in this District, without compensation having been given, and applied to the Collector for information on this point; but he was unable to furnish me with it.

93. The Salt beds are held by persons of all castes, including Brahmins. Some carry on the manufacture on their own account, others sub-let their Pans. The proprietors pay the manufacturer sometimes a quarter sometimes two-thirds of the price received from Government for the Salt. In the former case the manufacturers bear only the expense of restoring the Pans, and manufacturing the Salt; in the latter, he shares with the proprietor the burthen of delivering, storing, covering and measuring the Salt, and of keeping the platforms in repair.

94. The land, on which the Salt is to be manufactured, is, in the first instance, prepared either by ploughing or by digging. Water is then let in upon it, and the ground is well puddled, either by cattle or men treading on it. It is then carefully levelled and smoothed with wooden rakes, and left to dry for some days. The Pan is then formed. In some places a bank or broad path is formed down the middle of the Pan, which is further divided by small ridges of earth into small compartments. These operations occupy about twenty days.

95. In some Kottárs the bank separates one Pan from another. Sometimes a large bed, about half the size of the Pan, is formed at the head of the Pans, as a reservoir for condensing the water before it is let into the Salt beds. Sometimes the reservoirs are on one side, and the Pans on the other of the bank. Sometimes the reservoir and Salt beds are found next each other, in alternate beds. Sometimes it is placed between two Salt beds, while in some places the reservoir is not in use at all. At some of the Kottárs, the water, of which the Salt is manufactured, is conducted to the Pans from a backwater or creek by channels varying in length from one to four miles. At others, the water is conveyed to subsidiary channels, from which it is baled up by picotahs or hollowed palmirahs. In others, the water is drawn from ponds or shallow wells, dug in the bed of swamps, or in a porous or sandy soil, more or less impregnated with salt.

96. The ground, on which the Pans are formed, is usually flooded more or less during the rainy season. The Pans in some places are thus much destroyed, the channels and beds being clogged up with mud, and the bank and ridges washed away. On high ground and where the soil is a good tenacious clay, little repair beyond the cleaning out of the beds and levelling and tamping of them is needed. In some places the Pans require almost to be re-formed. The ground on which the Pans, situated on the Pulicat lake, are formed, being very low, is often under water till a very late date, and owing to the large precipitations from inland floods, the waters of the lake after the monsoon, are not fit for use till April or May. At Taddah the manufacturers use ponds from which they draw their water, they are therefore enabled to commence their operations as soon as the waters of the lake subside. The Deputy Collector has induced the manufacturers at Ramapuram and Pudi also to sink wells. It is of importance that the manufacture should commence early as the best salt is made during the prevalence of the south-east winds. The Salt is then whiter in color, larger in grain and of finer and better formed crystals than Salt produced later in the season, when the westerly winds are blowing; this Salt liable to be discolored with dust and other impurities, is formed in flakes and is very friable, and small in grain, especially if the season be a dry one. A moist state of atmosphere and still-water are needed for the production of good Salt; but these points are not sufficiently taken into account by the manufacturers who procrastinate and loiter over the work of repairing their beds.

97. There seems to be no rule observed, as to the length of time the water is to be retained in the reservoir, or condensing beds, nor as to the quantity of water to be introduced into them; and into the Salt beds. At the several Kottárs, a different practice is observed, in all these particulars; and the only reason that I could elicit for the diversity of practice was, that the soil and the winds required it. I believe ignorance and carelessness are the real causes.

98. When the Salt is gathered, it is left on the ridges, in heaps for two or three days, to allow the moisture to drain off, the contents of such heaps being entered on estimate, in an account which is professed to be taken daily, and the heaps are stamped to prevent any of the Salt being removed.

99. But as I have said above, it is obvious that these precautions, even presuming the accounts, give a true return of the quantities collected on any one day, are of themselves quite insufficient to ensure the due delivery to Government of all the Salt manufactured in a season. Severe falls of rain remove both the impression of the seal, and wash away large quantities of the Salt placed on the ridges, and such an excuse can at any time be assigned to account for Salt removed by other means than by rain. It is also easy for the servants at the Kottár to replace Salt illicitly taken by newly made Salt not brought to account, I believe it is in this way that a great deal of petty smuggling is carried on. Salt, instead of being entered in the account is buried and disposed of by the manufacturers with the connivance of the servants.

100. In the vicinity of each set of Pans, is a raised platform of earth, sufficiently large to receive all the Salt likely to be manufactured in the Pans under it. All the platforms in the Nellúr District are well raised, and as far as I could learn, from careful inquiry, the floors of the platforms are all above the level of floods. I found the Deputy Collector had taken much pains to raise and enlarge some of the platforms, to fill in the gutters and ruts with which all were cut up, level and tamp the surface, slope and turf the sides, and insist that the Salt heaps should be placed, in rows and in order. All this work was done, by the manufacturers, without any cost to Government. The state in which I found the platforms did credit to the zeal and care of M. Narainasawmy Moodelly.

101. Most of the platforms in the district of Nellúr are wholly unprotected by hedge or palisade. It appears to me that no time should be lost in enclosing them.

102. In the district of Madura, every platform is surrounded by a strong hedge and good ditch, and has but one entrance, at which there is a thatched or tiled native gateway, with doors. The gateway serves as a place of protection from the rains and sun for the servants and peons and for the traders when resorting to the platform to purchase Salt. I think a similar gateway might with advantage be adopted in Nellúr.

103. At present any one can easily enter a large proportion of the platforms in Nellúr, and when these are near villages, peculations and frauds are supposed to prevail, for the heaps are only covered with palmirah leaves, or a long grass or straw, through which easy access is obtained to the Salt.

104. When the Salt has been on the ridge, long enough to drain off the superabundant moisture, it is removed by the Raiyot in baskets to the platform, each Raiyot's Salt being separately heaped. The Salt is kept here indefinitely, till it suits the servants to store it. Some Salt had been months on the platform. In some of the Kottárs, very inferior Salt had been received, and a reference made to the Deputy Collector for instructions, whether it should be stored or destroyed. Such a reference was needless and is likely, if permitted, to lead to serious abuses. If a Superintendent is incompetent to discriminate between good and bad Salt, and cannot be trusted to destroy the latter, he is unfit for his post, and should be dismissed. Among the condemned Salt, I found some heaps of very good Salt, and some so bad, that there could be no reasonable doubts as to how it should have been treated. The Superintendent explained that as the good and bad were gathered at one scraping, he had condemned the whole, and solicited orders, sending specimen of the Salt.

105. Some Superintendents greatly abuse the power committed to them of destroying bad Salt, to exact presents from the manufacturers for passing their Salt; but this abuse must be checked by vigilant supervision, and the punishment of the offender. Salt should not be allowed to lie in the platform, till it suits the convenience of the Superintendent to receive it into store. He should be required to take it in, at the earliest practicable date. I am aware that no specific rule can be laid down on this head, as in a wet and damp season; the Salt would require to stand a longer time on the platform than in a dry one; but at present, the delay is more protracted than it need be, and the manufacturer not being paid for his Salt till it has been taken into store, is kept out of his money a longer time than he should be; besides, being subject to loss from wastage and to the expense of covering his Salt.

106. The operation of storing is conducted under the Superintendence of the Nevesindah or Gumáshta, in charge of the Kottár. A Peon is also in attendance to keep order. Where the quantity of Salt to be received is large, and there is more than one platform attached to the Kottár, two or three parties are employed at the same time. Each Gumáshta receives the Salt for one heap of 10 garces or 1,200 Indian maunds. Under each Gumáshta, from two to eight coolies (employed by the manufacturers) each with a merkal are placed. These men deliver the Salt into baskets, in which it is received, and carried to the places of storage by other coolies. Not less than twenty or thirty coolies are employed to each heap. It is found that each party can with occasional relief of the merkal and basket coolies, store three heaps of 10 garces each, in the day, but this standard is seldom attained. In Nellúr, the Salt appears to be fairly taken from the Raiyots. The measure is neither pressed down nor heaped up, and, as far as I could learn, the Salt is measured out in the same way to the purchaser. I examined several heaps, some of former years storage, some of the present. In every one there was a deficiency. The deficiency in the former years storage was accounted for by wastage. The Deputy Collector informs me that when he took charge of the Department, he found the Salt very much exposed, the covering having been blown or washed away, and not replaced, and the Salt heaps much injured and destroyed.

107. There had been no rain since the Salt of the present year's manufacture was stored and the Salt was said to be dry when it was placed in the heap. It is impossible to secure an equable measurement. And it is always found that Salt loses in re-measurement. No two sets of measurers measure alike, and with so compressible an article as Salt, the quantity which may be

contained in any measure varies greatly according as the measure is driven into the heaps with more or less violence, and the Salt poured in to fill it up, is subjected to any sort of pressure. The Salt is also much broken and compressed by the treading and shaking, it gets in storing. To all of these several causes the deficiencies in this year's heaps may, I think, be fairly attributed. The impossibility of ensuring accuracy and correctness in measuring Salt is admitted, and the experiments made by me, proved no exceptions. During the examination, I and the Deputy Collector were both obliged to be very careful to prevent any fraud, in the mode of filling the measure, and we endeavoured to counteract the efforts of the measurers to press down or overload their measures; but we were continually, baffled. It is doubtless very necessary, closely to scrutinize into the cause of any excess of wastage, but I believe it is equally necessary to ascertain that the very trifling account of wastage set down in some Districts, does not arise from a system equally, if not even more pernicious, and more prejudicial to the interests of Government, than that of careless storage and careless covering of the Salt; it is that of receiving largely in excess, or, as it is professionally termed taking good measure, that is, requiring the Salt when received into store to be well pressed down into the measure and heaped up; and selling by the struck measure, lightly filled. The excess thus obtained with a small addition for wastage, forms one of the sources of the profits of the establishments. Salt really lost by fair wastage, involves to the Government, the loss of the cost price and the proportionate loss of the cost of establishment, &c.; but, every grain of illicit Salt thrown into the market, displaces an equal quantity of Government Salt. I believe it is deemed necessary, in every District, to make some return of wastage, in order to avert suspicion from the unfair practices of the establishment. Wherever the practice of taking good measure prevails, the servants dispose of the excess to their own profit; but in order to attract merchants to their store, they allow them to take a portion of their Salt at reduced prices.

108. I examined several of the measures used in this District with grain, and found discrepancies in their contents: the accompaning table C shows the result of the examination of the measures of three Kottárs. I also found several of the merkals much broken, and in a very dilapidated state. Some of these were in constant use; some, it is said, were laid aside, but I found them in the Kottár, and as long as they are kept there, a temptation is offered to the servants to use them.

109. I have been informed by the Collector of Nellúr, that he has since called in all the worn-out measures from the stores of his District.

110. My tabular statement of examination has reference only to measures in use. I did not examine those put aside.

111. The white Salt, stored for exportation, is received by weight. The export platforms are each furnished with two or three sets of scales and weights, as well as with triangles in which to hang the scales. The scales are the common beam scales, but before they could be used they had to be adjusted. One scale was on the ground, the other kicking the beam. The weights also had to be adjusted. No one could state how much they represented, and before using them it was necessary to ascertain their equivalent in Rupees. I measured a garce of Salt, by the merkal's in use at Iskapalli, and afterwards weighed it. I found a large excess equal to 32 merkals. It was at this place that the *Alma* shipped her Salt, and with the scales and weights in use, it is not at all improbable that the quantity delivered on board, fell short of that supposed to have been shipped. I believe the Collecter after some trouble has obtained a few sets of beam scales and weights at Madras; but it appears to be necessary that each of his export Depôts should be furnished with four pairs of beam scales, and that each set of scales should be supplied with a set of the following weights, two of $\frac{1}{4}$, two of $\frac{1}{2}$, 1, 2 and 4 maunds.

The weights also had to be adjusted.

112 I made an experiment to ascertain how quickly a garce of Salt could be weighed. I found, by adopting the suggestion made by Mr. Robinson, and published at page 55 of the Board's Circular Orders of 1857, of placing planks cross-ways in the scales, and using 13 small baskets, each containing one merkal, that I was able to weigh 40 maunds in 11 minutes, or about two garces of 120 maunds in one hour. This experiment was carried out without any pressure or hurry. I tried the large basket of one maund, but found it could not be carried from the heap, or placed and taken from the scales, without difficulty. Two men were necessary to carry the basket, and much time was wasted in their placing it in the scale and removing it, and much Salt was also spilled. If weighing should be universally substituted for measuring, I think, practically, no machine will be found better adapted for this purpose, than the common beam scale prepared with boards to hold baskets: it would be less liable to get out of order, may be more easily repaired, is better understood by the people, and a larger quantity of Salt can be placed on it, and removed from it with greater rapidity, than if a more complex machine were used.

113. The Salt heaps were all well covered. To the south, the covering used, is made of palmirah leaves, but at all the platforms north of the Tadda Division, rushes, or straw or grass is used for this purpose. The Acting Sub-Collector had made an experiment, with a view of introducing the method adopted in the southern Provinces, of encasing the heaps in a thick coating of clay. He found the wastage in Tanjore, to be much less than it was in Nellár; and

on examination, discovered the Nellúr Salt heaps either half covered, or overlaid with a mass of damp corrupting grass. Even when the Salt was well protected from the influence of the weather, he considered Salt might with ease be abstracted from the heap; he therefore ordered two heaps to be covered with clay. I have not heard how his experiment has succeeded. I saw the heaps, they looked in good order, but what their outturn may prove to be, remains to be seen, after the heaps have been exposed a sufficiently long time to test their power of resistance. I am inclined to believe the mud case will be found, not only a better protection against the action of the seasons, but will also prove a more economical covering, as the clay removed from one heap can easily be worked up anew; whereas, the present covering has to be renewed once or twice a year.

114. The wastage returns show that the average wastage, for the District of Nellúr, during the last ten years was 4,76,428 Indian maunds, out of 64,68,312 Indian maunds stored, being at the rate of 7 Indian maunds, 15 seers per cent. The year in which the largest amount of wastage took place was 1858; the amount returned in this year was 99,074¼ Indian maunds. The smallest wastage occurred in the year 1850, and was 12,987 Indian maunds; but, I find, that while at one Kottár, the wastage is very great, and far in excess of ordinary years; in another Kottár it falls below the prescribed amount. In 1858 it amounted in some Kottárs to 33 maunds, 12 seers per cent.; in others, only to 1 maund, 27 seers per cent.

115. This difference is accounted for, by some platforms being more exposed than others to floods and rain. The quality of Salt has also to be taken into consideration; in some places, it is more porous and deliquescent than in others; again, some heaps are better covered and protected than others; but, after making every allowance for diversity of situation, quality of Salt, and care in covering the heaps, I fear, much that is set down to wastage must be ascribed to fraud. At Gógalapallí, I was told that after a severe storm in 1857, the Officer in charge of that Kottár, had surreptitiously disposed of whole heaps of Salt, and returned them as washed away. The fraud was brought to light, but for want of proof, the delinquent was only removed from office. In other places, I heard of similar practices, though not carried on in so bold a manner. I have asked for a statement showing the number and character of the offences against the Salt Revenue, charged against public servants and others, during the last ten years, and the manner in which the cases have been dealt with; but the Collector has been unable to furnish me with these returns.

116. The Deputy Collector complained very much of the inefficiency, carelessness and inattention of the servants employed under him; who, he said, with very few exceptions, were unfit for their posts. Many, appear to have been Officers, who have failed in the Revenue and Police Departments, or had grown unfit for employment in those departments. Several were old men, and some bore bad characters. Four, out of the six Superintendents, were Mahomedans. The Deputy Collector complained that they were generally ignorant of their duties and inattentive to them, and that they left them to be performed by their subordinates. Their Kottárs certainly showed less supervision and care, than the Kottárs of the Superintendents of Tadda and Dugarájapatam, and I found very great difficulty in obtaining any information or returns from them. The Collector, feeling that he and the Deputy Collector were both new to the District, was desirous of knowing more of the character of these Officers, before having recourse to any severe measures against them. It was one of those Mahomedan Superintendents, who had condemned indiscriminately good and bad Salt, simply because it had been obtained at the same scraping. Two of the subordinate Officers, the Nevisindahs of Mallam and Dévarampádu, were deemed unworthy of trust, and were very careless and negligent in the discharge of their duties. Two Peons are assigned to each platform, as a guard, and good huts had, under the directions of the Deputy Collector, been constructed for them; but I fear, the Peons are not always at their post. Salt was seen, by one of the Nevisindah's being, at night, carried away from the Binganapalli Pans, he could find no Peon at hand; and by the time a few were procured from the village, the offenders had decamped. Two platforms were close to the place, where the smugglers were first seen, but no Peons were found to render assistance. The Nevisindahs were afraid to pursue the offenders alone, the Salt was afterwards discovered, in bags, near some huts, but the offenders had escaped.

117. The Deputy Collector had also allotted the beats to be assigned to Peons to watch the Pans, and had done so very judiciously and satisfactorily; but the difficulty appeared to be to get the Peons to mount and keep guard. The Superintendent assured me that the Peons were always alert and on duty; but I learnt from other sources, this was not the case. It is hardly to be expected that men worked during the day should be watchful at night; and I have reason to know that even when on their beats, they lie down in their huts and fall asleep; many of the Peons were old men and unfit for work.

118. I believe that guarding the Salt both in the Pans and on the platforms will be better done by the Police, than by any Revenue preventive guard.

119. There are no roads to any of the Pans or platforms. One had been formed, I was told, in Mr. Vaughan's time, from some high ground to the Pans, and to the place of export at Gengapatam, but with the exception of a small ridge and one small bridge, no traces of this road existed. The road, it is said, was constructed for the double purpose of allowing bandies to reach the platforms and carry Salt from them to the interior and to the beach; and also, to serve as a dam to protect the Pans being flooded, with the drainage, of some paddy lands in the neighbourhood.

120. Some of the platforms lie about quarter of a mile from the main road; some at the same distance from the village; but the greater number are found in the midst of heavy sand or swampy ground. There are no approaches or cross roads to any of the platforms and the difficulty of reaching even those most favorably situated in the wet weather, must be very great indeed; wheeled carriages are consequently but little used in the trade, and I found that pack bullocks carry but one-eighth of the load placed on a bandy. The Taddai platforms are only half a mile from the great Northern road and from the village; but at the bazars of the town, I found the retail shops selling Salt at 16 per cent. in excess of the price paid to the Government for it; considering the monopoly and the high price fixed on this great necessary of life, it appears to me to be a simple matter of justice, not to say of policy, that roads should be made to all the platforms, and that when made, they should be kept in order, or, if this be found impracticable, that Salt should be carried and stored in places accessible to the people. It is now stored near the Pans in spots separated from the main road and villages, and only to be reached with much difficulty and expense of labor and capital. In some places the Salt might be easily removed to the vicinity of towns and stored on the edge of the high roads. This might be done at Taddai and Dugarájapatam; but it is a question, whether it would not cost more to carry the Salt to such stores, than to make the present one's accessible by good roads.

121. The Collector informs me that a road to connect the port of Taddai with the trunk road from Nellúr to Madras and a road from Dugarapatam to Gùdúr on the same trunk line, but at a distance of 44 miles north of Taddai, are now under construction and will materially facilitate the means of access to these two depôts. Again, the Kistnapatam Canal ordered by the Home Authorities, in communication with the inland navigation of the Madras Navigation and Irrigation Companies, viâ Kaddapá to Karnúl, will open up an unlimited demand for sea Salt at Kistnápatam, which will thus send Salt by water, not only to distant markets inland, but also to Nellúr; and besides this great opening, roads are being improved from Nellúr to Gengapatam and from the Northern trunk road at Allúr to Iskapalli. In the north, a road is much wanted to enable the carts that bring down grain to Kottápatam for export to take up Salt on their return at Pádarti, which lies two miles off the Kottápatam and Ongole road. This road has been ordered and formed to a certain extent, but requires much more to be done to it at present, and it would be very desirable if the six miles from Ongole to Kottápatam could be also put in good order at the same time. I fully concur in these suggestions of the Collector, which I strongly recommend to the favorable consideration of Government; and would add, that good roads should be opened to all the platforms which it may be determined to retain. There are at present fifty-two which number, I think, might with advantage be reduced to twenty.

122. After mature consideration, it does not appear to me that Mr. Pelly's Salt Establishment scheme could be carried out in its present form in Nellúr, where there are so many outlying villages attached to the Division stations.

123. Mr. Pelly, in his tabular Statement, has clubbed up several of the existing Divisions and Stations, and thus greatly increases and intensifies the evils which, I understood, the revision was intended to rectify. The result of his proposal would be, virtually to place the greater portion of the Salt sales of the District in the hands of ill-paid servants of 14 Rupees per mensem, without providing any efficient means of check or control. For, the Division establishments being weak and the superintending Officers necessarily residing at great distances from the several outlying villages under his charge, it would be impossible for him to exercise any real or practical control over the more distant Kottárs and by expecting too much more than could be possibly done, the result would be that nothing will be done. As far as my experience goes, I do not think that one system, or one scale of establishment can be framed to suit the several Districts under this Presidency. To be effective, the establishments must be adapted to the peculiar circumstances of each District; in each District, it will be found, there are peculiarities arising from the habits of the people, the natural conformation of the District as well as the system and mode of the manufacture, to which the people have long been habituated, that render it absolutely necessary to modify the establishment found to work well in one District, to suit it to the wants of the neighbouring one.

124. Mr. Pelly has laid down a principle that the manufacture and sale of the Salt should be placed under different persons, and that the Superintendent should ordinarily be present at all sales. This principle has been approved and adopted by Government; but, I believe, Mr. Pelly was not aware that, with the exception of Madras and perhaps of a few export Depôts and Depôts in Canara and Calicut, the places of sale and manufacture are indentical; the platform lying

immediately contiguous to, and in some instances in, the midst of the Pans. It is only where these places of manufacture re few and within very short distances of one another, that the Superintendent could be present at all the sales of the several depôts within his range, where the places of manufacture are distant: the manufacturing Amín, a man on 14 Rupees, must necessarily superintend the manufacture and sale too, and when these distinct manufacturing places are numerous as in Nellúr. The sales, as well as the manufacture of almost all the Salt of the District will fall into the hands of the Amíns. It is further to be recollected that from the nature of the work, the exposure and harrassing duties which a Salt Amín has to perform, as well as from the ill-odour into which the Department has fallen, that 14 Rupees in the Salt Department will not command the services of a man of the same stamp and character, that it would in the Revenue or Judicial or new Police Departments.

125. It appears to me, therefore, that no man in charge of a Salt store should receive less than 35 Rupees. If it is absolutely necessary that the two Departments of manufacture and sale should be distinct and separate, a Deputy Superintendent on 35 Rupees per mensem ought, I think, to be appointed to each sale Depôt, and an Amín on 14 Rupees be left in charge of the manufacture. Keeping this principle in view, I have drawn up a scale of Establishments (see Statement D,) for the several divisions and outlying stations, that I recommend should be retained in Nellúr. The establishment is, I believe, on the lowest scale consistent with efficiency. I have recommended that all the Superintendents should receive the same amount of salary, viz., 65 Rupees per mensem, except the Superintendent at Iskapalli to whom I would give 85 Rupees, in consideration of the nature and extent of his duties. The greatest quantity of Salt is sold and manufactured in this division. It contains a larger number of outlying stations than the other divisions. It contains two ports of export much resorted to, and the Superintendent should therefore be acquainted with English, in addition to pssessing the qualifications required of the other Superintendents.

126. I have also allowed a Deputy Superintendent at the division station of Iskapalli, where both inland and export sales take place. During the absence of the Superintendent at any of the outlying stations, or at the port of Varini, an Officer of experience and standing is required to supply his place. I have recommended that an allowance of 15 Rupees per mensem should constitute a part of the emoluments of the Superintendents. I think it is necessary that these Officers should be provided with horses and that they should frequently visit the Salt Pans and Depôts under their charge; an allowance of this kind is more likely to ensure the purchase and keep of a horse, than if the amount be simply added to, and consolidated in, the salary. As the Superintendent of Pàkala has no outlying stations, he will simply receive his salary of 65 Rupees per mensem.

127. There are, no doubt, more sale stores in Nellúr than the requirements of the District call for. I also think, the places of manufacture to be too numerous. In the Taddai Division there are now four manufacturing villages; three of these are close to each other within a distance, of little more than five miles. They all lie near the great Northern road and are flanked by the Pulicat backwater. There is one platform at Rámápuram and 1,184 beds, one platform at Púdi, and 997 beds and 3 platforms at Taddai and 2,478 beds; the sales at Púdi and Rámápuram are small, being on an average of the last six years, 10,692 maunds at the former place, and 7,921 maunds at the latter. The trade at Rámápuram is partly local and partly inland; it is said that traders from Kálástri and the west, who have gone to Madras with goods, take up Salt at this Kottár.

1st Division.
Rámapuram,
Púdi,
Taddai and,
Vélukadu,

128. The Deputy Collector is very anxious that the Rámápuram Kottár should be retained, and so is the Collector. My own judgement is that it, as well as the Púdi Kottár which the local Officers recommend should be closed, might be abolished; for I hardly think that Depôts are required within a distance of ten miles; and with a sale Depót at Chunámbúkolam four miles to the east, and a large store at Taddai six miles and three furlongs to the north. I do not think one is wanted at Rámápuram; but the local Officers urge that though Chunámbúkolam is so near, it is too far removed from the road to be accessible to carts; and further, that a large stream has to be passed to reach it. In deference therefore to their opinion, I would recommend that the Rámápuram Kottar be retained, and that Púdi which is only one mile from Taddai, be abolished. At Taddai there are three platforms at a distance of quarter mile from each other, and the Pans lie straggling along the backwater. I think the Pans might with advantage be concentrated, and that one out of the three platforms might be given up. I would retain two platforms and congregate the Pans about them there is plenty of room for such an arrangement. The Deputy Collector quite concurs in this view, and in fact suggested it.

129. The Vélukádu Kottár is situated in one of the small islands of the backwater; it is very difficult of access at all times, especially in the wet weather. My bearers found much difficulty in wading through the soft mud, into which they sometimes sunk as far as the middle

of the calf of the leg. The station Kachéri is not in the same, but in a separate island, at the village of Meenjúr. Vélukádu is 16 miles from Taddai. There are here 310 beds, the Salt was very bad and the trade small. The Deputy Collector and, I believe, the Collector, concurs with me in the advisability of closing this Kottár; but in lieu of it we would open a store on the main land at a village called Kattupalli just opposite to Vélukádu. This village is accessible at all seasons. There is a cross road from it to the main road and to many villages in the surrounding tract of country. There is much spontaneous Salt of a very superior kind produced in the swamps of the islands in the backwater, which is now said to be destroyed, but I heard that much of it is surreptitiously disposed of. It appears to me this Salt might be collected and sold at the store, which I propose should be established at Kattupalli. The Salt is found only after the floods abate, and could easily be collected by a small establishment of coolies to be annually entertained for this purpose. The fixed establishment at the store with the aid of Police Peons could prevent the surreptitious removal of the Salt and would superintend its gathering, storage and sale.

130. If these proposals were acceded to, there would be a Kottár at Chunámbúkolam, one at Rámápuram four miles to the nort-west of Chunámbúkolam, and one at Taddai six miles to the north of Rámápuram. Each Kottár would consist of its Pans and platform or platforms, and keeping in view the wish of the Government, that the Sale Depôt should be under a different person from the manufacture of Salt, I would recommend that there should as at present be a Division Kachéri at Bódilingálapádu, and that it should consist of a Superintendent on a salary of 65 Rupees per mensem, with 15 Rupees per mensem for horse allowance, to superintend the manufacture, storing and sale of Salt at Taddai and to exercise a supervision over the other stations of the division; a Gumástah on 20 Rupees to take the place of the Superintendent, when he visits any of the outlying villages of his division, and to prepare and submit all the accounts of the division to the Collector; an Amín on 14 Rupees to superintend the manufacture of the Salt made at Taddai; a Royasan on Rupees 10, to keep the correspondence and aid in the preparation of the accounts; a Shroff on 10 Rupees to have charge of the cash and monies paid into the Division Treasury; five Peons on 5 Rupees each, two to attend on the Amín and three on the Superintendent; three Measurers on 5 Rupees each, and a Massalji on 3½ Rupees.

131. At each of the outlying stations I would recommend a Deputy Superintendent on a monthly salary of 35 Rupees, to have charge of the Sale Depôt; an Amín on 14 Rupees per mensem, to superintend the manufacture of the Salt; a Shroff on 7 Rupees per mensem, to receive the money and transmit it to the division Kachéri daily; three Peons on 5 Rupees each per mensem, two for the Amín and one for the Deputy Superintendent; two Measurers on 5 Rupees each per mensem, and a Massalji and Sweeper on 3 Rupees, wherever there may be a Kachéri.

132. The Depôt at Kattupalli, I would place under the Superintendent at Dugarájapatam about 12 miles off.

133. The second Division, called the Dugarájapatam division, has now attached to it the four stations noted marginally.

2nd Division.
1. Mallám.
2. Dugárajapatam.
3. Tupili
4. Kottapatnam.

134. Mallám is notorious for its smuggling: it is only one mile to the south-west of the Dugarájapatam Kottár. I would abolish it and retain the Dugarájapatam Kottár, which is about one mile to the south of the village of that name. The Salt at the latter place is more accessible by land and by water, than that stored at Mallám. The Depót can be better looked after by the Division Kachéri and Dugarájapatam is likely to be much frequented as an emporium of trade. It is proposed to make a road from Gúdúr on the great Northern trunk road to Dugarájapatam, which is at present the terminus of Cochrane's Canal. This road should be continued from the village to the platform. At present the platform can only be reached from the village by passing over a heavy sand and swamp. It is necessary that a good road should be made to it, or that the Salt be brought down by water and stored at a platform to be made near the store shed of the Public Works Department. I rather incline to the latter proposal, because, I think, the bandies and bullocks employed in bringing goods to be shipped at Dugarájapatam (and I find there is an increasing trade in grain rising up in this place), would, if the Salt were near at hand, be induced to carry back Salt, instead of returning as they do at present, unladen. The Salt trade at Dugaràjapatam is not large; but with the difficulty of access to the platform, which is much out of the way, this is not surprising. If the Mallám Pans are closed, the sales of Dugarájapatam would increase very largely.

135. At four miles to the north of Dugarájapatam, near the village of Tupili is a Kottár with one platform. This was quite closed when I visited it. The Salt had all been sold and the Pans were not worked this year. The Deputy Collector and the Collector concur in thinking that this manufactory should be closed; it will be seen from the map that there are not many villages in the immediate neighbourhood, and when the proposed Coast Canal which will come near, if not pass over, the site of the Pans is completed, salt could easily be carried from Dugarájapatam

to the villages in the neighbourhood of Tupili. The sales during the last six years have averaged only 6,235 Indian maunds a year, of which 2,829 maunds were for local consumption, and 3,406 maunds were carried inland. Kottápatnam is situated at about four miles to the north-east of Tupili; it is in an out-of-the-way corner, a large river lies to the north and west, and the sea to the east; parties resorting to it from the south can only reach it by passing the Tupili Kottár. The village of Kottápatnam itself is about three miles from the Kottár and is on the north side, while the Kottár is on the south side of the river. There is a port near the Kottár, at which glass manufactured at Kálástri, is exported. Some of the traders carry back Salt, but the whole inland trade amounts, on an average for six years, only to 497 maunds a year.

136. No Salt was in store, nor were the Pans at work when I visited the place. From its inaccessibility, the place is notorious for smuggling, and it cannot be well looked after. I do not think the closing of these works would at all be felt to be a public inconvenience. The local trade might be supplied from Dugarájapatam, which is only eight miles to the south, and it seems hardly worth while to keep up an establishment at this place, to meet the convenience of the few inland traders, who might frequent it. I would recommend that this Kottár, as well as that of Tupili be closed; if either be retained, I think it should be the Tupili Kottár. The exporters of the glass pass through this village and halt at a tope near the Tupili Pans, on their way to and from the coast.

137. If my recommendation be acceded to, there will be a Division Office at Dugarájapatam equal in strength to that at Taddai, and a Kottár at Kattupalli with an establishment similar to that at Rámápuram.

Third Division Gengapatam, Kistnapatam.

135. The next Division consists of two villages. Kistnapatam and Gengapatam.

138. Salt is made at Kistnapatam, which is 22 miles north of Dugarájapatam, both for the inland and export trade. There are three inland platforms and two export ones, and two sets of Pans at this place. One of the inland platform belongs to the village, of Mutukúr and two to the village of Kistnapatam. The export platforms lie near the Collector's bungalow and adjoin each other. They are 2¼ miles from the Mutukúr Pans, and about 1¼ miles from the Kistnapatam Pans. The Salt is carried to the export platforms at the expense of Government, who pay 2 Rupees a garce for carriage hire. The manufacturers complained to me, that owing to the rise in the price of carriage, they had to pay half a Rupee in addition for every garce carried to the platform, and suggested the construction of a canal from the Kistnapatam Pans to the estuary, and the change of the export platforms from their present locality to the beach. It was estimated on the spot that the canal would cost about Rupees 2,000, and that this sum would soon be made up to the Government by the gain in the cost of the water carriage over land carriage. The Collector and myself examined the proposed site of the new platform, and found it possessed many advantages over the present one. The Salt could be more easily and expeditiously shipped. The shipping would secure better anchorage, boats are easily procurable, and would carry the Salt by the proposed canal from the Pans to the foot of the platform, the spot is sheltered by mounds of sand and could be easily guarded.

139. There are 479 beds at Mutukúr, but no Salt had been made there for the last five years. At the time I visited the platform, there were on it 42 heaps, containing 414 garces. The Salt was pretty good. The Salt is manufactured from water drawn from wells. The Salt carried to the export platforms was very good, while that on the inland store, was much discolored and not so large grained.

140. No Salt was manufactured at Mutukúr or Kistnapatam this year, the two stores at Kistnapatam, which are about a quarter of a mile from Mutukúr contained, the one 283 garces, 57 merkals; the other, 414 garces of Salt.

141. The Salt was fine but of a bad color. These platforms were not in such good order as some I had seen. That at Mutukúr was very little raised above the level of the surrounding country, but has never been affected by floods.

142. I would propose to close the Pans and platforms at Mutukúr, to have only one platform at Kistnapatam, large enough to contain a sufficiency of Salt to meet the inland demand, which, during the last six years has averaged at both places 44,254 Indian maunds per annum. Should it be found necessary to open new pans at Kistnapatam, the first offer of them should be made to the manufacturers of Mutukúr.

143. I would also strongly recommend the transfer of the export platform to the beach and the uniting the backwater with the Kistnapatam Pans by means of a canal, as suggested above.

144. A road has been made from Nellúr to Kistnapatam; but when I visited the place, it was in many parts washed away and near the Pans the country is a heavy swamp. It will be necessary the road be effectively repaired.

145. The Salt Kachéri is also much out of repair.

146. Gengapatam is 18 miles from Kistnapatam, but there is no road between these places, a heavy sand tract lies between them, and it is found easier to go to Nellúr and proceed from thence to Gengapatam than to go the direct route.

147. The Kottár is about 2¼ miles distant from the village, the greater part of the way lies over a sandy plain. There are two streams to be crossed and the last part of the road lies over a swamp. It is on the edge of this swamp that the old road referred to in paragraph 116, commences. There are two platforms distant a few hundred yards from each other surrounded by Pans. The Pans attached to the western platform are traversed by a cross road. The Pans are very straggling, and I think, might be much concentrated and a platform raised between them. The platforms were in 1856 much injured by floods. A portion of the eastern one with several heaps of Salt was washed away and an old Peon in attempting to regain his post which he had abandoned before the storm commenced, was washed away and drowned. It is very doubtful whether the present level of the floors of the platforms is above, that of extraordinary floods. I found that, though the required quantity of Salt had been manufactured and stored and the manufacture had closed for the season, the Pans were full of Salt in different stages of crystalization. I was told the Salt would be destroyed and that it had spontaneously cropped up from the action of the rain and sun on the highly impregnated saline earth of the beds. There are several villages in the neighbourhood of the Pans and between them and the Salt Kachéri. Measures should have been adopted when the manufacture was closed to prevent water collecting in the Pans by cutting the ridges. The temptation to the villagers to use the Salt is too great to be resisted, and the people about the place do not bear the most unblemished character for honesty. The platforms had been raised by the direction of the Deputy Collector and were in good order. The Salt was well stored and covered. The Kachéri was a good building. I examined the Treasury. The Shroff had supplied himself with a set of scales; they were his own private property. Considering the largeness of the transactions in many of the Kottárs, I think, all the divisional Treasuries and those of the larger villages should be furnished with scales. In examining the Treasuries, I was often detained a long time in seeing the money counted out. The balance in some Treasuries, amounted to thousands of Rupees, and I found that this amount was often realized in a week or less.

148. The Shroff, at Gengapatam, kept his accounts in gross and had no memorandum giving the particulars of the several coins, of which the amount was made up. I found many of the merkals at this Kottár in a very dilapidated state. I have been informed that since my visit they were sent to the Collector's Office for repair. On examination, none of the merkals were found of the same cubical contents.

149. Though the manufacture had been completed and the Salt stored, in May, the Kudiváram, or price, had not been paid on my visit in July. The whole of the Salt sold at Gengapatam, was for home consumption in the district. The marked fluctuations in the quantity of salt sold from year to year, cannot but attract attention. Last year the sales were below the average. It is explained that in some years the purchases are excessive and much beyond the demand of the market, and that in following years a falling off takes place to equalize this excess. I do not think this explanation satisfactory, especially when the amount of the population of the neighbourhood is considered and the nearness of Gengapatam to Nellúr. The state of the season and of the roads may affect the sales to some degree; but I believe under the stricter and more vigilant supervision of the Deputy Collector, fluctuations will be less apparent and that the sales will greatly increase.

150. The Deputy Collector informed me that from inquiries he had instituted, he found that large quantities of earth Salt were surreptitiously brought into the Nellúr District from Kaddapah, Karnúl and Bellary. The Government are aware that in these Districts, the manufacture of earth Salt is permitted, if not legalized, and that in Bellary a small sum is paid in the shape of Mohturfa on each Modá used for the manufacture of Salt. This indulgence is only conceded to the three inland Districts in question and is not extended to others, as far removed from the sea and in which the market price of Salt is largely in excess of that obtaining at Bellary. On the abolition of the Mohturfa, the Salt manufacturers in the Ceded Districts will either be allowed to manufacture and sell Salt without any restriction, or they will be bound to take out licenses, in either case, the inhabitants of these Districts will enjoy a privilege not conceded to any other of their countrymen throughout India, and the cheaper earth Salt will very materially interfere with the Government monopoly. Political necessity has been advanced in favor of this anomaly; but perhaps the Government may feel disposed to review the position of these manufactures with reference to the new measures of finance lately introduced and the principles of taxation now advocated.

Throughout India.

151. At seven miles north of Gengapatam lie the works of Varani, a Salt station attached to the division of Iskapalli. The Salt manufactured here and which is of good quality, is all exported. The platform which is on the beach is, at the distance of three quarter mile from the nearest Pan. The Salt is carried to the platform in carts sent from Nellúr. The difficulty of procuring carriage and the increasing rate of bandy hire, together with the state of the passage between the Pans and the platform, suggesed strongly to me, the desirableness of connecting the Pans with the platform by water. I think a canal might be easily constructed from the backwater to the platform, and by widening the present feeders to the Pans, the Salt might be conveyed by water from the most distant Pans. The sum paid for carriage during the last three years, average Rupees 1,500 per annum. The bandy-men complained of the insufficiency of the rates of hire paid them; much Salt was for want of carriage detained at the Pans, or near them. The tract along which the Salt was carried, was heavy loose sand. The carts employed could only carry 300 merkals in the six trips made in the day. Additional carts had been lately sent from Nellúr, but the number employed was still insufficient. I fancy that the cost of the canal would be realized in a few years from the gain in the price of water over land carriage and from the saving in the keeping up a good road between the Pans and the platform.

FOURTH DIVISION.
Varani.
Gógalapalli.
Iskapalli.
Júvaladinnai.
Túmmalapentah.

152. The platform was in most excellent order, and the heaps were well formed and kept, and did great credit to the pains bestowed on this part of his duty by the Deputy Collector. It was, however, insufficient for the storage of the Salt which it is found necessary to keep at this Depôt. The Deputy Collector recommended that it should be extended to the west and south, and that a good ditch should be completed round it and the hedge be kept in efficient order.

153. The expense of this extension cannot be fairly thrown on the manufacturers who have already been heavily taxed in enlarging and repairing the platform. I would, therefore, strongly recommend that the Engineer be required, in communication with the Collector, to carry out the proposals of the Deputy Collector which are necessary and jùdicious.

154. The Nevisindah in charge of this important station was a perfect cripple, he was lying down on a cumbly near his work, but it was clear he was quite unequal to the discharge of his duties. A relation of his, not in the service, was assisting him.

155. The man had just returned to his duty, and the Deputy Collector had made a representation to the Collector of his unfitness. The Collector, I am aware, proposed early measures for sending a more competent man as soon as he could find one.

The Collector had also sent to Madras for scales to be supplied to this and the other export Depôts, and after much difficulty had obtained a few sets.

156. At about four miles to the north-west of the Varani Pans, lies the Kottár of Gógalapalli. Gógalapalli possesses two inland platforms, and 723 salt beds are attached to these platforms. There are also two export platforms. This place bears a bad character for smuggling and frauds among the servants. It was here, I was told, heaps of Salt had been made away with, under the plea that they had been washed away by rain. The pans are formed on the border of a large swamp. They are ill-arranged and straggle over a space of one mile in length. They might with much advantage be contracted into a much smaller compass.

157. The inland platforms are protected by good hedges; but the southern one abuts on a village, the residents of which can obtain easy access to the Salt heaps, either by getting over the hedge, or through one of the many entrances. This platform might with advantage be given up and the pans concentrated round the northern Depôt, which would require enlargement. There is ample room for extending it to the north and east.

158. The Salt made here, is not good, and needs improvement. The heaps were well covered and formed. The platforms are above the level of floods and are well drained by stone drains. There are no roads at all. The platforms are approached over heavy sand.

159. Special means were taken this year to get rid of the Salt, which had for years past remained unsold on the export platforms. Gógalapalli is not a favorite port, and ships do not now resort to it. It is accordingly proposed to abandon the export platforms, which are only two miles from that at Varani on the south, and 1½ miles from Iskapalli on the north. These ports are much liked; the Salt made at Varani and Iskapalli is very superior, and the manufacture at these places can be increased to any extent. The export Depôt at Gógalapalli is not required, and I strongly recommend its abolition.

160. About four miles to the north-east of Gógalapalli, lie the Salt works of Iskapalli. This is an extensive manufactory. The Salt beds are large and the quantities of Salt produced and sold here, is greater than at any of the other stations.

161. Salt is made at Iskapalli, both for export and for home consumption. There are, in all, four platforms, two for each branch of the trade. The Salt usually manufactured here, is very good, but it is not of an uniform quality. The Salt for exportation is brought down, from the Pans to the platform on the beach, by water. A canal was formed about thirty years ago. The bed of the canal is full of oysters, and it was found that the Masúla boat could not be used, the bottom of the boat being liable to serious injury from the oyster shells. A more substantial boat was introduced by contract. The Contractor conditioned to provide a sufficient number of these boats, and was to receive 2 and 2¼ Rupees for the carriage of a garce of Salt. The distance the Salt has to be carried varied from quarter to two miles; the charge is high, but the boats are useless as sea boats, the boatmen can only find employment in carrying the Salt, as the canal does not extend beyond the Salt works; there is besides no competition. The boatmen have been called on to keep the canal in repair; they allege, this is a new condition, which is not contained in the original agreement, but was introduced a few years back by some Native Officer. The Collector is making inquiries into the matter, but has not yet been able to ascertain the time when, and circumstances under which this condition originated. The platforms were well kept and the heaps well formed. The export platform requires enlarging or a second one being formed. It seems desirable to do away with one of the inland platforms and to use only one, which should be located in a more central position.

162. The Kachéri was found to be too small, and an estimate was framed and passed in 1858, for enlarging it. The work is not yet completed. The additional room is to be used for a Treasury, but being built wholly of unburnt bricks, I much question the desirableness of placing in it the cash chest, which often contains large sums of money. The Shroff had no scales and is obliged to count out all the coin received into, and paid out of his Treasury.

163. A bungalow is attached to this station. The building is chiefly used by the Captains of ships resorting to the port for Salt. There is no other place of shelter for them on shore. The building is very dilapidated, much of it has fallen in, and that part which is standing needs strengthening. The Collector has, I believe, taken measures for getting such parts of the building as it is desirable to retain, repaired and put in order.

164. During the year a Gumáshta in charge of this Kottár was detected in fraudulently disposing of Salt. He was tried by the Joint Magistrate and sentenced to three months' imprisonment with labor. This man had been about 16 years in the Department.

165. The next Kottár is at Júvaladinnai about four miles to the north of Iskapalli. It consists of one platform which is about one mile from the village and the Salt Kachéri; the only way of reaching the platform is over a sandy track and a raised bank through paddy fields. The manufacturers and people about this Kottár have a bad name for smuggling, and the Salt that I saw was not good. The sales are almost entirely local. The large proportion of the Pan-holders are Brahmins and wealthy cultivators. They rent out their Pans to Salt makers living in the hamlets surrounding the Pans. The manufacture is very carelessly conducted. The drainage from the paddy fields in the neighbourhood of the Pans weakens the brine, delays the processes of manufacture, and prevents good Salt being produced. Adverting to the vicinity of Iskapalli on the south and Túmmalapentah on the north, the character of the manufacturers for smuggling and the careless manner in which the manufacture is conducted, I would recommend this Kottár be closed.

166. At about nine miles north of Júvaladinnai is Túmmalapentah. There are here four platforms, two for inland sale and two for export sales. The export platforms are about two miles apart, and immediately to the west of each, lies one of the inland platforms. One inland and one export platform being supplied from the same Pans. The Pans were not worked this year; I found that ships do not now frequent this port at all. No Salt had been exported for the last six years and very little occasionally before. The Pans to the south of this village are inconveniently situated and are not easily approached. The sales at Túmmalapentah are not large, and one platform seems to be sufficient at this station. Not only is that at the north of the village more conveniently situated, but the Salt stored here was superior to that stored at the southern platforms, though it all admits of being greatly improved. There is very good pasturage about Túmmalapentah.

167. Between Túmmalapentah and Júvaladinnai is a large broad Salt water river. Túmmalapentah could supply all the traders to the north of this river, and those to the south of it would not have far to go to reach the Iskapalli Depôt. It strikes me, however, that the works at Túmmalapentah may with much advantage be concentrated. I would recommend that the two export platforms be abolished and the Pans to the south closed. The Pans and platforms at the north, if not sufficient to meet the increased demands which would arise from the closing of the Júvaladinnai pans, might easily be extended, and the new Pans should be offered in the first instance to those Pan-holders, whose pans are closed at the south of the village.

168. The next Division consists of two stations Binganapalli and Pákala. The works at these places adjoin each other being less than a mile apart. Binganapalli is about 22 miles north of Túmmalapentah. There are five platforms at Binganapalli, including one export platform. The last platform of Binganapalli is only about 300 yards from the inland platform of Pákala. The furthest is about one or one and a half miles off. There is also an export platform at Pákala. The two export platforms are half a mile apart. The Salt stored on these was very good and white. The Binganapalli export platform was constructed in 1266 (1856); that at Pákala in 1262 (1852). No Salt has ever been exported from Binganapalli where there are no boats. At Pákala, Salt was exported by private traders in 1264-65-66 (1854-55-56), but none since. The whole quantity exported during these years was only 24,985 maunds. There is no trade at these ports and the experiment of exporting Salt appears to have failed. I think therefore these two export platforms may be given up.

FIFTH DIVISION.
Binganapalli.
Pákala.

169. The Pans under the Binganapalli platforms are very straggling. There is about them a good deal of low brush wood, and smuggling is said to be carried on to some extent, especially from the southernmost Pans. The platforms are in low swampy grounds and are not easily reached in the wet weather. Traders from the north must pass near the Pákala platform, to reach any of those belonging to Binganapalli. The Pákala platform is nearer the village, is situated on high ground, and the Salt from many of the Binganapalli Pans could without difficulty be carried for storage to the Pákala platform, which admits of being easily extended. There are 222 Pans or 1,878 beds in Pákala, held by 105 persons; of these, 18 hold 468 beds in Binganapalli, from which they supply three of the Binganapalli platforms. The sales at Pákala are also larger than those at Binganapalli.

170. I would strongly recommend that the manufacture at Binganapalli be closed and that some few Pans lying to the west of the Pákala platform, between it and the village, as offering strong temptations to fraud, be also closed, that the two export platforms be given up, and that the Pákala platform be enlarged, and the Binganapalli Pan-holders who will be thrown out of work by the closing of their Pans, be allowed to open new Pans in the vicinity of the Pákala platform, for doing which, there is ample room and ground belonging to Binganapalli.

SIXTH DIVISION.
Allúr.
Pádárti.
Dévarampádu.
Kanuparti.

171. The next division consists of four villages, the southernmost one of which, Allúr, is sixteen miles north of Pákala.

172. The Salt works of Allúr lie in an open bleak plain; the soil of the adjacent country is black cotton soil. In the wet weather, traders find it impossible to reach the Pans. There is no road, and the soft, stickey, slippery clay renders it difficult for cattle to travel over it. In the dry weather, the surface of the country is covered with a light black dust, which is carried in dense clouds, by the strong westerly winds which prevail in these parts, into the Salt Pans and injures the Salt which is both in color and quality very inferior. There is no water to be had in the vicinity of the Kottár; both traders and manufacturers have to bring it with them from the village two miles distant. Mid-way between the village and the Pans, a road has been made from Ongole to Kottapatnam, but this road is not used in the wet weather, and has, I am told, fallen into disrepair.

173. Owing to the inferior quality of the Salt, and the nature of the country lying between the road and the Depôt, the traders that frequent the port of Kottapatnam, seldom turn out of their way for Salt.

174. The sales consequently are very small. Last year 500 garces of Salt were allotted for manufacture to this village, but only 300 were made. Previous to 1268, with the exception of a small quantity made in 1266, no Salt was manufactured in this village later than 1261. It is proposed to abandon this Kottár and therefore no Salt was manufactured there this year. I fully concur with the local Officers in the propriety of closing the Allúr Kottár, and recommend that the proposal be sanctioned.

175. The Kottár of Pádárti is one mile from Allúr—it is in the village of Beeramguntah where the Division Kachéri is held. There are here four platforms, three constructed by the Government, and one by the manufacturers. The Salt stored on the two southern platforms was very indifferent, and it was here that I saw large quantities reserved for the orders of the Deputy Collector. Some of the reserved Salt was very good and should have been stored. The rest was so bad, that no reasonable doubt could have been entertained as to its disposal. The Superintendent is a Mahomedan, and evidently shrunk from the odium, if he did not endeavour to avoid the necessity, of destroying the bad Salt. The good Salt is much prized by the Lambadis: it is heavy, and of well-formed crystals, and bears carriage well. I was told that in some of the Pans, good Salt could not be made, the soil in the neighbourhood being like that at Allúr. Small black dust is carried into the Pans and destroys the Salt; but Pádárti is more sheltered by trees and foliage than Allúr. A heap was under sale, of which the Salt was so bad that the traders expressed great dissatisfaction and many in consequence deserted the Kottár. The greater part of the heap had

been sold, but a specimen of it that I brought away is forwarded for the inspection of Government. This Salt was stored in 1857. The Salt Pans run in a straight line of about two miles in length and 200 or 250 yards in breadth, it will, I think, therefore, be necessary to retain the three Government platforms; the other being not sufficiently raised, I would close. The platforms need to be enclosed by a hedge and ditch.

176. The heaps are well formed and covered. A new Kachéri had been lately erected at Beeramguntah. The old building was left standing and is in a most dangerous condition. It is necessary that it should be pulled down and the materials sold before any accident occurs from it. The Shroff at this Kottár had been supplied with scales; but they were not true ones. The merkals in use did not agree with one another. The Superintendent did not appear to me to be very active or intelligent. The Gumáshta was not efficient and the Nevisindah present at the Kachéri was very inaccurate and his accounts were badly kept. He could give no information and his accounts were, I learnt, often returned from the Collector's Office for correction. The other Nevisindah attached to this Office was at the village of Dévarámpádu in charge of the works of that station. The Shroff is very old, and wishes to retire from the service in favor of his son, a useful active and intelligent young man. The Akbarneviss is an old man and I should think utterly useless.

177. Beyond, at about three or four miles to the north-east of Pádárti, is the village of Naikavári Polliem, close to which, about one mile to the east, is the Kottár of Dévarámpádu. This Kottár possesses one platform which is situated in an open plain, much exposed and from the nature of the soil difficult of access. Immediately to the north of the platform, are the villages of Pallaipáliem and Gundiarpállayam. The former is a fishermans' village where much fish is cured for sale. The salt made at Dévarámpádu is very inferior. The Officer in charge of this Kottár bore a very indifferent character. He has been twice removed from the Office but has been restored. There was a great deal of bad salt collected on the platform and the regulated quantity had been much exceeded; the Officer stated the excess had been forced on him by the manufacturers. There is much salt sôld at this Kottár; but considering the very short distance to Pádarti on the one side, four miles; and Kanuparti on the other, four and a half miles, I concur with the local Officers in considering that Dévarámpádu Kottár might, with advantage, be closed. The average sales at this Kottár during the last six years are 34,686 maunds. Last year they amounted to 32,679 maunds; of these quantities the foreign sales averaged 24,927 maunds and amounted last year to 27,034 maunds, being 82 per cent. of the whole-sales. The foreign traders come from Hyderabad and it would be no great inconvenience or hardship to them to go to Kanáparti or Pádárti.

178. It has been urged, as a reason for keeping open a number of Kottárs, that foreign traders who are extensive purchasers, travel about in large bands and use much horned and other cattle; that these bands are not on friendly terms; that the waste tracks on the route and at the places of sale are not sufficient even immediately after the rain, for the pasture of the herds of more than one of these bands, and that as the season advances the difficulties of finding pasture are greatly increased; that concentration would compel the Lambádis often to meet at the same halting place on the route, and at the Depôts; that collision and affrays would be frequent, and that these troubles would seriously affect and diminish the Government sales.

179. It is difficult to determine how far these statements, made in good faith, rest, on well ascertained facts obtained from a wide range of observation, or on the opinions and assertions of interested parties. It is remarkable that in the adjoining Districts of Guntúr and Masulipatam, the foreign trade is much greater than it is at Nellúr; that each separate transaction is larger; and that in the aggregate they are more numerous, showing that the foreign traders frequenting these Districts came in larger and more numerous gangs, than those do who resort to the Nellúr Kottárs, and yet in Masulipatam, there are but two places of sale, and at Guntúr but one. At this latter place, Chinna Ganjam, the foreign sales are five times as numerous as they are at any of the northern Depôts in Nellúr, and are greatly increasing. The pasture lands in and about Chinna Ganjam did not strike me as being either more extensive or more rich in pasture than those about the Depôts

in Nellúr, and yet in those, the Lambádis accommodate themselves without any difficulty. There is no doubt that smuggling and frauds are increased and facilitated in proportion as Kottárs, places of manufacture and sale, are multiplied. All that it seems necessary for Government to do is to maintain a sufficient number of places of sale, at easy and moderate distances, say from 10 to 20 miles apart; to take care that these are made accessible to traders by good roads or canals; that they are well selected, as affording good pasture for cattle, and accommodation within reasonable distance for the traders; and that they are always abundantly supplied with a sufficient quantity of good salt to meet the wants of the people. To do this, I do not think it is at all necessary to multiply Kottárs at short distances of from three to five miles apart.

180. At four miles north of Dévarámpádu lies the Kottár of Kanaparti; this is the border Kottár. There are at it four platforms, one two miles to the north of the village and three to the south of it. The salt manufactured here is very good, especially at the northern Pans. There are no roads to the platforms. I would propose that only three platforms be retained, one at the north and two at the south of the village: the Nevisindáh and Gumáshta in charge of this Kottár were very old and infirm and unable to do their work. The Shroff appeared an active good man and so did the Akbarneviss. There is a large inland trade, carried on with Hyderabad, at this Kottár, but few of the dealers were willing to purchase the Salt by the heap. The explanation, offered for their not doing so, was that owing to the care with which the Salt is measured into store and to the manufacturers not being required to give heaped measures pressed down, the traders find that the wastage often exceeds the allowance of 5 per cent. granted to a purchaser of the heap, and therefore prefer buying their Salt, by measure, to taking a heap with the almost certainty of finding it contain less than the quantity stipulated for.

181. I have reason to believe that this is the true solution of the difference, which is found to exist in this, and the neighbouring Kottár of Chinna Ganjam, in regard to the quantity of Salt disposed of by the heap. In the latter District, the heaps contain more than the regulated quantity of 10 garces, and wholesale purchasers, by taking the heap, receive in addition to the 5 per cent. discount, a garce or a garce and a quarter above the 10 garces they pay for.

182. To recapitulate, I would recommend that the present six Divsions be retained; but that the stations be reduced to 14; that there be a Superintendent, on a salary of 65 Rupees at each Division, with travelling allowance of 15 Rupees; except at Pákala, where there are no outlying stations and where horse allowance will not therefore be required; that the Superintendent at Iskapalli, in consideration of the responsibility and extent of his charge, be allowed a salary of Rupees 85 and travelling allowance at the rate of 15; that under the Superintendent there be an establishment of the strength given in the Statement D; that the sales be placed under the Superintendent, who will also be responsible that the Salt received into store be of good quality, the best that can be manufactured; that on no account or under no pretence should any inferior Salt be taken, that when it is, the Superintendent be held personally responsible for it; that the manufacture be placed under an Amín on 14 Rupees a month, whose duty it will be to see that the manufacturers commence operations in proper time, conduct it according to rule and that Salt in sufficient quantities and of good quality be produced; that all disbursements be made by the Superintendent under the orders of the Deputy Collector.

183. That Chunambúkolam Kottár belonging to the Madras District be transferred to the Nellúr District and placed under the Superintendent of the Taddai Division; that the Superintendent of the Dugarájapatam Division have jurisdiction over all the islands and swamps of the Pulicat lake, and be required to collect all the spontaneous Salt produced in them and store it at Kattupalli.

184. That the number of platforms be reduced from 52 to 20.

185. That Salt be retained for exportation only at the ports of Kistnapatam, Varani and Iskapalli.

186. That all Salt be received and sold by weight.

187. That experiments be made to ascertain whether the mud casing used in Tanjore and some of the southern Districts be not a better and cheaper covering for Salt than that at present in use.

188. That the platforms be all surrounded by a good and substantial hedge and ditch, and that only one entrance be allowed, and that it be closed by gate.

189. That good roads be made from each of the platforms to the village in which it is situated, and to the main roads in its vicinity.

190. That the sale Depôt at Dugarájapatam be removed from its present locality to the immediate vicinity of the village and ferry.

191. And that the projects for opening out the District mentioned in paragraph 179 be completed as early as practicable.

192. In consequence of the receipt of the Government Order of 12th June 1860, No. 972, paragraph 8, I visited the Salt works of Chinna Ganjam in the Kistna District. Chinna Ganjam is about seven miles north of Kanuparti and between these two places lie the closed works of Peddaganjam. My object in visiting Chinna Ganjam was simply to determine whether it would be desirable to transfer the manufacture to Nellúr or retain it in the Kistna District. I proposed examining into the working of the system of manufacture and sale, and reporting on it when I should have visited the other Kottárs attached to the Kistna District.

193. After seeing Chinna Ganjam, I feel no hesitation in recommending it should remain annexed to the Kistna District.

194. The Salt works in Nellúr are numerous, scattered over many miles of sandy swampy grounds, difficult to be travelled over, and are sufficiently extensive to tax fully the time, energies and abilities of the Deputy Collector to superintend and control them. Much requires to be done, to improve the quality of the Salt produced, to prevent and check illicit trade, to open out the Depôts and to facilitate the access of traders to them.

195. The works at Chinna Ganjam are also very extensive. The manufacture there, this year, amounted to 4,20,407 Indian maunds, and the Sales to 3,54,976 maunds. In the Nellúr District 10,77,661 Indian maunds of Salt were manufactured, and 7,23,726 Indian maunds were sold during the same period. The Salt Deputy Collector, in the Kistna District, if relieved of Chinna Ganjam would have little to do. His duties would be confined to superintending the collection and sale of the spontaneous Salt generated in the swamps to the north of Masulipatam, and of that manufactured, at the Salt works of the same place, and at the new works to be opened at Nizampatam. If Chinna Ganjam be retained under his charge and he have his head quarters at Nizampatam, which I would strongly recommend he would have no difficulty in reaching in a day or two either Masulipatam or Chinna Ganjam, the one, about 40 miles to the north, and the other, about the same distance to the south of Nizampatam. His supervision could therefore be frequent, close and effective: on the other hand, the visits of the Deputy Collector of Nellúr must, of necessity, be few and at long intervals. He has even now a coast of 162 miles and odd to travel over, and 22 Kottárs to look after.

Chinna Ganjam is a large concern. The Pans are scattered over a space of about six miles in circumference. There are 15 platforms; each platform except the two export platforms has its Pans assigned to it. Each Pan is supposed to measure half a cawni, and there are in all 476 Pans. The platforms are in three lines—Nos. 1, 2, 3, 4, forming the first line; Nos. 5, 6, 8, 9, 10, the second; Nos. 7, 11 and 12, the third; No. 13 stands alone and so do the two export platforms, Nos. 14 and 15. The Pans are fed by water drawn from wells. Very good Salt is produced from some of the Pans, while in others, good Salt cannot be made. Every platform has a good road made to it, which is kept in thorough repair. A subordinate Officer, from the Department of Public Works, is specially charged to afford his aid, when required, to carry out all necessary repairs without delay. I was very much struck with the neatness and order observed in the outworks of the manufactory. The platforms are all well raised and the sides sloped and turfed, the floorings well levelled and drained.

See plan enclosed.

Each platform was surrounded by a strong and well-kept hedge and ditch. The entrance to the platform has a gate which is always kept shut, and the heaps were well shaped and covered.

It rained continually during the two days I was at Chinna Ganjam, so that I was not able to examine any of the heaps, but I visited all the platforms and examined the Salt. The Salt manufactured during this year was very inferior, and some so bad, that I advised the Superintendent to solicit the authority of the Collector to destroy it. The number of platforms is larger than is necessary. By reducing them, not only will the number of guards be reduced, but the facilities for fraud will be also greatly lessened. With the good port of Nizampatam to the north, it does not appear to me necessary that there should be a port for the export of salt at Chinna Ganjam also. I would therefore do away with the two export platforms. The Salt stored at them, I found to be of a very inferior kind, and such as I do not think would readily find a market. There are no boats at Chinna Ganjam and much difficulty and delay is experienced in collecting them from distant villages. To facilitate the carriage of the Salt, from the platforms on which it is stored, to the beach, a large bund has been erected, at some considerable expense, across the backwater. The bund has proved a failure, large portions of it having been washed away by floods; but from want of it, the Salt has to be transported in boats to the mouth of the tidal creek. The ebb of the tide often impedes the operation of the shipment. These difficulties confirm me in my opinion of the inexpediency of continuing the experiment of making Chinna Ganjam a port for the export of Salt. Should the two export platforms be given up, there will still remain thirteen. The Pans which supply the platform, No. 4, situated to the south of the bungalow, I am told by the Superintendent, cannot produce good Salt. I would recommend that it, as well as platforms, Nos. 1, 2, 3, 6, 8, 9, 10 and 13 be closed. That the platforms, Nos. 7, 11 and 12 which are near each other, and which are in the third line be united, and that the Salt which is now carried to platforms, Nos. 8, 9, 10 and 13 be stored on this extended platform. I would also retain platform, No. 5. It ought to be enlarged and the Salt now carried to platforms, Nos. 1, 2, 3 and 6, might be stored on it.

196. Considering the extent of the manufacture, I think the Pans should be divided into three divisions. Each division being placed under an Amín, on 14 Rupees per mensem. This Officer should be responsible for the manufacture of a sufficient supply of good Salt in his division. The Superintendent, aided by an Establishment as noted in the margin,* could superintend the storing and sale of the Salt, and the two departments of manufacture and sale would, in conformity with the principle laid down by Government, be separate and distinct. The Superintendent at present seldom, if ever, superintends the sales. He is vested with magisterial powers, and much of his time is taken up in the trial of cases, to the detriment of his more legitimate duties. I found that the Salt is received, at Chinna Ganjam, by the measure unstruck, that the merkal is driven into the Salt heap with much force, and pressed down once or twice. The heaps, therefore, must contain more than the regulated ten garces. There is no difficulty in disposing of these heaps by wholesale, and these stores are much resorted to by traders. In retail sales, the measures are struck, but pressed down once. The wastage entered in the accounts is very trifling indeed, but it appears to me there should be none. I saw one of the heaps opened. It was dry and in good order.

		Rupees.
*	1 Superintendent	100
	1 Deputy do.	35
	2 Gumáshtas at 20 Rupees each	40
	3 Amíns at 14 Rupees each	42
	1 Rayasam or writer	10
	1 Shroff	10
	12 Peons at 5 Rupees each	60
	8 Measurers at 5 do.	40
	1 Lamplighter and Sweeper	3½
30	Rupees	340½

197. Mr. Nailer, the Superintendent, appeared active, intelligent and zealous, and anxious to understand and discharge his duties. He had only been in charge of this Kottár some few months, and his time had been much occupied with Police duties. He appears to me to require further study of the details of his work and of the system of accounts. His subordinate servants did not appear very efficient, and Mr. Nailer does not give them, in general, good characters. The present Establishment, consists of the strength noted in the margin,* and, at the time of manufacturing and storing Salt, it is aided largely by drafts from the Táluk Kachéries. This aid it will not be in the power of the Tahsildars any longer to afford, and it therefore becomes the more necessary that the Establishment to be appointed should be complete in itself, and able to discharge all the duties devolving upon it, without extraneous aid. The expense of storing and covering the heaps, as well as the price of the covering is borne by Government, and the Salt is measured out to traders by paid coolies. When the area of the manufactory, the extent and variety of the duties devolving on the Establishment, the largeness of the deliveries and sales are considered, I do not think it will be found that the Establishment proposed by me is excessive or more than is absolutely required for the protection of the interests of Government. I examined the

		Rupees.
*	1 Superintendent	150
	1 Péshkar	35
	1 Head Gumáshta	20
	3 Gumáshtas at 14 Rupees each	42
	2 Do. at 10 do. each	20
	1 Shroff	14
	1 Do.	8
	1 Jamadar	12
	1 Duffadar	9
	1 Do.	7
	1 Do.	6
	48 Peons at 4½ Rupees each	216
	2 Salt Cutters at 5 do. do.	10
	3 Measurers at 3½ do. do.	10½
	1 Attendant	4½
	1 Musalji	2
	1 Sweeper	2
70	Rupees	568

Treasury and found it to contain Rupees 27,549-8-6. This sum was required for the payment of the Salt delivered in the season. The practice at this Kottár is to pay for no Salt, till the whole amount ordered for the season shall have been stored. The accounts of the sums due to the manufacturers had been submitted and passed, and the money was received for distribution. The Superintendent was only awaiting the order of the Collector, and the arrival of the Deputy Collector to issue the money; I think it would be better that the money should be paid as the Salt is received. But, in this district, the payments have hitherto been made in the presence of a Covenanted Officer. They might in future be made each month, by the Deputy Collector.

198. I was much pleased with what I saw of Mr. DeConceioçao, the Deputy Collector. He was very zealous and indefatigable in his duties, has thoroughly entered into and mastered its details and appears to me to be very anxious, conscientiously and honestly, to discharge himself of the work required of him. In Chinna Ganjam, the Superintendent acts independently of the Deputy Collector, makes his report, submits his accounts, and receives his order direct from the Collector. This arrangement is not one likely to raise the character of the Deputy Collector or to increase his efficiency, but rather to damp his ardor and discourage him. I would recommend that, unless the Collector has good reason for continuing the course pursued by him, the Deputy Collector be vested with the immediate control of the Department, and that all correspondence and orders pass through him.

199. I cannot conclude my Report without expressing my thanks for the effective aid afforded me by C. Narrainswami Mudaliar, the Deputy Collector of Nellúr, whose practical knowledge, untiring zeal and readiness on all occasions to meet my convenience in the progress of our tour, at much personal discomfort, demand commendation. I was much gratified at hearing the integrity, efficiency and zeal of this Officer always spoken of in very high terms, and considering the extent of his duties and the ability with which he discharges them, I trust I may be pardoned in bringing his services to the favorable notice of Government, in the hope that they may be rewarded.

200. I also beg to acknowledge the great assistance I received from Mr. Dykes the Collector of Nellúr, who did all in his power to aid my passage through his District; at much personal inconvenience, came out to Kistnapatam to meet me, and afforded me much valuable information; and who, for some time after my return to Madras, placed at my disposal the services of his Deputy Collector C. Narrainswami.

A.

Statistics of the Salt Kottár

Division.	Kottárs.	Distance of one Kottár from the next.	Number of Salt beds and platforms attached to each Kottár.				Average quantity of Salt manufactured during the last 6 Faslis.			For
			Beds.	Platforms. Inland.	Export.	Total.	White.	Brown.	Total.	Home.
							In. Mds.	In. Mds.	In. Mds.	In. Mds.
Taddai	Rámápuram...	.....	1,184	1	0	1	0	8,549	8,549	86
	Púdi.....	5	997	1	0	1	0	11,779	11,779	289
	Taddai.....	2	2,478	4	0	4	0	51,005	51,005	3,608
	Vélukádu.....	16	310	3	0	3	0	9,935	9,935	4,340
Dugarázpatam.	Mallám...	15	1,809	1	0	1	0	11,323	11,323	6,633
	Dugarázpatam	2	1,244	1	0	1	0	3,944	3,944	3,944
	Túpili.....	4	651	1	0	1	0	7,622	7,622	2,829
	Kottapatnam...	4	1,062	1	0	1	0	6,563	6,563	5,144
Kristnápatam.	Kristnápatam...	14	2,104½	3	2	5	95,572	23,102	1,18,675	23,242
	Gengápatam...	18	286	2	0	2	0	24,600	24,600	19,579
Iskapalli.	Varani.....	10	796½	0	1	1	64,275	5,000	69,275	1,386
	Gógulapalli.....	4	723	2	2	4	14,708	52,678	67,386	16,330
	Iskapalli.....	4	2,159 1/16	2	2	4	1,17,590	36,026	1,53,616	5,060
	Juvaladinna.....	6	813½	1	0	1	0	13,299	13,299	11,676
	Tummalapenta...	8	1,005	2	2	4	4,539	9,822	14,361	8,543
Pákala	Binganapalli...	22	3,394	4	1	5	1,216	39,893	41,109	20,798
	Pákala.....	1	1,878	2	1	3	9,464	45,333	54,797	25,715
Pádarti.	Allúr.....	16	883	1	0	1	0	10,833	10,833	11,222
	Pádarti.....	4	2,520	4	0	4	0	31,022	31,022	8,036
	Dévarampádu...	3½	2,028	1	0	1	0	26,175	26,175	5,184
	Kanuparti.....	4	2,661	4	0	4	0	27,646	27,646	5,212
	Total...	162½	30,986 1/16	41	11	52	3,07,364	4,56,149	7,63,514	1,88,856

MADRAS,
25th October 1860.

in the Nellore District.

Average quantity of Salt sold during the last 6 Faslis.								Date of Mr. Clarke's arrival in and departure from each Kottár.			
Home Consumption.			For Exportation.					Arrival.		Departure.	
Inland.	Foreign.	Total.	Private.	Public.	Chittagong.	Total.	Total of Home and Export sales	1860.		1860.	
In. Mds.	In. Mds	In. Mds.	In. Mds	In. Mds.	In. Mds.	In. Mds.	In. Mds.				
8,077	0	8,163	0	0	0	0	8,163	18th June.	A. M.	19th June.	P. M.
10,399	0	10,688	0	0	0	0	10,688	19th ,,	P. M.	20th ,,	A. M.
46,997	0	50,605	0	0	0	0	50,605	20th ,,	A. M.	21st ,,	P. M.
5,254	0	9,594	0	0	0	0	9,594	22nd ,,	P. M.	23rd ,,	A. M.
4,433	0	11,066	0	0	0	0	11,066	23rd ,,	P. M.	23rd ,,	P. M.
1,289	0	5,233	0	0	0	0	5,233	23rd ,,	P. M.	26th ,,	A. M.
3,406	0	6,235	0	0	0	0	6,235	26th ,,	A. M.	26th ,,	P. M.
497	0	5,641	0	0	0	0	5,641	26th ,,	P. M.	27th ,,	A. M.
21,012	0	44,254	6,500	1,943	38,742	47,185	91,439	27th ,,	P. M.	28th ,,	P. M.
0	0	19,579	0	0	0	0	19,579	29th ,,	P. M.	2nd July.	A. M.
2,811	699	4,896	6,044	3,021	50,912	59,977	64,873	2nd July.	A. M.	3rd ,,	A. M.
32,387	529	49,246	793	0	9,325	10,118	59,364	3rd ,,	A. M.	3rd ,,	A. M.
21,258	7,780	34,098	8,280	14,536	78,356	1,01,172	1,35,270	3rd ,,	A. M.	4th ,,	P. M.
328	0	12,004	0	0	0	0	12,004	4th ,,	P. M.	5th ,,	P. M.
239	199	8,981	1,789	0	0	1,789	10,770	5th ,,	A. M.	6th ,,	P. M.
15,157	411	36,366	0	0	0	0	36,366	9th ,,	P. M.	9th ,,	A. M.
14,396	2,180	42,291	4,164	520	0	4,684	46,975	9th ,,	A. M.	9th ,,	P. M.
1,862	549	13,633	0	0	0	0	13,633	10th ,,	P. M.	11th ,,	A. M.
4,356	26,030	38,422	0	0	0	0	38,422	11th ,,	A. M.	11th ,,	P. M.
4,542	24,961	34,687	0	0	0	0	34,687	11th ,,	P. M	12th ,,	A. M.
9,381	34,164	48,757	0	0	0	0	48,757	12th ,,	A. M.	12th ,,	P. M.
2,08,081	97,502	4,94,439	27,570	20,020	1,77,335	2,24,925	7,19,364				

(Signed) T. CLARKE,
3rd Member of the Board of Revenue.

B.

Statement showing the Divisions and the Kottárs attached to each Divisional and Kottár Establish

	Name of Division.	Name of Kottár.	Divisional Establishment.		Particulars of the Establish		
					Kottár.	Superintendent.	
				No. Rs.		No.	Rs.
			Superintendent..	1 40			
		Vélukáda...	Nivisindás.....	2 32	Vélukádu.....	0	0
			Shroffs.....	2 15			
1	Tada.....	Tada.....	Akhbárnivis.....	1 12	Tada..... ...	1	40
			Naik.....	1 6			
		Púdi...	Pygust.	1 6	Púdi.....	0	0
		Rámápuram..	Peons...	15 75	Rámápuram.....	0	0
			Vettiyans.....	2 4			
				25 190		1	40
			Superintendent..	1 30			
		Kottapatnam. ...	Nivisindás..... ..	3 44	Kottapatnam....	0	0
			Shroffs.....	3 21	Túpili..... ...	0	0
2	Dugarázpatam..	Túpili..... ...	Akhbárnivis.....	1 12			
			Naik..... ...	1 6	Dugarázpatam..	1	30
		Dugarázpatam.. ..	Pygust.....	2 12			
		Mallám..... ...	Peons...	17 85	Mallám	0	0
			Vettiyans.....	4 8			
				32 218		1	30
			Superintendent..	1 30			
			Gumáshta..... ...	1 20			
		Gengapatnam. ...	Nivisindá...	1 15	Gengapatnam....	0	0
			Shroff.	1 7			
3	Kistnápatam... .		Akhbárnivis.....	1 12			
			Naik.....	1 6			
		Kistnápatam... ...	Pygust.....	1 6	Kistnápatam. ...	1	30
			Peons.....	17 85			
			Vettiyans.....	2 6			
				26 187		1	30
			Superintendent..	1 40			
		Tummalapenta.. .	Gumáshta..... ...	1 20	Tummalapenta. .	0	0
		Juvaladinné.	Nivisindás.....	1 15			
			Shroffs..... ...	1 10	Juvaladinné.....	0	0
4	Iskapalli.....	Iskapalli...	Akhbárnivis.....	1 12	Iskapalli..... ...	1	40
		Gógulapalli... . .	Naik.....	1 6			
		Varanis.....	Pygust.....	1 6	Gógulapalli.....	0	0
			Peons.....	16 80	Varanis.....	0	0
			Vettiyans..... ...	4 12			
				27 201		1	40
			Superintendent..	1 30			
			Gumáshta..... ...	1 20			
			Nivisindás.....	2 28	Pákala.....	1	30
		Pákala.....	Shroffs.....	2 17			
5	Pákala.....		Akhbárnivis.... .	1 12			
			Naik...	1 6			
		Binganapalli.	Pygust.	1 6	Binganapalli....	0	0
			Peons...	17 85			
			Vettiyans.....	2 6			
				28 210		1	30
			Superintendent..	1 40			
		Kanuparti...	Gumáshta..... ...	1 25			
			Nivisindás.....	2 34	Kanuparti.....	0	0
		Dévarámpádu ...	Shroffs.....	2 21	Dévarámpádu....	0	0
6	Pádarti.....		Akhbárnivis. ...	1 12			
		Pádarti.....	Naik.....	1 6	Pádarti..... ...	1	40
		Allúr..... ...	Pygust.....	1 6	Allúr..... ...	0	0
			Peons.....	18 90			
			Vettiyans.....	2 7			
				29 241		1	40
					Grand Total...	6	210

MADRAS,
25th October 1860.

Statement showing the actual capacity of Markáls of the Salt Department at Chinna Ganjam, and also the result of measurement and weight ascertained by the Deputy Collector of the Kistna District on the 16th July 1860.

Markál's No.	Measured with grain.		The measured grain weighed with Rupees.		Measured with Salt.		The measured Salt weighed with Rupees.		Remarks.
	Seers.	Rupees by weight	Excess.	Decrease.	Seers.	Rupees by weight	Excess.	Decrease.	
13	12 7/16	980	75	...	12¾	1,039	134	...	
14	12 7/16	980	75	...	12 7/8	1,028	123	...	
15	12½	973	68	...	12⅝	1,025	120	...	
16	12⅜	965	60	...	12¾	1,012	107	...	
17	12⅜	966	61	...	12¾	1,029	124	...	
18	12 9/16	974	69	...	12 9/16	1,014	109	...	
19	12½	970	65	...	12 9/16	1,016	111	...	
20	12¼	972	67	...	12 9/16	1,025	120	...	
21	12⅜	973	68	...	12 9/16	1,036	131	...	
22	12¼	977	72	...	12⅝	1,024	119	..	
23	12 5/16	961	56	...	12½	1,019	114	...	
24	12½	969	64	...	12 9/16	1,022	117	...	
25	12⅜	968	63	...	12 7/32	1,025	120	...	
26	12 1/16	991	86	...	12⅝	1,033	128	...	
27	12¼	958	53	...	12 9/32	1,021	116	...	
28	12 5/16	959	54	...	12 7/32	1,030	125	...	
29	12 7/16	966	91	...	12⅝	1,030	125	...	
30	12¼	955	50	...	12 1/32	1,009	104	...	
31	12⅛	952	47	...	12 5/16	1,008	103	...	
32	12 5/16	967	62	...	12 7/16	1,018	113	...	
33	12 5/16	963	58	...	12½	1,022	117	..	
34	12¼	956	51	...	12⅜	1,017	112	...	
35	12⅝	970	65	...	12½	1,030	125	...	
36	12 7/16	979	74	...	12¾	1,046	141	...	
37	12 5/16	970	65	...	12 9/16	1,035	130	...	
38	12 5/16	965	60	...	12¼	1,034	129	...	
39	12 3/16	952	47	...	12¼	1,020	115	...	
40	12 5/16	965	60	...	12 9/32	1,025	120	...	
41	12⅛	962	57	...	12 5/16	1,029	124	...	
42	12 5/16	965	60	...	12⅜	1,029	124	...	
43	12½	980	75	...	12½	1,037	132	...	
44	12 7/16	972	67	..	12⅜	1,036	131	...	
45	12 5/16	956	51	...	12⅛	1,016	111	...	
46	12¼	962	52	...	12 3/16	1,019	114	...	
47	12¼	964	59	...	12 7/32	1,028	123	...	

(Signed) DECONCEIOCASO,
Deputy Collector.

Statement of the changes it is proposed to make in the Salt Divisions and in the number of the Kottárs and in the strength and salary of the Establishment attached to the Salt Department of the District of Nellore.

Number.	Division.	Kottár.	Superintendent.		Deputy Superintendent.		Gumáshta.		Amín.		Róyasam or Writer.		Shroff.		Peon.		Measurer.		Lamplighter and Sweeper.		Total.		Remarks.
			No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	
1	Tada	Tada	1	* 80	0	0	1	20	1	14	1	10	1	10	5	25	3	15	1	3½	14	177½	
		Rámápuram	0	0	1	35	0	0	1	14	0	0	1	7	3	15	2	10	0	0	8	81	
		Chunnambukolum	† 0	0	1	35	0	0	1	14	0	0	1	7	3	15	2	10	1	3	9	84	
		Total	1	80	2	70	1	20	3	42	1	10	3	24	11	55	7	35	2	6½	31	342½	
2	Dugarázpatam	Dugarázpatam	1	* 80	0	0	1	20	1	14	1	0	1	10	5	25	2	10	1	3½	13	172½	
		Kattupalli	0	0	1	35	0	0	1	14	0	10	1	7	3	15	2	10	0	0	8	81	
		Total	1	80	1	35	1	20	2	28	1	10	2	17	8	40	4	20	1	3½	21	253½	
3	Kistnápatam	Gengapatnam	0	0	1	35	0	0	1	14	0	0	1	7	3	15	2	10	1	3	9	84	
		Kistnápatam	1	* 80	0	0	1	20	1	14	1	10	1	10	5	25	3	15	1	3½	14	177½	
		Total	1	80	1	35	1	20	2	28	1	10	2	17	8	40	5	25	2	6½	23	261½	
4	Iskapalli	Tummalapenta	0	0	1	35	0	0	1	14	0	0	1	7	3	15	2	10	1	3	9	84	
		Iskapalli	1	*100	1	35	1	20	1	14	1	10	1	10	6	30	3	15	1	3½	16	237½	
		Gógulapalli	0	0	1	35	0	0	1	14	0	0	1	7	3	15	2	10	1	3	9	84	
		Varani	0	0	1	35	0	0	1	14	0	0	1	7	3	15	2	10	0	0	8	81	
		Total	1	100	4	140	1	20	4	56	1	10	4	31	15	75	9	45	3	9½	42	486½	
5	Pákala	Pákala	1	65	0	0	1	20	1	14	1	10	1	10	5	25	3	15	1	3½	14	162½	
6	Pádarti	Kanuparti	0	0	1	35	0	0	1	14	0	0	1	7	3	15	3	15	1	3	10	89	
		Pádarti	1	* 80	0	0	1	20	1	14	1	10	1	10	5	25	3	15	1	3½	14	177½	
		Total	1	80	1	35	1	20	2	28	1	10	2	17	8	40	6	30	2	6½	24	266½	
		Grand Total	6	485	9	315	6	120	14	196	6	60	14	116	55	275	34	170	11	36	155	1,773	

MADRAS,
25th October 1860.

* Including 15 Rupees Horse allowance.
† Hitherto this Kottár has been attached to the Chingleput District.

(Signed) T. CLARKE,
3rd Member of the Board of Revenue.

ment with the salaries of each Officer belonging to the Salt Department of the Nellore District.

ment as present assigned to each Kottár.

Gumáshta		Nivisindá.		Shroffs.		Akhbárnivis.		Naik.		Pygust.		Peon.		Vettiyans		Total.		Remarks.
No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	
0	0	1	15	1	7	1	10	0	0	1	6	6	30	2	4	12	72	
0	0	1	20	1	10	1	12	1	6	1	6	15	75	2	4	23	173	
0	0	1	12 15	0	0 5	0	0	0	0	0	0	2 3	10 15	1	2 2	4 7	24 43	
0	0	4	62	3	22	2	22	1	6	3	18	26	130	6	12	46	312	
0	0	0	0	0	0	0	0	0	0	1	6	2	10	2	6	40		
0	0	1	15	1	7	0	0	0	0	0	0	2	10	1	2	3	12	
0	0	1	14	1	7	1	12	1	6	6	36	11	55	1	2	18	132	
0	0	1	15	1	7	0	0	0	0	0	0	2	10	1	2	5	34	
0	0	3	44	3	21	1	12	1	6	2	12	17	85	4	8	32	218	
1	20	1	10	1	7	1	10	0	0	1	6	7	35	2	6	14	94	
1	20	1	15	1	7	1	12	1	6	1	6	17	85	2	6	26	187	
2	40	2	25	2	14	2	22	1	6	2	12	24	120	4	12	40	281	
1	20	1	15	1	7	0	0	0	0	1	6	8	40	2	6	14	94	
1 1	20 20	0 1	15	1 1	7 10	1 1	12 12	0 1	0 6	1 6	6 16	9 80	45	2 4	6 12	15 27	96 201	
1 0	20 0	1 1	15 15	1 0	7 0	1 0	12 0	0 0	0 0	1 0	6 0	14 4	70 20	2 1	6 3	21 6	136 38	
4	80	4	60	4	31	3	36	1	6	4	24	51	255	11	33	83	563	
1	20	1	14	1	10	1	12	1	6	1	6	12	60	1	3	20	161	
0	0	1	14	1	7	0	0	0	0	0	0	5	25	1	3	8	49	
1	20	2	28	2	17	1	12	1	6	1	6	17	85	2	6	28	210	
1 0	20 0	1 1	15 20	1 1	7 7	1 1	12 12	0 0	0 0	1 1	6 6	13 5	65 25	2 2	7 6	20 11	132 76	
1 1	25 20	1 1	14 15	1 *1	14 5	1 0	12 0	1 0	6 0	1 1	6 6	18 4	90 20	2 2	7 7	27 10	214	* He is on the Roll of Peons, but acts as Shroff.
3	65	4	64	4	33	3	36	1	6	4	24	40	200	8	27	68	495	† Of these one is a Peon.
10	205	19	283	†18	138	12	140	6	36	16	96	175	875	35	98	297	2,081	

(Signed) T. CLARKE,
3rd Member of the Board of Revenue.

C.

A Tabular Statement showing the actual capacity of markáls of the Salt Depôt at Pákala and also the results of measurement and weight ascertained by examination made on the 9th July 1860.

Markál's No.	Measured with grain.	The measured grain weighed with Rupees.	Difference. Excess.	Difference. Deficiency.	Remarks.
	Seers.				
41	12	1,001½	95⅞		
39	12½	1,049	144⅝		
34	12¼	1,027½	121⅞		
19	12	1,028	122⅜		
11	12¼	1,024	118⅜		
1	12	1,011	105⅝		
37	12	1,010	104⅜		
98	12¼	1,026½	120⅞		
13	11⅞	997	91⅜		
40	12	1,004	98⅜		
63	12¼	1,029½	123⅞		
22	12¼	1,027	121⅜		
44	12¼	1,026	120⅜		
	At Pádarti on the 11th July 1860.				
New					
16	11¼	952	46⅜		
14	11⅜	955	49⅜		
30	11¼	951	45⅝		
17	11½	965	59⅜		
3	11⅜	955	49⅜		
9	11⅜	955	49⅜		
20	11¼	949	43⅜		
33	11¼	949	43⅜		
Old					
24	11¼	943	37⅜		
26	11¼	945	39⅜		
	At Chinnaganjam on the 14th July 1860.				
1	12 5/16	987	81⅝		
2	12 3/8	979	73⅜		
3	12 5/16	978	72⅜		
4	12 1/16	992	86⅜		
5	12 9/16	980	74⅜		
6	12 7/8	980	74⅜		
7	12 7/16	968	62⅜		
8	12 1/2	963	57⅜		
9	12 5/8	984	78⅜		
10	12 11/16	979	73⅜		
11	12 9/16	962	56⅜		
12	12 3/8	962	56⅜		

Markal's No.	Measured with Salt.	Measured Salt, weighed with Rupees.	Difference. Excess.	Difference. Deficiency.
11	12⅝	856	...	49⅝
12	12⅜	845	...	60⅜

MADRAS,
25*th October* 1860.

(Signed) T. CLARKE,
3rd Member of the Board of Revenue.

No. 380. ORDER THEREON, 22nd December 1860, No. 2,476.

Ordered to lie over for future consideration.

(Signed) J. D. SIM,
Acting Secretary to Government.

Revenue 1860 Dep.t

Pro: of Govt. for Dec.r

No. 2476.

Pro: of the Madras

Government

Dated 22d Dec.r 60

94-1-69+

Para 176. Num 2

Letter from W.m Clarke, reporting on the Salt Depôts visited by him, ordered to lie over for future consideration.

Nos 379 & 380.

Revenue 1860 Dept.
Pro: of Govt. for Decr.

No. 2387

From T. Clarke Esqr.
Member of the Bd. of Rev.
Further Cr. Lr. 1 Nov/61 No. 2101
Dated 25 } October 1860
Recd. 26 }
Pro. Bd. of Rev. d/3d. Sept./62 C. No. 257
& Encl. [illegible]
Pro. [illegible] July/61 C. No. 153 [illegible]

Forwards his report on the salt Establishments visited by him.

Pro. Bd. of Rev. d/18 Jany./63 C. No. 2174 [illegible]

No. 2476. 22d. December
[illegible]

18th May/60 No. 31
12th July " " 136–137.
3d. Aug. " " 27

Copy in a Letter to B
d/11th February 62 No. 6.

Ref. No. [illegible]
26 Nov 1860 }

Ordered to lie over for future consideration.

No. 2476

No. 379 + 38[illegible]