M.R.O. 1—8,000-10-40.

MADRAS RECORD OFFICE.

Government of Madras.

Political DEPARTMENT

G.O. No. 18 Press Mis

(2-5-26)

Dated 2-5-26 — 1[illegible] — [illegible]

Not to be folded or roughly handled.

No. 25. Read the following Proceedings of Government in the Financial Railway Department, dated 17th January 1863, No. 32.

Observing that application will be made in the Political Department to the Resident at Hyderabad to obtain the sanction of the Nizam's Government for the execution of the proposed survey of the country between Ghooty and Hyderabad vid Kurnool within His Highness' territories, and for such aid as his Officers may be able to render to the Engineer entrusted with the survey.

(Vide Proceedings Financial Railway Department, dated 17th January 1863, Nos. 536 and 537.)

No. 26. To the Resident at Hyderabad, dated Fort Saint George, 20th January 1863, No. 18.

I am directed by His Excellency the Governor in Council to inform you that in consequence of a proposal made by the Great India Peninsula Railway Company to carry their line to Hyderabad and make that city the common terminus of the Madras and Bombay Railways, this Government has instructed the Agent and Manager of the Madras Railway to arrange for the survey of the country between Ghooty and Hyderabad viâ Kurnool with as little delay as possible; and I have to request that you will be so good as to obtain the sanction of the Nizam's Government for the execution of the proposed survey within the limits of His Highness' Territories, and for such aid as his Officers may be able to render to the Engineer entrusted with this duty.

(Signed) A. J. ARBUTHNOT,
Chief Secretary.

FINANCIAL RAILWAY DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following papers :—

From Captain P. P. L. O'CONNELL, Acting Consulting Engineer for Railways; to A. J. ARBUTHNOT, Esq., Chief Secretary to Government, Fort Saint George, dated 18th December 1862, No. 212.

With reference to the Order of Government, No. 628, dated the 12th ultimo, forwarding a letter from the Secretary to the Government of Bombay, and its accompaniment, I have the honor to report, that I called on the Agent and Manager of the Madras Railway Company on the 13th idem, to favor me with his views, with as little delay as possible, on the proposal made of carrying the Great Indian Peninsula Railway to Hyderabad instead of to Bellary, and of making the former city the common terminus of the Madras and Bombay Railways.

Letter No. 829, dated 6th December 1862.

2. The Agent in reply forwarded a copy of a communication from the Chief Engineer in which he states that he is not in a position to offer an opinion on the proposal made, having no information regarding the country north of Kurnool; and requested to be informed whether the Governor in Council desired that an Engineer be sent over the ground, to report upon the new route, as suggested by the Chief Engineer.

3. Adverting to this, the Agent was informed that it appeared from the correspondence that had taken place his views were asked for in a general way, rather than any decided opinion upon the practicability of constructing the Railway. It was also pointed out to him that in a letter, No. 512, dated the 27th November, to the Railway Board of Directors, while soliciting their early views upon the subject, he had stated his own idea "has always been that Hydera-"bad was a territory belonging to our system of Railways and not to that of Bombay."

Letter No. 834, dated 9th December 1862.

4. In acknowledging the receipt of this communication, the Agent states, that it appears to him that he could not well offer an opinion, even in a general way, upon the proposal made by the Great Indian Peninsula Railway Company, without knowing something of the country to be traversed, and the towns adjacent thereto, adding :—

"The character of the country, through which a Railway passes, forms, I think, the Chief element upon which any opinion can be based, and it was not with me, a question of practicability of constructing a Railway, but to ascertain the nature of the country through which it was proposed to carry the line, that I suggested a survey being made."

"Speaking for myself, after looking at the map, and without data, I should undoubtedly say, that the proposed deviation would be a beneficial one to this Company, but an important question hinges upon the subject, namely, the point at which we should diverge from our projected North West Line beyond Cuddapah, so as to form a junction at Hyderabad.

"I will by the outward Mail, bring this matter prominently before my Directors, but in the meantime, I will ask the Government to be kind enough to obtain the consent of His Highness the Nizam, to a survey being made, and for authority for one of our Engineers to enter upon this duty."

Letter No. 514, dated 13th December 1862.

5. In referring the subject to the Railway Board, the Agent writes :—

"Our Chief Engineer, however, is of opinion, that if it is ultimately determined to proceed to Hyderabad, diverging from Cuddapah, the line to Bellary should be completed. If the divergence be decided upon from Gooty, then the works between that town and Bellary should be abandoned."

"Mr. Smart observes, and I quite agree with him, that a direct line from Cuddapah to Hyderabad would fail to "tap" the rich traffic (principally cotton) expected from the Raichore Doab."

"I must, however, not omit to remind the Directors, that a large sum of money has already been spent on workshops at Bellary, and upon the works between Cuddapah and that place, amounting to Rupees 5 lacs, exclusive of the Nuggur Forest."

6. From the above extracts the Government will see that the Agent and the Chief Engineer of the Madras Railway, although unable to express any very decided opinion on the subject, appear favorable to the project of carrying the Madras Railway on to Hyderabad.

7. Originally, as Government are aware, the Madras and Great Indian Peninsula Railways were to meet at Moodghul, 208 miles from Cuddapah, which is distant from Hyderabad 262 miles by the road passing through Kurnool. If the latter route be chosen and the line from Cuddapah to Bellary be abandoned, the Madras Railway will receive an extension of 54 miles, and will traverse the Hyderabad territory for the distance between Kurnool and Hyderabad which is 139 miles. At the same time the important District of Bellary and a portion of Cuddapah will be deprived of the Railway communication originally intended to be given them: whether the Hyderabad State would pay any portion of the interest of the Capital to be expended on the Railway through it, is an important point in the present enquiry. For if not the Madras Presidency will be called upon to make a double sacrifice, viz., of money in the shape of interest of the Capital to be guaranteed, and of the means of communication between one of its most important Military Stations, Bellary, with the District of that name, and the Presidency Town and Port of Madras.

8. I do not consider that the communication with Hyderabad is worth this sacrifice. If the Nizam can, however, be persuaded to guarantee the Capital of the line within his own territories, I would propose that the Madras North West Line be carried on to Bellary and that a Branch Railway be constructed from Gooty through Kurnool to Hyderabad.

From R. B. ELWIN, Esq., Agent and Manager; to Captain P. P. L. O'CONNELL, Acting Consulting Engineer for Railways, dated Madras, 6th December 1862, No. 829.

1. Adverting to your letters, Nos. 704 and 720 of the 5th and 13th ultimo, respectively, with reference to the proposal of the Great Indian Peninsula Railway Company, to make Hyderabad, instead of Bellary, the common terminus of the Madras and Bombay Railways, I have the honor to annex copy of a communication received this morning from the Chief Engineer, from which it will be seen, that until some data have been received regarding the country north of Kurnool, we are precluded from offering any opinion on the subject.

2. May I therefore ask you to inform me, at your early convenience, whether the Governor in Council desires that an Engineer be sent over the ground, to report upon the new route, as suggested by Mr. Smart?

3. In the meantime, I retain the papers forwarded in your letter of the 13th November.

From W. G. SMART, Esq., Chief Engineer; to the Agent and Manager, dated Madras, 4th December 1862, No. 823.

Letter from Acting Consulting Engineer, No. 720, dated 13th November 1862.
Letter to the Secretary to the Government of India, No. 1,283, dated 28th October 1862.
Despatch to the Secretary of State, No. 24, dated 27th September 1862.
Letter from the Acting Chief Resident Engineer Great Indian Peninsula Railway, dated 8th July 1862.

I beg to acknowledge the receipt of the papers noted in the margin.

I am not in a position to offer an opinion on the proposal to make Hyderabad the common terminus of the Great Indian Peninsula and the Madras Railway, having no information regarding the country north of Kurnool.

The question is one of vital importance to the Madras Railway, and I must therefore request you to allow me to send an Engineer to explore and report upon the proposed new route. I beg to recommend Mr. Edward Johnston for this duty, his District No. 8 being the most remote from Madras, and the progress of the work having been recently checked by Government, there will be less inconvenience in removing him from his District than in removing an Engineer this side of Cuddapah.

(True Copy.)
(Signed) ROBERT B. ELWIN,
Agent and Manager.

From ROBERT B. ELWIN, Esq., Agent and Manager; to Captain H. L. PRENDERGAST, Acting Deputy Consulting Engineer for Railways in charge, dated Madras, 9th December 1862, No. 834.

1. I have the honor to acknowledge the receipt of your letter, No. 760, of the 8th instant, and, in reply, to state that it appears to me, that I could not well offer an opinion, even in a general way, upon the proposal made by the Great Indian Peninsula Railway Company of carrying their line to Hyderabad, and making that place the common terminus of the Madras and Bombay Railways, without knowing something of the country to be traversed, and the towns adjacent thereto.

2. The character of the country, through which a Railway passes, forms, I think, the chief element upon which any opinion can be based, and it was not with me a question of the practicability of constructing a Railway, but to ascertain the nature of the country through which it was proposed to carry the line, that I suggested a survey being made.

3. Speaking for myself, after looking at the map, and without data, I should undoubtedly say, that the proposed deviation would be a beneficial one to this Company, but an important question hangs upon the subject, namely, the point at which we should diverge from our projected North West Line beyond Cuddapah, so as to form a junction at Hyderabad.

4. I will by the outward Mail, bring this matter prominently before my Directors, but in the meantime, I will ask the Government to be kind enough to obtain the consent of His Highness the Nizam, to a survey being made, and for authority for one of our Engineers to enter upon this duty.

5. As requested in your letter, I have now the pleasure to return the original papers, which accompanied Captain O'Connell's letter of the 13th of November.

Observations by Captain P. O'CONNELL, Acting Consulting Engineer for Railways, dated Madras, 23rd December 1862, No. 214; on letter from the Agent and Manager of the Madras Railway Company, No. 853 of the 18th December 1862.

The Agent submits with his letter above quoted, copies of reports from the Chief Engineer, and Mr. Going, the Engineer who was deputed to survey the line between Gooty and Raichoor.

2. Mr. Going's report of the line is satisfactory and very creditable to him, but it calls for no orders of Government, in asmuch as the Great Indian Peninsula Railway Company agitate the construction of a Railway direct from Cuddapah to Hyderabad, and the question* is now under the consideration both of this Government, and that of the Government of India.

* Letter to the Chief Secretary, No. 212, dated 18th December 1862.

To the Chief Secretary to Government, Fort Saint George.

From ROBERT B. ELWIN, Esq., Agent and Manager; to Captain P. P. L. O'CONNELL, Acting Consulting Engineer for Railways, dated Madras, 18th December 1862, No. 853.

1. Adverting to the correspondence noted in the margin, I have the honor to forward a copy of a letter from our Chief Engineer, enclosing the report of Mr. Going, the Officer deputed to survey the line between Gooty and Raichoor.

From Acting Consulting Engineer, No.				243,	8th April	1862.
To	,,	,,	,,	265,	9th ,,	,,
,,	,,	,,	,,	304,	29th ,,	,,
,,	,,	,,	,,	338,	13th May	,,
From	,,	,,	,,	327,	24th ,,	,,
,,	,,	,,	,,	329,	26th ,,	,,
,,	,,	,,	,,	368,	7th June	,,
,,	,,	,,	,,	653,	14th Oct.	,,
To	,,	,,	,,	713,	17th ,,	,,
From	,,	,,	,,	679,	27th ,,	,,
,,	,,	,,	,,	704,	6th Nov.	,,

2. As Mr. Smart observes, the information afforded by Mr. Going, in his report, is so complete, that there is little further to add.

3. May I ask you to be kind enough to obtain an expression of opinion from His Excellency the Governor in Council, in order that the same may be communicated to my Board of Directors.

From W. G. SMART, Esq., Chief Engineer, Madras Railway; to R. B. ELWIN, Esq., Agent and Manager Madras Railway, dated Madras, 16th December 1862, No. 840.

I forward herewith plans and sections of the proposed deviation of the North West Line, from Gooty to the Kistna, together with Mr. Going's report.

The information afforded by these documents is so full that little remains for me to add. I have not been over the ground, my time having been occupied by more pressing matters; but from my knowledge of the country, obtained while I was engaged on the North West surveys, I have no doubt Mr. Going has selected the best route for a *direct* line from Gooty to Adoni. With the exception of the first 13 miles the section obtained is a fair one. The gradients and curves being tolerably favorable, and the amount of work moderate.

In making the estimate of comparative cost in the latter part of his report, Mr. Going goes on the supposition that a trunk line is to be constructed between Cuddapah and Bellary, and compares the cost of a branch from Gooty to Raichoor with that of a branch from Bellary to Moodgul. The result shows that a saving of capital to the amount of Rupees 5,62,500 may be effected by adopting the shorter lines (Bellary to Moodgul), but that the branch from Gooty to Raichoor would be mile for mile some Rupees 500 cheaper than the other.

The difference is so insignificant that we may dismiss the question of cost. Considered commercially, I am disposed to give the preference to the eastern line just surveyed. The country through which it passes is more generally cultivated than that to the west. Adoni appears to be a considerable centre of trade, and Raichoor is a more important Station than Moodgul. Another consideration is that goods for Madras would have a shorter and therefore a less expensive route. The Raichoor line being 30 miles shorter than the Moodgul line.

If the Great Indian Peninsula decide on meeting the Madras Railway viâ the Beemavalley, I am of opinion that the best point at which to deviate from our present course would be at Goondacul. The through line would be 7 miles longer than Mr. Going's deviation; but the Bellary branch would be 16 miles shorter and the heavy works on the first portion of Mr. Going's survey would be avoided.

This would in fact be the line I originally recommended in my report on the North West Line in 1857.

From T. H. GOING, Esq., Engineer in charge of Deviation Survey; to WILLIAM G. SMART, Esq., Chief Engineer, Madras Railway, dated 15th November 1862.

Agreeably with instructions from the then Acting Chief Engineer, (Mr. Pinson) directing me to proceed to Gooty and make a survey thence to Raichoor with a view to the proposed alterations of line south of Sholapoor, advocated by the Great Indian Peninsula Board, I commenced field work on the 14th July, dating my survey from a point on the old line close to the proposed station ground at Gooty, and am now prepared to lay before you, with this report, the plan and section of the survey as completed.

The point at which the survey terminates is opposite the village of Yerramurrus, 3¾ miles to the north of Raichoor and within about 8¼ miles of the Kistna. Since the point at which the Great Indian Peninsula Company would propose crossing that river was unknown to me, I was not in a position to fix the precise direction beyond the high ground at Yerramurrus; though, from having examined the ground, I can report that the works on this portion of the line would be no heavier than the section shows for that between the Toongabudra and Raichoor. I am supposing that the crossing of the Kistna would be selected at some point within 5 miles below its junction with the Beema. In my own judgment it would be best at about half way between this junction and the Hyderabad road ferry, where the channel is rocky and the direction good.

The Alignment.—You will observe that the line throughout is a very direct one. The total length surveyed between the points abovenamed is 87¾ miles, of which there are,

	Miles.	Chains.	Links.
Of straight line...	77	17	10
,, Curves 172 chains radius...	4	76	70

	Miles.	Chains.	Links.
Of curves 129 Chains radius...	2	53	20
do. 86 do.	1	13	0
do. 70 do.	1	5	0

at the 10th mile a reverse curve of 70 chains radius is shown, though possibly, in locating the line, this might be improved on.

Gradients.—The list of gradients is as follows:—

	Miles.	Chains.
1st. Horizontal...	23	32
2nd. Less than 20 feet per mile	13	28
3rd. Between 20 and 35 feet per mile	17	71
4th, do. 35 — 45 do.	13	13
5th. do. 45 — 53 do.	12	70
6th. 54 feet in the mile...	2	0

The Section.—The section is light, except that portion of it where we ascend from the low lands of the Pennair valley to the summit dividing its feeders from those of the Toongabudra. To reach this summit, which is indispensable, a climb of 224 feet must be made in a distance of 6½ miles. The line which I have selected here, was adopted after a close examination of the country to east and west, and I do not think it can be improved as regards earthwork and gradients, without considerably adding to the distance. The maximum gradient to this summit at 13¼ miles, is 54 feet in the mile.

There is very little doubt that a far superior section to this, as regards amount of earthwork, might be had by taking the line from Tunancherla instead of Gooty; but as my instructions were to diverge from the old line at Gooty, and as Government expressed anxiety for the speedy completion of the survey, I did not feel at liberty to devote any extra time to the examination of this route.

Another line still which suggests itself, is one which would follow up the valley leading north from Paulekacherroo tank. From having examined a considerable portion of this route, however, I am of opinion that no improvement on this section would result from adopting it.

The Toongabudra.—The Toongabudra is crossed at a point, about four miles above Rampoor, where it is apparently narrower than at any other, either up or down for some miles. The channel is rocky from bank to bank, and the general direction is square with the line. The width between the natural banks is 38 chains, but to provide for the high water level has pointed out by the villagers of Rampoor, a bridge of 46 chains in length would be required.

The Hindry.—Next to the Toongabudra, the largest bridge would be that over the Hindry, which though we cross it near its head waters, is still a considerable stream after rains, as I had an opportunity of observing. This will require a bridge of 2 chains in length.

Minor water courses.—Of minor water courses there are,

9 requiring a water-way of 60 feet.
7 ,, do. do. 30 ,,

Villages.—The chief towns and villages along the route are, Jonagherry, Putticondah, Heera Hoolty, Auspree, Adoni, Toombal, Kasgee, Rampoor, Raichoor. The greater part of the country throughout which the survey passes is, however, thickly studded with minor villages, especially between Putticondah and the Toongabudra. This I should describe as a rich and populous country. Adoni the largest town on the route, has a population (as I was informed by the Tashildar) of 17,000 people, and the country around it is highly cultivated.

Soil.—From Gooty to the 12th mile, the country is hilly and barren, and cultivation, which is principally in grain and oil, producing crops, bears a very small proportion to waste lands. From thence to Adoni it is black cotton soil as far as the eye can reach, interspersed with patches of red soil in the neighbourhood of the hills, which in this region are frequent, isolated and springing abruptly from the surrounding plain. Close to the base of these hills too, the numerous villages are invariably situated, partly, no doubt, owing to the suitability of the soil to produce grain crops. From Adoni to the Toongabudra river there is no black soil, but cholum, castor-oil plant and other crops not requiring artificial irrigation are cultivated very largely and attain great luxuriance. The Raichoor Doab, where crossed by the line of survey, is one great cotton

plain with the exception of that land which is in the neighbourhood of the range of hills to our east near Raichoor, where, as elsewhere in such localities, the soil is red and is very highly cultivated. I may add that at the time I was leaving the country for Madras (this was at the end of September) all the cotton land was being actively prepared for this crop, and as far as I could observe but a very small proportion of it was left uncultivated.

Alternative route at Adoni.—At Adoni there is a passage through the hill which affords so direct a route that I thought it desirable to include it in the survey, and have accordingly done so and furnished its plan and section. The result of the levels, however, has disappointed my first expectation, and you will observe that in descending on the north side of the summit of the pass a gradient of 65 feet per mile becomes necessary. Independently of this, there would be a heavy solid rock cutting at the summit, and material to construct the long bank to south of the summit would be obtained with great difficulty. On the whole then, though, a distance of 1½ miles would be saved by adopting this route, still I think its disadvantages more than counterbalance this saving of distance.

Earthwork.—I have already observed that the character of the numerous hills which are scattered over this region of country, is abrupt. It may consequently be inferred that in the cuttings, unless indeed where they are actually through hill spurs, solid rock would not be encountered. This I believe to be the case, still I have taken care, in fixing the gradients, to pitch the cuttings as low as possible.

In crossing the cotton plains too, it is very desirable that the embankments should be light. Black soil is a bad material for banks, and the principal security for the solidity and drainage of the permanent way, should be considered to lie in the ballast, which fortunately is found in abundance all through the cotton plains within no great distance below the surface.

I have observed that the public road where it has a base of black soil and a surface simply composed of about 18 inches of the sub-soil morum, without any bank intervening, (except where a drainage channel is to be provided for, and then pitching should be resorted to) invariably stands best. By attending to this consideration, I believe as good a formation for the permanent way may be secured as is possible over more solid soil.

Along the whole line there is abundance of good stone for building, principally gneiss. For most of the bridges it is available in the immediate neighbourhood, and in no instance more distant than from 2 to 3 miles.

I have observed Kunker too every where along the route. In the cotton lands alone, sand is not to be found, but as the hills are nowhere far off this would be got without much expense.

Ballast can be had in situ every where. Timber for Station buildings cannot be had along the line. Even that which would suit for the roofs, &c., of temporary Bungalows and for false, works would be difficult to procure. The supply should come from the south.

Public Road.—And here is a proper place to touch upon a subject of some importance, should the Company decide on the adoption of the line through this country. I allude to the Public road. This keeps close company with the line of survey throughout, and would be of immense value in the transport of materials. In dry weather it is what may be termed a good road, but since in many places it is not provided with culverts or bridges, and in others badly ballasted, (especially that part of it which traverses a corner of Kurnool District from Girricutta to Devanbunda, and also that across the Raichoor Doab) and is consequently, during rains, almost impassable to bandies, it would be very desirable that the attention of Government should be directed to the improvement of this road.

Whichever of the two routes may be finally adopted, that viâ Raichoor, or that viâ Moodgul since the Board expresses the intention of constructing the line between Gooty and Bellary in either case, the question of comparative cost evidently lies between a line from Gooty to Raichoor and one from Bellary to Moodgul. Supposing Raichoor and Moodgul to be respectively the two points where in case of the adoption of either route the Madras Railway would form its junction with that from Bombay.

In order to draw this comparsion of cost, I give below an approxmiate estimate of each route, based on the method adopted by you in your report on the survey from Cuddapah to the

Kistna in 1857, viz, dividing the work into three classes, 1st the plain country; 2nd the undulating; and 3rd the mountainous. The cost attached to each being that which similar work has cost under similar circumstances. Taking the Gooty and Raichoor line, we have

			Rupees.
58 Miles 1st class work,	Rupees 42,500 per mile...	... ...	24,65,000
20 do. 2nd do.	,, 49,000 do.	....	9,80,000
6 do. 3rd do.	,, 83,000 do.	.....	4,98,000
Bridges 1,056 line yards	,, 250 per yard...	...	2,64,000
84 Miles to construct.		Rupees.....	42,07,000

Taking the Bellary and Moodgul line we have

36 Miles 1st class work,	Rupees 42,500 per mile.....	...	15,30,000
18 do. 2nd do.	,, 49,000 do. ...	...	8,82,000
12 do. 3rd do.	,, 83,000 do. ...	...	9,96,000
Bridges 946 line yards.	Rupees..... 250 per yard...	...	2,36,500
66 Miles to construct.		Rupees...	36,44,500

I have not sufficient data on which to found a correct estimate of the traffic to be expected from this country and shall merely give a return taken at Gooty during the present year, of traffic passing to Cuddapah. This was given me by Captain Flint, 1st Assistant District Engineer of Bellary, and the return was taken by his Overseer at Gooty. February, March, April, and May are the four months during which the largest amount of cotton is sent south, and this return may be taken as an average for each of these months. During June and July there is a considerable falling off, and for the other six months of the year, I suppose we may conclude that the bandies which have gone south in the previous months with cotton, will return with other goods.

Return of traffic taken on tthe road from Gooty to Cuddapah from 20th April to 20th May 1862.

Bandies.		Bullocks.		Horses.		Asses.		Buffaloes.		Men.	
With load.	Without load.	With load.	Without load.	With load.	Without load.	With load.	Without load.	With load.	Without load.	With load.	Without load.
13,238	1,976	1,277	541	381	...	419	...	272	...	641	...
			Being about...		...	8,700 Tons.					

The Engineering Assistants employed under me on this survey were C. Vadaetha Charry and J. Davids, who, between them did most of the instrumental field work, and gave me much satisfaction by the manner in which they performed their duties. I trust you will consider this mention of them as entitling them to be ranked among the first of the Engineering Assistants for promotion.

(True Copy.)

(Signed) W. G. SMART,
Chief Engineer.

(True Copies.)

(Signed) ROBT. B. ELWIN,
Agent and Manager.

Observations from Captain P. O'CONNELL, Acting Consulting Engineer for Railways, Madras, dated 5th January 1863, No. 2; on letter from the Agent and Manager of the Madras Railway Company, No. 6, dated 2nd January 1863.

The foregoing letter from the Agent refers to the Orders of Government, Nos. 590 and 686, dated 24th October and 23rd December 1862, relative to the expediency of stopping the works on the North West Line beyond Cuddapah.

2. The Agent now forwards a copy of a communication from the Chief Engineer, and asks the kind consideration of His Excellency the Governor in Council, and an expression of his views thereon.

3. The Chief Engineer states, that "whatever the future course of the main line may be, I think, there ought to be no doubt as to the necessity for completing," the section from Cuddapah to Ghooty, and he adds:—

"The line is in itself a good one as shown by the return of traffic between Ghooty and Cuddapah given by Mr. Going in his report on the deviation survey, dated 15th November 1862. It is the only line that will effectually draw the traffic of the Bellary and Raichoor cotton fields on to the North West Line, and therefore it appears to me that it will be well worth making, even if Hyderabad should be our ultimate destination; but in addition to these reasons a large sum has already been expended on it, no less than Rupees 5,07,913, and I can hardly suppose that the Government contemplate the abandonment of a line on which so much has been spent. The works beyond Ghooty are comparatively of no importance, and may be postponed without much loss or inconvenience."

"I beg to recommend at the same time that the works should be constructed for a single line only, a saving of about Rupees 4,000 per mile might then be effected, and if it should ever be necessary to double the line, which I very much doubt, there would be no difficulty in adding the necessary masonry."

4. The Agent is of opinion that the large amount of money shown by the Chief Engineer to have been expended upon the line between Cuddapah and Ghooty, "renders a careful consideration of the question indispensable," and that he concurs in the views expressed by the Chief Engineer; and intimates that as soon as he is in possession of the wishes of Government he will refer the matter to his Directors in England.

5. It appears to me that the tenor of the letter* from the Government of India leaves no choice in respect to the stoppage of works "on the doubtful part of the line."

* No. 1,318-19, dated 5th April 1862.

6. When that letter was received the portion of the line between Cuddapah and Ghooty was not considered "doubtful;" but since the Bombay Government have recommended that the Great Indian Peninsula Railway be carried to Hyderabad, it has really become so, it being uncertain of a line direct from Cuddapah to Kurnool may not be chosen in preference to one passing by, or through Ghooty.

7. The suggestion that the works should be constructed for a single line is not a new one. It was made in 1861, but the Right Honorable the Secretary of State did not approve of it.

Despatch No. 17, dated 7th June 1861.

8. Mr. Going's report referred to by the Chief Engineer was submitted to Government with my Observations, No. 214, dated 23rd December 1862, and my own opinion regarding the deviation of the line was given in letter, No. 212, dated the 18th idem, to which I have at present nothing further to add.

To the Chief Secretary to Government, Fort Saint George.

From ROBERT B. ELWIN, Esq., Agent and Manager; to Captain P. P. L. O'CONNELL, Acting Consulting Engineer for Railways, dated Madras, 2nd January 1863, No. 6.

1. Adverting to your letters No. 679 and 800, dated respectively the 27th of October and 26th of December 1862, having reference to the stoppage of the works on the North West Line beyond Cuddapah until the question submitted by the Great Indian Peninsula Railway Company is decided, I have the honor to annex copy of a communication addressed to me by Mr. Smart, to which I would ask the kind consideration of His Excellency the Governor in Council, and an expression of his views.

2. The large amount of money shown by Mr. Smart to have been expended upon the line between Cuddapah and Gooty, renders a careful consideration of the question indispensable.

3. The suggestion also of constructing the works for a single line instead of a double, whereby a saving of Rupees 4,000 per mile will be effected, is one upon which I would solicit His Excellency the Governor's opinion.

4. For my own part I quite concur in the views expressed by our Chief Engineer, and immediately I am in possession of the wishes of Government, I will refer the matter home to my Directors.

From WILLIAM GEORGE SMART, Esq., Chief Engineer; to the Agent and Manager, dated Madras, 23rd December 1862, No. 852.

In conformity with the Order of Government, dated 27th October 1862, expenditure on the North West Line beyond Cuddapah has been restricted to works in progress at the time the order was received. It is very desirable that the attention of Government should be drawn to the expediency of repealing this order as far as the line from Cuddapah to Gooty is concerned.

The order referred to is stated to be due to the uncertainty that prevails as to the point of junction of the Madras and Bombay Railways, but whatever the future course of the main line may be, I think there ought to be no doubt as to the necessity for completing the above section. The line is in itself a good one as is shown by the return of traffic between Gooty and Cuddapah given by Mr. Going in his report on the deviation Survey, dated 15th November 1862. It is the only line that will effectually draw the traffic of the Bellary and Raichoor cotton fields on to the North West Line, and therefore it appears to me that it will be well worth making, even if Hyderabad should be our ultimate destination; but in addition to these reasons a large sum has already been expended on it, no less than Rupees 5,07,913, and I can hardly suppose that the Government contemplate the abandonment of a line on which so much has been spent. The works beyond Gooty are comparatively of no importance and may be postponed without much loss or inconvenience.

I beg to recommend at the same time that the works should be constructed for a single line only, a saving of about Rupees 4,000 per mile might then be effected, and if it should ever be necessary to double the line, which I very much doubt, there would be no difficulty in adding the necessary masonry.

(True Copy.)

(Signed) ROBERT B. ELWIN,
Agent and Manager.

Observations by Captain P. P. O'CONNELL, Acting Consulting Engineer for Railways, dated Madras, 9th January 1863, No. 6; on letter from the Agent and Manager of the Madras Railway Company, No. 25, dated 8th January 1863.

The Agent submits, with the letter quoted above, a copy of one from the Railway Board of Directors regarding the proposed route for the Railway between Sholapoor and Cuddapah, and asks the consideration of His Excellency the Governor in Council to the views expressed by the Directors.

2. The Directors "entertain a *favorable opinion, so far* as they are at present informed, of the alteration which would give a terminus like Hyderabad for the North West Line. They are of opinion, under the same reserve, that the line should proceed as at present laid out as far as Gooty, and thence by Kurnool and Pangtoor to Hyderabad, by this means avoiding the rough and unproductive country thinly inhabited which a more direct route would traverse." * *

3. "Without attempting" the Board continue for the present a regular survey of the line, it will be desirable to make such a general examination of the country as will enable the Chief Engineer to estimate roughly the cost per mile, of a line from Gooty by Kurnool to Hyderabad,

and the probable difference of the cost of crossing the Kistna and Toongabudra separately or when united below the Raichoor Dooab. We are inclined to think that the advantages of carrying the Railway into the Dooab would amply compensate any excess of cost likely to be incurred thereby.

"It is an additional recommendation of the route preferred by the Board that it does not require the abandonment of any of the works which have been sanctioned and commenced beyond Cuddapah, and that as far as Gooty the line would be the trunk line both to Hyderabad and Bellary, thus shortening materially the branch line, which has been proposed to the latter Station."

"Pending the decision of the present question no work of course must be undertaken in advance of those already in construction on the line between Cuddapah and Gooty."

4. The Agent draws attention to the views of the Directors respecting the examination of the country from Gooty by Kurnool to Hyderabad, and to his letter, No. 834, dated 9th December. This letter was submitted to Government with my report No. 212, dated the 18th December, but I have not yet been favored with the orders of Government thereon.

5. The Directors observe that the country from Cuddapah to Kurnool is a rough, thinly populated, unproductive country, an observation which I conceive to be inapplicable, as the operations of the Canal and Irrigation Company will in a very short time considerably alter the features of the country, and render it a productive one.

6. Having already remarked on the route proposed, I would add that to obviate delay in arriving at an early settlement of the question, the Agent might be permitted to have the country between Gooty (viâ Kurnool) and Hyderabad, as well as the portion between Cuddapah and Kurnool, examined, in order that it may be definitively ascertained, which would be the most feasible and economical route.

To the Chief Secretary to Government, Fort Saint George.

From R. B. ELWIN, Esq., Agent and Manager; to Captain P. P. L. O'CONNELL, Acting Consulting Engineer for Railways, dated Madras, 8th January 1863, No. 25.

I have the honor to ask the kind consideration by His Excellency the Governor in Council, of the views expressed in the accompanying copy of a letter No. 310, dated the 28th November 1862, *received to-day from my Directors, on the subject of the route of the Railway between* Sholapore and Cuddapah.

2. The Government will observe that by para. 3 of the abovementioned letter, my Directors consider it desirable that an examination of the country should be made in order to enable our Chief Engineer to estimate the cost per mile, &c., &c., of a line from Gooty by Kurnool to Hyderabad.

3. As I have not heard from you in reply to my letter of the 9th of December, No. 834, on this subject, I will ask you to let me do so at your early convenience.

From JAMES WALKER, Esq., Managing Director; to the Agent and Manager Madras Railway Company, dated Madras Railway Company, 33, New Broad Street, London, 28th November 1862, No. 310.

In forwarding to you the accompanying copy of a correspondence which has recently passed between the Secretary of State in Council and the Board, on the subject of the route of the Railway between Sholapoor and Cuddapah, I have to request that your immediate attention, in communication with the Chief Engineer, may be given to it, and that we may receive, with as little delay as possible, an expression of your and Mr. Smart's opinion upon the merits of the proposed alteration, so far as the interests of this Company are concerned. With the advantage of Mr. Smart's personal knowledge of great part of the country through which the line on our side passes, and the presence of Mr. Going on the ground, you will not have much difficulty, we apprehend, in arriving at a conclusion.

Mr. T. G. Baring, to Mr. Walker, 8th Nov. 1862.

No. 1,452 to the Under Secretary of State in reply.

2. The Board, you will observe, entertain a favorable opinion, so far as they are at present informed, of the alteration, which would give a terminus like Hyderabad for the North West Line. They are of opinion, under the same reserve, that this line should proceed as at present laid out as far as Gooty, and thence by Kurnool and Pangtoor to Hyderabad; by this means avoiding the rough and unproductive country, thinly inhabited, which a more direct route would traverse. After suffering so much by leaving towns and villages on one side, in the case of the South West Line, we must do our best to secure the passage of this Railway through the seats of population and trade, and this object, it appears to us, would best be attained by the route we have indicated.

3. Without attempting for the present a regular survey of the line, it will be desirable to make such a general examination of the country as will enable the Chief Engineer to estimate roughly the cost per mile of a line from Gooty by Kurnool to Hyderabad; and the probable difference of the cost of crossing the Kistna and Toongabudra separately, or when united below the Raichoor Dooab. We are inclined to think, that the advantages of carrying the Railway into the Dooab would amply compensate any excess of cost likely to be incurred thereby.

4. It is an additional recommendation of the route preferred by the Board, that it does not require the abandonment of any of the works which have been sanctioned and commenced beyond Cuddapah, and that as far as Gooty the line would be the trunk line both to Hyderabad and Bellary; thus shortening materially the branch line, which has been proposed to the latter station.

5. Pending the decision of the present question, no work of course must be undertaken in advance of those already in construction, on the line between Cuddapah and Gooty.

From T. G. BARING, Esq.; to JAMES WALKER, Esq., Managing Director, dated India Office, S. W., 8th November 1862.

I am desired by the Secretary of State for India to transmit for the information of the Directors of the Madras Railway Company, a copy of a Despatch from the Government of Bombay on the subject of the route of the Railway between Sholapore and Cuddapah, and to request to be furnished with any observations which the Directors may wish to make on the suggestion that the line in question should be taken to Hyderabad. I am to add that it is not the intention of Sir Charles Wood to pass a decision on the subject until he is in receipt of the views of the Governments of India and Madras.

No. 24 of 1862,
RAILWAY DEPARTMENT.

To HER MAJESTY'S PRINCIPAL SECRETARY OF STATE
FOR INDIA IN COUNCIL, LONDON.

RIGHT HONORABLE SIR,

We have the honor to acknowledge the receipt of your Despatch, dated the 26th February last, calling upon us to furnish you with our views relative to the line which should be adopted to effect a junction between the terminus of the Great Indian Peninsula Railway at Sholapore, and of the Madras Railway at Cuddapah.

2. Having referred the question for the opinion of the Committee of Directors in Bombay of the Great Indian Peninsula Railway Company we have received from

Dated 8th July 1862.

them a copy of a report from the Acting Chief Resident Engineer of the Company, Mr. Graham, in which he suggests the adoption, of a line from Sholapore to Hyderabad in lieu of the one suggested by the London Board in their letter dated 31st January 1862, to the address of the Under Secretary of State for India.

3. The Committee have requested our sanction to the survey of the line proposed.

4. Mr. Graham argues that however important may be the through communication between Madras and Bombay, it is nevertheless necessary for the Great Indian Peninsula Railway Company in effecting it to ensure the greatest possible amount of local traffic from stations on the line, and he points out that while the lines hitherto proposed for effecting a junction between the two Railways, promise little of such local traffic, that to be expected from Hydera-

bad and the surrounding Districts is so large as to point out the necessity for its being secured either by carrying the main line in that direction or by providing a branch line.

5. The former arrangement Mr. Graham shows, would involve a detour of only 40 miles in the entire distance between Madras and Bombay, while the adoption of either of the alternative lines, although shortening the through communication by the abovementioned distance would entail the construction of a branch line to Hyderabad varying in length from 110 to 170 miles, according as the main line ran viâ Raichore or viâ Moodgul.

6. The through communication with Madras and Western India would be secured either way, and we think that the Madras Railway Company would prefer such a terminus as Hyderabad, one of the largest and richest Native Capitals in India with a vast population, and a large garrison of Madras Troops to Moodgul, the sole merit of which is or would be that, if they find any Railway to meet them there, it is likely to draw most of the local traffic which is seeking the Coast northwards and westwards, rather than by the Madras line southwards and eastwards. Whilst for the Great Indian Peninsula Railway Company there is no comparison, as by the proposed diversion an easy line to a great city is substituted for one which crosses formidable rivers and traverses a country improvable perhaps, but not now populous or rich to arrive at a third class out-station.

7. We, therefore, concur with Mr. Graham in opinion that Railway communication between Madras and Bombay can best be afforded by carrying the main line through Hyderabad and Cuddapah.

8. In a Military and Political point of view, the superior advantages of this line are too marked to require pointing out. We would add that the project now submitted entails no fresh guarantee, as to the line of which it is a modification has already been guaranteed, and the expenditure necessary to construct the line from Sholapore viâ Hyderabad will probably not be more than is needed to make the line from Sholapore viâ Moodgul, as, owing to the absence of large rivers on the line to Hyderabad, the construction, and consequently, the commencement of paying returns will be much more rapid.

9. Should it be objected to the adoption of a line from Sholapore to Hyderabad in lieu of one to Moodgul, that it will not provide for bringing the cotton and other produce of Bellary and the Raichore Doab to Bombay we would observe that the traffic between the Districts south of the Kistna and the Western Coast will be much better served by any line running eastward from Sadasewghur. Such a line to Bellary would be cheaper and easier of construction and probably shorter than one from Sholapore, and whenever it is constructed will inevitably get all the traffic between Bellary and the Western Coast leaving to any Bellary and Sholapore line nothing but the local traffic which is not likely to be valuable or important.

10. In May 1861 this Government urged on the Great Indian Peninsula Railway Company the advantage of employing several of the Civil Engineers then without work in the survey of a branch line to Hyderabad. His Highness the Nizam, through his Minister Sala Jung, not only expressed his approval of such a proposal but promised to send one of his Officers with a suitable guard to meet the surveying party at Sholapore and escort them through their operations, and at the same time forwarded to the Secretary to this Government an order for Rupees (5,000) five thousand, the amount which had been named as the probable contingent expenditure on the survey.

11. The Committee of Directors of the Great Indian Peninsula Railway Company who, at first, approved of the proposal subsequently hesitated on a report being furnished by their Acting Chief Resident Engineer as to the Engineering Staff then available being inadequate for the purpose, and it unfortunately became necessary to intimate to the Resident at Hyderabad that the proposal had been withdrawn. The order for Rupees (5,000) five thousand was then returned. In the mean time His Excellency the late Resident who was much interested in promoting the project, appears to have casually learned that the backwardness of the Great Indian Peninsula Railway Company, was based on consideration of the abovementioned grant of Rupees (5,000) five thousand being inadequate for the purpose in view, a circumstance which if real was to be

regretted as had the subject been properly represented, it is very possible His Highness the Nizam would have contributed a larger amount quite as readily as that for which alone he had been asked.

12. That the above consideration readily influenced the Committee seems probable from the fact of their afterwards offering to carry out the survey, provided they were paid by His Highness or by Government the expenses entailed, which in turn they engaged to refund in case of their subsequently carrying out the construction of the line under a guarantee from Government.

13. This latter proposal was not so warmly taken up by the Resident of Hyderabad as the former one; this may have been owing to the somewhat abrupt manner in which previous negociations had been terminated by the Great Indian Peninsula Railway Company, but it was submitted by the late Colonel Davidson to the Government of India, who intimated that as there was then no probability of a guarantee being granted for additional Railways in India, it seemed unnecessary to renew the proposal to His Highness.

14. We now propose to address the Government of India on the subject, explaining the misunderstanding, owing to which the line was surveyed last year, and asking their aid in obtaining the Nizam's consent to the survey of the proposed line being now made. We shall at the same time address the Resident at Hyderabad, and the Madras Government, and hope to obtain their concurrence in our views.

(Sigend) H. B. E. FRERE.
(„) W. W. MANSFIELD.
(„) W. E. FRERE.
(„) J. D. INVERARITY,

BOMBAY CASTLE,
27th September 1862.

COPY.

From J. WALKER, Esq., Managing Director of the Madras Railway Company; to the Under Secretary of State, dated 33, New Broad Street, London, 24th November 1862, No. 1,452.

I have the honor to acknowledge the receipt of your letter of the 8th instant, transmitting a copy of a Despatch from the Government of Bombay on the subject of the route of the Railway between Sholapore and Cuddapah, and requesting to be furnished with any observations which the Directors may wish to make on the suggestion that the line should be taken to Hyderabad.

In reply, I am directed to state that the Board upon the best consideration they can give to the subject entertain a favorable opinion of the proposed change of line, considering it of much importance to bring in this way a city like Hyderabad into connection with the system of Railways. The additional length imparted by the alteration into the communication between Bombay and Madras does not appear to the Board deserving of much consideration when set against the advantages of the Hyderabad route.

Before offering, however, a final opinion, the Board are desirous of obtaining the views of their Agent and Chief Engineer on the question, which they will immediately call for, and as your letter informs us that the Secretary of State does not intend to pass a decision on the subject until he is in receipt of the views of the Governments of India and Madras, the Board hope to be able to lay their definitive opinion before the Secretary of State in time for his consideration along with the other papers from India relating to the question.

(True Copies.)

(Signed) R. B. ELWIN,
Agent and Manager.

ORDER THEREON, 17th January 1863, No. 32.

His Excellency the Governor in Council thinks it desirable that the country between Ghooty and Hyderabad, viâ Kurnool, should be surveyed, with as little delay as possible. Mr. Elwin will be requested to depute an Engineer for this duty, and application will be made in the

Political Department to the Resident at Hyderabad, to obtain the sanction of the Nizam's Government, for the execution of the proposed survey within the limits of His Highness' territories, and for such aid as his Officers may be able to render to the Engineer entrusted with the survey.

2. Mr. Elwin should also arrange to have the direct line examined between Cuddapah and Kurnool. Under present circumstances, the Governor in Council does not deem it advisable to stop the works in progress between Cuddapah and Ghooty.

(True Extract.)

Signed/ A. J. Arbuthnot

Chief Secretary.

To the Acting Consulting Engineer for Railways,
(with original enclosures returned.)
„ Political Department.

the limits of His Highness territories, and for such aid as his Officers may be able to render to the Engineer entrusted with the survey.

Fort St George
20th January 1863

Exd. T. McMoolry.

Despatch 21st

Political Department

No. 18.

To

The Resident at Hyderabad

Sir,

I am directed by
H.E. the Governor in
Council to inform you
that in consequence of a
proposal made by the
Great India Peninsula
Railway Company to
carry their line to Hyder-
abad and make that
city the common terminus
of the Madras and
Bombay Railways the
Government has instructed
the Chief Engineer
of the Bombay Railways
to arrange for the
survey of that line between
Bombay and Hyderabad
said Surveyor Mr. Bell
Little delay as possible
and I also to request
that you will be good
as to obtain the sanction
of the Nizam's Government
for the execution of the
proposed survey and

Bo. 1863. Departmental

No. 18

To

The Resident

at Hyderabad

dated 20th January

Received 30th Jany.

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