EAST AFR. PROT.

Nº 22483

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No.
328

1905
June 8.

previous Paper.
19677

(Subject.)

East Africa Syndicate
Carriage of Soda from L. Magadi

To copy memo by Manager of Railway respg —

(Minutes.)

See minutes — No 9
22499

H. J. R

1/7

Subsequent Paper.

A J.
22499

Commissioner's Office,

Mombasa,

June 8th 1905.

22483

EAST AFRICA PROTECTORATE.

No.328

Sir,

With reference to my telegram No.140 of 7th instant, I have the honour to transmit herewith a copy of a memorandum by the Manager of the Uganda Railway regarding the proposal of the East Africa Syndicate to work the soda deposit at Lake Magadi.

I have the honour to be,

Sir,

Your most obedient,

humble servant,

J. Stewart

H. M. Principal Secretary of State

for the Colonies,

Downing Street,

LONDON.

MEMORANDUM.

. . . . .

(1.) This is the first time I have received a definite
estimate of the quantities the Syndicate propose to carry
and I have now a definite basis on which to go for estimating
rates etc.

The figures I give below are only approximate
but are sufficiently accurate for present purposes.

(2.) With our present engines a full train load of
loaded vehicles between Kiu and Mackinnon Road is 14 i.e.
13 trucks and a brake van.

Each truck can take 10 tons so we can carry 130
tons per train up or down.

By the time the Kiu to Magadi line is built the
realignments between Mazeras and Mackinnon Road should be
done so that it will be possible to take 130 tons all the
way between Kiu and Kilindini.

Allowing for uneven loading, occasional stoppages
etc. one train per diem means in practice about 40,000 tons
per annum. So with our present engines the programme works
out somewhat as follows:-

	Up. Coal.	Down.	Soda.	
	Tons.	Tons.	Trains.	
1st year.	20,000	60,000	1½	trains per diem.
2nd "	40,000	120,000	3	do. do.
3rd "	80,000	240,000	6	do. do.
4th "	160,000	500,000	12	do. do.

(3.) The capacity of our existing line is 6 trains
per diem both ways so that allowing for other traffic we
could not guarantee to carry more than 160,000 tons of soda
per annum with our existing engines and a few more stations.

(4.) J

(4.) Taking a rate of ½d. per ton per mile for soda down and   "   "   1d.   "   "   coal up, our earnings per mile for each train up and down would be

$$
\begin{array}{llllll}
 & 130 \text{ tons} & x & \tfrac{1}{2}\text{d.} & = & 65 \text{ pence} \\
1/3\ x & 130 \text{ tons} & x & 1\text{d.} & = & 43 \ " \\
\end{array}
$$

$$2\ \overline{)\ 108}$$

54 pence.

$$
\begin{array}{cc}
\text{s } & \text{d} \\
= \quad 4/6 & = \quad \text{Rs.3.3.0 per train mile.}
\end{array}
$$

I am doubtful whether we could work the trains for much less than this.

(5.) If we get heavier engines which will take a load 50% greater than the above our earnings per train mile would be

$$
\begin{array}{llllll}
 & 130+65 & x & \tfrac{1}{2}\text{d.} & = & 97 \\
1/3\ (& 130+65\ ) & x & 1\text{d.} & = & 65 \\
\end{array}
$$

$$2\ \overline{)\ 162}$$

81 pence.

$$
\begin{array}{cc}
\text{s } & \text{d} \\
= \quad 6/9 & = \quad \text{Rs.5.1.0 per train mile.}
\end{array}
$$

This could bear reduction and we could carry coal up at ½d. per ton mile. Our earnings per train mile would then be

$$
\begin{array}{llllll}
 & 195 & x & \tfrac{1}{2}\text{d.} & = & 97 \\
1/3\ (& 195 & x & \tfrac{1}{2}\text{d.}\ ) & = & 32 \\
\end{array}
$$

$$2\ \overline{)\ 129}$$

64

$$
\begin{array}{cc}
\text{s } & \text{d} \\
= \quad 5/4 & = \quad \text{Rs.4.0.0 per train mile.}
\end{array}
$$

This, I think, could be done and leave a small remuneration.

(6.) With these more powerful engines the table in para 2 would be altered to

	Tons. - Up.	Tons. - Down.	
1st year	20,000	60,000	1 train per diem.
2nd "	40,000	120,000	2 trains do.
3rd "	80,000	240,000	4 do. do.
4th "	160,000	500,000	8 do. do.

Adding another 2 trains per diem each way to allow for timber and other traffic we should have to work 10 trains each way daily to carry 500,000 tons of soda per annum. This could be done (with crossing stations at 8 miles intervals) for a limited period, but having regard to the maintenance of the road in a tropical climate would for continuous running necessitate doubling the line.

In my opinion we could not run continuously more than 8 trains, goods and passenger, each way per diem on our single line with crossing stations at say 10 miles intervals. If 6 of these were natron trains carrying 195 tons each, about 300,000 tons could be exported per annum.

To run 5 trains each way daily between Mombasa and Kiu would necessitate 45 powerful engines which at £ 3,500 each in Africa = £ 157,500.

In addition 15 new crossing stations would have to be put in at a cost of about £ 1,500 each = £ 22,500 and some £ 20,000 would have to be expended in increasing the accommodation in our present stations. Total £ 42, 500.

If the natron is going to be calcined before export it will apparently have to be cased before being despatched from Magadi in order to keep it from the air. If this is so, our present stock of goods vehicles is suitable for carrying it. If, however, it is going to be shipped in bulk in the raw state, hopper wagons will probably be required so that it can be loaded automatically.

Assuming

Assuming that the former surmise is correct we have after allowing for other traffic on the railway at present sufficient stock to run two trains per diem. To run 3 trains we should have to purchase about 200 more bogie vehicles at a total cost of £ 60,000.

To run 300,000 tons per annum which, in my opinion, is not far off the maximum we can safely guarantee without either increasing the weight of our rails and increasing our axle loads, or doubling the railway we should have to effect a capital outlay of about

Engines	..	£ 157,500
Stations	..	" 42,500
Stock	..	" 60,000
Arrangements for water etc.		" 40,000
		————
Total		" 300,000

I have not yet been advised what the ruling gradient on the Magadi branch will be or what water can be got. If I am correct in assuming that the last survey points to a 2% gradient and reversing stations the cost of working the branch per mile will be in excess of our own line, the more so, that I believe there is no water on the last 30 miles.

However we do not want to make a profit out of working this branch and I would suggest that it be worked at so much per mile per annum, the rate to be fixed on basis of cost of working the main line plus such extra as the nature of the branch requires.

I am strongly averse to quoting any rate below ½d. per ton per mile. Whatever minimum rate we give to the Syndicate we shall have to quote to the public for similar kinds of products and we shall have difficulty in not quoting it for all cheap downwards traffic; we cannot carry

below

6

below this rate without loss.

We must also safeguard our interests in another respect. We shall have no assurance that in event of a slump in the price of matron the traffic will not cease after we have gone to great expenditure to provide for it. Of course this would injure the Company more than the railway but it is a contingency that must be considered.

Our rails are only 50 lbs per yard and with this heavy traffic the maintenance of the road will be an item of difficulty and expense.

I doubt whether we can run 6 to 8 trains per diem for long with wood fuel; we should have to go back to coal and thereby raise the cost per train mile. Water would be a source of great difficulty unless we can get it in quantities by boring.

(Sd.) H. A. F. Currie,
5/6/1905.