

Public Works (189) Department.

RAILWAY BRANCH.

G.O., No. 1193-94 Ry

DATED 23rd Oct, 1899

Inclus. 272 R 7/9-10-99

[Despatch Abstract.]

Analysis of Working, Madras Ry.
Ordered, that copies of the — (including
Kolar Gold Fields, and the Madras-
Emmure section of the E. C. Ry) for the
half year ended the 30th June 1899, be
forwarded to the Govt of India and to
the Secretary of State

Forwarding a copy of Proceedings
Embodying the — (including Kolar Goldfield
and Madras Esmer section of the E. C. Ry) for
the half year ended the 30th June 1899

Indexed.

Forwarding a copy of Proceedings embodying the — (including Kolar Gold Field Railway and the Madras-Ennur Section of the East Coast Railway), for the half-year ended the 30th June 1899.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Railway.

Read the following paper :—

From—The Agent and Manager, Madras Railway Company.
To—The Consulting Engineer for Railways, Madras.
Dated—Madras, 13th October 1899, No. 11605/1266.

ORDER—No. 1193 Ry., dated 23rd October 1899.

Ordered that nine copies of the Analysis of Working of the Madras Railway (including the Kolar Gold Fields Railway and the Madras-Ennur Section of the East Coast Railway) for the half-year ended the 30th June 1899, be forwarded to the Government of India and to the Secretary of State.

[Here enter No. 1194 Ry., dated 23rd October 1899.]

(True Extract.)

FRANCIS J. E. SPRING,
Secretary.

To the Agent and Manager, Madras Railway.
„ Examiner, Guaranteed Railway Accounts, Madras.
„ Consulting Engineer for Railways.

ENDORSEMENT—No. 1194 Ry., dated 23rd October 1899.

Forwarded.

(By order.)

FRANCIS J. E. SPRING,
Secretary.

Exd. T. K. Narayana Aiyangar.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

(Copy.)

LETTER to the Right Honourable the Secretary of State
for India.

No. ²⁷_{1193 Ry.}, dated 23rd October 1899.

FORWARDING a copy of Proceedings embodying the Analysis of Working, Madras Railway (including Kolar Gold Fields Railway and the Madras-Ennur Section of the East Coast Railway), for the half-year ended the 30th June 1899.

RAILWAY.

Government {1899} of Madras.
PUBLIC WORKS.

Recd.

1899.

Regd.

Enclosures

Spare copies

G.O., No. 1193 Ry., 23rd October 1899.

OCTOBER.

Analysis of Working, Madras Railway

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" Consulting Engineer for Railways.

Exd. T. K. Narayana Aiyangar.

PUBLIC WORKS DEPARTMENT.

LETTER—to

THE RIGHT HONOURABLE THE SECRETARY OF STATE FOR INDIA.

MY LORD,

We have the honour to forward, herewith, a copy of our Proceedings No. 1193 Ry., dated 23rd October 1899, embodying the Analysis of Working of the Madras Railway (including the Kolar Gold Fields Railway and the Madras-Ennur section of the East Coast Railway) for the half-year ended the 30th June 1899.

We have the honour to be,

My Lord,

Your Lordship's most obedient, humble servants,

(Signed) A. E. HAVELOCK.
(") A. T. ARUNDEL.
(") H. M. WINTERBOTHAM.

MADRAS,
23rd October 1899.

Specie
PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

— 1193 *h*
DESPATCH

FOR SIGNATURE *h. s. h.*
14/11/99

OF

HIS EXCELLENCY THE GOVERNOR

AND

MEMBERS OF GOVERNMENT.

(With Original).

H. s. h.
14/11/99
R 15/11/99

38/11/99

Madras Railway Company.

INCLUDING THE KOLAR GOLD FIELDS AND MADRAS-ENNUR
SECTION OF THE BEZWADA-MADRAS RAILWAYS.

ANALYSIS OF WORKING

FOR THE

Half-Year ending 30th June 1899.

Printed by H. Plumbé, at the Lawrence Asylum Press, Mount Road, Madras—1899.

mcw:
36 copies.

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MADRAS RAILWAY COMPANY.

INCLUDING THE KOLAR GOLD FIELDS AND MADRAS-ENNUR SECTION
OF THE BEZWADA-MADRAS RAILWAYS.

Analysis of Working for the Half-year ended 30th June 1899.

Progressive Number.	HEADINGS.	REMARKS.
No. I.		
DESCRIPTION OF RAILWAY WORKED.		
		Ft. In.
1	Gauge of Railway Miles	5 6
2	Mean mileage worked No.	859.41
3	Number of Stations	164
4	Total length of the following gradients:—	Nil.
	(a) $\frac{1}{100}$ and less Miles	22.64
	(b) $\frac{1}{80}$ to $\frac{1}{100}$	50.13
	(c) $\frac{1}{60}$ to $\frac{1}{80}$	199.48
	(d) $\frac{1}{40}$ to $\frac{1}{60}$	124.10
	(e) $\frac{1}{20}$ to $\frac{1}{40}$	
5	Steepest gradient worked—	0.80
	(a) Length Miles	1 in 60
	(b) Inclination	
No. II.		
FINANCIAL RESULTS.		
6	Percentage of net earnings (including Steam-boat traffic) on Capital outlay Per cent.	a. 1.92
7	Percentage of net earnings on paid up capital	b. 1.93
No. III.		
OUTLAY, EARNINGS AND EXPENSES.		
(Exclusive of Steam-boat Service.)		
8	Capital outlay per mile open Rs.	c. 1,41,308
9	Total earnings per mile open per week	220.93
10	Total working expenses per mile per week	114.74
11	Total earnings per train-mile	3.824
12	Total working expenses per train-mile	1.986
13	Net earnings per train-mile	1.838
14	Cost per 1,000 gross ton-miles moved (freight and dead weight)	6.77
15	Percentage of total working expenses upon total earnings Per cent.	51.94
16	Percentage of total working expenses upon total earnings, excluding from both sides of the account the charges for carriage of revenue stores	51.18
(Inclusive of Steam-boat Service.)		
17	Percentage of total working expenses on total earnings (for details, see Table No. VII)	51.94
No. IV.		
DIVISION OF EXPENDITURE BETWEEN COACHING AND GOODS TRAFFIC.		
18	Total working expenses for both coaching and goods traffic excluding steam-boat expenses, and after deducting telegraph and sundry receipts and leaving only the balance of payments to other lines for mileage, &c. Rs.	24,72,152
Proportions, dividing expenditure in ratio of gross ton-mileage (freight and dead load)—		
19	Coaching	7,97,981
20	Goods	16,74,171
		a. b. c.
Madras Railway		1.91 1.91 1,42,819
K. G. F. Railway		2.51 3.02 74,111
Madras-Ennur Section		3.71 3.71 70,836

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ANALYSIS OF WORKING

For the Half-year ended 30th June 1899.

Progressive Number.	HEADINGS.	REMARKS.
No. V.		
COACHING TRAFFIC.		
GROSS RECEIPTS AND TRAIN-MILEAGE—		
21	Receipts from coaching traffic <i>Rs.</i>	16,98,833
22	Coaching train-miles run <i>No.</i>	611,147
23	Average coaching receipts per train-mile <i>Rs.</i>	2-78
UNITS AND UNIT-MILEAGE—		
Number of units carried one mile—		
24	1st Class <i>Unit miles.</i>	1,682,753
25	2nd „ „	5,652,282
26	3rd or Intermediate Class „	...
27	4th or Lowest Class „	104,652,589
28	Total passenger unit mileage „	111,987,624
29	Other coaching traffic <i>Ton-miles.</i>	1,649,266
Average sum received for carrying a unit one mile—		
30	1st Class <i>Pies.</i>	11-65
31	2nd „ „	4-63
32	3rd or Intermediate Class „	...
33	4th or Lowest Class „	2-12
34	Average for all classes... .. „	2-39
35	Other coaching traffic per ton-mile „	35-26
Average number of units in a train—		
36	1st Class <i>No.</i>	2-75
37	2nd „ „	9-25
38	3rd or Intermediate Class „	...
39	4th or Lowest Class „	171-24
40	Total passenger units „	183-24
41	Other coaching traffic <i>Tons.</i>	2-70
VEHICLES AND VEHICLE-MILEAGE—		
Number of coaching vehicles hauled one mile—		
42	1st Class <i>Vehicle miles</i>	923,829
43	2nd „ „	1,093,845
44	3rd or Intermediate Class „	...
45	4th or Lowest Class „	5,031,708
46	Other vehicles „	933,257
47	Brake vans „	...
48	Total „	7,982,639
Average number of vehicles in a coaching train—		
49	1st Class <i>No.</i>	1-51
50	2nd „ „	1-79
51	3rd or Intermediate Class „	...
52	4th or Lowest Class „	8-23
53	Other vehicles „	1-53
54	Brake vans „	...
55	Total „	13-06
Average earnings per coaching vehicle per mile—		
56	1st Class <i>Pies.</i>	21-23
57	2nd „ „	23-94
58	3rd or Intermediate Class „	...
59	4th or Lowest Class „	44-16
60	Other vehicles „	62-31
Carrying capacity hauled one mile (excluding brakes)—		
61	1st Class <i>Seats.</i>	10,214,152
62	2nd „ „	21,719,689
63	3rd or Intermediate Class „	...
64	4th or Lowest Class „	256,566,791
65	Other vehicles <i>Tons.</i>	3,862,955
Percentage of freight upon capacity hauled—		
66	1st Class <i>Per cent.</i>	16-47
67	2nd „ „	26-02
68	3rd or Intermediate Class „	...
69	4th or Lowest Class „	40-79
70	Other vehicles „	42-69

ANALYSIS OF WORKING

For the Half-year ended 30th June 1899.

Progressive Number.	HEADINGS.	REMARKS.
WEIGHT OF TRAIN AND TON-MILEAGE—		
Gross ton-mileage of all coaching trains—		
71	Freight <i>Ton-miles.</i>	8,548,880
72	Dead weight „	109,266,096
73	Total „	117,814,976
Average weight of a coaching train—		
74	Freight <i>Tons.</i>	13-99
75	Dead weight „	178-79
76	Total „	192-78
COST OF WORKING AND PROFITS—		
77	Average cost of hauling a coaching train one mile... .. <i>Rs.</i>	1-31
78	Average cost of hauling a coaching vehicle with its load one mile <i>Pies.</i>	19-19
Average cost of hauling a coaching unit one mile—		
79	Per passenger unit <i>Pies.</i>	1-21
80	Other traffic per ton „	10-78
81	Average profit on working a coaching train one mile <i>Rs.</i>	1-47
Average profit on working a coaching vehicle one mile—		
82	1st Class <i>Pies.</i>	2-04
83	2nd „ „	4-75
84	3rd or Intermediate Class... .. „	...
85	4th or Lowest Class „	24-97
86	Other vehicles „	43-12
Average profit on working a coaching unit one mile—		
87	Per passenger unit <i>Pies.</i>	1-18
88	Other traffic per ton „	24-48
No. VI.		
GOODS TRAFFIC.		
GROSS RECEIPTS AND TRAIN-MILEAGE—		
89	Receipts from goods traffic <i>Rs.</i>	31,34,905
90	Goods train-miles run <i>No.</i>	679,723
91	Average goods receipts per train-mile <i>Rs.</i>	4-61
UNITS AND UNIT MILEAGE—		
92	Tons of goods carried one mile <i>Ton-miles.</i>	72,181,133
93	Average sum received for carrying a ton one mile <i>Pies.</i>	8-34
94	Average number of tons in a train <i>Tons.</i>	106-19

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ANALYSIS OF WORKING
For the Halfyear ended 30th June 1899.

Progressive Number.	HEADINGS.	REMARKS.
VEHICLES AND VEHICLE-MILEAGE—		
Number of goods vehicles hauled one mile—		
95	Loaded	Vehicle Miles
96	Empty	12,213,706
97	Brake vans	4,003,431
98	Total	2,664,938
		18,882,075
Average number of vehicles on a goods train—		
99	Freight vehicles	No.
100	Brake vans	23.86
101	Total	3.92
102	Average earnings per goods vehicle per mile (excluding brakes)	27.78
103	Carrying capacity hauled one mile (excluding brakes)	Pies.
104	Percentage of freight upon capacity hauled	37.12
105	Average load of a goods vehicle (including both loaded and empty)	Tons.
106	Average load of a loaded goods vehicle	192,103,684
		37.57
		4.45
		5.91
WEIGHT OF TRAIN AND TON-MILEAGE—		
Gross ton-mileage of all goods trains—		
107	Freight	Tons.
108	Dead weight	72,181,133
109	Total	174,995,818
		247,176,951
Average weight of a goods train—		
110	Freight	Tons.
111	Dead weight	106.19
112	Total	257.45
		363.64
COST OF WORKING AND PROFIT—		
113	Average cost of hauling a goods train one mile	Rs.
114	Average cost of hauling a goods vehicle with its load one mile	2.46
115	Average cost of hauling a goods unit (viz., one ton) one mile	Pies.
115A	Do. do. do. do. including interest on capital expended on open line, &c.	19.82
116	Average profit on working a goods train one mile	4.45
117	Average profit on working a goods vehicle with its load one mile	Rs.
118	Average profit on working a goods unit (viz., one ton) one mile	10.01
		2.15
		Pies.
		17.30
		3.89

ANALYSIS OF WORKING
For the Half-year ended 30th June 1899.

Progressive Number.	HEADINGS.	REMARKS.
No. VII.		
DETAILED PERCENTAGES OF EARNINGS AND EXPENDITURE.		
Percentage to Total Earnings—		
119	Coaching Traffic	Per cent.
120	Goods Traffic	34.41
121	Sundries, including Telegraph	63.50
122	Steam-boat Earnings	2.09
	Total, Earnings	100.00
Percentage of Working Expenses upon Total Earnings—		
123	Maintenance	Per cent.
124	Locomotive Expenses	11.12
125	Carriage and Wagon Expenses	21.02
126	Traffic Expenses	4.03
127	General Charges	8.74
128	Miscellaneous Charges	5.80
129	Steam-boat Expenses	1.23
130	Total, Working Expenses	51.94

ANALYSIS OF WORKING
For the Half-year ended 30th June 1899.
No. VIII.—WORKING EXPENSES.

TABLE A.
Maintenance of Way, Works and Stations.

REFERENCE TO REVENUE ACCOUNT.				Progressive num- ber in analysis.	DETAILS.	Per mile of line maintained.	Per mile of track, including sidings.	Per total train-mile.	Per 1,000 gross ton- miles.
Table and main head.	Sub- head.		(859.41)			(1,050.08)	(1,290,870)	364,991,927	
IX (A)	1	1 & 2 3 to 5	6	131	General Superintendence—	Rs.	Rs.	As.	Rs.
		Engineers' salaries and allowances ...			80.31	65.73	.86	.19	
					Subordinate Superintendents' salaries and allowances, including overtime ...	41.75	34.17	.44	.10
					Office expenses ...	36.74	30.07	.39	.08
					Total ...	158.80	129.97	1.69	.37
					Maintenance and Renewal of Permanent way—				
					Wages ...	160.45	131.32	1.71	.38
					Materials ...	104.56	85.57	1.11	.24
					Total ...	265.01	216.89	2.82	.62
					Repairs of Bridges, &c.—Wages and Materials—				
					Bridges and tunnels ...	25.29	20.70	.27	.06
					Miscellaneous ...	21.31	17.44	.23	.05
					Total ...	46.60	38.14	.50	.11
					Conservancy of Rivers ...				
					Repairs of Stations and Buildings—Wages and Materials—				
					Repairs of all, except staff quarters ...	43.34	35.48	.46	.10
					Repairs of staff quarters ...	19.58	16.02	.21	.05
					Total ...	62.92	51.50	.67	.15
					Maintenance by Contract—				
					Amount paid to contractors ...				
					Materials supplied by the Railway ...				
					Total ...				
					New Minor Works ...				
					Unclassified Expenditure—	11.86	9.70	.13	.03
					Plantations ...				
					Tools and Plant ...	1.85	1.51	.02	.01
					Loss by exchange ...	5.74	4.70	.06	.01
					Loss on stores, &c. ...	35.96	29.44	.38	.09
					Freight on stores ...	12.78	10.46	.13	.03
					Total ...	37.32	30.54	.40	.09
					Total, Heads 5, 6 and 7 Less Credits...	93.65	76.65	.99	.22
					136 Net Total, Other Charges	105.51	86.35	1.12	.25
					137 Total, Maintenance	105.51	86.35	1.12	.25
						638.84	522.85	6.80	1.50

ANALYSIS OF WORKING
For the Half-year ended 30th June 1899.
No. VIII.—WORKING EXPENSES.

TABLE B.
Locomotive Expenses.

REFERENCE TO REVENUE ACCOUNT.			Progressive num- ber in analysis.	DETAILS.	Per total	Per	Per 1,000
Table and main head.	Sub- head.	train-mile.			engine-mile.	gross ton- miles.	
					(1,290,870)	(1,561,647)	364,991,927
IX (B)	1	1 & 2 3 to 5 6	138	General Superintendence—	As.	As.	Rs.
				Salaries of Superintendents and Assistants, includ- ing allowances... ..	·22	·18	·05
				Do. of Subordinate do. including do. ...	·42	·35	·09
				Office expenses... ..	·26	·22	·06
	2	1 & 2 3 4	139	Total ...	·90	·75	·20
				Running Expenses—			
				Wages of Drivers and Firemen, including overtime..	1·78	1·47	·39
				Fuelling, cleaning and looking after engines ...	·39	·33	·09
	3	1 to 4	140	Contingent expenses	...	...	...
				Total ...	2·17	1·80	·48
				Fuel—[In terms of Giridih (Kurhurbaree) Coal].	lbs.	lbs.	lbs.
				Average quantity consumed	52·45	43·36	185·50
	4	...	141	Average price per ton, Rs. 15·58	As.	As.	Rs.
				Do. cost	5·84	4·82	1·29
				Water—(including wages and stores)	·22	·18	·05
				5	...	142	Oil, Tallow and other Stores
	Maintenance and Renewals of Engines—						
	Wages, including overtime	1·60	1·32				·35
	Materials	1·03	·85				·23
	6	1 & 2 3	143	Total ...	2·63	2·17	·58
Maintenance and Renewals of Machinery—							
Wages, including overtime				·05	·04	·01	
Materials				·02	·02	...	
6a	1 & 2 3	143a	Total ...	·07	·06	·01	
			New Minor Works	·01	...	...	
			Payments to other Lines	...	...	...	
			Unclassified Expenditure—				
9	1 2 3		Loss by exchange	·18	·15	·04	
			Loss on stores, &c.	...	...	...	
			Freight on stores	·49	·41	·11	
			Total ...	·67	·56	·15	
			Total, Heads 7, 8 and 9... ..	·68	·56	·15	
			Less Credits	...	...	...	
			144 Net Total, Other Charges	·63	·56	·15	
			145 Total, Locomotive Expenses	12·86	10·63	2·84	

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ANALYSIS OF WORKING
For the Half-year ended 30th June 1899.
No. VIII.—WORKING EXPENSES.

TABLE C.
Carriage and Wagon Expenses.

REFERENCE TO REVENUE ACCOUNT.		Sub- head.	Progressive num- ber in analysis.	DETAILS.	Per total train-mile.	Per 1,000 vehicle miles run by home vehicles.
Table and main head.						
					(1,290,870)	(26,511,921)
IX (C) 1	1	1 & 2		General Superintendence—	As.	Rs.
		3 to 5		Salaries of Superintendents, including allowances ...	·06	·17
		6		Do. of Subordinate do. including do. ...	·11	·32
				Office expenses ...	·06	·20
			146	Total ...	·23	·69
				Repairs and Renewals of Vehicles—		
		1 to 3		Coaching vehicles { Wages, including overtime	·46	4·45
				Materials ...	·42	4·00
			147	Total ...	·88	(a) 8·45
		1 to 3		Goods vehicles { Wages, including overtime	·47	2·09
2				Materials ...	·29	1·29
			148	Total ...	·76	(b) 3·38
				Repairs and Renewals of Machinery—		
		1 & 2		Wages, including overtime ...	·03	·09
		3		Materials ...	·01	·03
			148a	Total ...	·04	·12
				Cleaning and Oiling—		
		1		Labour, including wages of oilers, &c. ...	·26	·78
		2		Stores ...	·16	·49
			149	Total ...	·42	1·27
4				New Minor Works ...		
				Unclassified Expenditure—		
		1		Loss by exchange ...	·13	·40
		2		Loss on stores, &c. ...		
		3		Freight on stores ...	·03	·09
				Total ...	·16	·49
				Total, Heads 4 and 5 ...	·16	·49
				Less Credits ...	·02	·04
			150	Net Total, Other Charges...	·14	·45
			151	Total, Carriage and Wagon Expenses	2·47	7·51

(a) Per 1,000 Coaching Vehicle Miles.

(b) Per 1,000 Goods Vehicle Miles.

ANALYSIS OF WORKING
For the Half-year ended 30th June 1899.
No. VIII.—WORKING EXPENSES.

TABLE D.
Traffic Expenses.

REFERENCE TO REVENUE ACCOUNT.		Sub- head.	Progressive num- ber in analysis.	DETAILS.	Per total train- mile.	Per cent. of traffic earnings. Abstracts H. and I.
Table and main head.						
					(1,290,870)	(48,33,738)
IX (D) 1	1	(a) 1 & 3		General Superintendence—	As.	Per cent.
		(a) 2 & 4		Traffic Manager, Assistants, &c., including travelling allowances	·58	·97
				Office establishment and contingencies ...	·36	·60
			152	Total ...	·94	1·57
		(b) 153		Station Staff ...	2·44	4·07
		(c) 154		Train Staff ...	·74	1·24
		2 1 to 3	155	Fuel, Lighting, Water and General Stores ...	·45	·75
		3	156	Clothing ...	·09	·14
		4	157	Printing, Stationery and Tickets ...	·47	·78
		5	158	Charges for Delivery and Collection of Goods, &c. ...	·02	·03
6		159		Miscellaneous Expenses ...	·04	·07
				Payments to other Lines—		
		7 1	160	Expenses at joint stations ...	·10	·17
				Unclassified Expenditure—		
		1		Loss by exchange ...	·04	·07
		2		Loss on stores, &c. ...		
		3		Freight on stores ...	·02	·03
				Total, Head 8 ...	·06	·10
				Less Credits ...		
			161	Net Total, Other Charges ...	·06	·10
162				Total, Traffic Expenses ...	5·35	8·92

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ANALYSIS OF WORKING
For the Half-year ended 30th June 1899.
No. VIII.—WORKING EXPENSES.
TABLE E.
General Charges.

REFERENCE TO REVENUE ACCOUNT.		Sub- head.	Progressive num- ber in analysis.	DETAILS.	Per total train- mile.	Per cent. on total earnings.
Table and main head.					(1,290,870)	(49,36,648)
IX (E) 1	1 to 4	163		Home Expenditure	As. .47	Per cent. .77
				Indian Management—		
		1	164	Agent's Office, including travelling allowances and contingencies	.35	.58
		2		Auditor's Office ditto ditto		
		3		Account's Office ditto ditto		
		4		Cash Office ditto ditto	.91	1.49
				Total 2 to 4 ...	.91	1.49
		5	166	Store Department, ditto ditto	.15	.25
		6	167	Medical Department, ditto ditto	.20	.33
		7		Rents	.01	.02
		8 to 10		Miscellaneous expenses, including printing, stationery, medicine and contributions to Hospitals ...	.11	.17
				Total 7 to 10 ...	.12	.19
3	1 to 3	169		Police	.24	.39
4		170		Advertising	.04	.06
				Electric Telegraph—		
		1	171	Salaries, &c.	.61	1.00
		2		Maintenance (wages and stores)	.25	.41
		3		Government Telegraph Department for rent, maintenance and inspection ...	.01	.02
				Total ...	.87	1.43
				Clearing accounts with other Lines ...		
				Unclassified Expenditure—		
		1		Loss on stores, &c.	.03	.05
		2		Expenses connected with fire-engines ...	.18	.30
		3		Loss by exchange	.01	.02
		4		Freight on stores		
		5		Funeral expenses		
				Total ...	.22	.37
				Total, Heads 6 and 7 ...		
				Less Credits	.22	.37
		172		Net Total, Other Charges ...	.03	.06
		173		Total, General Charges ...	.19	.31
				Total ...	3.54	5.80

ANALYSIS OF WORKING
For the Half-year ended 30th June 1899.
No. VIII.—WORKING EXPENSES.
TABLE F.
Steam Boat Service.

Nil.

TABLE G.
Special and Miscellaneous Expenditure.

REFERENCE TO REVENUE ACCOUNT.		Sub- head.	Progressive num- ber in analysis.	DETAILS.	Per cent. on total earnings.
Table and main head.					(49,36,648)
IX (G) 1				Law Charges	.05
				Compensation—	
				For goods lost or damaged	.03
				" personal injury	
				" other claims	.08
				Total ...	.22
				Rates and Taxes	
				Payments to other Lines—	
				Hire of locomotives	.11
				" of vehicles	
				Mileage of foreign stock	
				Rent of stations, &c., jointly occupied ...	
				Shunting at Joint stations	.11
				Total ...	.41
				Contributions to—	
				Railway Provident Institution	.22
				Miscellaneous	.63
				Total, Heads 5 to 7	.63
				Less Credits	
				Net Total, Other Charges ...	1.05
				Total, Special and Miscellaneous Expenses ...	

MADRAS RAILWAY,
CHIEF AUDITOR'S OFFICE,
21st September 1899.

F. DUNSTERVILLE,
Chief Auditor.

LOUIS S. MOSS,
Agent and Manager.

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APPENDICES.

APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 30th June 1899.

APPENDIX I.

Working of Locomotives.

REFERENCE TO REVENUE ACCOUNT.						
Table and main-head.	Sub- head.		Passenger and Mail.	Mixed.	Goods.	Tank.
		Locomotives	4 coupled. Tons.	4 coupled. Tons.	6 coupled. Tons.	4 coupled. Tons.
		1.—Wheels coupled ...	14 90	13 40	13 55	14 27
		2.—Weight on driving axle ...	44 13	33 10	38 32	42 10
		3.—Weight of engine in steam ...	39 13	27 75	30 12	...
		4.—Weight of tender loaded ...				
XII	5	1.—Number of locomotives erected and made over to Locomotive Department ...	41	40	69	18
	11	2.—Average number of locomotives constantly under repairs and renewals ...	11	3	15	3
		3.—Number of locomotives laid by as spare ...	4	3	...	...
		4.—Ditto lent or hired out to other lines ...	...	...	...	...
		5.—Average number of locomotives 1—(3+4) ...	37	37	69	18
		6.—Total mileage of locomotives (5) ...	437,310	378,021	615,876	130,440
		7.—Average miles run by a locomotive of each class 6 ÷ 5 ...	11,819	10,217	8,926	7,247
		Per diem ...	65 30	50 45	49 31	40 04
		8.—Weight of coal, &c., used per engine-mile. <i>To be separated, if possible, among the classes of locomotives.</i>	lbs. 42 71	lbs. 41 19	lbs. 48 34	lbs. 28 24
		9.—Weight of wood used per engine-mile.				
		10.—Average gross weight of trains hauled...Tons.	129 79	325 90	274 13	...
		11.—Average speed between stations... Miles per hour.	29 36	17 10	19 00	...
		12.—Average through speed... Miles per hour.	19 91	12 26	11 17	...
		13.—Average consumption of fuel per engine mile. lbs.	...	...	...	43 36

* { Inclusive of 16,942 engine miles run over the Kolar Gold Fields Railway.
Do. 15,347 do. Madras-Bannur line.

The total quantities of each description of fuel consumed were as follows:—

Description of Fuel.	Actual quantity consumed in lbs.	Rate of conversion.	Quantity consumed in terms of Giridih (Kuhurbarree) coal in lbs.
Kuhurbarree Coal ...	...	0 80	...
Patent Fuel ...	45,132,444	1 27	35,537,857
Singareni Coal ...	14,000	1 15	12,174
Borakur Coal ...	96,272,750	3 00	32,090,917
Wood ...	146,064½	2 23	65,003
Crude Oil ...	...	...	...
Total ...	...	...	67,706,351

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APPENDIX TO
For the Half-year
APPEN
Working of

Working.

DESCRIPTION OF VEHICLES.	Total number on the list at end of the half-year.	AVERAGE WEIGHT IN TONS.		AVERAGE CARRYING CAPACITY.		Average number laid by as spare.	Average number lent or hired out.	Average number working.
		Of each description of vehicles.	Of each group.	Of each description of vehicles.	Of each group.			
Coaching Stock.								
Saloon State... 6-wheeled.	2	13-00	...	4-00	...	f.	...	2
1st Class Carriages including Saloons.	32	10-71	...	8-00	...	...	...	32
Inspection Carriages ... 6-wheeled.	1	13-85	10-36	3-00	3-00	...	...	1
Do. do. ... 4 do.	2	8-62		3-00		...	...	2
Composites 1st and 2nd Class Carriages	...	...	...	...	...	...	...	...
Ordinary Sleeping ...	46	10-03	10-04	14-00	15-18	...	...	46
Do. do. do. Day...	5	10-10		26-00		...	...	5
Do. do. 1st, 2nd and 3rd Class	...	...	...	...	...	...	...	...
do. do. do. Bogie.	3	30-38	...	32-00	...	...	...	3
Second Class Carriages Ordinary ...	63	10-25	...	22-50	...	1	...	62
Third do. do. without Brakes	...	...	...	...	...	...	...	...
Ordinary ...	358	8-50	8-52	51-72	50-99	...	...	375
Do. do. do. Ambulance	28	8-50		55-00		11	...	...
Do. do. and Postal Vans Ordinary	7	10-23	...	30-00	...	...	...	7
Do. do. Carriages with Brakes	...	7-15	...	3-50	...	...	...	...
Ordinary ...	8	8-80	...	42-50	...	3	...	5
Postal Vans ...	9	10-55	...	3-25	...	...	...	9
Carriage Trucks ...	21	5-15	...	6-00	...	1	...	20
Horse Boxes...	46	8-35	...	3-00	...	...	...	46
Luggage Vans (Baggage Vans) ...	24	6-35	...	6-00	...	...	...	24
Total ...	655	8-86	8-86	35-80	35-80	16	...	639
Goods Stock.								
Covered Goods Wagons Ordinary, Iron	395	7-55	6-98	11-75	11-80	...	...	395
Do. do. do. do. Wooden	1,986	6-78		12-00		2	...	1,084
High Sided Wagon Ordinary, Iron	...	...	...	6-00	...	...	...	...
Do. do. 16 Tons, 6-wheeled.	50	8-00	6-26	18-50	12-38	...	...	50
Do. do. Wooden 10 Tons, 4 do.	800	6-15		12-00		4	...	796
Do. do. 8 Tons, 4 do.	...	...	...	...	...	...	...	...
(In term of 10 ton vehicles) ...	...	...	...	...	...	...	...	...
Low Sided Wagon Ordinary, Wooden.	191	4-95	...	12-00	...	...	...	...
Coal or Coke Wagons ...	60	5-80	5-80	6-00	7-76	7	...	184
Fuel Trucks ...	70	5-80		7-00		40	...	90
Cattle Wagons ...	50	6-40	...	6-33	...	5	...	45
Platform do. ... 8-wheeled.	1	10-27	7-22	20-00	14-67	...	...	1
Do. do. ... 4 do.	2	5-70		12-00		...	...	2
Powder Vans ...	4	8-50	...	7-50	...	...	...	4
Tool or Accident Vans ...	12	7-57	...	6-50	...	2	...	10
Timber Trucks Wooden, Double Bolster	60	5-20	5-20	12-00	10-69	...	...	173
Do. do. do. Single do.	115	5-20		10-00		2	...	50
Rail do. do. ... 6-wheeled.	50	7-45	6-74	18-00	14-57	...	...	...
Do. do. do. ... 4 do.	20	4-95		6-00		20	...	12
Travelling Oil Tanks ... 6 do.	12	9-43	...	12-00	...	...	...	...
Do. Water Tanks ...	4	5-40	...	11-50	...	...	...	...
Do. Cranes ... 6-wheeled.	3	23-58	17-80	5-75	6-72	...	...	4
Do. do. ... 4 do.	4	33-10		10-00		...	...	3
Do. do. ... 4 do.	4	11-08	...	15-00	...	...	...	...
Brake Vans ...	20	11-43	8-89	3-00	5-07	2	...	4
Do. ... 4 do.	157	8-57		4-70		...	...	18
Truck for carrying gas-holders ...	5	10-86	...	...	...	...	...	157
Support Wagon for 15 Tons, Crane ...	1	5-00	...	...	...	...	...	5
Total ...	3,172	6-65	6-65	10-99	10-99	84	...	3,088
Grand Total ...	3,827	Nil.	Nil.	Nil.	Nil.	100	...	3,727

Column f.—We have no vehicles laid by as spare, but in this column Average Mileage per diem run on

* Includes Madras Railway Vehicles
Do. do.
Do. do.
Do. do.

ANALYSIS OF WORKING.
ended 30th June 1899.
DIX II.
Vehicles.

Foreign vehicles on Home Line.		MILEAGE OF		Home vehicles on foreign lines.	Carrying capacity hauled on Home Line.	Ton-mileage of vehicle dead weight hauled on Home Line.
		Home vehicles on Home Line.	Home vehicles on Home Line.			
Loaded.	Empty.	Loaded.	Empty.			
...	...	*	*	...	12,996	42,237
73,420	9,138	2,338	911	...	4,204,176	5,628,341
...	...	412,031	28,933	...	43,143	148,987
...	...	13,405	976	...	...	...
...	...	...	...	...	11,993,961	7,932,765
4,268	1,509	755,694	28,645	...	15,722,708	7,162,567
...	...	528,757	90,312	...	...	...
67,202	12,516	...	...	...	255,801,635	42,742,301
...	...	...	...	...	...	...
33,634	5,843	4,857,780	119,445	...	908,083	2,947,776
...	...	...	...	...	625,470	536,862
59,693	351	219,366	50,960	...	973,302	2,709,024
1,557	1,557	152,207	116,427	...	1,345,740	1,424,242
27,900	27,900	58,660	...	...	...	...
4,915	593	160,122	...	...	Nil.	71,275,102
274,589	59,407	7,151,871	495,269	763,182	...	...
...	...	8,704,414	1,520,013	...	120,648,239	71,366,500
...	...	...	...	...	60,364,557	30,895,749
614,109	613,573	2,272,699	1,342,868	...	...	...
...	...	...	...	...	656,496	418,770
...	...	35,531	49,069	...	375,886	311,448
...	...	27,105	26,593	...	797,485	806,304
...	...	63,800	62,185	...	31,658	15,581
...	...	1,078	1,080	...	863,790	978,962
...	...	90,550	24,622	...	41,451	48,274
...	...	6,121	256	...	4,791,322	2,330,671
...	...	234,029	214,177	...	2,474,948	1,144,897
...	...	96,550	73,316	...	1,723,068	1,354,044
...	...	71,640	71,949	...	73,902	55,571
...	...	6,613	3,678	...	...	...
...	...	5,351	52	...	86,308	96,173
...	...	...	2,664,938	...	13,511,236	23,601,299
...	...	...	...	...	...	...
614,109	613,573	11,615,481	6,054,796	431,322	Nil.	133,514,243
888,698	672,980	18,767,352	6,550,065	1,194,504	Nil.	204,789,345

has been entered the number of vehicles broken up and awaiting renewals.

Home line by Coaching Vehicles 44,004-97.
Goods do. 101,408-61.
on K. G. F. Ry. Coaching 93,723.
do. Goods 165,666.
M. E. Railway Coaching 100,907.
do. Goods 61,100.

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APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 30th June 1899.

APPENDIX III.

Distribution of Mileage according to the traffic carried, giving total mileage of home and foreign stock on home line.

DESCRIPTION OF VEHICLES.	MILEAGE OF			REMARKS.
	Vehicles.	Carrying capacity.	Dead weight.	
<i>Coaching—</i>				
First Class	923,829	10,214,152	9,636,961	
Second	1,093,845	21,719,689	11,128,949	
Third	5,031,708	256,566,791	42,847,043	
Total passenger vehicles ...	7,049,382	288,500,632	63,612,953	
Other coaching vehicles ...	933,257	3,862,955	7,624,032	
Total paying coaching mileage ...	7,982,639	Nil.	71,236,985	
Total coaching mileage ...	7,982,639	Nil.	71,236,985	
<i>Goods—</i>				
Loaded vehicles	12,213,706	144,333,633	83,245,411	
Empty vehicles	4,003,431	47,770,051	26,466,663	
Total paying goods mileage ...	16,217,137	192,103,684	109,712,074	
Brake vans	2,664,938	...	23,691,299	
Total goods mileage, including brakes...	18,882,075	192,103,684	133,403,373	
<i>Miscellaneous—</i>				
Free mileage for inspections, &c. ...	14,381	43,143	148,987	
Grand Total ...	26,879,095	Nil.	204,789,345	

APPENDICES TO ANALYSIS OF WORKING

For the Half-year ended 30th June 1899.

APPENDIX IV.—Maintenance of Way-Rails.

DETAILS.	IRON, DOUBLE-HEADED, WEIGHING			STEEL.			ENRUE SECTION OF BEWADA-MADRAS RAILWAY.			REMARKS.
	65 lbs. per yard.	75 lbs. per yard.	84 lbs. per yard.	Total.	30 feet built-headed 75 lbs. per yard.	30 feet double-headed 75 lbs. per yard.	20 feet and other double-headed 75 lbs. per yard.	Flat footed on bridges 75 lbs. per yard.	Total.	
1 Miles of rail in way, including sidings ...	317,3648	732,8884	73,1712	1123,2244	197,6118	65,8622	685,7998	12,0836	20,0334	21,4424
2 Rails removed, miles ...	10,9304	21,7352	3,1124	35,7780	...	...	63166	...	...	...
3 Rails laid, miles ...	8,6712	7,5764	8,1565	24,344	10,0902	...	19,6526	0066	...	...

Increased mileage of sidings—
South-West Line ... 3409
North-West Line ... 3063

6463 x 2 = 12924

* Includes 10,7410 miles of Arco-Rampet Branch.

* The difference between removed and laid is owing to an increase in the mileage of sidings and Main Line.

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APPENDIX V.—Maintenance of Way-Sleepers.

DETAILS.	WOOD.										ENURE SECTION OF BEZWADA-MADRAS RAILWAY.				REMARKS.
	TRANSVERSE.										Iron Bolt Sleepers.				
	Teak.			Jungle.			Total.	Crested Pine Sleepers.	Teak.	Jungle.		Total.	Iron Bolt Sleepers.		
	16' x 12' x 6'	14' x 12' x 6'	12' x 12' x 6'	10' x 12' x 6'	10' x 10' x 5'	10' x 12' x 6'				10' x 10' x 5'	16' x 12' x 6'			10' x 12' x 6'	
1 Number of sleepers in way, including sidings, at the commencement of the half-year ...	2,311	156	5,605	1,586	7,864	4,753	18,946	41,221	135	3,282,473	2	150	10,186	19,338	2,400
2 Average age of sleepers in way at the end of the half-year ...	20.0767	25.6601	22.2591	17.9093	17.3587	4.0698	5.8609	8.6297	3.2275	27.3552	2.25	3.14	3.25	2.73	2.72
3 Number removed ...	1	...	26	...	1	403	821	*1,342	...	*5,732	...	...	...	...	...
4 Number laid ...	1	...	4	1	2	723	1,027	*1,763	344	*27,373	...	...	...	...	...
5 Percentage of removals on total of each class ...	.0432	...	.4638	...	.0127	10.0372	4.3333	3.2556	...	.1137	...	...	...	...	...
6 Number of sleepers in way, including sidings, at the end of the half-year ...	2,311	156	5,583	1,587	7,865	4,988	19,132	41,642	479	3,304,114	2	150	10,186	19,338	2,400

* The difference between removed and laid.

* The difference between removed and laid is owing to increase in mileage of sidings and Main Line.

(No. L.)

No. 11605
1266

MADRAS RAILWAY.

AGENT AND MANAGER'S OFFICE,

Madras, 13th October 1899

From

Note

To

Sir,

The Agent and Manager.

The Consulting Engineer for Railways.

Madras.

I have the honour to forward herewith printed copies of the Analysis of Working of the Madras Railway (including Kolar Gold Fields Railway and Madras-Ennore section of the Bezwada-Madras Railway) for the half year ending 30th June 1899, as under :-

30 Copies for your Office *
6 for despatch to the Mysore Govt.

I have the honour to be,

Sir,

Your most obedient servant,

J. M. V. S.

Agent & Manager.

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36 copies.

RM No. 272 RM

Government of Madras,
PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

To
THE Resident in Mysore
Bangalore

19 October 1899

SIR,

I have the honour
to forward herewith for transmission
to the Mysore durbar
a copy of the Analysis of
Working of the Madras Railway
Concluding Kolar Gold Fields
and Madras - Mysore section of
the East Coast Railway for
the half year ended the 30th
June 1899 -

Despatched on 19/10/99

15.10.99
J.R.

PUBLIC WORKS DEPARTMENT,
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Form No. 1.

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- Enner Section of the East Coast
Railway) for the half-year
ended the 30th June 1899, be
forwarded to the Govt of India
and to the Secy of State.

Print

To.
The Agent & Manager, M.R.
" Examiner, C.R. & A.C., Madras
" Cons. Eng. for Mys.

Despatched on 24/10/99

Note

To the Secy of State for India
24/10/99

H.E. No. 1194 d 23rd Oct 99
Forwarded

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To.
The Rt. Honble the Secy of State
for India
We have the honour
to

to forward herewith a copy
of our Proceedings No.

Embodying the Analysis
of working of the Madras Railway
(including the Kolar Gold Fields Ry
and Madras. Census Section of the
East Coast Railway) for the half
year ended the 30th June 1899.

JH
16.10.99.

checked on 16/11/99

16/10/99

30