

Atlantic & North Carolina Railroad Co.,

W. S. CHADWICK,
PRESIDENT.

President's Office,

[June 13, 1893?]

New Bern, N. C., 189

note,
for Mr. DeLaney, July

In several
terms 20 feet of elevation to the
mile reduces the power of the
engine one half. Observe the val-
ue of gradient in this road is 26
feet per mile. While in the N. &
W. road it is 36 feet, I think, but
less I know. To understand better
these grades, I will state, that an
engine of 18 tons, with a load
of 200 tons, would have to exert
a force, to propel that load up
a plane of 26 feet to the mile,
that it would have to exert to
draw on a level 50 tons, whereas
to propel the same load up a plane

of 36 feet to the mile, it would
 have to exert a force that would
 draw upon a level 614 tons, or
 an additional force of 113 tons -
 See the advantage this road thus
 has over perhaps, all other rail
 roads in the State provided it is
 kept up to grade - A perfect
 rail road would be a straight line
 from point to point & on a level -
 Two hundred thousand dollars more
 could have made the Atlantic road
 an air line from Newbern to Goldsboro
 59 miles & from the elevation a little
 less than 2 feet to the mile, thus the
~~cars~~ would have run down hill
 without an engine when one started,
 but to do this would have compelled
 the crossing of the Neuse near Winston
 twice - I will stop before I make you
 a more drawn out paper than there has been that
 would do this. Truly, your friend,
 J. D. V.