

miles of this distance are over rugged and steep side hills, requiring much deep cutting and heavy side walling, the grades being not less than sixty feet per mile. The remaining three miles, to the lake, is on flat swampy land.

The route then traverses the northerly shore of the lake, either upon flats or steep hill sides, to the outlet of Richardson's Lake, called the Narrows, about six miles. At this point, my route leaves Col. Long's, and crossing the Narrows, follows along the Westerly shore of the Lake to its northwestern source, about seven miles, and then inclines more westerly over a rise of land connected with the east side of Azisiscoois Mountain, to the Magalloway River, about three miles. The route then follows up the Magalloway to its source, which is within three-fourths of a mile of the boundary line on the Highlands, a distance of thirty-five miles.

Fourteen miles up this river is Lake Pamachena, three miles in length and one in breadth, and through which this river flows. The first ten miles of this distance of the route, must follow the valley of this river, with very slight grades, occasionally crossing the river by bridges, to shorten the distance and avoid projecting points and uneven ground, and with embankments and some walling along its banks, to prevent the overflowing of the road in freshets. For the remaining four miles it must follow along the slopes of the hills, to overcome the rise of the Lake, with heavy embankments and side walling, and rock excavation. The grades for the first two miles will be from twenty-five to fifty feet per mile, and the last two miles at sixty feet per mile.

From the outlet of Pamachena Lake, the route passes