REFERENCE CLAUSE 2.

Effect of tailings on navigation.

2. The second reference made to the Commission is to determine whether the navigation of the Rivers Ohinemuri and Waihou has been, or is likely to be, seriously impeded as a result of the Proclamation of the rivers as sludge-channels.

Your Commissioners are of opinion that the navigation of the Ohinemuri and part of the Lower Waihou Rivers has been seriously affected by the deposit of mining tailings in the rivers under the Proclamation.

Extent of navigation, 1895, Ohinemuri.

Prior to 1895 the River Ohinemuri was navigable up to the Town of Paeroa, and for small craft for some two miles above it, where there was then a rise and fall of tide of from 3 to 4 feet, and a depth sufficient to permit craft drawing up to 7 feet to come up on the top of the tide. This depth has now decreased, and this old navigation head has less than a foot of water, with a rise of tide of from 2 to 3 feet only.

Vessels to Paeroa.-Junction Wharf .- Te Puke Wharf.

Prior to the Proclamation, steamers such as the "Paeroa" and "Ohinemuri," drawing loaded from 7 feet 6 inches to 8 feet, used to trade to Paeroa and berth at the Wharf Street and other wharves. Subsequently, owing partly to the silting of the river and partly to the commercial necessity of getting up and down on the one tide, the steamers deserted the town wharves, and lay at a wharf in the Ohinemuri immediately above the Junction. About seven years ago the Junction Wharf was deserted, and the steamers of the Northern Steamship Company, "Waimarie" and "Taniwha," which are twin-screw vessels specially built for the trade, and drawing not more than 7 feet to 7 feet 9 inches loaded, now berth as a terminus at Te Puke Wharf, at a point some two miles by road, and about seven miles by river, below the Township of Paeroa.

Shoaling, Lower Waihou.

The master of one of these vessels is of opinion that the channel in the Lower Waihou up to Te Puke may have shoaled some 6 inches, whilst the master of the other does not see much change in the depth, though he states that the Lower Waihou shows more shoals after freshes, but that so far these have been swept away. Both masters and other witnesses testified to the pinching of the river by the deposition of tailings on the banks, and it is also clear from the evidence that, whilst the action of the twin screws of the steamers has so far, by churning up the bottom, enabled the navigation to be kept open without serious difficulty, the bottom is becoming harder, which your Commission attributes to the deposition of fine mining silts and slimes in the interstices of the natural coarser sands of the river bottom.

Shoaling, Junction to Te Puke.

Since the twin-screw steamers ceased, about the beginning of 1903, to use the Junction Wharf, that portion of the Lower Waihou between the Junction and Te Puke has both shoaled and narrowed materially, and is not now navigable by steamers of the class which used to readily navigate it.

Upper Waihou sands.—Artificial drainage, Gordon, Shaftesbury.—Navigation, Upper Waihou.

In addition to the mining silt, there has been a large factor affecting the navigation of both the Upper and Lower Waihou Rivers in the large volume of light sands discharged into the Upper Waihou above Te Aroha through the drainage and the settlement of the flat lands in the upper reaches of the river. Mr. J. E. Thomson, licensed surveyor, gave evidence that in the district lying between the Gordon Settlement and Te Aroha he estimated that a volume of sand exceeding a million cubic yards had been scoured out of artificially made drains into the Waihou, being a volume sufficient to fill the dry-weather bed of the river for a length of some seven miles. The Commission personally investigated this