

Hauling was stopped about 1 a.m., as the horses were unable to work longer. About 300 feet had been hauled; in all 750 feet.

Friday, August 31st.—In the morning the pipe was examined by the diver, who went right along the part under water from end to end, and found everything in good order. There is a soft shingle bank extending from the north side to within about five hundred feet from the south side of the Narrows, and the pipes had ploughed into this for a depth of about two feet and moved boulders that were in their way. Further south the bottom is a sandy hardpan.

Hauling began about 5 p.m., and one fleet (the length of travel of the moving blocks, about 75 feet) was hauled by about 7 p.m. The tackles were then overhauled. Hauling was continued again from about 8 to 8.20 p.m., when the gripper on the eastern cable gave way. It was got in order again and operations were continued. About 12.30 a.m. the central cable slipped in the gripper and work was suspended for the night. About 150 feet hauled; in all 900 feet.

The pull was now becoming heavier.

Saturday, September 1st.—The diver went down in the morning and found everything in good shape.

Hauling began about 4.30 p.m. The pipe would not start at once, and the gripper on the central cable (No. 1 capstan) slipped at about 4.45 p.m. It had to be loosened and a fresh grip taken, when the pipe was started. The fleet was finished at 6.15 p.m. It was found from measurement that 162 feet still required to be hauled. The tackles were overhauled; a sheave in one of the blocks, which was found to be cutting (the hole had become enlarged about $\frac{1}{4}$ inch) was replaced by another, and hauling was begun again about 7.45 p.m. About 9 p.m. it was found that the head of No. 2 capstan was giving way, and work had to be suspended till a new drum could be made. 169 feet were hauled; in all 1069 feet. 155 feet remained to be hauled.

Monday, September 3rd.—A new capstan barrel had been made and placed in position, and hauling was begun at 8.15 a.m. The main was moved about 40 feet, but the tide was found to be running out too strongly, and work was stopped. The pull had become very heavy, as so much of the main was on the ground and part of it was coming up hill. Six horses were used this day, viz., two each on Nos. 1 and 2 capstans, and one each on Nos. 3 and 4.

Hauling was begun again at 11.10 a.m. A gripper slipped soon after starting. A fresh pin was put in and tightened up, and hauling was continued. Before long the rope of the tackle of No. 2 capstan got under the barrel of the capstan and had to be cleared.