

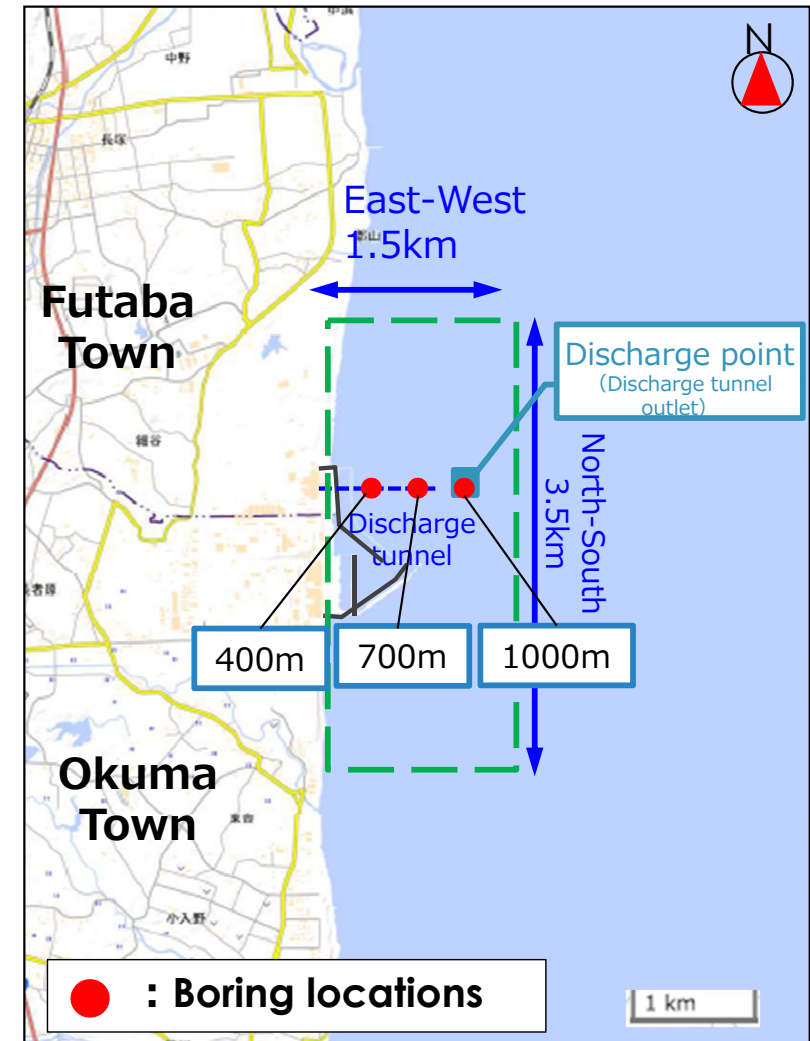
# Results of the geological survey (boring survey) for discharge facilities for water treated with multi-nuclide removal equipment at the Fukushima Daiichi Nuclear Power Station

< Reference Material >  
 February 3, 2022  
 Tokyo Electric Power Company Holdings, Inc.  
 Fukushima Daiichi D & D Engineering Company

- We continue our deliberation of water intake and discharge facilities, which, under the current plan, will take in water from outside the harbor and pass it through an undersea tunnel (approx. 1,000m) to discharge the ALPS treated water.
- In order to deliberate these facilities in further detail and ensure the safety of the project, a magnetic survey was conducted in November 2021 in ocean areas from which geological data must be ascertained. The survey confirmed that there are no obstacles on the seabed in the aforementioned areas. Based on these results, we conducted a geological survey (boring survey) in December 2021.
- In the three target areas of the geological survey where we plan to construct the discharge tunnel (Approx. 1,000m, 700m and 400m offshore from discharge vertical shaft), geological samples were collected and tests to measure the firmness of the ground were conducted sequentially

[ Announced by December 27, 2021 ]

- From the data collected from these geological samples we have confirmed that there is bedrock (mudstone or sandstone) that is thick and rigid enough for the construction of the discharge tunnel, and that there is bedrock at the outlet of the discharge tunnel (approx. 1,000m offshore).
- From this survey we have obtained basic data on geological conditions that is required for the design and construction of the discharge tunnel.



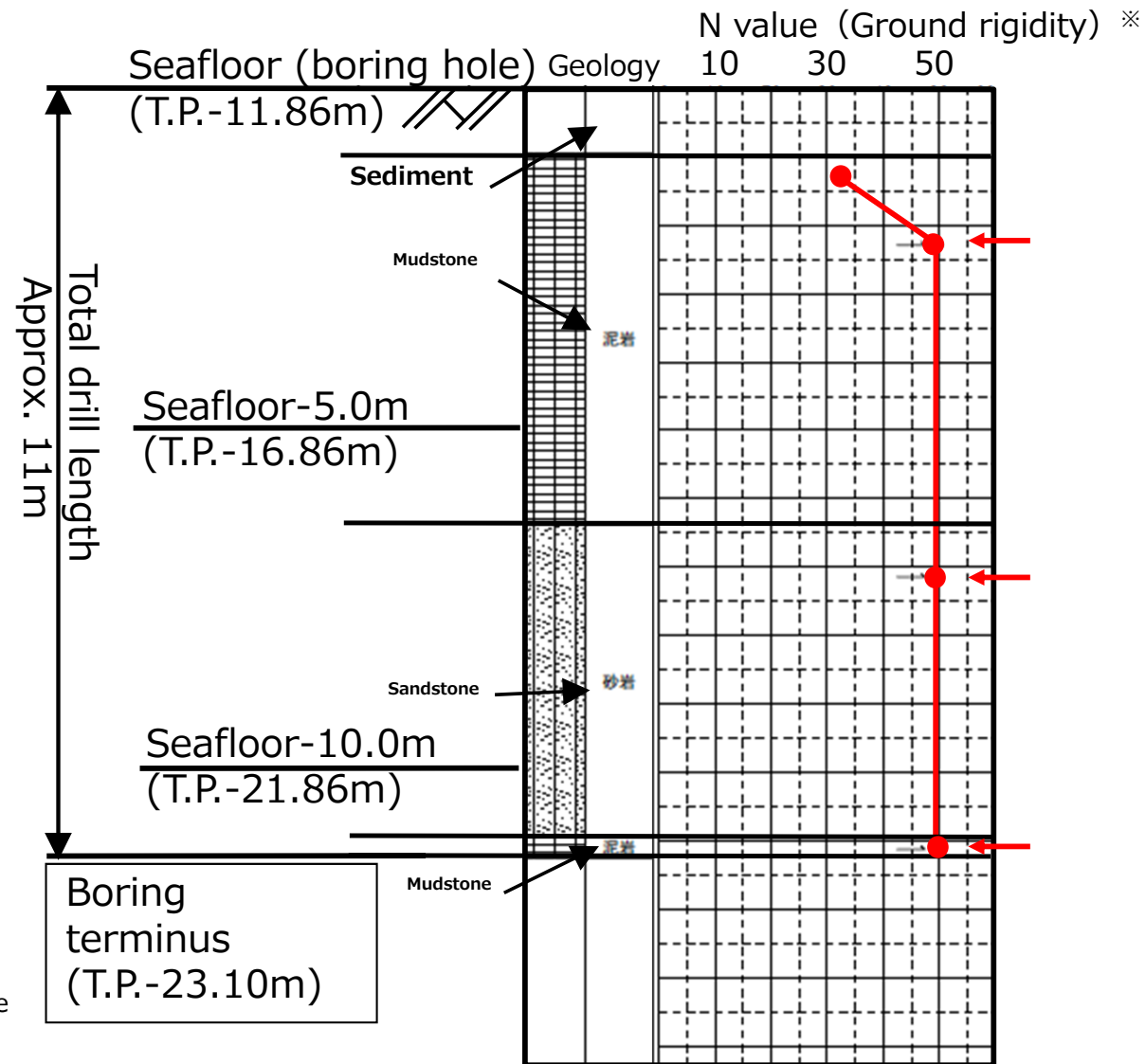
Area where fishing is not routinely conducted\*  
 East-West 1.5km North-South 3.5km

\* Area where common fishery rights are not set

# Geological survey data ① (Approx. 1,000m offshore)

■ Geological survey data ① is shown on the right.

- The survey was conducted over a total drill length of approximately 11m from the boring hole (T.P.-11.86m) to the boring terminus (T.P.-23.10m).
- Geological survey data point ① will be the location of the discharge outlet facility and endpoint of the discharge tunnel, and we have confirmed that the bedrock (sandstone, mudstone) is thick and rigid enough for construction.



※N value

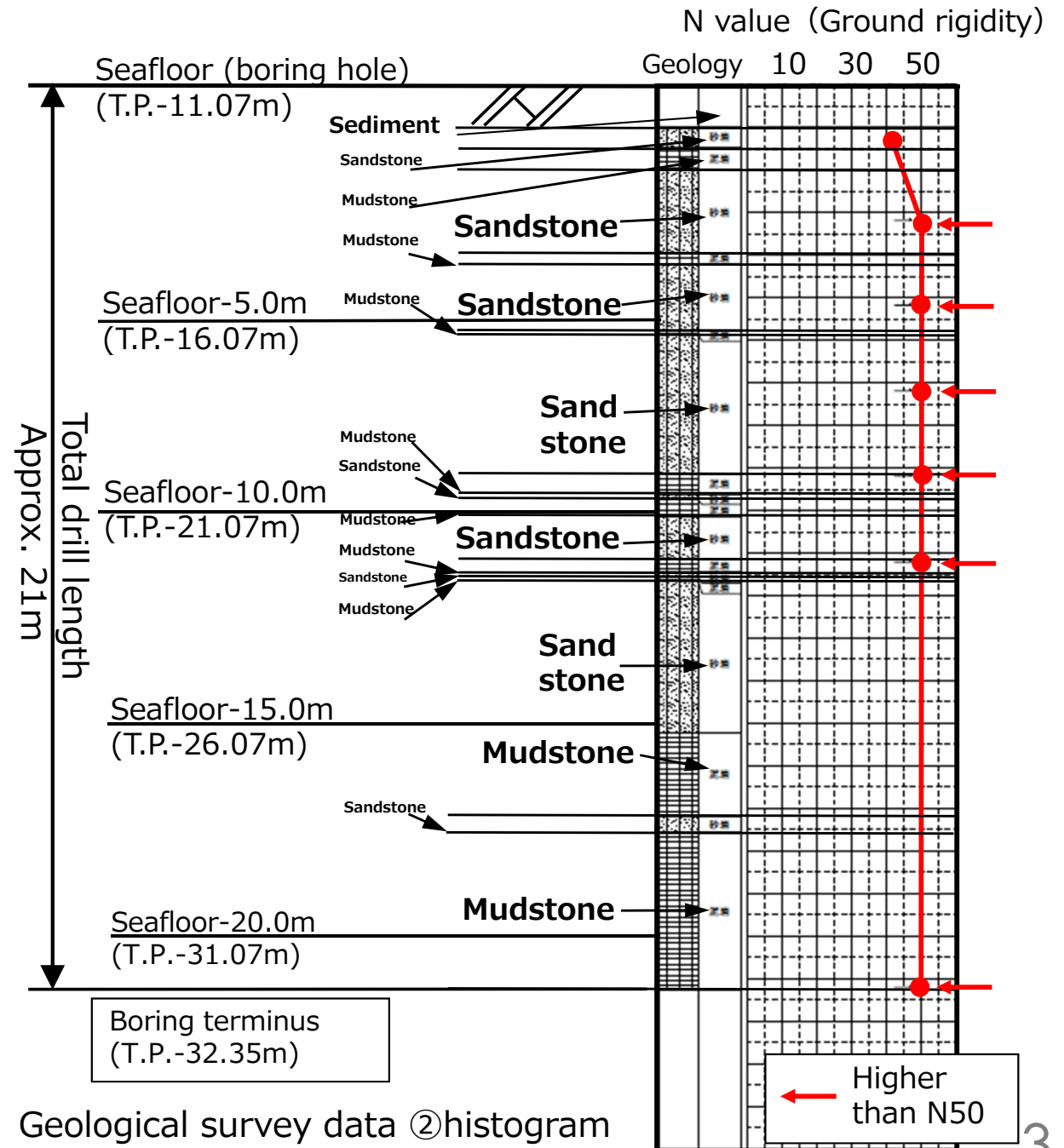
- Value that represents the rigidity of the ground calculated through standard penetrations tests (JIS A 1219)
- Larger the value, the harder the ground. The N value of the Kanto Rome layer is between 3~5, and that of the soft alluvium cohesive layer is between 0~2. The N value of the foundation of mid to high-rise structures is generally more than 30~50.

Geological survey data ① histogram

← Higher than N50

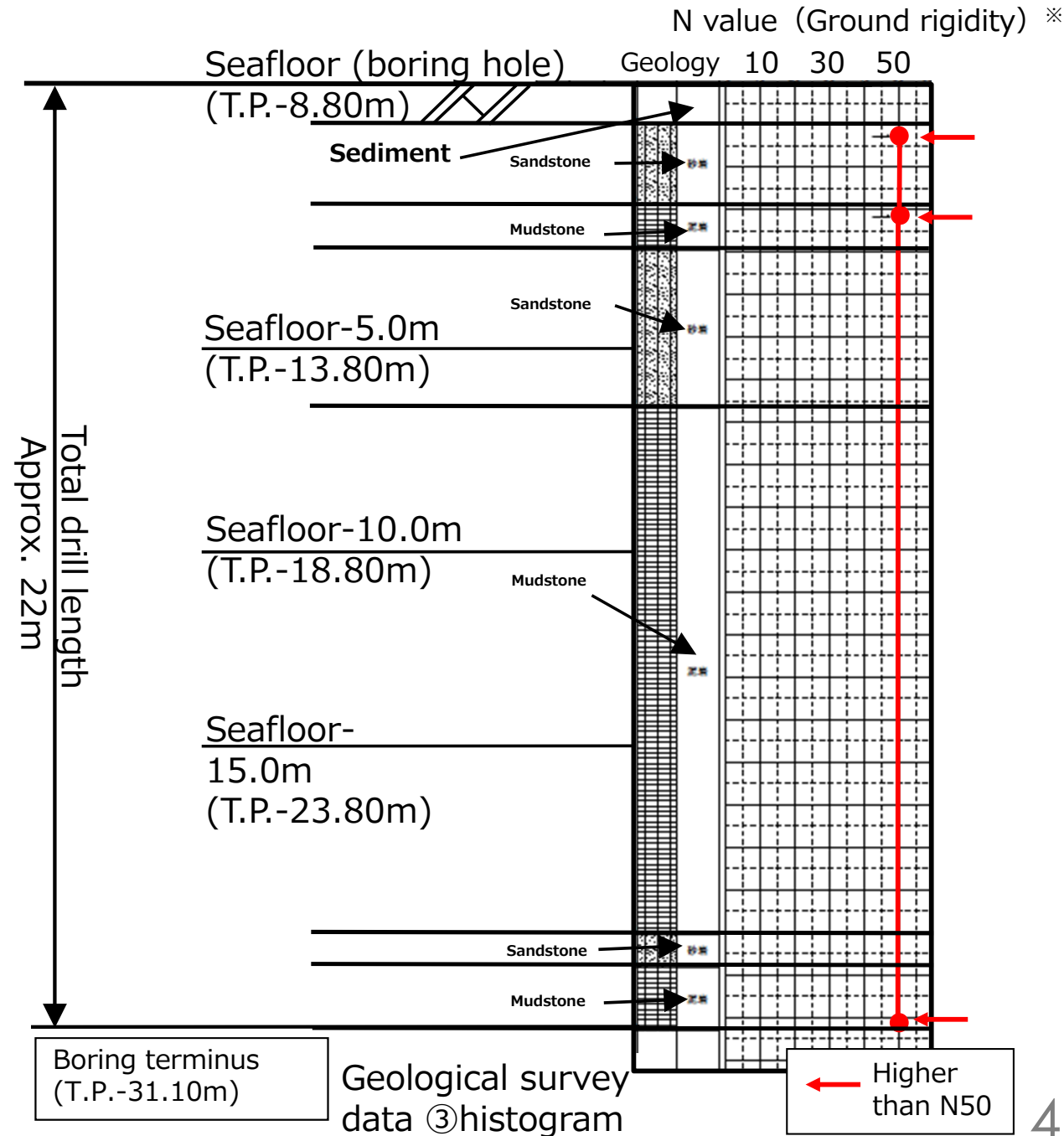
# Geological survey data ② (Approx. 700m offshore)

- Geological survey data point ② is shown on the right
- The survey was conducted over a total drill length of approximately 21m from the boring hole (T.P.-11.07m) to the boring terminus (T.P.-32.35m).
- We have confirmed that there is bedrock (sandstone, mudstone) at geological survey point ② that is thick and rigid enough for construction of the planned discharge tunnel.

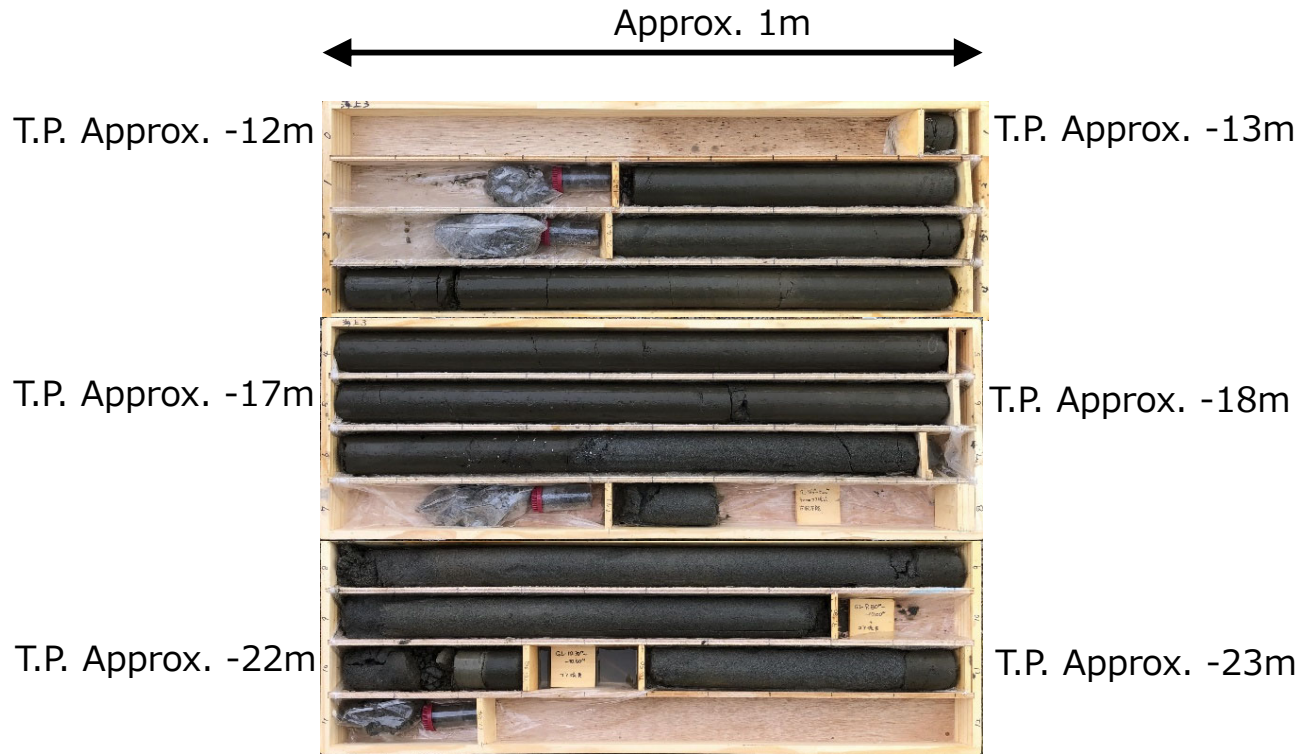


# Geological survey data ③ (Approx. 400m offshore)

- Geological survey data point ③ is shown on the right.
- The survey was conducted over a total drill length of approximately 22m from the boring hole (T.P.-8.80m) to the boring terminus (T.P.-31.10m).
- We have confirmed that there is bedrock (sandstone, mudstone) at geological survey point ③ that is thick and rigid enough for construction of the planned discharge tunnel.

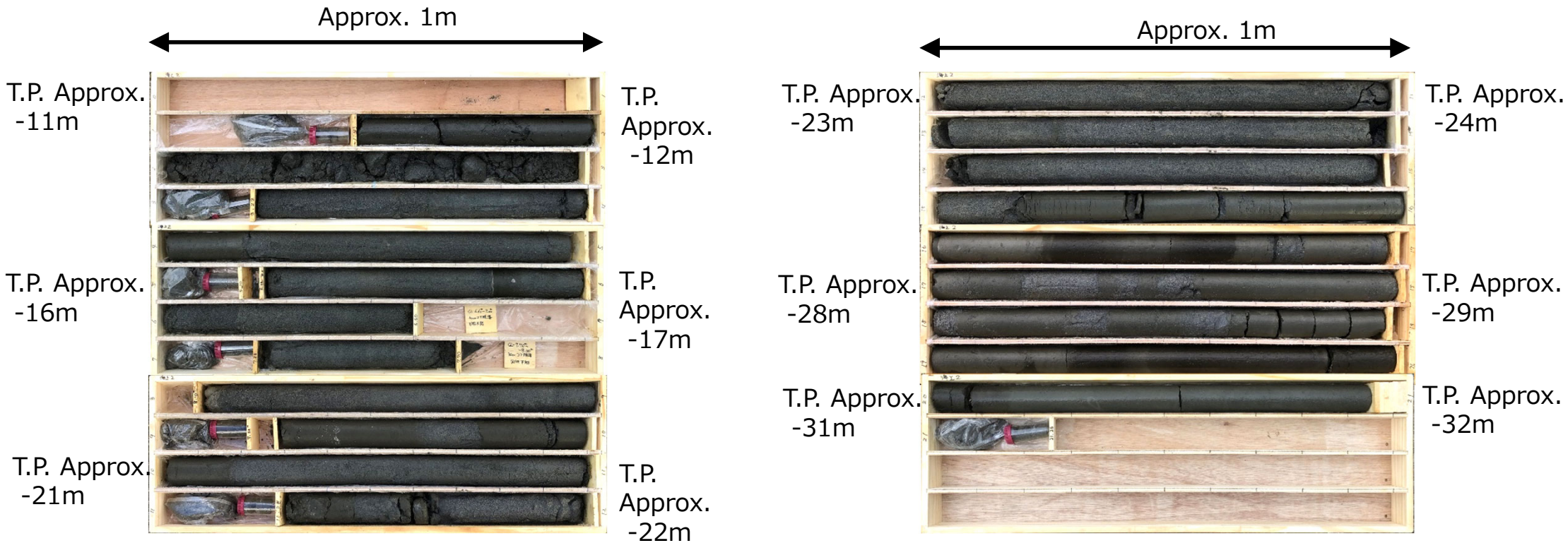


**[Reference] Geological survey data ① Boring cores (Approx. 1,000m offshore)**



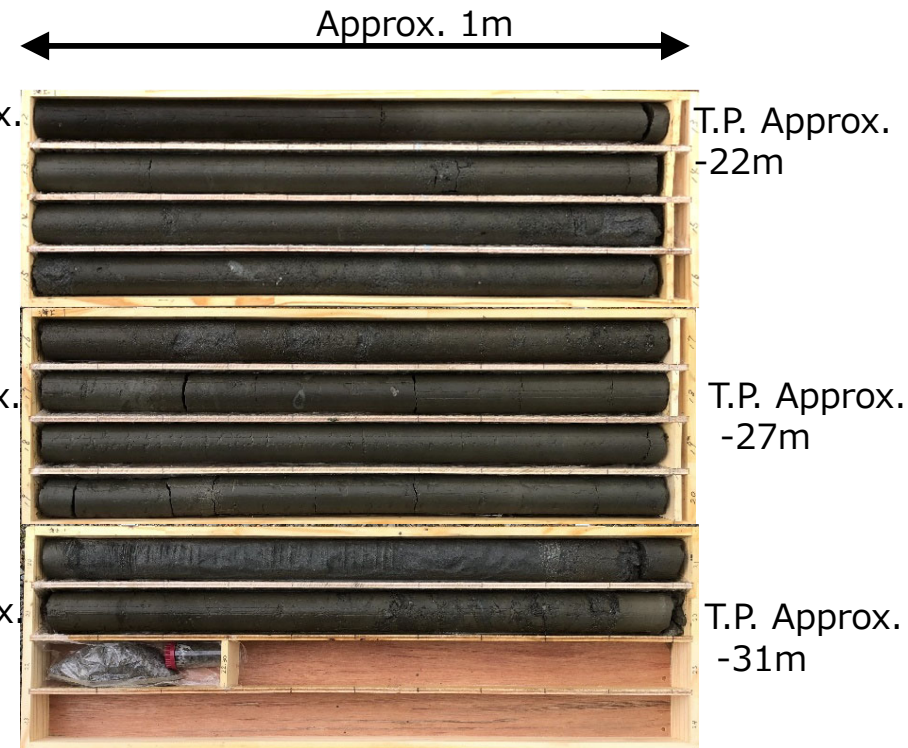
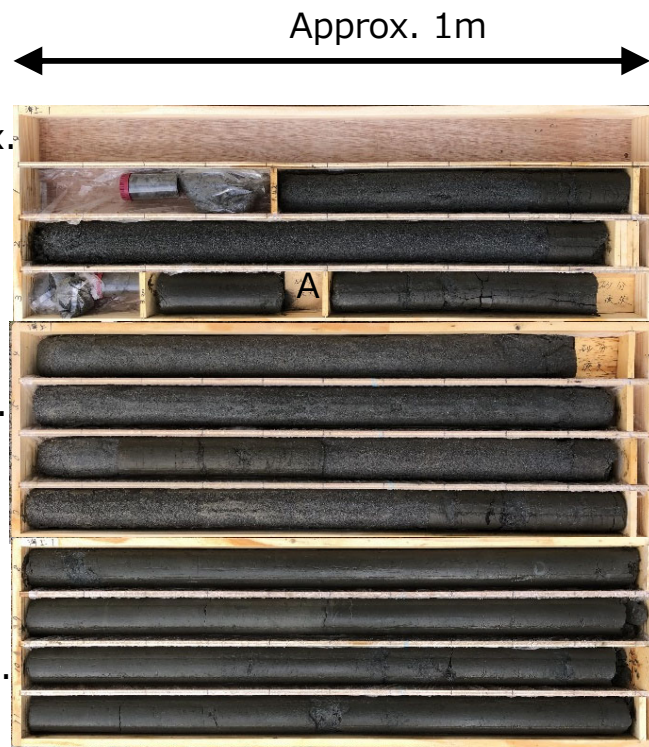
Geological survey data point ①  
boring core sample

**[Reference] Geological survey data ② Boring cores (Approx. 700m offshore)**



Geological survey data point ②  
boring core sample

**[Reference] Geological survey data ③ Boring cores (Approx. 400m offshore)**



Geological survey data point ③  
boring core sample

# (Reference) Photos of the geological survey (Marine boring survey)

