



**Daily Drilling and Scientific Report for IODP Expedition 386
Japan Trench Paleoseismology, 2021**



29th April 00:00 – 24:00 JST Japan Standard Time (UTC+9)

1. Location

Position 40° 26.180' N, 144° 26.196' E
IODP-MSP borehole: M0085
Prospectus borehole: JTPN-10A
Water Depth: 7586 m

2. Operations Report

MBES/SBP was continued throughout the night and suspended at 0445 hrs for the start of GPC operations. A total of 16 survey lines out of 23 were completed in this area.

The ship sailed to the stand-by location at Site M0085 (JTPN-10A), and the 3rd 40 m GPC operation of Exp.386 began at 0600 hrs. The GPC assembly was deployed into the water at 0730 hrs, and the inclinometer and transponder were installed on the a winch cable at 20 m and 50 m above the GPC weighthead. The GPC assembly was then run down with winch speed 0.5 – 1.0 m/s from 0 to 100 m depth in cable length, and 1.2 – 1.5 m/s from 100 to 7700 m depth in cable length. Running down was paused at 1000 hrs at 7700 m depth in cable depth to stabilize GPC assembly, and resumed after 3 minutes with winch speed at 0.3 m/s. The GPC assembly spudded-in and released from Holes M0085 C and D at 1011 hrs at 7821 m cable length, and then run back to surface. The GPC assembly was fully recovered by 1315 hrs, and the Trigger corer was dismantled while sampling took place. The GPC core bit was removed by 1400 hrs, however it was decided to delay withdrawal of the core from the barrel string due to rough weather forecast for the evening. The ship began transit to a stand-by point off Miyako for WOW at 1400 hrs, and arrived at 2300 hrs.

3. Science Report

N/A

4. Core Recovery Details

Hole	C (Trigger core)	D (GPC main)
Barrel length (m)	1.5	40
Cored length (m)	0.33	33.69
Curated length (m)	0.33	33.69
Recovery (%)	100	100
Number of sections	2	34

5. Time Breakdown

00:00 Continue MBES SBP survey around M0084/M0085 (JTPN-09A & JTPN-10A)
#10(W-E): From Lat: 40°22.6765' N, Long: 144°22.9806' E to Lat: 40°21.6978' N, Long: 144°26.4574' E
#11(W-E): From Lat: 40°21.3021' N, Long: 144°25.6689' E to Lat: 40°22.0813' N, Long: 144°22.9154' E
#21(W-E): From Lat: 40°21.6302' N, Long: 144°22.9784' E to Lat: 40°20.8292' N, Long: 144°25.7357' E
#22(W-E): From Lat: 40°20.2942' N, Long: 144°25.6582' E to Lat: 40°21.0727' N, Long: 144°22.9286' E
#12(W-E): From Lat: 40°20.5826' N, Long: 144°22.9506' E to Lat: 40°19.7746' N, Long: 144°25.7305' E
#23(W-E): From Lat: 40°19.3728' N, Long: 144°25.6595' E to Lat: 40°20.1088' N, Long: 144°22.9668' E
04:45 Stand-by at Site M0085 (JTPN-10A).
06:00 Prepare running 40 m GPC
06:50 Set Trigger corer to GPC assembly
07:30 Run GPC into water. Set inclinometer and transponder on a winch cable at 20 m and 50 m above the weighthead of GPC respectively. Set winch speed 0.5 – 1.0 m/s (to 100 m depth in cable length) and 1.2 -1.5 m/s (7700 m depth in cable length).
10:00 Hold running GPC 3 minutes at 7750 m depth in cable length for stabilization. Resume running GPC down with 0.3 m/s.
10:11 Spud-in and released from Holes M0085 C and D at 7821 m in cable depth (tension before: 5.8 tonf, 6.3 tonf, overpull 13 tonf).
10:15 Run GPC back to surface with 1.0 – 1.5 m/s winch speed.
12:35 Recover Trigger corer on deck

13:15 Recover GPC assembly on deck.
Dismantle Trigger corer, cut core and collect BW.
14:00 Start sailing to off Miyako due to rough weather
23:00 Arrived at a stand-by point off Miyako. WOW

6. Hours (inc. cumulative total) – no contractual implications can be made from these figures

In port	10.0
Transiting	30.4
Operating	180.0
Technical downtime	0.0
Weather downtime	175.9
Other downtime (specify)	0.0

7. Weather

Overcast then with rain later and warm (~17 degC) during the day. Light northwesterly winds (<5 m/s), and surface current (<1.2 knot) flowing eastwards, and small waves (<1 m) were observed.

8. Planned Activity for the next 24 hours

WOW off Miyako. Withdrawing and cutting core into sections. Prepare 40 m GPC assembly for the next run.

9. Health and Safety and Environmental

Toolbox talk before the operation

10. Photo of the day



1) Assistant Offshore EPM Nori Sakurai checking condition of the trigger beak (photo by NOKutsu@ECORD/IODP/JAMSTEC)



3) A bird witnessing the GPC operation from deployment to recovery (photo by NSakurai@ECORD/IODP/JAMSTEC)



2) Rewinding the winch (photo by LMaeda@ECORD/IODP/JAMSTEC)



4) Checking temperature at the bit (photo by NSakurai@ECORD/IODP/JAMSTEC)



5) Curatorial staff standing up with a plunger to lay-down Trigger core (photo by NOKutsu@ECORD/IODP/JAMSTEC)



7) Nori providing weather/sea condition forecast at onshore/offshore meeting (photo by NOKutsu@ECORD/IODP/JAMSTEC)



6) Laying down Trigger core to cut (photo by LMaeda@ECORD/IODP/JAMSTEC)



8) Lots of sample vials for microbiological study (photo by NOKutsu@ECORD/IODP/JAMSTEC)