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SJADES 2018 biodiversity research cruise: Methodology and station data

Chim Chee Kong^{1,2,3*}, Ismiliana Wirawati^{4*}, Praditya Avianto⁴, Bertrand Richer de Forges⁵, Tin-Yam Chan⁶ & Tan Koh Siang^{2,3}

Abstract. The South Java Deep-Sea (SJADES) Biodiversity Expedition 2018 was a joint expedition organised by the Indonesian Institute of Sciences (LIPI) and the National University of Singapore (NUS). Benthic samples were collected in the deeper waters of Sunda Strait as well as off the southwest coast of Java from Pulau Panaitan to Cilacap along the northern slopes of the Sunda Trough over two weeks in March and April 2018. Details pertaining to the vessel, cruise participants, collecting equipment used onboard, and localities where biological material were collected are provided.

Key words. Java, Sunda Strait, Sunda Trough, Baruna Jaya VIII, beam trawl, Waren dredge, box corer, multi-corer

INTRODUCTION

The South Java Deep-Sea (SJADES) Biodiversity Expedition was jointly organised by the Indonesian Institute of Sciences (LIPI) and the National University of Singapore (NUS). The areas of interest were the deep waters of the Sunda Strait and the northern slope of the Sunda Trough off the western coastline of southern Java, Indonesia. The 14-day cruise was conducted on board the LIPI research vessel *Baruna Jaya VIII*, which started its journey from Muara Baru, Jakarta, Indonesia on 23rd March 2018 and returned to the same port of call on 5th April 2018. A total of 30 scientists from Indonesia, Singapore, Taiwan, and France took part in the cruise (Table 1; see also Ng & Rahayu, 2021, in this volume).

Ng & Rahayu (2021, in this volume) provide a detailed overview of the research cruise, including the background and how the areas were selected. They also summarise the major research outcomes and outputs of the cruise.

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SPECIMEN COLLECTION EQUIPMENT AND METHODS

Sampling vessel. K.R. *Baruna Jaya VIII* is 53.2 m long and 12.5 m wide and has a cruise speed of 10 knots. It is equipped with five laboratories, a 5T SWL A-frame, single and multibeam echosounders (only the single beam instrument was used), a box corer, and rooms that can accommodate 30 researchers or surveyors.

Beam trawl and Waren dredge. The beam trawl (Fig. 1A) was composed of a 4 m long wooden beam which defined the width of the trawl. Each end of the beam was attached with a skid of 0.5 m height, and a tickler chain connected the pair of skids in front of the net (chalut à perche, or CP; for more details see Tsai et al., 2009; Chan et al., 2017). The length of the main net was 8.8 m and the mesh size was 13 mm. An additional secondary net with a smaller mesh (7 mm) was attached on the inside of the cod end of the main net. This instrument was trawled along the seafloor for about 25 minutes at 0.5–2 knots during each deployment. After recovery, the sediments were washed through sieves of 5-mm and 1-mm mesh sizes using seawater. Specimens retained on the sieves were immediately sorted to major taxa on the vessel deck and placed on trays with chilled seawater. Digital images of selected specimens were later obtained in a dedicated photography area. All specimens were fixed and preserved according to the requirements of the respective scientists. The Warèn dredge (Fig. 1B; Chan et al., 2017) has a 1.0 m \times 0.3 m opening with a net length of 3 m and mesh size of 3 cm with an additional net with a smaller mesh (7 mm) attached on the inside of the cod end. Samples collected were treated in the same manner as those in the trawl.

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Table 1. SJADES participants, with their family names in bold. Affiliation: LKCNHM = Lee Kong Chian Natural History Museum; LIPI = Indonesian Institute of Sciences; MNHN = Muséum d'Histoire Naturelle, Paris; NDWU = National Dong Hwa University, Hualien, Taiwan; NTOU = National Taiwan Ocean University, Keelung, Taiwan; NUS = National University of Singapore; RCDS = Research Center for Deep Sea, Ambon; RCO = Research Centre for Oceanography, Jakarta; TMSI = Tropical Marine Science Institute, NUS; UI = University of Indonesia.

No.	Name	Affiliation	Designation	Research interest
1	Praditya Avianto	RCO-LIPI	Mapper	Geology
2	Eko Burhanuddin	UI	Biologist	Stomatopoda
3	Chan Tin-Yam	NTOU	Biologist	Caridea and Dendrobranchiata
4	Chim Chee Kong	TMSI, NUS	Biologist	Peracarida
5	Chuar Cheah Hoay	TMSI, NUS	Biologist	Annelida
6	Nurul Fitriya	RCO, LIPI	Biologist	Copepoda
7	Gan Bin Qi	TMSI, NUS	Biologist	Nematoda
8	Hadiyanto Hadiyanto	RCO, LIPI	Biologist	Annelida
9	Iffah binte Iesa	LKCNHM, NUS	Biologist	Cnidaria
10	Muhammad Masrur Islami	RCDS, LIPI	Biologist	Mollusca
11	Lim Swee Cheng	TMSI, NUS	Biologist	Porifera
12	Lin Chia-Wei	NDWU	Biologist	Galatheoidea
13	Jose Christopher Escaño Mendoza	LKCNHM, NUS	Biologist	Brachyura
14	Peter Ng Kee Lin	LKCNHM, NUS	Chief scientist	Brachyura
15	Dharma Arif Nugroho	RCDS, LIPI	Biologist	Brachyura
16	Selvia Oktaviyani	RCO, LIPI	Biologist	Pisces
17	Rene Ong Sheue Lin	LKCNHM, NUS	Photographer	Photographer
18	Teguh Peristiwady	RCDS, LIPI	Biologist	Pisces
19	Dwi Listyo Rahayu	RCO, LIPI	Chief scientist	Paguroidea
20	Bertrand Richer de Forges	MNHN	Biologist	Brachyura
21	Muhammad Dzaki bin Safaruan	LKCNHM, NUS	Technician	General
22	Riyana Subandi	RCO, LIPI	Technician	General
23	Tan Heok Hui	LKCNHM, NUS	Biologist	Pisces
24	Tan Koh Siang	TMSI, NUS	Biologist	Mollusca
25	Tan Siong Kiat	LKCNHM, NUS	Biologist	Mollusca
26	Samantha Tong Jia Wen	NUS (TMSI)	Biologist	Copepoda
27	Indra Bayu Vimono	RCO, LIPI	Biologist	Echinodermata
28	Ernawati Widyastuti	RCO, LIPI	Biologist	Brachyura
29	Ismiliana Wirawati	RCO, LIPI	Biologist	Echinodermata
30	Yang Chien-Hui	NTOU	Biologist	Scyllaridae

Box corer. Dimensions of the box corer (Fig. 1C) were 60 cm L \times 50 cm W \times 50 cm H. For each deployment, the stainless steel corer was lowered at about 1 m.s-1 until it reached about 100 m above the seabed, after which the speed was lowered to 0.5 m.s⁻¹, while paying attention to the winch wire tensiometer. As an acoustic pinger was not available, the approximate height of the corer above the seabed was estimated by comparing the length of the winch wire that was paid out with the depth of the sea provided by the ship echosounder. When the wire tensiometer showed a loss in tension, indicating that the corer has touched the seabed, an interval of 3 seconds was allowed before the winch was stopped. A further 10 seconds was allowed to pass before the winch was reversed and the corer was raised at a rate of about 0.5 m.s⁻¹ for the first 100 m and then retrieved at 1 m.s⁻¹. Upon recovery of the corer, the top

water was siphoned into a bucket and kept aside. Samples from all stations, except CR09, were sectioned into 0–2 cm, 2–5 cm, and 5–10 cm depth layers. The top water was then combined with the 0–2 cm sediment. These fractions were passed through 300 μm followed by 250 μm mesh size sieves using chilled (4–10°C) filtered (to 40 μm) seawater. Sediment retained on the sieves from different depths were stored separately and fixed in 10% borax-buffered formalin. As the sample from CR09 contained only a small quantity of sediment due to unsuccessful deployment, the sediment was not differentiated according to depth and was treated in its entirety.

Multiple corer. The multiple corer used in this survey was an OSIL Mega Corer (Fig. 1D) with 12 perspex tube cores each of length 70 cm with a diameter of 60 mm. This corer

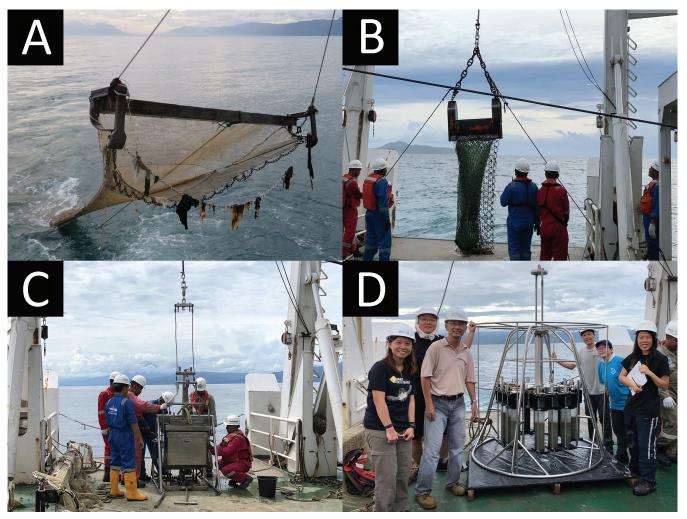


Fig. 1. Sampling instruments deployed during SJADES 2018: (A) beam trawl, (B) Waren dredge, (C) box corer, and (D) multiple corer.

was deployed and retrieved in the same manner as the box corer. After the corer was retrieved and secured on the deck, the tube cores were removed carefully and immediately processed. The contents of each tube were sectioned into 0–2 cm and 2–5 cm depth layers. Each layer was then sieved through a 40-µm mesh size sieve with chilled, filtered seawater. Sediments retained on the respective layers and sieves were stored separately and fixed in 'DESS', a solution containing dimethyl sulfoxide, ethylenediamine tetra-acetic acid (EDTA), and saturated salt.

STATION DATA

There were a total of 63 sampling stations (Table 2), of which 21 stations were located in the Sunda Strait and 42 stations in the Indian Ocean between Panaitan Island and Cilacap in south Java (Fig. 2). The majority of the stations were in deeper waters between depths of 208–2,355 m. Six stations (i.e., DW01, DW16, DW19, CP37, CP56, and DW60) were in shallower waters between 92 m and 256 m.

The beam trawl (Fig. 1A) was the primary sampling instrument for this expedition and was deployed 44 times. The rectangular dredge (Fig. 1B) was deployed nine times while the box corer (Fig. 1C) and multiple corer (Fig. 1D) were deployed five times each.

LITERATURE CITED

Chan T-Y, Richer de Forges B & Barazer J-F (2017) Ship-based collection of large crustaceans. Journal of Crustacean Biology, 37: 481–489.

Ng PKL & Rahayu DR (2021) The first Indonesia–Singapore deepsea expedition: South Java Deep-Sea (SJADES) Biodiversity Expedition 2018. In: Rahayu DL & Tan KS (eds.) South Java Deep-Sea (SJADES) Biodiversity Expedition 2018. Raffles Bulletin of Zoology, Supplement 36: 1–16.

Tsai P-C, Yeh H-M, Chan BKK & Chan T-Y (2009) Comparison between the catch composition of the French and ORE type beam trawls on deep-sea decapod crustaceans: implications for quantitative sampling of the deep-sea decapod biodiversity. Crustaceana, 82: 565–591.

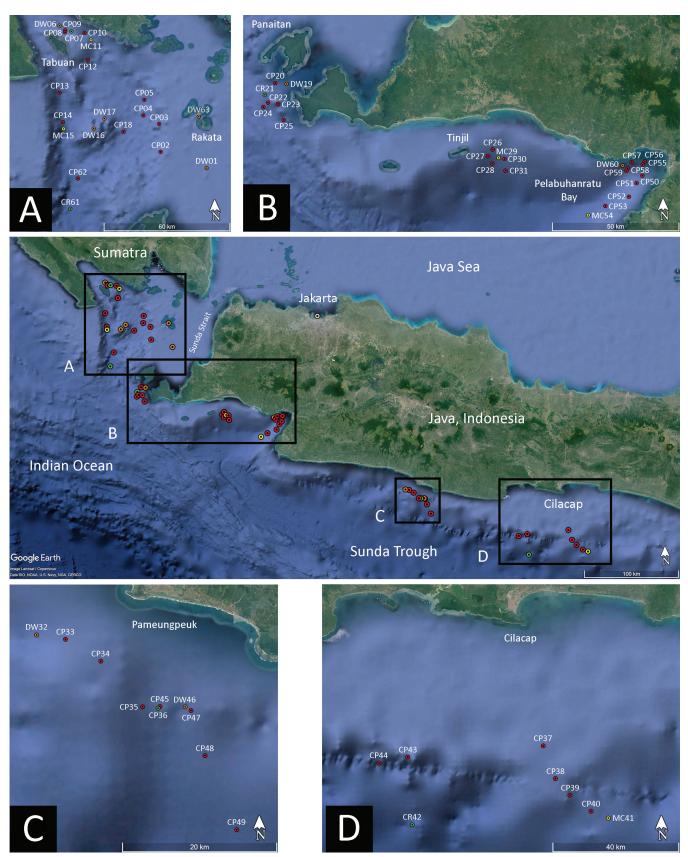


Fig. 2. Sampling stations of the SJADES biodiversity cruise. Insets A through D are enlarged and shown above and below the main map. (A) Sunda Strait; (B) between Panaitan and Pelabuhanratu Bay, (C) south of Pameungpeuk, and (D) south of Cilacap. Sampling instruments employed at each station: beam trawl (red), rectangular dredge (orange), box corer (green), and multiple corer (yellow). For depths of each station, see Table 2. This map was prepared in Google Earth Pro (ver. 7.3.3.7786).

Table 2. SJADES station data (for map, see Fig. 2). Stations were named according to the type of sampling instrument deployed: CP = beam trawl; CR = box corer; DW = Waren dredge; MC = multiple corer. Time was based on Jakarta time zone (UTC +9). Asterisk indicates failed deployment.

DWO1 24 March 733 100 6-20.489'S 105-26.890'E 7:44 Depth (m) Latitude CPO2 24 March 10.23 100 6-20.489'S 105-26.890'E 7:54 104 6-20.04 CPO2 24 March 10.29 398 6-08.941'S 105-11.07'E 10.49 6-08.04 CPO3 24 March 15:40 850 6-06.713'S 105-11.107'E 19.01 929 6-08.02 CPO3 24 March 15:34 850 6-06.713'S 104-49.712'E 12.43 283 6-08.02 CPO3 25 March 11:50 87 6-06.05'T 104-49.712'E 13.49 8-0.45 CPD3 25 March 11:50 8-44.678'S 104-50.712'E 13.49 8-44.678'S 104-40.712'E 13.49	10.77	356			On bottom				Off bottom		7
24 March 733 100 6° 20.489'S 105° 26.890'E 754 104 6° 20.489'S 24 March 10.02 257 6° 16.066'S 105° 15.053'E 1054 281 6° 24 March 15.40 850 6° 06.713'S 105° 10.783'E 16.10 870 6° 24 March 18.31 928 6° 06.713'S 109° 10.783'E 16.10 870 6° 25 March 18.31 928 6° 06.713'S 109° 11.107'E 19.01 929 6° 25 March 11.50 425 5° 44.4678'S 104° 51.131'E 79 5° 25 March 11.50 425 5° 44.181'S 104° 51.181'E 377 5° 25 March 15.03 429 5° 45.399'S 104° 50.08'E 15.23 39 5° 25 March 15.33 429 5° 45.399'S 104° 50.08'E 15.39 6° 5° 5° 5° 44.6 5° 5° 5° 5° 5° 5°	Station	Date	Time	Depth (m)	Latitude	Longitude	Time	Depth (m)	Latitude	Longitude	Substrate
24 March 10.02 257 6° 16.066'S 105° 15.053'E 10.54 281 6° 6 24 March 12.29 398 6° 08.941'S 105° 10.783'E 16.10 870 6° 24 March 15.40 850 6° 02.737'S 105° 10.107'E 19.01 929 6° 25 March 7.18 266 5° 43.413'S 104° 49.712'E 7.38 294 5° 25 March 11:50 425 5° 44.678'S 104° 51.151'E 9.01 409 5° 25 March 11:50 425 5° 44.678'S 104° 50.08'E 12.22 44 5° 25 March 11:50 425 5° 44.90'S 104° 50.08'E 13.28 5° 44 5° 25 March 15:03 6° 00.521'S 104° 50.08'E 15.20 44 5° 5° 5 5 5 5 5 5 5 5 5 5 5 6 5 5 5 5 5 5 <td></td> <td>4 March</td> <td>7:33</td> <td>100</td> <td></td> <td>105° 26.890′ E</td> <td>7:54</td> <td>104</td> <td>6° 20.431′ S</td> <td>105° 26.214′ E</td> <td>Mostly mud</td>		4 March	7:33	100		105° 26.890′ E	7:54	104	6° 20.431′ S	105° 26.214′ E	Mostly mud
24 March 12.29 398 6° 08.941'S 105° 14.817'E 12.43 283 6° 24 March 15:40 850 6° 06.713'S 105° 10.783'E 16:10 870 6° 24 March 18:31 928 6° 06.713'S 105° 11.107'E 19:01 929 6° 25 March 1:18 266 5° 43.413'S 104° 51.131'E 9:01 409 5° 25 March 1:150 425 5° 44.678'S 104° 51.08C'E 12:12 442 5° 25 March 1:503 429 5° 45.126'S 104° 51.08C'E 12:12 442 5° 25 March 1:503 429 5° 45.399'S 104° 50.08C'E 12:29 6° 5° 25 March 1:503 429 5° 45.399'S 104° 50.78C'E 13:49 5° 5° 26 March 1:503 5° 47.181'S 104° 50.78C'E 13:48 377 5° 26 March 1:534 10.50 6° 0.521'S 104° 50.78C'E		4 March	10:02	257	6° 16.066′ S	105° 15.053′ E	10:54	281	6° 14.668′ S	105° 15.256′ E	Mostly mud with some clay
24 March 15:40 850 6° 06.713'S 105° 10.783'E 16:10 870 6° 24 March 18:31 928 6° 02.737'S 105° 11.107'E 19:01 929 6° 25 March 7:18 266 5° 43.413'S 104° 51.121'E 9:01 409 5° 25 March 11:50 425 5° 44.678'S 104° 51.181'E 9:01 409 5° 25 March 11:50 425 5° 45.126'S 104° 51.08'E 12:12 442 5° 25 March 15:03 429 5° 45.399'S 104° 56.08'E 15:29 446 5° 25 March 15:03 429 5° 45.399'S 104° 56.08'E 15:29 446 5° 26 March 15:03 5° 47.181'S 104° 56.786'E 15:29 446 5° 26 March 15:41 103 6° 0.521'S 104° 56.786'E 15:39 5° 26 March 15:41 103 6° 0.0521'S 104° 50.786'E 15:49 5°		4 March	12:29	398	6° 08.941′ S	105° 14.817′ E	12:43	283	8° 08.590′ S	105° 15.100' E	Mostly mud with some clay
24 March 1831 928 6° 02/377S 105° 11.107'E 1901 929 6° 25 March 7.18 266 5° 43.413'S 104° 51.151'E 9.91 99 6° 25 March 11:50 425 5° 44.678'S 104° 51.131'E 9.91 409 5° 25 March 11:50 425 5° 45.126'S 104° 51.080'E 12:12 442 5° 25 March 15:03 429 5° 45.30'S 104° 50.080'E 15:29 446 5° 25 March 16:32 530 5° 47.181'S 104° 50.080'E 18:20 446 5° 26 March 16:32 530 5° 47.181'S 104° 50.080'E 18:20 446 5° 26 March 16:32 530 5° 47.181'S 104° 50.080'E 11:80 6° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8°		4 March	15:40	850		105° 10.783′ E	16:10	870	6° 06.294′ S	105° 09.931' E	Small clumps of mud
25 March 7:18 266 \$° 43413'S 104° 49.112'E 7:38 294 \$° 25 March 8:32 379 \$° 44,678'S 104° 51.131'E 9:01 409 \$° 25 March 11:50 425 \$° 44,678'S 104° 51.031'E 13:48 377 \$° 25 March 15:03 429 \$° 44,960'S 104° 50.08'E 13:48 377 \$° 25 March 15:03 429 \$° 45,399'S 104° 50.08'E 18:29 446 \$° 25 March 16:32 530 \$° 47.181'S 104° 50.08'E 18:29 446 \$° 26 March 16:32 530 \$° 47.181'S 104° 50.08'E 18:26 698 \$° 26 March 16:32 60 \$° 47.181'S 104° 50.08'E 11:8 5° 5° 26 March 16:38 165 \$° 60.0521'S 104° 50.08'E 13:4 15:4 6° 26 March 17:39 6° 08.044'S 104° 50.08'E 13:4		4 March	18:31	928		105° 11.107′ E	19:01	929	6° 03.229′ S	105° 10.642′ E	Very fine sand-mud
25 March 8:32 379 \$° 44,678'S 104° 51.151'E 9:01 409 5° 25 March 11:50 425 \$° 45,126'S 104° 51.080'E 12:12 442 5° 25 March 15:03 429 \$° 45,126'S 104° 50.080'E 13:48 377 5° 44960'S 104° 50.080'E 13:48 377 5° 25 March 15:03 429 \$° 45,181'S 104° 50.780'E 18:26 698 5° 25 March 16:32 530 \$° 47,181'S 104° 50.780'E 18:26 698 5° 26 March 17:43 1259 6° 00,521'S 104° 50.780'E 11:18 5° 26 March 16:54 103 6° 09,803'S 104° 50.200'E 11:18 5° 26 March 15:41 103 6° 09,803'S 104° 50.200'E 11:18 5° 26 March 15:41 103 6° 09,803'S 104° 50.200'E 11:18 5° 26 March 15:49 105 6		5 March	7:18	266	5° 43.413′ S	104° 49.712′ E	7:38	294	5° 43.779′ S	104° 50.060′ E	Mud and clay
25 March 11:50 425 \$ 45.126 'S 104° 51.080 'E 12:12 442 \$ 5 25 March 13:48 377 \$ 44.960 'S 104° 52.731 'E 13:48 377 \$ 5 25 March 16:32 530 \$ 5 4.5399 'S 104° 50.08' E 15:29 446 \$ 5 25 March 16:32 530 \$ 5 47.181 'S 104° 57.733 'E 16:32 530 \$ 5 26 March 18:07 615 \$ 5 52.252 'S 104° 50.08' E 11:18 1539 \$ 6 26 March 10:58 1528 \$ 6 08.044' S 104° 50.08' E 11:18 1539 \$ 6 26 March 15:41 103 \$ 6 09.722' S 104° 57.97' E 15:39 \$ 6 26 March 15:41 103 \$ 6 09.323' S 104° 57.97' E 15:39 \$ 6 26 March 15:41 103 \$ 6 09.333' S 105° 00.528' E 15:30 \$ 6 27 March 18:59 1060 \$ 6 10.738' S 105° 05.589' E 1073 \$ 6 27 March 11:48 864 \$ 6 4.2530' S		5 March	8:32	379	5° 44.678′ S	104° 51.151′ E	9:01	409	5° 44.917′ S	104° 52.061' E	Coarse sand, gravels, rubble and wood
25 March 13.48 377 \$9.44,960'S 104° 52.731'E 13.48 377 \$9.44,960'S 104° 56.098'E 15.29 446 \$9 25 March 16.32 530 \$9.45.399'S 104° 56.098'E 15.29 446 \$9 25 March 16.32 530 \$9.47.181'S 104° 56.086'E 18.26 698 \$9 26 March 18.37 615 \$9.52.252'S 104° 50.086'E 11.18 15.39 \$6 26 March 10.58 1528 \$6° 08.044'S 104° 50.086'E 11.18 1539 \$6 26 March 13.49 1577 \$6° 09.202'S 104° 50.086'E 13.49 1577 \$6 26 March 15.41 103 \$6° 09.803'S 104° 50.09'E 13.49 1577 \$6 26 March 15.41 103 \$6° 09.803'S 104° 50.09'E 13.49 167 \$6 \$1.21 \$4 \$1.51 \$6 \$1.52 \$1 \$2 \$6 \$6 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1 \$1		5 March	11:50	425		104° 51.080′ E	12:12	442	5° 45.225′ S	104° 51.710′ E	Coarse sand, gravels and rubbles
25 March 15:03 429 \$° 45:399'S 104° 56:098'E 15:29 446 \$° 25 March 16:32 530 \$° 47.181'S 104° 57.733'E 16:32 530 \$° 25 March 18:07 615 \$° 52.225'S 104° 56.786'E 18:26 698 \$° 26 March 7:43 1259 6° 00.521'S 104° 50.086'E 11:18 1539 6° 26 March 17:34 1528 6° 08.044'S 104° 50.086'E 11:18 1539 6° 26 March 15:41 103 6° 09.722'S 104° 50.096'E 13:49 1577 6° 26 March 15:41 103 6° 09.0722'S 104° 50.209'E 13:49 1577 6° 26 March 15:41 103 6° 09.0722'S 104° 50.209'E 13:49 1577 6° 26 March 15:41 103 6° 09.0733'S 105° 00.762'E 17:07 469 6° 27 March 16:50 182 6° 42.551'S 105° 00.588'E 105° 00.623'E 105° 0 105 0 105		5 March	13:48	377		104° 52.731′ E	13:48	377	5° 44.960′ S	104° 52.731′ E	Mud and clay
25 March 16:32 530 5° 47.181'S 104° 57.733'E 16:32 530 5° 25 March 18:07 615 5° 52.252'S 104° 56.786'E 18:26 698 5° 26 March 7:43 1259 6° 00.521'S 104° 50.786'E 11:18 1589 6° 26 March 10:58 1528 6° 08.044'S 104° 50.086'E 11:18 1539 6° 26 March 10:58 1528 6° 09.022'S 104° 57.976'E 13:49 1577 6° 26 March 15:41 103 6° 09.803'S 104° 57.976'E 13:49 1577 6° 26 March 17:03 448 6° 07.333'S 105° 00.762'E 17:07 469 6° 26 March 17:03 448 6° 07.333'S 105° 01.628'E 107:0 17:0 6° 27 March 18:59 1060 6° 10.758'S 105° 01.628'B 107:0 17:0 6° 27 March 11:48 864 6° 42.320'S 105° 07.068'E 10:3 6° 46.458'S 105° 07.068'E 10:3 10 <td< td=""><td></td><td>5 March</td><td>15:03</td><td>429</td><td></td><td>104° 56.098′ E</td><td>15:29</td><td>446</td><td>5° 46.183′ S</td><td>104° 56.565′ E</td><td>Mud-clay and a large fallen wood</td></td<>		5 March	15:03	429		104° 56.098′ E	15:29	446	5° 46.183′ S	104° 56.565′ E	Mud-clay and a large fallen wood
25 March 18:07 615 5° 52.252'S 104° 56.786'E 18:26 698 5° 26 March 7:43 1259 6° 00.521'S 104° 50.086'E 11:18 1539 6° 26 March 10:58 1528 6° 08.044'S 104° 50.086'E 11:18 1539 6° 26 March 13:49 1577 6° 09.722'S 104° 50.209'E 13:49 1577 6° 26 March 15:41 103 6° 09.803'S 104° 50.209'E 13:49 1577 6° 26 March 15:41 103 6° 09.803'S 104° 50.702'E 15:71 469 6° 26 March 17:03 448 6° 07.333'S 105° 00.5589'E 17:07 469 6° 27 March 18:59 1060 6° 10.758'S 105° 01.428 17:07 469 6° 27 March 10:31 836 6° 42.531'S 105° 06.422'E 17:07 49 6° 27 March 11:48 864 6° 42.531'S 10		5 March	16:32	530	5° 47.181′ S	104° 57.733′ E	16:32	530	5° 47.181′ S	104° 57.733′ E	Mostly mud
26 March 7:43 1259 6° 00.521'S 104° 49.410'E 7:54 1268 6° 26 March 10:58 1528 6° 08.044'S 104° 50.086'E 11:18 1539 6° 26 March 13:49 1577 6° 09.722'S 104° 50.209'E 13:49 1577 6° 26 March 15:41 103 6° 09.722'S 104° 50.209'E 15:51 92 6° 26 March 15:41 103 6° 09.803'S 104° 57.976'E 15:70 469 6° 26 March 17:03 448 6° 07.333'S 105° 00.762'E 17:07 469 6° 27 March 18:59 1060 6° 10.758'S 105° 07.62'E 17:07 469 6° 27 March 11:48 864 6° 42.320'S 105° 06.422'E 10:31 836 6° 44.791'S 105° 07.068'E 12:17 87 6° 27 March 11:48 864 6° 46.739'S 105° 07.068'E 13:14 87 6° 46.739'S 105° 05.039		5 March	18:07	615	5° 52.252′ S	104° 56.786′ E	18:26	869	5° 52.728′ S	104° 56.422′ E	Mostly mud
26 March 10:58 1528 6° 08.044′S 104° 50.086′E 11:18 1539 6° 26 March 13:49 1577 6° 09.722′S 104° 50.209′E 13:49 1577 6° 26 March 15:41 103 6° 09.803′S 104° 57.976′E 15:51 92 6° 26 March 17:03 448 6° 07.333′S 105° 00.762′E 17:07 469 6° 26 March 17:26 182 6° 42.551′S 105° 01.143′E 7:40 172 6° 27 March 17:26 182 6° 42.320′S 105° 06.422′E 10:31 836 6° 27 March 11:48 864 6° 46.458′S 105° 07.068′E 17:17 87 6° 27 March 11:48 864 6° 46.458′S 105° 07.068′E 17:31 836 6° 27 March 16:10 1044 6° 46.458′S 105° 07.068′E 16:37 1068 6° 27 March 16:10 1044 6° 46.458′S 105° 06.039′E 16:37 1068 6° 28 March 16:10		6 March	7:43	1259	6° 00.521′ S	104° 49.410′ E	7:54	1268	6° 00.828′ S	104° 49.428′ E	Some mud and plenty of plastic trash
6 March 13:49 1577 6° 09.722'S 104° 50.209'E 13:49 1577 6° 26 March 15:41 103 6° 09.803'S 104° 57.976'E 15:51 92 6° 26 March 17:03 448 6° 07.333'S 105° 00.762'E 17:07 469 6° 26 March 17:03 448 6° 07.333'S 105° 00.762'E 17:07 469 6° 20 March 18:59 1060 6° 10.758'S 105° 01.11.43'E 7:40 172 6° 27 March 10:31 836 6° 42.320'S 105° 06.422'E 10:31 836 6° 27 March 11:48 864 6° 44.791'S 105° 06.422'E 10:31 836 6° 27 March 11:48 864 6° 44.739'S 105° 06.039'E 14:26 571 6° 27 March 16:10 1044 6° 47.344'S 105° 06.039'E 16:37 1068 6° 28 March 13:54 6° 57.221'S 105° 56		6 March	10:58	1528	6° 08.044′ S	104° 50.086′ E	11:18	1539	6° 08.518′ S	104° 49.879′ E	Some mud, fallen wood and plastic trash
26 March 15:41 103 6° 09.803'S 104° 57.976'E 15:51 92 6 26 March 17:03 448 6° 07.333'S 105° 00.762'E 17:07 469 6 26 March 17:03 448 6° 07.333'S 105° 00.762'E 17:07 469 6 26 March 17:26 182 6° 42.551'S 105° 05.589'E 19:28 1073 6 27 March 17:36 182 6° 42.320'S 105° 08.682'E 9:08 362 6 27 March 11:48 864 6° 44.791'S 105° 06.422'E 10:31 836 6 27 March 13:56 559 6° 46.739'S 105° 07.068'E 14:26 571 6 27 March 18:14 876 6° 46.739'S 105° 06.039'E 16:37 1068 6 28 March 18:14 876 6° 50.185'S 105° 54.754'E 8:07 77 6 28 March 11:58 957 7° 00.194'S 105° 54.624'E 10:16 557 6 28 March 13:53 1231		6 March	13:49	1577		104° 50.209′ E	13:49	1577	6° 09.722′ S	104° 50.209′ E	NA
26 March 17:03 448 6° 07.333'S 105° 00.762'E 17:07 469 6° 26 March 18:59 1060 6° 10.758'S 105° 05.589'E 19:28 1073 6° 27 March 7:26 182 6° 42.551'S 105° 06.422'E 9:08 362 6° 27 March 10:31 836 6° 42.320'S 105° 06.422'E 10:31 836 6° 27 March 11:48 864 6° 46.739'S 105° 07.068'E 12:17 870 6° 27 March 13:56 559 6° 46.739'S 105° 09.239'E 14:26 571 6° 27 March 16:10 1044 6° 47.344'S 105° 06.039'E 16:37 1068 6° 27 March 16:10 1044 6° 50.185'S 105° 10.353'E 18:44 937 6° 28 March 7:34 517 6° 57.221'S 105° 54.754'E 8:07 727 6° 28 March 11:58 957 7° 00.194'S 105° 53.745'E 11:28 957 6° 50.000'S 105° 55.97'E 13:51 6° <td></td> <td>6 March</td> <td>15:41</td> <td>103</td> <td></td> <td>104° 57.976′ E</td> <td>15:51</td> <td>92</td> <td>8° 09.606′ S</td> <td>104° 58.208′ E</td> <td>Gravel, sand and mud</td>		6 March	15:41	103		104° 57.976′ E	15:51	92	8° 09.606′ S	104° 58.208′ E	Gravel, sand and mud
26 March 18:59 1060 6° 10.758′S 105° 05.589′E 19:28 1073 6° 27 March 7:26 182 6° 42.551′S 105° 11.143′E 7:40 172 6° 27 March 8:47 325 6° 42.320′S 105° 08.682′E 9:08 362 6° 27 March 11:48 864 6° 44.791′S 105° 06.422′E 10:31 836 6° 27 March 11:48 864 6° 46.738′S 105° 06.039′E 12:17 870 6° 27 March 16:10 1044 6° 47.344′S 105° 06.039′E 16:37 1068 6° 27 March 18:14 876 6° 50.185′S 105° 10.353′E 18:44 937 6° 28 March 7:34 517 6° 57.221′S 105° 54.754′E 8:07 727 6° 28 March 11:58 957 7° 00.194′S 105° 53.745′E 11:28 1022 6° 28 March 13:53 1231 6° 59.000′S 105° 55.977′E 13:53 1231 6° 59.206′S 105° 57.261′E 13:57 13:4		6 March	17:03	448	6° 07.333′ S	105° 00.762′ E	17:07	469	6° 07.221′ S	105° 00.865′ E	Gravel, coral rubble and small rocks
27 March 7:26 182 6° 42.551'S 105° 11.143'E 7:40 172 6 27 March 8:47 325 6° 42.320'S 105° 08.682'E 9:08 362 6° 27 March 10:31 836 6° 44.791'S 105° 06.422'E 10:31 836 6° 27 March 11:48 864 6° 46.739'S 105° 09.239'E 14:26 571 6° 27 March 16:10 1044 6° 47.344'S 105° 06.039'E 16:37 1068 6° 27 March 18:14 876 6° 50.185'S 105° 10.353'E 18:44 937 6° 28 March 7:34 517 6° 57.221'S 105° 54.754'E 8:07 727 6° 28 March 11:58 957 7° 00.194'S 105° 54.624'E 11:28 1022 6° 28 March 13:53 1231 6° 59.000'S 105° 55.977'E 13:51 6° 28 March 15:14 1270 6° 59.265'S 105° 57.261'E 13:41 6°		6 March	18:59	1060	6° 10.758′ S	105° 05.589′ E	19:28	1073	6° 11.587′ S	105° 05.735′ E	Gravel, plastic trash and sunken wood
27 March 8:47 325 6° 42.320′S 105° 08.682′E 9:08 362 6° 27 March 10:31 836 6° 44.791′S 105° 06.422′E 10:31 836 6° 27 March 11:48 864 6° 46.458′S 105° 06.039′E 12:17 870 6° 27 March 16:10 1044 6° 46.739′S 105° 06.039′E 16:37 1068 6° 27 March 18:14 876 6° 50.185′S 105° 10.353′E 18:44 937 6° 28 March 7:34 517 6° 57.221′S 105° 54.754′E 8:07 727 6° 28 March 11:58 957 7° 00.194′S 105° 53.745′E 11:28 1022 6° 28 March 13:53 1231 6° 59.000′S 105° 55.97′E 13:51 6° 28 March 15:14 1270 6° 59.265′S 105° 57.261′E 13:51 6°		7 March	7:26	182	6° 42.551′ S	105° 11.143′ E	7:40	172	6° 42.762′ S	$105^{\circ}\ 10.967'$ E	Mud and clay
27 March 10:31 836 6° 44.791'S 105° 06.422'E 10:31 836 6° 6 27 March 11:48 864 6° 46.458'S 105° 07.068'E 12:17 870 6° 27 March 13:56 559 6° 46.739'S 105° 06.039'E 14:26 571 6° 27 March 16:10 1044 6° 47.344'S 105° 10.353'E 18:44 937 6° 28 March 7:34 517 6° 57.221'S 105° 54.754'E 8:07 727 6° 28 March 11:58 957 7° 00.194'S 105° 53.745'E 11:28 1022 6° 28 March 13:53 1231 6° 59.000'S 105° 55.97'E 13:53 1231 6° 28 March 15:14 1270 6° 59.265'S 105° 57.261'E 13:53 1231 6°		7 March	8:47	325	6° 42.320′ S	105° 08.682′ E	80:6	362	6° 42.879′ S	105° 09.018′ E	Mud, gravel and many plastic trash
27 March 11:48 864 6° 46.458'S 105° 07.068'E 12:17 870 6 27 March 13:56 559 6° 46.739'S 105° 09.239'E 14:26 571 6 27 March 16:10 1044 6° 47.344'S 105° 06.039'E 16:37 1068 6° 27 March 18:14 876 6° 50.185'S 105° 10.353'E 18:44 937 6° 28 March 7:34 517 6° 57.221'S 105° 54.754'E 8:07 727 6° 28 March 9:56 481 6° 58.624'S 105° 53.745'E 10:16 557 6° 28 March 11:58 957 7° 00.194'S 105° 54.624'E 11:28 1022 6° 28 March 13:53 1231 6° 59.000'S 105° 55.97'E 13:51 6° 28 March 15:14 1270 6° 59.265'S 105° 57.261'E 13:51 6°		7 March	10:31	836	6° 44.791′ S	105° 06.422′ E	10:31	836	6° 44.791′ S	105° 06.422′ E	Mostly mud
27 March 13:56 559 6° 46.739′S 105° 09.239′E 14:26 571 6° 27 March 16:10 1044 6° 47.344′S 105° 06.039′E 16:37 1068 6° 27 March 18:14 876 6° 50.185′S 105° 10.353′E 18:44 937 6° 28 March 7:34 517 6° 57.221′S 105° 54.754′E 8:07 727 6° 28 March 11:58 957 7° 00.194′S 105° 53.745′E 11:28 1022 6° 28 March 13:53 1231 6° 59.000′S 105° 55.977′E 13:53 1231 6° 28 March 15:14 1270 6° 59.265′S 105° 57.261′E 15:27 1341 6°		7 March	11:48	864	6° 46.458′ S	105° 07.068′ E	12:17	870	6° 47.450′ S	105° 07.613′ E	Mostly mud
27 March 16:10 1044 6° 47.344′S 105° 06.039′E 16:37 1068 6° 27 March 18:14 876 6° 50.185′S 105° 10.353′E 18:44 937 6° 28 March 7:34 517 6° 57.221′S 105° 54.754′E 8:07 727 6° 28 March 9:56 481 6° 58.624′S 105° 53.745′E 10:16 557 6° 28 March 11:58 957 7° 00.194′S 105° 54.624′E 11:28 1022 6° 28 March 13:53 1231 6° 59.000′S 105° 55.977′E 13:53 1231 6° 28 March 15:14 1270 6° 59.265′S 105° 57.261′E 15:27 1341 6°		7 March	13:56	559		105° 09.239′ E	14:26	571	6° 45.924′ S	105° 08.360′ E	Gravel with some mud
27 March 18:14 876 6° 50.185′S 105° 10.353′E 18:44 937 6° 28 March 7:34 517 6° 57.221′S 105° 54.754′E 8:07 727 6° 28 March 9:56 481 6° 58.624′S 105° 53.745′E 10:16 557 6° 28 March 11:58 957 7° 00.194′S 105° 54.624′E 11:28 1022 6° 28 March 13:53 1231 6° 59.000′S 105° 55.97′E 13:53 1231 6° 28 March 15:14 1270 6° 59.265′S 105° 57.261′E 15:27 1341 6°		7 March	16:10	1044	6° 47.344′ S	105° 06.039′ E	16:37	1068	6° 47.914′ S	105° 06.485′ E	Gravel with pieces of woods
28 March 7:34 517 6° 57.221′S 105° 54.754′E 8:07 727 6° 28 March 9:56 481 6° 58.624′S 105° 53.745′E 10:16 557 6° 28 March 11:58 957 7° 00.194′S 105° 55.977′E 11:28 1022 6° 28 March 13:53 1231 6° 59.000′S 105° 57.261′E 13:53 1231 6° 59.265′S 105° 57.261′E 15:27 1341 6°		7 March	18:14	928	6° 50.185′ S	105° 10.353′ E	18:44	937	6° 50.923′ S	105° 10.776′ E	Gravel and biogenic debris
28 March 9:56 481 6° 58.624′S 105° 53.745′E 10:16 557 6° 28 March 11:58 957 7° 00.194′S 105° 54.624′E 11:28 1022 6° 28 March 13:53 1231 6° 59.206′S 105° 57.261′E 13:53 1231 6° 28 March 15:14 1270 6° 59.265′S 105° 57.261′E 15:27 1341 6°		8 March	7:34	517	6° 57.221′ S	105° 54.754′ E	8:07	727	6° 56.664′ S	105° 55.315′ E	Mostly mud
28 March 11:58 957 7° 00.194′S 105° 54.624′E 11:28 1022 6° 58 March 13:53 1231 6° 59.000′S 105° 55.977′E 13:53 1231 6° 59.265′S 105° 57.261′E 15:27 1341 6°		8 March	9:56	481	58.624′	105° 53.745′ E	10:16	557	6° 58.937′ S	105° 53.363′ E	Gravel
28 March 15:14 1270 6° 59.265' S 105° 55.977' E 13:53 1231 6° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8° 8°		8 March	11:58	957		105° 54.624′ E	11:28	1022	8° 59.778′ S	105° 55.224′ E	Coarse sand and some mud
28 March 15:14 1270 6° 59.265' S 105° 57.261' E 15:27 1341 6°		8 March	13:53	1231		105° 55.977' E	13:53	1231	8° 59.000′ S	105° 55.977′ E	Mostly mud
		8 March	15:14	1270	6° 59.265′ S	105° 57.261′ E	15:27	1341	6° 59.431′ S	105° 57.476′ E	NA

CPM Time Depth (m) Latitude Time Depth (m) Latitude Time Depth (m) Latitude Latitude Time Depth (m) Latitude					On bottom				Off bottom		
28 March 1808 1763 7° 01.755 S 105° 57.422 E 1835 1796 7° 01.911 S 100° 35.030 E 29 March 909 977 7° 42.538 S 107° 34.335 E 929 885 7° 42.556 S 107° 35.030 E 29 March 10.23 235 7° 42.917 S 107° 39.018 E 1245 234 7° 44.575 S 107° 39.047 E 29 March 13.23 7° 47.677 S 107° 39.018 E 1234 7° 44.575 S 107° 39.447 E 29 March 15.57 1114 7° 47.627 S 100° 10.530 E 1114 7° 47.527 S 107° 39.018 E 30 March 15.53 1114 7° 47.627 S 100° 10.536 E 13.24 686 7° 47.627 S 100° 10.648 E 30 March 15.23 8° 10.862 S 100° 10.658 E 100° 10.658 S 109° 10.678 S 100° 10.678 S 100° 10.678 S 10° 10.678 S 10° 10° 10° 10° 10° 10° 10° 10° 10° 10°	Station	Date	Time	Depth (m)	Latitude	Longitude	Time	Depth (m)	Latitude	Longitude	Substrate
29 March 699 977 7° 42.883° 107° 34.335° 929 805 7° 42.556° 107° 35.303° 29 March 1049 523 7° 42.912° 107° 36.353° 1119 312 7° 42.556° 107° 35.304° 29 March 1402 603 7° 44.464° 107° 39.048° 113 7° 44.575° 107° 39.048° 29 March 1402 603 7° 44.64° 107° 40.904° 183 100° 40.347° 107° 41.904° 183 100° 42.309° 100° 40.304° 100° 40° 40.304° 10° 40° 40.304° 10° 40° 40.304°	CP31	28 March	18.08	1763			18:35	1796	7° 01.911′ S		Small clumps of mud
29 March 10.49 52.5 7 + 4.2917* 107* 36.559* 11:19 31.2 7 + 4.3255* 107* 37.234* 29 March 12.33 2.43 7 + 4.444* 107* 39.018* 12.44 5.44 7.444* 107* 39.018* 107* 37.234* 107* 37.234* 20 March 15.25 11.47 7 + 74.767* 107* 39.018* 11.44 7 + 74.681* 107* 42.991* 30 March 15.30 16.3 8° 07.462* 109° 05.390* 109° 05.390* 109° 07.689* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 07.8479* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 16.478* 109° 1	DW32	29 March	60:6	277	7° 42.583′ S	107° 34.535′ E	9:29	805	7° 42.556′ S	107° 35.030′ E	Coarse sand and mud
29 March 1223 243 7* 4446* 107* 3918* 124 7* 4457* 107* 3918* 124 686 7* 4457* 107* 3194* 29 March 1432 603 7* 4767* 107* 41994* 1434 686 7* 4758* 107* 4294* 29 March 1450 603 7* 4778* 109* 41299* 1334 166 8* 07.864* 109* 06.470* 30 March 1623 528 8* 13.885* 109* 16.74* 160* 06.470* 109* 06.470* 30 March 1623 528 8* 15.885* 109* 16.74* 160* 06.429* 153 8* 10.99* 16.476* 109* 13.40* 109* 18.40* <	CP33	29 March	10:49	525		107° 36.559′ E	11:19	312	7° 43.255′ S	107° 37.234′ E	Coarse sand and mud
29 March 1402 663 7 + 47677 107 + 41904* 1424 686 7 + 47.681* 107 + 42477* 29 March 1557 1114 7 + 47.782* 107 + 42.991* 1557 1114 7 + 47.782* 107 - 42.991* 30 March 1533 163 8 ° 74.662* 109° 05.639* 153 8 ° 13.887* 109° 10.649* 109° 0 109° 05.404* 109° 0	CP34	29 March	12:23	243	7° 44.464′ S	107° 39.018′ E	12:45	234	7° 44.575′ S		Gravel with pieces of broken wood
29 March 15.57 1114 7° 47782VS 107° 42991° 15.54 1114 7° 47782VS 107° 42991° 15.54 1114 7° 47782VS 107° 42991° 1114 7° 47782VS 107° 42991° 15.00 10	CP35	29 March	14:02	603		107° 41.904′ E	14:24	989	7° 47.681′ S		Mud, clay and rocks
30 March 13.33 163 8° 07,462'S 109° 05,639'E 13.34 166 8° 07,864'S 109° 05,639'E 13.34 169 9° 04,70'E 30 March 14.50 290 8° 13,338'S 109° 10,163'E 15.31 89° 16,060'S 109° 05,076'S 30 March 16.23 238 8° 19,884'S 109° 10,163'E 16.23 8° 18,088'S 109° 10,745'E 30 March 20.25 1239 8° 19,884'S 109° 10,745'E 109° 10,748'S 109° 10,748'S <td>CR36</td> <td>29 March</td> <td>15:57</td> <td>1114</td> <td></td> <td>107° 42.991′ E</td> <td>15:57</td> <td>1114</td> <td></td> <td>107° 42.991′ E</td> <td>Mostly mud</td>	CR36	29 March	15:57	1114		107° 42.991′ E	15:57	1114		107° 42.991′ E	Mostly mud
30 March 14:50 290 \$° 13.038 S 109° 07.689 E 15:10 295 \$° 13.130 S 109° 07.689 E 15:10 295 \$° 13.130 S 109° 10.548 E 109° 10.548	CP37	30 March	13:03	163		109° 05.639′ E	13:34	166	8° 07.864′ S		Fine mud with pieces of small tree branches
30 March 16.23 528 8° 15.885'S 109° 10.163'E 16:34 637 8° 16.060'S 109° 10.344'E 30 March 18.23 1078 8° 18.42'S 109° 10.43'E 109° 10.43'E 109° 10.43'E 30 March 18.23 1078 8° 18.84'S 109° 16.74'S 109° 16.74'S 109° 16.74'S 109° 16.74'S 109° 16.74'S 109° 16.74'S 109° 10.74'S 109° 16.74'S 109° 16.75'S 109° 16.74'S 109° 16.75'S 100° 45.37'S 100° 45.37'S 100° 45.37'S 100° 45.33'S 100° 45.33'S 100° 45.33'S 100° 45.33'S 10° 45.33'S	CP38	30 March	14:50	290		109° 07.689′ E	15:10	295			No sediment
30 March 1823 1078 8° 18.642S 109° 13.767°E 18.49 1091 8° 18.88°S 109° 14.476°E 30 March 20.25 1239 8° 19.850'S 109° 16.743°E 20.25 139 8° 19.850'S 109° 16.743°E 100° 16.743°E <td>CP39</td> <td>30 March</td> <td>16:23</td> <td>528</td> <td></td> <td>109° 10.163′ E</td> <td>16:54</td> <td>637</td> <td>8° 16.060′ S</td> <td>109° 10.944′ E</td> <td>Some mud</td>	CP39	30 March	16:23	528		109° 10.163′ E	16:54	637	8° 16.060′ S	109° 10.944′ E	Some mud
30 March 2025 1239 8° 19.850'S 109° 16.743'E 2025 1239 8° 19.850'S 109° 16.743'E 1318 8° 19.850'S 109° 16.743'E 1318 8° 10.055'S 109° 16.743'E 1318 8° 20.609'S 109° 16.743'E 1318 8° 20.609'S 108° 43.305'E 108° 44.508'E 108°	CP40	30 March	18:23	1078		109° 13.767′ E	18:49	1091			Rock?
31 March 7:55 235 8° 20.0609'S 108° 43.036'E 7:55 235 8° 20.0609'S 108° 43.036'E 7:55 235 8° 20.069'S 108° 42.30'E 1340 292 8° 08.093'S 108° 43.03'E 108° 42.37'E 108° 42.34'E 108° 42.34'E 108° 42.34'E 108° 42.34'E 108° 42.34'E 108° 42.34'E	MC41	30 March	20:25	1239	8° 19.850′ S	109° 16.743′ E	20:25	1239	8° 19.850′ S		Mud with fine sand
31 March 13:20 383 8° 09.092'S 108° 42.390'E 13:40 292 8° 08.903'S 108° 42.372'E 31 March 17:33 1013 8° 10.065'S 108° 37.439'E 17:50 970 8° 08.003'S 108° 37.145'E 1 April 7:49 851 7° 47.670'S 107° 43.126'E 8:16 684 7° 47.151'S 107° 43.595'E 1 April 10:15 654 7° 47.716'S 107° 44.896'E 10:29 340 7° 47.151'S 10° 43.595'E 1 April 11:51 530 7° 47.716'S 107° 44.896'E 12:14 476 7° 48.275'S 10° 43.53'E 1 April 11:51 530 7° 47.97'S 10° 46.446'E 12:14 476 7° 48.27'S 10° 46.37'E 2 April 16:38 1531 7° 64.245'E 12:10 425 7° 63.34'S 10° 43.37'E 2 April 16:39 16:30 16° 25.34'E 12:30 627 7° 63.34'S 10° 62.244'E 2 April 6:40 38 7° 61.148'Y	CR42	31 March	7:55	2355	8° 20.609′ S	108° 43.036′ E	7:55	2355			Mud with fine sand
31 March 17:33 1013 8° 10.066'S 108° 37.439'E 17:50 970 8° 09.802'S 108° 37.145'E 1 April 7:49 851 7° 47.670'S 107° 43.126'E 8:16 684 7° 47.151'S 107° 43.99'E 1 April 10:15 654 7° 47.716'S 107° 48.99'E 12:14 476 7° 47.90'S 107° 43.99'E 1 April 11:51 530 7° 47.91'S 107° 45.298'E 12:14 476 7° 47.90'S 107° 45.10'C 1 April 11:56 689 7° 51.120'S 107° 45.298'E 12:14 476 7° 47.90'S 107° 45.10'C 2 April 11:56 7° 61.120'S 107° 45.298'E 11:16 7° 51.11'R'S 107° 45.31'S 2 April 11:00 383 7° 04.32'S'S 106° 25.396'E 12:30 657 7° 07.84'S'S 106° 25.34'E 2 April 14:00 388 7° 01.01'S'S 106° 25.37'C'E 17:25 7° 01.39'S 106° 25.41'E 2 April 6:40 378 7° 01.01'S	CP43	31 March	13:20	383	8° 09.092′ S	108° 42.390′ E	13:40	292			A piece of clay
1 April 7.49 851 7-47,670'S 107-43,126'E 8:16 684 7-47,151'S 107-43,595'E 1 April 10:15 654 7-47,16'S 107-44,896'E 10:29 540 7-47,905'S 107-45,190'E 1 April 11:51 530 7-47,912'S 107-44,896'E 12:14 476 7-48,257'S 107-45,190'E 1 April 11:51 530 7-47,912'S 107-46,245'E 14:16 637 7-51,718'S 107-45,206'E 2 April 16:38 1531 7-56,311'S 107-48,408'E 17:08 425 7-56,314'S 107-48,356'E 2 April 10:40 383 7-04,874'S 106-26,673'E 11:05 425 7-56,314'S 106-26,334'E 2 April 12:07 569 7-04,874'S 106-26,334'E 11:24 7-03,348'S 106-25,346'E 2 April 17:25 1521 7-04,874'S 106-26,377'E 11:24 7-03,318'S 106-26,344'E 2 April 17:25 152 17-01,184'S </td <td>CP44</td> <td>31 March</td> <td>17:33</td> <td>1013</td> <td>8° 10.065′ S</td> <td>108° 37.439′ E</td> <td>17:50</td> <td>026</td> <td></td> <td></td> <td>Mud with pieces of wood</td>	CP44	31 March	17:33	1013	8° 10.065′ S	108° 37.439′ E	17:50	026			Mud with pieces of wood
1 April 10:15 654 7° 47.716′S 107° 44.896′E 10:29 540 7° 47.905′S 107° 44.896′E 1 April 11:51 530 7° 47.972′S 107° 45.298′E 12:14 476 7° 48.257′S 107° 45.706′E 1 April 16:38 1531 7° 51.120′S 107° 46.248′E 14:16 637 7° 51.718′S 107° 45.376′E 2 April 10:40 383 7° 56.311′S 106° 26.637′E 11:05 425 7° 51.718′S 107° 49.328′E 2 April 10:40 383 7° 03.322′S 106° 26.396′E 12:30 657 7° 03.48′S 106° 26.34′E 2 April 10:40 1156 7° 07.44°S 106° 253.96′E 12:30 657 7° 07.81°S 106° 25.34°E 2 April 12:07 569 7° 07.44°S 106° 25.30°E 12:30 657 7° 07.81°S 106° 25.30°E 2 April 17:25 1521 7° 09.610°S 106° 18.35°E 17:4 7° 01.84°S 106° 25.30°E 3 April 6:40	CP45	1 April	7:49	851	7° 47.670′ S	107° 43.126′ E	8:16	684	7° 47.151′ S		Mud with pieces of wood
1 April 11:51 530 7° 47.972'S 107° 45.298'E 12:14 476 7° 48.257'S 107° 45.706'E 1 April 13:56 689 7° 51.120'S 107° 46.248'E 14:16 637 7° 51.718'S 107° 46.378'E 1 April 16:38 1531 7° 55.1120'S 106° 26.334'E 17.08 1425 7° 53.718'S 100° 46.378'E 2 April 10:40 383 7° 03.322'S 106° 25.396'E 12:30 657 7° 03.748'S 106° 25.344'E 2 April 12:07 569 7° 04.874'S 106° 25.396'E 12:30 657 7° 05.348'S 106° 25.344'E 2 April 14:09 1156 7° 07.740'S 106° 25.396'E 12:30 657 7° 05.348'S 106° 25.344'E 2 April 17:25 1521 7° 09.610'S 106° 25.379'E 17:25 17:4 7° 01.84'S 106° 25.380'E 2 April 6:40 378 7° 01.148'S 106° 24.40'F 7° 01.148'S 106° 24.198'E 3 April 8:06 1	DW46	1 April	10:15	654	7° 47.716′ S	107° 44.896′ E	10:29	540		107° 45.190′ E	Mostly mud
1 April 13:56 689 7° 51.120′S 107° 46.245′E 14:16 637 7° 51.118′S 107° 46.375′E 1 April 16:38 1531 7° 54311′S 107° 48.408′E 17:08 1425 7° 56.321′S 107° 49.325′E 2 April 10:40 383 7° 04.322′S 106° 26.736′E 11:05 425 7° 03.762′S 106° 26.34′E 2 April 11:07 569 7° 04.84′S 106° 23.719′E 11:24 7° 05.34°S 106° 23.38° 2 April 17:25 1521 7° 04.40′S 106° 18.24°C 11:44 7° 07.81°S 106° 23.38°C 2 April 17:25 1521 7° 04.140′S 106° 18.96′C 20:00 2086 7° 11.48° 106° 14.96′C 20:00 2086 7° 11.48° 106° 14.96′C 106° 14.96′C 106° 25.30°C 106° 14.96′C 106° 25.30°C 106° 25.30°C <td< td=""><td>CP47</td><td>1 April</td><td>11:51</td><td>530</td><td></td><td>107° 45.298′ E</td><td>12:14</td><td>476</td><td></td><td></td><td>Coarse sand</td></td<>	CP47	1 April	11:51	530		107° 45.298′ E	12:14	476			Coarse sand
1 April 16:38 1531 7° 56.311'S 107° 48.408'E 17:08 1425 7° 56.321'S 107° 49.352'E 2 April 10:40 383 7° 03.322'S 106° 26.673'E 11:05 425 7° 03.762'S 106° 25.044'E 2 April 12:07 569 7° 04.874'S 106° 25.396'E 12:30 657 7° 05.348'S 106° 25.044'E 2 April 14:09 1156 7° 04.874'S 106° 18.632'E 17:25 1714 7° 07.819'S 106° 25.044'E 2 April 17:25 1521 7° 04.610'S 106° 18.632'E 17:55 1714 7° 07.819'S 106° 25.044'E 2 April 17:25 1521 7° 04.90'S 106° 14.967'E 20:00 2086 7° 11.487'S 106° 14.967'E 106° 14.967'E 106° 14.967'E 106° 14.967'E 106° 25.328'E 106° 25.288'E	CP48	1 April	13:56	689	51.120′	107° 46.245′ E	14:16	637	51.718′		Some mud and fishing line
2 April 10:40 383 7° 03.322'S 106° 26.673'E 11:05 425 7° 03.762'S 106° 26.334'E 2 April 12:07 569 7° 04.874'S 106° 25.396'E 12:30 657 7° 05.348'S 106° 25.304'E 2 April 14:09 1156 7° 07.740'S 106° 23.719'E 1124 7° 07.819'S 106° 25.304'E 2 April 17:25 1521 7° 09.610'S 106° 18.632'E 1714 7° 10.184'S 106° 25.304'E 2 April 17:25 1521 7° 09.610'S 106° 18.632'E 1714 7° 10.184'S 106° 25.304'E 3 April 6:40 378 7° 01.945'S 106° 14.967'E 20.00 2086 7° 11.487'S 106° 14.967'E 3 April 8:06 183 7° 01.925'S 106° 27.247'E 8:25 255 7° 01.957'S 106° 24.19'E 3 April 11:10 564 7° 01.692'S 106° 22.477'E 16:10 50 7° 01.420'S 106° 22.38'E 3 April 15:55 161 7° 01.	CP49	1 April	16:38	1531	56.311′	107° 48.408′ E	17:08	1425	56.321'		No sediment
2 April 12:07 569 7° 04.874'S 106° 25.396'E 12:30 657 7° 05.348'S 106° 25.044'E 2 April 14:09 1156 7° 07.40'S 106° 13.719'E 14:29 1124 7° 07.819'S 106° 25.044'E 2 April 17:25 1521 7° 09.610'S 106° 14.967'E 20:00 2086 7° 11.487'S 106° 14.967'E 20:00 2086 7° 11.487'S 106° 14.967'E 106° 14.967'E 106° 20:00 2086 7° 11.487'S 106° 17.714'E 106° 17.714'E 106° 26.721'E 106° 26.721'E 106° 26.721'E 106° 26.721'E 106° 26.721'E 106° 27.241'E 8:25 255 7° 01.393'S 106° 24.198'E 106° 27.241'E 8:25 255 7° 01.997'S 106° 24.198'E 106° 24.498'E 11:31 505 7° 01.997'S 106° 24.198'E 106° 24.418'E 106° 24.418'E<	CP50	2 April	10:40	383		106° 26.673′ E	11:05	425			Mostly mud
2 April 14:09 1156 7° 07.740'S 106° 23.719'E 1124 7° 07.819'S 106° 23.580'E 2 April 17:25 1521 7° 09.610'S 106° 18.632'E 17:55 1714 7° 10.184'S 106° 17.714'E 2 April 20:00 2086 7° 11.487'S 106° 14.967'E 20:00 2086 7° 11.487'S 106° 14.967'E 106° 17.714'E 106° 14.967'E 106° 14.967'E 106° 26.421'E 106° 26.421'E 106° 26.721'E 106° 27.241'E 1	CP51	2 April	12:07	695		106° 25.396′ E	12:30	657			Coarse sand, mud and plastic trash
2 April 17:25 1521 7° 09.610′S 106° 18.632′E 17:55 1714 7° 10.184′S 106° 17.714′E 2 April 20:00 2086 7° 11.487′S 106° 14.967′E 20:00 2086 7° 11.487′S 106° 14.967′E 3 April 6:40 378 7° 01.013′S 106° 26.772′E 7° 00.393′S 106° 26.421′E 3 April 9:17 269 7° 00.299′S 106° 27.247′E 8:25 255 7° 00.393′S 106° 26.790′E 3 April 11:10 564 7° 01.692′S 106° 23.258′E 11:31 505 7° 01.997′S 106° 22.198′E 3 April 11:10 564 7° 01.682′S 106° 23.270′E 14:01 659 7° 01.997′S 106° 22.389′E 3 April 15:55 161 7° 01.088′S 106° 22.477′E 16:10 256 7° 01.420′S 106° 22.389′E 4 April 6:43 1950 6° 30.151′S 104° 53.580′E 9:41 1630 6° 22.279′S 104° 53.580′E 4 April 16:01 25	CP52	2 April	14:09	1156		106° 23.719′ E	14:29	1124			Mud, biogenic debris and plastic trash
2 April20:0020867° 11.487' S106° 14.967' E20:0020867° 11.487' S106° 14.967' E3 April6:403787° 01.013' S106° 26.772' E7:003797° 01.116' S106° 26.421' E3 April8:061837° 00.299' S106° 27.247' E8:252557° 00.393' S106° 26.790' E3 April11:105647° 01.692' S106° 23.558' E11:315057° 01.997' S106° 23.258' E3 April13:435797° 02.252' S106° 22.477' E16:102567° 01.420' S106° 22.387' E4 April6:4319506° 30.151' S104° 51.550' E6° 30.151' S104° 53.550' E16:106° 22.749' S104° 53.654' E4 April16:012506° 07.293' S105° 25.076' E16:22086° 07.277' S104° 53.830' E	CP53	2 April	17:25	1521		106° 18.632′ E	17:55	1714		106° 17.714′ E	Pieces of small wood
3 April 6:40 378 7° 01.013' S 106° 26.772' E 7:00 379 7° 01.116' S 106° 26.421' E 3 April 8:06 183 7° 00.299' S 106° 27.247' E 8:25 255 7° 00.393' S 106° 26.790' E 3 April 9:17 269 7° 00.429' S 106° 24.407' E 9:38 223 7° 00.455' S 106° 24.198' E 3 April 11:10 564 7° 01.692' S 106° 23.588' E 11:31 505 7° 01.997' S 106° 23.288' E 3 April 13:43 579 7° 02.252' S 106° 23.270' E 14:01 659 7° 01.420' S 106° 22.388' E 4 April 15:55 161 7° 01.088' S 106° 22.477' E 16:10 256 7° 01.420' S 104° 51.550' E 4 April 9:21 1623 6° 22.449' S 104° 53.654' E 9:41 1630 6° 22.779' S 104° 53.830' E 4 April 16:01 250 6° 07.227' S 105° 25.726' E 16:22 208 6° 07.277' S 104° 53.830' E </td <td>MC54</td> <td></td> <td>20:00</td> <td>2086</td> <td></td> <td>106° 14.967′ E</td> <td>20:00</td> <td>2086</td> <td></td> <td></td> <td>Fine mud</td>	MC54		20:00	2086		106° 14.967′ E	20:00	2086			Fine mud
3 April8:061837° 00.299′ S106° 27.247′ E8:257° 00.393′ S106° 26.790′ E3 April9:172697° 00.429′ S106° 24.407′ E9:382237° 00.455′ S106° 24.198′ E3 April11:105647° 01.692′ S106° 23.270′ E11:315057° 01.997′ S106° 23.288′ E3 April13:435797° 02.252′ S106° 22.270′ E14:016597° 01.420′ S106° 22.389′ E3 April15:551617° 01.088′ S106° 22.477′ E16:102567° 01.420′ S106° 22.289′ E4 April9:2116236° 30.151′ S104° 53.654′ E9:4116306° 22.279′ S104° 53.830′ E4 April16:012506° 07.293′ S105° 25.076′ E16:222086° 07.277′ S105° 25.725′ E	CP55	3 April	6:40	378		106° 26.772′ E	7:00	379		106° 26.421′ E	Clay and mud
3 April9:172697° 00.429′ S106° 24.407′ E9:382237° 00.455′ S106° 24.198′ E3 April11:105647° 01.692′ S106° 23.558′ E11:315057° 01.997′ S106° 23.258′ E3 April13:435797° 02.252′ S106° 22.270′ E14:016597° 02.668′ S106° 22.981′ E3 April15:551617° 01.088′ S106° 22.477′ E16:102567° 01.420′ S106° 22.289′ E4 April6:4319506° 30.151′ S104° 51.550′ E6° 30.151′ S104° 53.654′ E9:4116306° 22.279′ S104° 53.830′ E4 April16:012506° 07.293′ S105° 25.076′ E16:222086° 07.277′ S105° 25.725′ E	CP56		8:06	183		106° 27.247′ E	8:25	255		106° 26.790′ E	Mostly mud
3 April 11:10 564 7° 01.692' S 106° 23.558' E 11:31 505 7° 01.997' S 106° 23.258' E 3 April 13:43 579 7° 02.252' S 106° 23.270' E 14:01 659 7° 02.668' S 106° 22.981' E 3 April 15:55 161 7° 01.088' S 106° 22.477' E 16:10 256 7° 01.420' S 106° 22.289' E 4 April 6:43 1950 6° 30.151' S 104° 51.550' E 6° 30.151' S 104° 51.550' E 4 April 9:21 1623 6° 22.449' S 104° 53.654' E 9:41 1630 6° 22.279' S 104° 53.830' E 4 April 16:01 250 6° 07.293' S 105° 25.076' E 16:22 208 6° 07.277' S 105° 25.725' E	CP57		9:17	269		106° 24.407′ E	9:38	223		24.198′	Mud, biogenic debris and plastic trash
3 April 13:43 579 7° 02.252′S 106° 23.270′E 14:01 659 7° 02.668′S 106° 22.981′E 3 April 15:55 161 7° 01.088′S 106° 22.477′E 16:10 256 7° 01.420′S 106° 22.289′E 4 April 6:43 1950 6° 30.151′S 104° 51.550″E 6° 30.151′S 104° 51.550″E 6° 22.449′S 104° 53.654″E 9:41 1630 6° 22.279′S 104° 53.830″E 4 April 16:01 250 6° 07.293′S 105° 25.076″E 16:22 208 6° 07.277′S 105° 25.725″E	CP58	3 April	11:10	564	7° 01.692′ S	106° 23.558′ E	11:31	505		106° 23.258′ E	Mostly mud
3 April 15:55 161 7° 01.088′S 106° 22.477′E 16:10 256 7° 01.420′S 106° 22.289′E 4 April 6:43 1950 6° 30.151′S 104° 51.550′E 6:43 1950 6° 30.151′S 104° 51.550′E 4 April 9:21 1623 6° 22.449′S 105° 25.076′E 16:22 208 6° 07.277′S 105° 25.725′E 16:22 208 6° 07.277′S 105° 25.725′E	CP59	3 April	13:43	579	7° 02.252′ S	106° 23.270′ E	14:01	659		106° 22.981′ E	Mostly mud
4 April 6:43 1950 6° 30.151' S 104° 51.550' E 6:43 1950 6° 30.151' S 104° 51.550' E 4 April 9:21 1623 6° 22.449' S 104° 53.654' E 9:41 1630 6° 22.279' S 104° 53.830' E 4 April 16:01 250 6° 07.293' S 105° 25.076' E 16:22 208 6° 07.277' S 105° 25.725' E	DW60	3 April	15:55	161	01.088′	106° 22.477′ E	16:10	256		22.289′	Mud and plastic trash
4 April 9:21 1623 6° 22.449′S 104° 53.654′E 9:41 1630 6° 22.279′S 104° 53.830′E 4 April 16:01 250 6° 07.293′S 105° 25.076′E 16:22 208 6° 07.277′S 105° 25.725′E	CR61	4 April	6:43	1950	30.151′	104° 51.550′ E	6:43	1950	30.151'	104° 51.550′ E	Mostly mud
4 April 16:01 250 6° 07.293' S 105° 25.076' E 16:22 208 6° 07.277' S 105° 25.725' E	CP62	4 April	9:21	1623	22.449′	104° 53.654′ E	9:41	1630		53.830′	Mostly mud
	DW63	4 April	16:01	250	07.293′	25.	16:22	208	6° 07.277′ S	25.725'	Mostly mud