MGGH 15045002

UNIVERSITY OF CALIFORNIA

SCRIPPS INSTITUTION OF OCEANOGRAPHY

SOUTHTOW EXPEDITION

July 1972 - January 1973

LIST OF CORES AND DREDGE HAULS

Copied from Shipboard Logs

Depths Corrected by Matthews' Tables

R/V THOMAS WASHINGTON

NOTE: Leg X Samples are listed separately as their numbers do not fit into system used on the rest of the expedition; also, Leg XII Samples have been renumbered to better conform with rest of expedition.

Supplement to

SOUTHTOW Expedition

Geological Sample Catalogue

NOTE: Core numbers in parentheses have been assigned to the five (5) actual cores in the SIO collection in order to fit into the numbering system of the remainder of the expedition for the purpose of the core descriptions publication by the SIO curating staff. All non-parenthetic numbers are the original designations.

Leg 5

SOTW 5-1G	8 June 1972, 0840-0935 hrs.; 0°42.6'S, 85°26.1'W; depth 2686 m. Two vials only, with small pieces of Mn and foraminiferal sand from catcher. Axis of channel on north flank of Carnegie Ridge.
SOTW 5-2G	8 June 1927, 0943-1105 hrs.; 0°42.2'S, 85°26.0'W; depth 2686 m; core length 41 cm. 0-10 cm to Peter Lonsdale; 24-41 cm to R. Tyce for physical properties. Winnowed foraminiferal sand. From dune structures in channel on north flank of Carnegie Ridge.
SOTW 5-3G (1G)	8 June 1972, 1811-1817 hrs.; 1°24.3'S, 85°40.3'W; depth 2575 m; core length 62 cm. 47-57 cm to R. Tyce for physical properties. Calcareous ooze.
SOTW 5-4G (2G)	8 June 1972, 1952-2116 hrs.; 1°24.0'S, 85°39.5'W; depth 2467 m; core length 136 cm. 115-125 cm to R. Tyce for physical properties. Calcareous ooze.
SOTW 5-5G (3G)	8 June 1972, 2205-2314 hrs.; 1°23.8'S, 85°39.3'W; depth 2406 m; core length 36 cm. 28-36 cm to R. Tyce for physical properties. Calcareous ooze.
SOTW 5-6G (4G)	8-9 June 1972, 2340-0110 hrs.; 1°24.0'S, 85°40.4'W; depth 2536 m; core length 33 cm. Calcareous ooze.
SOTW 5-7G	9 June 1972, 2217-2315 hrs.; 1°16.6'S, 85°35.7'W; depth 2295 m; core length 21.5 cm. Entire sample to R. Tyce for physical properties. Calcareous ooze.
SOTW 5-8G	10 June 1972, 0001-0051 hrs.; 1°17.1'S, 85°33.9'W; depth 2295 m; core length 20.5 cm. 0-16 cm to R. Tyce for physical properties. Calcareous ooze.

Leg 6

SOTW 6-1G (5G)	2 July 1972, 0041 hrs.; 0°37.5'N, 86°10.7'W; depth 2658 m; core length 127 cm. Calcareous ooze.
SOTW 6-2G	5 July 1972, 0031 hrs.; 0°30.1'S, 86°11.2'W; depth 2798 m. Entire sample in plastic bag (?).

SOTW 6PG 6PG	20 July 1972, 0453-0720 hrs.; 4°20.4'N, 83°21.3'W; depth 3313 m; core length 70cm. Top 2cm dark brown clay, remainder greenish grey calcareous clay. Rough bottom.
SOTW 6P 6P	Simultaneously with 6PG. Core length: Section 1 (bottom of core), 127cm; Section 2, 126cm; Section 3, 54cm; Section 4, 135cm; Section 5, 147cm; Section 6, 150cm; Section 7, 56cm. Greenish grey calcareous-siliceous clay. A few water pockets close to liner joinings.
SOTW 7D	21 July 1972, 0538-1020 hrs.; 3°12.1'N, 83°20.0'W-3°12.0'N, 83°18.3'W; depth 2664 m. Dredge empty. Costa Rica Rift.
SOTW 8D	21 July 1972, 1140-1520 hrs.; 3°11.9'N, 83°20.2'W-3°12.5'N, 83°20.4'W; depth 2468 m. Fine grained tholeiitic basalt with plagioclase phenocrysts, weathered, but little Mn. 8 bags, 1 box of basalt pieces.
SOTW 9D	22 July 1972, 0134-0520 hrs.; 3°01.2'N, 84°14.2'W-3°01.6'N, 84°13.9'W; depth 2293-2319 m. One rock (!) of amphibolitized gabbro with a thick Mn coating (to Roger Anderson), and a plastic box of calcareous ooze. Ecuador Fracture Zone.
SOTW 10PG 10PG	22 July 1972, 2120-2315 hrs.; 3°02.4'N, 86°00.5'W; depth 2962 m; core length 109cm. Top 10cm moderate brown radiolarian clay, remainder greenish grey calcareous clay.
SOTW 10PV 10P	Simultaneously with 10PG. Core length: Section 1 (bottom of core), 152cm; Section 2, 154cm; Section 3, 126cm. Light olive grey calcareous clay. Heat flow thermisters on barrel.
SOTW 11PG 11PG	23 July 1972, 1058-1244 hrs.; 2°23.2'N, 85°59.8'W; depth 2937 m; core length 160cm. Top 12cm dark brown radiolarian clay with some Foraminifera, remainder of core light greenish grey calcareous clay.
SOTW 11PV 11P	Simultaneously with 11PG. Core length: Section 1 (bottom of core), 150cm; Section 2, 136cm; Section 3, 89cm. Light greenish grey calcareous clay; Section 1 appears to be sucked in.
SOTW 12PG	24 July 1972, 1150-1318 hrs.; 2°03.5'N, 86°01.8'W; depth 2768 m; core length 160cm. Top 16cm moderate brown radiolarian clay with some Foraminifera; remainder of core greenish grey calcareous clay. Core given to C. Rogers and J. Bada for chemical analysis and dating. (Thesis sample for Rogers.)
SOTW 12PV	Simultaneously with 12PG. Core length: Section 1 (bottom of core), 150cm; Section 2, 152cm; Section 3, 151cm; Section 4, 160cm. Greenish grey calcareous clay. To C. Rogers (thesis) and J. Bada for chemical analysis and dating.

SOTW 13PG 13PG	25 July 1972, 1711-1927 hrs.; 2°10.2'N, 86°02.2'W; depth 2927 m; core length 187cm. Some ? dark brown radiolarian clay in top 10cm; remainder greenish grey calcareous clay. Overpenetration of 10cm.
SOTW 13PV 13P	Simultaneously with 13PG. Core length: 34cm. Top 2 cm dark brown radiolarian clay; remainder greenish grey calcareous clay. Very compact.
SOTW 14PG 14PG	26 July 1972, 1017-1310 hrs.; 2°25.0'N, 80°37.2'W; depth 2470 m; core length 129cm. 0-10cm moderate brown radiolarian clay with Foraminifera; remainder greenish grey calcareous clay.
SOTW 14PV 14PV	Simultaneously with 14PG. Core length: Section 1 (bottom of core), 150cm; Section 2, 150cm; Section 3, 39cm; Section 4, 157cm; Section 5, 68cm; Section 6, 150cm; Section 7, 150cm. 0-650cm, greenish grey calcareous clay; 650-864cm, bluish grey calcareous clay.
SOTW 15PG 15PG	27 July 1972, 0151-0337 hrs.; 2°32.3'N, 85°37.5'W; depth 3055 m; core length 123cm. 0-14cm foraminiferal ? radiolarian clay; remainder greenish grey calcareous clay.
SOTW 15PV 15PV	Simultaneously with 15PG. Core length: Section 1 (bottom of core), 150cm; Section 2, 150cm; Section 3, 150cm; Section 4, 119cm; Section 5, 41cm; Section 6, 138cm; Section 7, 150cm. Greenish grey calcareous clay throughout.
SOTW 16PG 16PG	27 July 1972, 1804-2001 hrs.; 2°07.0'N, 85°38.5'W; depth 2854 m; core length 138cm. 0-12cm dark brown radiolarian clay; remainder greenish grey calcareous clay.
SOTW 16PV 16PV	Simultaneously with 16PG. Core length: Section 1 (bottom of core), 145cm; Section 2, 150cm; Section 3, 147cm; Section 4, 148cm; Section 5, 150cm; Section 6, 150cm. Greenish grey calcareous ooze.
SOTW 17D	29 July 1972, 1338-1635 hrs.; 0°49.1'N, 86°07.9'W-0°48.3'N, 86°07.9'W; depth 2472-2319 m. Three bags of fresh basalt. North side of large hill.
SOTW 18PG 18PG	1 August 1972, 1158-1351 hrs.; 0°35.4'N, 86°11.0'W; depth 2723 m; core length 90cm. 0-10cm moderate brown foraminiferal radiolarian clay; remainder pale olive calcareous clay.
SOTW 18PV 18PV	Simultaneously with 18PG. Core length: Section 1 (bottom of core), 66cm; Section 2, 120cm; Section 3, 120cm; Section 4, 120cm; Section 5, 121cm; Section 6, 39cm. Greenish grey calcareous clay, with many water pockets; may be sucked up.
SOTW 19PG	2 August 1972, 1836-2025 hrs.; 0°34.1'N, 86°11.6'W; depth 2695 m; core length 62cm. 0-12cm moderate brown foraminiferal radiolarian clay; remainder greenish grey calcareous clay. To C. Rogers and J. Bada for chemical analysis.

SOTW 19PV 19PV	Simultaneously with 19PG. Core length: Section 1 (bottom of core), 120cm; Section 2, 120cm; Section 3, 120cm; Section 4, 121cm; Section 5, 107cm; Section 6, 59cm; Section 7, 100cm; Section 8, 130cm. Greenish grey calcareous clay - 0-130cm, 200-230cm, 289-330cm, 396-430cm, 500-517cm, 517-532cm, 600-637cm, 700-757cm and 800-830cm given to C. Rogers and J. Bada for chemical analysis.
SOTW 20PG	3 August 1972, 1110-1250 hrs.; 0°04.8'N, 86°11.7'W; depth 2927 m. No sample, did not reach bottom; heat flow instrument malfunctioned.
SOTW 21PG 21PG	3 August 1972, 1943-2142 hrs.; 0°11.1'S, 85°58.2'W; depth 2816 m; core length 174cm. 0-9cm moderate brown foraminiferal radiolarian clay; remainder olive calcareous clay with light brown mottles throughout.
SOTW 21PV	Simultaneously with 21PG. No core; corer did not trip.
SOTW 22D	4 August 1972, 0350-0755 hrs.; 0°42.9'S, 85°31.2'W; depth 2677 m. Three-fourths pint of foraminiferal ooze in pipe dredge. Outcropping of Carnegie Ridge.
SOTW 23G 23G	16 August 1972, 0940-1105 hrs.; 15°02.1'S, 94°11.0'W; depth 3962 m; core length 11cm. Pale yellowish brown calcareous clay with mottles. Old Galapagos Rise.
SOTW 24D	16 August 1972, 1642-2100 hrs.; 15°19.3'S, 94°20.7'W- 15°21.8'S, 94°21.7'W; depth 4564 m. No sample. Rough, top of ridge scarp.
SOTW 25D	16-17 August 1972, 2125-0110 hrs.; 15°21.1'S, 94°22.3'W-15°20.6'S, 94°23.8'W; depth 3606-3361 m. No sample. Scarp.
SOTW 26G 26G	17 August 1972, 2252-0002 hrs.; 15°42.0'S, 95°53.1'W; depth 3637 m; core length 108cm. Pale yellowish brown calcareous (foraminiferal) clay with mottles. Rough; old ridge.
SOTW 27D	18 August 1972, 1738-2120 hrs.; 16°19.3'S, 96°48.1'W-16°19.8'S, 96°51.4'W; depth 3858-3538 m. Mud with pieces of Mn in pipe dredge. One chain broke on chain dredge. Rough, flank of old fracture zone.
SOTW 28D	19 August 1972, 0807-1300 hrs.; 16°00.6'S, 95°39.7'W-15°59.8'S, 95°40.7'W; depth 4240-3662 m. Four bags: Altered basalt, serpentinite, gabbro and diabase. Seamount; fracture zone.
SOTW 29PG 29PG	19 August 1972, 2018-2228 hrs.; 15°30.4'S, 96°11.8'W; depth 3705 m; core length 108cm. Moderate yellowish brown calcareous clay with some mottling. Rough topography.
SOTW 29PV	Simultaneously with 29PG. No sample; piston malfunction due to poor liner quality believed responsible.

SOTW 30PG 30PG	20 August 1972, 0029-0210 hrs.; 15°32.1'S, 96°22.8'W; depth 3606 m; core length 182cm. Light yellowish brown calcareous clay. Approx. 5cm lost due to overpenetration.
SOTW 30PV 30PV	Simultaneously with 30PG. Core length: Section 1 (bottom of core), 130cm; Section 2, 130cm; Section 3, 110cm. Samples to T. Johnson: 0-4, 237-240, 367-370cm (4cc each). Light yellowish brown calcareous clay.
SOTW 31D	22 August 1972, 0405-1200 hrs.; 16°25.2'S, 101°19.9'W-16°24.6'S, 101°22.0'W; depth 3416-3948 m. Approx. 50 lbs. greenstone; 50 lbs. altered basalt; one small bag of cobbles of greenstone, diabase and basalt. Scarp.
SOTW 32D	28-29 August 1972, 2055-0049 hrs.; 14°05.3'S, 110°48.9'W-14°06.3'S, 110°49.6'W; depth 3778-3138 m. Approx. 40 lbs. of basalt with 2cm Mn coating. To N. Anderson and R. Nishimori.
SOTW 33D	29-30 August 1972, 2155-0052 hrs.; 13°33.6'S, 112°20.4'W-13°33.8'S, 112°21.3'W; depth 2750-2918 m. Seven bags and hand samples of fresh basalt. Top of East Pacific Rise.
SOTW 34D	31 August 1972, 0510-0912 hrs.; 12°44.0'S, 113°35.8'W-12°43.9'S, 113°37.2'W; depth 3611-3300 m. 30-40 lbs. of weathered basalt and Mn nodules. Fracture zone.
SOTW 35PG 35PG	1 September 1972, 1630-1900 hrs.; 12°02.1'S, 115°58.8'W; depth 3555 m; core length 218cm: 0-25cm lost due to overpenetration; 25-40cm in plastic box; 40-218cm in (regular) liner. Flat bottom.
SOTW 35PV 35PV	Simultaneously with 35PG. Core length: Section 1 (bottom of core), 118cm; Section 2, 136cm; Section 3, 130cm; Section 4, 130cm; Section 5, 67cm; Section 6, 19cm. 0-4, 343-346, 591-594cm to T. Johnson (4cc each). Moderate yellowish brown calcareous clay.
SOTW 36D	10 September 1972, 1730-2025 hrs.; 16°45.7'S, 148°10.9'W; depth 1642-1622 m. Approx. 20 lbs. Mn coated coral and limestone. Seamount.
SOTW 37G 37G	19 September 1972, 0020-0215 hrs.; 19°35.9'S, 152°01.3'W; depth 4767 m; core length 106cm. Dark reddish brown clay. Abyssal plain.
SOTW 38G 38G	20 September 1972, 2005-2155 hrs.; 24°48.7'S, 157°29.3'W; depth 4901 m; core length 167cm. Dark reddish brown clay with several 1cm Mn nodules on top. Abyssal hills.
	NOTE: HF2, taken at the same station, had approx. 4cm of buff-yellow clay coating the body of the probe and overlying chocolate brown mud on probe base. Buff clay looks like altered volcanic ash or hyaloclastite or glass.

SOTW 39D — 22 September 1972, 0039-0659 hrs.; 27°33.2'S, 160°42.3'W-27°29.6'S, 160°35.9'W; depth 5162-4818 m. Approx. 5 kg.: 3 Mn-encrusted sharks' teeth (photographed); numerous 1-3cm Mn nodules; Mn coated, altered basalts and volcaniclastics and probably divitrified glass or hyoloclastite; buff-yellow "zeolite and montmorillonite" claystone. Scarp, probably fracture zone.

SOTW 40D — 23 September 1972, 0417-approx. 0850 hrs.; 27°58.5'S, 159°47.2'W-27°54.7'S, 159°47.0'W; depth 4835-4282 m. Approx. 15 kg.: sharks' teeth; numerous, quite rounded 1-6cm Mn nodules; Mn pavement; volcanic ash. Lab samples to J. Hawkins. Scarp.

SOTW 41G
41G — 24 September 1972, 1815-2001 hrs.; 29°45.0'S, 164°48.8'W; depth 5283 m; core length 27cm. Compact medium brown clay. Abyssal plain.

SOTW 42PG
42PG — 26 September 1972, 0715-1000 hrs.; 31°06.5'S, 171°20.3'W; depth 5762 m; core length 92cm. Brown mud with small Mn nodule at top. Abyssal plain.

SOTW 42P
42P — Simultaneously with 42PG. Core length: Section 1 (top of core), 127 cm; Section 2, 32cm; Section 3, 166cm. Much water. Brown clay with some angular consolidated "globs" interspersed through upper column (Section 2).

SOTW 43D — 26-27 September 1972, 2036-0145 hrs.; 31°26.1'S, 172°28.7'W-31°25.3'S, 172°26.0'W; depth 4743-3639 m. Sediment only, in "catcher".

SOTW 44D — 27 September 1972, 0146 hrs.; 31°25.9'S, 172°24.7'W; depth 3107 m. Sheave broke at 15,000 lbs., wire broke. Dredge and 4,600 m of wire lost.

SOTW 45G
45G — 27 September 1972, 1750-1945 hrs.; 32°01.2'S, 174°37.4'W; depth 5805 m; core length 141 cm. Medium to light brown mud with small Mn nodules at top; material in catcher very compact and dry. Abyssal plain.

SOTW 46G — 28 September 1972, 0830-1045 hrs.; 31°00'S, 173°00'W; depth 5941 m; core length 141cm. Brown mud with small Mn nodules at top. Abyssal plain.

SOTW 47G
47G — 28 September 1972, 2020-2210 hrs.; 30°24.9'S, 172°44.0'W; depth 5511 m; core length 25cm. Consolidated (?) brown mud, coarse grained with some foraminifers. Abyssal plain.

SOTW 48D — 29 September 1972, 0653-0944 hrs.; 30°10.3'S, 173°25.7'W-30°09.0'S, 173°24.3'W; depth 3299-2298 m. Approx. 10 lbs.: rounded pumice; 1 large piece of Mn encrusted (1cm) vesicular; glass-rinded basalt, and 3 smaller pieces; 1 piece of angular buff tuff siltstone with 2cm Mn crust; 1 piece of vesicular siltstone. Lab samples to J. Hawkins. Louisville Ridge.

SOTW 49PG	30 September 1972, 0325-0535 hrs.; 29°34.0'S, 174°20.2'W; depth 5645 m. One small piece of pumice (in vial) was caught in catcher and bent fingers; core either washed out or corer fell on side. Abyssal plain.
SOTW 49P 49P	Simultaneously with 49PG. Core length: Section 1 (top of core), 135cm; Section 2, 135cm; Section 3, 135cm; Section 4, 135cm; Section 5, 49cm. Very compact, dry, medium brown clay.
SOTW 50PG 50PG	1 October 1972, 0007-0230 hrs.; 28°18.2'S, 171°52.3'W; depth 5083 m; core length 55cm. Light brown, compact, clayey silt with abundant granules of pumice. Abyssal plain.
SOTW 50P 50P	Simultaneously with 50PG. Core length: Section 1 (top of core), 135cm; Section 2, 100cm; Section 3, 98cm. Very compact, light brown clayey silt with 1-3mm granules of pumice.
SOTW 51D	1 October 1972, 1744-2124 hrs.; 28°14.7'S, 173°39.8'W-28°11.8'S, 173°37.9'W; depth 3319-2361-2761 m. 2-3 kg. of mostly rounded to subangular pumice; Mn crust-pavement fragments; volcanic breccia fragments with blue-grey and brown aphanitic chips, plus blocky yellow-white chips. Lab samples to J. Hawkins. Louisville Ridge north.
SOTW 52D	2 October 1972, 1335-1808 hrs.; 27°28.0'S, 174°21.7'W-27°25.8'S, 174°18.9'W; depth 3593-3480 m. Approx. 1,000 kg, largely one 3½' x 1' x 1½' Mn-encrusted (3-4cm) pillow of plagioclase-rich basalt; Mn-encrusted sediments; some hyaloclastite and pumice. Lab samples to J. Hawkins. Louisville Ridge.
SOTW 53PG 53PG	2-3 October 1972, 2150-0046 hrs.; 27°24.2'S, 174°55.6'W; depth 5566 m; core length 28cm. Medium brown, gritty mud. Flank of Louisville Ridge, thick (.3 sec.) sediment.
SOTW 53P 53P	Simultaneously with 53PG. Core length: Section 1 (top of core), 135cm; Section 2, 135cm; Section 3, 115cm. Light to medium brown with black sand stringers. Slightly disturbed.
SOTW 54G	4 October 1972, 0232-0314 hrs.; 26°29.4'S, 174°42.4'W; depth 1894 m. Several pebbles of pumice in catcher only. Seamount.
SOTW 55PG	4 October 1972, 0650-0850 hrs.; 26°18.0'S, 174°10.1'W; depth 4955 m. No core, weight stand and barrel lost due to brummel hook failure. Abyssal plain east of Louisville Ridge.
SOTW 55P	Simultaneously with 55PG. Brummel hook or tripping arm broke (see 55PG), piston core barrel bent beyond further use (deep sixed). Three freezer boxes (one for catcher) of material was obtained, however: Darker brown, sandy clay with zeolites, volcanic glass fragments, sand-sized grains of plagioclase and pyroxene (?); some discoasters, coccoliths, radiolarians and diatoms.

SOTW 56G
56G

4 October 1972, 1115-1309 hrs.; 26°19.2'S, 174°07.3'W; depth 4961 m; core length 126cm. Medium brown mud with 25cm of coarse-grained turbidite at top of core. East plain of Louisville Ridge.

SOTW 57D

5 October 1972, 1833-2150 hrs.; 25°52.2'S, 174°59.7'W; depth 3244-2238 m. Dredge lost due to failure of swivel at 17,500 lbs. Osborne Seamount.

SOTW 58D

6 October 1972, 0856-1130 hrs.; 25°53.2'S, 175°04.9'W-25°49.9'S, 175°05.3'W; depth 3225-2425 m. Approx. 10 kg: Angular basalt fragments, one large block 12" X 8" X 6", and pumice. Lab. samples to J. Hawkins. Osborne Seamount.

SOTW 59G

7 October 1972, 0740-0800 hrs.; 25°20.5'S, 176°31.3'W; depth 715 m; core length 13cm. Hard, gritty calcareous material with foraminifers, other shells and some volcanic ash.

SOTW 60D

12 October 1972, 1531-1918 hrs.; 19°21.0'S, 176°43.2'W-19°22.0'S, 176°40.5'W; depth 2346-2128 m. Approx. 10 kg. of pumice - typical Lau Basin variety. Small ridge.

SOTW 61D

13 October 1972, 0710-0940 hrs.; 19°16.8'S, 176°24.8'W-19°15.7'S, 176°27.5'W; depth 2613-2042 m. Approx. 20 kg.: about 15 kg. of pillow basalt with fresh glass rind (several fragments probably of same pillow); 2 pieces of buff-grey siltstone. Basalt probably is from deepest part of dredge. One bag of pumice, rest lab samples to J. Hawkins. Scarp on Lau Basin Ridge.

SOTW 62G
62G

14 October 1972, 2005-2045 hrs.; 18°20.0'S, 177°17.2'W; depth 2620 m; core length 160cm. Brown foraminiferal mud. Lau Basin.

SOTW 63D

15 October 1972, 0753-1110 hrs.; 18°35.9'S, 176°10.9'W-18°40.0'S, 176°08.8'W; depth 2931-2501 m. Three pieces of pumice and 1 piece of siltstone. Scarp ("fracture zone").

SOTW 64D

16 October 1972, 1553-1847 hrs.; 18°02.7'S, 176°01.2'W-18°02.6'S, 176°00.5'W; depth 2238-1726-2059 m. Approx. 600 kg.: Basalt and minor amounts of pumice; glass rinds or large pillow fragments; plagioclase-rich vitrophyre and fine-grained basalt - looks fresh, lacks Mn coating. Lab samples to J. Hawkins. 600 fm. peak.

SOTW 65G
65G

18 October 1972, 0046-0130 hrs.; 16°01.2'S, 175°19.8'W; depth 2194 m; core length 77cm. Light brown mud with interspersed black sand. Rough bottom.

SOTW 66D

19 October 1972, 0103-0356 hrs.; 15°03.0'S, 172°11.0'W-15°02.1'S, 172°12.8'W; depth 2805-2247 m.

SOTW 68D

27-28 November 1972, 2053-approx. 0105 hrs.; 9°48.7'S, 164°44.1'W-9°48.0'S, 164°45.2'W; depth 4275-4123 m. Approx. 50 kg.: Mn-coated breccia of larger (to 15cm) chunks of

altered, fine-grained basalt and smaller (mainly granules and sand-sized) fragments of serpentinite. Base of ridge.

SOTW 70D 28 November 1972, 0603-0925 hrs.; 9°59.4'S, 164°13.3'W-9°59.2'S, 164°12.3'W; depth 3972-3531 m. A few small Mn nodules; a few pieces of subangular altered basalt; brown foraminiferal clay in sediment dredge. Ridge.

SOTW 73PG 29 November 1972, 0641-0852 hrs.; 9°58.2'S, 164°08.4'W; depth 3529 m. No core. Edge of Manihiki Plateau.

SOTW 73P 73P Simultaneously with 73PG. Core length: Section 1 (bottom of core), 130cm; Section 2, 130cm; Section 3, 123cm. White calcareous ooze.

SOTW 74PG 29-30 November 1972, 2332-0131 hrs.; 10°11.0'S, 163°58.0'W; depth 3650 m. No core but no apparent failures of equipment.

SOTW 74P 74P Simultaneously with 74PG. Core length: 155cm. 5cm of white calcareous ooze over 150cm of "red clay".

SOTW 75PG 30 November 1972, 0233-0448 hrs.; 10°11.0'S, 163°58.1'W; depth 3831 m. No core; catcher sample only. A few sand grains and pieces of hard clay.

SOTW 75P Simultaneously with 75PG. Cutter packed full of very hard volcanic sands, buff to dark grey-brown.

SOTW 78D 2 December 1972, 0408-0804 hrs.; 8°39.0'S, 163°43.4'W-8°41.2'S, 163°41.7'W; depth 3926-3864 m. Twenty-two small pieces of basalt, some altered; 1 piece of red chert, 1 white volcanic ash; 1 whale ear bone.

SOTW 80D 3 December 1972, 1913-2228 hrs.; 7°59.6'S, 163°40.2'W-7°59.8'S, 163°39.2'W; depth 4228-3838 m. Four cobbles (two each basalt and volcanic breccia); sediment bag full of recent radiolarian ooze.

SOTW 84PG 6 December 1972, 2046-2340 hrs.; 2°31.7'S, 161°10.3'W; depth 5356 m; core length 144cm. Brown clay. Nearly flat, small hills, acoustically transparent.

SOTW 84P Simultaneously with 84PG. Core length: Section 1 (bottom of core), 120cm; Section 2, 130cm; Section 3, 120cm; Section 4, 120cm; Section 5, 48cm. Brown clay.

SOTW 85PG 85PG 7 December 1972, 0037-0340 hrs.; 2°31.1'S, 161°11.0'W; depth 5358 m; core length 143cm. Dark brown mud. Flat bottom; 15 fm transparent.

SOTW 85P 85P Simultaneously with 85PG. Core length: Section 1 (bottom of core), 120cm; Section 2, 120cm; Section 3, 120cm; Section 4, 107cm. Dark brown mud.

SOTW 99D 13 December 1972, 0055-0430 hrs.; 4°15.6'S, 164°23.2'W-4°15.9'S, 164°24.9'W; depth 3845-3502 m. No rocks; foraminiferal ooze in sediment bag.

SOTW 100D	14 December 1972, 0705-1051 hrs.; 4°11.0'S, 164°27.2'W-4°11.3'S, 164°28.3'W, depth 3827-3516 m. No rocks, sediment bag full of foraminiferal ooze.
SOTW 101PG	14 December 1972, 1954-2257 hrs.; 4°22.8'S, 164°26.1'W; depth 3787 m. No core.
SOTW 101P	Simultaneously with 101PG. No core.
SOTW 102PG	14-15 December 1972, 2333-0148 hrs.; 4°24.2'S, 164°27.4'W; depth 3686 m. No. core.
SOTW 102P 102P	Simultaneously with 102PG. Core length: Section 1 (bottom of core), 124cm; Section 2, 130cm; Section 3, 135cm. White foraminiferal ooze.
SOTW 103PG	15 December 1972, 0402-0549 hrs.; 4°33.8'S, 164°26.0'W; depth 3503 m. No core.
SOTW 103P 103P	Simultaneously with 103PG. Core length: Section 1 (bottom of core), 121cm; Section 2, 126cm; Section 3, 130cm; Section 4, 36cm. White foraminiferal ooze.
SOTW 104PG 104PG	19 December 1972, 1346-1622 hrs.; 13°21.7'S, 170°40.7'W; depth 4816 m; core length 55cm. Brown clay.
SOTW 104P	Simultaneously with 104PG. Core length: Section 1 (bottom of core), 130cm; Section 2, 130cm; Section 3, 37cm; Section 4, 37cm. Large water pocket between sections 3 and 4. Brown clay with Mn nodules.
SOTW 105G (formerly 202G) 105G	11-12 January 1973, 2331-0135 hrs.; 8°10.9'N,158°59.3'W; depth 4661 m; core length 175cm, approx. 30cm weight stand sample, some of which was given to Poierier, San Diego School District. Brown foraminiferal mud; some layers (?) of nearly pure foraminiferal ooze. Line Islands; Deep-tow station 12-201.
SOTW 106G (formerly 203G) 106G	12 January 1973, 0234-0400 hrs.; 8°15.2'N, 158°59.0'W; depth 4628 m; core length 175cm, plus approx. 10cm in weight stand. Brown foraminiferal mud, lighter at top. Line Islands; Deep-two station 12-201.
SOTW 107G (formerly 204G) 107G	13 January 1973, 1536-1713 hrs.; 8°13.8'N, 158°56.6'W; depth 4617 m; core length 156cm. Very fine brown mud with a few areas of "off white" giving core a slightly mottled appearance. Line Islands; Deep-tow station 12-201.

SOTW Leg 10

SOTW 1FF-A 1FA	1 November 1972, 1341-1520 hrs.; 7°15.5'S, 168°28.5'W; depth 5688 m; core length 88cm. Medium brown mud.
SOTW 1FF-B 1FB	1 November 1972, 1348-1530 hrs.; 7°15.1'S, 168°28.6'W; depth 5731 m; core length 112cm. Light brown at top grading to medium brown at bottom.
SOTW 1FF-C 1FC	1 November 1972, 1354-1547 hrs.; 7°14.7'S, 168°28.6'W; depth 5752 m; core length 117cm. Medium brown mud with light calcareous ooze at top.
SOTW 1FF-D 1FD	1 November 1972, 1359-1603 hrs.; 7°14.4'S, 168°28.7'W; depth 5776 m; core length 115cm. Light to medium brown mud and calcareous ooze.
SOTW 1FF-E 1FE	1 November 1972, 1401-1617 hrs.; 7°14.2'S, 168°28.7'W; depth 5780 m; core length 117cm. Very light calcareous ooze.
SOTW 2FF-A	3 November 1972, 1215 hrs.; 7°13.1'S, 168°25.2'W; depth 5610 m. Not recovered.
SOTW 2FF-B 2FB	3 November 1972, 1222-1411 hrs.; 7°11.2'S, 168°25.3'W; depth 5584 m; core length 90cm. Medium brown mud.
SOTW 2FF-C 2FC	3 November 1972, 1230-1422 hrs.; 7°12.0'S, 168°25.4'W; depth 5555 m; core length 106cm. Medium brown mud.
SOTW 2FF-D 2FD	3 November 1972, 1238-1442 hrs.; 7°12.4'S, 168°26.1'W; depth 5507 m; core length 73cm. Medium brown mud.
SOTW 3FF-A 3FA	8 November 1972, 0809-1001 hrs.; 8°31.4'S, 168°42.7'W; depth 5145 m; core length 112cm. Very sticky brown mud.
SOTW 3FF-B 3FB	8 November 1972, 0823-1025 hrs.; 8°30.7'S, 168°44.3'W; depth 5156 m; core length 67cm. Very sticky brown mud.
SOTW 3FF-C	8 November 1972, 0850 hrs.; 8°29.8'S, 168°46.4'W; depth unknown. No core recovered.
SOTW 4FF-A 4FA	10 November 1972, 1146 hrs.; 8°17.2'S, 168°31.7'W; depth 4758 m; core length 79cm. Light foraminiferal mud with Mn nodules on top.
SOTW 4FF-B 4FB	10 November 1972, 1201 hrs.; 8°17.0'S, 168°31.2'W; depth 4751 m; core length 97cm. Light foraminiferal mud with Mn nodules on top.
SOTW 4FF-C 4FC	10 November 1972, 1216 hrs.; 8°16.5'S, 168°30.5'W; depth 4565 m; core length 114 cm. Medium to light brown foraminiferal mud with Mn nodules on top.
SOTW 10-1G 1G X	10 November 1972, 1537-1732 hrs.; 8°17.4'S, 168°28.8'W; depth 4377 m; core length 135cm. Light foraminiferal mud with Mn nodules on top. Abyssal plain.

SOTW 5FF-A
5FA

14 November 1972, 1036 hrs.; 7°29.1'S, 168°29.0'W; depth 5619 m; core length 86cm. Medium brown mud with Mn nodules on top.

SOTW 5FF-B
5FB

14 November 1972, 1049 hrs.; 7°28.9'S, 168°28.9'W; depth 5626 m; core length 123cm. Medium brown mud with Mn nodule on top.

SOTW 10-2G
Leg X 2G

17 November 1972, 1638-1936 hrs.; 7°26.4'S, 168°28.8'W; depth 5507 m; core length 16cm. Dark brown mud, very sticky and compact.

SOTW 10-3G
Leg X 3G

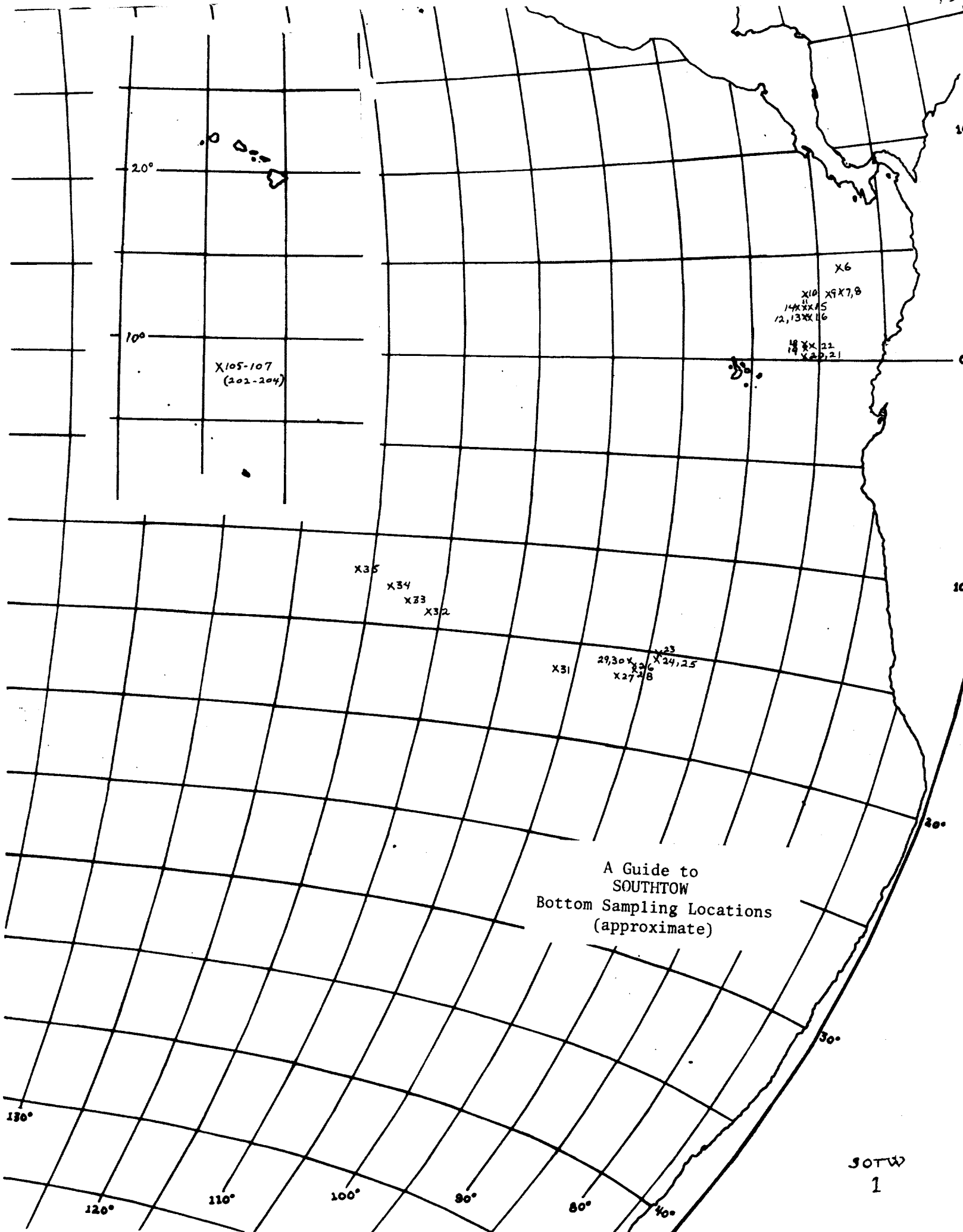
19 November 1972, 1928-2155 hrs.; 12°47.5'S, 170°16.6'W; depth 4920 m. Foraminifera-rich mud, possibly turbidite.

SOTW 10-4G
Leg X 4G

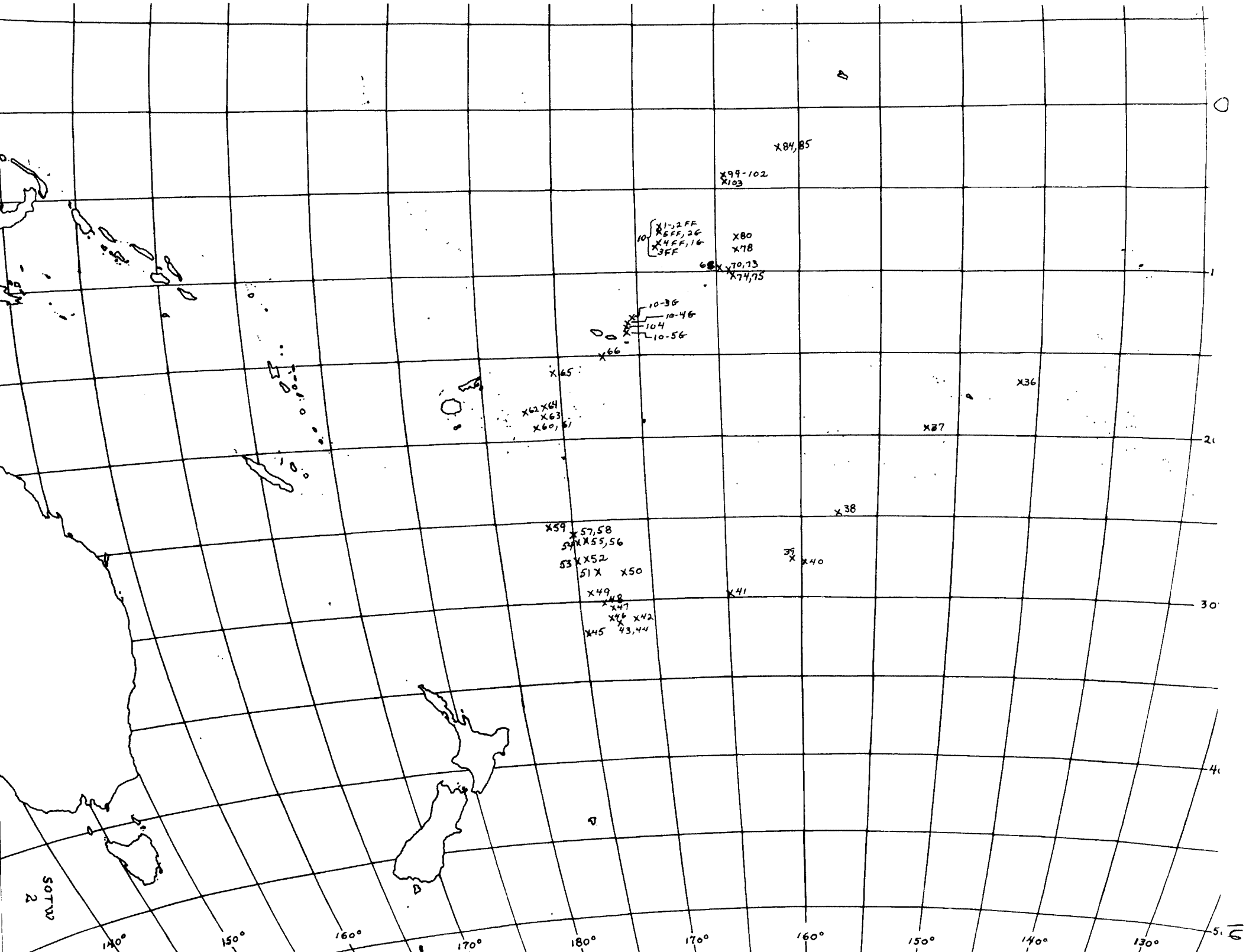
20 November 1972, 0112-0251 hrs.; 13°06.9'S, 170°35.0'W; depth 4891 m; core length 152cm. Medium brown foraminiferal mud.

SOTW 10-5G
Leg X 5G

20 November 1972, 0805-0932 hrs.; 13°37.8'S, 170°39.2'W; depth 4590 m; core length 91cm. Light brown foraminiferal mud. Sand dune.



A Guide to
SOUTHTOW
Bottom Sampling Locations
(approximate)


84,85
99-102
103
1-,2FF
5FF,26
4FF,16
3FF
10
80
78
68
70,73
74,75
10-36
10-46
104
10-56
66
65
36
62 64
63
60,61
37
38
59
57,58
54
55,56
53
52
51
50
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41
49
48
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45
43,44
0
10
20
30
40
50
140°
150°
160°
170°
180°
170°
160°
150°
140°
130°
SOTW
2

SCRIPPS INSTITUTION OF OCEANOGRAPHY

Key to Abbreviations Used in Sample Descriptions ("core logs")

G: Gravity core

P: Piston core

PG: Gravity core obtained in conjuction with a piston core, and bearing the same sample number. This is also known as a "trip gravity" core since in this instance a gravity corer is used to trip the arm of the piston corer.

Note: In some core logs (e.g. Monsoon) it will be noted that there is sometimes a PG core with no accompanying P core (or vice versa). This is a result of no P sample having been obtained; therefore, even the attempt was ignored when the log was compiled. (Obviously, however, there was an attempt or there would be no PG.)

V: Heat probe core, short and of small diameter (c. 1"), developed by R. von Herzen. Occasionally regular gravity cores are used instead.

GV: AMPHITRITE Expedition ONLY: Gravity cores taken for a specific person and purpose.

Note: Such "special request" cores are frequently taken on SIO cruises; but, with the above exception, are not usually designated differently than other samples. Frequently, also, such cores are used in their entirety by the person for whom they were taken and are no longer in the SIO collection, even though they may appear in the log.

C: Very small cores obtained by corers attached to the frame of a camera.

T: Triple corer samples, some are very small, others are regular gravity cores.

Grab: Designated as such (e.g., MSN 135 grab).

S: Snapper: The proper term for "grab". May also be spelled out.

D: Dredge samples. Also used to designate subaerial samples.

H: Hydrographic PBS (Phleger Bottom Sampler). See Downwind, Horizon, DWHHI.

Abbreviations of ship names:

A: R/V Argo (e.g., LSDA)
H: R/V Horizon (e.g., LSDH, DWH)
B: R/V Spencer F. Baird (e.g., DWB)
HMS: R/V Hugh M. Smith (e.g., FAN, HMS)
S: R/V Stranger

Note: In the LUSIAD-ARGO (LSDA) core log will also be found SCS: South China Sea.

Use of lower case letters and prime (′): Used to indicate that two (or more) attempts were made to obtain a sample; e.g., 101 G (first attempt), 101 Ga (second attempt); or 101 Ga (first attempt), 101 Gb (second attempt). Occasionally, as in Chubasco Roman-numeraled samples, a prime mark (′) has been used for this purpose, e.g., CHUB Vg, V′g. (Note that this log also uses lower case for gravity and piston core designations).

Occasionally no letter designation is used if all cores of an expedition were gravity cores.