

SIO REFERENCE SERIES

DESCRIPTION OF CORES FROM THE PACIFIC OCEAN

TAKEN ON SCAN EXPEDITION

Thomas C. Johnson and Carolyn Glockhoff

University of California

Scripps Institution of Oceanography

SIO Ref. No. 74-22

JUNE 1974

SCRIPPS INSTITUTION OF OCEANOGRAPHY
UNIVERSITY OF CALIFORNIA, SAN DIEGO
LA JOLLA, CALIFORNIA 92037

DESCRIPTION OF CORES FROM THE CENTRAL PACIFIC
TAKEN ON SCAN EXPEDITION

Thomas C. Johnson and Carolyn Glockhoff

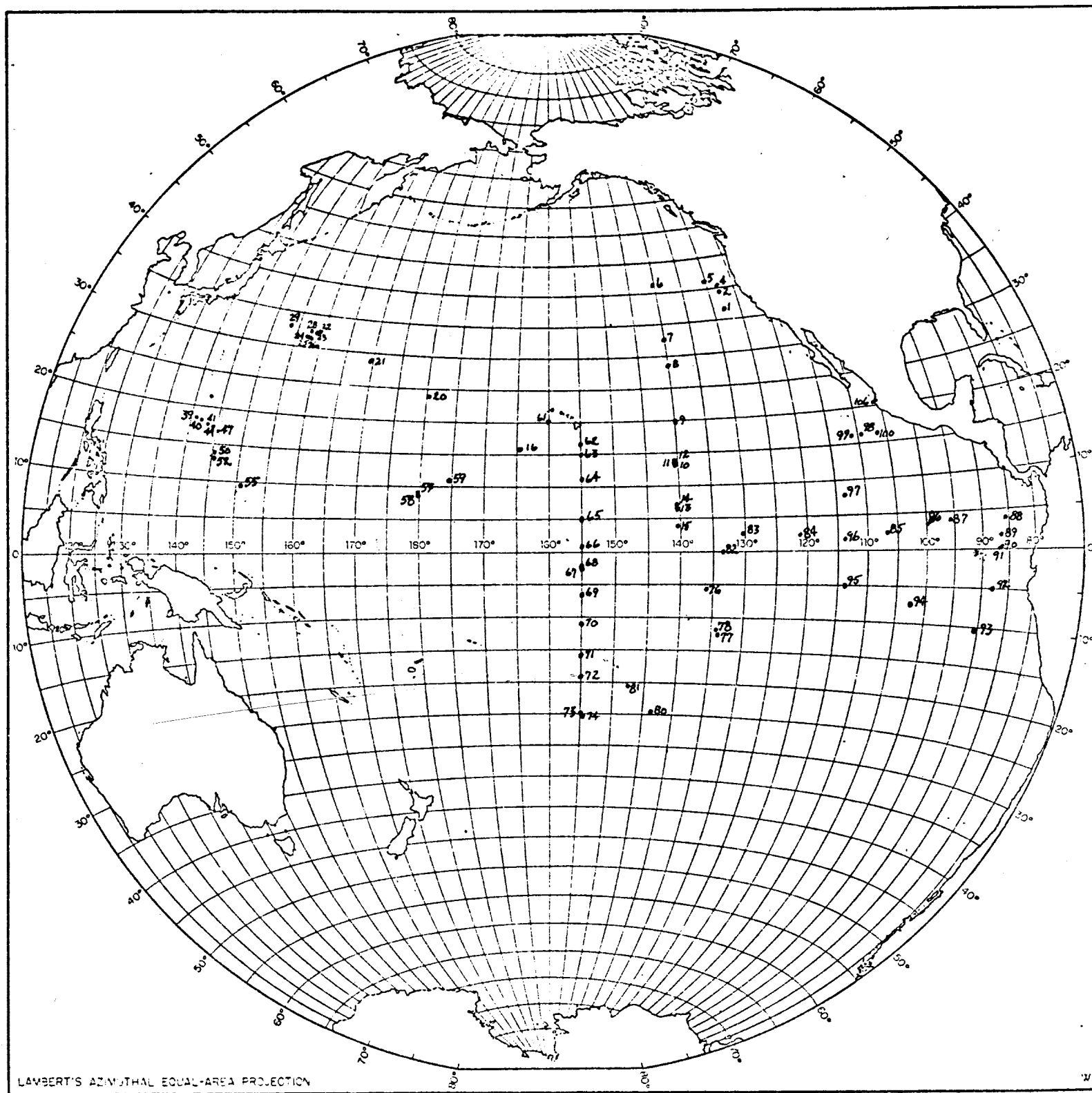


Fig. 1. SCAN Core Locations

The cores described on the following pages were obtained on the Scripps Institution of Oceanography SCAN Expedition during March 1969 to February 1970. The primary purpose of the expedition was to conduct geological surveys of prospective drilling sites for the Deep Sea Drilling Project. A total of 106 locations in the Pacific Ocean were geologically sampled (fig. 1), usually by coring but, on occasion, by dredging. The following descriptions are of all the cores taken on SCAN which are available at Scripps for sampling and study.

Scripps' cores are generally not split open at sea, but are cut into 150 centimeter sections, capped, and stored at 4°C until they are brought to the Scripps core locker. Here they are split longitudinally into the archive and working halves, visually described, and photographed. Approximately 5 gram sediment samples are taken from the top, bottom and at 150 centimeter intervals from the working half of piston cores, and from the top, bottom and middle of the working half of gravity cores. A smear slide is made from a minute portion of a sample, and the remainder is treated with hydrogen peroxide, hydrochloric acid if the calcium carbonate content is relatively high, and sieved through a 62-micron sieve. The larger than 62 micron fraction is mounted in Caedex or balsam on a glass slide for microscopic examination, primarily for age determination based upon the radiolarian assemblage present. Both halves of the core are then stored horizontally in air-tight D tubes in a refrigerator at 7°C. This keeps them moist and in reasonably good condition for further study and sampling.

This project entailed a re-examination of all the SCAN cores, a brief visual description of the apparently different intervals of each core, additional sampling to supplement the routine sampling described in the previous paragraph, and microscopic examination of slides made from all samples.

Descriptions of the cores have been limited to a brief, tabulated notation (Table 1) supplemented by footnotes in order to minimize the size of this report. In most categories of the table, relative abundances are limited to common (designated by a "C" in the table), few ("F") or none ("-"). A parameter is left blank in the table if it was not measured.

"Common" and "few" are rather arbitrary classifications of relative abundance whereas "none" is absolute. For instance if only one diatom is seen on a smear slide, then the relative abundance of siliceous microfossils is "few" and not "none". On the other hand, the term "none" is not always significant because a minor constituent may not always be recognized. For instance if few silt-sized quartz or other mineral grains are scattered through a nannofossil ooze they may not have been recognized and the abundance of "other mineral grains" would have been recorded as "none".

The visual examination included separating the core into lithological, textural or otherwise apparent intervals, and within each of these intervals counting and measuring the manganese nodules, noting the presence of bedding, assessing the relative abundance of burrow mottles, determining

the degree to which the core has been disturbed by suction or flow-in during the coring operation, and describing the nature of that interval's lower boundary. The terminology, "common", "few" or "none", applied to the degree of flow-in, is meaningless. In this case "C" denotes a great degree of flow-in, in which color contrasts in the sediment are seen as longitudinal streaks in the interval, "F" denotes a slight amount of flow-in, in which sedimentary layers or mottles have been disturbed by no more than 10 centimeters, and "-" denotes no apparent disturbance by flow-in.

Both a smear slide and one of the larger than 62 μ fraction were examined with a petrographic microscope to determine the relative abundances of calcareous microfossils, siliceous microfossils, fish debris, zeolites, glass shards, other mineral grains (not specified) and reworked older microfossils. (The relative abundance of zeolites actually refers to euhedral phillipsite which is readily identified under a microscope. No other zeolites were considered.)

The age was usually determined by the radiolarian assemblage, and supplemented by the calcareous nannofossil assemblage, if present. The index fossils used in assigning ages are listed in Table 2. Zonal boundaries are those of Riedel and Sanfilippo (in press) and Sanfilippo and Riedel (1974) for radiolaria, and Bukry (1973) for calcareous nannofossils. Age footnotes include the core number and sampled intervals, the zonal age and a list of species of the youngest assemblage present, and ages and species lists of the older reworked microfossils present. No age footnote is made if the sediment is of Quaternary age and contains no older reworked microfossils. Criteria used for the recognition of Quaternary radiolarian assemblages are the presence of *Theocorythium trachelium*, *Pterocorys hertwigii*, *Spongaster tetras* and/or *Ommatartus tetrathalamus*, and the absence of *Pterocanium prismatium*. In the age footnotes rare occurrences of index fossils are frequently indicated by "R", and common occurrences by "C".

In summary the following descriptions are not absolute, but are to a certain extent variable and arbitrary. Nevertheless sufficient information is provided to determine which cores may be important to one's own particular needs, and from which intervals in these cores one might want samples for additional study.

ACKNOWLEDGMENT

We thank William R. Riedel for providing guidance in all phases of the project, and David Bukry, USGS, La Jolla, for dating several of the nannofossil-rich sediments. This work was supported by NSF GA-32177.

REFERENCES

- Bukry, David (1973), Low-latitude coccolith biostratigraphic zonation.
In: Edgar, N. T., Saunders, J. B., et al. Initial Reports of
the Deep Sea Drilling Project, vol. XV, Washington (U.S. Govern-
ment Printing Office), p. 685-703.
- Riedel, W. R. and Annika Sanfilippo (in press). Cenozoic radiolaria.
In: A. T. S. Ramsay (ed.), Oceanic Micropaleontology.
- Sanfilippo, Annika and W. R. Riedel (1974). Radiolaria from the west-
central Indian Ocean and Arabian Sea, DSDP Leg 24. In: Initial
Reports of the Deep Sea Drilling Project, vol. XXIV. Washington
(U.S. Government Printing Office). In press.

TABLE 1

EXPEDITION - SCAN					Micro-fossils	Fish debris	Zeolites	Shards	Other mineral grains	Mn Nodules		Bedding (Bedded, graded or none)	Burrow mottling	Flow-in	Lower boundary (sharp or gradational)	Age			Additional notes	Sampled interval (cm)
Core number	Latitude	Longitude	Water depth (m)	Depth in core (cm)						Calcareous	Silicious					Number	Size (mm)	Sediments		
1P	37°10'N	127°40'W	4752	0-19	F	F	-	F	C	-	-	Bedded	F		S	Quaternary?			6-8	
				19-23	F	F	F	F	C	-	-	Graded	-		S				21-22	
				23-70	F	F	-	-	C	-	-	Bedded	F		G				40-41	
				70-94	F	-	-	-	F	C	-	Graded	-		S				90-92	
				94-223	F	F	-	-	F	C	-	Bedded	F		S				98-100	
				223-226	F	-	-	-	F	C	-	-	-		S			1	224-225	
				226-251	F	F	-	-	F	C	-	Bedded	F		S				240-241	
				251-299	F	F	F	-	F	C	-	Graded	-		S				283-285	
				299-336	F	F	-	-	F	C	-	Bedded	F		G				314-316	
				336-341	F	-	F	-	F	C	-	-	-		S			1	339-340	
				341-444	F	F	-	-	F	C	-	Bedded	-		G				390-392	
				444-457	F	F	F	-	F	C	-	Graded	-		S				450-451	
				457-586	F	F	F	-	F	C	-	Bedded	F		G				490-492	
				586-597	F	F	F	-	-	C	-	Graded	-		S				591-592	
				597-623	F	-	-	-	-	C	-	Bedded	F		G				610-611	
				623-628	F	F	-	-	-	C	-	Graded	-		S				626-627	
				628-757	F	F	F	-	F	C	-	Bedded	F		G				691-693 748-750	
				757-803	F	F	F	-	F	C	-	Graded	-		S				774-775	
				803-1024	F	F	F	-	F	C	-	-	-						999-1000	
2PG	39°28'N	127°30'W	4255	0-40	-	F	-	-	-	F	C	-	-					3		

TABLE 1 (continued)

EXPEDITION - SCAN					Micro-fossils		Fish debris	Zeolites	Shards	Other mineral grains	Mn Nodules		Bedding, graded or none)	Burrow mottling	Flow-in	Lower boundary (sharp or gradational)	Age			Additional notes	Sampled interval (cm)
Core number	Latitude	Longitude	Water depth (m)	Depth in core (cm)	Calcareous	Siliceous					Number	Size (mm)					Sediments	Reworked older forms	Footnotes		
2PG	39°28'N	127°30'W	4255	40-45	F	-	-	-	-	C	-	-	-	-	-	-	Quaternary	-	3		
2P	39°28'N	127°30'W	4255	0-9	F	C	-	-	F	C	-	-	-	-	-	G		-		0-2	
				9-644	F	-	-	-	F	C	-	-	Bedded	-	-	G				2	40-42, 282-284, 590-592
				644-660	C	-	-	-	F	C	-	-	-	F	-	G					648-650
				660-974	F	-	-	-	F	C	-	-	Bedded	-	-						730-732, 916-918
4PG	40°44'N	127°31'W	3229	0-100	C	C	-	-	F	C	-	-	-	F	-	G	Quaternary	-		0-2, 70-72	
				100-145	F	F	-	-	-	C	-	-	-	-	-					140-142	
4P	40°44'N	127°31'W	3229	0-455	F	F	-	-	F	C	-	-	-	-	-	G	Quaternary	-	4	0-2, 240-242, 440-442	
				455-501	F	F	F	-	F	C	-	-	Graded	-	-	S				490-492	
				501-760	F	F	-	-	-	C	-	-	Bedded	-	-	G				540-542, 650-652	
				760-772	F	F	-	-	F	C	-	-	Graded	-	-	S				770-772	
				772-1010	F	F	-	-	-	C	-	-	-	-	-					780-782, 1000-1002	
5PG	41°03'N	130°04'W	3268	0-15	F	C	-	-	-	C	-	-	Bedded	F	-	G	Quaternary	-		2-4	
				15-145	C	F	-	-	-	C	-	-	Bedded	G	-				5	70-72, 138-140	
5P	41°03'N	130°04'W	3268	0-3	F	C	-	-	-	-	-	-	-	-	-	G	Quaternary	-		0-2	
				3-128	-	-	-	-	F	C	-	-	Bedded	F	-	G			6	108-109	
				128-144	C	-	-	-	F	C	-	-	Bedded	-	-	G	Quaternary	-		135-136	
				144-320	-	-	-	-	F	C	-	-	Bedded	F	-				7	210-211, 246-248	
				320-425	C	-	-	-	F	F	-	-	Bedded	F	-		Quaternary	-	7	380-381	
				425-472	-	-	-	-	F	C	-	-	Bedded	F	-	S				434-436	

					472-500	C	-	-	F	F	-	-	Bedded	F	-	S	Quaternary	-	490-492
					500-874									C					
6PG	41°04'N	140°35'W	4544		0-171	-	F	-	F	F	C	1	5	-	C	-			5,8 0-2, 90-92, 162-164
6P	41°04'N	140°35'W	4544		0-329	F	F	F	F	F	C	1	25	Bedded	C	-	G	Quaternary	- 9 41-43, 162-164, 240-242
					329-340	C	-	-	-	F	C	-	-	-	C	-	G	Pliocene	- 1 335-336
					340-376							-	-	-	C	-	G		
					376-388	C	-	-	-	F	C	-	-	-	C	-	S	Pliocene	- 2 10 385-387
					388-475	-	-	F	-	F	C	-	-	-	C	-	G		450-452
					475-534	-	-	C	F	-	C	-	-	-	C	-	S		482-484
					534-636	-	-	C	C	-	C	-	-	-	-	-	G		535-537
					636-786										C				
7PG	33°04'N	140°01'W	5032		0-53	-	-	C	F	-	C	-	-	-	-	-			5-7
MISSING																			
					53-71														
					71-243	-	F	F	F	C	1	7	Bedded	F	-				11 160-162, 230-232
7P	33°04'N	140°01'W	5032		0-300	-	F	C	C	F	-	-	-	-	-	G			0-2, 166-168
					300-949	-	-	C	C	F	-	-	-	-	-	-			310-312, 700-702, 864-866
8PG	28°12'N	140°01'W	4792		0-107	-	F	F	F	C	-	-	-	-	-	-			0-2, 105-107
8P	28°12'N	140°01'W	4792		0-40	-	-	F	F	F	C	-	-	-	-	S			0-3
					40-340	-	-	F	C	F	F	1	<10	Bedded	-	-	S		64-66, 190-192, 336-338
					340-357	-	-	F	C	-	C	<10	<15	Bedded	-	-			348
9aPG	19°52'N	139°52'W	5175		0-24	-	F	-	C	-	F	C	<15	-	-	-			18-20
9aP	19°52'N	139°52'W	5175		0-9	-	C	-	F	-	F	1	15	-	-	S	M. Eocene	- 3 7-9	
WATER POCKET																			
					9-34														
					34-100	-	C	C	F	-	F	1	Bedded	-	-		M. Eocene ?	- 4 96-98	
9bPG	19°56'N	139°52'W	5186		0-153	-	F	-	C	-	C	1	20	-	-	-	M. Eocene	5 12 0-2, 97-100, 151-153	

TABLE 1 (continued)

/8

EXPEDITION: SCAN					Micro-fossils				Mn Nodules		Bedding (Bedded, graded or none)	Burrow mottling	Flow-in	Lower boundary (sharp or gradational)	Age		Additional notes	Sampled interval (cm)
Core number	Latitude	Longitude	Water depth (m)	Depth in core (cm)	Fossils		Mn Nodules		Sediments	Reworked older forms					Footnotes			
					Calcareous	Siliceous	Number	Size (mm)										
9bP	19°56'N	139°52'W	5186	0-30	-	F	-	C	F	F	-	Bedded	-	-	G	M. Eocene ?	6	11-13
				30-378	-	F	F	C	-	-	-	-	-	-	-	M. Eocene ?	7	218-220, 350-352
				378-1011										C				
10PG	13°52'N	140°10'W	4864	0-151	-	C	F	F	-	F	-	-	-	-	-	Quaternary/ Oligocene	8	3-5, 81-83, 148-150
10P	13°52'N	140°10'W	4864	0-122	-	C	F	-	-	F	-	Bedded	C	-	G	Oligocene	9	7-9, 78-80, 100-102
				122-215	-	C	F	C	F	F	-	-	C	-	S	Oligocene	10	200-202
				215-252	-	F	F	F	-	F	-	-	F	-	S			216-218
				252-391	F	F	F	C	F	F	-	Bedded	C	-	G	Oligocene	11	290-292, 388-390
				391-550	C	C	-	-	-	-	-	-	C	-	S	Oligocene	12	409-411, 428-430, 520-522
				550-864										C				
11PG	13°54'N	140°15'W	4866	0-168	-	C	F	-	-	F	-	-	F	-		Quaternary/ Oligocene	13	0-2, 80-82, 165-167
11P	13°54'N	140°15'W	4866	0-389	-	C	F	F	-	F	-	-	C	-	G	Oligocene	14	7-9, 340-342
				389-630	-	C	F	C	F	F	-	-	C	-	S	Oligocene	15	420-422, 600-602
				630-915	-	C	F	F	-	F	-	-	F	-	G	Oligocene	16	638-640, 875-877
				915-971	-	C	F	F	-	-	-	-	C	-	S	Oligocene	17	920-922
				971-1083	C									C				
12PG	13°55'N	140°15'W	4842	0-35	-	C	F	-	F	F	-	-	F	-		Quaternary/ Oligocene	18	2-4, 33-35
12P	13°55'N	140°15'W	4842	0-13	C	C	C	-	F	F	-	-	-	-		Oligocene	19	0-2
				13-31														
				31-271	C	C	F	-	F	F	-	-	F	F	G	Oligocene	20	32-34, 143-145, 230-232

WATER POCKET

12P	13°55'N	140°15'W	4842	271-560	C	C	F	-	F	-	-	Bedded	C	F	G	Oligocene	-	21	278-280, 375, 438	
				560-609	C	C	F	-	F	1	-	-	F	F		Oligocene	F	22	590-592	
				609-727										C						
13PG	6°19'N	140°19'W	5059	0-115	-	C	F	-	F	F	-	Bedded	C	-		Quaternary	F	23	14	0-2, Catcher
13P	6°19'N	140°19'W	5059	0-106	F	C	F	-	F	F	-	-	C	-	S	Quaternary	F	24		0-2, 101-103
				106-459	F	C	F	-	F	-	-	Bedded	C	-	S	Quaternary/ Pliocene	F	25		108-110, 146-147, 296-297, 446-447
				459-670	-	C	F	-	-	-	-	Bedded	C	-	S	Pliocene	C	26		480-482, 596-597
				670-723	-	C	F	-	-	-	-	Bedded	C	-	S					683
				723-737	-	C	F	-	-	-	-	-	C	-	S					731
				737-799	-	C	F	-	F	F	-	Bedded	C	-	S	Pliocene	C	27		759-760
				799-813	-	C	F	-	F	-	-	-	C	-	S					806
				813-876	F	C	F	-	-	F	-	Bedded	C	-	S					830
				876-926	-	C	F	-	F	-	-	-	C	-	S	Pliocene	C	28		877, 909-910
				926-1209	-	C	F	-	-	-	-	-	C	-		Pliocene	C	29		927-929, 1054-1055
14PG	6°25'N	140°20'W	4968	0-178	C	C	F	-	-	-	-	-	C	-		Quaternary	F	30	15	0-2, 80-82, 176-178
14P	6°25'N	140°20'W	4968	0-44	F	C	F	-	-	-	-	-	C	-	S	Quaternary	F	31		0-2
				44-372	F	C	F	-	F	-	-	-	C	-	S	Quaternary/ Pliocene	F	32		80-82, 230-232
				372-670	-	C	F	-	-	F	-	Bedded	F	-	S	Pliocene	C	33		381-383, 532-534
				670-728	F	C	F	-	F	-	-	-	C	-	S	Pliocene	C	34		696-698
				728-765	F	C	F	-	-	-	-	-	C	-	S	Pliocene	C	35		750-752
				765-1040	F	C	F	-	-	-	-	-	C	-	S	Pliocene	C	36		846-848, 996-998
				1040-1148										C						
15PG	4°28'N	140°15'W	4383	0-7	C	F	-	-	-	-	-	-	F	-	G	Quaternary	-			2-4
				7-52								-	C	-	G					
				52-74	C	F	F	-	-	-	-	-	C	-	G	Quaternary	-			70-72

TABLE 1 (continued)

EXPEDITION: SCAN				Core number	Latitude	Longitude	Water depth (m)	Depth in core (cm)	Micro-fossils		Fish debris	Zeolites	Shards	Other mineral grains	Mn Nodules		Bedding (Bedded, graded or none)	Burrow mottling	Flow-in	Lower boundary (sharp or gradational)	Age			Additional notes	Sampled interval (cm)
Calcareous	Siliceous	Number	Size (mm)						Sediments	Reworked older forms					Footnotes										
15PG	4°28'N	140°15'W	4383	74-109	C	F	F	F	F	-	-	-	Bedded	C	-	G				G				90	
				109-120	C	F	F	F	F	-	-	-	-	C	-	G				G				113	
				120-137	C	F	F	F	F	-	-	-	Bedded	C	-	G				G				130	
				147-144	C	C	F	-	-	-	-	-	Bedded	C	-		Quaternary	-						142-144	
15P	4°28'N	140°15'W	4383	0-2	C	C	-	-	-	-	-	-	-	F	-	S	Quaternary	-							
				2-431	C	C	-	-	-	F	-	-	Bedded	C	-	S	Quaternary/ Pliocene	-	37	16	71-73, 221-223, 415-417				
				431-712	C	C	F	-	F	-	-	-	Bedded	C	F	S	Pliocene	F	38					461-463, 710-712	
				712-986										C											
16PG	16°25'N	164°24'W	5597	0-115	-	F	C	C	-	F	2	≤30	-	-	-		Quaternary/ ?	C/-	39	17	0-2, 60-62, 113-115				
16P	16°25'N	164°24'W	5597	0-340	-	F	C	C	F	F	-	-	-	-	-	G	Quaternary/ ?	C/-	40	18	0-2, 246-248				
				340-430	-	F	C	F	-	F	-	-	Bedded	-	-	S								19	390-392, 418-420
				430-448	-	C	C	F	-	C	-	-	Bedded	-	-	S	?		41	20	440-442				
				448-858											C										
20PG	24°06'N	178°30'W	56-4	0-151	-	F	C	-	-	F	-	-	-	-	-									0-2, 149-151	
20P	24°06'N	178°30'W	5604	0-466	-	F	C	F	-	F	-	-	-	-	-	S								21	0-2, 250-252, 348-350
				466-471	C	-	C	C	-	C	-	-	-	-	-	S								22	470-472
				471-951											C										
21PG	28°59'N	168°55'E	5709	0-126	-	F	F	F	-	C	-	-	-	F	-		Quaternary							23	0-2, 124-126
21P	28°59'N	168°55'E	5709	0-95	-	F	C	F	F	C	-	-	-	F	-	G								24	0-2, 60-63
				95-541	-	-	C	C	-	F	1	20	-	-	-	S									200-202

21P	28°59'N	168°55'E	5709	541-729	-	C	F	-	F	-	-	Bedded	-	F		Cretaceous		42	25	543-545, 720-722
22PG	32°20'N	159°15'E	3869	0-36	C	C	-	-	C	F	-	Bedded	F	-	G	Quaternary	-			2-5
				36-79	C	F	-	-	C	F	-	-	-	C	-	S	Quaternary	-		50-52
				79-88	C	C	-	-	C	C	-	-	-	F	-		Quaternary	-		85-87
22P	32°20'N	159°15'E	3869	0-30	C	C	F	-	C	F	-	Bedded	F	-	G	Quaternary	-	26	0-2, 22-24	
				30-69	C	C	F	-	F	F	-	-	-	F	-	G	Quaternary	-		48-50, 60-62
				69-106	C	C	F	-	F	F	-	-	-	-	-	G	Quaternary	-		100-102
				106-488	C	C	-	-	C	F	-	Bedded	C	-	S	Quaternary	0/F	43	250-252, 485-487	
				488-811										C						
23PG	32°19'N	159°13'E	3470	0-12	C	C	-	-	F	F	-	-	-	F	-	G	Quaternary	-		2-4
				12-32	C	C	F	-	F	F	-	-	-	-	-	S	Quaternary	-	27	20-22
				32-81	C	C	F	-	C	F	-	-	-	F	-		Quaternary	-		78-79
23P	32°19'N	159°13'E	3470	0-17																
				17-120	C	C	-	-	C	F	-	-	-	F	-	G	Quaternary	-		17-19
				120-172	C	C	-	-	F	F	-	Bedded	F	-	G	Quaternary	-			135-137
				172-547	C	C	F	-	C	F	-	Bedded	F	-	S	Quaternary	-			180-182, 380-382, 540-542
				547-612	C	C	F	-	C	F	-	Bedded	F	-	S	Quaternary	-			560-562, 610-612
				612-1034										C						
24PG	31°54'N	157°08'E	3582	0-40														28		
24P	31°54'N	157°08'E	3582	0-60	C	F	-	-	C	C	I	40	Bedded	F	-	S	Quaternary	R	44	10-12, 58-60
				60-159	C	-	-	F	-	C	I	10	-	F	-		L. Miocene	-	45	110-112, 156-158
25G	31°54'N	157°19'E	3489	0-9	C	C	-	-	C	C	-	-	-	-	-		Quaternary	-		0-2
26G	31°51'N	157°21'E	3622	0-60	C	F	-	-	F	F	I	40	-	-	-		Quaternary	-		5-7, 53-55
28G	32°14'N	157°40'E	2858	0-10	C	F	-	-	F	-	-	-	-	F	-	G	Quaternary	-		0-2
				10-23	C	C	F	-	F	F	-	-	-	-	-	G	Quaternary	-		15-16

M I S S I N G

TABLE 1 (continued)

/12

EXPEDITION: SCAN					MISSING													Age			Additional notes	Sampled interval (cm)
Core number	Latitude	Longitude	Water depth (m)	Depth in core (cm)	Micro-fossils	Fish debris		Zeolites	Shards	Other mineral grains	Mn Nodules		Bedding (Bedded, graded or none)	Burrow mottling	Flow-in	Lower boundary (sharp or gradational)	Sediments	Reworked older forms	Footnotes			
						Calcareous	Siliceous				Number	Size (mm)										
28G	32°14'N	157°40'E	2858	23-42	C	C	F	F	C	F	-	-	-	F	-		Quaternary	-		41-43		
29aPG	33°23'N	153°50'E	5893	0-13	-	C	F	-	F	C	-	-	-	-	-	G	Quaternary	-		0-2		
				13-125	-	C	F	-	C	C	-	-	Bedded	F	-		Quaternary	-		123-125		
29aP	33°23'N	153°50'E	5893	0-7	-	C	F	-	F	C	-	-	-	-	-		Quaternary	-		0-2		
				7-143	-	C	F	-	C	C	-	-	Bedded	F	-		Quaternary	-		48-50, 141-143		
29bPG	33°16'N	153°44'E	5857	0-10	-	C	F	-	F	C	-	-	-	F	-	G	Quaternary	-		0-2		
				10-145	-	C	F	-	F	C	-	-	-	F	-		Quaternary	-		60-62, 142-144		
29bP	33°16'N	153°44'E	5857	0-7	-	C	F	-	C	C	-	-	-	-	-	G	Quaternary	-		0-2		
				7-155	-	C	F	-	C	C	-	-	Bedded	F	-	S	Quaternary	-		140-142		
				155-162	-	F	-	-	C	C	-	-	-	-	-	S		30		155-156		
				162-1118	-	C	F	-	C	C	-	-	Bedded	F	-		Quaternary	-		300-302		
33PG	21°24'N	142°39'E	4529	0-79	-	C	F	-	F	C	-	-	-	-	-	G	Quaternary	-		0-2		
				79-131	-	C	F	-	F	C	-	-	Bedded	-	-		Quaternary	-		129-131		
33P	21°24'N	142°39'E	4529	0-25																		
				25-65	-	C	F	-	F	C	-	-	-	-	-	G	Quaternary	-		25-27		
				65-150	-	C	F	-	C	C	-	-	Bedded	-	-	G	Quaternary	-	31	70-72		
				150-392	-	C	F	-	F	C	-	-	-	F	-	G	Quaternary	-	32	170-172, 310-312		
				392-597	-	C	F	-	F	C	-	-	-	F	-		Quaternary	-		450-452, 595-597		
39PG	17°54'N	141°07'E	4643	0-61	-	C	F	-	F	C	-	-	-	-	-		Quaternary	-	33	0-2, 60-61		
39P	17°54'N	141°07'E	4643	0-184	-	F	F	-	F	C	-	-	-	-	-					1-4, 182-184		

40PG	17°52'N	142°24'E	4046	0-47	C	C	F	-	F	C	-	-	-	F	-	G	Quaternary	-	0-2
				47-70	C	C	F	-	F	C	-	-	-	F	-	G			60
				70-102	C	C	F	-	F	C	-	-	-	F	-	G	Quaternary	-	70-72
				102-136	-	C	F	-	F	C	-	-	-	F	-	G			120
				136-147	C	F	F	-	C	C	-	-	-	F	-		Quaternary	-	145-147
40P	17°52'N	142°24'E	4046	0-114	C	F	F	-	C	C	-	-	Bedded	F	-	G	Quaternary	-	2-5, 110-112
				114-140	C	F	-	-	F	F	-	-	-	F	-	G			130
				140-164	C	F	F	-	F	C	-	-	-	F	-	G			150
				164-193	C	F	-	-	F	F	-	-	-	F	-	G			170
				193-410	C	F	F	-	C	C	-	-	Bedded	F	-	S	Quaternary		210-212, 390-392
				410-486											C				
41PG	17°48'N	143°41'E	4476	0-141	F	C	F	-	F	C	-	-	Bedded	-	-		Quaternary	-	0-2, 139-141
41P	17°48'N	143°41'E	4476	0-50	-	C	F	-	F	C	-	-	Bedded	-	-	G	Quaternary	-	1-3
				50-327	C	C	F	-	F	C	-	-	Bedded	F	-	S	Quaternary	-	140-142, 280-282
				327-362	-	C	F	-	F	C	-	-	-	-	-	S			340
				362-418	-	C	F	-	F	C	-	-	-	-	C	-	G		380
				418-658	F	C	F	-	F	C	-	-	Bedded	F	-		Quaternary	-	470-472, 656-658
44PG	17°33'N	144°22'E	4231	0-69	F	F	F	-	F	C	-	-	Bedded	-	-				34 0-2, 67-69
44P	17°33'N	144°22'E	4231	0-143	F	C	F	-	C	C	-	-	Bedded	F	-	G	Quaternary	-	35 2-4, 120-122
				143-150	-	C	F	-	F	C	-	-	-	-	-	S			149
				150-367	C	C	F	-	F	C	-	-	Bedded	F	-	G	Quaternary	-	35 310-312
				367-533	C	C	F	-	F	C	-	-	Bedded	F	-		Quaternary	-	35 490-492, 531-533
47G	16°58'N	145°17'E	3584	0-10	C	F	-	-	C	C	-	-					Quaternary	-	36
50G	14°00'N	145°45'E	3750	0-10	F	F	F	-	C	C	-	-	-	-	-		Quaternary	-	37 0-5, 8-10
52bPG	13°39'N	145°33'E	3030	0-18	C	C	F	-	C	C	-	-	-	-	-		Quaternary	-	16-18

TABLE 1 (continued)

/14

EXPEDITION: SCAN				MISSING										Age				Additional notes	Sampled interval (cm)
Core number	Latitude	Longitude	Water depth (m)	Depth in core (cm)	Micro-fossils		Fish debris	Zeolites	Shards	Other mineral grains	Mn Nodules		Bedding (Bedded, graded or none)	Burrow mottling	Flow-in	Lower boundary (sharp or gradational)	Sediments	Reworked older forms	Footnotes
					Calcareous	Siliceous					Number	Size (mm)							
55PG	9°53'N	151°35'E	5431	0-10	-	C	-	-	-	C	-	-	-	-	-	-	Quaternary	-	0-2
				10-138	-	F	F	F	-	C	-	-	Bedded	-	-	-	Quaternary	-	38 17-19, 70-72, 136-138
55P	9°53'N	151°35'E	5431	0-405	-	F	F	F	F	C	-	-	Bedded	-	-	-	Quaternary/?	-	39 0-2, 150-152, 403-405
57G	9°25'N	179°51'E	6056	0-30															
				30-187	-	C	F	C	-	F	-	-	-	F	-	-	Quaternary/Oligocene	C/F	46 40 30-32, 110-112, 185-187
58PG	9°19'N	179°51'E	6155	0-9	-	C	P	F	-	F	-	-	-	-	-	G	Quaternary	F	47 41 0-2
				9-116	-	C	F	F	-	F	-	-	-	F	-	-	Eocene	F	48 42 60-62, 114-116
58P	9°19'N	179°51'E	6155	0-128	F	C	F	F	-	F	-	-	Bedded	F	-	G	E. Miocene	C	49 0-2, 100
				128-161	C	C	-	F	-	F	-	-	Graded	F	-	S			43 150, 160-162
				161-190	F	C	F	C	-	F	-	-	-	F	-	G			162-164, 180
				190-230	C	F	-	-	-	F	-	-	Graded	F	-	S	E. Miocene		50 192-194
				230-256	F	C	F	F	-	F	-	-	-	F	-	S			231-233
				256-310	C	-	-	C	-	F	-	-	Graded	F	-	S	E. Miocene		51 280-282
				310-340	F	C	-	C	-	F	-	-	-	F	-	S			310-312
				340-506	C	F	-	C	-	F	-	-	Graded	F	-		E. Miocene		52 503-505
59PG	11°01'N	175°07'W	4814	0-8	C	C	F	-	-	F	4	≤10	-	F	-	G	Quaternary	-	3-5
				8-133	-	C	-	C	-	F	-	-	-	F	-		Quaternary/?	C/-	53 60-62, 130-133
59P	11°01'N	175°07'W	4814	0-4	C	C	-	-	-	F	4	≤10	-	-	-	S	Quaternary	-	2-4
				4-528	-	F	F	F	F	F	1	50	-	C	-	G	Quaternary/?	F/-	54 6-8, 70-72, 202-204, 350-352
				528-574	-	-	C	C	-	F	-	-	-	-	-				538-540, 572-574

61G	20°14'N	160°07'W	4602	0-85	-	C	F	-	F	C	-	-	-	-	-	-	Quaternary	-	2-4, 83-85
62G	16°59'N	155°04'W	4913	0-11	-	F	-	C	C	-	-	-	-	-	-	-	Quaternary	-	0-3
63G	15°00'N	155°00'W	5507	0-12	-	F	-	C	C	-	-	-	-	-	-	-	Quaternary	F 55	0-3
64G	11°00'N	154°58'W	5312	0-130	-	C	-	F	-	F	-	-	-	-	-	-	Quaternary/ Late Eocene	C 56	0-3, 60-62, 127-130
65G	5°04'N	155°00'W	4450	0-5	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	-	2-4
				5-38	C	C	-	-	-	-	-	-	-	-	-	-			25
				38-55	C	C	-	-	-	-	-	-	-	-	-	-			46
				55-77	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	F 57	60-62
				77-123	C	C	-	-	-	-	-	-	-	-	-	-			105
				123-131	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	F 58	126-130
66G	00°59'N	155°00'W	4759	0-2	C	C	-	-	-	-	-	-	-	-	-	-			0
				2-50	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	F 59	2-4
				50-59	C	C	-	-	-	-	-	-	-	-	-	-			54
				59-70	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	F 60	60-62
				70-101	C	C	-	-	-	-	-	-	-	-	-	-			76
				101-103	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	C 61	100-102
				103-125	C	C	-	-	-	-	-	-	-	-	-	-			120
				125-145	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	F 62	142-145
67G	02°27'S	155°02'W	4921	0-4	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	-	2-4
				4-32	C	C	-	-	-	-	-	-	-	-	-	-			25
				32-52	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	F 63	45, 50-52
				52-75	C	C	-	-	-	-	-	-	-	-	-	-			60
				75-132	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	F 64	80-82
				132-151	C	C	-	-	-	-	-	-	-	-	-	-			133, 148
				151-158	C	C	-	-	-	-	-	-	-	-	-	-	Quaternary	F 65	156-158

TABLE 1 (continued)

EXPEDITION: SCAN																	Age			Additional notes	Sampled interval (cm)
Core number	Latitude	Longitude	Water depth (m)	Depth in core (cm)	Micro-fossils		Fish debris	Zeolites	Shards	Other mineral grains	Mn Nodules		Bedding (Bedded, graded or none)	Burrow mottling	Flow-in	Lower boundary (sharp or gradational)	Sediments	Reworked older forms	Footnotes		
					Calcareous	Siliceous					Number	Size (mm)									
68G	02°26'S	155°03'W	4950	0-34	C	C	-	-	-	-	-	-	-	F	-	G	Quaternary	-		0-2	
				34-119	C	C	-	-	-	-	-	-	Bedded	F	-		Quaternary	F	66	70-72, 114-118	
69G	06°58'S	154°58'W	5205	0-97	-	C	C	C	-	-	-	-	-	-	-		Quaternary	-	45	0-2, 95-97	
70G	11°00'S	155°02'W	5513	0-82	-	F	-	C	-	F	-	-	-	-	-		Quaternary	-		0-2, 80-82	
71G	15°27'S	155°02'W	4663	0-121	-	F	F	F	-	C	-	-	-	-	-					0-2, 114-116	
72G	19°00'S	155°00'W	4605	0-136	F	-	F	C	-	F	-	-	-	-	-		Quaternary	-	46	0-2, 133-135	
73G	24°54'S	154°59'W	5007	0-124	-	F	F	C	-	-	-	-	-	-	-					0-2, 118-120	
74G	24°56'S	154°50'W	4721	0-130	C	F	F	C	-	-	-	-	-	-	-		Quaternary	-	47	2-4, 128-130	
76PG	6°31'S	136°01'W	4390	0-23	C	C	-	-	-	-	-	-	Bedded	-	-	G	Quaternary	-		0-2	
				23-31	C	C	-	-	-	-	-	-	-	F	-	S	Quaternary	F	67	28-30	
				31-68	C	F	-	-	F	F	-	-	-	C	-		Quaternary	C	68	38-40	
76P	6°31'S	136°01'W	4390	0-3	C	C	-	-	-	-	-	-	-	-	-	S	Quaternary	F	69	0-2	
				3-60	C	F	-	-	F	-	-	-	-	C	-		E. Miocene/ L. Oligocene	C	70	57-59	
77PG	12°25'S	134°09'W	4174	0-22	C	C	F	-	F	F	1	15	-	F	-	G	Quaternary	F	71	0-2	
				22-41	C	F	C	C	F	F	-	-	-	C	-	G	Quaternary	F	72	25-27	
				41-57	C	F	C	C	F	F	-	-	-	F	-	G	Quaternary	F	73	50-52	
				57-82	C	F	C	C	F	F	-	-	-	F	-	G	Quaternary	F	74	70-72	
				82-113	C	F	C	C	F	-	-	-	-	F	-		Quaternary	F	75	111-113	
78PG	12°15'S	134°19'W	4231	0-14	C	C	-	C	-	-	-	-	-	F	-	G	Quaternary	-		0-2	
				14-117	-	-	F	C	-	F	-	-	-	F	-					110-112	

78P	12°15'S	134°19'W	4231	0-3	C	F	C	-	-	-	-	-	-	F	-	G	Quaternary	-	0-3
				3-276	F	-	C	C	F	-	-	-	-	F	-	G			150-152
				276-345	C	-	C	F	-	-	-	-	-	F	-	G	M. Miocene	76 48	300-302
				345-372	C	F	C	C	-	F	-	-	-	F	-		E. Miocene	77	366-368
80G	24°53'S	143°27'W	4697	0-85	F	F	C	C	-	C	-	-	-	-	-				2-4, 84-85
81G	20°37'S	147°35'W	4569	0-92	F	F	F	C	-	F	-	-	-	-	-		Quaternary	-	0-2
82PG	0°27'N	133°16'W	4284	0-34	C	C	-	-	-	-	-	-	-	Bedded	C	-	G	Quaternary	2-4
				34-93	C	C	-	-	-	-	-	-	-	-	-	G	Quaternary	-	60-62
				93-139	C	C	-	-	-	-	-	-	-	-	-	C	Quaternary	-	137-139
MISSING																			
82P	0°27'N	133-16-W	4284	0-37	C	C	-	-	-	-	-	-	-	Bedded	F	-	G	Quaternary	37-39
				37-79	C	C	-	-	-	-	-	-	-	Bedded	C	-	S	Quaternary	83-85
				79-130	C	C	-	-	-	-	-	-	-	Bedded	C	-	S	Quaternary	
				130-426												C			
83PG	2°41'N	130°29'W	4410	0-22	C	C	-	-	-	-	-	-	-	-	F	-	G	Quaternary	2-4
				22-70	C	C	-	-	-	-	-	-	-	Bedded	F	-	G	Quaternary	50-52
				70-106	C	C	-	-	-	-	-	-	-	-	F	-	G	Quaternary	90-92
				106-149	C	C	-	-	-	-	-	-	-	-	C	-	G	Quaternary	120-122
				149-156											F	-			
VERY DISTURBED																			
83P	2°41'N	130°29'W	4410	0-108	C	C	-	-	-	-	-	-	-	-	F	-	G	Quaternary	108-110
				108-135	C	C	-	-	-	-	-	-	-	-	-	-			
				135-175	C	C	-	-	-	-	-	-	-	Bedded	C	-	G		144
				175-293	C	C	-	-	-	-	-	-	-	Bedded	C	-	G	Quaternary	180-182
				293-308	C	C	-	-	-	-	-	-	-	-	C	-	G	Quaternary	300-302
				308-340	C	C	-	-	-	-	-	-	-	Bedded	F	-	S	Quaternary	340
				340-550												C			

TABLE 1 (continued)

EXPEDITION: SCAN					Micro-fossils		Fish debris	Zeolites	Shards	Other mineral grains	Mn Nodules		Bedding (Bedded, graded or none)	Burrow mottling	Flow-in	Lower boundary (sharp or gradational)	Age			Additional notes	Sampled interval (cm)	
Core number	Latitude	Longitude	Water depth (m)	Depth in core (cm)	Calcareous	Siliceous					Number	Size (mm)					Sediments	Reworked older forms	Footnotes			
84PG	2°28'N	121°26'W	4478	0-12	C	C	-	-	-	-	-	-	-	-	-	G	Quaternary	-		0-2		
				12-55	C	C	-	-	-	-	-	-	-	Bedded	C	-	G	Quaternary	-		40-42	
				55-90	C	C	F	-	-	-	-	-	-	Bedded	F	-	G				65-67	
				90-128	C	C	-	-	-	F	-	-	-	Bedded	C	-	G			49	100-102	
				128-152	C	C	F	-	-	-	-	-	-	Bedded	F	-		Quaternary	-		149-151	
84P	2°28'N	121°26'W	4478	0-8	C	C	-	-	-	-	-	-	-	-	F	-	G	Quaternary	-		1-3	
				8-25	C	C	-	-	-	-	-	-	-	Bedded	F	F	G	Quaternary	-		18-20	
				25-48	C	C	-	-	-	-	-	-	-	-	F	F	G				35-37	
				48-56	C	C	F	-	-	-	-	-	-	-	F	F	G				53-55	
				56-80	C	C	F	-	-	F	-	-	-	-	C	F	G				70-72	
				80-303	C	C	-	-	-	-	-	-	-	Bedded	C	F	S	Quaternary	-	50	275-277	
				303-391											C							
85PG	2°26'N	106°56'W	3675	0-34	C	C	-	-	-	-	-	-	-	Bedded	F	-	G	Quaternary	-		2-4	
				34-41	C	C	-	-	-	F	-	-	-	-	F	-		Quaternary	-		39-41	
85P	2°26'N	106°56'W	3675	0-3	C	C	-	-	-	-	-	-	-	-	F	-	G	Quaternary	-		0-2	
				3-15	C	C	-	-	-	-	-	-	-	-	F	-	S					
				15-63	C	C	-	-	-	-	-	-	-	Bedded	F	-	S					
				63-580	C	C	-	-	-	F	-	-	-	Bedded	C	-		Quaternary	-		190-192, 578-580	
86PG	3°30'N	99°28'W	3441	0-29	C	C	-	-	-	F	-	-	-	Bedded	-	-	S	Quaternary	-		2-4	
				29-43	C	C	-	-	-	F	F	-	-	-	-	-		Quaternary	-		40-42	

86P	3°30'N	99°28'W	3441	0-20	C	C	-	-	F	F	-	-	-	-	-	S	Quaternary	-		2-5
				20-80	C	C	-	-	-	F	-	Bedded	F	-	S	Quaternary	-		20-22	
				80-134	C	C	-	-	-	F	-	-	-	C	-	S	Quaternary	-		110-112
				134-382	C	C	-	-	F	-	-	-	-	F	-		Quaternary	-		380-382
87PG	4°16'N	95°39'W	3441	0-24	C	C	F	-	F	F	-	-	-	F	-	G	Quaternary	-		2-4
				24-56								-	-	C	-	G				
				56-117	C	C	F	-	C	F	-	-	-	C	-	G	Quaternary	-		70-72
				117-150	C	C	-	-	F	F	-	-	-	F	-		Quaternary	-		147-149
87P	4°16'N	95°39'W	3441	0-44	C	C	-	-	F	F	-	-	Bedded	-	-	S	Quaternary	-		0-2
				44-494											C					
88PG	4°02'N	85°38'W	2880	0-12	C	C	-	-	F	F	-	-	Bedded	-	-	G	Quaternary	-		2-4
				12-96	C	C	-	-	C	F	-	-	Bedded	-	-		Quaternary	-		94-96
88P	4°02'N	85°38'W	2880	0-2	C	C	-	-	F	F	-	-	-	-	-	G	Quaternary	-		0-2
				2-25	C	C	-	-	C	F	-	-	Bedded	-	-	S	Quaternary	-		20-22
				25-287											C					
89G	2°06'N	86°02'W	3059	0-4	C	C	-	-	-	F	-	-	-	-	-	G	Quaternary	-		0-2
				4-153	C	C	-	-	C	F	-	-	Bedded	C	-		Quaternary	-		150-152
90G	0°39'N	86°07'W	3704	0-6	C	C	F	-	F	-	-	-	-	-	-	S	Quaternary	-		0-2
				6-84	C	C	-	-	C	F	-	-	Bedded	F	-		Quaternary	-		40-42, 80-82
91G	0°25'S	86°19'W	2697	0-4	C	C	-	-	F	F	-	-	-	-	-		Quaternary	-		2-4
				4-168	C	C	-	-	F	F	-	-	-	-	C	-	Quaternary	F 78	166-168	
92G	4°59'S	88°04'W	3686	0-181	C	C	-	-	F	F	-	-	Bedded	F	-		Quaternary	-		0-8, 158-160
93G	10°01'S	90°05'W	3891	0-177	C	C	F	-	F	F	-	-	-	-	C	-	Quaternary	-	51	0-2, 60-62, 119-121
94PG	7°26'S	102°38'W	3990	0-38	C	C	F	-	-	F	-	-	-	-	F	-	Quaternary	F 79	2-4	
				38-46	C	C	-	-	F	F	-	-	-	-	F	-	Quaternary	-		43-45

TABLE 1 (continued)

EXPEDITION: SCAN				Core number	Latitude	Longitude	Water depth (m)	Depth in core (cm)	Micro-fossils		Fish debris	Zeolites	Shards	Other mineral grains	Mn Nodules		Bedding (Bedded, graded or none)	Burrow mottling	Flow-in	Lower boundary (sharp or gradational)	Age			Additional notes	Sampled interval (cm)
Calcareous	Siliceous	Number	Size (mm)						Sediments	Reworked older forms					Footnotes										
				94P	7°26'S	102°38'W	3990	0-42			C	C	F	-		F	-	-	-	Bedded	F	-	S	Quaternary	-
				42-128	C	C	-	-	-	-	-	-	-	-	Bedded	C	-	G	Quaternary/ L. Miocene	F/-	80	44-46, 100			
				128-155	C	F	-	F	-	-	-	-	-	-	-	C	-	S	L. Miocene	-	81	150-152			
				155-310												C									
95G	5°01'S	114°04'W	4189	0-49	C	C	-	-	-	-	-	-	-	-	-	F	-	G	Quaternary	F	82	2-4			
				49-78	C	C	F	-	-	-	-	-	-	-	-	C	-	G	Quaternary	-		70-72			
				78-122	C	C	F	-	-	-	-	-	-	-	-	C	-		Quaternary	F	83	119-121			
96PG	1°29'N	113°52'W	3856	0-25	C	C	-	-	-	-	-	-	-	-	-	-	F	-	G	Quaternary	F	84	2-4		
				25-120	C	C	-	-	-	-	-	-	-	-	-	-	F	-		Quaternary	-		60-62, 118-120		
96P	1°29'N	113°52'W	3856	0-7	C	C	-	-	-	-	-	-	-	-	-	-	F	-	G	Quaternary	-		0-2		
				7-30	C	C	-	-	-	-	-	-	-	-	-	-	F	-	G				17		
				30-50	C	C	-	-	-	-	-	-	-	-	-	-	F	-	G	Quaternary	-		38-40		
				50-571	C	C	-	-	-	-	-	-	-	-	-	Bedded	F	-		Quaternary	-		150-152, 560-562		
97G	8°07'N	113°54'W	3975	0-10	C	C	F	-	-	-	-	-	-	-	-	-	-	G	Quaternary	-		0-2			
				10-47	C	C	-	-	F	F	-	-	-	-	-	-	F	-	G			30			
				47-98	C	C	F	-	F	F	-	-	-	-	-	-	F	-	G	Quaternary	-		55-57		
				98-148	C	C	-	-	F	-	-	-	-	-	-	-	F	-							
MISSING																									
98G	16°27'N	109°17'W	3474	0-17																					
				17-159	-	C	F	-	C	C	1	2	-	-	-	F	-				Quaternary	-		17-19, 100-102	
MISSING																									
99G	16°03'N	111°03'W	3200	0-41																					

MISSING

MISSING

99G	16°03'N	111°03'W	3200	41-111	-	C	-	-	C	-	-	-	-	F	-	Quaternary	-	52	41-43, 109-111
100G	16°19'N	106°26'W	3436	0-24	-	C	-	-	F	C	-	-	-	F	-	Quaternary	-		0-2
				24-93	-	C	-	-	C	C	-	-	-	F	-	Quaternary	-		30-32, 91-93
106G	20°40.3'N	105°25.4'W	617	0-55	-	C	-	-	F	C	-	-	-	F	-	Quaternary	-		0-2
				55-85	C	F	-	-	F	C	-	-	-	Bedded	F	Quaternary	-	53	83-85

Footnotes on Age Assignments

- 1 6P, 335-336cm
Pliocene (*D. brouweri* Zone, *D. tamalis* Subzone) *D. tamalis*,
D. brouweri, *D. quinqueramus*, *D. intercalaris*, *D.*
asymmetricus, *D. decorus*, *D. surculus*, *C. macintyre*

- 2 6P, 385-387cm
Pliocene (*D. brouweri* Zone, *D. tamalis* Subzone) *D. tamalis*,
D. brouweri, *D. surculus*, *D. decorus*, *D. asymmetricus*

- 3 9aP, 7-9cm
Middle Eocene (*P. chalara* Zone) *P. goetheana* (R), *P. chalara*, *P.*
mitra, *S. triconiscus*, *P. trachodes*, *P. ampla*, *T.*
triacantha, *E. fistuligerum*, *P. sinuosa*, *L. vesper-*
tilio, *T. mongolfieri*

- 4 9aP, 96-98cm
Middle Eocene? *T. mongolfieri*, *T. triacantha*

- 5 9bPG, 0-3cm
Middle Eocene *E. fistuligerum*, *L. vespertilio*, *T. triacantha*, *T.*
mongolfieri

- 6 9bP, 11-13cm
Middle Eocene? *T. triacantha*, *T. mongolfieri*

- 7 9bP, 218-220cm
Middle Eocene? *T. triacantha*

- 8 10PG, 3-5cm
Quaternary *T. trachelium*

Oligocene *L. elongata*, *A. gracilis*, *L. angusta*, *T. tuberosa*,
T. annosa

Eocene *C. turris*, *L. aristotelis* group, *P. chalara*, *E.*
fistuligerum, *P. diamesa*, *T. triacantha*, *P. papalis*,
T. mongolfieri, *L. vespertilio*

10PG, 80-82 and 148-150cm
Oligocene (*L. elongata* Zone) *L. elongata*, *T. tuberosa*, *D.*
ateuchus, *A. gracilis*, *T. annosa*, *C. gravida*, *T.*
tricer

Eocene *P. goetheana*, *T. tetracantha*, *P. chalara*, *P. mitra*,
S. triconiscus, *T. triacantha*, *E. fistuligerum*, *L.*
vespertilio, *T. mongolfieri*

- 9 10P, 54-56cm
Oligocene (*L. elongata* Zone) *L. elongata*, *T. annosa*, *D. ateuchus*,
D. riedeli, *T. tuberosa*, *T. tricer*

Eocene *P. goetheana*, *E. lagena*, *E. fistuligerum*, *L. vespertilio*,
T. mongolfieri, *T. triacantha*

- 10 10P, 200-202cm
Oligocene *A. gracilis*, *T. tuberosa*, *C. gravida*
Eocene *C. turris*, *P. goetheana*, *T. triacantha*, *P. diamesa*,
T. mongolfieri
- 11 10P, 290-292cm
Oligocene *L. elongata*, *A. gracilis*
Eocene *P. goetheana*, *T. mongolfieri*, *T. triacantha*
- 10P, 388-390cm
Oligocene *D. ateuchus*
- 12 10P, 409-411cm and 520-522cm
Oligocene (*L. elongata* Zone) *C. pegetrum* (C), *D. papilio* (C),
L. elongata (R), *T. annosa*, *D. circulus*, *D. ateuchus*,
C. prismaticus, *T. tuberosa*, *A. gracilis*
Eocene *P. chalara*, *T. triacantha*, *P. ampla*, *L. vespertilio*,
T. mongolfieri
- 13 11PG, 0-2cm
Quaternary *T. trachelium*
Oligocene *D. papilio*, *C. pegetrum*, *T. tuberosa*, *D. ateuchus*,
L. elongata, *C. gravida*, *A. gracilis*
Eocene *P. chalara*, *T. triacantha*, *E. fistuligerum*, *T. mongolfieri*
- 11PG, 80-82 and 165-167cm
Oligocene (Zone unknown; see additional footnote 13)
L. angusta, *A. gracilis*, *T. tuberosa*, *T. triceros*,
C. gravida, *C. robusta* (R), *T. annosa*, *L. crux*
Eocene *T. tetracantha*, *P. goetheana*, *L. aristotelis* group,
P. chalara, *P. mitra*, *E. lagena*, *S. triconiscus*,
T. triacantha, *E. fistuligerum*, *T. mongolfieri*,
P. sinuosa, *L. vespertilio*, *P. papalis*
- 14 11P, 7-9 and 340-342cm
Oligocene (Zone unknown; see additional footnote 13)
T. tuberosa, *T. triceros*, *A. gracilis*, *T. annosa*,
D. quadripes
Eocene *P. goetheana*, *P. chalara*, *E. fistuligerum*, *L. vespertilio*,
P. sinuosa, *T. triacantha*, *T. mongolfieri*
- 15 11P, 420-422 and 512cm
Oligocene (Zone unknown; see additional footnote 13)
T. tuberosa, *T. triceros*, *D. ateuchus*, *D. quadripes*,
T. annosa
Eocene *P. goetheana*, *T. tetracantha*, *E. fistuligerum*, *L. vespertilio*,
P. sinuosa, *T. triacantha*, *T. mongolfieri*

- 16 11P, 638-640cm
Oligocene (*L. elongata* Zone) *L. elongata* (F), *D. ateuchus*, *D. pseudopapilio*, *D. spinosa*, *T. tuberosa*, *A. gracilis*, *C. pegetrum*
Eocene *T. tetracantha*, *S. triconiscus*, *E. fistuligerum*, *L. vespertilio*, *T. triacantha*, *T. mongolfieri*
- 17 11P, 920-922cm
Oligocene (*L. elongata* Zone) *C. pegetrum*, *C. robusta*, *D. ateuchus*, *L. elongata*, *A. gracilis*, *T. annosa*, *D. papilio*, *D. forcipata*
- 18 12PG, 2-4 and 33-35cm
Quaternary (2-4cm only) *O. tetrathalamus* (R), *S. tetras* (R), no *P. prismatium*
Oligocene *L. elongata*, *D. ateuchus*, *C. robusta*, *D. papilio*, *A. gracilis*, *C. pegetrum*
Eocene *P. goetheana*
- 19 12P, 0-2cm
Oligocene (*L. elongata* Zone) *L. elongata*, *D. ateuchus*, *D. forcipata*, *C. pegetrum*, *T. annosa*, *C. robusta*, *D. papilio*, *T. tuberosa*
Eocene *E. fistuligerum*, *T. mongolfieri*
- 20 12P, 32-34, 143-145 and 230-232cm
Oligocene (*L. elongata* Zone) *C. robusta*, *D. forcipata*, *C. tubarius*, *C. prismaticus*, *D. ateuchus*, *L. elongata*, *T. annosa*, *A. gracilis*, *C. pegetrum*, *D. papilio*
Eocene *L. aristotelis* group, *T. mongolfieri*
- 21 12P, 286, 375 and 438cm
Oligocene (*L. elongata* Zone) *L. elongata*, *C. robusta*, *D. ateuchus*, *D. papilio*, *T. annosa*, *C. prismaticus*, *D. praeforcipata*, *A. gracilis*, *C. pegetrum*, *D. forcipata*
- 22 12P, 590-592cm
Oligocene (*D. ateuchus* Zone) *D. ateuchus*, *T. annosa*, *C. pegetrum*, *D. papilio*, *A. gracilis*, *C. prismaticus*, *C. robusta*
Eocene *T. triacantha*
- 23 13PG, 0-2cm
Quaternary *T. trachelium*, *P. hertwigii*
Miocene *C. cornuta*
Oligocene *T. annosa*, *C. robusta*
13PG, Catcher
Quaternary *T. trachelium*, *P. hertwigii*
Miocene *O. antepenultimus*, *C. laticonus*, *C. cornuta*, *C. mammifer*, *S. wolffii*, *C. violina*, *L. stauropora*, *C. virginis*
Oligocene *T. annosa*, *C. robusta*, *A. gracilis*

- 24 13P, 0-2 and 101-103cm
Quaternary *T. trachelium*, *P. hertwigii*
Miocene *O. hughesi*, *C. laticonus*, *C. virginis*, *S. wolffii*,
C. cornuta, *C. tubarius*, *C. prismaticus*
Oligocene *A. gracilis*, *C. robusta*, *T. tuberosa*
- 25 13P, 108-110 and 146-147cm
Quaternary *T. trachelium*, *P. hertwigii*
Pliocene *S. peregrina*
Miocene *O. antepenultimus*, *O. hughesi*, *O. penultimus*, *C. laticonus*, *C. costata*, *L. stauropora*, *C. violina*,
C. tubarius, *C. cornuta*, *C. tetrapera*, *C. virginis*
Oligocene *T. tuberosa*
Eocene *T. mongolfieri*
- 13P, 296-297 and 446-447cm
Pliocene (*P. prismatium* Zone) *P. prismatium* (C)
Miocene *O. penultimus*, *O. antepenultimus*, *C. laticonus*,
O. hughesi, *C. virginis*, *C. cornuta*, *L. stauropora*,
L. parkerae, *D. alata*, *C. costata*, *L. elongata*, *D. forcipata*
Eocene *T. mongolfieri*
- 26 13P, 480-482 and 596-597cm
Pliocene (*P. prismatium* Zone) *P. prismatium* (C), *S. peregrina* (596-597cm sample)
Miocene *O. antepenultimus*, *O. penultimus*, *O. hughesi*, *C. petterssoni*, *D. alata*, *C. violina*, *C. prismaticus*,
D. dentata, *C. virginis*, *C. costata*, *C. tetrapera*,
C. tubarius, *L. parkerae*, *C. cornuta*, *L. elongata*
Oligocene *C. robusta*, *T. tuberosa*, *T. annosa*, *C. pegetrum*
Eocene *T. mongolfieri*
- 27 13P, 759-760cm
Pliocene (*P. prismatium* Zone) *P. prismatium* (C), *S. peregrina* (C)
Miocene *O. penultimus*, *O. hughesi*, *O. antepenultimus*, *C. laticonus*, *C. petterssoni*, *C. virginis*, *C. cornuta*,
C. tubarius, *C. costata*, *C. tetrapera*
Oligocene *T. annosa*
- 28 13P, 909-910cm
same as 27, plus *T. tuberosa* (L. Eocene-E. Oligocene), and
C. violina (E. Miocene)

- 29 13P, 927-929cm
Pliocene (*S. pentas* Zone) *P. prismatium* (C), *S. peregrina* (C), *S. pentas* (R)
Miocene *O. penultimus*, *O. antepenultimus*, *O. hughesi*, *C. laticonus*, *C. virginis*, *C. costata*
Oligocene *D. ateuchus*
- 13P, 1054-1055cm
Pliocene (*S. pentas* Zone) *S. pentas* (F), *S. peregrina* (C), *P. prismatium*
Miocene *O. penultimus*, *O. hughesi*, *O. antepenultimus*, *C. laticonus*, *C. cornuta*, *C. tubarius*, *C. virginis*
Oligocene *T. tuberosa*
- 30 14PG, 0-2, 80-82 and 176-178cm
Quaternary *P. hertwigii*, *T. trachelium*
Miocene *O. antepenultimus*, *O. hughesi*, *C. costata*, *C. cornuta*, *C. tetrapera*, *C. violina*, *C. virginis*, *C. tubarius*
Oligocene *T. tuberosa*
Eocene *T. mongolfieri*
- 31 14P, 0-2cm
Quaternary *P. hertwigii*
Miocene *O. hughesi*, *C. cornuta*, *C. virginis*
- 32 14P, 80-82cm
Quaternary *P. hertwigii*
Miocene *O. antepenultimus*, *O. hughesi*, *C. laticonus*, *C. virginis*, *C. cornuta*, *D. dentata*
Oligocene *T. tuberosa*, *C. robusta*
- 14P, 230-232cm
Pliocene (*P. prismatium* Zone) *P. prismatium* (C)
Miocene *O. hughesi*, *C. tetrapera*, *C. costata*, *C. cornuta*, *C. virginis*
Oligocene *T. tuberosa*
- 33 14P, 381-383cm
Pliocene (*P. prismatium* Zone) *P. prismatium*
Miocene *O. antepenultimus*, *O. hughesi*, *C. laticonus*, *C. costata*, *C. cornuta*, *D. dentata*, *C. violina*, *L. elongata*
Oligocene *T. tuberosa*, *A. gracilis*
Eocene *T. triacantha*
- 14P, 532-534cm
Pliocene (*S. pentas* Zone) *P. prismatium*, *S. peregrina*
Miocene *O. penultimus*, *O. antepenultimus*, *O. hughesi*, *C. laticonus*, *C. cornuta*, *C. costata*, *C. tubarius*
Oligocene *A. gracilis*

- 34 14P, 696-698cm
Pliocene (*S. pentas* Zone) *P. prismatium*, *S. peregrina*
Miocene *O. antepenultimus*, *O. hughesi*, *C. mammifer*, *C. violina*, *C. tubarius*, *C. costata*, *C. virginis*, *C. cornuta*, *L. elongata*
Oligocene *T. tuberosa*
Eocene *T. mongolfieri*
- 35 14P, 750-752cm
Pliocene (*S. pentas* Zone) *P. prismatium*, *S. peregrina* (C), *S. pentas* (R)
Miocene *O. antepenultimus*, *O. hughesi*, *C. laticonus*, *L. elongata*, *C. virginis*
Oligocene *D. papilio*
- 36 14P, 846-848 and 996-998cm
Pliocene (*S. pentas* Zone) *S. pentas*, *S. peregrina* (C), *P. prismatium*
Miocene *O. penultimus*, *O. antepenultimus*, *O. hughesi*, *C. laticonus*, *C. petterssoni*, *C. costata*, *L. elongata*, *C. virginis*, *C. cornuta*
Oligocene *T. tuberosa*
- 37 15P, 71-73, 221-223 and 405cm
Quaternary *T. trachelium* (C)
(no discoasters at 405cm)
15P, 415-417cm
Pliocene (*P. prismatium* Zone) *P. prismatium*
- 38 15P, 461-463 and 710-712cm
Pliocene (*P. prismatium* Zone) *P. prismatium*, *S. pentas* (R)
Miocene *C. costata*
- 39 16PG, 0-2cm
Quaternary? *O. tetrathalamus* (R)
Eocene *L. aristotelis* group, *P. chalara*, *E. fistuligerum*, *E. lagna*, *P. papalis*, *P. sinuosa*, *T. triacantha*, *T. mongolfieri*, *L. vespertilio*, *L. archaea*
16PG, 60-62 and 113-115cm
non-fossiliferous except for fish debris
- 40 16P, 0-2cm
Quaternary *T. trachelium*
Eocene *E. fistuligerum*, *T. triacantha*, *P. sinuosa*, *P. papalis*, *L. vespertilio*, *T. mongolfieri*

- 41 16P, 440-442cm (poor preservation of radiolarians, age not determined)
Eocene *L. archaea*, *Dorcadospyris* sp.
- 42 21P, 540-542, 543-545, 650-652 and 720-722cm
Cretaceous *Dictyomitra* sp. (R), *Theoperids* cf. *Sciadiocapsa*
(all radiolarians altered to chert)
- 43 22P, 250-252cm
Quaternary *T. trachelium*
- 22P, 400-402, 485-487cm
Quaternary *T. trachelium*
- Pliocene (*D. brouweri* Zone, *D. tamalis* Subzone) *D. tamalis*,
D. decorus, *D. pentaradiatus*, *D. surculus*, *D. variabilis*,
D. asymmetricus, *D. brouweri*, *C. macintyreii*
- 44 24P, 10-12cm
Quaternary (none present)
- Cretaceous *Dictyomitra* sp. altered to chert
- 24P, 58-60cm
Quaternary *T. trachelium*
- Cretaceous *Dictyomitra* sp. (rare)
- 45 24P, 110-112, 134-136, 144-146, 156-158cm
Late Miocene (*D. quinquerramus* Zone, *C. primus* Subzone) *C. primus*,
D. decorus (R), *T. rugosus*, *D. quinquerramus*, *D.*
variabilis (C), *D. brouweri*, *D. surculus*, *D. penta-*
radiatus, *D. challengerii*
- 46 57G, 30-32cm
Quaternary *T. trachelium*
- Miocene *O. penultimus*, *D. simplex*, *C. cornuta*
- Oligocene *D. papilio*, *A. gracilis*
- Eocene *T. tetracantha*, *L. aristotelis* group, *E. fistuligerum*,
T. triacantha, *S. triconiscus*, *P. diamesa*, *T. mongol-*
fieri, *B. clinata*
- 57G, 110-112cm
Miocene *D. simplex*
- Oligocene *T. triceros*, *D. ateuchus*, *D. quadripes*, *T. annosa*
- Eocene *P. papalis*, *L. aristotelis* group, *T. bromia*, *T. tri-*
acantha, *T. mongolfieri*
- 57G, 184-186cm
Oligocene *C. milowi*, *D. ateuchus*
- Eocene *C. turris*, *T. mongolfieri*

- 47 58PG, 0-2cm
Quaternary *T. trachelium*
Miocene *C. costata*
Eocene *S. triconiscus*, *L. aristotelis* group, *T. mongolfieri*
- 48 58PG, 60-62 and 114-116cm
Eocene *E. fistuligerum*, *T. mongolfieri*, *L. vespertilio*,
L. archaea (all crystobalized)
Cretaceous *Dictyomitra* or *Amphipyndax* sp. (chertified)
- 49 58P, 0-2cm
Early Miocene *C. cornuta*, *C. virginis*, *D. forcipata*
Oligocene *D. quadripes*, *T. tuberosa*
Eocene *T. tetracantha*, *T. bromia*, *L. aristotelis* group,
E. fistuligerum, *T. triacantha*, *P. mitra*, *T. mongolfieri*
- 50 58P, 192-194cm
Early Miocene (*S. belemnus* Zone or *D. druggii* Zone) *T. milowii*, *T. carinatus*, *D. moorei*, *D. deflandrei*, *D. druggii*,
C. miopelagicus, *D. variabilis*, *S. moriformis*
(most discoasters overgrown)
- 51 58P, 280-282cm
Early Miocene *D. deflandrei*, *T. carinatus*, *S. moriformis*,
D. variabilis (most discoasters overgrown)
- 52 58P, 503-505cm
Early Miocene (*S. belemnus* Zone) *D. deflandrei*, *T. milowii*, *T. carinatus*
D. druggii (R), *D. variabilis*, *S. belemnus*
(most discoasters overgrown)
- 53 59PG, 60-62cm
Quaternary *O. tetrathalamus*
Eocene *P. trachodes*, *T. tetracantha*, *T. mongolfieri*
59PG, 130-133cm
No age diagnostic radiolarians present
- 54 59P, 70-72cm
Quaternary *T. trachelium*
Eocene *P. trachodes*, *T. triacantha*
59P, 202-204cm
Quaternary *T. trachelium*
Eocene *P. sinuosa*, *E. fistuligerum*, *T. triacantha*
59P, 350-352cm
No age diagnostic radiolarians present

- 55 63G, 0-3cm
 Quaternary *O. tetrathalamus*
 Eocene *L. vespertilio*, *T. triacantha*, *T. anaclasta*,
 T. mongolfieri, *P. sinuosa*
- 56 64G, 0-3, 62-64, 127-130cm
 Quaternary *O. tetrathalamus* (F) (0-3cm sample only)
 Late Eocene (*T. tetracantha* Zone) *T. triceros*, *T. tetracantha*,
 C. turris, *L. aristotelis* group, *P. goetheana*
 Middle Eocene *P. trachodes*, *P. mitra*, *P. chalara*, *S. triconiscus*,
 P. ampla, *P. sinuosa*, *P. diamesa*, *L. vespertilio*,
 E. fistuligerum, *E. lagena*, *T. triacantha*, *T. anaclasta*,
 T. mongolfieri, *P. striata*, *L. archaea*
- 57 65G, 60-62cm
 Quaternary *P. hertwigii* (F)
 Pliocene *P. prismatium* (R)
 Miocene *C. virginis*, *S. delmontensis*, *C. tetrapera*, *C. cornuta*
 Oligocene *C. robusta*, *T. tuberosa*, *T. annosa*
 Eocene *B. clinata*, *L. archaea*
- 58 65G, 126-130cm
 Quaternary *P. hertwigii*
 Miocene *C. virginis*, *C. tetrapera*, *L. elongata*, *C. cornuta*,
 C. violina
- 59 66G, 2-4cm
 Quaternary *P. hertwigii*, *T. trachelium*
 Pliocene-
 Miocene *D. brouweri* (R), *D. surculus* (R)
 (rare overgrown discoasters)
- 60 66G, 60-62cm
 Quaternary *T. trachelium*, *P. hertwigii*
 Pliocene *S. pentas* (R)
 Miocene *C. tetrapera* (rare overgrown discoasters)
- 61 66G, 100-102cm
 Quaternary *P. hertwigii*, *T. trachelium*
 Pliocene *P. prismatium*, *O. penultimus*
 Miocene *S. peregrina*, *O. antepenultimus*, *O. hughesi*, *C.*
 laticonus, *C. petterssoni*, *C. mammifer*, *C. virginis*,
 C. robusta, *C. tubarius*, *L. elongata*
 Oligocene *A. gracilis*
 Eocene *L. aristotelis* group, *T. tetracantha*, *E. fistuligerum*,
 P. sinuosa, *T. triacantha*

- 62 66G, 142-145cm
 Quaternary *P. hertwigii*, *T. trachelium*
 Pliocene-
 Miocene *D. brouweri* (rare, mostly overgrown, discoasters)
- 63 67G, 50-52cm
 Quaternary *T. trachelium*, *P. hertwigii*
 Miocene-
 Pliocene *D. quinqueramus*, *D. variabilis*
 (rare, poorly preserved, discoasters)
- 64 67G, 80-82cm
 Quaternary *P. hertwigii*, *T. trachelium*
 Miocene *C. cornuta*
 Oligocene *T. tuberosa*
- 65 67G, 156-158cm
 Quaternary *P. hertwigii*
 Pliocene-
 Miocene *D. brouweri*
 (rare discoasters)
 Miocene *S. delmontensis*
- 66 68G, 70-72, 114-118cm
 Quaternary *T. trachelium*, *P. hertwigii*
 Pliocene *P. prismatium* (R at 70-72cm, F at 114-118cm)
 S. pentas (114-118cm)
 Miocene *S. peregrina*
 Oligocene *A. gracilis*
- 67 76PG, 28-30cm
 Quaternary *T. trachelium*, *P. hertwigii*
 Pliocene-
 Miocene *D. variabilis*
 (most discoasters overgrown)
 Miocene *S. peregrina*
 Oligocene *D. ateuchus*
- 68 76PG, 38-40cm
 Quaternary *T. trachelium*
 Pliocene-
 Miocene *D. variabilis*
 (most discoasters overgrown)
- 69 76P, 0-2cm
 Quaternary *T. trachelium*, *P. hertwigii*
 Pliocene *S. pentas*
 Pliocene-
 Miocene *D. variabilis*
 (most discoasters overgrown)
 Miocene *Dorcadospyrus* sp.

- 70 76P, 57-59cm
Early Miocene- (T. carinatus Zone) T. carinatus (C), S. conicus,
Late Oligocene D. deflandrei, C. miopelagicus, D. variabilis
(most discoasters overgrown)
- 71 77PG, 0-2cm
Quaternary P. hertwigii, T. trachelium
Pliocene-
Miocene (rare overgrown discoasters)
- 72 77PG, 25-27cm
Quaternary C. cristatus
Pliocene- D. variabilis
Miocene (rare overgrown discoasters)
- 73 77PG, 50-52cm
Quaternary C. cristatus (C)
Pliocene C. rugosus (R)
Pliocene- D. variabilis
Miocene (rare overgrown discoasters)
- 74 77PG, 70-72cm
Quaternary C. cristatus (C)
Pliocene C. rugosus (R)
Pliocene-
Miocene (rare overgrown discoasters)
- 75 77PG, 111-113cm
Quaternary C. cristatus (R)
Pliocene- D. variabilis
Miocene (few overgrown discoasters)
- 76 78P, 300-302cm
Middle Miocene (S. heteromorphus Zone) S. heteromorphus, D. exilis,
D. deflandrei, D. variabilis, D. aulakos
- 77 78P, 366-368cm
Early Miocene (S. belemnos or H. ampliapertura Zone) D. deflandrei,
5-rayed D. deflandrei, D. c. f. D. variabilis, T. milowii,
D. divaricatus, C. miopelagicus, C. floridanus, D.
aulakos, D. exilis, D. moorei, D. braarudii, S.
moriiformis
- 78 91G, 166-168cm
Quaternary P. hertwigii
Pliocene D. surculus (R), D. asymmetricus (R)
- 79 94PG, 2-4cm
Quaternary T. trachelium, P. hertwigii
Pliocene- D. broweri
Miocene (R)

- 80 94P, 44-46cm
 Quaternary *T. trachelium*
 Miocene *O. antepenultimus*, *S. peregrina*, *O. penultimus*,
 C. petterssoni, *L. elongata*, *D. loeblichii*, *D.*
 neohamatus, *D. berggrenii*, *D. brouweri*, *D.*
 variabilis, *D. neorectus*, *D. pansus*, *D. bellus*,
 D. moorei, *D. surculus*
- 94P, 100cm
 Late Miocene (*D. neohamatus* Zone, *D. bellus* Subzone) *D. quin-*
 queramus, *D. variabilis* (C), *D. bellus*(C) ,
 D. pansus, *T. rugosus*, *C. macintyreii*, *D. pentaradiatus* (R)
- 81 94P, 150-152cm
 Late Miocene (*D. neohamatus* Zone, *D. bellus* Subzone) *D. quin-*
 queramus, *D. variabilis* (C), *D. braarudii*, *D. bellus*,
 D. loeblichii, *D. brouweri*, *D. moorei*, *D. pansus*
- 82 95G, 2-4cm
 Quaternary *T. trachelium*, *P. hertwigii*
 Pliocene *C. rugosus* (R), *discoasters* (R)
- 83 95G, 119-121cm
 Quaternary *P. hertwigii*, *T. trachelium*
 Pliocene-
 Miocene *S. peregrina* (R), *D. variabilis* (R)
- 84 96PG, 2-4cm
 Quaternary *T. trachelium*, *P. hertwigii*
 Pliocene-
 Miocene *D. brouweri* (R), *D. variabilis* (R)

Additional Footnotes

- 1 This bed is more sandy than the over- and underlying material, and similar to the other beds recorded as graded.
- 2 Only one sample (590-592cm) in this interval had fragments of radiolarian skeletons. These were poorly preserved robust forms.
- 3 Core 2PG, approximately 45cm long, fell out of corer when brought aboard ship, and was subsequently stored in 3 boxes. Accordingly, the length of the intervals of this core are approximate and the degree of burrowing, nature of basal contact and degree of flow-in could not be detected.
- 4 Radiolaria are fairly common in the 0-2cm sample, but absent in the deeper samples of this interval. Similarly, the nannoplankton are fairly common in the top sample, but are much rarer in the lower samples.
- 5 The number and preservation of radiolaria decrease with depth in this interval.
- 6 This interval contains some thin (≤ 1 cm), dark layers rich in carbonaceous (?) matter.
- 7 The lower boundary is disturbed so its nature could not be determined.
- 8 The number of Mn micronodules increases with depth, and zeolites appear with depth in this interval.
- 9 The top 40cm of this interval contain no calcareous microfossils, but poorly preserved foram fragments and nannoplankton are present lower in the core. Radiolaria are poorly preserved at the top and disappear with depth.
- 10 The nature of the upper and lower boundaries of this interval suggest that this may be a turbidite layer.
- 11 Fish debris decreases in abundance from the top to bottom of this interval. Poorly preserved, robust radiolarians are present at the bottom, but there are no siliceous microfossils at the top.
- 12 Number and preservation of radiolaria decrease with depth from common and well preserved at the top to rare and poorly preserved at the bottom. Zeolites increase in size and number with depth.
- 13 Early Oligocene assemblage containing radiolarians no younger than *T. tuberosa* Zone (at least down to 512cm) overlies Late Oligocene-Early Miocene *L. elongata* Zone (at 638cm) indicating Late or post-Oligocene erosion and redeposition of the older material. Turbidite sequences are not readily apparent. The interval 461-512cm is missing.

- 14 Reworked older microfossils are very rare in the 0-2cm sample, and much more abundant in the lower sample.
- 15 Calcareous microfossils common but poorly preserved in the 0-2cm sample and not present in the samples from lower in the core.
- 16 Turbidite beds are common in this interval, characterized by basal layers with common, poorly preserved foram fragments grading up into sediments containing less coarse material.
- 17 Micro fragments ($\sim 100\mu$) of chert present, concentration increasing with depth in core. Radiolarians present in 0-2cm interval, but not in deeper samples.
- 18 Age determined by 0-2cm sample. Radiolarians are much less abundant and were not identified in the 246-248cm sample. Chert fragments present, increase in concentration with depth.
- 19 Sieved portion consists almost entirely of fish debris in the 418-420cm sample.
- 20 This interval has relatively well indurated brown claystone, as well as interbedded 1-2mm thick layers of white sediment and claystone (porcelanite). Many siliceous spines, which have not been common in the intervals above, are very abundant. Chert fragments common.
- 21 The only siliceous microfossils present in this interval are very few unidentifiable sponge spicules in the 0-2cm sample. Manganese micronodules appear in the 350-352cm sample and below.
- 22 Silicified foram tests are abundant.
- 23 Siliceous microfossils present in the 0-2cm sample but not below. Zeolites present in the lower samples but not in 0-2cm.
- 24 Small fragments of chert and manganese micronodules present in the 60-62cm sample, and below.
- 25 Manganese micronodules become less abundant with depth in this interval. Radiolarians are most abundant in the lowest sample, 720-722cm. They are all altered to chert.
- 26 Glass shards much more common in the 22-24cm sample than in the 0-2cm sample. Coccospheres abundant in the 22-24cm sample.
- 27 Well rounded piece of tuff, 1cm in diameter, at 25-26cm.
- 28 24PG fell out of core liner. Sediment packed into plastic container. Looks like 0-60cm interval of 24P.
- 29 There is a good progression of alteration of glass shards in this core from pure, unaltered glass at the top to more and more altered, and finally unrecognizable, alteration products at 110-112cm.

- 30 The coarse fraction of this sample consists almost entirely of glass shards.
- 31 This interval and the one above appear to have unusually high water content, and unusually high concentrations of diatoms (primarily *Ethmodiscus rex*). Some of the beds, less than 1cm thick, in this interval are an unusual yellowish-green color.
- 32 The abundances of glass shards and diatoms are much less in the lower sample of this interval, while the number of other mineral grains in the coarse fraction is greater.
- 33 Siliceous microfossils in the lower sample are not well preserved.
- 34 Calcareous nannofossils are common in the 67-69cm sample, and not present in the 0-2cm sample. Radiolaria are common in the 0-2cm sample but much less abundant in the 67-69cm sample.
- 35 This interval contains thin (≈ 1 cm) layers of sand with sharp basal contacts. They are probably turbidites.
- 36 This core is stored in a plastic box. The top, bottom and sampled interval cannot be determined.
- 37 This core was broken into 3 sections (0-5cm, 5-approx. 8cm, and catcher), and stored in a plastic box. Top, bottom and sampled interval cannot be determined within a section, and the total length of the core is not accurately known.
- 38 Diatoms and radiolarians are common and well preserved at the top of this interval, but only poorly preserved fragments of radiolarians and sponge spicules are present at 70-72cm and 136-138cm. Zeolites are present only in the two lower sample intervals.
- 39 Siliceous microfossils are present only in the uppermost sample (0-2cm), which is Quaternary. The other samples were nonfossiliferous, hence age is not known.
- 40 Radiolarians are most common and best preserved in the uppermost sample. Micronodules of chert are present, but not common.
- 41 Cristobalized radiolarians present.
- 42 Most of the Eocene radiolarians have altered to cristobalite, and the rare recognizable Cretaceous radiolarians have altered to chert. Other chert micronodules are present.
- 43 Radiolarians in the 0-2cm sample are fairly well preserved, while those from the lower samples of the core are altering to cristobalite and are poorly preserved. Chert micronodules are present in the lower samples.

- 44 Radiolarian abundance decreases with depth in this interval, and zeolite abundance increases.
- 45 Preservation and numbers of radiolarians and fish debris decrease with depth in the core.
- 46 Calcareous nannofossils are common in the upper part of the core, but decrease in abundance and are absent at the base of the core. Zeolites increase in abundance with depth in the core.
- 47 Calcareous and siliceous microfossils are "common" and "few", respectively, at the surface and decrease to "few" and "none" at the bottom of the core.
- 48 Some of the fish debris in this interval is being replaced by calcite. Shallow water indicators are present: echinoid spines and benthic forams (e.g., *Quinqueloculina*).
- 49 A cristobalite micronodule is present.
- 50 This interval is a bedded series of two types of sediment which are distinguished by color (brown and beige) and probably indicate a difference in CaCO_3 content. These two kinds of beds are differentiated and described separately in 84PG.
- 51 The numbers of calcareous and siliceous microfossils decrease with depth in the core from common in the 0-2cm sample to none and few, respectively, in the 119-121cm sample. Fish debris is relatively more abundant at depth.
- 52 Numbers and preservation of siliceous microfossils decrease considerably with depth in this core.
- 53 Several graded beds, each no thicker than 1cm, occur in this interval. Common, shallow water benthonic foraminifera, mollusc fragments, echinoid spines, and other shallow water constituents are present.

TABLE 2

Radiolarian species considered in this report

<i>Artophormis gracilis</i>	<i>Pterocanium prismatium</i>
<i>Buryella clinata</i>	<i>Pterocorys hertwigii</i>
<i>Calocyclus turris</i>	<i>Sethocytris triconiscus</i>
<i>Calocyclus costata</i>	<i>Spongaster pentas</i>
<i>robusta</i>	<i>Stichocorys delmontensis</i>
<i>virginis</i>	<i>peregrina</i>
<i>Cannartus laticonus</i>	<i>wolffii</i>
<i>mammifer</i>	<i>Theocampe mongolfieri</i>
<i>petterssoni</i>	<i>Theocorys anacasta</i>
<i>prismaticus</i>	<i>Theocorythium trachelium</i>
<i>tubarius</i>	<i>Theocyrtis annosa</i>
<i>violina</i>	<i>tuberosa</i>
<i>Centrobotrys gravida</i>	<i>Thyrsocyrtis bromia</i>
<i>Cyclampteryum milowi</i>	<i>tetracantha</i>
<i>pegetrum</i>	<i>triacantha</i>
<i>Cyrtocapsella cornuta</i>	<i>Tristylospyris tricerus</i>
<i>tetrapera</i>	
<i>Dorcadospyris alata</i>	
<i>ateuchus</i>	
<i>circulus</i>	
<i>dentata</i>	
<i>forcipata</i>	
<i>papilio</i>	
<i>praeforcipata</i>	
<i>pseudopapilio</i>	
<i>quadripes</i>	
<i>riedeli</i>	
<i>simplex</i>	
<i>spinosa</i>	
<i>Eusyringium fistuligerum</i>	
<i>lagena</i>	
<i>Liriospyris parkerae</i>	
<i>stauropora</i>	
<i>Lithocytris archaea</i>	
<i>vespertilio</i>	
<i>Lithocyclia angusta</i>	
<i>aristotelis</i> group	
<i>crux</i>	
<i>Lychnocanoma elongata</i>	
<i>Ommatartus antepenultimus</i>	
<i>hughesi</i>	
<i>penultimus</i>	
<i>tetrathalamus</i>	
<i>Phormocyrtis striata</i>	
<i>Podocyrtis ampla</i>	
<i>chalara</i>	
<i>dianesa</i>	
<i>goetheana</i>	
<i>mitra</i>	
<i>papalis</i>	
<i>sinuosa</i>	
<i>trachodes</i>	
	Calcareous nannofossil species
	<i>Ceratolithus cristatus</i>
	<i>primus</i>
	<i>rugosus</i>
	<i>Coccolithus miopelagicus</i>
	<i>Cyclicargolithus floridanus</i>
	<i>Cyclococcolithina macintyreii</i>
	<i>Discoaster asymmetricus</i>
	<i>aulakos</i>
	<i>bellus</i>
	<i>berggrenii</i>
	<i>braarudii</i>
	<i>broweri</i>
	<i>challengeri</i>
	<i>decorus</i>
	<i>deflandrei</i>
	<i>divaricatus</i>
	<i>druggii</i>
	<i>exilis</i>
	<i>loeblichii</i>
	<i>moorei</i>
	<i>neohamatus</i>
	<i>neorectus</i>
	<i>pansus</i>
	<i>pentaradiatus</i>
	<i>quinqueringus</i>
	<i>surculus</i>
	<i>tamalis</i>
	<i>variabilis</i>
	<i>Helicopontosphaera ampliapertura</i>
	<i>Reticulofenestra umbilica</i>

Sphenolithus belemnos
conicus
heteromorphus
moriformis

Triquetrorhabdulus carinatus
milowii
rugosus

MGG15015008

UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

SCAN EXPEDITION
March 1969 - February 1970

LIST OF CORES AND DREDGE HAULS

Copied from Shipboard Logs

Depths Corrected by Matthews' Tables

R/V ARGO

Revised, December 1974

SCAN 1

- SCAN 1PG 8-9 March 1969, 2205-0025 hrs.; 37°09.7'N, 127°36.3'W; depth 4745 m. No core. Flat bottom. DSD Site 1.
- SCAN 1P Simultaneously with 1PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 161 cm; Section 5, 150 cm; Section 6, 68 cm; Section 7, 150 cm; Section 8, 45 cm. Top 457 cm is green-grey clay with interbedded dark grey terrigenous sands, typical turbidite characteristics, minor tan-brown clay. From 457 cm to the bottom is homogeneous green-grey clay, possibly some clastic silt. The last 91 cm grades from the green hue to light-medium grey. Upper 457 cm disturbed.
- SCAN 2PG 13 March 1969, 0326-0545 hrs.; 39°27.7'N, 127°32.0'W; depth 4255 m; core length approx. 45 cm which fell out of corer; placed in plastic boxes. Soft, plastic clay, greyish brown over dark greenish grey. Flat bottom. DSD Site 2.
- SCAN 2P Simultaneously with 2PG. Core length: Section 1 (bottom of core), 151 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 160 cm; Section 5, 150 cm; Section 6, 150 cm; Section 7, 59 cm. A 4-cm section between Sections 3 & 4 placed in box. 0-1 cm is very soft greyish-brown clay; at 58-59, 208-209, 358-359, 518-519 and 672-673 cm is dark green-grey plastic clay; at 822-823 cm dark grey, plastic clay streaked or layered; 973-974 cm slightly brittle dark greenish grey clay; 987-988 cm dark green-grey plastic clay, with a 2 cm fragment of brittle olive grey clay.
- SCAN 4PG 16 March 1969, 0136-0324 hrs.; 40°41.9'N, 127°29.2'W; depth 3229 m; core length 149 cm. Upper 6 cm greyish brown sandy clay, remainder olive grey plastic clay. Flat bottom. DSD Site 4.
- SCAN 4P Simultaneously with 4PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 151 cm; Section 4, 154 cm; Section 5, 150 cm; Section 6, 150 cm; Section 7, 90 cm; Section 8, 9 cm. Between Sections 4 and 5 is a 6-cm piece put in a box. A 132-cm gap between Sections 7 and 8. 0-1 cm soft, sandy olive-grey clay, streaked with greyish brown; 9-10, 98-99, 248-249, 398-399, 558-559 cm is plastic, olive-grey clay; 709-710, 559-560, 1009-1010 cm is dark greenish grey, plastic clay.
- SCAN 5 PG 18 March 1969, 2219-2353 hrs.; 41°02.3'N, 130°07.3'W; depth 3268 m; core length 146 cm. 0-18 cm soft, dark yellowish brown clay; 18-146 cm plastic, light olive-grey clay. Flat bottom. DSD Site 5.
- SCAN 5P Simultaneously with 5PG. Core length: Section 1 (bottom of core), 149 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 99 cm; Section 5, 150 cm; Section 6, 151 cm; Section 7, 25 cm. Air gaps in Sections 4 and 7, sucked-in center in Section 3 and below. 0-1 cm soft, dark yellowish brown clay; 24-25 and 175-176 cm, plastic, light greenish gray clay; 574-575, 724-725, 873-874, 890-891 cm, slightly brittle, light bluish grey silty clay.

- SCAN 6PG 22 March 1969, 1655-1925 hrs.; 41°03.7'N, 140°34.9'W; depth 4544 m; core length 171 cm. Soft, pale yellowish brown clay followed by brittle, pale yellowish brown clay. Abyssal hills. DSD Site 6.
- SCAN 6P Simultaneously with 6PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 161 cm; Section 5, 140 cm. Intervals 0-12, 12-25 and 165-175 cm are in boxes. 0-1 cm soft, pale yellowish brown clay; 164-165 cm brittle, pale yellowish brown clay; 336-337 cm brittle foraminiferal, very pale orange clay; 485-486 cm dark yellowish brown, brittle clay; 635-636 and 785-786 and 799-800 cm firm, greyish brown clay. Top 25 cm collapsed; nodules dragged down to 267 cm; bottom sucked in at least up to 780 cm.
- SCAN 7PG 26 March 1969, 1239-1920 hrs.; 33°03.6'N, 140°00.6'W; depth 5025 m; core length 226 cm. Dark yellowish brown stiff clay. Dummy liner was 0-53 cm and approx. 18 cm of mud was lost from the bottom; therefore, the interval 53-54 cm represents an 18 cm gap. The standard liner is 53-226 cm. Abyssal hills. DSD Site 7.
- SCAN 7P Simultaneously with 7PG. Core length: Section 1 (bottom of core), 151 cm; Section 2, 151 cm; Section 3, 150 cm; Section 4, 104 cm; Section 5, 55 cm; Section 6, 150 cm; Section 7, 150 cm; Section 8, 38 cm. 0-1 cm, 37-38 cm and 187-188 cm dark yellowish brown, stiff clay; 337-338, 496-497, 646-647, 797-798 and 948-949 cm are grayish brown.
- SCAN 8PG * 14 April 1969, 2135-2350 hrs.; 28°11.6'N, 140°00.6'W; depth 4794 m; core length 119 cm. Abyssal hills. DSD Site 8.
- SCAN 8P * Simultaneously with 8PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 57 cm. Light brown at top grading to dark brown clay at bottom.
- SCAN 9PGa * 18 April 1969, 1535-1745 hrs.; 19°52.1'N, 139°51.6'W; depth 5176 m; core length 24 cm. Unconsolidated mud breccia on top of reddish brown clay. Abyssal hills. DSD Site 9.
- SCAN 9Pa * Simultaneously with 9PGa. Core length: Section 1 (bottom of core), 86 cm; Section 2, 14 cm. Mixed, reddish brown to tan clay.
- SCAN 9PGb * 18 April 1969, 2024-2245 hrs.; 19°56.0'N, 139°52.0'W; depth 5186 m; core length 169 cm. Abyssal hills.
- SCAN 9Pb * Simultaneously with 9PBb. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 163 cm; Section 5, 15 cm; Section 6, 151 cm; Section 7, 150 cm; Section 8, 78 cm. Section 5 and a 4-cm section (379-383 cm) are in boxes. Dark brown clay.
- SCAN 10PG * 22 April 1969, 1509-1715 hrs.; 13°52.1'N, 140°10.3'W; depth 4864 m; core length 172 cm. DSD Site 10.

* Times noted for cores 8-29 and 62-75 are probably local. All others are GMT.

- SCAN 10P * Simultaneously with 10PG. Core length: Section 1, (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 149 cm; Section 5, 151 cm; Section 6, 114 cm. Upper 530 cm is white calcareous ooze, followed by red clay. From 204 cm to 265 cm there are lumps of white, red and brown clay.
- SCAN 11PG * 22-23 April 1969, 2340-0145 hrs.; 13°54.1'N, 140°14.8'W; depth 4866 m; core length 173 cm. DSD Site 10.
- SCAN 11P * Simultaneously with 11PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 121 cm; Section 5, 51 cm (missing); Section 6, 152 cm; Section 7, 142 cm; Section 8, 167 cm; Section 1 is white calcareous ooze; Section 2 is brown mud with calcareous lumps; Sections 3 and 4 are brown, oozy mud; mixed calcareous and mud lumps in Sections 7 and 8.
- SCAN 12PG * 23 April 1969, 0456-0706 hrs.; 13°55.0'N, 140°15.2'W; Depth 4842 m; core length 36 cm. Calcareous lumps present. DSD Site 10.
- SCAN 12P * Simultaneously with 12PG. Core length: Section 1 (bottom of core), 118 cm; Section 2, 19 cm; Section 3, 152 cm; Section 4, 60 cm; Section 5, 92 cm; Section 6, 141 cm; Section 7, 130 cm; Section 8, 15 cm. Sections 1, 2 and 3, white calcareous layer; Sections 4-8 contain calcareous lumps in red clay. Section 1 is in two boxes.
- SCAN 13PG * 26 April 1969, 1825-2045 hrs.; 6°19.2'N, 140°19.0'W; depth 5059 m; core length 112 cm, plus catcher. Core catcher forced upward in barrel; all sediment in barrel below catcher is stored with catcher sample. DSD Site 24.
- SCAN 13P * Simultaneously with 13PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 163 cm; Section 5, 150 cm; Section 6, 150 cm; Section 7, 150 cm; Section 8, 146 cm. Siliceous ooze, light brown above to darker brown at bottom, with large white casts (?).
- SCAN 14PG * 27 April 1969, 0450-0645 hrs.; 6°24.8'N, 140°19.7'W; depth 4968 m; core length 181 cm. Upper part of core is calcareous, bottom is non-calcareous. DSD Site 24.
- SCAN 14P * Simultaneously with 14 PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 164 cm; Section 5, 151 cm; Section 6, 151 cm; Section 7, 151 cm; Section 8, 81 cm. Brown mud with white, non-calcareous lumps.
- SCAN 15PG * 29 April 1969, 0527-0732 hrs.; 4°27.6'N, 140°14.8'W; depth 4383 m; core length 144 cm. DSD Site 25.
- SCAN 15P * Simultaneously with 15PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 73 cm; Section 5, 90 cm; Section 6, 150 cm; Section 7, 150 cm; Section 8, 73 cm. White calcareous mud. Throughout Section 7 are distinct foraminiferal layers.

* Times noted for cores 8-29 and 62-75 are probably local. All others are GMT

MS01 301 5118

SCAN 4

- SCAN 16PG * 13 May 1969, 2036 hrs.; 16°25.0'N, 164°23.5'W; depth 5597 m; core length 115 cm. DSD Site 22.
- SCAN 16P * Simultaneously with 16PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 150 cm; Section 5, 10 cm; Section 6, 139 cm; Section 7, 109 cm. Brown clay above to dark brown at bottom.
- SCAN 17G * 16 May 1969, 0252-0322 hrs.; approx. 19°26'N, 169°00'W; depth 1754 m. No core. Horizon Guyot. DSD Site 11.
- SCAN 18G * 16 May 1969, 0327-0355 hrs.; approx. 19°26'N, 169°00'W; depth 1754 m. No core. Horizon Guyot. DSD Site 11.
- SCAN 19PG * 16 May 1969, 1007-1105 hrs.; 19°16'N, 169°05'W; depth 1490 m. No core, empty barrel. Horizon Guyot. DSD Site 11.
- SCAN 19P * Simultaneously with 19PG. No core; small amount of foraminiferal sand. Horizon Guyot.
- SCAN 20PG * 21 May 1969, 1335-1616 hrs.; 24°06.0'N, 178°30.0'W; depth 5604 m; core length 163 cm. Red clay. Abyssal plains. DSD Site 12A.
- SCAN 20P * Simultaneously with 20PG. Core length: Section 1 (bottom of core), 29 cm; Section 2, 33 cm; Section 3, 150 cm; Section 4, 150 cm; Section 5, 145 cm; Section 6, 135 cm; Section 7, 134 cm; Section 8, 143 cm; Section 9, 32 cm. Sections 1-5 foraminiferal; Section 1 is buff sand grading downward to red clay; dark brown flocculated mud in Section 6. Catcher sample indicates extreme slippage and turning of sediments. Abyssal plains.
- SCAN 21PG * 25 May 1969, 1428-1651 hrs.; 28°58.7'N, 168°55.2'E; depth 5741 m; core length 127 cm.
- SCAN 21P * Simultaneously with 21PG. Core length: Section 1 (bottom of core), 151 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 139 cm; Section 5, 31 cm; Section 6, 108 cm. Sections 1 and 2 are red clay with chert fragments.
- SCAN 22PG * 30 May 1969, 0959-1135 hrs.; 32°20.4'N, 159°14.9'E; depth 3679 m; core length 91 cm. East flank of Shatsky Rise. DSD Site 13.
- SCAN 22P * Simultaneously with 22PG. Core length: Section 1 (bottom of core), 148 cm; Section 2, 147 cm; Section 3, 146 cm; Section 4, 147 cm; Section 5, 27 cm; Section 6, 150 cm; Section 7, 148 cm; Section 8, 46 cm. Sections 6, 7 and 8 are buff-tan calcareous ooze; Sections 3, 4, and 5 are light brown and more compacted; Sections 1 and 2 are darker brown, compacted calcareous clay-ooze.

* Times noted for cores 8-29 and 62-75 are probably local. All others are GMT.

- SCAN 23PG * 30 May 1969, 1452-1622 hrs.; 32°18.8'N, 159°13.1'E; depth 3470 m; core length 84 cm. Brown to grey calcareous ooze. East flank of Shatsky Rise. DSD Site 13.
- SCAN 23P * Simultaneously with 23PG. Core length: Section 1 (bottom of core), 166 cm; Section 2, 147 cm; Section 3, 149 cm; Section 4, 149 cm; Section 5, 147 cm; Section 6, 111 cm; Section 7, 165 cm. Calcareous (foraminiferal) ooze throughout.
- SCAN 24PG 31 May 1969, 0902-1040 hrs.; 31°54.3'N, 157°08.2'E; depth 3582 m. Core fell out of liner when removed from barrel; placed in plastic box. Calcareous ooze. Southwest flank of Shatsky Rise. DSD Site 13.
- SCAN 24P * Simultaneously with 24PG. Core length: Section 1 (bottom of core), 42 cm; Section 2, 117 cm. Brown siliceous ooze. Black rock (basalt?) in catcher. Core barrel bent like a pretzel, perhaps having hit "basement".
- SCAN 25G * 31 May 1969, 1345-1447 hrs.; 31°53.9'N, 157°14.8'E; depth 3489 m; core length (remaining in liner) 11 cm. Remainder of core fell out of liner when extruded and was placed in plastic box. Foraminiferal ooze. Shatsky Rise. DSD Site 13.
- SCAN 26G * 31 May 1969, 1553-1654 hrs.; 31°51.5'N, 157°21.2'E; depth 3622 m; core length 64 cm. Light brown calcareous ooze. Shatsky Rise. DSD Site 13.
- SCAN 27G * 1 June 1969, 0743-0827 hrs.; 32°37.0'N, 158°14.2'E; depth 2644 m; core length approx. 10 cm. Foraminiferal sand with one brown rock fragment (coral?). Shatsky Rise. DSD Site 13.
- SCAN 28G * 2 June 1969, 0052-0140 hrs.; 32°13.9'N, 157°39.8'E; depth 2858 m; core length 45 cm. Shatsky Rise. DSD Site 14.
- SCAN 29PGa * 5 June 1969, 1013-1241 hrs.; 33°23.2'N, 153°45.9'E; depth 5893 m; core length 127 cm. Abyssal plains. DSD Site 15.
- SCAN 29Pa * Simultaneously with 29PGa. Core length: 150 cm. Brown siliceous ooze. Most of core barrel was filled with water on this first attempt.
- SCAN 29PGb * 5 June 1969, 1914-2210 hrs.; 33°16.4'N, 153°43.7'E; depth 5857 m; core length 147 cm. Brown siliceous ooze.
- SCAN 29Pb * Simultaneously with 29PGb. Core length: Section 1 (bottom of core), 151 cm; Section 2, 151 cm; Section 3, 151 cm; Section 4, 150 cm; Section 5, 12 cm; Section 6, 151 cm; Section 7, 150 cm; Section 8, 150 cm; Section 9, 52 cm. Compacted brown clay throughout.

* Times noted for cores 8-29 and 62-75 are probably local. All others are GMT.

- SCAN 30PG 16 June 1969, 1025-1215 hrs.; 30°05.4'N, 140°04.1'E; depth 3417 m. No core: nose piece torn off. Bonin Trough.
- SCAN 30P Simultaneously with 30PG. No core. Basalt found in weight stand and glass imbedded in lead. Total sample to Dan Karig.
- SCAN 31PG 17 June 1969, 0155-0345 hrs.; 28°59.3'N, 141°31.3'E; depth 3950 m. No core. Bonin Trough.
- SCAN 31P Simultaneously with 31PG. Approx. 1 gram from catcher and around piston. Barrel bent. Light grey calcareous mud, fragments of pumice, magnetite and glass.
- SCAN 32G 17-18 June 1969, 2325-0030 hrs.; 27°02.5'N, 141°46.5'E; depth 3812 m. Red clay, foraminiferal ooze and black material, volcanic glass fragments. In two plastic boxes. Bonin Trough.
- SCAN 33PG 19 June 1969, 1814-2030 hrs.; 21°24.5'N, 142°37.0'E; depth 4529 m; core length 131 cm. Red clay.
- SCAN 33P Simultaneously with 33PG. Core length: Section 1 (bottom of core), 138 cm; Section 2, 151 cm; Section 3, 148 cm; Section 4, 150 cm. Red clay. Barrel collapsed on Section 1.
- SCAN 34D 20 June 1969, 0435-0830 hrs.; 20°53.8'N, 142°39.2'E; depth 3112-2854 m; 5 Kg rock dredge sample. Fragments of subangular pumice, red clay in catcher. Ridge.
- SCAN 35D 20 June 1969, 0900-1215 hrs.; 20°54.7'N, 142°31.9'E; depth 2602-2010 m; 4 gunny sacks and 4 tin cans. Angular pumice; a large sample of calcareous ooze; Mn-stained ooze, rounded pellets 5-10 cm in diameter, and a few glass sponges.
- SCAN 36D 20 June 1969, 1411-1615 hrs.; 20°49.9'N, 142°31.1'E; depth 1818-1803 m. Pumice fragments.
- SCAN 39PG 23 June 1969, 1048-1240 hrs.; 18°01.2'N, 141°05.5'E; depth 4668 m; core length 69 cm. Red clay. DSD Site 17.
- SCAN 39P Simultaneously with 39PG. Core length: Section 1 (bottom of core), 125 cm; Section 2, 112 cm. Section 1 in 2 plastic boxes. Radiolarian clay-ooze and fragments of pumice. Steel chips were mixed into Section 1 due to barrel being cut.
- SCAN 40PG 24 June 1969, 0036-0224 hrs.; 17°51.4'N, 142° 23.9'E; depth 4074 m; core length 148 cm. Buff-brown sediment.
- SCAN 40P Simultaneously with 40PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 110 cm; Section 4, 76 cm. Foraminiferal clay. Top 100 cm of core liner collapsed.
- SCAN 41PG 24 June 1969, 1154-1340 hrs.; 17°47.1'N, 143°41.8'E; depth 4474 m; core length 138 cm. Siliceous ooze.

- SCAN 41P Simultaneously with 41PG. Core length: Section 1 (bottom of core), 149 cm; Section 2, 149 cm; Section 3, 150 cm; Section 4, 160 cm; Section 5, 50 cm. Bottom section is radiolarian ooze; 360-410 cm is grey volcanic glass shards; remainder of core is red clay ooze and more compact.
- SCAN 42D 25 June 1969, 0437-0900 hrs.; 17°49.4'N, 144°47.2'E; depth 3577-3178 m. Basalt and volcanic tuff.
- SCAN 44PG 26 June 1969, 0518-0705 hrs.; 17°34.1'N, 144°22.3'E; depth 4231 m; core length 70 cm. Red clay and volcanic material.
- SCAN 44P Simultaneously with 44PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 83 cm. Siliceous red clay with volcanic fragments.
- SCAN 45D 26 June 1969, 1117-1500 hrs.; 17°33.5'N, 144°52.6'E-17°34.1'N, 144°54.0'E; depth 4571-3950 m; 2 gunny sacks, 2 tin cans and one plastic container. Serpentinite, basalt, glass, peridotite and sedimentary tuffs.
- SCAN 46D 27 June 1969, 1532 hrs.; 17°10.3'N, 144°49.8'E-17°10.6'N, 144°50.7'E; depth 4180-3322 m. Pillow lavas with plagioclase phenocrysts.
- SCAN 47G 27 June 1969, 2239-2342 hrs.; 16°59.0'N, 145°13.9'E; depth 3595 m. Approx. 10 cm of brown-grey, fine-grained volcanic sand.
- SCAN 48D 28 June 1969, 1536-2033 hrs.; 16°16.5'N, 146°59.0'E-16°20.3'N, 146°57.6'E; depth 4977-4456 m. Approx. 5 Kg. salmon-colored, fine-grained, consolidated (?) sediment blocks, plus some sediment in catcher.
- SCAN 49D 29 June 1969, 0414-0800 hrs.; 15°46.8'N, 147°09.1'E-15°46.3'N, 147°11.1'E; depth 4396-3796 m. A few small, lithified sedimentary pebbles.
- SCAN 50G 30 June 1969, 0435-0540 hrs.; 13°59.5'N, 145°45.3'E; depth 3706 m. Hard, compact red clay followed by grey foraminiferal clay.
- SCAN 51G 5 July 1969, 2217-2258 hrs.; 13°55.3'N, 145°21.2'E; depth 2194 m. No core. DSD Site 18A.
- SCAN 52PGa 6 July 1969, 0655-0805 hrs.; 13°39.2'N, 145°33.0'E; depth 3012 m; small catcher sample only. Foraminiferal sand. DSD Site 18A.
- SCAN 52Pa Simultaneously with 52PGa. Small catcher sample only. Foraminiferal sand.
- SCAN 52PGb 6 July 1969, 0829-0940 hrs.; 13°39.2'N, 145°33.0'E; depth 3041 m; core length 18 cm. Buff foraminiferal ooze.
- SCAN 52Pb Simultaneously with 52PGb. No sample, no penetration.
- SCAN 55PG 10 July 1969, 0520-0720 hrs.; 10°02.5'N, 151°33.8'E; depth 5427 m; core length 142 cm. Red clay. DSD Site 19.

- SCAN 55P Simultaneously with Scan 55PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 151 cm; Section 3, 104 cm. Red clay.
- SCAN 57G 18-19 July 1969, 2222-0020 hrs.; 9°24.9'N, 179°50.7'E; depth 6062 m; core length 157 cm. Lost top 30 cm as core was removed from weight stand. Brown clay with manganese fragments and lighter sediment in balls.
- SCAN 58PG 19 July 1969, 0410-0635 hrs.; 9°19.8'N, 179°54.0'E; depth 6146 m; core length 119 cm. Brown clay.
- SCAN 58P Simultaneously with 58PG. Core length: Section 1 (bottom of core), 152 cm; Section 2, 153 cm; Section 3, 153 cm; Section 4, 48 cm. Top 150 cm, red clay; 150-354 cm, white foraminiferal ooze; bottom (Section 1), interbedded brown and white clay with 3-cm brown nodules.
- SCAN 59PG 20 July 1969, 2101-2300 hrs.; 11°00.0'N, 175°10.6'W; depth 4849 m; core length 122 cm. Top of flat ridge.
- SCAN 59P Simultaneously with 59PG. Core length: Section 1 (bottom of core), 122 cm; Section 2, 150 cm; Section 3, 151 cm; Section 4, 151 cm. Brown mud grading to darker towards the bottom. Top three-quarters of core contained lumps of buff material (sandstone?).
- SCAN 60PG 23 July 1969, 0626-0815 hrs.; 15°19.3'N, 169°33.5'W; depth 5584 m. One Mn nodule. West flank of Line Island rise.
- SCAN 60P Simultaneously with 60PG. 1 cm of brown mud, vari-colored chert and rock fragments.
- SCAN 61G 25 July 1969, 2024 hrs.; 20°14.8'N, 160°09.0'W; depth 4595 m; core length 100 cm. Brown mud.
- SCAN 62G * (Climax II) 21 September 1969, 0540-0850 hrs.; 16°58.6'N, 155°04.2'W; depth 4911 m; core length 15 cm. Grey-brown compacted clay.
- SCAN 63G * (Climax II) 21 September 1969, 2012-2145 hrs.; 15°00.0'N, 155°00.0'W; depth 5506 m; core length 15 cm. Grey-brown compacted clay.
- SCAN 64G * (Climax II) 23 September 1969, 0100-0300 hrs.; 11°00.0'N, 154°58.0'W; depth 5310 m; core length 135 cm. Reddish brown siliceous clay with some random calcareous spots.
- SCAN 65G * (Climax II) 24 September 1969, 1703-1945 hrs.; 5°03.8'N, 155°00.0'W; depth 4449 m; core length 136 cm.
- SCAN 66G (Climax II) 26 September 1969, 0212-0345 hrs.; 00°59.4'N, 155° 00.1'W; depth 4758 m; core length 151 cm. Light brown siliceous ooze with mottles of white.
- SCAN 67G * (Climax II) 27-28 September 1969, 2300-0055 hrs.; 02°27.0'S, 155°01.8'W; depth 4920 m; core length 163 cm. Mottled light brown siliceous ooze.

Times noted for cores 62-75 are probably local. All others are GMT.

- SCAN 68G * 28 September 1969, 0100-0235 hrs.; 02°26.0'S, 155°02.9'W; depth 4950 m;
(Climax II) core length 130 cm.
- SCAN 69G * 28 September 1969, 0907 hrs.; 06°58.0'S, 154°58.3'W; depth 5204 m;
(Climax II) core length 104 cm. Reddish brown clay.
- SCAN 70G * 29 September 1969, 1040 hrs.; 11°00.1'S, 155°03.2'W; depth 5507 m;
(Climax II) core length 88 cm.
- SCAN 71G * 30 September 1969, 1900 hrs.; 15°26.6'S, 155° 01.8'W; depth 4663 m;
(Climax II) core length 126 cm.
- SCAN 72 G * 1 October 1969, 1915 hrs.; 18°59.8'S, 155°00.3'W; depth 4604 m;
(Climax II) core length 135 cm. Dark brown clay.
- SCAN 73G * 5 October 1969, 0543-0715 hrs.; 24°53.6'S, 154°59.3'W; depth 5006 m;
(Climax II) core length 127 cm. Mountainous terrain.
- SCAN 74G * 8 October 1969, 0440 hrs.; 24°56.2'S, 154°49.9'W; depth 4719 m; core
(Climax II) length 130 cm. Dark brown clay
- SCAN 75G * 8 October 1969, 0815-0945 hrs.; 24°35.0'S, 154°51.8'W; depth 4067 m.
(Climax II) Manganese nodules.
- SCAN 76PGa 24 October 1969, 2022-2322 hrs.; 6°31.5'S, 136°00.6'W; depth 4275 m.
No core. Small hills. DSD Site 26.
- SCAN 76Pa Simultaneously with 76PGa. No core.
- SCAN 76PGb 25 October 1969, 0030-0247 hrs.; 6°32.4'S, 136°05.3'W; depth 4390 m;
core length 72 cm. 0-approx. 52 cm, stiff tan to light brown cal-
careous ooze, grading downward to very light buff calcareous ooze.
Small hills. DSD Site 26.
- SCAN 76Pb Simultaneously with 76PGb. Core length 98 cm. Top 8 cm is watery
buff foraminiferal ooze; 8-9 cm, brown foraminiferal mud; 9-24 cm,
air gap; 24-98 cm, stiff pale yellow-brown (buff) calcareous ooze
with very light yellow mottles; somewhat lumpy. Partial air gap
84-98 cm.
- SCAN 77PG 28 October 1969, 1720-2003 hrs.; 12°25.4'S, 134°09.5'W; depth 4116 m;
core length 115 cm. 0-20 cm very light brown calcareous clay-ooze,
plus several small Mn nodules; 20-approx. 36 cm, irregularly brown
and tan calcareous clay-ooze grading by mottling to foraminiferal?,
very dark brown clay. Flat bottom. DSD Site 27.
- SCAN 77P Simultaneously with 77PG. No core.
- SCAN 78PG 29 October 1969, 0053-0325 hrs.; 12°14.7'S, 134°18.8'W; depth 4226 m;
core length 121 cm. 0-20 cm, medium brown foraminiferal clay;
remainder irregularly medium and dark brown foraminiferal clay. Flat
bottom. DSD Site 27.

* Times noted for cores 62-75 are probably local. All others are GMT.

- SCAN 78P Simultaneously with 78PG. Core length: Section 1 (bottom of core), 150 cm (plus 9 cm in catcher box); Section 2, 150 cm; Section 3, 54 cm. 0-approx. 251 cm, dark brown, at least in part foraminiferal clay; 251-326 cm, tan calcareous clay-ooze; 326-bottom, medium brown foraminiferal clay. Flat bottom.
- SCAN 79D 7 November 1969, 1156-1222 hrs.; 28°59.1'S, 140°14.8'W; depth 144-255 m; 4 burlap bags. Weathered basalt. Top of MacDonald's Volcano.
- SCAN 80G 10 November 1969, 0134-0301 hrs.; 24°53.3'S, 143°29.2'W; depth 4694 m, core length 90 cm. Dark brown clay with Mn nodule at top. Flat bottom.
- SCAN 81G 12 November 1969, 0148-0306 hrs.; 20°36.6'S, 147°35.3'W; depth 4569 m; core length 101 cm. Medium brown clay with Mn nodules at top. Abyssal hills.
- SCAN 82PG 25 November 1969, 0109-0446 hrs.; 0°26.5'N, 133°17.6'W; depth 4284 m; core length 145 cm. Foraminiferal ooze, light grey-tan at top and bottom with white between. Flat bottom. DSD Site 30.
- SCAN 82P Simultaneously with 82PG. Core length: Section 1 (bottom of core), 119 cm; Section 2, 175 cm; Section 3, 128 cm. Section 2, liner collapsed and broken; Section 3 not full. Approx. two-thirds light buff calcareous ooze; lower one-third white calcareous ooze.
- SCAN 83PG 28 November 1969, 1741-2006 hrs.; 2°41.4'N, 130°29.2'W; depth 4410 m; core length 172 cm. Light brown foraminiferal clay. Small hills. DSD Site 30A.
- SCAN 83P Simultaneously with 83PG. Core length: Section 1 (bottom of core), 159 cm plus 5 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 151 cm. Liner collapsed from 45 cm - 142 cm. 0-approx. 18 cm, watery light brown foraminiferal clay; remainder tan, mottled calcareous clay. Top of core is in poor, discontinuous condition and lower three-fourths may be sucked in.
- SCAN 84PG 2 December 1969, 0935-1223 hrs.; 2°29.1'N, 121°26.6'W; depth 4471 m; core length 161 cm. 0-approx. 16 cm, brown foraminiferal clay, grading by mottling, approx. 16-approx. 56 cm, to tan and off-white calcareous clay-ooze; approx. 56-66 cm, brown foraminiferal clay; 66-approx. 106 cm, tan calcareous clay with a darker layer at 88 cm; 106-148 cm, tan calcareous clay; 148-161 cm, dark grey-brown clay. Small hills. DSD Site 32.
- SCAN 84P Simultaneously with 84PG. Core length: Section 1 (bottom of core), 158 cm; Section 2, 150 cm; Section 3, 151 cm (liner partly collapsed). Upper 25 cm, medium brown foraminiferal clay; 25-279 cm, tan clay; 279-319 cm, light tan clay; 319-347 cm, very light brown clay; 347 cm - bottom, light tan grading to light tan-grey clay.
- SCAN 85PG 8 December 1969, 1430-1628 hrs.; 2°25.6'N, 106°55.8'W; depth 3679 m; core length 45 cm. Small hills. DSD Site 34.

SCAN 11

- SCAN 85P Simultaneously with 85PG. Core length: Section 1 (bottom of core), 149 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 131 cm. 0-4 cm is light brown calcareous clay; remainder grey-white calcareous ooze.
- SCAN 86PG 13 December 1969, 0233-0425 hrs.; 3°32.7'N, 99°28.8'W; depth 3441 m; core length 44 cm. 0-approx. 14 cm, light brown foraminiferal clay; approx. 14-33 cm, medium brown, tan-mottled foraminiferal clay; approx. 33-44 cm, pale yellowish tan, very stiff calcareous clay. Small hills. DSD Site 35.
- SCAN 86P Simultaneously with 86PG. Core length: Section 1 (bottom of core), 85 cm; Section 2, 150 cm; Section 3, 147 cm. 0-40 cm not full core due to collapsed liner. 0-approx. 20 cm, medium brown foraminiferal clay; approx. 20-26 cm, mixed brown and tan calcareous clay; 26-approx. 80 cm, tan calcareous clay; approx. 80-156 cm, medium brown calcareous clay; approx. 156-approx. 227 cm, tan to light brown calcareous clay grading to very pale grey-green calcareous ooze-clay for remainder.
- SCAN 87PG 16 December 1969, 0114-0305 hrs.; 4°15.6'N, 95°39.0'W; depth 3438 m; core length 152 cm. 0-26 cm, light brown foraminiferal clay; 26-63 cm, buff mottled tan foraminiferal clay; distinct break at 63 cm; 63-88 cm, light brown foraminiferal clay; 88-152 cm, brown and light brown foraminiferal clay, with buff mottles near bottom. Small hills. DSD Site 36.
- SCAN 87P Simultaneously with 87PG. Core length: Section 1 (bottom of core), 150 cm; Section 2, 150 cm; Section 3, 149 cm; Section 4, 45 cm; Section 5, 39 cm. 0-approx. 39 cm, medium brown foraminiferal clay; approx. 39-533 cm, light brown foraminiferal clay. Entire core is rather lumpy and contains many water pockets.
- SCAN 88PG 2 January 1970, 1203-1343 hrs.; 4°02.2'N, 85°38.4'W; depth 2874 m; core length 99 cm. Upper 20 cm, moderate brown calcareous clay, remainder is olive calcareous clay. Small hills. DSD Site 37.
- SCAN 88P Simultaneously with 88PG. Core length: Section 1 (bottom of core), 127 cm; Section 2, 77 cm; Section 3, 83 cm. Upper 20 cm moderate brown calcareous clay, remainder is olive calcareous clay.
- SCAN 89G 3 January 1970, 1755-1835 hrs.; 02°05.5'N, 86°02.0'W; depth 3059 m; core length 158 cm. Upper 8 cm dark brown radiolarian clay, remainder pale green foraminiferal clay.
- SCAN 90G 5 January 1970, 0348-0430 hrs.; 00°38.5'N, 86°06.7'W; depth 2704 m; core length 92 cm. Upper 8 cm is dark brown radiolarian clay, remainder is light green calcareous clay.
- SCAN 91G 6 January 1970, 0632-0720 hrs.; approx. 00°06.0'N, 86°15.0'W; depth 2708 m; core length 174 cm. Upper 7 cm is dark brown radiolarian clay; 7-22 cm, buff calcareous clay; 22-174 cm, greenish grey calcareous clay.

SCAN 12

- SCAN 92G 8 January 1970, 0530-0635 hrs.; 4°59.0'S, 88°03.7'W; depth 3686 m; core length 177 cm. 0-21 cm, olive brown calcareous ooze; 21-49 cm, olive calcareous clay with possible volcanic ash layer; 49-66 cm, greyish olive calcareous clay and volcanic ash?; 66-177 cm, olive brown calcareous clay. Top 8 cm in box due to over penetration.
- SCAN 93G 10 January 1970, 1110-1215 hrs.; 9°58.4'S, 90°07.5'W; depth 3895 m; core length 123 cm. 0-10 cm, dark brown clay; 10-94 cm, mottled yellowish brown clay; 94-123 cm, buff calcareous clay.
- SCAN 94PG 14 January 1970, 0200-0434 hrs.; 7°26.4'S, 102°38.4'W; depth 3900 m; core length 47 cm. Moderate brown radiolarian clay.
- SCAN 94P Simultaneously with 94PG. Core length: Section 1 (bottom of core), 100 cm; Section 2, 150 cm; Section 3, 60 cm. Moderate brown clay with Foraminifera and Mn micro-nodules in top section. Liner crushed at top of core, affecting only section 3.
- SCAN 95G 18 January 1970, 0148-0300 hrs.; 4°59.7'S, 114°04.9'W; depth 4189 m; core length 125 cm. Moderate brown calcareous clay with mottles. Small hills.
- SCAN 96PG 21 January 1970, 0435-0620 hrs.; 1°29.0'N, 113°52.0'W; depth 3856 m; core length 123 cm. Moderate yellowish brown calcareous clay. DSD Site 33.
- SCAN 96P Simultaneously with 96PG. Core length: Section 1 (bottom of core), 83 cm; Section 2, 150 cm; Section 3, 150 cm; Section 4, 150 cm; Section 5, 38 cm. 0-68 cm, light brown calcareous clay; 68-338 cm, greyish brown calcareous clay; 338-571 cm, bluish grey calcareous clay.
- SCAN 97G 23-24 January 1970, 2316-0030 hrs.; 8°06.9'N, 113°55.7'W; depth 3975 m; core length 148 cm. 0-14 cm, dusky red clay; 14-48 cm, buff-mottled yellowish brown clay; 48-148 cm, yellowish brown clay.
- SCAN 98G 7 February 1970, 1817-1915 hrs.; 16°29.1'N, 109°16.5'W; depth 3474 m; core length 183 cm. 0-17 cm and 162-183 cm were squeezed by Dr. Drever and are now in boxes. Red clay with Mn nodule on top. Rough bottom, on rise.
- SCAN 99G 8 February 1970, 1830-1930 hrs.; 16°01.6'N, 111°04.7'W; depth 3200 m; core length 136 cm. Upper 18 cm lost; 18-41 cm and 114-136 cm were squeezed by Dr. Drever and are now in boxes. Rough bottom.
- SCAN 100G 11 February 1970, 1320-1408 hrs.; 16°19.2'N, 106°26.0'W; depth 3436 m; core length 102 cm. Upper half red clay, remainder green-grey.
- SCAN 101G 15 February 1970, 0615-0720 hrs.; 20°34.4'N, 106°27.2'W; depth 3973 m; core length 114 cm. Green-gray clay. Bottom of Middle America Trench. Sample was cut and squeezed by Dr. James Drever.

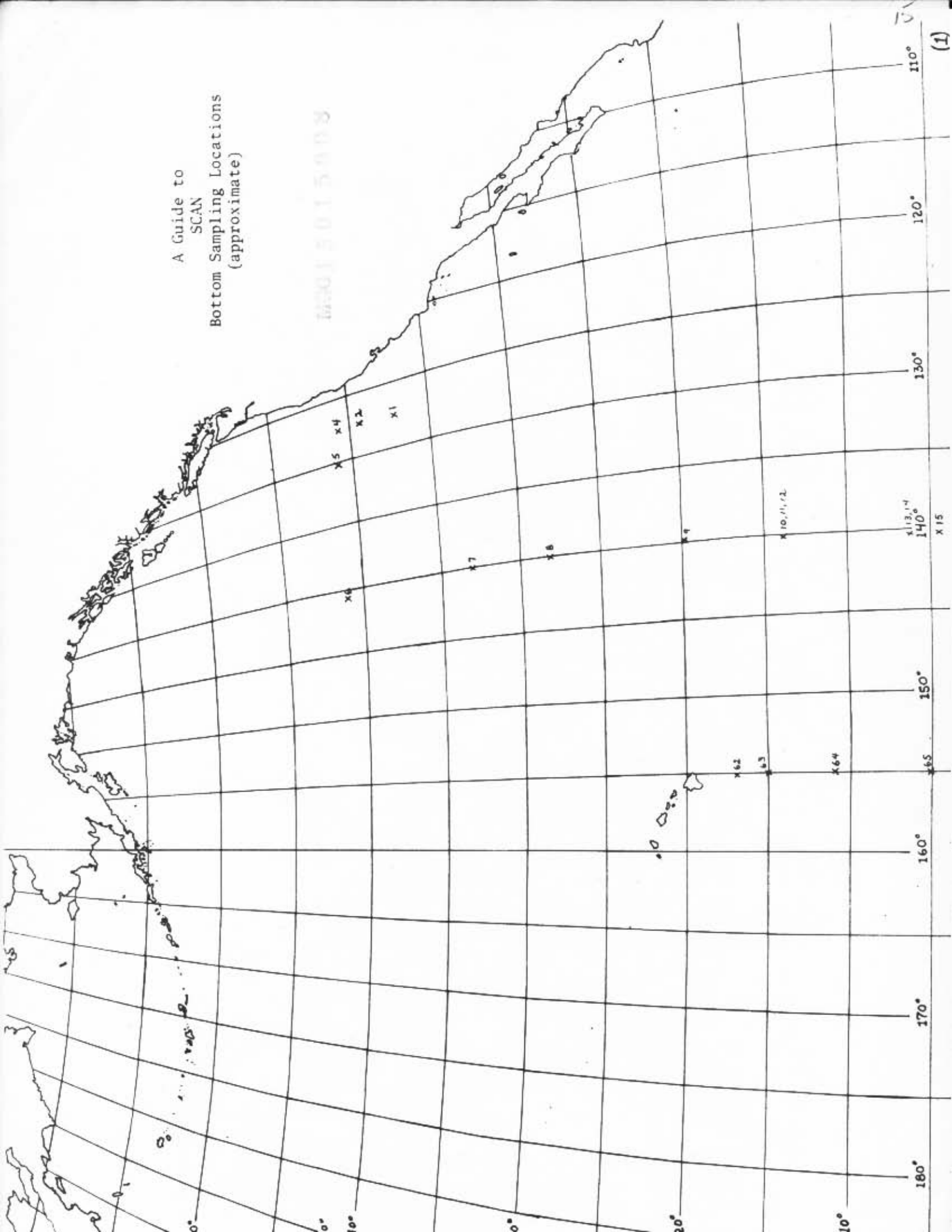
MAGT 503-508

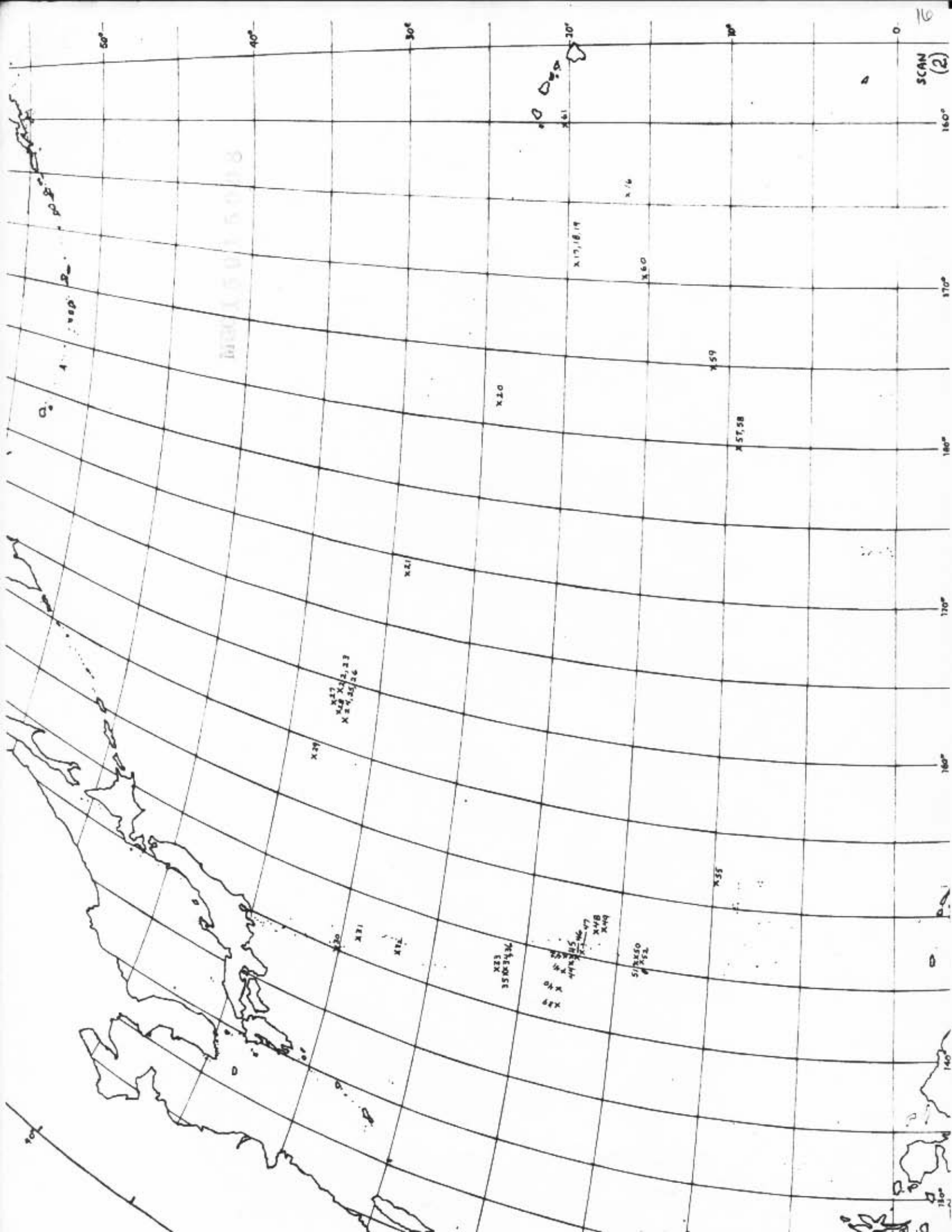
SCAN 13

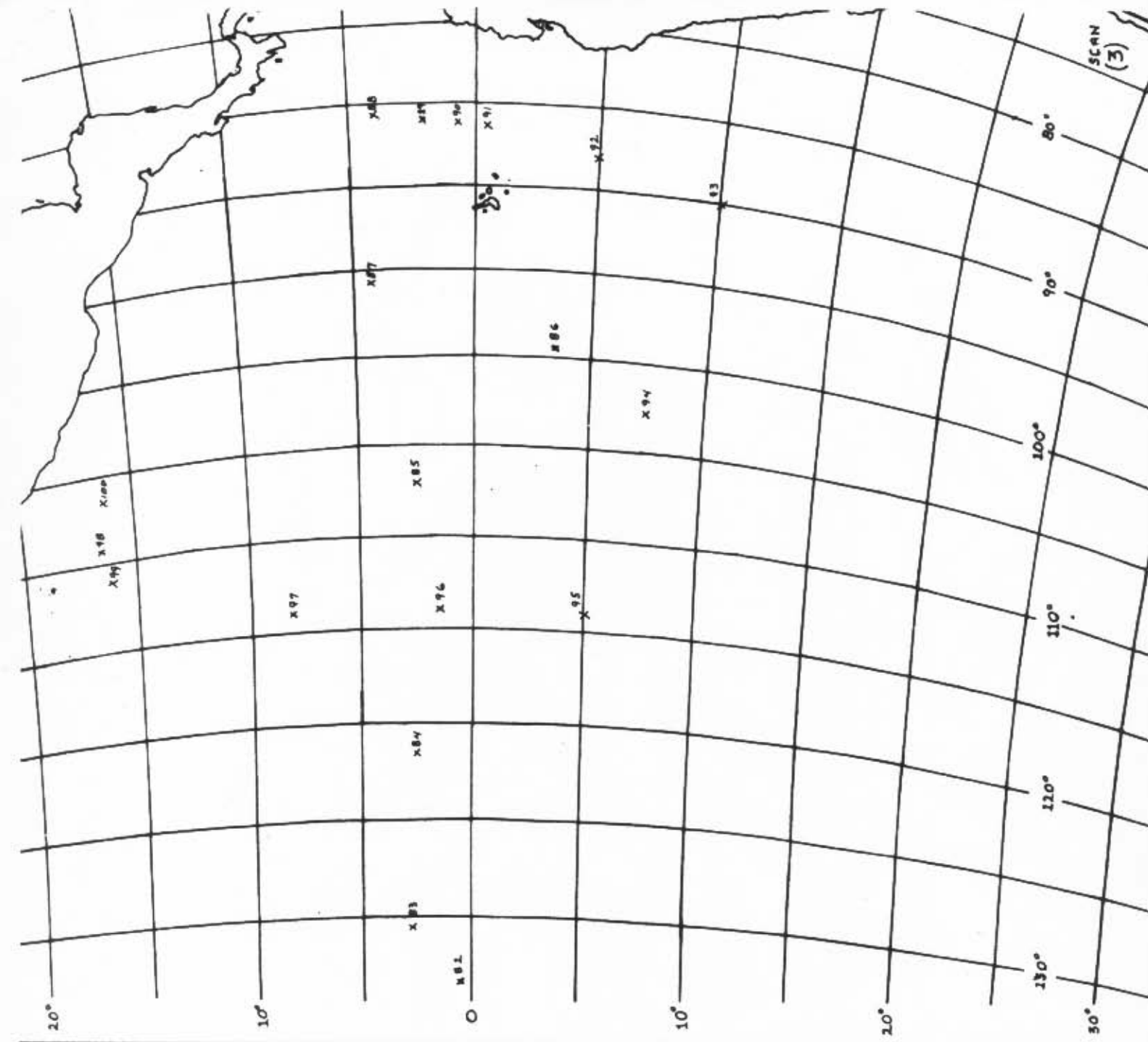
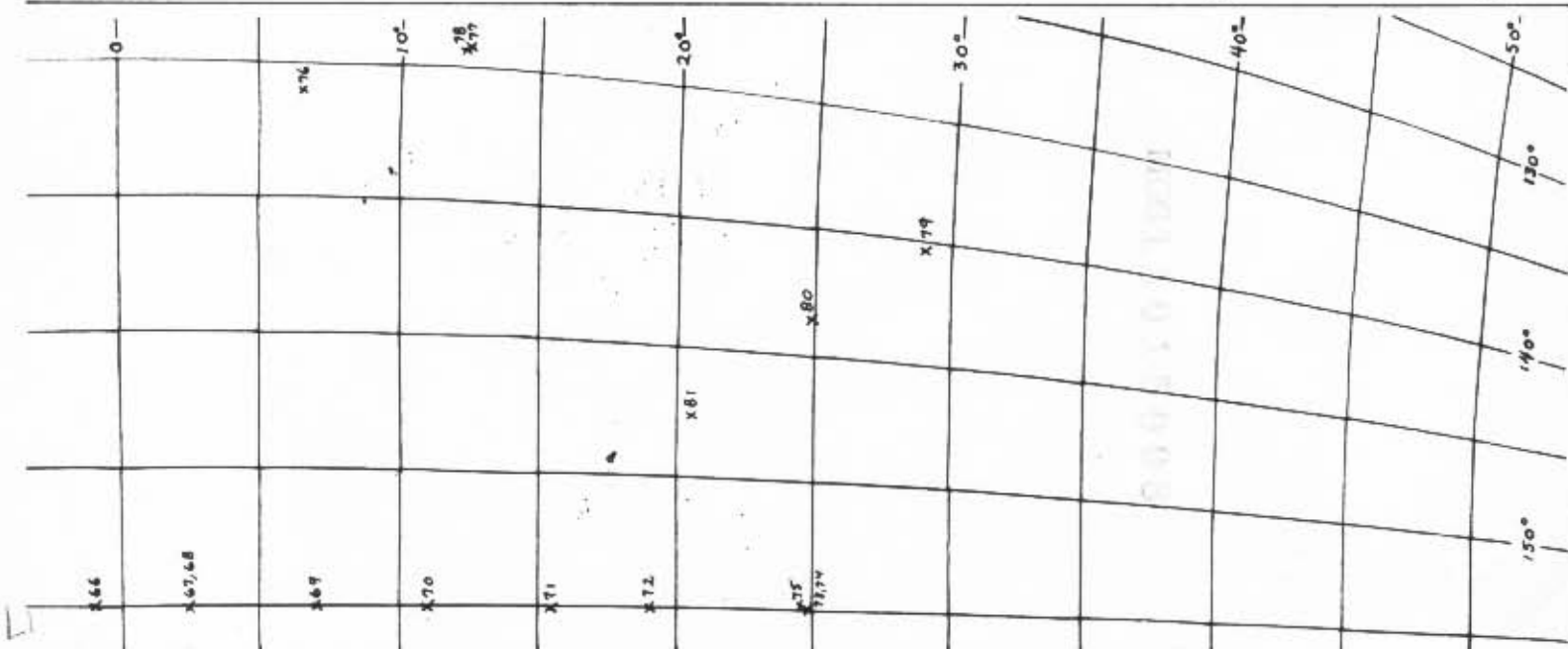
- SCAN 102G 15 February 1970, 1309-1325 hrs.; 20°36.6'N, 105°21.3'W; depth 872 m; core length 124 cm. In Banderas Bay. Core cut and squeezed by Dr. J. Drever.
- SCAN 102Ga 15 February 1970, 1327-1344 hrs.; 20°36.6'N, 105°21.3'W; depth 790 m; core length 14 cm. Hard green clay. In Banderas Bay. To Dr. J. Drever.
- SCAN 103G 15 February 1970, 1430-1433 hrs.; 20°39.9'N, 105°16.1'W; depth 112 m; core length 115 cm. Black mud. In Banderas Bay. To Dr. J. Drever.
- SCAN 104G 15 February 1970, 1530-1533 hrs.; 20°41.3'N, 105°20.7'W; depth 93 m; core length 149 cm. Green clay. In Banderas Bay. To Dr. J. Drever.
- SCAN 105G 15 February 1970, 1637-1641 hrs.; 20°40.3'N, 105°25.4'W; depth 90 m; core length 138 cm. Green clay. In Banderas Bay. To Dr. J. Drever.
- SCAN 106G 15 February 1970, 1716-1727 hrs.; 20°36.0'N, 105°27.7'W; depth 603 m; core length 85 cm. Brown mud and green clay. In Banderas Bay. To Dr. J. Drever.
- SCAN 106Ga 15 February 1970, 1729-1737 hrs.; 20°36.0'N, 105°27.7'W; depth 585 m; core length 130 (?) cm. Green clay. Banderas Bay.
- SCAN 107G 15 February 1970, 1825-1855 hrs.; 20°30.3'N, 105°38.6'W; depth 1703 m; core length 10 cm. Sand. Banderas Bay. To Dr. J. Drever.
- SCAN 107Ga 15 February 1970, 1920-1945 hrs.; 20°30.0'N, 105°38.3'W; depth 1733 m; core length 15 cm. Sand, pebbles and ash. Banderas Bay. To Dr. J. Drever.
- SCAN 107Gb 15 February 1970, 2012-2031 hrs.; approx. 20°30.0'N, 105°42.0'W; depth 1406 m. Small amount of sand and volcanic ash. Banderas Bay. To Dr. J. Drever.
- SCAN 108G 15 February 1970, 2135-2208 hrs.; 20°29.7'N, 105°53.4'W; depth 2359 m; core length 62 cm. Green clay. To Dr. J. Drever.
- SCAN 109G 15 February 1970, 2319-2358 hrs.; 20°30.4'N, 106°10.7'W; depth 2896 m; core length 31 cm. Green clay. To Dr. J. Drever.

A Guide to
SCAN
Bottom Sampling Locations
(approximate)

12015015003







SCAN (3)



SCAN ARGO
SITE 25
LOWERING
7
29 APRIL 1969
LEFT C

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

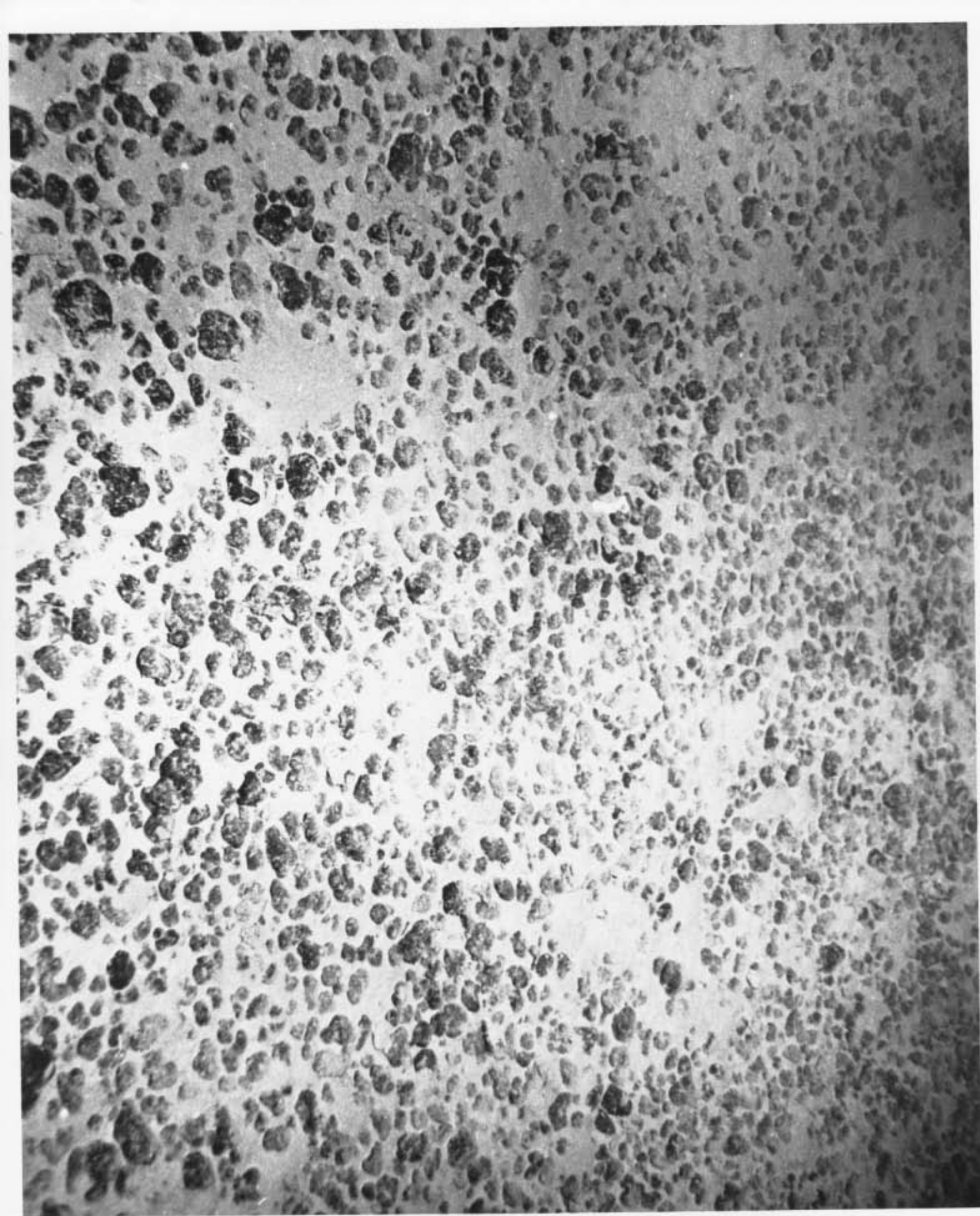
EXPEDITION: *SCAN* VESSEL: *ARGO*
STATION: *SITE 25, CAM. 7* DATE: *29 APRIL 1969*
LOCALE:
TIME (Corr.):
LAT.: *4° 28.0' N* LONG: *140° 17.0' W*
NO _____ OF _____
DEPTH (PDR): _____ CORR: _____
HEIGHT ABOVE BOTTOM:
SIZE OF FIELD:
CAMERA:
BY:



11-00124-9-63

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: *SCAN* VESSEL: *ARGO*
STATION: *SITE 24, CAM. 6* DATE: *26 APRIL 1969*
LOCALE:
TIME (Corr.):
LAT.: *6° 21.1' N* LONG: *140° 20.3' W*
NO _____ OF _____
DEPTH (PDR): CORR:
HEIGHT ABOVE BOTTOM:
SIZE OF FIELD:
CAMERA:
BY:





SCIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: SCAN

VESSEL: ARGO

STATION: SITE 18A, CAM. 17 DATE: 6 July 1969

LOCALE:

TIME (Corr.):

LAT.: $13^{\circ}39.2'N$

LONG: $145^{\circ}33.7'E$

NO _____ OF _____

DEPTH (PDR):

CORR:

HEIGHT ABOVE BOTTOM:

SIZE OF FIELD:

CAMERA:

BY:

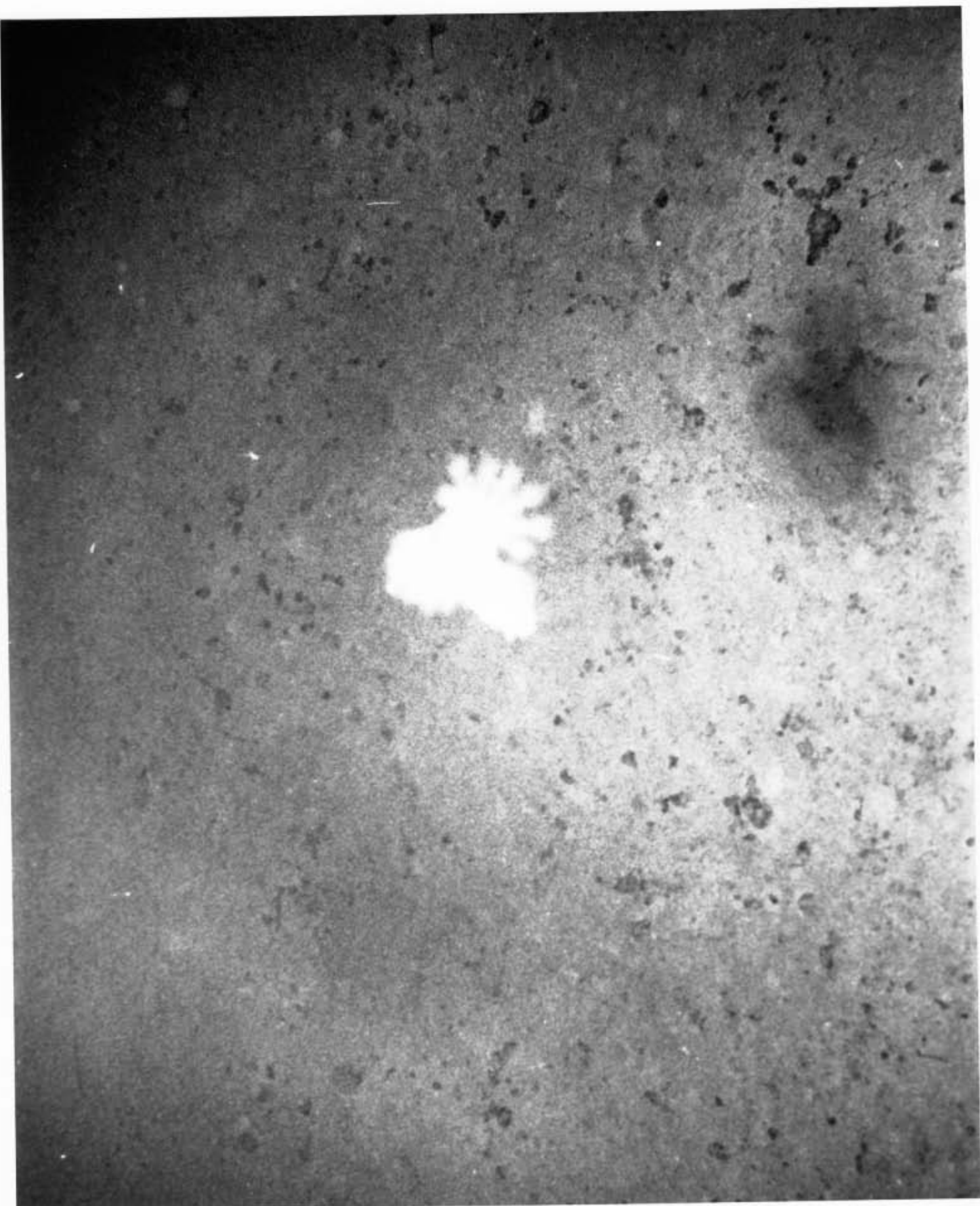




L 3118

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: *SCAN* VESSEL: *ARGO*
STATION: *SITE 15, CAM. 15* DATE: *5 JUNE 1969*
LOCALE:
TIME (Corr.):
LAT.: *33° 20.0' N* LONG: *153° 44.6' E*
NO _____ OF _____
DEPTH (PDR): _____ CORR: _____
HEIGHT ABOVE BOTTOM:
SIZE OF FIELD:
CAMERA:
BY:



SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: SCAY

VESSEL: ARGO

STATION: SITE 13, CAM. 14 DATE: 31 MAY 1969

LOCALE:

TIME (Corr.):

LAT.: $31^{\circ}54.9'N$ LONG: $157^{\circ}4.6'E$

NO _____ OF _____

DEPTH (PDR):

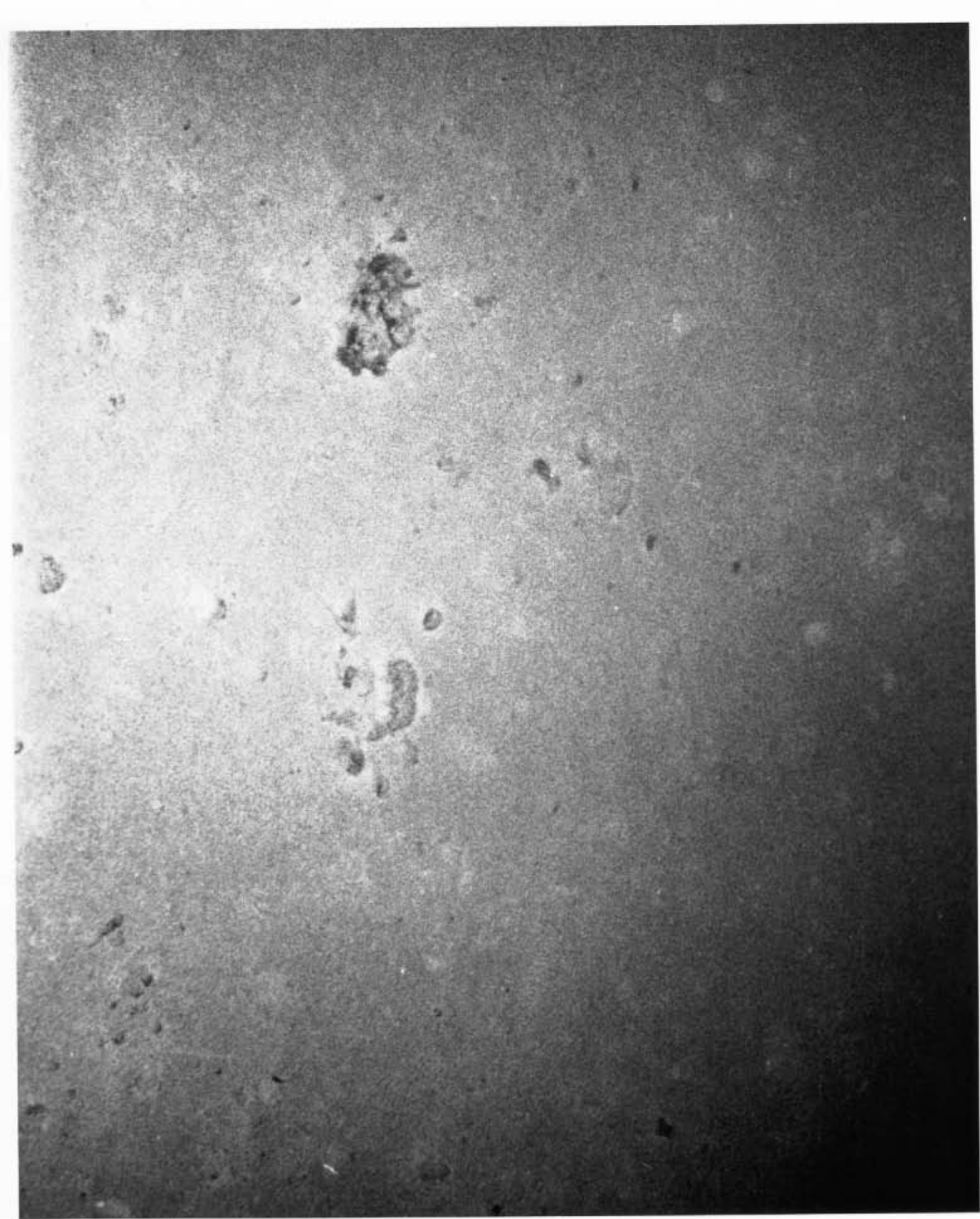
CORR:

HEIGHT ABOVE BOTTOM:

SIZE OF FIELD:

CAMERA:

BY:



2515

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: *SCAN*

VESSEL: *ARGO*

STATION: *SITE 13, CAM. 13* DATE: *30 MAY 1969*

LOCALE:

TIME (Corr.):

LAT.: *32° 22.6' N*

LONG: *159° 13.6' E*

NO _____ OF _____

DEPTH (PDR):

CORR: _____

HEIGHT ABOVE BOTTOM:

SIZE OF FIELD:

CAMERA:

BY:



110015015008

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: *SCAN*

VESSEL: *ARGO*

STATION: *SITE 12A; CAM STA. 12* DATE: *21 MAY 1969*

LOCALE:

TIME (Corr.):

LAT.: *24° 8.1' N*

LONG: *178° 32.3' W*

NO OF

DEPTH (PDR):

CORR:

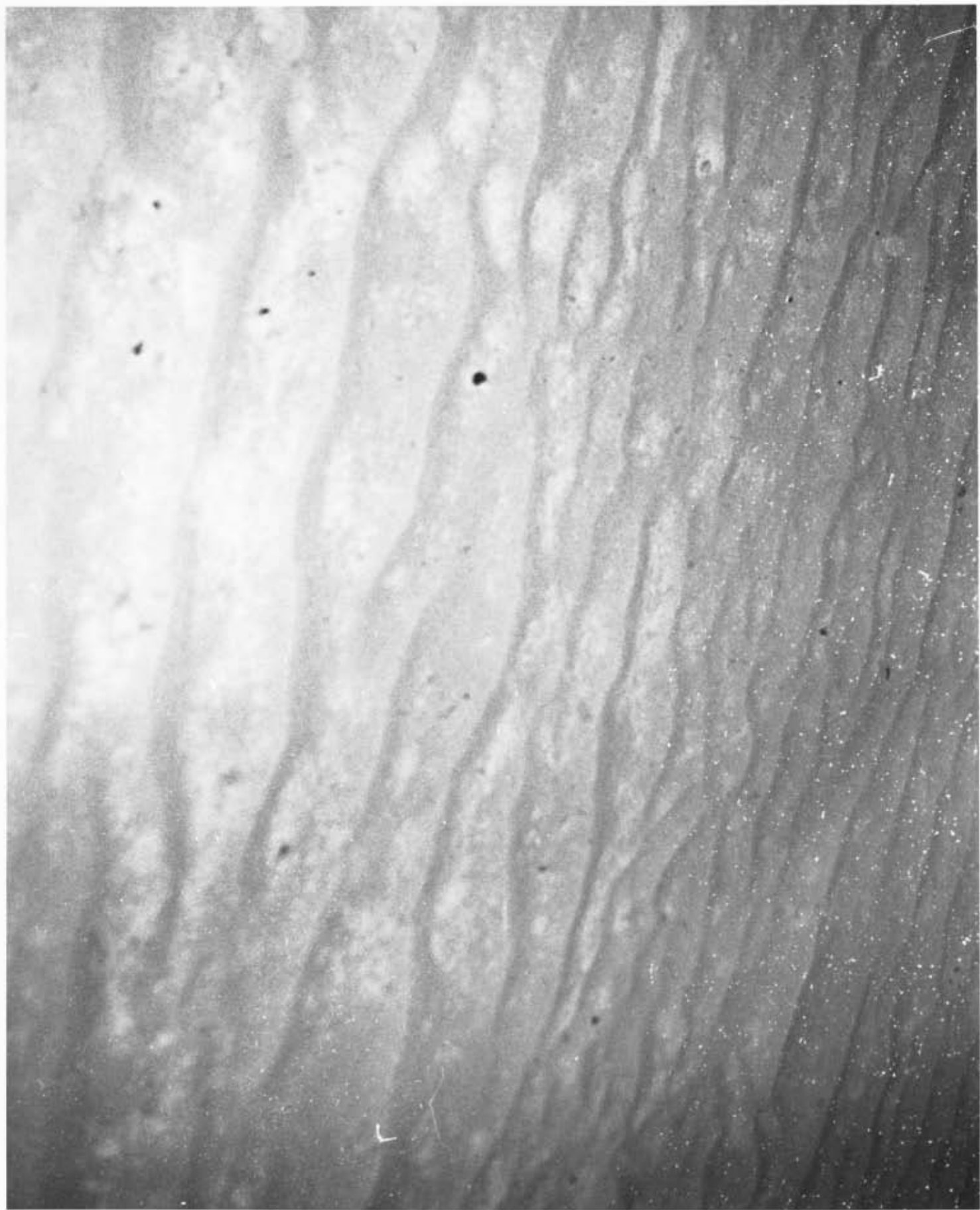
HEIGHT ABOVE BOTTOM:

SIZE OF FIELD:

CAMERA:

BY:

SITE 12A
LOWERING 12
21 MAY 1969

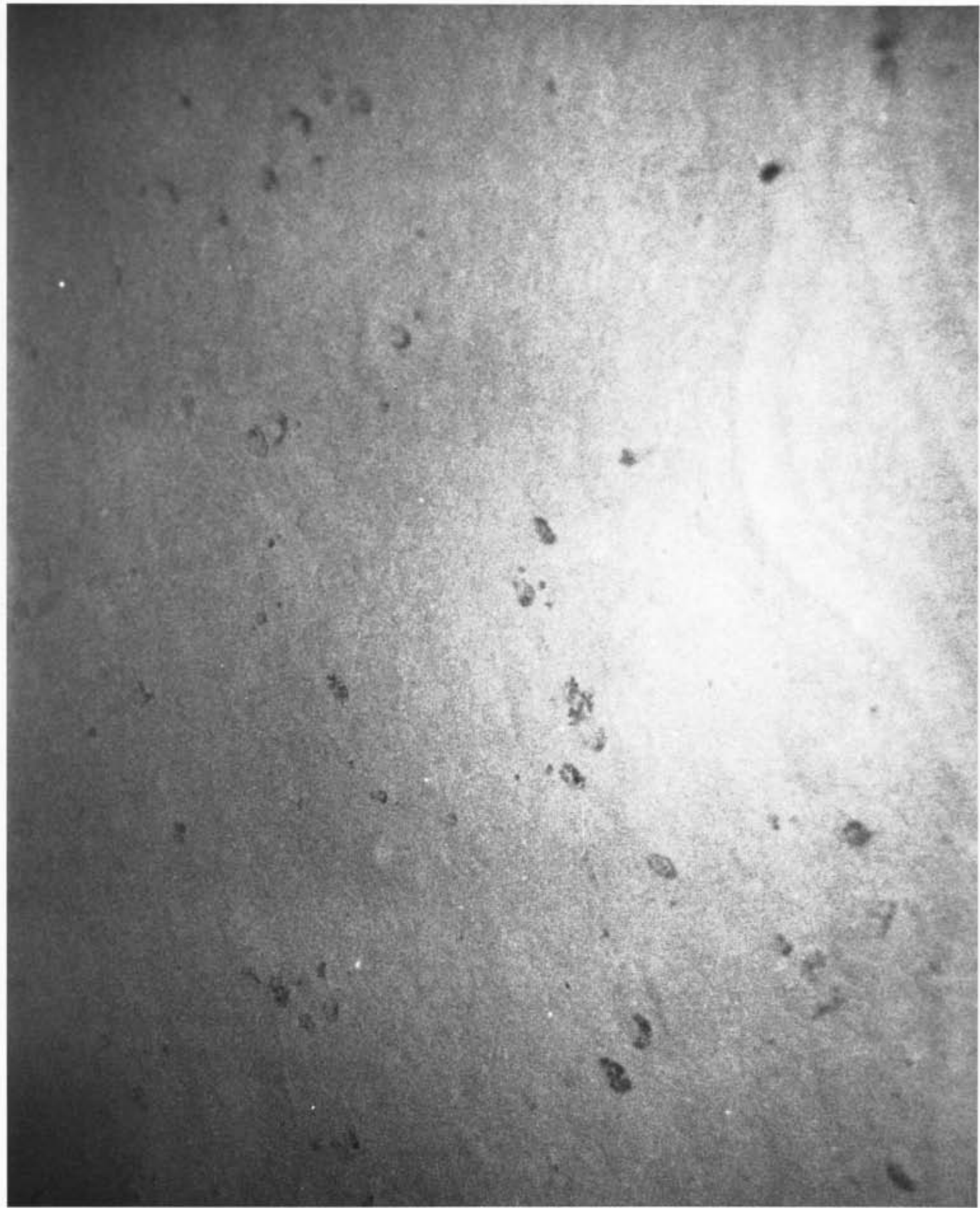


71 21 5015008

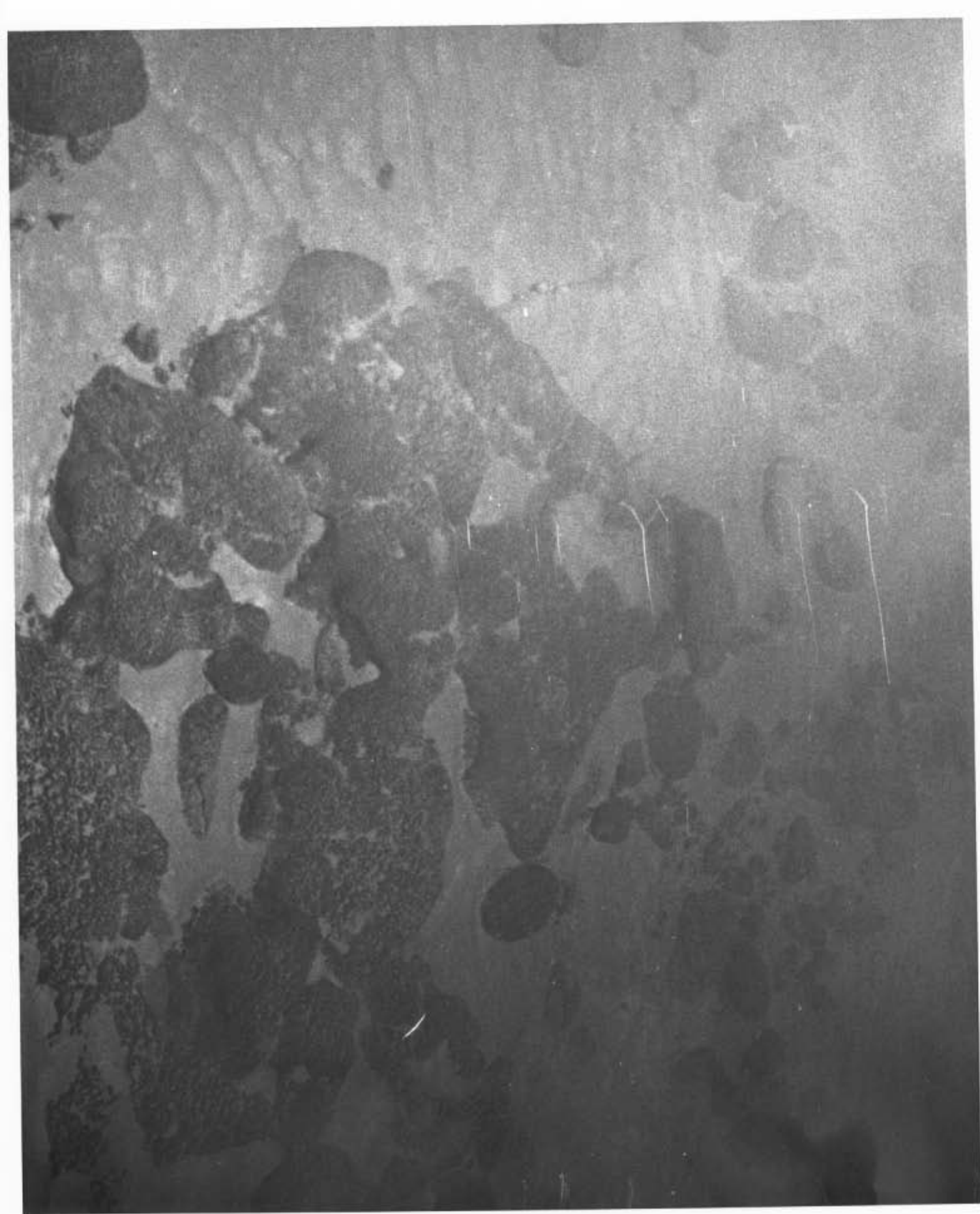
SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: *SCAN* VESSEL: *ARGO*
STATION: *SITE 11, CAM. 11* DATE: *17 MAY 1969*
LOCALE:
TIME (Corr.):
LAT.: *19° 24.6' N* LONG: *169° 8.6' W*
NO _____ OF _____
DEPTH (PDR): _____ CORR: _____
HEIGHT ABOVE BOTTOM:
SIZE OF FIELD:
CAMERA:
BY:

5/17/69



SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA
EXPEDITION: *SCAN* VESSEL: *ARGO*
STATION: *SITE 10, CAM. 5* DATE: *22 APRIL 1969*
LOCALE:
TIME (Corr.):
LAT.: *13° 52.4' N* LONG: *140° 13.7' W*
NO. _____ OF _____
DEPTH (PDR): _____ CORR: _____
HEIGHT ABOVE BOTTOM:
SIZE OF FIELD:
CAMERA:
BY:



11 SITE

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: SCAN

VESSEL: ARGO

STATION: SITE 11, CAM. 9

DATE: 16 MAY 1969

LOCALE:

TIME (Corr.):

LAT.: $19^{\circ} 27.0' N$

LONG: $167^{\circ} 59.0' W$

NO _____ OF _____

DEPTH (PDR):

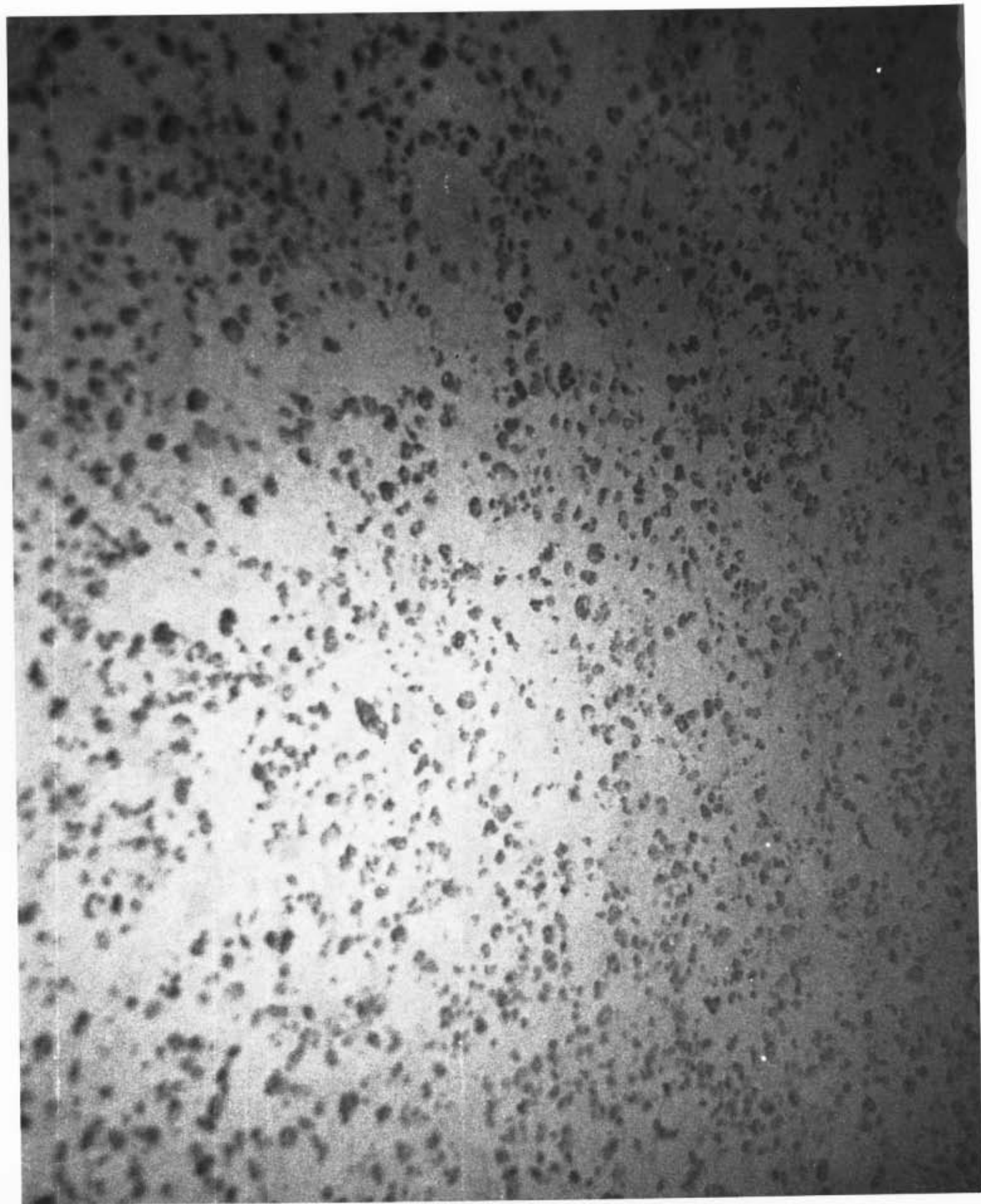
CORR:

HEIGHT ABOVE BOTTOM:

SIZE OF FIELD:

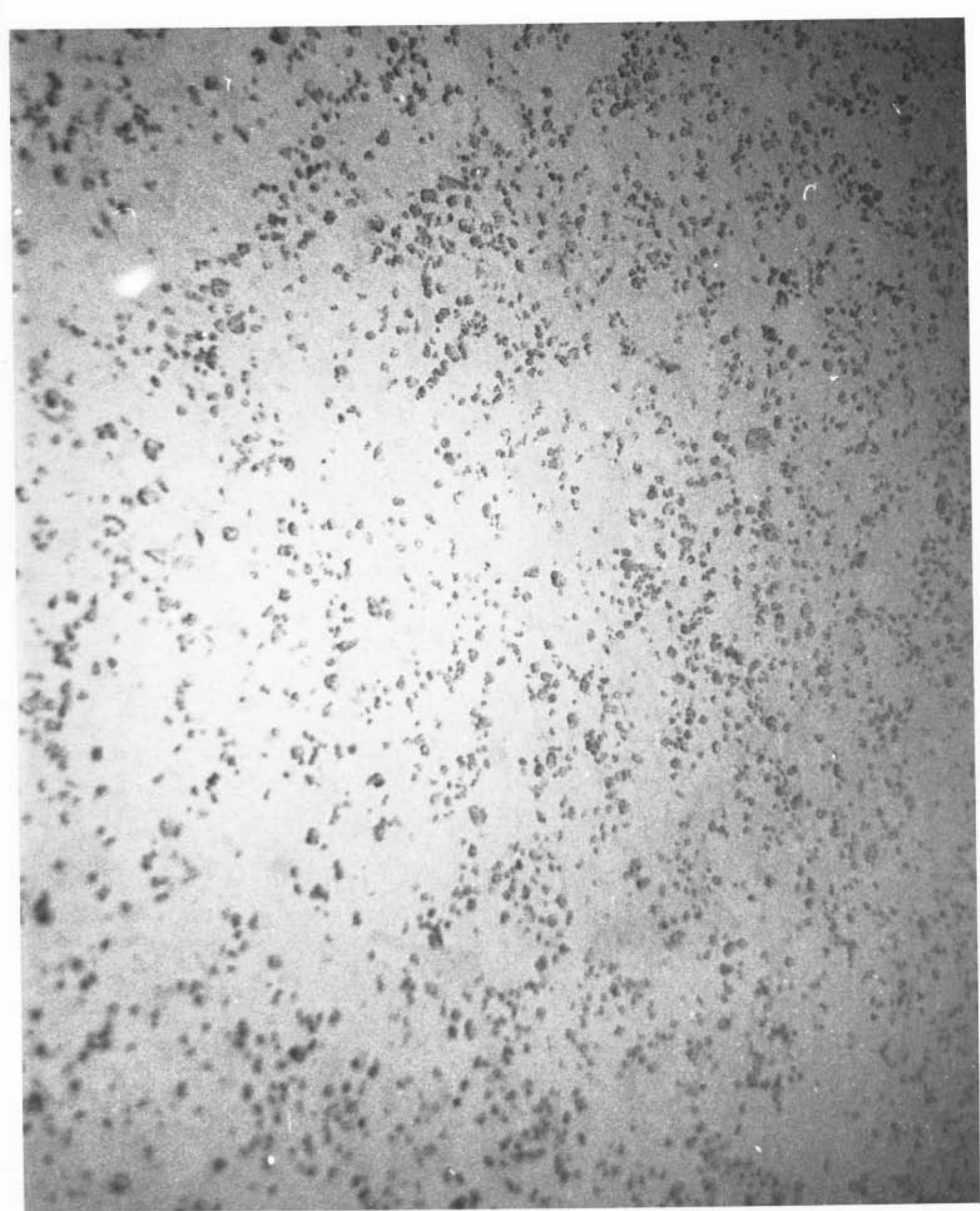
CAMERA:

BY:



SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: *SCAN* VESSEL: *ARGO*
STATION: *SITE 9, CAM. 4* DATE: *18 APRIL 1969*
LOCALE:
TIME (Corr.):
LAT.: *19° 48.0' N* LONG: *139° 52.4' W*
NO _____ OF _____
DEPTH (PDR): _____ CORR: _____
HEIGHT ABOVE BOTTOM:
SIZE OF FIELD:
CAMERA:
BY:



11-415713008

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: *SCAN*

VESSEL: *ARGO*

STATION: *SITE 8* CAM.3 DATE: *14 APRIL 1969*

LOCALE:

TIME (Corr.):

LAT.: *28° 14.5' N*

LONG: *140° 02.8' W*

NO

OF

DEPTH (PDR):

CORR:

HEIGHT ABOVE BOTTOM:

SIZE OF FIELD:

CAMERA:

BY:

[Signature]



MOOI 3015008

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: *SCAN*

VESSEL: *ARGO*

STATION: *SITE 4, CAM. 1* DATE: *15 MAR 1969*

LOCALE:

TIME (Corr.):

LAT.: *40° 40' N*

LONG: *127° 30' W*

NO

OF

DEPTH (-DR):

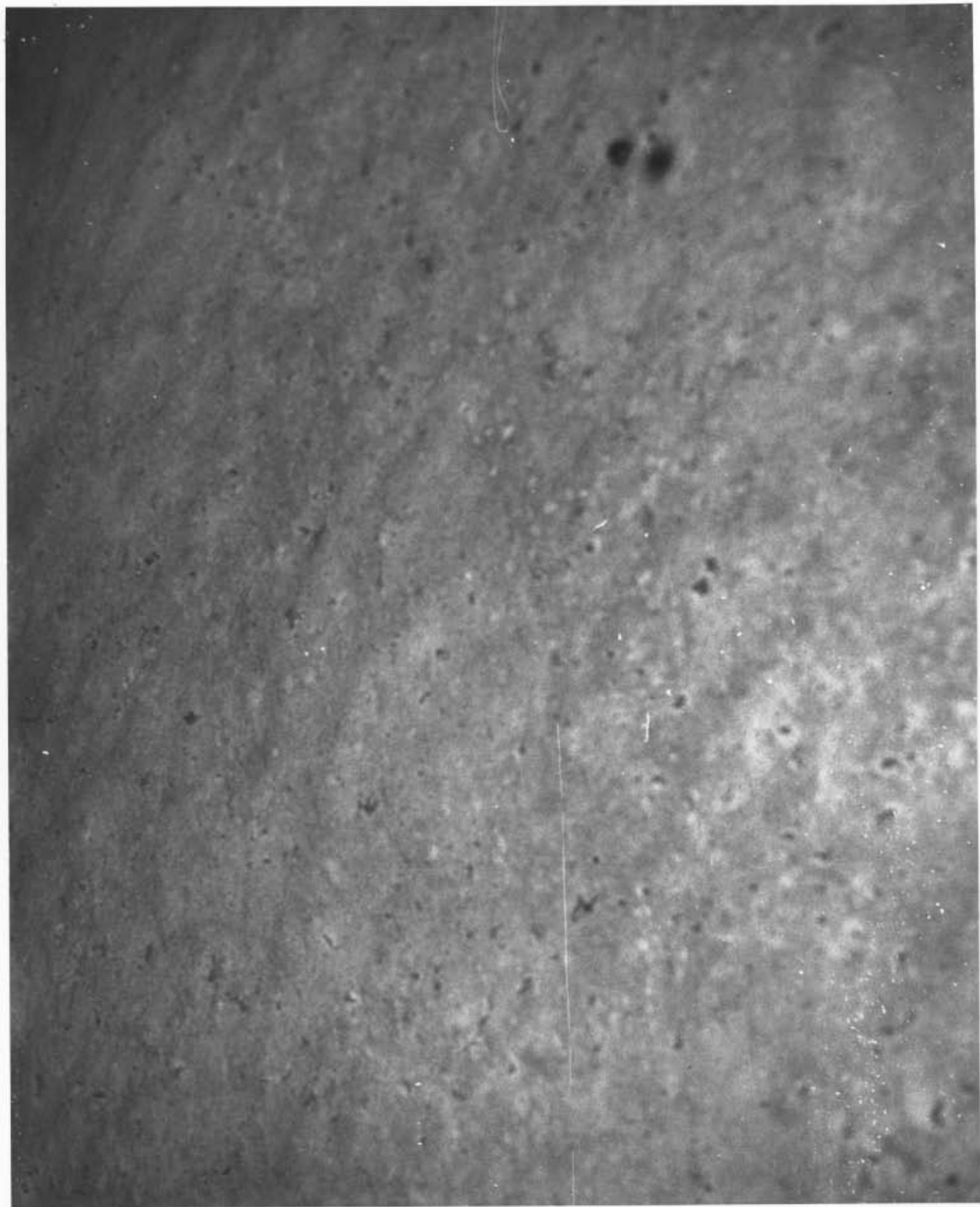
CORR:

H.G. IT ABOVE BOTTOM:

SIZE OF FIELD:

CAMERA:

BY:



NOG 1501 1003

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: SCAN VESSEL: ARGO
STATION: SITE 11; CAM. STA. 10 DATE: 16 MAY 1969

LOCALE:

TIME (Corr.):

LAT.: $19^{\circ} 16.3' N$

LONG: $169^{\circ} 5.1' W$

NO

OF

DEPTH (PDR):

CORR:

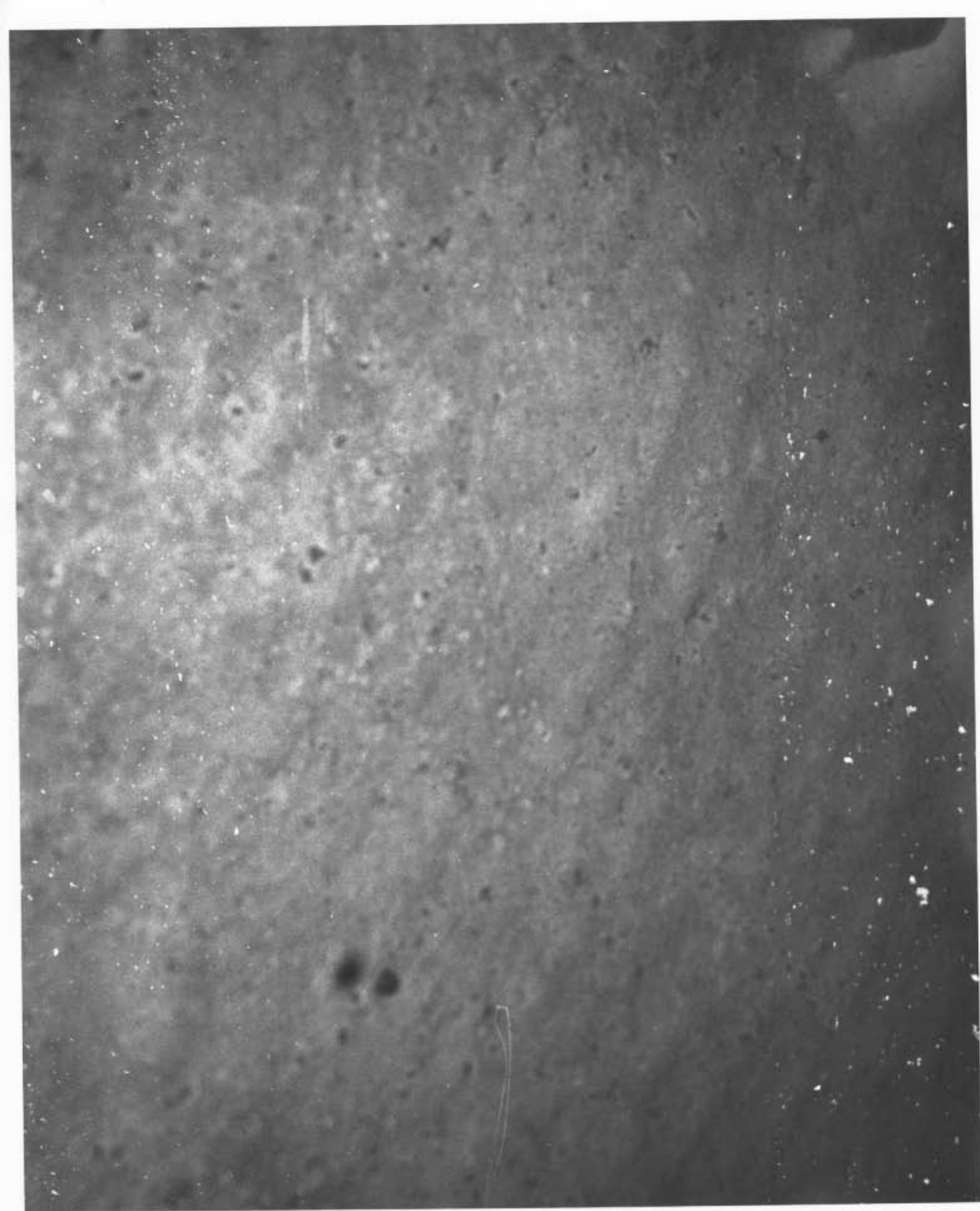
HEIGHT ABOVE BOTTOM:

SIZE OF FIELD:

CAMERA:

BY:

Site 11
Lowering 10
16 May 1969



3 ELLIS

NOV 13 01 50 00

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: *SCAN*

VESSEL: *ARGO*

STATION: *SITE 11, CAM. 10* DATE: *16 MAY 1969*

LOCALE:

TIME (Corr.):

LAT.: *19° 16.3' N*

LONG: *169° 5.1' W*

NO

OF

DEPTH (PDR):

CORR:

HEIGHT ABOVE BOTTOM:

SIZE OF FIELD:

CAMERA:

BY:



MOGL5015008

SCRIPPS INST. OF OCEANOGRAPHY, LA JOLLA, CALIFORNIA

EXPEDITION: SCAN VESSEL: ARGO
STATION: SITE 11; CAM. STA. 10 DATE: 16 MAY 1969
LOCALE:
TIME (Corr.):
LAT.: 19° 16.3' N LONG: 169° 5.1' W
NO _____ OF _____
DEPTH (PDR): CORR:
HEIGHT ABOVE BOTTOM:
SIZE OF FIELD:
CAMERA:
BY:

Site 11
Lowering to
16 May 1969