2. SITE 85

The Shipboard Scientific Party[1]

SITE DATA

Occupied: February 22-24, 1970.

Position: 22°50.49'N; 91°25.37'W.

Water Depth: 3733 meters.

Total Depth: 302 meters.

Holes Drilled: Two.

Cores Taken: Seven (five in 85, two in 85A).

BACKGROUND AND OBJECTIVES

The Campeche Bank is a shelf-slope feature extending about 120 miles into the Gulf of Mexico from the Campeche shoreline. It is surfaced by limestones and reefs and has one atoll on its surface—Arrecife Alacran. It descends into the gulf basin abruptly in a surface with an average slope of about 20 degrees to 30 degrees, called the Campeche Scarp. Profiling in the vicinity of where the scarp meets the Sigsbee Abyssal Plain appears to show the scarp curving upwards in a concave configuration so that the profile of the scarp is predominantly that of a sigmoid curve beneath the abyssal plain sediments. The scarp face is broken by slight benches about one-half mile wide where slopes may be reduced to about 2 to 3 degrees.

The Campeche Scarp is believed by some to be a fault face, primarily because of its fairly steep slope and its apparent linearity striking about 040 degrees true. Others believe it is the front face of a reef with talus broken from the reef forming the scarp surface. Still others believe it is a continental margin, perhaps of Precambrian age, or perhaps covered with Paleozoic deposits capped by reef deposits.

Site 85 (Figure 1 of Chapter 10) is located one mile basinwards from the junction of the scarp and the abyssal plain, where the scarp is believed to lie about 400 meters beneath the abyssal plain. The principal objective established for this site was to drill into the scarp beneath the abyssal plain to determine the type of rocks forming the foot of the scarp, and their age. If the rocks beneath the scarp could be penetrated, additional age and lithological data for the foot of the Campeche Scarp could be determined. Other objectives were to determine the lithology, to date the layers of the abyssal plain sediments overlapping the scarp at its foot, and, if possible to ascertain the source of these sediments.

The *Glomar Challenger* drilled two holes at Site 85 on February 22-24. At Site 85, five cores of Upper Pleistocene silty clay, nanno ooze, and sand were recovered. The hole was terminated at a depth of 212.6 meters and a second site, Site 85A, was drilled. Only two cores were attempted at Site 85A and the site was abandoned after reaching a depth of 302 meters below the seafloor. Coring inventories are shown in Table 1.

NATURE OF SEDIMENTS

General Description

Sediments recovered at Site 85 are considered to be of two main types: (1) terrigenous detritus derived from a northern provenance and transported to the site primarily via turbidity currents, and (2) organogenic carbonate-rich sediments of a mixed pelagic and gravity-transported nature, probably derived from the Yucatan continental slope.

In stratigraphically descending order, the sediments are described as follows:

Core 1 consists of gray (5Y4/1), slightly to moderately mottled to massive, clay with occasional zones of dispersed quartz silt particles and infrequent bands/laminae/mottles of nannofossil-rich, light gray (N 7 to 5Y6/1) clay and thin, gray (5Y3/1), quartzose silt laminae.

Core 2 is similar to Core 1, but with a lesser amount of nannofossil-rich clay and with the presence of texturally graded to massive, silty, very fine to fine, quartzose sand units from a few cm to 80 cm thick, and thinner (generally only a few millimeters) quartzose silt laminae with sharp basal contacts.

Core 3, again, is similar to Core 1, containing minor nannofossil-rich clay and infrequent quartz silt laminae. Burrows are sparsely represented. Sediment color changes slightly, becoming generally darker in Core 3 (5Y3/1). On the basis of mineralogy, textural composition, and color, these sediments are quite comparable to those recovered from the equivalent stratigraphic position at Site 3, Leg I (Cores 1 and 2).

Core 4 consists of finely laminated, moderately burrowed, greenish gray (5Y6/1—5YR5/1—5GY6/1), clayey, nannofossil ooze and clayey, foraminiferal calcisiltite. This hemipelagic assemblage of sediment sharply overlies a sequence of disseminated carbonate rock fragments in a matrix of nannofossil calcisiltite or ooze. The carbonate rock fragments consist of lithified shallow-water limestone and dolomite clasts up to 4 cm in diameter. Rock types present include the following:

1) White, skeletal-pelletal limestone, with a matrix of recrystallized calcilutite. Some spar filling was noted in

[1] J. Lamar Worzel, Marine Biomedical Institute, University of Texas, Galveston; William Bryant, Texas A&M University (co-chief scientists); Arthur O. Beall, Jr., Continental Oil Company (lead sedimentologist); Kendell Dickinson, United States Geological Survey; Robert Laury, Southern Methodist University; Lee Anderson Smith, ESSO Production Research (lead paleontologist); Blake McNeely, Shell Oil Company; Helen P. Foreman, Oberlin College; Roy Capo, Lamont-Doherty Geological Observatory.

TABLE 1
Core Inventory – Site 85

Core	No. Sections	Date	Time	Cored[a] Interval (m)	Cored (m)	Recovered (m)	Subbottom Penetration (m) Top	Subbottom Penetration (m) Bottom	Lithology	Age
Hole 85										
1	6	2/22	0100	3752-3761	9.0	9.0	19.0	28.0	Silty clay	Late Pleistocene
2	3	2/22	0430	3781-3790	9.0	4.4	48.0	57.0	Silty clay	Late Pleistocene
3	6	2/22	0630	3832-3841	9.0	9.0	99.0	108.0	Silty clay	Late Pleistocene
4	1	2/22	1200	3922-3931	9.0	1.0	189.0	198.0	Nanno ooze	Late Pleistocene
5	2	2/22	1800	3943-3945.6	2.6	6.2	210.0	212.6	Sand	Late Pleistocene
Total	18				38.6	29.6		212.6		
% Cut					18.1%					
% Recovered						74.0%				
Hole 85A										
1	–	2/24	0130	3952-3971	19	0	219.0	238.0	–	–
2	1	2/24	1130	4015-4035	20	0.5	282.0	302.0	Dol. sandstone	Late Pleistocene
Total	1				39	0.5		302.0		
% Cut					12.9%					
% Recovered						1.3%				

[a]Drill pipe measurement from derrick floor.

voids. The skeletal material consists primarily of pelecypod shell debris and subsidiary benthonic foraminifera tests.

2) White, recrystallized calcilutite. Some voids exhibit sparlined boundaries. The original fabric is indeterminate.

3) Gray, dolomitic calcarenite, with grains largely indeterminate although occasional outlines of foraminifera are obvious. It seems apparent that recrystallization and leaching of the clasts have occurred, with subsequent replacement by crystalline dolomite. This alteration obviously occurred before transport to the present site.

4) Light brown to white, highly leached, skeletal limestone. Grains consist of shell debris and oolitic (?) components. The surface texture of these fragments suggests subaerial exposure and calcification.

5) Light brown, sucrosic dolomite. The voids show secondary infill. The original rock fabric and texture are indeterminate.

Although precise age determinations are not available at this time, the carbonate rock fragments are considered to be probable (Early?) Cretaceous in age. All of the above limestone/dolomite rock types are considered to be of shallow-water origin. Proximity to the Campeche Scarp and Yucatan continental slope suggests mutually exclusive derivation from that general region.

In Core 5, although badly disturbed during coring and recovery, the sand recovered is apparently representative of the interval sampled. Compositionally, the sand is quite similar to sands recovered from Core 2, but is texturally coarser. Quartz to feldspar ratios as well as heavy mineral composition suggest a common provenance. The presence of carbonate rock fragments, especially near the base of the core and in the core catcher, is apparently a reflection of continued supply of debris from the nearby Campeche Scarp and is quite similar to rock fragments described from Core 4.

The following rock types were noted:

1) White rudistid (?) limestone with some interskeletal porosity. Some recrystallization is apparent with spar infilling porosity. Minor indeterminate grain types are incorporated into a lime-mud matrix.

2) White, coralline limestone with skeletal debris, including micro-gastropods and rounded pellets. Some secondary spar infill was noted.

3) Graybrown to brown to white, laminated to massive dolomite. Some fragments appear to be finely laminated (stromatolitic?), whereas others are dominantly sucrosic, fine-grained dolomite with variable porosity.

Core 2A—recovery was limited to several short pieces of core. The sediment consists of dark brown (5YR3/1), finely laminated, organic-carbon and feldspar-bearing, somewhat clayey, dolomite sandstone with subsidiary dark brown (5Y3/1), clayey dolosiltstone. Laminae consistently dip at an angle of 25 degrees, assuming a vertical

hole. Organic content appears to be higher in the finer-grained sediment.

It is not known whether the dolomite sand/silt represents in situ depositional conditions or is the result of drilling through a large slump block. This particular textural and compositional assemblage has not been seen at any other drill site in the deep-water portion of the Gulf of Mexico. The interpretation of a slump block seems favored at this time because of the highly organic nature of the sediment, the finely laminated fabric, the anomalously high dips (not noted in sediments cored above this horizon or in the profiler record), and the mineralogy of the carbonate. The quartz to feldspar ratio is considerably less than that noted in other, obviously terrigenous, cores. It appears more likely that the dolomite formed in a shelf environment, was subsequently exposed in this area of high slope, and slumped via gravity to the present site during Pleistocene time.

Sedimentologic Interpretation

The terrigenous-derived clastics recovered in the upper three cores and in Core 5 are interpreted as turbidites and turbidity-current related deposits (laminites and hemilaminites). On the basis of mineralogy, textural composition, and age, the most likely source of these sediments can be identified as the Mississippi Fan or northern Gulf of Mexico continental slope complex. Late Pleistocene in age, such sediments are essentially identical to documented glacial cold cycle (maximum lowering of sea level) abyssal plain sediments from other localities in the Gulf of Mexico, including Site 3, Leg 1, and Site 91.

The lower sequence of carbonates at Site 85 appears to be largely a reflection of contribution of carbonate debris from the nearby Campeche Scarp and Yucatan platform. The presence of pelagic ooze (upper Core 4) suggests that intermittent pelagic conditions occurred in proximity to the site during Pleistocene time. The presence of minor nannofossil-rich clay in the upper part of the sequence (Cores 1-3) likewise suggests infrequent periods of quiescence or slow deposition during Late Pleistocene time.

Physical Properties of Sediments

Gamma-ray, GRAPE, sonic velocity, and penetrometer readings were taken on all suitable material recovered from Site 85. Results are shown both on the core summaries and on the site summary.

GRAPE determinations of bulk density on all cores appear to be extremely low when compared to laboratory determinations of bulk density (one sample) and to GRAPE determinations from Leg 1. A correction of .16 to .3 g/cc appears to be required. Gamma-ray determinations appear to be reliable. For comparison with values cited for Leg 1, values should be multiplied by 2, since counting time has been reduced by one-half for subsequent cruises.

Core 2 provides a good example of the correlation between gamma-ray, GRAPE, and sonic velocity data for sands versus muds. Note that the gamma-ray average is lower in the section opposite high bulk density and high velocity values. Disturbance during coring often has a disastrous effect on physical measurement of sediments. Core 3 is an excellent example. Low sonic velocity determinations can be, at least in part, attributed to disturbed or missing sediment. Such areas of core also yield unreliable GRAPE values.

Core 4 shows another example of correlative data. Note that GRAPE values are highest opposite the pebbly mudstone interval, declining upwards in the nannofossil ooze. Core 5 was too disturbed for any but gamma-ray measurement.

Physical property trends shown on the site summary compilation can be described as follows. Penetrometer data shows a progressive increase in consolidation with depth. The relationship is also shown by an increase in sonic velocity measurements and a generalized increase of bulk density with depth. Note that Core 2, because of a higher quartz sand content, has a somewhat high bulk density and sonic velocity average.

Gamma-ray determinations, which most clearly show lithological variability, indicate a slight increase (rather than decrease) in Core 2. Nevertheless, the upper three cores are clearly more clay-rich than the lower carbonate-dominated cores and the terrigenous sand core (Core 5). Correspondingly, the clayey nannofossil ooze shows higher gamma-ray readings than the underlying quartzose sand, as would be expected. These observations are consistent with those reported for Leg 1, Gulf of Mexico sites (Beall and Fischer, 1969).

BIOSTRATIGRAPHY

As interpreted from fossil plankton (foraminifers and calcareous nannofossils), the biostratigraphy of Site 85 is shown in Figure 1. The samples, additionally, were examined for Radiolaria, but only a few reworked Late Cretaceous forms were noted. These were in Core 2 of Site 85A (10-85A-2). The faunal and floral lists are not complete, since only the stratigraphically or environmentally significant forms are listed.

Sample 1 (10-85-1, CC):

Globigerinoides ruber (pink), *Globorotalia inflata, G. truncatulinoides, Coccolithus pelagicus, Cyclococcolithus leptoporus,* cf. *Gephyrocapsa* sp., *Reticulofenestra* sp.

Age: Late Pleistocene (Wisconsinan); *Globorotalia truncatulinoides* Zone; *Pulleniatina finalis* Subzone.

Environment: Bathyal.

Remarks: Sparseness of the fauna and flora, the presence of *Globorotalia inflata* (and absence of *G. menardii*), the degree of dilution with terrigenous clastics, and the dominance of coccoliths among the calcareous nannofossils suggest deposition in cooler waters than are presently found at the site (glacial stage). The sample contains an assemblage of reworked Cretaceous calcareous nannofossils (pelagic flora), including *Arkhangelskiella, Eiffelithus, Watznaueria, Micula,* and *Cretarhabdus.* Additionally, reworked *Heterohelix* sp. was found among the foraminifers.

Sample 2 (10-85-2, CC):

Globigerinoides ruber (pink), *Globorotalia inflata, G. menardii, Coccolithus pelagicus, Ceratolithus cristatus, Cyclococcolithus leptoporus,* and cf. *Gephyrocapsa* sp.

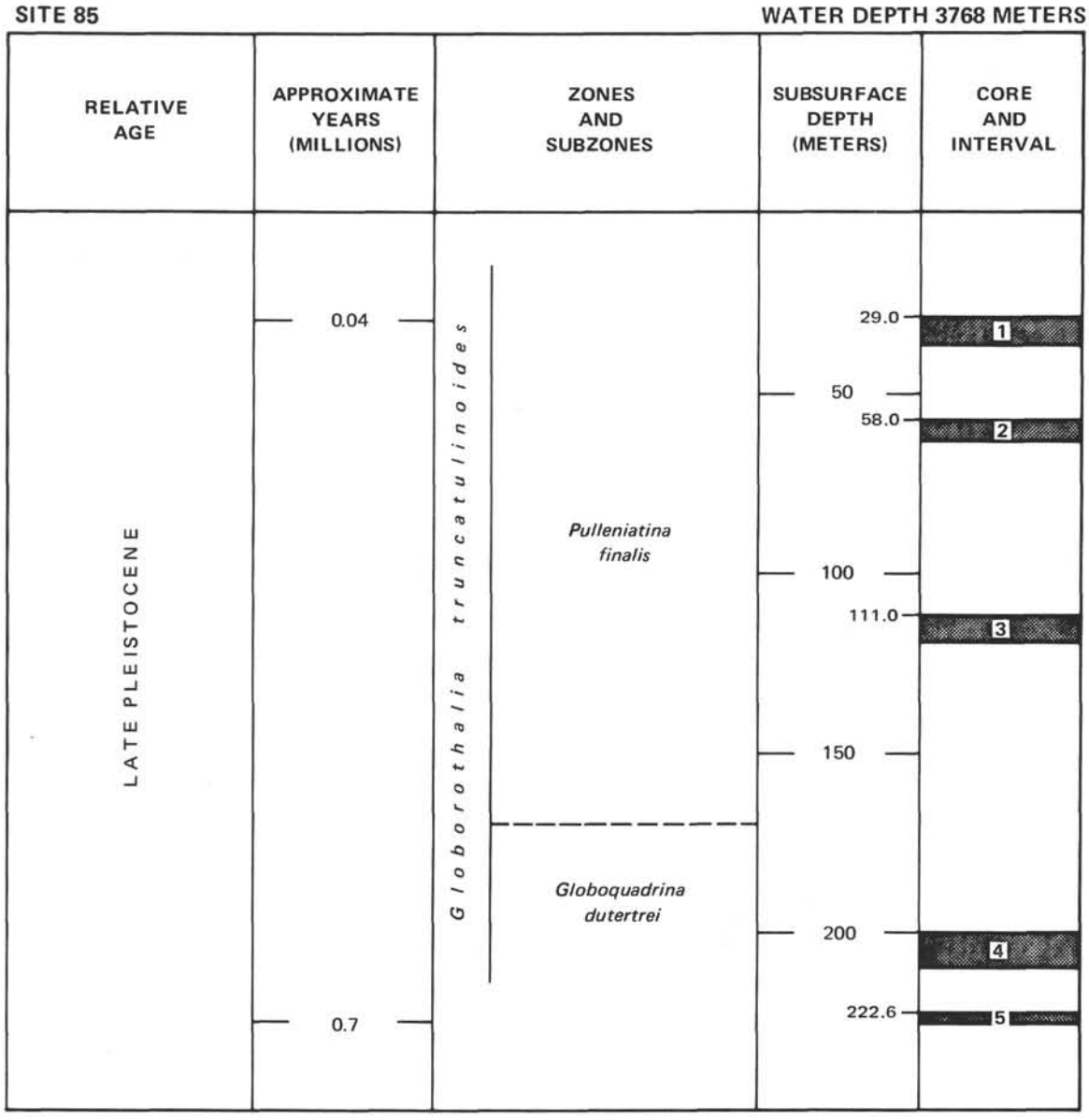


Figure 1. *Biostratigraphic summary of Site 85.*

Age: Late Pleistocene (Wisconsinan): *Globorotalia truncatulinoides* Zone; *Pulleniatina finalis* sub-Zone.
Environment: Probable bathyal.
Remarks: Sparseness of the fauna and flora, the dominance of coccoliths among the calcareous nannofossils, the degree of dilution with terrigenous clastics, and the presence of *Globorotalia inflata* suggest deposition in cooler waters than are presently found at the site (glacial stage). A few reworked Cretaceous planktonic forms were noted, including *Watznaueria, Arkhangelskiella, Micula,* and *Cribrosphaerella.*

Sample 3 (10-85-3, CC):
Globigerinoides ruber (pink), *Globorotalia inflata, G. truncatulinoides, G. menardii, Gephyrocapsa oceanica, G.* sp. cf. *G. caribbeanica, Reticulofenestra* sp., *Ceratolithus cristatus, Coccolithus sarsiae, C. Pelagicus, Cyclococcolithus leptoporus, Helicopontosphaera kamptneri.*
Age: Late Pleistocene (probably Late Illinoian); *Globorotalia truncatulinoides* Zone; *Pulleniatina finalis* Subzone.
Environment: Probable Bathyal.
Remarks: The presence of *Globorotalia inflata* and *G. truncatulinoides* suggests colder waters than at present. The evident increase in diversity of the calcareous nannofossils, however, suggests slightly warmer waters than is suggested by the assemblage from Sample 1. Reworked Late Cretaceous and rare Pliocene pelagic floras also were recovered from the sample.

Sample 4 (10-85-4, CC):
Globoquadrina altispira, G. venezuelana, Globorotalia tosaensis, G. inflata, Discoaster brouweri, D. pentaradiatus, D. surculus, Ceratolithus rugosus, Sphenolithus abies, Pseudoemiliania lacunosa, Scyphosphaera aequitorialis.
Age: The fauna and flora are of Late Pliocene age, but the presence of a younger suite below this (see Sample 5) indicates that the material sampled was slump (probably Illinoian).
Environment: Bathyal.

Remarks: Reworked shallow-water material of probable Cretaceous age and pelagics of definite Late Paleocene age (containing *Globorotalia velascoensis*) were also recovered from this sample.

Sample 5 (10-85-5, CC):
Globorotalia truncatulinoides, G. menardii, G. inflata, Globoquadrina venezuelana, Globigerinoides ruber, Sphaeroidinella dehiscens, Gephyrocapsa oceanica, Pseudoemiliania lacunosa, Reticulofenestra pseudoumbilica.
Age: Late Pleistocene (Early Illinoian): *Globorotalia truncatulinoides* Zone; *Globoquadrina dutertrei* Subzone.
Environment: Bathyal.
Remarks: The assemblage recovered from this sample is younger than that recovered from the core catcher sample from Core 4 (see above).

Sample 6 (10-85A-2, CC):
Globorotalia truncatulinoides, G. inflata, G. menardii, Globigerinoides ruber (pink) *G. sacculifera, Nonion pompillioides, Gephyrocapsa oceanica, Rhabdosphaera stylifer, Cyclococcolithus leptoporus leptoporus, Ceratolithus cristatus, Coccolithus pelagicus.*
Age: Late Pleistocene (? Early Illinoian): *Globorotalia truncatulinoides* Zone; probably *Globoquadrina dutertrei* Subzone.
Environment: Bathyal.
Remarks: The sample also contains a Late Cretaceous planktonic assemblage including the foraminifers, *Rotalipora cushmani, R. greenhornensis, Globotruncana renzi,* and *G. schneegansi,* the calcareous nannofossils, *Watznaueria barnesae, Cribrosphaera ehrenbergi, Prediscosphaera intercisa,* and *Zygodiscus pseudanthroporus,* and several radiolarians.

DISCUSSION AND INTERPRETATION

All five cores of Site 85 and the one from Site 85A (Table 1) were Late Pleistocene in age (*Globorotalia truncatulinoides* zone). The fauna and flora of the samples examined indicate the climate to have been cooler than at present. Upward increase in dilution and decrease in biotic diversity suggest that the younger samples represent the lower marine temperatures.

The upper sequence of intercalated gray mud and graded sands, grading downwards to greenish gray with minor pelagic components, are representative of the Mississippi-derived turbidite wedge. There is a minor fraction of well-rounded quartz sand, decreasing upwards in the section. At the bottom of Hole 85A (222.5 meters), an organic rich, dark brown dolomitic sandstone with a terrigenous quartz component and a dark brown, organic rich dolomitic siltstone were recovered; both exhibit 25 degree layering dips (assuming the hole to be vertical).

All of the sediment strongly indicate a bathyal environment. Pliocene, Paleocene, Cretaceous, and Late Cretaceous reworked materials were found in the various cores. All cores contained some reworked material.

All of these data suggest an environment similar to that of the present day, except with a colder climate. The upward decrease of coarser silicious components is indicative of a decrease of erosion on land in the later part of the Late Pleistocene. The reworked Pliocene, Paleocene, and Cretaceous components indicate contributions from slumping, most probably from the Campeche Bank or Scarp. See Chapter 10 for further discussion of this point.

The rubble of large size carbonate pebbles encountered at the deepest penetration, which caused destruction of the bit in Hole 85 and jamming of the drill and core barrel in 85A, suggests coarse slump material which could not have been transported very far. The track from Site 86 to Site 87, which passed along the scarp face at a depth of about 800 fathoms, just eleven to twelve miles inshore of Site 85, shows a canyon deeply incised in the scarp to a depth of about 1700 fathoms. It is probable that the canyon was the avenue of transport of this rubble. An on-station profiler record for Site 85 is shown in Figure 2.

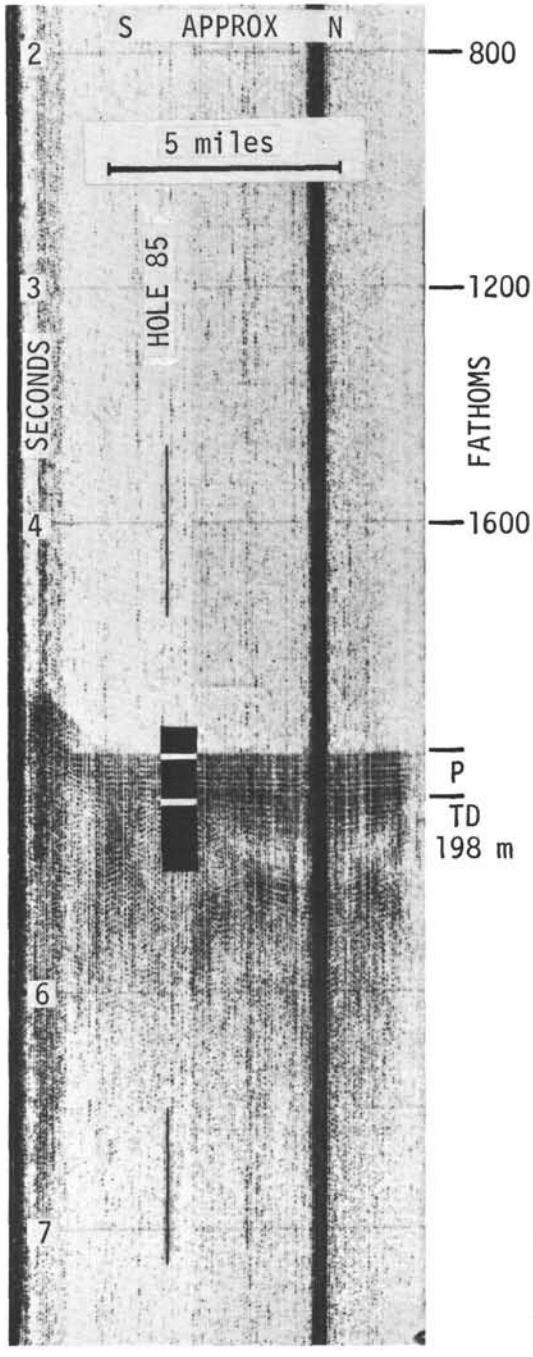
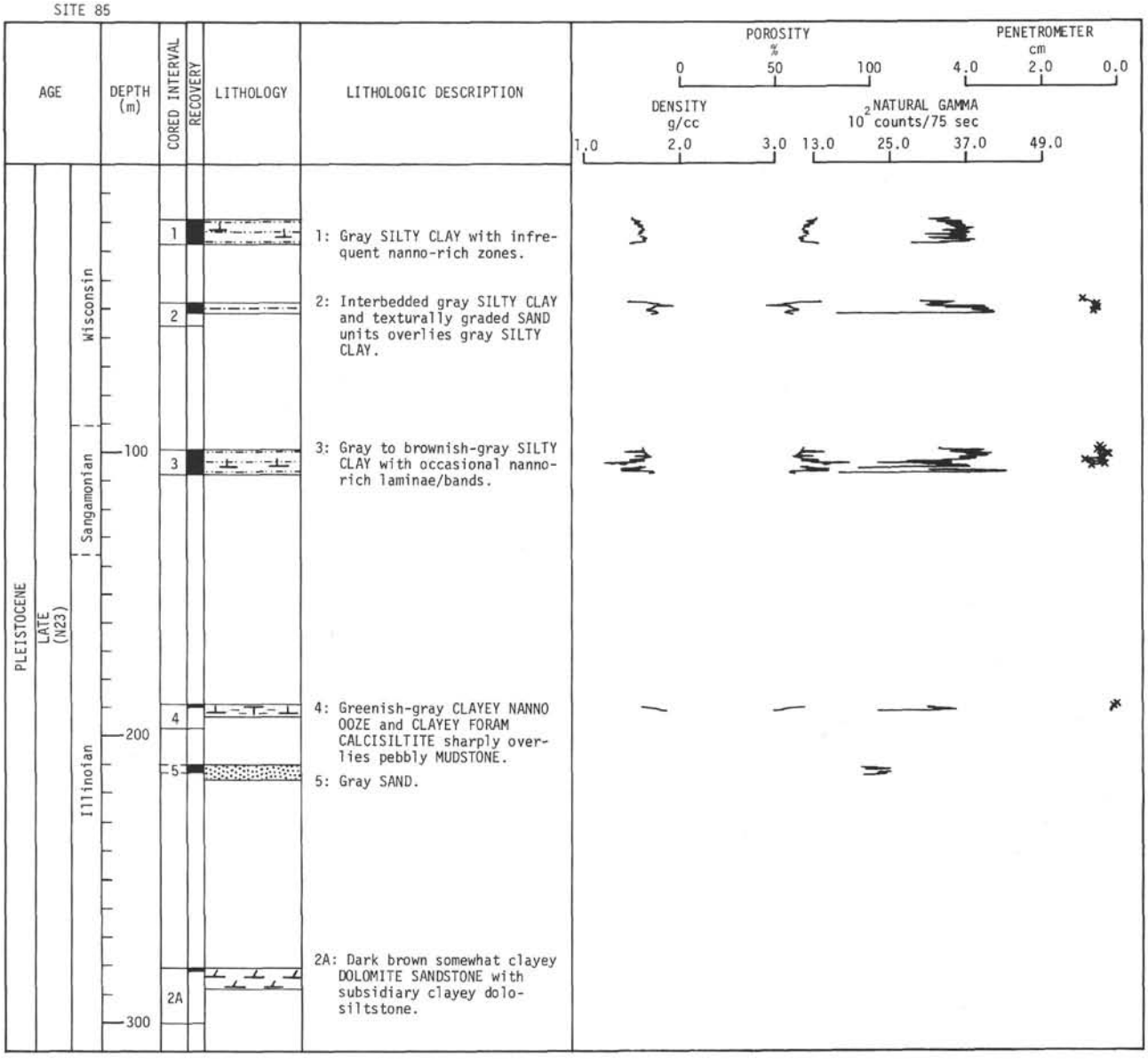


Figure 2. *Profile record, Site 85.*

In Site 85, the basal material in Core 4, at a depth of 198 meters, was dated as Late Pliocene, while the core catcher sample from Core 5, from a depth of 228.6 meters, was identified as Middle Pleistocene (*Globoquadrina dutertrei* subzone). In Site 85A, the small amount of material recovered from a depth of 282 to 302 meters was also dated as Late Pleistocene. This sequence could occur if Core 4 represented slump material intercalated into the Late Pleistocene section, our preferred interpretation, or if the Late Pleistocene in the deeper barrels were downhole contamination making Core 4 the upper part of the Pliocene section.

The dip angle of 25 degrees exhibited by the dark brown dolomitic sandstone and siltstone indicates that this material probably represents a gravity slump block.

On the assumption that the Pliocene is a slump block intercalated into the Pleistocene section, the average sedimentary rate would be about 31 cm/10^3y. This is a rather high rate which is probably explained by the incorporation of much slump material and turbidites in this section.


SITE 85
AGE
DEPTH (m)
CORED INTERVAL
RECOVERY
LITHOLOGY
LITHOLOGIC DESCRIPTION
POROSITY %
0
50
100
PENETROMETER cm
4.0
2.0
0.0
DENSITY g/cc
1.0
2.0
3.0
NATURAL GAMMA 10² counts/75 sec
13.0
25.0
37.0
49.0
PLEISTOCENE
LATE (N23)
Wisconsin
Sangamonian
Illinoian
100
200
300
1
2
3
4
5
2A
1: Gray SILTY CLAY with infrequent nanno-rich zones.
2: Interbedded gray SILTY CLAY and texturally graded SAND units overlies gray SILTY CLAY.
3: Gray to brownish-gray SILTY CLAY with occasional nanno-rich laminae/bands.
4: Greenish-gray CLAYEY NANNO OOZE and CLAYEY FORAM CALCISILTITE sharply overlies pebbly MUDSTONE.
5: Gray SAND.
2A: Dark brown somewhat clayey DOLOMITE SANDSTONE with subsidiary clayey dolosiltstone.

Site 85 Hole Core 1 Cored Interval: 19-28 m

AGE	ZONE	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION	GRAIN SIZE WEIGHT % SAND	SILT	CLAY
LATE PLEISTOCENE (Wisconsin)	*Globorotalia truncatulinoides (Pulleniatina finalis* Subzone)	1	0.5–1.0				SILTY CLAY Gray (5Y4/1); slightly to moderately mottled, slightly burrowed, with mottles of nanno-rich, light gray (5Y6/1) silty clay.	0.1	22.8	77.1
		2					As above; more or less massive, slightly burrowed, with a zone of dispersed quartz sand particles at base.	1.0	28.9	70.1
		3					As above; massive, with zones of dispersed quartz. Sand particles.	5.9	30.7	63.4
		4					As above; more or less massive, with a few thin bands of nanno-rich silty clay (N7). Sparse microburrows.	2.9	30.9	66.2
		5					As above; moderately to strongly disturbed, probably massive, with occasional bands of nanno-rich, light gray (N7) silty clay.	0.1	26.0	74.0
		6					As above; massive to laminated, with quartz laminae(graded?) (5Y3/1), and rare nanno-rich silty clay (5Y7/1). Sparse burrows.	0.1	24.5	75.5
		Core Catcher								

Site 85 Hole Core 2 Cored Interval: 48-57 m

AGE	ZONE	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION	GRAIN SIZE WEIGHT % SAND	SILT	CLAY
LATE PLEISTOCENE (Wisconsin)	*Globorotalia truncatulinoides (Pulleniatina finalis* Subzone)	1*	0.5–1.0				VOID Interbedded SILTY CLAY and SAND units. Former is gray (5Y4/1) and massive; quartz sandy units are texturally graded to massive with a muddy matrix.	4.7	27.8	67.4
		2								
		3					SILTY CLAY Gray (5Y3/1); more or less massive with occasional faint color laminations and thin discontinuous quartz silt/sand laminae. Base of barrel appears to be top of underlying graded bed. *See Section Summary for more detail.	0.0	29.0	71.0
		Core Catcher								

Site 85 Hole Core 3 Cored Interval: 99-108 m

AGE	ZONE	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION	GRAIN SIZE WEIGHT % SAND	SILT	CLAY
LATE PLEISTOCENE (Illinoian)	*Globorotalia truncatulinoides (Pulleniatina finalis* Subzone)	1	0.5–1.0				Marbellized SILTY CLAY and NANNO OOZE. Mud is gray (N4.5). Nanno ooze is light gray (N7).	1.1	21.9	77.0
		2					SILTY CLAY Gray (5Y 3/1), strongly disturbed with discontinuous (?) laminae of quartz silt- otherwise massive.			
		3					Brownish-gray (5Y4/1 to 5YR4/1); strongly disturbed and color mottled; rare definite burrows and occasional laminae of quartz silt and or nanno-rich clay (5B6/1).	0.0	21.7	78.3
		4		VOID / Watery			Severely disturbed.	2.0	41.0	57.0
		5					Assumed to be as above and below based on general appearance.			
		6					VOID Rare laminae of nanno-rich silty clay and sparse quartz-silt laminae. Clay below 8 meters devoid of above elements.	0.0	13.3	86.7
		Core Catcher		VOID						

Site 85 Hole Core 4 Cored Interval: 189-198 m

AGE	ZONE	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION	GRAIN SIZE WEIGHT % SAND	SILT	CLAY
LATE PLEISTOCENE (Illinoian)		1	0.5–1.0				NANNO OOZE and FORAM CALCISILTITE Former is greenish gray and clayey. Latter with subsidiary clay.	1.5	80.8	17.6
		Core Catcher					Sharply overlies: MUDSTONE Pebbly with limestone/dolomite clasts (up to 4 cm) at base of core. *See Section Summary for more detail.			

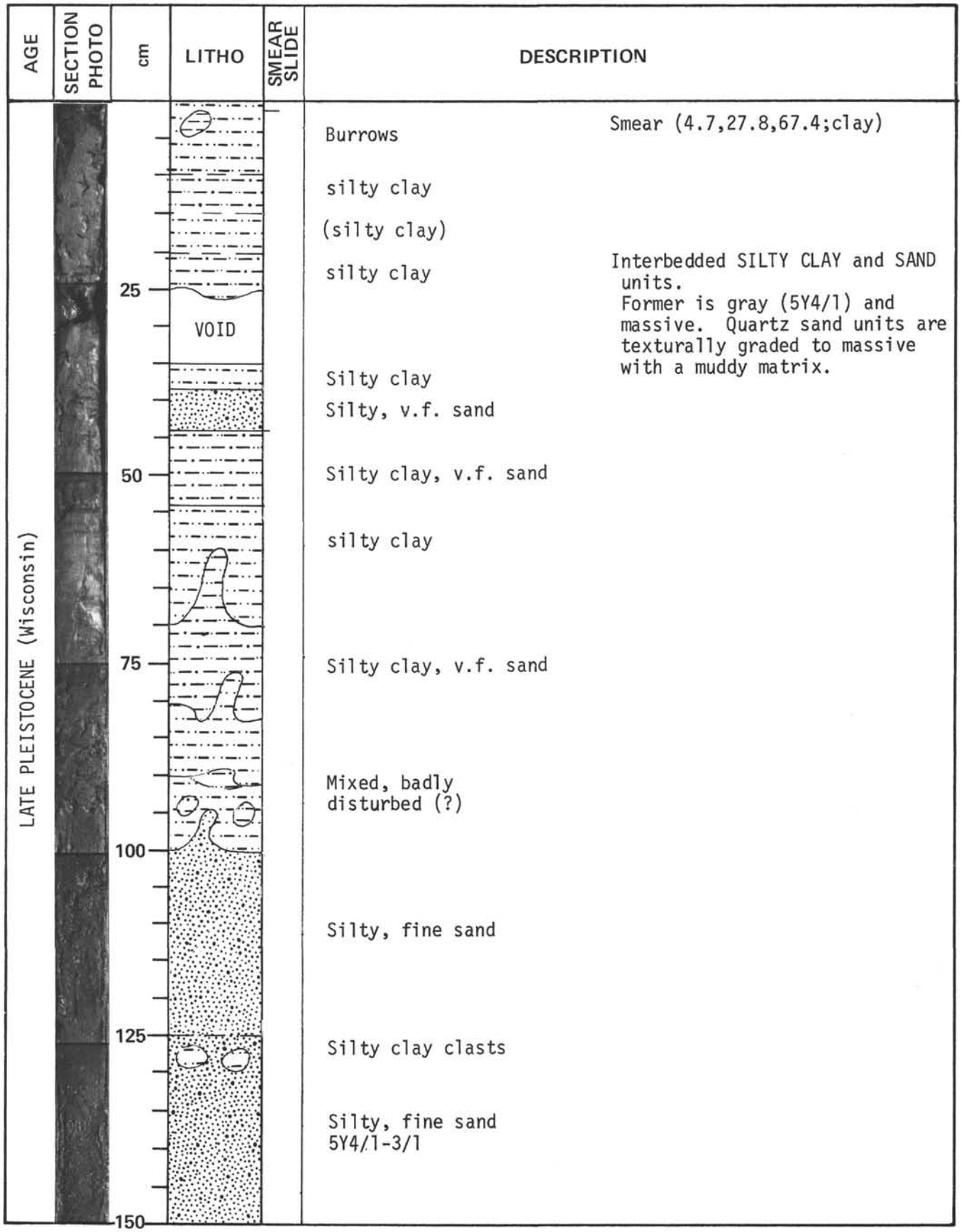
Site 85 Hole Core 5 Cored Interval: 210-212 m

AGE	ZONE	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION	GRAIN SIZE WEIGHT % SAND	SILT	CLAY
LATE PLEISTOCENE (Illinoian)	*Globorotalia truncatulinoides (Globoquadrina dutertrei* Subzone)	1	0.5–1.0	VOID	?		SAND Gray (5Y5/1); quartz carbonate, becoming coarser at base. Fluidity of core suggests that grading may be a result of resuspension during coring and retrieval. Original textural composition unknown.	94.3	2.1	3.6
		2						96.5	1.2	2.4
		Core Catcher								

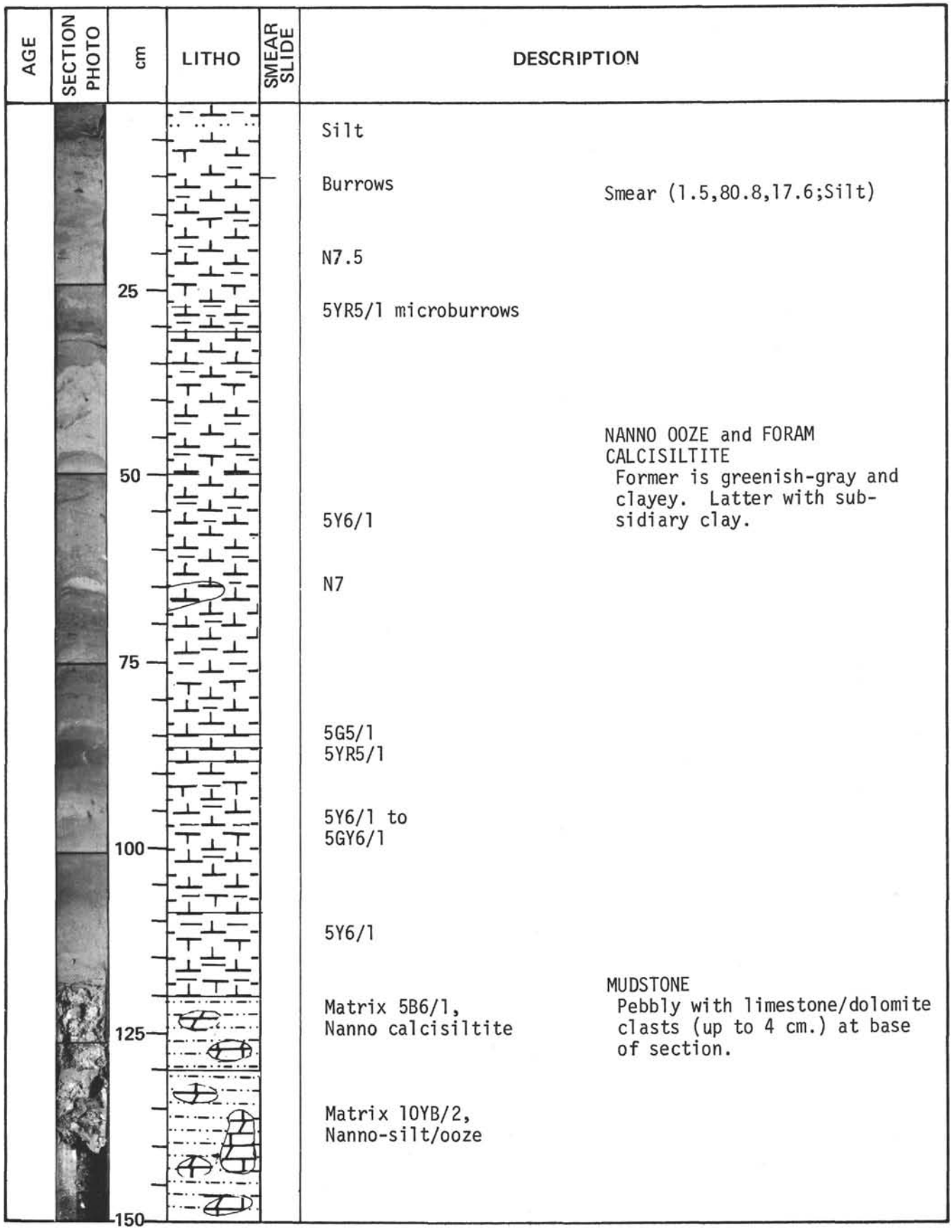
Site 85 Hole A Core 2 Cored Interval: 282-302 m

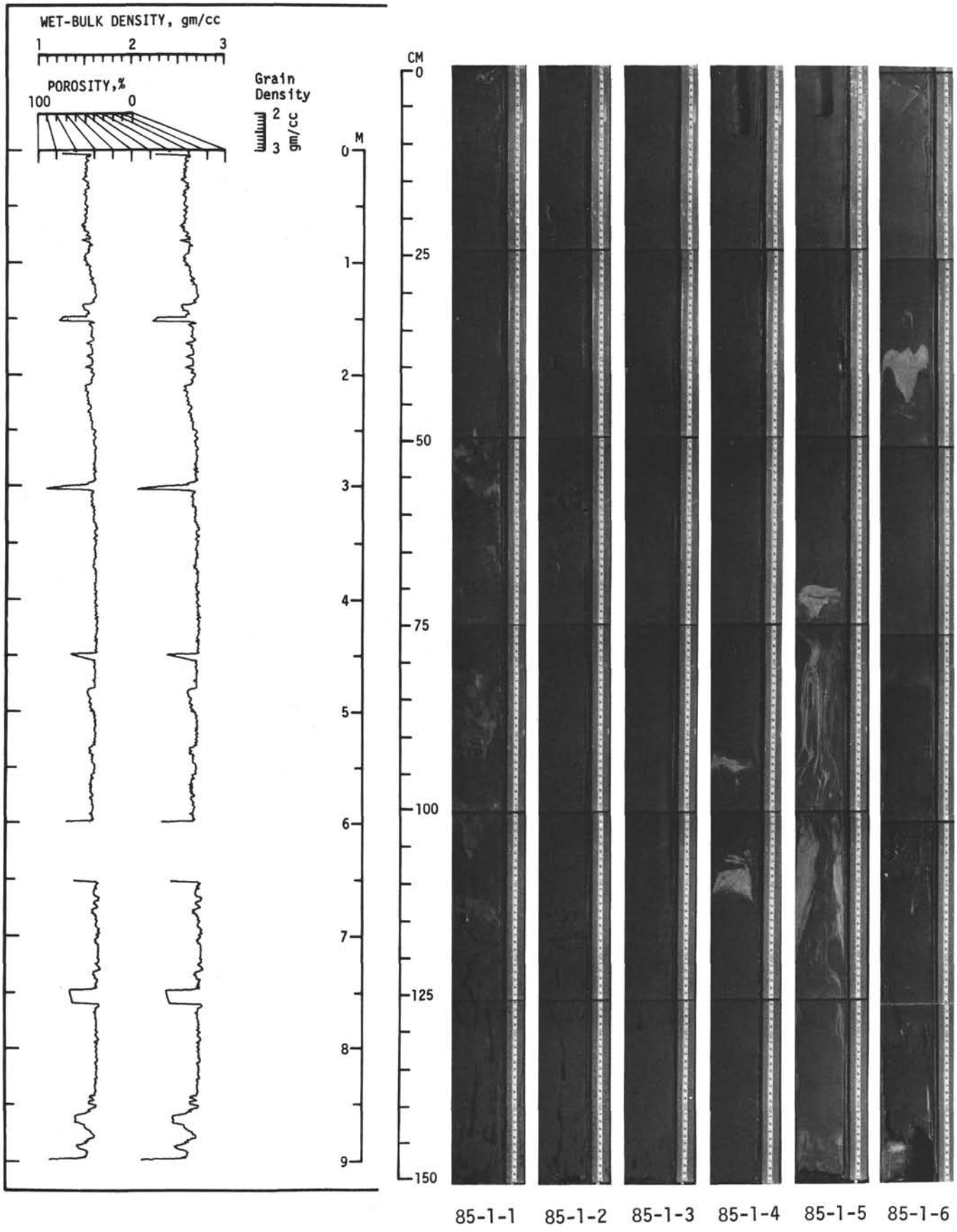
AGE	ZONE	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION	GRAIN SIZE WEIGHT % SAND	SILT	CLAY
LATE PLEISTOCENE	?	1	0.5	VOID			Core disturbed. Consists of SAND and clasts.			
			1.0	UNOPENED						
		Core Catcher								

SITE 85 CORE 2 SECTION 1



SITE 85 CORE 4 SECTION 1

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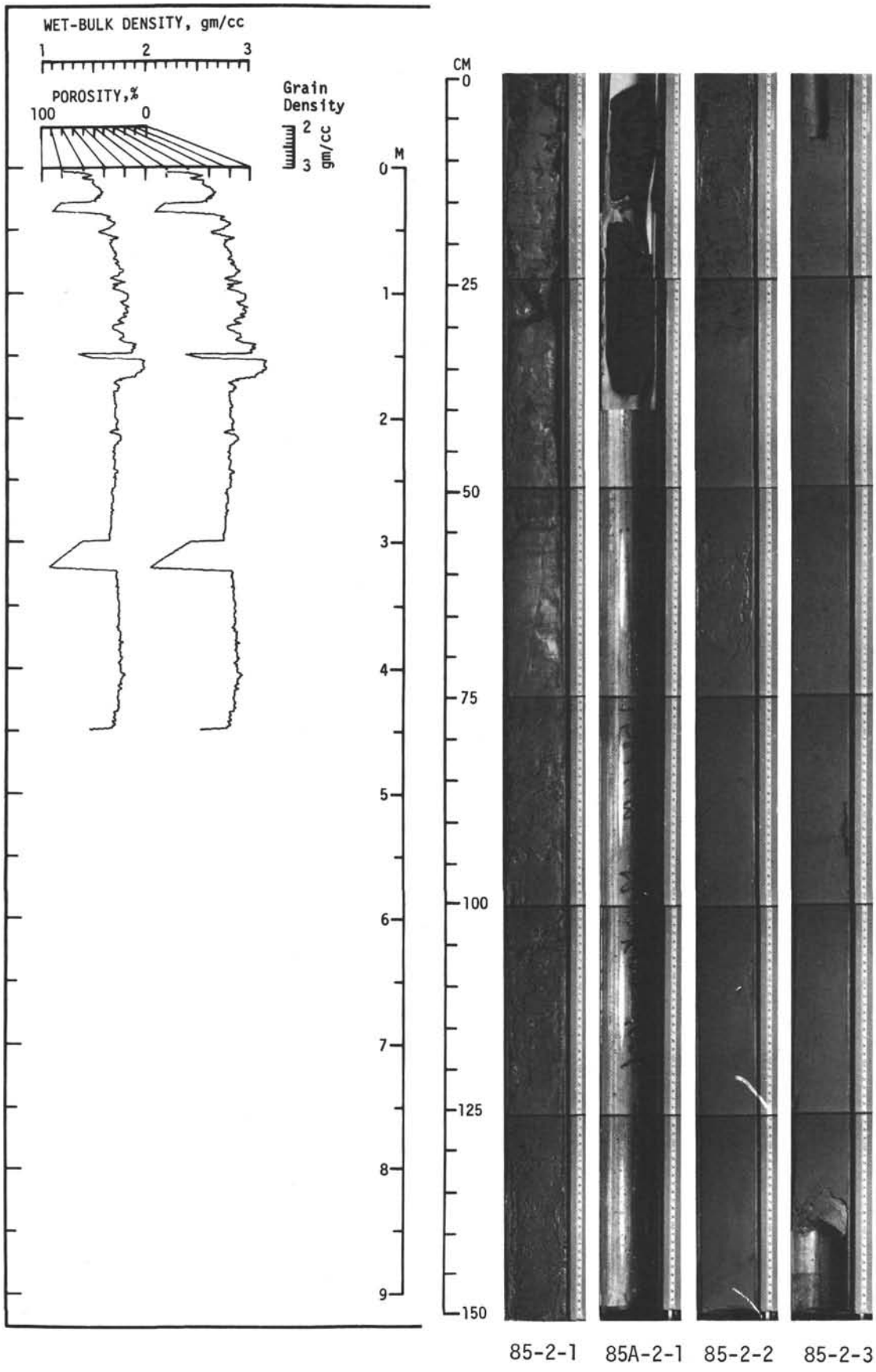
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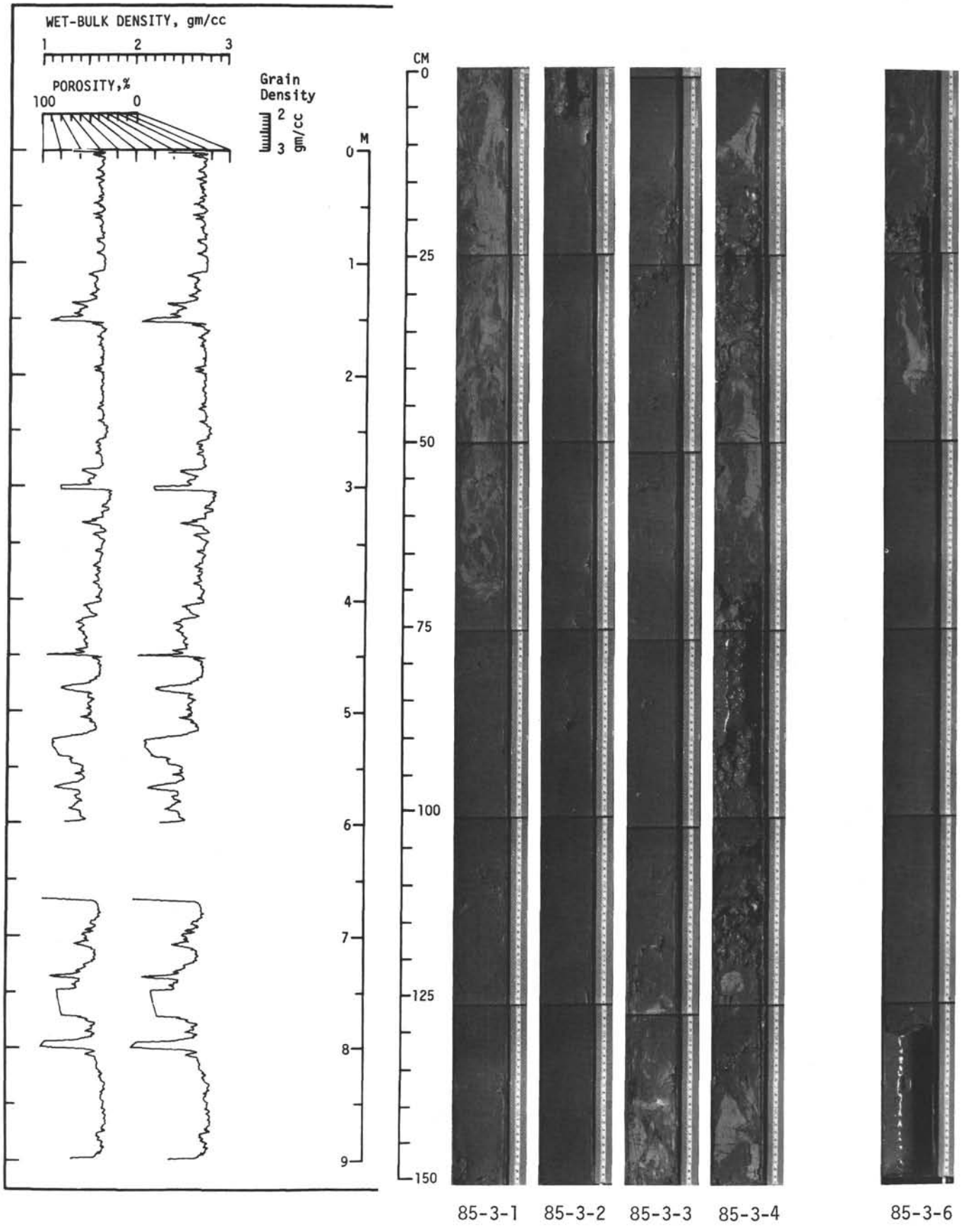
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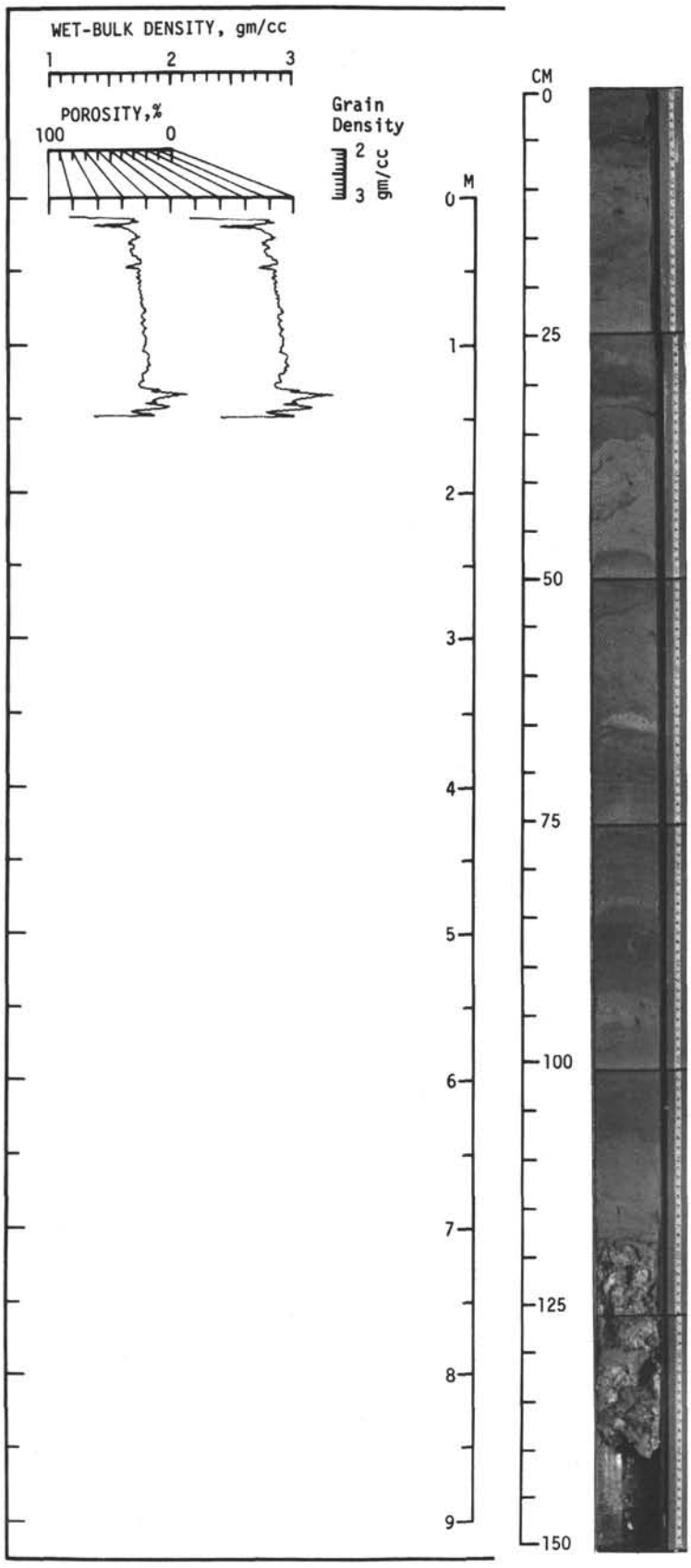
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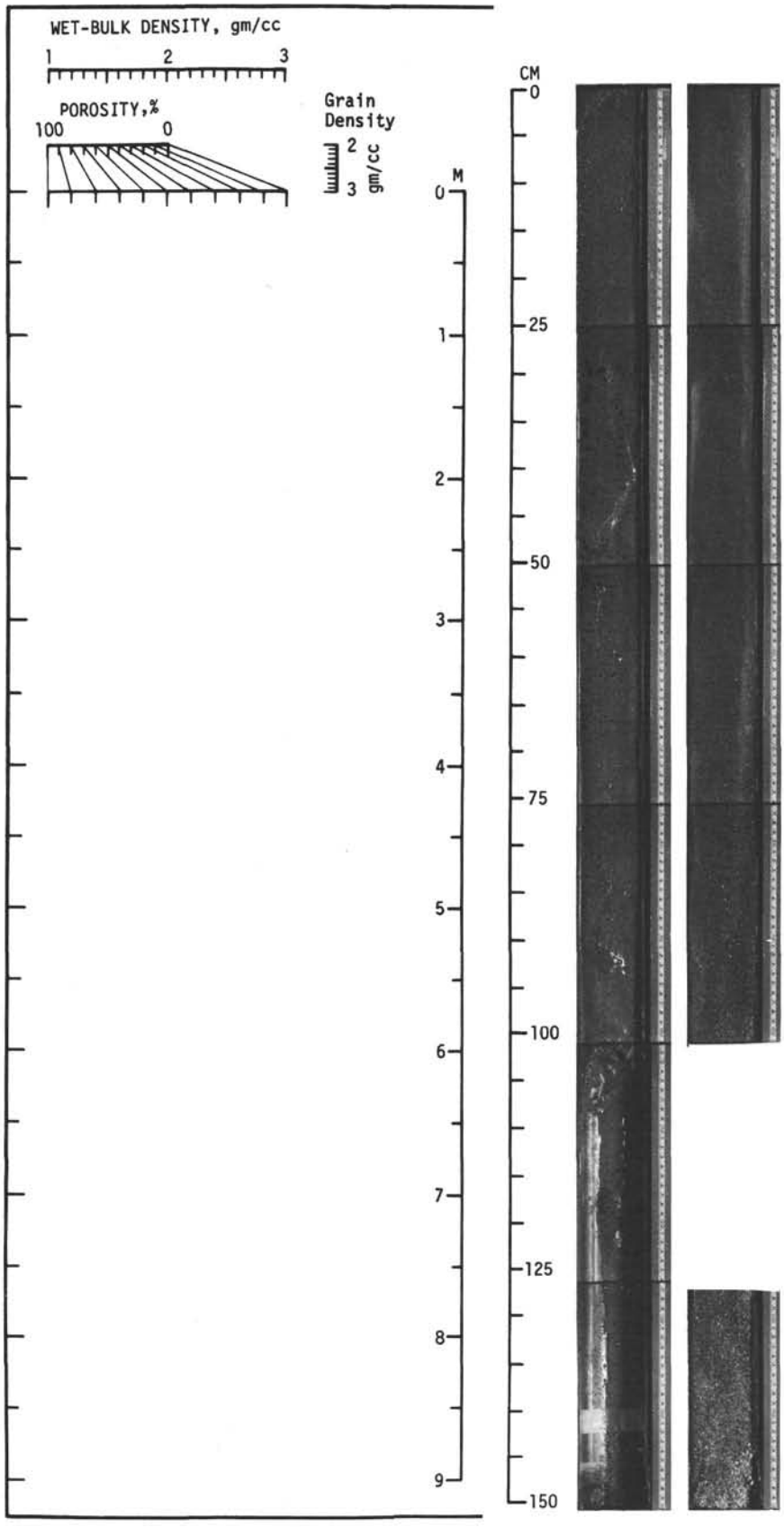
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