CONRAD 6 PISTON CORES

CORE NO.	DATE 1963	LOCAL TIME	LATITUDE	LONGITUDE	CORRECTED DEPTH (M)	LENGTH(CM)	TRIGGER CORE LENGTH(CM)
RC6-1	May 1	0700	41°44' N	64°58' W	2505	1308	None see description
RC6-2	May 2	1523	41°45' N	64°56' W	2470	1231	None
RC6-3	May 14	0734	41°52.2'N	65°12.3'W	1977	1283	1 ft.
RC6-4	May 15	0754	42°08' N	64°42' W	1977	1370	5
RC6-5	June 24	1137	41°40' N	64°55' W	2562	1094	None

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Preliminary Description
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Conrad 6-1

Megascopic Description of a Split Core

Latitude:	41°44'N	Longitude:	64°58'W
Corr. depth:	2511 M	P.D.R. depth:	1352 fms.
Date taken:	1 May 1963	Date opened:	30 September 1963
Described by:	R. Hekinian	Date described:	1 October 1963
Core length:	908 cm.	Flow-in:	155 cm.

0-908 cm.- Poorly sorted, soft, dark brown slightly silty lutite with large pocket penetrance due probably to slumping of light medium grained clastic sand.

No forams were seen. Low percentage of carbonate. Micaceous flakes and very-fine clastic silt are mixed with sediment. Very rare burrow-mottlings appear to be concentrated mostly at top of layer. Slumping of clastic sand abound from top to 90 cm.

From top to 125 cm. presence of irregular patches and apparently disturbed laminae of clastic silt mixed with about 15-20% lutite sporadically scattered throughout.

Coarse to very coarse clastic sand and rounded pebbles (2 x 1 x 0.8 cm.) at 118 cm. White mica had been found mixed with the clastic sand.

Manganese oxide abundant at the top area decreasing gradually with depth.

Intercalated laminae and layers of red lutite, dark lutite, and laminae of clastic silt, from 105 cm. to bottom of core.

a. Red lutite contains very low percentage of carbonate. No forams.

b. Dark lutite. No calcium carbonate was found.

c. Clastic silt appears moderately sorted. Composed mostly of quartz-feldspar association, few colored minerals and are often intercalated with microlaminae of dark lutite. Disturbed laminae (due to corer) at 780 cm.

Zone from 785 cm. to 795 cm. appears to be upside down? Badly disturbed area from 856 cm to 908 cm.

NOTE:- The following samples have been sent to Washington: 60-70 cm., 125-130 cm., 270-280 cm., 355-363 cm., 540-550 cm., 796.5-804.5 cm., 826-834 cm., 856.5-864.5 cm., 887-895 cm., 918.5-926.5 cm., 949-957 cm., 980-987 cm., 1008.5-1016.5 cm., 1037-1045 cm., 1045-1053 cm.

Note:

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Megascopic Description of a Split Core

Latitude:	41°45'N	Longitude:	64°56'W
Corr. depth:	2478 M	P.D.R. depth:	1334 fms.
Date taken:	2 May 1963	Date opened:	25 July 1963
Described by:	T. Willis	Flow-in:	
Core length:	791 cm.	Location:	THRESHER magnetic and large debris area. Continental slope.

General: A four cm. layer of lutaceous silt underlain by a brownish gray silty lutite containing numerous fine laminae of quartzose silt. The core is banded through much of its length with brownish green or reddish brown silty lutite. Manganese and hydrotroilite are irregularly present.

0-4 cm. Light to medium grayish brown lutaceous silt containing occasional fine to granule size quartz rock fragments. The layer is disturbed probably during coring. A 5-10 mm. irregularly disturbed layer of orange-red silty lutite runs diagonally across the layer from 2-3.5 cm. Forams are common. Burrowing is not in evidence. Although the layer is not visibly graded, it probably represents a turbidity flow. Lower contact is irregular and sharp.

4-~165 cm. Medium brownish gray silty lutite. Burrowing is not present. Forams are rare. Fine laminations of quartzose silt occur irregularly through the layer, averaging 1-2 cm. apart. They are generally 1 mm. thick with extremes of less than 1 mm. to 5 mm. The laminae are frequently irregular, occasionally not extending entirely through the core or forming small pockets of material. Many of the laminae contain finer structuring of lutite and silt microlaminae. Micronodules of manganese are present in some of the laminae. Hydrotroilite is associated with a laminae at 65 cm. Discrete balls of dark gray lutite ranging in size from 1-10 mm. occur irregularly in the layer, larger balls occurring at 14, 46, 81 and 164 cm. Layer of reddish gray silty lutite is present at 22-27 cm. The 30-40 cm. zone has been alternated and disturbed, presumably by coring. Lower contact is gradational and is based on the appearance of wider, red orange laminations.

~165-235 cm. Medium brownish gray silty lutite similar to the 4-165 cm. layer. Silt lamina as above occur less frequently. Fairly regular bands of darker gray material ranging from 5 mm. to 20 mm. in width are present. Occasional bands of reddish brown lutite occur less frequently. Hydrotroilite is frequently associated with the bands especially those at 170, 200, and 208 cm. Lower contact of the layer is marked by a decrease in the hydrotroilite fraction of the layer.

235-277 cm. Similar to the overlying layer except for a decrease in hydrotroilite. The lower contact is moderately sharp and marked by the absence of laminations.

277-347 cm. Dark greenish gray silty lutite becoming a reddish brown silty lutite intermixed with green lutite after 290 cm. Burrowing may be present although indistinct. Dark gray brown lutite balls fanging from 2 mm. to ~1.5 cm. occur in the layer

Larger balls are at 300 cm. and at the base of the layer. Manganese and hydrotroilite occur throughout the layer. Bottom contact is sharp and irregular.

347-349 cm. A turbidity deposit of medium sand to pebble size quartz and rock fragments, generally subangular to sub-rounded. The layer is well sorted, but disturbed and irregular. The lower contact is sharp and irregular, probably disturbed by coring.

349-378 cm. Medium brownish gray silty lutite as in the 4-165 cm. layer. Fine silt laminae occur more frequently than in 4-165 cm. The layer is underlain by a 6 mm. layer of fine to granule size generally subangular rock fragments. This layer is not visibly graded. Lower contact issharp and irregular.

328-407 cm. Greenish gray silty lutite becoming a reddish brown silty lutite as in 277-347 cm. Lower contact is sharp.

407-729 cm. Medium brownish gray silty lutite similar to the 165-235 cm. layer. Fine laminae(15 mm.) of silt occuring irregularly through the layer. Broader bands of greenish brown and reddish brown silty lutite also are present. The silt fraction increases in some of the bands. Local accumulations of hydrotroilite and manganese occur sporadically throughout the layer. A 2.5 cm. pebble, probably ice rafted is at 643 cm. Lower contact is sharp.

729-784 cm. Coarse silt to medium sand size subangular quartzose sand. The layer has been disturbed during coring and is partially flowed. Lower contact sharp.

784-791 cm. Brownish gray silty lutite disturbed by coring and becoming flowin after 791 cm.

This core tested for radioactivity by Dr. Morris Eiland, Knolls Atomic Power Lab, Niskayuna, New York (outskirts Schenectady, New York). No unusual activity. Th and U present.

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Conrad 6 -3

Preliminary Description

Megascopic Description of a Split Core NOT FOR PUBLICATION

Latitude:	41°52'N	Longitude:	65°12'W
Corr. depth:	1977 M	P.D.R. depth:	1070 fms.
Date taken:	14 May 1963	Date opened:	25 July 1963
Described by:	R. R. Capo	Flow-in:	77 cm.
Core length:	1195 cm.		

0-3 cm.- Medium brown soft silty lutite distorted possibly because core too wet when opened. Slight reaction to dilute hydrochloric acid. Forams common. Poorly sorted zone. Quartz, mica, garnet, manganese micronodules and zircon were seen under microscope. Lutite approximately 40%, silt 45% (mainly quartz), forams 10% and accessory minerals (garnet, mica, etc) 5%. Bottom contact gradational in color. Lithology changes to more lutaceous zone.

3-84 cm.- Medium to reddish-brown lutite highly mottled and burrowed with prominent horizontal zoophycus tracks. These zoophycus tracks are lighter in color than matrix above and below. Minute streaks and/or specks of manganese disseminated throughout layer. Manganese micronodules present in sand. Slight reaction to dilute hydrochloric acid. Quartzose sand concentrated in several small lenses and spots at 40 cm., and 75-83 cm. Forams but in smaller quantities than overlying zone. Hydrotroilite test inconclusive. Lutite approximately 75%, silt (mainly quartz) 15%, quartzose sand 5%, manganese 3%, and forams 2%. Bottom contact distinct with zoophycus track. Lithology similar.

84-558 cm.- Medium brown silty (mainly quartz) lutite with dark manganiferous streaks, and mottling (reddish-brown) disseminated throughout. Few foram tests and/or fragments observed. Reddish-brown (iron oxide) lutite very distinct between 205-216 cm. and this same color pattern (somewhat lighter) dominates core from 220 cm. down to approximately 420 cm. Zoophycus tracks so common in overlying layer conspicuously absent in this zone. Several igneous pebbles approximately 1 cm. in diameter scattered throughout layer at 310 and 425 cm. Small circular concentration of mud located between 470-480 cm. Manganese micronodule concentration at 481-483 cm. Lutite about 80%, silt (mainly quartz) 15%, pebbles (ice rafting?) 3%, forams 1% and manganese 1%. Bottom contact sharp in color and lithology.

558-1195 cm.- Primarily a reddish-brown silty (primarily quartz) lutite with quartzose sand laminae and/or zones scattered throughout. Quartzose sand and silty lutite layer between 558-563 cm. Core somewhat distorted here; indications of frictional drag on core sides. Sand inclusion approximately 4 cm.

long (originally horizontal) appears to have been pressured and stretched. Very thin laminae of silty pale gray lutite distinct between 575-600 cm. with thin silt layer interbedded at 593 cm. Piston and/or coupling effect (stretched somewhat longer than usual) between 605-634 cm. Laminae pattern of silt and lutite similar to 575-600 cm. zone occurs between 634-690 cm. Distortion of core evident here also - layers "dragged-down" on core edge. Sand layer stretched and elongated between 691-701 cm. This zone contains a higher concentration of manganese. Larger manganese micronodules permeate bottom section. Distorted sand layers occur at 795-815 cm., 883-895 cm., 914 cm., 925-950 cm., 965-985 cm. and 1010-1030 cm. The 1010-1030 cm. zone appears graded. From approximately 930 cm. to bottom core appears greatly disturbed. Poorly sorted very coarse subangular quartzose sand zone occurs between 1011-1018 cm. Large ice-rafted igneous rock fragments found at 710, 960, 1132 and 1183 cm. Burrows present but not too distinct. There is a slight reaction to dilute hydrochloric acid although no forams were observed. Lutite approximately 70%, silt (primarily quartz) 10%, igneous rock fragments 10%, coarse quartzose sand 5%, manganese 3%, and glauconite 2%.

NOTE:- Sand and/or silt layer texture ranges from very fine to coarse and coarse sand layer (1011-1018 cm.) overlies fine sand zones. The layer appears to have reverse grading.

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Megascopic Description of a Split Core

Latitude:	42°08'N	Longitude:	64°42'W
Corr. depth:	1977 M	P.D.R depth:	1070 fm
Date taken:	15 May 1963	Date opened:	27 January 1965
Date described:	28 January 1965	Date photographed:	27 January 1965
Described by:	J.R.Conolly	Flow-in:	?
Core length:	1348 cm.		

0-123 cm.- Medium olive gray (5Y4/2) lutite. Has a faint tinge of pink or rose in the lower 20 cm. Structureless except for 1 cm. thick horizontal burrows, approximately 2-5 cm. apart. Sharp basal contact.

123-130 cm.- Grayish red (R4/2) to moderate reddish brown (10R4/6) lutite.

130-163 cm.- Grayish red (5R4/2) lutite. Sharp basal contact.

163-165 cm.- Moderate olive gray to grayish brown pebbly lutite. Sharp basal contact.

165-730 cm.- Grayish brown lutite (5YR3/2) containing many thin laminae (1/2-1 mm thick) of silty brown lutite. Scattered pebbles throughout.

730-1348 cm.- Grayish brown lutite with many scattered pebbles. Bedding not visible. This part of core could be wholly or partly flow-in material.

Approximately 12 pebbles, 1-2" in diameter occur in this zone. They consist almost exclusively of sub-rounded to rounded fine-grained gray to green quartz-biotite-schists, supporting the hypothesis that this section is wholly or partly flow-in material.

Sand Analysis

Sample depth	Percent sand	Description
10 cm.	4.7	5-10% planktonic foraminifera (No G. menardii). Remainder consists of 90% angular quartz sand. Trace of spicules, glauconite, mica, rock fragments and iron oxides present. About 5% of the quartz has a red iron oxide coating. Some benthic foraminifera occur but less than 1%.
29 cm.	1.7	Less than 1% planktonic and benthic foraminifera. Sand similar to that described above but with about 1% of 1/2-1 mm grains.
50 cm.	4.5	Similar to above with more large grains and less foraminifera.
75 cm.	15.5	Pebbles of gray slate, granite and vein quartz common.

Sand Analysis (cont'd)

Sample depth	Percent sand	Description
100 cm.	4.7	As above but with 1/2-1% planktonic foraminifera.
120 cm.	21.1	As above but less than 1% planktonic foraminifera.
130 cm.	24.6	Brick red till; red sedimentary rock pebbles common.
145 cm.	26.3	Similar to 120 cm. but with 1/2-1% planktonic foraminifera.
165 cm.	26.6	Similar to above except for 30% pebbles 1-5 mm in diameter. Pebbles consist of quartz, limestone, granite, gray slates, mica schist, red siltstone and sandstone. Almost no foraminifera.
180 cm.	5.0	As above with less pebbles.
210 cm.	1.6	As above with even less pebbles and sand.
250 cm.	3.0	Slightly more pebbles and with several large (1/2 mm by 6 mm) spicules completely replaced by pyrite.
300 cm.	2.3	
350	4.8	
400	3.0	As above, but with 1-3% large green mammillary glauconite grains. Almost no foraminifera.
450	5.0	
500	6.0	
600	32.0	
700	26.6	
800	35.4	Poorly sorted, angular, sand and pebbles.
900	31.9	A large percentage of the pebbles including
1000	27.5	Mica Schist, gray slate, granite and vein
1100	33.0	quartz.
1200	23.4	
1300	15.7	

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Conrad 6-5

Preliminary Description

Megascopic Description of a Split Core NOT FOR PUBLICATION

Latitude:	41°40'N	Longitude:	64°55'W
Corr. depth:	2562 M	P.D.R depth:	1383 fm
Date taken:	24 June 1963	Date opened:	28 January 1965
Date described:	29 January 1965	Date photographed:	28 January 1965
Described by:	J.R. Conolly	Flow-in:	70 cm
Core length:	910 cm		

0-8 cm.- Fine-medium, light-olive gray (5Y5/2) foraminifera sand layer. Sharp basal contact.

8-42 cm.- Medium olive gray (5Y4/2) at top to pale brown (5YR5/2) lutite at base. Disturbed and transitional contact.

42-48 cm.- Light to moderate reddish-brown lutite. Disturbed basal contact.

48-115 cm.- Grayish-red (10R4/2) to moderate reddish-brown mottled lutite. One large (1 1/2") rounded pebble of bedded fine red sandstone occurs at 95 cm. Transitional basal contact.

115-170 cm.- Grayish-red (at top) becoming gradually medium olive gray lutite towards base. Sharp basal contact at top of sand layer.

170-288 cm.- Medium olive gray lutite with many thin 1 mm to 10 mm gray sand layers. About 5 to 6 layers generally occur in each 10 cm. and are fairly evenly spaced. The sand layers are well-sorted. One sand layer at 225 cm. is 1 cm. thick and cross-stratified.

288-299 cm.- Light moderate reddish-brown lutite similar in color and texture to that in the 42-228 cm. zone. Sharp basal contact.

299-910 cm.- Medium to light olive gray lutite with many thin sand and silt laminae (1/2 to 1 mm thick normally) and about 7 to 15 laminae in each 10 cm. Distinct (1/2 to 1 cm thick), light-moderate reddish-brown lutite layers occur between 490 and 525 cm.(7 layers in this zone) and 550 and 570 cm.(10 layers in this zone). The zone from 610 to 678 cm.consist of a mottled light to moderate reddish-brown and olive gray lutite. Moderate reddish-brown lutite layers (about 6 layers) also occur between 715 and 735 cm.

The zone between 678-706 cm contains about 10 (3 to 5 mm thick) gray sand layers. These layers are more distinctive than those elsewhere in this section of the core, except in the 800 to 910 cm. section of the core where several layers this thick are about 5 to 10 cm. apart.