

**FUGRO ENGINEERING SERVICES LIMITED**

7

**TITLE E:**

## CORE

### DESCRIPTION CHART

SCALE

**1:50**

*WELL:*

## C5a

TD:

30m

CLE.

SURFACE POSITION:

178m

**X-453924 Y- 4236252**

INTERVAL :

**0m - 30m**

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DETAIL S.

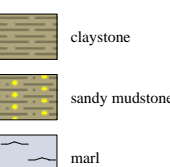
DATE: NOVEMBER, 2011  
AUTHORS: O. DAVIS  
REPORT NO: 7166/lb  
PROJECT NO: GF721  
SOFTWARE: WellCAD 4.1



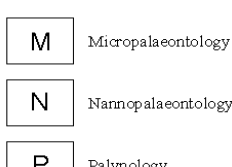
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## LEGEND

## LITHOLOGY



## SAMPLES



LOGGER'S DEPTH 1m:50m	AGE	BIOZONE	CORE CONDITION	SAMPLES	GRAIN SIZE AND SEDIMENTARY STRUCTURES	LITHOLOGY	WELLSITE DESCRIPTION	CORE DESCRIPTION	BIOSTRATIGRAPHIC ANALYSIS
					<div>cobbles/boulders</div> <div>Pebbles</div> <div>Stones</div> <div>Very coarse sand</div> <div>Coarse sand</div> <div>Medium sand</div> <div>Fine sand</div> <div>Silt</div> <div>Argillaceous siltstone</div> <div>Mudstone</div> <div>Anhydrite/Coal</div>				
0.0	RECENT	Pliocene - ?Pleistocene		P			HUMUS with sand and gravel.	Recent soil.	P: ABN Glomus spp., ABN algal cysts, CMN Asteraceae Cichorioideae
0.5				M			CLAY weathered (oxidised) with fine gravel.	CLAY: matrix locally supporting angular, cream limestone gravel, more carbonaceous flecks observed throughout clay.	M: Reworked Lt.-Mid. Miocene planktonic foraminifera including Globigerinoides bulloideus and Globoquadrina dehiscens
1.0				M			CLAY with calcareous concretions and angular gravel, weathered (oxidised). At 2m, becoming more gravely. Dark-Grey.		N: CMN Coccolithus miopelagicus, OCC Sphenolithus heteromorphus, TOP Cretaceous reworking.
1.5				N					P: Very impoverished in palynomorphs. Presence of Zygnema type
2.0				P					N: Highly impoverished assemblage, PRES Cyclicargolithus floridanus
2.5				N					M: Impoverished assemblage
3.0				M					P: Very impoverished in palynomorphs
3.5				P					N: ABN Cyclicargolithus floridanus and Reticulofenestra producta, TOP Paleogene reworking
4.0				N					P: Very impoverished in palynomorphs
4.5				M					M: ABN Globigerina decoraperta, CMN Gonorotalia acostaensis
5.0	N	MARL, ?bedding planes subhorizontal? Light grey with brown patches.	CLAY: Soft calcareous, light yellowish brown. Structureless. Locally limestone gravel.	N: ABN Reticulofenestra producta, CMN Sphenolithus neoabies, S. abies, S. heteromorphus (reworked)					
5.5	M			M: ABN Globigerina decoraperta, OCC Gonorotalia acostaensis					
6.0	P			P: SABN bisaccate. Presence of Homotryblum tenuispinosum, H.floripes					
6.5	N			M: OCC Cibicides spp, RARE indeterminate planktonic.					
7.0				N: CMN Amaulolithus primus, OCC A. amplificus					
7.5				M: CMN Globigerina/Globigerinoides spp.					
8.0	M			MARL, moderately weak, bedding and fractures planes are 40 to 60° (rare conjugate pairs).	CLAY/MARL: homogenous soft.	N: CMN Sphenolithus neoabies, PRES Pseudoemiliania lacunosa			
8.5	N					M: CMN pyrite debris, OCC Orbulina universa			
9.0	M					N: CMN Sphenolithus neoabies and Reticulofenestra pseudumbilica, N: SABN small Gephyrocapsa spp., PRES Pseudoemiliania lacunosa			
9.5	N					N: SABN small Gephyrocapsa spp.			
10.0	P	P: SABN bisaccates, ABN Spiniferites ramosus gr., PRES of Hystrichosphaeropsis obscura, Selenopemphix brevispinosa, Mendicodinium robustum, Achomosphaera andalusiensis, Homotryblum floripes							
10.5		CLAY/MARL: homogenous soft.							
11.0		Siltier towards base.							
11.5	M	M: Barren.							
12.0	MARL, sandy, stiff, thickly bedded. Bedding planes and fractures 60° (Smooth surface). Dark grey	MARL: grain size varies from clay to silt, with local silt laminations.	Inclined bedding 60° explains inclined laminae.			N: ABN Reticulofenestra pseudumbilica, PRES Pseudoemiliania lacunosa ovata			
12.5						M: ABN Globigerina decoraperta, CMN Orbulina universa, O. suturalis, OCC Gonorotalia acostaensis			
13.0				P: SABN bisaccates, PRES of Hystrichosphaeropsis obscura					
13.5				M: SABN Globigerina decoraperta					
14.0				N: CMN Sphenolithus neoabies and Reticulofenestra producta					
14.5				M: SABN Globigerina decoraperta, SABN Orbulina universa, ABN O. suturalis.					
15.0				N: ABN Reticulofenestra producta, PRES Gephyrocapsa spp. (large) BASE Paleocene reworking					
15.5				P: SABN bisaccates, CMN Spiniferites ramosus gr., PRES Homotryblum tenuispinosum					
16.0				M: SABN Orbulina universa, ABN O. suturalis, CMN Gonorotalia acostaensis, Globigerina decoraperta, OCC O. bilobata					
16.5				N: PRES Discoaster asymmetricus and Sphenolithus heteromorphus (reworked), BASE Cretaceous reworking					
17.0	MARL (more calcareous), sandy, very stiff, thickly bedded. Bedding planes and fractures 60°. Light grey	Sandy lense associated with very thin clay bed.	Sandy laminae and lenses are more common. Inclined bedding.	M: SABN Orbulina universa, SABN O. suturalis, CMN Globigerina decoraperta, reworked Globigerinoides bulloideus					
17.5				N: OCC Sphenolithus heteromorphus, INFLUX Diatoms					
18.0									
18.5									
19.0									
19.5									
20.0									
20.5									
21.0									
21.5									
22.0	MARL: grain size varies from silt to clay.	Sandy laminae and lenses are more common. Inclined bedding.	Sandy laminae and lenses are more common. Inclined bedding.	M: SABN Orbulina universa, CMN O. suturalis, CMN Globigerina decoraperta, reworked ABN Globigerinoides bulloideus and CMN larger foraminifera (operculinids)					
22.5				N: OCC Sphenolithus heteromorphus, INFLUX Diatoms					
23.0									
23.5									
24.0									
24.5									
25.0									
25.5									
26.0									
26.5									
27.0	MARL: grain size varies from silt to clay.	Sandy laminae and lenses are more common. Inclined bedding.	Sandy laminae and lenses are more common. Inclined bedding.	M: SABN Orbulina universa, CMN O. suturalis, CMN Globigerina decoraperta, reworked ABN Globigerinoides bulloideus and CMN larger foraminifera (operculinids)					
27.5				N: OCC Sphenolithus heteromorphus, INFLUX Diatoms					
28.0									
28.5									
29.0									
29.5									
30.0									
30.5									
31.0									
31.5									