

I.G.S. Continental Shelf Units

SHEET/STATION NOS. ^{CSU 1} 459001-03 ^{CSU 2} 95 NO. OF SAMPLES 17
 ORGANISATION CRUISE NO. DATE TIME GMT
 UNCORRECTED DEPTH M POSITION FIXING METHODS COMMENTS
 PRIMARY FIXING METHOD chain red green purple
 COMPUTED/MANUAL LATITUDE LONGITUDE
 SECONDARY FIXING METHOD

SITINGS	BEARING °T	RANGE

EQUIPMENT	CORRECTED DEPTH _____ O.D.	CARBONATE %	GRAVEL %	SAND %	SILT & CLAY %	CORES	BOTTLES	BAGS
	GEOLOGIST _____							
	SHIP _____							
59-03/95 = BH 77/04								

SAMPLE DATA SHEET 1.

SECTION OF BOREHOLE 77/16 77/4P

M/S PERBER

Lat 59° 8.75'N Long 02° 15.9'W Decca G: E 41.2 P: D 51.3

Water Depth 80m Surface Level O.D.

Communicated 29/6/77 by J. A. Charles, D. Evans, K. Rocker, R. Sutherland

Date of boring or sinking 28-29/6/77 Borer

One-inch Map Six-inch Map 1:1,00,000 Sheet 59°N 8°W

248429 8M 473 I.E.S. 275

		Thickness		Depth from Surface	
		M	Mm	M	Mm
Run	0 - 3m open hole to establish borehole No recovery.				
Run	3.0 - 3.5m Rush sample 10cms recovered. Sand above weathered sandstone. <u>Sand</u> , medium grained, reddish with large broken brachiopod fragments <u>Sandstone</u> at base of sample, weathered reddish, med-coarse grained, sub rounded-angular, common quartz, feldspathic grains & mica, slightly ferruginous.				
Run	3.5 - 5.5m rotary drilling - 1m recovery. <u>Arkose</u> purplish red, coarse, angular to sub rounded, common quartz, weathered feldspathic grains and flakes and books of mica, Quartz up to pebble size. Well compacted. Bottom 20 cms in 4.30 - 4.50m is soft disturbed sandstone.				
Run	5.5 - 7.5m 1.2m recovery. <u>Arkose</u> a/c but less weathered and with occasional bands of breccia/conglomer particularly 5.65 - 5.90m (where it is grey green) and 6.6 - 6.8m.				

	Thickness		Depth from Surface	
	M	Mm	M	Mm
Run 7.5 - 10.7 m (2.4 m recovery)				
- 7.5 - 7.7 m Siltstone ^{Arkose} fine-medium, micaceous arkose, dark purplish red, soft.				H'pal sample *
- 7.7 - 9.4 m <u>Arkose</u> , med-coarse conglomeratic afa, with bedding at c. 30-35° seen. purplish red - grey green - latter particularly in bottom 25 cm.				
- 9.4 - 9.85 m <u>Siltstone</u> ? laminated, coarse, above varies from med. grey at top 10 cm to purplish red at base, variable in between.				
- 9.85 - 10.0 m <u>Arkose</u> ^{fine med} Siltstone ^{arkose} afa.				
10.00 - 10.10				
- 10.00 - 10.10 <u>Siltstone</u> afa purplish red.				
- 10.10 - 10.25 <u>Arkose</u> purplish red / grey green / green, med grained afa.				
Run 10.7 - 12.60 m (1.8 m recovery)				
<u>Arkose</u> med-coarse, purplish red sandstone and grit with occ'l more conglom. layers. micaceous. Includes 11.70 - 12.0 m a laminated micaceous <u>kaolstone</u> layer with a 25° dip. Occ'l reduction spots and layers.				
<u>TD. 12.60 m</u>				

INSTITUTE OF GEOLOGICAL SCIENCES

Continental Shelf Unit North

COMPOSITE LOG

Borehole No **77/16** 77/4

Location: *West Fair Isle Basin*

Actual position: Latitude: 59° 8.75'N
Longitude: 02° 15.9'W

Dates of drilling: 29.6.77

Total depth: 12.60 m

Water depth: 80 m

Navigation: MAIN CHAIN BOCCA Green E 4-2
6C Purple D 51-3

Positioning: Anchored.

Contractor: Anton von der Lippe

Vessel: mv Ferder

Sea Area: E. Orkney

Planned IGS No: SLN 16

Licence Block:

Operator: - not allocated

1:100 000 Sheet No: 59°N 3°W

Geologists: JAC, KR, DE

IGS Borehole No

<p>Purpose</p> <p>To establish age of oldest beds in West Fair Isle basin.</p>	
<p>Comments</p>	

LITHOLOGICAL KEY	
CLAY/SHALE, MUDSTONE	EVAPORITES
SILT/SILTSTONE	EXTRUSIVE IGNEOUS
SAND/SANDSTONE	INTRUSIVE IGNEOUS
GRAVEL CONGLOMERATE	BASEMENT
LIMESTONE	WHOLE SHELLS/SHELL FRAGMENTS
CHALK	CARBONACEOUS PLANT FRAGMENTS
DOLOMITE	IRON PYRITES/FERRUGINOUS
COAL/LIGNITE	CALCAREOUS

AGE	NATURAL GAMMA RAY LOG (Counts/s)	LITHOLOGY <small>INTERPRETED FROM CORE RECORD</small>	DESCRIPTION	SUB-SAMPLES	COMMENTS
	<p>Depth (m below sealevel)</p> <p>Scale: 1:50</p>		Seabed		
PLEISTOCENE - RECENT			Open lake top 5m.		
		ROCKHEAD	S med, reddish with large broken bivalve frags		
			S Arkose sst, purplish red, coarse, angular-sub rounded frags, common quartz, pelopitic grains and mica, ferruginous. Occasional pebbles.		
		5	dilat.		
			S s/a with conglomeratic horizons, upper conglom. band is grey green, remainder purplish red s/a.		
			30-35° dip recorded		
			S Arkose s/a		
				← M'Pal	
? PERMO-TRIAS			Siltstone layers include med grey and grey-green calcareous v. micaceous		
		10		← M'Pal	
			S Arkose s/a		
			Siltstone horizon, 10° dip		← SUB-SAMPLED AT 11.3m BY M.B.K. OCT '82
			TD 12.60m.		