REPORT ON REFERRED FOSSILS

32L005

GGS3201
32L005

STRATIGRAPHIC RANGE	Upper Cretaceous	SHIPMENT NUMBER	EEG-78-35(1)
GENERAL LOCALITY	Georgia	REGION	Wayne Co.
QUADRANGLE OR AREA	Jessup East Quad.	DATE RECEIVED	5/5/78
KINDS OF FOSSILS	Calcareous Nannofossils	STATUS OF WORK	Complete
REFERRED BY	Greg Gohn	DATE REPORTED	5/19/78
REPORT PREPARED BY	Charles C. Smith		

Eight very small samples of drill cuttings were submitted for calcareous nannoplankton investigations. Samples were collected from the Davis Hopkins No. 2 Core Hole, located in the Jessup East Quadrangle, lat. 31 deg. 32 min. North, long. 81 deg. 43 min. West, Wayne Co., Georgia.

Prior to laboratory processing, all submitted samples were examined with a low-power binocular microscope. This brief examination indicated there to be a considerable amount of drilling mud adhering to the cuttings, and that the cuttings themselves varied greatly in bulk lithology. Some consisted of dark gray shale and others of clean quartzose siltstone and fine sandstone, and still others of varying proportions of clay and silt to fine sand fractions. The presence of drill mud is prior indication of potential contamination of the prepared nannofossil residues, and the variable lithologies suggest that down hole contamination by cavings from above should be regarded as a distinct possibility.

All samples were prepared by normal laboratory techniques, and each sample yielded a rich and well preserved nannofossil flora. A detailed listing of species present and their relative abundance is included in chart form as an attachment to this report. Initial sample volumes were so small that no attempt was made to process the residues for planktonic foraminiferal investigations.

Sample 3227-3259 feet
Age: Campanian, most probably early to middle Campanian in age.
Comments: This sample contains a number of species characteristic of Campanian nannofloras. BROINSONIA PARCA has its lowest occurrence surface in strata of earliest Campanian age, and although this species could represent a down hole contaminant, I see no evidence (at this stratigraphic level) for pre-Campanian age beds. EIFFELLITHUS EXIMIUS is also common in this sample, and its highest occurrence level coincides with the Campanian-Maastrichtian boundary as defined by the planktonic foraminifera. Thus, the presence of these and associated species convince me of the Campanian age of this sample. I further suspect the sample is early to middle Campanian in age based on the absence of a number of species, including TETRALITHUS TRIFIDUS, normally observed in strata of late Campanian age.

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STRATIGRAPHIC RANGE		SHIPMENT NUMBER	EEG-78-35(1)
GENERAL LOCALITY		REGION	
QUADRANGLE OR AREA		DATE RECEIVED	
KINDS OF FOSSILS		STATUS OF WORK	
REFERRED BY		DATE REPORTED	
REPORT PREPARED BY			

Sample 3385-3416 feet
Age: Early to middle Campanian.
Comments: Same general comments as above. This sample contains common BROINSONIA PARCA, a species restricted to strata of Campanian through middle Maastrichitan age. If this sample were pre-Campanian in age, I would not expect B. PARCA to be quite so abundant. Too, I see no species indicative of older strata.

Sample 3490-3500 feet
Age: Santonian, most probably middle to late Santonian.
Comments: This sample contains an extremely abundant nannoplankton flora of which a number are unquestionably reworked (caved) from overlying beds. The age of this sample is derived primarily from the presence of LITHASTRINUS FLORALIS which has been adequately documented to have its highest occurrence surface in strata of late-middle or late Santonian age.

Sample 3560-3570 feet
Age: Coniacian through middle Santonian
Comments: This sample contains the highest stratigraphic occurrence of LITHASTRINUS GRILLII and MARTHASTERITES FURCATUS, both having their highest occurrence level in strata of middle Santonian age. Furthermore, the common presence of both TETRALITHUS OBSCURUS and TETRALITHUS OVALIS, which do not occur in pre-Coniacian age sediments, strongly indicates this sample to be assignable to the Coniacian or early or middle Santonian. As is possible with any conclusions derived from cuttings samples, the age may be much older and the observed flora entirely reworked. However, I seriously doubt it in this case, as I see no pre-Coniacian aged species. I will stick with the age as given above.

Sample 3640-3650 feet
Age: Coniacian through middle Santonian.
Comments: Same general comments as above. This sample contains BROINSONIA PARCA, TETRALITHUS ACULEUS, and other species which are unquestionably down hole contaminants. Yet, due to the presence of LITHASTRINUS FLORALIS, LITHASTRINUS GRILLII, MARTHASTERITES CRASSUS, MARTHASTERITES FURCATUS, and other species indicative of Coniacian or Santonian aged beds, I believe the bulk of this assemblage to be in place and to represent strata no older than early Coniacian in age. @

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GENERAL LOCALITY		REGION	
QUADRANGLE OR AREA		DATE RECEIVED	
KINDS OF FOSSILS		STATUS OF WORK	
REFERRED BY		DATE REPORTED	
REPORT PREPARED BY			

Sample 3697-3728 feet

Age: Coniacian through middle Santonian.

Comments: Although there appears to be a significant number of down hole contaminants in this sample, the presence of LITHASTRINUS FLORALIS and MARTHASTERITES FURCATUS with common TETRALITHUS OBSCURUS, and absence of older species, leads me to believe the sample is no older than Coniacian in age.

Sample 4019-4051 feet

Age: Uncertain, middle Santonian or older.

Comments: This sample stratigraphically lies below well-documented sections of Coniacian through middle Santonian age, yet the flora consists of nothing but Campanian species. I particularly noted the absence of L. FLORALIS, L. GRILLII, M. CRASSUS, and M. FURCATUS. I am convinced that this particular sample consists of very very little other than cuttings of Campanian age representing cavings from overlying sections.

Sample 4051-4081 feet

Age: Uncertain, middle Santonian or older.

Comments: Same general comments as above. There are a tremendous number of reworked species present, including Campanian and Maastrichtian forms as well as Paleocene species. Intensive examination of these lower samples, with resulting lack of my identifying anything indicating strata older than Coniacian age, leads me to believe that

(a) This interval is assignable to strata no older than Coniacian age,

(b) The section at 4051-4081 is older than Coniacian in age, but the cuttings represent caving from above, or

(c) The penetrated section is older than Coniacian in age but is non-marine or so sparingly fossiliferous that key nannofossil species are not present.

In spite of my extensive experience, tremendous knowledge expertise, and good looks, I am unwilling to suggest which of the above alteratives is most reasonable. @

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REPORT ON REFERRED FOSSILS

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STRATIGRAPHIC RANGE

GENERAL LOCALITY

QUADRANGLE OR AREA

KINDS OF FOSSILS

REFERRED BY

REPORT PREPARED BY

SHIPMENT NUMBER EEG-78-35(1)

REGION

DATE RECEIVED

STATUS OF WORK

DATE REPORTED

At your request, excess unprocessed cuttings are being returned. Processed powdered sample and prepared slides will be retained in this laboratory.

Range and abundance chart follows in Part 2. @

Charles C. Smith

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REPORT ON REFERRED FOSSILS

STRATIGRAPHIC RANGE	Upper Cretaceous	SHIPMENT NUMBER	EEG-78-35(2)
GENERAL LOCALITY	Georgia	REGION	Wayne Co.
QUADRANGLE OR AREA	Jessup East Quad.	DATE RECEIVED	5/5/78
KINDS OF FOSSILS	Calcareous Nannofossils	STATUS OF WORK	Complete
REFERRED BY	Greg Gohn	DATE REPORTED	5/19/78
REPORT PREPARED BY	Charles C. Smith		

CONTINUED FROM EEG-78-35(1).

RANGE AND ABUNDANCE OF CALCAREOUS NANNOFOSSILS
DAVIS HOPKINS NO. 2 DEEP WELL
WAYNE COUNTY, GEORGIA

	3227-3259	3385-3416	3490-3500	3560-3570	3640-3650	3697-3728	4019-4051	4051-4081
AHMUELLERELLA OCTORADIATA	C	R	C	C	C			
ARKHANGELSKIELLA SPECILLATA	C	A	VA	C	R		R	
BISCUTUM CONSTANS	R			C	R			
B. CORONUM	R	R	C	R	R	R	R	VR
B. NOTACULUM						VR	VR	R
BRAARUDOSPHAERA BIGELOWI	C	R	C	C	R	C	R	
B. IMBRICATA	VR	VR				VR		
BROINSONIA ENORMIS							R	C
B. PARCA	C	C	VR	R	R	C	R	R
CHIASTOZYGUS CUNEATUS	R	VR	C	A	VR		R	C
C. PLICATUS	A	C	A	A	R	C		
C. ROTATORIUS	R	R						
COROLLITHION SIGNUM	R	VR	C	R	VR	R		C
CRETARHABDUS CONICUS	A	C	C	C	R	C		R
C. CRENULATUS	A	A	C	C	C	C	R	a

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REPORT ON REFERRED FOSSILS

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STRATIGRAPHIC RANGE

GENERAL LOCALITY

QUADRANGLE OR AREA

KINDS OF FOSSILS

REFERRED BY

*REPORT PREPARED BY

SHIPMENT NUMBER EEG-78-35(2)

REGION

DATE RECEIVED

STATUS OF WORK

DATE REPORTED

	3227- 3259	3385- 3416	3490- 3500	3560- 3570	3640- 3650	3697- 3728	4019- 4050	4051- 4081
CRETARHABDUS DECORATUS				VR				
C. LORIEI				VR	VR			
CRIBROSPHAERELLA EHRENBERGII	C	C	C	C	C	R	R	C
CYLINDRALITHUS sp. indet.	C	R	R	R	C	R	R	R
EIFFELLITHUS EXIMIUS	C	A	VA	A	A	C	R	C
E. TRABECULATUS			A	R	R			C
E. TURRISEIFFELI	A	C	C	C	VA		C	A
GARTNERAGO OBLIQUUM	VA	C	C	C	A	C	C	R
KAMPTNERIUS MAGNIFICUS	C							
K. PUNCTATUS	C	C		VR	R	VR		
LITHASTRINUS FLORALIS			R	C	R	R		C
L. GRILLII				C	C			R
LITHRAPHIDITES CARNIOLENSIS	VA	VA	A	A	A			A
LUCIANORHABDUS CAYEUXII	C	R	C	C	C	VR	R	A
L. MALEFORMIS	R	R	A	C	C		R	C
MANIVITELLA PEMMATOIDEA	C	R	VR	R	R	R	VR	
MARTHASTERITES CRASSUS					VR			
M. FURCATUS				A	R	R		
MICRORHABDULUS BELGICUS		R	R	R	VR		VR	R @

REPORT ON REFERRED FOSSILS

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STRATIGRAPHIC RANGE		SHIPMENT NUMBER	EEG-78-35(2)
GENERAL LOCALITY		REGION	
QUADRANGLE OR AREA		DATE RECEIVED	
KINDS OF FOSSILS		STATUS OF WORK	
REFERRED BY		DATE REPORTED	
*REPORT PREPARED BY			

	3227-3259	3385-3416	3490-3500	3560-3570	3640-3650	3697-3728	4019-4050	4051-4081
MICRORHABDULUS DECORATUS		R						
M. ELONGATUS	A	C	C	C	C	R	C	C
M. STRADNERI	C	C	VA	C	C	R	VR	R
MICULA STAUROPHORA	VA	VA	VA	VA	VA	A	C	VA
M. STAUROPHORA var.	C	A	C	C	C	R		
OTTAVIANUS TERRAZETUS	C		R	R	R			
PARHABDOLITHUS ANGUSTUS	R	R	R	R	R	VR	VR	C
P. EMBERGERI	R	C	VR		R			
P. REGULARIS			R		R			R
PREDISCOSPHAERA CRETACEA	A	A	VA	A	A	C	A	A
P. SPINOSA			R					VR
RUSSELLIA BUKRYI	R	C						
STEPHANOLITHION LAFFITTEI						R		
TETRALITHUS ACULEUS	VR	VR	R		VR			
T. OBSCURUS	VA	C	C	C	C	C	R	R
T. OVALIS		C	A	C	R			R
THORACOSPHAERA sp. indet.		VR	C		R	R		
VAGALAPILLA MATALOSA		R	A	C	R		R	∂

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REPORT ON REFERRED FOSSILS

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STRATIGRAPHIC RANGE

GENERAL LOCALITY

QUADRANGLE OR AREA

KINDS OF FOSSILS

REFERRED BY

*REPORT PREPARED BY

SHIPMENT NUMBER EEG-78-35(2)

REGION

DATE RECEIVED

STATUS OF WORK

DATE REPORTED

	3227-3259	3385-3416	3490-3500	3560-3570	3640-3650	3697-3728	4019-4050	4051-4081
VEKSHINELLA DIBRACHIATA	R	R			C	VR		VR
V. ELLIPTICA			VR					
WATZNAUERIA BARNESAE	VA	VA	VA	VA	VA	VA	A	VA
ZYGODISCUS DIPLOGRAMMUS	C	A	VA	VA	C	A	A	VA
Z. ORIONATUS		R	C					
Z. SPIRALIS	C	C	A	A	R	C	C	R
Z. sp. cf.								
Z. THETA	R							

ABUNDANCE CODE

VR = 1-2 specimens
R = 3-5 specimens
C = 6-10 specimens
A = 11-50 specimens
VA = greater than 50 @

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REQUEST FOR PALEONTOLOGICAL ANALYSIS

TO	CHIEF, PALEONTOLOGY AND STRATIGRAPHY BRANCH	SHIPMENT NUMBER EEG-78-35
FROM	NAME GREG GOHN	DATE [illegible]
	BRANCH BR. EAST. ENVIRON. GEOL.	PROJECT

STATE, COUNTRY, OR OCEAN GEORGIA	COUNTY, PROVINCE, OR MARITIME SUBDIVISION [illegible]	MAP SHEET(S) [illegible]

DETAILED LOCALITY DESCRIPTION (Include stratigraphic position)

[illegible] #1, DEEP WELL
LOCATED [illegible]
[illegible] DH #1

7 SAMPLES

MAP GRID

LATITUDE [illegible]

LONGITUDE [illegible]

TOWNSHIP

RANGE

SECTION

LITHOSTRATIGRAPHIC UNIT(S)	FIELD LOCALITY NUMBER(S)
MARINE UPPER CRETACEOUS "EUTAW" "TUSCALOOSA"	DH #2 3225'-3416' 4060'-[illegible] [illegible] [illegible]

DOMINANT LITHOLOGY, FOLLOWED BY MODIFIERS

CLAY, SILTY, CALC; SAND, F-M, MUDDY, CALC; LS, QUARTZOSE

SYSTEM(S) AND SERIES	DOMINANT BIOLOGIC GROUP(S)
UPPER CRETACEOUS	FORAMS NANNOS POLLEN MOLLUSKS

REMARKS (Statement of problem, information requested, urgency, etc.)

3135' - [illegible] MARL IN DH #1 [illegible]
3135 - 3600' MARINE (MAESTRICHTIAN? AND CAMPANIAN?
3600' OR 3650' TO 3775' "EUTAW"
3775' - 4060' [illegible] "TUSCALOOSA"
4060 - 4178 "MARINE TUSCALOOSA" ZONE V POLLEN AT 4145' - 4176'
4178 - 4310' [illegible] "TUSCALOOSA"
4310' - TD VOLCANICS

☐ DISCARD
☒ RETURN
SPECIMENS OR SAMPLES NOT DESIRED BY P&S

SIGNATURE OF PERSON SUBMITTING SPECIMENS
Gregory S. Gohn

APPROVED (Signature of Chief of submitting organization)

FORM 9-1862
(APRIL 1972)

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

INT: 1418-72