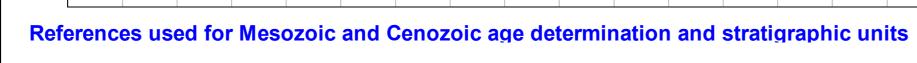
## United States Department of Interior, Bureau of Ocean Energy Management Biostratigraphic Chart of the Gulf of Mexico Offshore Region, Jurassic to Quaternary **BOEM**



ne ya)	CH	HRONOSTF	RATI	GRAPI	ΗY	ВОЕМ	ecent through Oligocene BIOSTRATIGRAI	PHY		BOE
t to ile)	System	Subsystem	Se	Holoco	Stage ene Tarantian	Strat Code	Planktic & benthic foraminiferal regional and local markers  Globorotalia inflata	Strat Code	Calcareous nannoplanktic regional and local markers	CHRC ZON
26—		Q		Middle	lonian	Q1 11	Globorotalia flexuosa acme  Truncorotalia truncatulinoides coil change, right-to-left	NQ35 NQ01 NQ55 NQ16 NQI	Emiliania huxleyi (base of acme) Gephyrocapsa oceanica flood Gephyrocapsa parallela Pseudoemiliania lacunosa "A" Pseudoemiliania lacunosa "B"	PL
78—	u a		P		С	Q5 26	Trimosina "A" Stilostomella antillea	NQ59 NQ36 NQ38	Gephyrocapsa caribbeanica increase Pseudoemiliania ovata Reticulofenestra asanoi	
		t	l e i		a I a	Q0 17 16	Trimosina "A" acme Sphaeroidinella dehiscens acme "A"  Angulogerina magna	NQ39 NQE NQ56 NQ44	Pseudoemiliania pacifica Pseudoemiliania lacunosa "C" acme Gephyrocapsa aperta acme Scyphosphaera pulcherima,	
		e r	s t o		b r i a	27 Q6 19	Globorotalia incisa Hyalinea balthica / Trimosina "B" Globorotalia tosaensis tosaensis	NQV NQ40 NQT	Gephyrocapsa caribbeanica (large) Reticulofenestra asanoi acme Helicosphaera sellii	
31—		n	c e n	L o w	n	36 Q7 99	Sphaeroidinella dehiscens acme "B" Angulogerina "B" Uvigerina hispida	NQ51 NQW	Lithostromation perdurum Calcidiscus macintyrei	PL
		a r	e	r	G e	P7 P11 P3 39	Globorotalia crassula acme, Globorotalia praehirsuta Cristellaria "S" Menardella exilis	NP41 NP50 NP42	Discoaster brouweri, Calcidiscus macintyrei increase  Discoaster brouweri "A"	
		У			I a s	21 P12 P8	Menardella menardii coil change, left-to-right Menardella pertenuis Lenticulina 1	NP43	Discoaster pentaradiatus	
					a n	20 23 22 40	Menardella miocenica Bolivina imporcata / "P" Textularia crassisepta / "P" Ceratobulimina pacifica	NP44	Discoaster surculus	
59—				U	P i a	24 41 25	Cassidulina laevigata carinata acme / "L"  Haplophragmoides emaciatum  Saracenaria "H"	NP45 NP46 NP47	Discoaster asymmetricus  Cycloperfolithus carlae  Discoaster tamalis	
				p p e	c e n	43 101 P9	Menardella multicamerata Siphogenerina lamellata acme Dentoglobigerina altispira = Valvulineria "H"			PI
			P I i	r	i a n	45 32 44 P1	Sphaeroidinellopsis seminulina Arenaceous fauna Cibicides grosseperforatus Textularia 1	NP01	Sphenolithus abies	
58—-			0		Z	P5 98 P16	Buccella (Eponides) hannai acme Cibicides marsi Globorotalia plesiotumida	NP02	Reticulofenestra pseudoumbilica	
			e n e	L o w	a n c	30 46 31 P13	Globorotalia margaritae Globigerina druryi / bolli Globigerina nepenthes Uvigerina rustica	NP40 NPP	Pseudosphenolithus abies "B" acme  Sphenolithus abies "B"	P
				e r	l i a n	P2 34 35	Buliminella 1 Siphotextularia jugosa / "J" Sigmoilina "P" / cf. schlumbergeri	NP08	Amaurolithus tricorniculatus  Dictyococcites antarcticus	
33—-					"	P10 37 P14	Sphaeroidinellopsis multilobata Globigerinoides mitra Globorotalia plesiotumida acme	NPA NP26	Ceratolithus acutus Discoaster quintatus	
						R1 R15 42 48	Textularia 6 Textularia "X" Bigenerina irregularis / 6 Menardella menardii coil change, right-to-left	NRW	Discoaster quinqueramus	
					M e s s	47 R14 R22	Globorotalia juanai Globorotalia primitiva Sphaeroidinellopsis subdehiscens	NRW NR30 NRE NRY	Discoaster quinqueramus Discoaster quinqueramus acme Discoaster berggrenii Reticulofenestra rotaria	
					i n i a	R2 R16 R17 59	Robulus E, Textularia tatumi Bolivina denticulata Reophax davepopei,	NRX	Discoaster berggrenii "A"	
					n	60 49 R4	Sphaeroidinellopsis disjuncta Siphogenerina lamellata increase Bigenerina floridana / "A"	NR12	Discoaster berggrenii "C"	Μl
25—-					T o r	54	Globorotalia acostaensis coiling change, right-to-left	NR08 NR04	Discoaster neohamatus, Discoaster calcaris	
				U		R24 55 R23 R5	Globigerina nepenthes acme A Planulina renzi Sphaeroidinellopsis kochi Cristellaria "K"	NR02 NR21	Discoaster loeblichii Discoaster bellus	
						R13 R6 R25	Uvigerina carapitana Amphistegina "E" Globigerina nepenthes acme B	NR06 NR07	Catinaster mexicanus  Minylithus convallis	
0—-		N				R7 R12 R19	Cyclammina 3 Melonis pompilioides increase Cibicides trincherasensis,	NRZ NR01 NR16	Reticulofenestra gelida acme Discoaster prepentaradiatus Discoaster prepentaradiatus increase	
		e o			t o n	57 65 R8 61	Globorotalia lenguaensis, Bolivina thalmanni Discorbis 12 Globoquadrina dehiscens	NR09	Discoaster bollii	
		g			i a n	62 53 R9	Cibicides crebbsi Robulus 15 Textularia "L"	NR00 NRV NRA	Discoaster hamatus Catinaster calyculus Catinaster coalitus	
		e n				56 R10 R20 69	Cibicides inflata Cibicides carstensi, Bigenerina 2 Paragloborotalia mayeri	NRC NR33	Discoaster exilis increase	MI
	Т	е	M i o c		S e r r a	R18 R11 R21	Globorotalia siakensis Uvigerina 3, Cibicides carstensi increase	NR25 NRG	Helicosphaera walbersdorfensis Coccolithus miopelagicus	
63—	е					74 64 63	Haplophragmoides wilsoni acme  Fohsella robusta Robulus 5 / 55	NBG NB11 NB20	Discoaster kugleri Discoaster kugleri increase Calcidiscus premacintyrei	MU
20—	r		e n e			B4 76 66	Textularia "W" Fohsella lobata Fohsella fohsi	NB04 NB05	Cyclicargolithus floridanus  Discoaster sanmiguelensis	WIC
	t			M	a I I	77 B5 B10 67	Fohsella praefohsi Bigenerina humblei Fohsella peripheroacuta Gyroidina miocenica	NBI	Discoaster sanmiguelensis increase	MN
82—	i			d d	a n	B6 68 B7	Cristellaria "I" Fohsella peripheroronda Cibicides opima	NB23 NB06 NB25	Discoaster sanmiguelensis acme Sphenolithus heteromorphus Discoaster petaliformis	
	a			e	L a n g	B11 80 B12 B13	Praeorbulina sicana Praeorbulina glomerosa Globoquadrina dehiscens acme Praeorbulina transitoria	NB10 NB07 NB13	Sphenolithus heteromorphus acme  Helicosphaera ampliaperta Discoaster deflandrei increase	ML
	V				h i a n	B13 79 B14 B8	Globigerinatella insueta Globigerinoides bisphericus Amphistegina "B"			IVIL
97—	J				B u r	B9 D14 D10	Robulus "L" / 43 Globigerinoides diminutus Camerina 1.	NB08 ND03 NBY	Discoaster deflandrei acme Discoaster druggii increase Discoaster calculosus	
)5—						D1 75 82	Robulus 54B = Cristellaria 54 Saracenaria sp. / "D" Catapsydrax stainforthi	NDR NDV	Reticulofenestra gartneri Sphenolithus disbelemnos	MU
					d i g a	84 D2 D12	Catapsydrax dissimilis Robulus chambersi, Discorbis bolivarensis / "B"	NDG ND00 NDS	Sphenolithus belemnos Triquetrorhabdulus carinatus Orthorhabdus serratus	
				L o w	a I i a	100 86 D3	Globigerina binaiensis Siphogenerina fredsmithi Marginulina ascensionensis / "A"	NDS NB22 NDO NDF	Orthorhabdus serratus Helicosphaera mediterranea Sphenolithus conicus Discoaster calculosus increase	MN
3.03—				e r	A q u i t a n i a n	D15 83	Bolivina tenuistriata acme Gyroidina 8	NDI	Cyclicargolithus abisectus	
						85 D4 D6 87	Globigerinoides primordius Siphonina davisi Planulina palmerae Paragloborotalia kugleri	NDW NDL	Sphenolithus dissimilis	
						D8 D9	Lenticulina hanseni Lenticulina jeffersonensis = Cristellaria "R"	ND01 NDX NDJ	Discoaster saundersi Cyclicargolithus abisectus increase Helicosphaera recta	MI
						A1	Discorbis gravelli	NDT ND09 NA05 NAF	Triquetrorhabdulus challengeri Sphenolithus capricornutus Dictyococcites bisectus Sphenolithus delphix,	
				U p p	C h a t	90 91 88	Globigerina ciperoensis ciperoensis Globigerina sellii Globigerina angulisuturalis	NA03 NAE NA04	Clausicoccus fenestratus Zygrhablithus bijugatus Sphenolithus ciperoensis	
						A2 A3 A4 A5	Heterostegina texana Cibicides jeffersonensis Bolivina perca Marginulina idiomorpha	NO17 NO18	Triquetrorhabdulus carinatus acme Sphenolithus conicus acme	0
		P		e r	t i a n	A6 A7 F2	Marginulina vaginata Marginulina howei Camerina "A"			
8.09—		a I	O I i gocene		11	F3 F4 93 94	Miogypsinoides "A" Cibicides hazzardi Paragloborotalia opima nana Paragloborotalia opima opima	NF00 NO02	Sphenolithus distentus Sphenolithus predistentus	
		e O				94 92 F5 F6	Paragloborotalia opima opima Cristellaria "H"  Marginulina texana Bolivina mexicana	NO02 NF03	Sphenolithus predistentus  Helicosphaera compacta	
		o g e		L o w e r	R u p e l i a n	F1 O23	Nonion struma Chiloguembelina cubensis	NO08 NO11	Discoaster nodifer Sphenolithus pseudoradians	
		n e				O26 F7 95 O27	Globigerina gortani Nodosaria blanpiedi Turborotalia ampliapertura Globigerina tapuriensis			
		C				F0	Anomalina bilateralis	NO14 NO19 NO20	Lanternithus minutus Reticulofenestra circus Sphenolithus akropodus	0
						O18 O22 O21	Textularia warreni Pseudohastigerina micra Loxostoma "B"	NO09 NO01 NO00 NV05	Isthmolithus recurvus Reticulofenestra hillae Reticulofenestra umbilica Helicosphaera reticulata	
30						O19 O25	Cibicides pippeni Turborotalia increbescens	NO03 NO10	Ericsonia formosa Ericsonia subdisticha acme	
39						O20	Cibicides mississippiensis	NO21	Ericsonia formosa increase  Depth in	
	Tra	nsitional – Inner Shelf		Middle Sh	nelf	Outo	Sea Level Shelf		meters  0 100 200	
		Inner Shelf		2	ymetric Zona	;	Upper Slope  4  Middle Slope		500	
		1	Z <u>one</u> Transit Middle	tional – Inn	<u> </u>	0 - 2 20 - 1	in meters 5		1000	
		3 (	Outer S Upper	Shelf Slope		20 - 1 100 - 2 200 - 5 500 - 10	00 00	Lower Slope	2000	
		5 I	Middle	Slope		10			yssal	



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Time	C	HRONOSTE	RATIO	GRAP	HY		BIOSTRATIGRA	PHY		BOTT												
(mya) (not to	System	Subsystem	Se	eries	Stage	BOEM Strat Code	Planktic & benthic foraminiferal, ostracod (O), radiolarian and dinoflagellate (D) regional and local markers	BOEM Strat Code	Calcareous nannoplanktic regional and local markers	BOEM CHRONO ZONE												
33.89					P r	J3 J4 J6	Hantkenina alabamensis Turborotalia cerroazulensis cocoaensis Textularia hockleyensis	NJ03 NJ01	Discoaster saipanensis, Chiasmolithus consuetus													
				U p p	i a b	J14 J7 J12	Subbotina linaperta Textularia dibollensis Globigerinatheka tropicalis	NJ00 NJ07	Discoaster barbadiensis  Cribrocentrum reticulatum	EU												
				e r	o n i a	J10 J8 J11	Turborotalia pomeroli Camerina moodybranchensis Globigerinatheka semiinvoluta Globigerinatheka mexicana	NOT	Micrantholithus press	20												
<b>—</b> 37.80 <b>—</b>					a n	J13 J15 C11 C27	Globigerinatheka mexicana Globigerinatheka barri Nonionella cockfieldensis Acarinina spinuloinflata	NCD NJ10 NJ02 NC00	Micrantholithus procerus Micrantholithus altus Sphenolithus obtusus Chiasmolithus grandis													
						C0	Acarınına spinuloinflata Discorbis yeguaensis Eponides yeguaensis Nodosaria mexicana	NC00 NCG	Chiasmolithus grandis Campylosphaera dela													
					B a r	96 C4 C2	Truncorotaloides rohri Ceratobulimina eximia Eponides guayabalensis															
			E o c e n e	M i d d	t o n	C14 C15 C28	Truncorotaloides topilensis Clavulinoides guayabalensis Hantkenina dumblei	NC10 NC02	Sphenolithus spiniger Chiasmolithus solitus													
					i a n	C16 C5 C12	Orbulinoides beckmanni Operculinoides sabinensis Morozovella lehneri	NC11	Sphenolithus furcatolithoides	EM												
						C13 024 C17	Acarinina bullbrooki Radiolarian acme A Turborotalia frontosa Acarinina pentacamerata	NCK NC13	Sphenolithus radians Sphenolithus furcatolithoides increase													
—41.20—	_				L u t	C29 C30 C9 C31	Acarinina pentacamerata Hantkenina nuttalli Igorina broedermanni Globigerinoides higginsi	NC13 NC14 NC15	Sphenolithus furcatolithoides increase  Discoaster wemmelensis  Blackites gladius													
					t e t i	C31 C6 C10	Cyclammina caneriverensis Morozovella aragonensis	NC15 NC16 NC05	Nannotetrina fulgens  Chiasmolithus gigas													
<b>—</b> 47.84 <b>—</b>	e	P a			a n	C19	Morozovella caucasica Haplocytheridea stenzeli (O) Acarinina soldadoensis	NC05 NC06 NC08 NXQ	Discoaster sublodoensis Discoaster lodoensis Discoaster kuepperi													
	4	1				C20	Morozovella quetra Acarinina angulosa Radiolarian acme B	NXR NC07	Toweius magnicrassus Rhabdosphaera inflata													
	i	e o g e n		L o w e r	Y p r e s i a n	C22	Morozovella rex / subbotinae	NXN NWA NXP	Chiasmolithus californicus Toweius crassus Tribrachiatus orthostylus													
	a					C24	Morozovella formosa formosa Acarinina wilcoxensis Morozovella lensiformis	NXS NXT	Toweius callosus Toweius pertusus Discoaster multiradiatus													
	r	e				X17	Cytheridea sabinensis (O) Planorotalites chapmani Morozovella aegua	NX02 NXB NX04 NXU	Discoaster multiradiatus Tribrachiatus contortus Toweius eminens Tribrachiatus bramlettei	EL												
	V					X19 X20	Morozovella aequa Morozovella edgari Subbotina velascoensis Rzehakina epigona	NXW	Tribrachiatus bramlettei Prinsius bisulcus Fasciculithus involutus Discoaster mahmoudi													
	3					C25 026	Morozovella acuta Radiolarian acme C Morozovella velascoensis	NX03	Chiasmolithus bidens Cruciplacolithus frequens Prinsius martinii													
<b>—</b> 55.96—					Т	X6 X22	Discorbis washburni Apectodinium homomorphum (D) acme /PETM Bathysiphon spp increase	NX06 NX05 NX10	Ellipsolithus distichus Fasciculithus tympaniformis Ericsonia robusta													
				U	h a n	X8	Planorotalites pseudomenardii Acarinina mckannai	NX11 NXA	Heliolithus cantabriae Heliolithus riedelii													
					e t i		Morozovella angulata  Triforina harborti	NX12 NX13 NX14	Fasciculithus billii Fasciculithus ullii Fasciculithus janii	LU												
<b>—</b> 59.24 <b>—</b>			P a	p e r	a n	Т9	Trifarina herberti Subbotina triloculinoides Gyroidina aeris	NX07 NX15 NXC	Heliolithus kleinpelli Prinsius martinii increase Discoaster diastypus Chiasmolithus danicus													
			e	e o c		Selandian	T11	Igorina pusilla pusilla Gyroidina brevis Morozovella conicotruncana Planorotalites compressa	NXD NT02 NXE NT03	Chiasmolithus danicus Neochiastozygus saepes Cruciplacolithus tenuis Cruciplacolithus edwardsii												
—61.61—					c e	c e			X10 X11 T5	Vaginulina longiforma, Vaginulina midwayensis	NT03 NT04 Nt05	Fasciculithus chowii  Neochiastozygus eosaepes										
			e	L o		X12 X13 T3	Parasubbotina pseudobulloides Praemurica uncinata Praemurica inconstans	NT06	Hornibrookina edwardsii													
				w e r	Danian	T7 T8 T6	Praemurica trinidadensis Globocontusa daubjergensis Robulus pseudocostata		Cyclagelosphaera alta	LL												
—66.04— <sub>:</sub>						T13 T14 97	Parvularugoglobigerina fringa Discorbis newmanae Parvularugoglobigerina eugubina		Neobiscutum parvulum Neobiscutum romeinii													
					M a a s		Contusotruncana contusa  Abathomphalus mayaroensis  Gansserina gansseri		Micula decussata, Watznaueria barnesae, Micula prinsii													
					t r i	G1 G28 G29 G11	Gansserina gansseri Globotruncana linneiana Rugoglobigerina pennyi Globotruncana lapparenti,	NK03	Nephrolithus frequens FAD													
				G	c h t	G2	Rosita fornicata Pyramidina szajnoche Globotruncana ventricosa	NK04 NK06	Reinhardtites levis Tranolithus orionatus													
<b>—</b> 72.10 <b>—</b>					a n	G9	Globorotalites conicus	NK05 NKA NKB	Uniplanarius trifidus Aspidolithus parcus constrictus Reinhardtites anthophorus													
					C a m p a n i a n	G12 G31 G4	Globotruncanita calcarata Anomalina henbesti Planulina taylorensis	NKD NKH NKC	Aspidolithus parcus parcus Broinsonia enormis Eiffellithus eximius													
		U p p e r				G32 G13 G14	Kyphopyxa christneri Globotruncanita elevata Archaeoglobigerina bosquensis	NK11	Rucinolithus hayi	KUU												
							Marginotrupoppa annuat	NKF NKG NKI	Lithastrinus grillii Bukryaster hayi Marthasterites furcatus	NOU												
—83.64—							u I f	S a	G25 G26 G16 G5	Marginotruncana coronata Whiteinella baltica Dicarinella asymetrica Dicarinella concavata	NKK	Eprolithus floralis										
				f i a n	n t o n		Marginotruncana schneegansi Whiteinella inornata Marginotruncana sinuosa	NK09	Zeugrhabdotus noeliae													
<b>—</b> 86.26 <b>—</b>	C				i a n	K0 G35 G36	Marginotruncana renzi Marginotruncana sigali Whiteinella archaeocretacea	NK08 NKL NKJ	Quadrum gartneri Chiastozygus platyrhethus Lithastrinus septenarius													
					Coniacian	K7 K6 G37	Whiteinella paradubia Dicarinella imbricata Whiteinella aprica	NKM	Rhagodiscus achylostaurion													
<b>—</b> 89.77 <b>—</b>	r					G39 G6 K8	Hedbergella planispira Hedbergella amabilis Dicarinella hagni Planulina eaglefordensis	NK10	Stoverius achylosus													
	е				Turonian	K1 G7 G38 K2	Planulina eaglefordensis Helvetoglobotruncana helvetica Dicarinella algeriana Praeglobotruncana stephani,	NKS NKN	Lithraphidites pseudoquatratus Calculites axosuturalis													
—93.90—	t					K2 K3 K9 K12	Praeglobotruncana stephani, Helvetoglobotruncana praehelvetica Globigerinelloides bentonensis Ammobacculites agrestis	NKP NKY	Helenea chiastia Lithraphidites acutus													
					C e n	G8 G21 G22	Rotalipora greenhornensis Rotalipora appenninica	NKY NKQ NKR NKO	Axopodorhabdus albianus Coriollithon kennedyi Rhagodiscus asper	KLU												
<b>—96.16—</b>	а				o m a	G23 H2 H9	Rotalipora reicheli Textularia rioensis Fossocytheridea lenoirensis (O)															
-30.16 <del></del>	С				n i a	H11 H0 H1	Rotalipora gandolfii Lenticulina washitensis, Favusella washitensis															
—100.5—	е						С		n		Globigerinelloides bentonensis increase  Cythereis frederickshurgensis (O), Cyth. brevis (O)	NKU NKZ NKV	Braarudosphaera africana Hayesites irregularis Braarudosphaera stenorhetha									
	0								H12	Cythereis fredericksburgensis (O), Cyth. brevis (O) Planomalina buxtorfi Ticinella roberti / bejaouaensis Rotalipora ticinensis	NKT NKX	Hayesites albiensis Crucicribrum anglicum										
				o m m	A	H10 H20 H21 H6	Biticinella breggiensis Coskinolinoides texanus Dictyoconus walnutensis			KUL												
—103.13 <b>—</b>	u			a n c	b i a	H23 H24	Rotalipora subticinensis Hedbergella gorbachikae Barkerina barkerensis	NHL	Sollasites falklandensis													
	s			h e	n	K4 H5 H7	Eocytheropteron trinitiensis (O)  Buccicrenata subgoodlandensis  Orbitolina texana			KML												
—112.95 <b>—</b>		L o w		a n	а		H26 H27 H13	Hedbergella infracretacea Paraticinella transitoria Paraticinella eubejaouaensis	NHN	Diadorhombus rectus  Assipetra infracretacea												
					A	H14 H17 H28	Planomalina cheniourensis Leupoldina cabri Gavelinella barremiana Clabigarinelloides algerianus	NIB NHM NIA	Nannoconus abundans Nannoconus bucheri Nannoconus colomii Micrapholithus obtugus													
									p t i a	H15 H19 H29	Globigerinelloides algerianus Hedbergella sigali Hedbergella trochoidea		Micrantholithus obtusus Nannoconus truitti acme Nannoconid crisis Micrantholithus hoschulzii									
		e r			n n	H16 I2 H30	Globigerinelloides blowi Choffatella decipiens Epistomina caracolla	NHE NHO NHH NHF	Micrantholithus hoschulzii Farhania varolii Nannoconus kamptneri Nannoconus steinmanni													
—126.30 <b>—</b>				C o a h	Per	H18 I10	Epistomina caracolla Favusella hoteriva Epistomina hechti Lenticulina saxonica	NHF NHG NHB	Conusphaera rothii  Conusphaera mexicana													
—130.77 <b>—</b>					Barremian	I8 I11 FLBB	Clavihedbergella eocretacea Lenticulina ouachensis increase Muderongia simplex (D)	NIC NHA NIE	Calcicalathina oblongata Eprolithus antiquus Lithraphidites bollii	KLL												
				n u i	Hauterivian		Everticyclammina virginulina	NIF NIG NIH	Speetonia colligata Cruciellipsis cuvillieri Tubodiscus verenae													
<b>—133.88</b> —				l a n	Valanginian		Conoglobigerina helvetojurassica	NHP NII NIK	Eiffellithus windii Rucinolithus wisei Micrantholithus speetonensis													
—139.39—								Berriaeian	14 113	Globuligerina oxfordiana Schuleridea acuminata (O) Lenticulina busnardoi Epistomina stellacostata	NIII	Polycostella senaria										
—145.01—					Berriasian	U14 U1 I5 U7	Epistomina stellacostata  Anchispirocyclina lusitanica  Hutsonia vulgaris / callahani (O),  Galliaecytheridea postrotunda (O)	NUH NUA	Polycostella senaria  Lotharingius sigillatus  Hexalithus noelae													
			U p p e r		Tithonian	U17 U9	Kumubia palastiniensis Buccicrenata italica increase Lenticulina quenstedti	NUA NIM NUG	Polycostella beckmanni Watznaueria britannica increase													
	J u					U3 U6	Epistomina uhligi Alveosepta jaccardi Epistomina mosquensis	NUB NUJ	Stephanolithion bigotii bigotii Anfractus harrisonii													
—152.10 <b>—</b>	r	ķ				U12 U4 FLJT	Paalzowella feifeli Reinholdella A increase Gonyaulacysta jurassica (D)			JU												
—157.30 <b>—</b>	S	Ì			r	r	ŗ	•	r	; (	<del>;</del>						Kimmer.	U15 U16 UV4	Haplophragmoides canui Praekumubia crusei Alveosepta jaccardi acme	NUK	Crepidolithus perforatus  Lotharingius crucicentralis	
	i C				Oxfordian	UV1 UV2 UV5	Reinholdella crebra, Epistomina regularis, Globuligerina oxfordiana increase Epistomina coronata	NUC NUL	Stephanolithion bigotii maximum Ansulasphaera helvetica													
—163.50—	_	NA:	d -		Calleri	UV3 UV10 UV6	Epistomina coronata  Lophocythere interrupta (O)  Satorina apuliensis  Globuligarina calloviensis	NVA NUM	Stephanolithion hexum  Lotharingius velatus	INA												
166.10		Mid	ule		Callovian	UV7 UV8 UV9	Globuligerina calloviensis Reinholdella crebra increase, Garantella ornata	NUN NUE	Pseudoconus enigma Stephanolithion speciosum	JM												

## **LEGEND**

BOEM Gulf of Mexico Resource Evaluation

Robert B. Witrock (504) 736-2718

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All foraminiferal markers are extinction points (LADs) unless otherwise indicated. The calcareous nannoplanktic markers are mainly coccolith species LADs. Dinoflagellates and palynomorphs are occasionally used. Planktic foraminifera and radiolarians are indicated in blue font, i.e., Globigerina nepenthes. or Radiolarian acme A Arenaceous foraminifera are indicated in red font, i.e., Alveosepta jaccardi. (O) indicates an ostracode species, (D) indicates a dinoflagellate species. LAD: Last Appearance Datum

FAD: First Appearance Datum Species LADs separated by a virgule (the diagonal mark "/") indicates either synonymous species or synchronous species. Species LADs separated by "=" indicates synchronous species.

Two or more species LADs separated by a comma indicate synchronous species LADs. (for example, Discoaster bollii, Catinaster calyculus are two separate but time-equivalent coccolith extinction points). BOEM Chronozone: A body of rock formed during the same time span, bounded by biostratigraphic or correlative seismic markers.

References to this chart should be as follows: Witrock, R. B., 2017, Biostratigraphic chart of the Gulf of Mexico offshore region, Jurassic to Quaternary, U. S. Department of the Interior, Bureau of Ocean Energy Management, New Orleans.