Ms 184SR-216, Table T2. Range chart for Zones A and B.

| Lithologic unit | Dinoflagellate assemblage zone | Dinoflagellate assemblage subzone | Age | Core, section, interval (cm) | Depth (mbsf) | Depth (mcd) | *Achomosphaera alicicornu* | *Achomosphaera callosa* | *Achomosphaera crassipellis* | *Achomosphaera goniaferformis* | *Achomosphaera ramulifera* | *Achmosphaera* sp. | *Apeodinium granulatum* | *Apeodinium maculatum* | *Apeodinium nanhaicum* | *Apteodinium* sp. | *Areoligera* sp. | *Batiacasphaera baculata* | *Batiacasphaera blomata* | *Batiacasphaera micropapillata* | *Batiacasphaera minuta* | *Batiacasphaera* sp. | *Canninginia* sp. | *Cerebrocysta satchellae* | *Cerebrocysta* spp. | *Chiangteridium gaeta* | *Chiangteridium* sp. | *Cleistosphaeridium ancyreum* | *Cleistosphaeridium diversispinosum* | *Cleistosphaeridium placacanthum* | *Cleistosphaeridium* sp. | *Cordosphaeridium cantharellum* | *Cordosphaeridium eilimnurum* | *Cordosphaeridium gracile* | *Cordosphaeridium inodes* | *Cordosphaeridium minimum* | *Cordosphaeridium* sp. | *Cribroperidinium tenuitabulatum* | *Cribroperidinium* sp. | *Dapsilidinium pseudocelligerum* | *Dapsilidinium* sp. | *Dipthyes colligerum* | *Distatodinium ellipticum* | *Enneadocysta arcuata* | *Enneadocysta multicornuta* | *Enneadocysta pectiniformis* | *Glaphyrocysta intricata* | *Glaphyrocysta* sp. | *Heteraulacosta campanula* | *Heteraulacosta fetmarnensis* | *Heteraulacosta* sp. | *Homotryblium abreviatum* | *Homotryblium plectium* | *Homotryblium tenuispinosum* | *Homotryblium vallum* | *Hystrichokolpoma cinctum* | *Hystrichokolpoma rigaudiae* | *Hystrichokolpoma salacia* | *Hystrichokolpoma velsonii* | *Hystrichokolpoma* sp. | *Hystrichosphaeridium7 latitricum* | *Hystrichosphaeridium* sp. | *Hystrichosphaeropsis obscura* | *Impagidinium aculeatum* | *Impagidinium dispertitum* | *Impagidinium minus* | *Impagidinium multiplice* | *Impagidinium torsium* | *Impagidinium velorum* | *Impagidinium* spp. | *Impletosphaeridium* sp. | *Kallosphaeridium* sp. | *Lejeunecysta commanis* | *Lejeunecysta fallax* | *Lejeunecysta globosa* | *Lejeunecysta hyalina* | *Lejeunecysta lata* | *Lejeunecysta* sp. | *Linguludinium machaerophorum* | *Linguludinium* sp. | *Melitasphaeridium asterinum* | *Melitosphaeridium choanophorum* | *Melitosphaeridium* sp. | *Membranilamacia? picena* | *Membranophoridium aspinatum* | *Multigimula* sp. | *Nematosphaeropsis labyrinthus* | *Nematosphaeropsis lemniscata* | *Nematosphaeropsis* sp. | *Oligosphaeridium* sp. | *Operculodinium centrocarpum* | *Operculodinium divergens* | *Operculodinium israelianum* | *Operculodinium longigingerum* | *Operculodinium microtriainum* | *Operculodinium piasseckii* | *Operculodinium tara* | *Operculodinium xanthium* | *Operculodinium* spp. | *Pentadinium? cacumisum* | *Pentadinium imaginatum* | *Pentadinium latcinctum* | *Pentadinium taenigerum* | *Pentadinium* sp. | *Phthanoperidinium amoenum* | *Polysphaeridium subtile* | *Polysphaeridium zohryri* | *Polysphaeridium zohryri kiana* | *Pyxidiella* sp. | *Pyxidinopsis* spp. | *Reticulatosphaera actinocoronata* | *Schematophora speciosa* | *Selenopemphix armata* | *Selenopemphix nephroides* | *Selenopemphix* sp. | *Sentusidinium* sp. | *Spiniferites bulloides* | *Spiniferites hyperacanthus* | *Spiniferites membranaceus* | *Spiniferites mirabilis* | *Spiniferites mosilis* | *Spiniferites pseudofarcatus* | *Spiniferites ramosus* | *Spiniferites ramosus angustus* | *Spiniferites ramosus granosus* | *Spiniferites ramosus multibrevis* | *Spiniferites* spp. | *Tanyosphaeridium regulare* | *Tectatodinium granule* | *Tectatodinium pellitum* | *Tectatodinium* sp. | *Thalassiphora patula* | *Thalassiphora pelagica* | *Thalassiphora velata* | *Tuberculodinium vancampoae* | *Wetzeliella articulata* | *Wetzeliella gochtii* | *Wetzeliella symmetrica* | *Xenicodinium echinitenum* | *Xenicodinium consipinum* |
|---|---|---

Table T2. Range chart for Zones A and B. (See table note. Continued on next seven pages.)

Lithologic unit	Dinoflagellate assemblage zone	Dinoflagellate assemblage subzone	Age	Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	*Achomospaera alcicornu*	*Achomospaera callosa*	*Achomospaera crassipellis*	*Achomospaera grallaeformis*	*Achomospaera ramulifera*	*Achmosphaera* sp.	*Apeodinium granulatum*	*Apeodinium maculatum*	*Apeodinium nanhaicum*	*Apteodinium* sp.	*Areoligera* sp.	*Batiacasphaera baculata*	*Batiacasphaera biornata*	*Batiacasphaera micropapillata*	*Batiacasphaera minuta*	*Batiacasphaera* sp.	*Canningia* sp.	*Cerebrocysta satchelliae*	*Cerebrocysta* spp.	*Chiropteridium galea*	*Chiropteridium* sp.	*Cleistosphaeridium ancyreum*	*Cleistosphaeridium diversispinosum*	*Cleistosphaeridium placacanthum*	*Cleistosphaeridium* sp.	*Cordosphaeridium cantharellum*	*Cordosphaeridium exilimurum*	*Cordosphaeridium gracile*	*Cordosphaeridium inodes*	*Cordosphaeridium minimum*	*Cordosphaeridium* sp.	*Cribroperidinium tenuitabulatum*	*Cribroperidinium* sp.	*Dapsilidinium pseudocolligerum*	*Dapsilidinium* sp.	*Diphyes colligerum*	*Distatodinium ellipticum*	*Enneadocysta arcuata*	*Enneadocysta multicornuta*	*Enneadocysta pectiniformis*
				184-1148A-																																											
				40X-1, 25–27	364.75	376.97																																									
				40X-3, 25–27	367.75	379.97															P			P	P																						
IV				40X-6, 25–27	372.25	384.47															P									P									P								
				41X-3, 25–27	377.45	389.67																			P																						
				41X-4, 25–27	378.95	391.17																P			P																						
				41X-7, 25–27	383.45	395.67																								P																	
				42X-1, 25–27	384.15	396.37																						P		P																	
				43X-2, 25–27	395.25	407.47										P					P			P	P																						
				43X-6, 25–27	401.25	413.47															P				P																						
				44X-1, 25–27	403.45	415.67					P	P				P					P			P						P																	
				44X-2, 25–27	404.95	417.17					P	P									P			P								P							P								
				44X-4, 25–27	407.95	420.17					P	P										P		P																							
				44X-6, 25–27	410.95	423.17					P	P										P		P								P							P								
				44X-CC, 25–27	412.9	425.12															P	P		P						P	P																
				45X-2, 25–27	414.65	426.87					P	P				P					P			P		P				P	P									P	P	P					
				45X-4, 25–27	417.65	429.87					P										P			P																							
				45X-5, 25–27	419.15	431.37		P											P		P				P													P			P						
V				45X-7, 25–27	422.15	434.37		R				R				R					R			R						R								R									
				46X-1, 25–27	422.75	434.97		R											R	R											R									R							
				46X-3, 25–27	425.75	437.97						R															R			R							R		R		R						
				46X-5, 25–27	428.75	440.97		R			R	R																		R							R		R								
				46X-CC, 25–27	431.67	443.89						P			P	P							P							P											P						
				47X-1, 25–27	432.45	444.67		R			R																			R									R								
				47X-3, 25–27	435.45	447.67		R			R	R																		R							R	R									
				47X-4, 25–27	436.95	449.17		R			R					R											R			R	C						R		R	R							
				47X-CC, 25–27	441.93	454.15										P												P											P								
				48X-2, 25–27	443.55	455.77										P							P							P																	
				48X-5, 25–27	448.05	460.27																																									
				49X-4, 25–27	456.15	468.37																								P																	
VI				52X-CC, 0–2	473.1	485.32				R	R								R											R	R	R					R							R	R	
				53X-CC, 0–2	478.38	490.6					R					R												C		C	R			R					R			R				
				54X-1, 0–2	482.7	494.92					R			R														R		R	R											R					
				54X-CC, 0–2	483.5	495.72					R	R				R												R		C	C		R	R		R					R						
				55X-1, 25–27	487.55	499.77					R	R				C													C		C			R							R						
VII				56X-1, 25–27	492.55	504.77						R				R													R	R											R						
				56X-CC, 25–27	494.02	506.24					P			P														P	P																		
				57X-1, 25–27	501.95	514.17					C																			R	R	R		R							R	R					
				57X-2, 25–27	503.45	515.67																R						C	C	C				R													
	Polysphaeridium zoharyi		Early Miocene																																												
	Cleistosphaeridium diversispinosum	*Cordosphaeridium gracile*	late Oligocene																																												

Table T2 (continued).

Lithologic unit	Dinoflagellate assemblage zone	Dinoflagellate assemblage subzone	Age	Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	*Glaphyrocysta intricata*	*Glaphyrocysta* sp.	*Heteraulacacysta campanula*	*Heteraulacacysta fehmarnensis*	*Heteraulacacysta* sp.	*Homotryblium abbreviatum*	*Homotryblium plectilum*	*Homotryblium tenuispinosum*	*Homotryblium vallum*	*Hystrichokolpoma cinctum*	*Hystrichokolpoma rigaudiae*	*Hystrichokolpoma salacia*	*Hystrichokolpoma wilsonii*	*Hystrichokolpoma* sp.	*Hystrichosphaeridium? latitricum*	*Hystrichosphaeridium* sp.	*Hystrichosphaeropsis obscura*	*Impagidinium aculeatum*	*Impagidinium dispertitum*	*Impagidinium minus*	*Impagidinium multiplice*	*Impagidinium torsium*	*Impagidinium velorum*	*Impagidinium* spp.	*Impletosphaeridium* sp.	*Kallosphaeridium* sp.	*Lejeunecysta communis*	*Lejeunecysta fallax*	*Lejeunecysta globosa*	*Lejeunecysta hyalina*	*Lejeunecysta lata*	*Lejeunecysta* sp.	*Lingulodinium machaerophorum*	*Lingulodinium* sp.	*Melitasphaeridium asterimum*	*Melitasphaeridium choanophorum*	*Melitasphaeridium* sp.	*Membranilarnacia? picena*	*Membranophoridium aspinatum*	*Multispinula* sp.
				184-1148A-																																										
				40X-1, 25–27	364.75	376.97																								P									P								
				40X-3, 25–27	367.75	379.97																								P									P								
IV				40X-6, 25–27	372.25	384.47																	P	P						P																	
				41X-3, 25–27	377.45	389.67																								P																	
				41X-4, 25–27	378.95	391.17																								P																	
				41X-7, 25–27	383.45	395.67											P							P						P																	
				42X-1, 25–27	384.15	396.37																																									
				43X-2, 25–27	395.25	407.47																		P						C								R	R								
				43X-6, 25–27	401.25	413.47																								P							P										
				44X-1, 25–27	403.45	415.67																		P						P									P								
				44X-2, 25–27	404.95	417.17																								P									P								
				44X-4, 25–27	407.95	420.17																								P	P								P						P		
				44X-6, 25–27	410.95	423.17																								P	P								P								
				44X-CC, 25–27	412.9	425.12																	P							P	P										P							
				45X-2, 25–27	414.65	426.87											P													P									R								
				45X-4, 25–27	417.65	429.87																								P	P																
				45X-5, 25–27	419.15	431.37												P								P				P									P								
V				45X-7, 25–27	422.15	434.37												R						R						C									R	R					R		
				46X-1, 25–27	422.75	434.97											R	R						R		R				C									C	R							
				46X-3, 25–27	425.75	437.97											C			R					R					C									C	R					R		
				46X-5, 25–27	428.75	440.97											R			R	R									C																	
				46X-CC, 25–27	431.67	443.89															P									P																	
				47X-1, 25–27	432.45	444.67											R				R									R									R								
				47X-3, 25–27	435.45	447.67											C			C	R									R									C	R							
				47X-4, 25–27	436.95	449.17											R				R									R									R			R					
				47X-CC, 25–27	441.93	454.15											P													P									P			P					
				48X-2, 25–27	443.55	455.77																								P													P				
				48X-5, 25–27	448.05	460.27											P													P																	
				49X-4, 25–27	456.15	468.37																								P									P								
VI				52X-CC, 0–2	473.1	485.32							C	R		C	R			R						R			R								R	C								
				53X-CC, 0–2	478.38	490.6							R				R									R											R	C								
				54X-1, 0–2	482.7	494.92						R	C				R									R				R	R								C							R
				54X-CC, 0–2	483.5	495.72							C	R	C													R	R	R					R				R	R			R			
				55X-1, 25–27	487.55	499.77							C	R						R										R	R						R	R	R							
VII				56X-1, 25–27	492.55	504.77							R	R	R						R				R									R				R		R	R					R
				56X-CC, 25–27	494.02	506.24							P		P					P								P		P								P	P							
				57X-1, 25–27	501.95	514.17						R	R				R									R				C	R							R		R						
				57X-2, 25–27	503.45	515.67							R	R	R						R									R				R			R	R								

Polysphaeridium zoharyi
Cleistosphaeridium diversispinosum
Cordosphaeridium gracile
Early Miocene
late Oligocene

Table T2 (continued).

Lithologic unit	Dinoflagellate assemblage zone	Dinoflagellate assemblage subzone	Age	Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	*Nematosphaeropsis labyrinthus*	*Nematosphaeropsis lemniscata*	*Nematosphaeropsis* sp.	*Oligosphaeridium* sp.	*Operculodinium centrocarpum*	*Operculodinium divergens*	*Operculodinium israelianum*	*Operculodinium longispinigerum*	*Operculodinium microtriainum*	*Operculodinium piaseckii*	*Operculodinium tiara*	*Operculodinium xanthium*	*Operculodinium* spp.	*Pentadinium*? *circumsutum*	*Pentadinium imaginatum*	*Pentadinium laticinctum*	*Pentadinium taenigerum*	*Pentadinium* sp.	*Phthanoperidinium amoeneum*	*Polysphaeridium subtile*	*Polysphaeridium zoharyi*	*Polysphaeridium zoharyi ktana*	*Pyxidiella* sp.	*Pyxidinopsis* spp.	*Reticulatosphaera actinocoronata*	*Schematophora speciosa*	*Selenopemphix armata*	*Selenopemphix nephroides*	*Selenopemphix* sp.	*Sentusidinium* sp.	*Spiniferites bulloides*	*Spiniferites hyperacanthus*	*Spiniferites membranaceus*	*Spiniferites mirabilis*	*Spiniferites monilis*	*Spiniferites pseudofurcatus*	*Spiniferites ramosus*	*Spiniferites ramosus angustus*	*Spiniferites ramosus granosus*	*Spiniferites ramosus multibrevis*
				184-1148A-																																										
				40X-1, 25–27	364.75	376.97													P																												
				40X-3, 25–27	367.75	379.97																																									
IV				40X-6, 25–27	372.25	384.47					P												P							P		P															
				41X-3, 25–27	377.45	389.67																	P					P		P																	
				41X-4, 25–27	378.95	391.17																																								
				41X-7, 25–27	383.45	395.67																																								
				42X-1, 25–27	384.15	396.37					P			P																																
				43X-2, 25–27	395.25	407.47			R		C			R					R			R	R	R			C	R				R															
				43X-6, 25–27	401.25	413.47																	P	P							P																
				44X-1, 25–27	403.45	415.67					P								P					P		P	P	P											P					P				
				44X-2, 25–27	404.95	417.17					P								P				P			P				P													P					
				44X-4, 25–27	407.95	420.17					P								P									P															P					
				44X-6, 25–27	410.95	423.17					P								P									P														P	P				
				44X-CC, 25–27	412.9	425.12					P					P			P				P	P		P	P																P					
				45X-2, 25–27	414.65	426.87	R				R								R				R			R	R																C				R	
				45X-4, 25–27	417.65	429.87													P				P																				P					
				45X-5, 25–27	419.15	431.37					P					P			P			P					P				P												P				P	
V				45X-7, 25–27	422.15	434.37					R								C								C		R	R	R	R			R								C					
				46X-1, 25–27	422.75	434.97					C								C								R	C															C		R		R	
				46X-3, 25–27	425.75	437.97					R								C			R	A	R			C					R					R						R					
				46X-5, 25–27	428.75	440.97					R		C						R			R	R				R				R							C	R				C					R	
				46X-CC, 25–27	431.67	443.89			P		R								P			P						P				P											P					
				47X-1, 25–27	432.45	444.67					R		R						C			C		R			R																A	R				
				47X-3, 25–27	435.45	447.67					R								C			R					C									R							C					
				47X-4, 25–27	436.95	449.17					R		P									P									P																	P
				47X-CC, 25–27	441.93	454.15					P																P					P						P					P					
				48X-2, 25–27	443.55	455.77													P				P				P	P				P						P					P					P
				48X-5, 25–27	448.05	460.27																																									
				49X-4, 25–27	456.15	468.37																						P																			
VI				52X-CC, 0–2	473.1	485.32					C														R				R														C					
				53X-CC, 0–2	478.38	490.6					R										R			R												R					R		C					
				54X-1, 0–2	482.7	494.92					C								R		R						R								R					R			C					
				54X-CC, 0–2	483.5	495.72			R		R								R													R				R							C					
				55X-1, 25–27	487.55	499.77			R		C								C					R		R	C																C					
VII				56X-1, 25–27	492.55	504.77					R								R							R	C					R			R	R						R	C					
				56X-CC, 25–27	494.02	506.24					P								P								P																P					
				57X-1, 25–27	501.95	514.17		R			C								C								C									R							C					
				57X-2, 25–27	503.45	515.67		R	R		C	R					R		R								C	R						R								R	A				R

Table T2 (continued).

Lithologic unit	Dinoflagellate assemblage zone	Dinoflagellate assemblage subzone	Age	Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	*Spiniferites* spp.	*Tanyosphaeridium regulare*	*Tectatodinium grande*	*Tectatodinium pellitum*	*Tectatodinium* sp.	*Thalassiphora patula*	*Thalassiphora pelagica*	*Thalassiphora velata*	*Tuberculodinium vancampoae*	*Wetzeliella articulata*	*Wetzeliella gochtii*	*Wetzeliella symmetrica*	*Xenicodinium echiniferum*	*Xenicodinium conispinum*
				184-1148A-																
				40X-1, 25–27	364.75	376.97	P													
				40X-3, 25–27	367.75	379.97														
IV				40X-6, 25–27	372.25	384.47	P			P	P									
				41X-3, 25–27	377.45	389.67	P													
				41X-4, 25–27	378.95	391.17	P			P										
				41X-7, 25–27	383.45	395.67					P									
				42X-1, 25–27	384.15	396.37				P	P									
				43X-2, 25–27	395.25	407.47	R			P	P									
				43X-6, 25–27	401.25	413.47														
				44X-1, 25–27	403.45	415.67	P			P	P									
				44X-2, 25–27	404.95	417.17	P			P	P									
				44X-4, 25–27	407.95	420.17	P													
				44X-6, 25–27	410.95	423.17	P													
				44X-CC, 25–27	412.9	425.12	P			P										
				45X-2, 25–27	414.65	426.87	C			R										
				45X-4, 25–27	417.65	429.87	P			P										
				45X-5, 25–27	419.15	431.37	P													
V	*Polysphaeridium zoharyi*		Early Miocene	45X-7, 25–27	422.15	434.37	C													
				46X-1, 25–27	422.75	434.97	C													
				46X-3, 25–27	425.75	437.97	R			R	R				R					
				46X-5, 25–27	428.75	440.97				R	R									
				46X-CC, 25–27	431.67	443.89	P				R									
				47X-1, 25–27	432.45	444.67	C			R										
				47X-3, 25–27	435.45	447.67	R				R									
				47X-4, 25–27	436.95	449.17					P									
				47X-CC, 25–27	441.93	454.15					R									
				48X-2, 25–27	443.55	455.77														
				48X-5, 25–27	448.05	460.27	P													
				49X-4, 25–27	456.15	468.37	P													
VI				52X-CC, 0–2	473.1	485.32	R				R				R					
	Cleistosphaeridium diversispinosum	*Cordosphaeridium gracile*	late Oligocene	53X-CC, 0–2	478.38	490.6	R				R					A	R	C		
				54X-1, 0–2	482.7	494.92	C													
				54X-CC, 0–2	483.5	495.72	R		R											
				55X-1, 25–27	487.55	499.77	C													
VII				56X-1, 25–27	492.55	504.77	R						R							
				56X-CC, 25–27	494.02	506.24	P													
				57X-1, 25–27	501.95	514.17	C													
				57X-2, 25–27	503.45	515.67	C													

Table T2 (continued).

Lithologic unit	Dinoflagellate assemblage zone	Dinoflagellate assemblage subzone	Age	Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	*Achomospaera alcicornu*	*Achomospaera callosa*	*Achomospaera crassipellis*	*Achomospaera grallaeformis*	*Achomospaera ramulifera*	*Achmosphaera* sp.	*Apeodinium granulatum*	*Apeodinium maculatum*	*Apeodinium nanhaicum*	*Apteodinium* sp.	*Areoligera* sp.	*Batiacasphaera baculata*	*Batiacasphaera biornata*	*Batiacasphaera micropapillata*	*Batiacasphaera minuta*	*Batiacasphaera* sp.	*Canningia* sp.	*Cerebrocysta satchelliae*	*Cerebrocysta* spp.	*Chiropteridium galea*	*Chiropteridium* sp.	*Cleistosphaeridium ancyreum*	*Cleistosphaeridium diversispinosum*	*Cleistosphaeridium placacanthum*	*Cleistosphaeridium* sp.	*Cordosphaeridium cantharellum*	*Cordosphaeridium exilimurum*	*Cordosphaeridium gracile*	*Cordosphaeridium inodes*	*Cordosphaeridium minimum*	*Cordosphaeridium* sp.	*Cribroperidinium tenuitabulatum*	*Cribroperidinium* sp.	*Dapsilidinium pseudocolligerum*	*Dapsilidinium* sp.	*Diphyes colligerum*	*Distatodinium ellipticum*	*Enneadocysta arcuata*	*Enneadocysta multicornuta*	*Enneadocysta pectiniformis*
VII	*Cleistosphaeridium diversispinosum*	*Cordosphaeridium gracile*	late Oligocene	57X-3, 25–27	504.95	517.17					R		R									R						R	C	R						R				R	R					
				57X-4, 25–27	506.45	518.67										R												R	C					R												
				57X-5, 25–27	507.95	520.17						R			R	R												R	C	R	R										R		R		R		
				57X-6, 25–27	509.45	521.67												R							R			R	R	R	R															
				57X-CC, 25–27	509.73	521.95																						R			R			C	C	C			R							
				58X-1, 25–27	511.55	523.77					R	R				R												C		R	R	R							R	R						
				58X-2, 25–27	512.65	524.87			R			R	R												R			R	C	R				R	R		R			R		R		R			
				58X-3, 25–27	514.15	526.37							R		R	C	R											C	C	R	R			R			R	R	R	R						
				58X-CC, 25–27	516.34	528.56					R		R			R												R				R		R					R	R	R						
				59X-2, 25–27	522.75	534.97					R	R				R			R						R			C	R	R				R	R											
				59X-4, 25–27	525.75	537.97			R							R												C	C	R		R				R			R	R				R		
		Enneadocysta pectiniformis	early Oligocene	60X-CC, 25–27	531.36	543.58					R																		R	R				R							R					R
				62X-1, 25–27	550.15	562.37								R	R	R												R	C	R																
				62X-4, 25–27	554.65	566.87						R				R												R			R	R	R	R			R									
				63X-1, 25–27	559.75	571.97										R			R						R			C	C	R	R	R		C		R					R					
				63X-5, 25–27	565.45	577.67					R	R				R												C	C	R		R		C	R					R						
				64X-1, 25–27	569.35	581.57					R	R		R		R												R	C		R					R											
				64X-3, 25–27	572.35	584.57					R	R	R	R		R												R	C		R		R	R	R						R						
				65X-1, 25–27	579.05	591.27						R				R												R	R		C	R		R	R						R						
				65X-CC, 25–27	581.35	593.57			R				R	R	R													C	C	R	R			R													
				66X-1, 25–27	588.65	600.87				R	R	R			R													C	C	R	C			R	R												
				66X-3, 25–27	591.65	603.87					R	R			R													C	C	R	R				R												
				67X-3, 25–27	601.25	613.47					C	C																C	C	R	R				R												
				68X-5, 25–27	612.39	624.61					R	R																C	C	R	R	R		R	R		R			R			R		R	
				68X-CC, 25–27	617.4	629.62					R	R				R												R	R		C			R		R	R			R					R	
				69X-5, 25–27	623.45	635.67				R	R	R																R	A	R	C				R					R					R	
				70X-5, 25–27	633.05	645.27			R	R	R	R		R	R	R			R									C	C	R	C			R	R		R		R	R						
				72X-5, 25–27	652.45	664.67	R				R	R																C	C	C	C			R	R	R							R			R
				74X-6, 25–27	673.25	685.47			R		R	R			R	R												R	C		R				R	R		R		R			R			
				76X-6, 25–27	692.34	704.56					R											R						C	C		C		R		R		R						R	R		R
				39X-CC, 25–27	709.47	715.72				R	R	R							R									R	C	R	C		R	R	R		R	R		R						
				42X-1, 25–27	728.95	735.2					R	R																C	C		C				R											
				43X-2, 25–27	740.05	746.3					R	R				R									R			R	C	R	R				R				R			R				
				45X-3, 25–27	760.55	766.8				R	R	R		R					R									C	C	R	A			R	R			R			R					
				46X-3, 25–27	770.15	776.4	R			R		R					R					R						C	C	R	C	R		R	R		R				R	R				R
				48X-2, 25–27	786.55	792.8				R		R																R	A		C		R		R		R			R						
				50X-1, 25–27	804.35	810.6				R	R	R																R	R		R				R					R						
				52X-1, 25–27	814.95	821.2				R		R																C	A		C		R	R	R		R			R						R
				55X-1, 25–27	834.25	840.5						R				R			R			R						R	C	R	R		R	R	R		R			R						R
				56X-1, 25–27	843.85	850.1				R		R																R	C	R	C					R						R				R

Note: V = very abundant, A = abundant, C = common, R = rare, P = present.

Table T2 (continued).

Lithologic unit	Dinoflagellate assemblage zone	Dinoflagellate assemblage subzone	Age	Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	*Glaphyrocysta intricata*	*Glaphyrocysta* sp.	*Heteraulacacysta campanula*	*Heteraulacacysta fehmarnensis*	*Heteraulacacysta* sp.	*Homotryblium abbreviatum*	*Homotryblium plectilum*	*Homotryblium tenuispinosum*	*Homotryblium vallum*	*Hystrichokolpoma cinctum*	*Hystrichokolpoma rigaudiae*	*Hystrichokolpoma salacia*	*Hystrichokolpoma wilsonii*	*Hystrichokolpoma* sp.	*Hystrichosphaeridium*? *latitricum*	*Hystrichosphaeridium* sp.	*Hystrichosphaeropsis obscura*	*Impagidinium aculeatum*	*Impagidinium dispertitum*	*Impagidinium minus*	*Impagidinium multiplice*	*Impagidinium torsium*	*Impagidinium velorum*	*Impagidinium* spp.	*Impletosphaeridium* sp.	*Kallosphaeridium* sp.	*Lejeunecysta communis*	*Lejeunecysta fallax*	*Lejeunecysta globosa*	*Lejeunecysta hyalina*	*Lejeunecysta lata*	*Lejeunecysta* sp.	*Lingulodinium machaerophorum*	*Lingulodinium* sp.	*Melitasphaeridium asterimum*	*Melitasphaeridium choanophorum*	*Melitasphaeridium* sp.	*Membranilarnacia*? *picena*	*Membranophoridium aspinatum*	*Multispinula* sp.
VII	*Cleistosphaeridium diversispinosum*	*Cordosphaeridium gracile*	late Oligocene	57X-3, 25–27	504.95	517.17						R	C				R									R				C	R					R				R							R
				57X-4, 25–27	506.45	518.67							R				R	R		R						R				C	R							R	R								R
				57X-5, 25–27	507.95	520.17				R			R	R	R		R			R	R				C					C							R	R	R								
				57X-6, 25–27	509.45	521.67						C	C				R				R							R		R								R	R								
				57X-CC, 25–27	509.73	521.95				R			C	C	R		R								R					R					R			R	R								
				58X-1, 25–27	511.55	523.77			R			R	C		R		R													R	R					R		R	R		R				R		
				58X-2, 25–27	512.65	524.87	R			R			R	R	R						R	R			R												R	R		C	R						
				58X-3, 25–27	514.15	526.37			R		R		C		R		R	R	R	R						R					R						R		R	R							
				58X-CC, 25–27	516.34	528.56			R	R		R	V		C											R				R									R								
				59X-2, 25–27	522.75	534.97							R		R					R										R	R								R								R
				59X-4, 25–27	525.75	537.97		R		R			C		R		R	R												R				R					C								
		Enneadocysta pectiniformis	early Oligocene	60X-CC, 25–27	531.36	543.58							R		R		R									R				R	R			R			R	R	R	R							R
				62X-1, 25–27	550.15	562.37							C		R											R				R	R	R		R				R	C								R
				62X-4, 25–27	554.65	566.87						R	V	C	R															R	R					R			R		R						
				63X-1, 25–27	559.75	571.97						R	R	R	R		R			R							R			C								R	C								R
				63X-5, 25–27	565.45	577.67							A		R		R													R	R					R			R		R						
				64X-1, 25–27	569.35	581.57						R	R		R		R									R				R	R							R	C								
				64X-3, 25–27	572.35	584.57						R	C		C		R									R				R	R								R	R	R						
				65X-1, 25–27	579.05	591.27	R		R				C				R													R	R								R								
				65X-CC, 25–27	581.35	593.57			R	R		R	C	C		R	R	R		R						R				C						R			R								
				66X-1, 25–27	588.65	600.87						R	C	R								R			R					R																	
				66X-3, 25–27	591.65	603.87			R	R			C	C								R			R					R								R	R								
				67X-3, 25–27	601.25	613.47							R	R		R	R	R												R	R								R								
				68X-5, 25–27	612.39	624.61						R	C	R	R	R	C	C		C										R									R								
				68X-CC, 25–27	617.4	629.62					R		C	R			C			R										C	R			R		R			R								
				69X-5, 25–27	623.45	635.67						R	R	R																R	R					R		R	R	R	R						
				70X-5, 25–27	633.05	645.27						R	C	R	R		C	R												R	R					R		R									
				72X-5, 25–27	652.45	664.67											R													R	R							R	R		R						
				74X-6, 25–27	673.25	685.47											R													R	R							R	R		R		R				
				76X-6, 25–27	692.34	704.56											R			R											R							R	R								
				39X-CC, 25–27	709.47	715.72		R					R							R											R					R		R									
				42X-1, 25–27	728.95	735.2		R									R	R		C											R					R		R			R						
				43X-2, 25–27	740.05	746.3											C	R													R							R	C								
				45X-3, 25–27	760.55	766.8		R									R	R		R										R	R							R	R								
				46X-3, 25–27	770.15	776.4											R			R											R					R			R					R				
				48X-2, 25–27	786.55	792.8							R				C			C										R	R							R	R								
				50X-1, 25–27	804.35	810.6										R	V			R																R		R									
				52X-1, 25–27	814.95	821.2										R	R	R		R											R				R	R		R									
				55X-1, 25–27	834.25	840.5			R								C	R		C										R	R					R		R									
				56X-1, 25–27	843.85	850.1						R					C	R		C																		R	R		R						

Table T2 (continued).

Lithologic unit	Dinoflagellate assemblage zone	Dinoflagellate assemblage subzone	Age	Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	*Nematosphaeropsis labyrinthus*	*Nematosphaeropsis lemniscata*	*Nematosphaeropsis* sp.	*Oligosphaeridium* sp.	*Operculodinium centrocarpum*	*Operculodinium divergens*	*Operculodinium israelianum*	*Operculodinium longispinigerum*	*Operculodinium microtriainum*	*Operculodinium piaseckii*	*Operculodinium tiara*	*Operculodinium xanthium*	*Operculodinium* spp.	*Pentadinium*? *circumsutum*	*Pentadinium imaginatum*	*Pentadinium laticinctum*	*Pentadinium taenigerum*	*Pentadinium* sp.	*Phthanoperidinium amoeneum*	*Polysphaeridium subtile*	*Polysphaeridium zoharyi*	*Polysphaeridium zoharyi ktana*	*Pyxidiella* sp.	*Pyxidinopsis* spp.	*Reticulatosphaera actinocoronata*	*Schematophora speciosa*	*Selenopemphix armata*	*Selenopemphix nephroides*	*Selenopemphix* sp.	*Sentusidinium* sp.	*Spiniferites bulloides*	*Spiniferites hyperacanthus*	*Spiniferites membranaceus*	*Spiniferites mirabilis*	*Spiniferites monilis*	*Spiniferites pseudofurcatus*	*Spiniferites ramosus*	*Spiniferites ramosus angustus*	*Spiniferites ramosus granosus*	*Spiniferites ramosus multibrevis*
VII	*Cleistosphaeridium diversispinosum*	*Cordosphaeridium gracile*	late Oligocene	57X-3, 25–27	504.95	517.17		R			C													R			C								R	R							C			
				57X-4, 25–27	506.45	518.67					C								C								R																C			
				57X-5, 25–27	507.95	520.17					C	R							R							R	R								R								R			
				57X-6, 25–27	509.45	521.67					C																C								R	R							R			
				57X-CC, 25–27	509.73	521.95			R		R								R							R	R																C			
				58X-1, 25–27	511.55	523.77					R								R								R								R								C			
				58X-2, 25–27	512.65	524.87					C							R	R							R	R																C			
				58X-3, 25–27	514.15	526.37					C																C		R						R								C			
				58X-CC, 25–27	516.34	528.56					R																R								R								R			
				59X-2, 25–27	522.75	534.97					C				R				C								R		R						R								C			
				59X-4, 25–27	525.75	537.97			R		C								R				R				C																C			
		Enneadocysta pectiniformis	early Oligocene	60X-CC, 25–27	531.36	543.58					C							R									C							R	R							C			R
				62X-1, 25–27	550.15	562.37					R								C								C	R							R	R							C			
				62X-4, 25–27	554.65	566.87					R																C								R								R			R
				63X-1, 25–27	559.75	571.97													R								R																R			R
				63X-5, 25–27	565.45	577.67					C								R								R																R		R	
				64X-1, 25–27	569.35	581.57					C								R								C									R							C			
				64X-3, 25–27	572.35	584.57					R									R		R		R			R		R						R								C			
				65X-1, 25–27	579.05	591.27		R			C								R	R		R					C								R								C		R	
				65X-CC, 25–27	581.35	593.57					C							R	R								R		R						R				R			R	A			R
				66X-1, 25–27	588.65	600.87					R								R								R					R		R					R		R	R	C			
				66X-3, 25–27	591.65	603.87												R	R															R			R						C			
				67X-3, 25–27	601.25	613.47					R																R					R											C			
				68X-5, 25–27	612.39	624.61					R							R							R								R						R		R	C		R	
				68X-CC, 25–27	617.4	629.62													C						R							C		R					R				R			
				69X-5, 25–27	623.45	635.67			R	R	R														C	R					R		R		R						R	R	C			
				70X-5, 25–27	633.05	645.27					R							R																R					R			R	R			
				72X-5, 25–27	652.45	664.67			R		R							R							R											R							R			
				74X-6, 25–27	673.25	685.47					R											R		R		R	R									R						R	R			
				76X-6, 25–27	692.34	704.56					R							R	R							R	C	R															R			
				39X-CC, 25–27	709.47	715.72					R							R	R															R	R							R	R			
				42X-1, 25–27	728.95	735.2			R		R						R	R	R			R				R	C					R		R	R								R			
				43X-2, 25–27	740.05	746.3			R									R									R							R		R							R			
				45X-3, 25–27	760.55	766.8					R							R	R									R							R							R	R			
				46X-3, 25–27	770.15	776.4					R							R								C	C	R				R			R											
				48X-2, 25–27	786.55	792.8					R							R	R							C	R								R							R	R			
				50X-1, 25–27	804.35	810.6					R								R							R	R	R														R	R			
				52X-1, 25–27	814.95	821.2					R				R				R			R			R	C	R	R			R			R								R	R			
				55X-1, 25–27	834.25	840.5					R				R		R		R							R	R					R										R	R			
				56X-1, 25–27	843.85	850.1					R								R																											

Table T2 (continued).

Lithologic unit	Dinoflagellate assemblage zone	Dinoflagellate assemblage subzone	Age	Core, section, interval (cm)	Depth (mbsf)	Depth (mcd)	*Spiniferites* spp.	*Tanyosphaeridium regulare*	*Tectatodinium grande*	*Tectatodinium pellitum*	*Tectatodinium* sp.	*Thalassiphora patula*	*Thalassiphora pelagica*	*Thalassiphora velata*	*Tuberculodinium vancampoae*	*Wetzeliella articulata*	*Wetzeliella gochtii*	*Wetzeliella symmetrica*	*Xenicodinium echiniferum*	*Xenicodinium conispinum*
VII	*Cleistosphaeridium diversispinosum*	*Cordosphaeridium gracile*	late Oligocene	57X-3, 25–27	504.95	517.17	C									R				
				57X-4, 25–27	506.45	518.67	R				R					R				
				57X-5, 25–27	507.95	520.17	R				R		R							
				57X-6, 25–27	509.45	521.67	R		R		R									
				57X-CC, 25–27	509.73	521.95					R									
				58X-1, 25–27	511.55	523.77	C				R								R	
				58X-2, 25–27	512.65	524.87	C													
				58X-3, 25–27	514.15	526.37					R									
				58X-CC, 25–27	516.34	528.56	R													
				59X-2, 25–27	522.75	534.97	C		R		R									
				59X-4, 25–27	525.75	537.97	C		R											
		Enneadocysta pectiniformis	early Oligocene	60X-CC, 25–27	531.36	543.58					C									
				62X-1, 25–27	550.15	562.37														
				62X-4, 25–27	554.65	566.87	R		R		R									
				63X-1, 25–27	559.75	571.97	R		R		R			R						
				63X-5, 25–27	565.45	577.67	C				R									
				64X-1, 25–27	569.35	581.57	C				R									
				64X-3, 25–27	572.35	584.57	C													
				65X-1, 25–27	579.05	591.27	C													
				65X-CC, 25–27	581.35	593.57	R				R									
				66X-1, 25–27	588.65	600.87	R				R									
				66X-3, 25–27	591.65	603.87	C													
				67X-3, 25–27	601.25	613.47	C													
				68X-5, 25–27	612.39	624.61	C													
				68X-CC, 25–27	617.4	629.62	C					R	C							
				69X-5, 25–27	623.45	635.67	C					R	R							
				70X-5, 25–27	633.05	645.27	C		R											C
				72X-5, 25–27	652.45	664.67	C												R	
				74X-6, 25–27	673.25	685.47	C													
				76X-6, 25–27	692.34	704.56	R													
				39X-CC, 25–27	709.47	715.72	R											R		R
				42X-1, 25–27	728.95	735.2	C					R	R							
				43X-2, 25–27	740.05	746.3	C													
				45X-3, 25–27	760.55	766.8	R						R						R	
				46X-3, 25–27	770.15	776.4	R	R								R				R
				48X-2, 25–27	786.55	792.8	C					R	R							
				50X-1, 25–27	804.35	810.6	R													
				52X-1, 25–27	814.95	821.2	R													
				55X-1, 25–27	834.25	840.5	R				R									
				56X-1, 25–27	843.85	850.1	R													