

Chapter 3, Table 6. Range chart of planktonic foraminifers at Site 1035.

Core, section, interval (cm)	Top depth (mbsf)	Geologic age	Zone	Group abundance	Preservation	Dissolution	Overgrowth	<i>Globigerina bulloides</i>	<i>Globigerina bulloides umbilicata</i>	<i>Globigerina clarki</i>	<i>Globigerina falconensis</i>	<i>Globigerinita glutinata</i>	<i>Globigerinita parkeri</i>	<i>Globigerinita uvula uvula</i>	<i>Globigerinita uvula uvula</i>	<i>Globigerinoides ruber</i>	<i>Globobulimina scitula</i>	<i>Neoglobobulimina pachyderma (left-coiling)</i>	<i>Neoglobobulimina pachyderma (right-coiling)</i>	<i>Orbulina suturalis</i>	<i>Orbulina universa</i>	<i>Orbulina universa bilobata</i>	<i>Turborotalita humilis</i>	<i>Turborotalita iota</i>	<i>Turborotalita quinqueloba</i>	Lithologic units	Sediment environment	Description of sand-sized fraction											
169-1035A-1H-1, 0-2	0.00	Holocene	CD1	Rare	Poor	Strong	None	R																		III A	Hemipelagite	Core top with much orange stain, oxidized iron sulfides, sponge spicules, diatoms, radiolarians, agglutinated foraminifers, and very rare planktonic foraminifers.											
169-1035A-1H-1, 34-37	0.34	Holocene	CD1	Abundant	Moderate	Moderate	None	C																			III A	Hemipelagite	Planktonic foraminifers dominate the sample, with common benthic foraminifers and rare siliceous fossils.										
169-1035A-1H-1, 86-88	0.86	Pleistocene	CD2	Abundant	Moderate	Moderate	Protuberances	C	C	F					R	R	R	C	F								III A	Hemipelagite	Planktonic foraminifers dominate the sand with few benthic foraminifers and common pyrite, with green clay lumps in the fine fraction 63-150 microns.										
169-1035A-1H-2, 0-2	1.50	Pleistocene	CD2	Common	Moderate	Moderate	None	C	R						R	R	R	C	R								III A	Hemipelagite	Planktonic foraminifers dominate the sand-sized fraction. Calcareous benthic foraminifers are quite rare as are diatoms and sponge spicules. Abundant mineral grains in the fine sand fraction.										
169-1035A-1H-CC, 17-19	7.43	Pleistocene	CD2	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	III A	Sulfide debris	Sulfide debris.										
169-1035A-2H-CC, 25-27	17.42	Pleistocene	CD2	Abundant	Good	Weak	None	C																			F	II A	Hemipelagite	Planktonic foraminifers dominate the sand-sized material, with common calcareous benthic foraminifers.									
169-1035A-3H-1, 103-105	18.03	Pleistocene	CD2	Abundant	Moderate	Moderate	None	C	F						R	R	R	C	R								R	II A	Hemipelagite	Planktonic foraminifers dominate the sand-sized fraction.									
169-1035A-3H-2, 92-93	19.42	Pleistocene	CD2	Few	Poor	Strong	None	C							R												R	II A	Hemipelagite	Mineral grains dominate. Almost no sand-sized material in 10 ³ sample. One benthic foraminifer, <i>Sphaeroidina bulloides</i> .									
169-1035A-3H-3, 93-94	20.93	Pleistocene	CD2	Few	Moderate	Moderate	None	C							R												R	II A	Hemipelagite	Planktonic foraminifers dominate sand-sized fraction, but there is very little sand-sized material. There are few mineral grains and a few benthic foraminifers.									
169-1035A-3H-4, 13-14	21.63	—	—	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	Hemipelagite	Almost nothing in the sand-sized fraction. A few mica grains and unidentified grains.									
169-1035A-3H-5, 119-120	24.19	—	—	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	Turbidite?	Mica and sulfide grains.									
169-1035A-3H-7, 11-12	26.11	Pleistocene	—	Few	Poor	Strong	None	R		R	R							A	R							R	II A	Turbidite?	Mineral grains dominate, sulfides.										
169-1035A-3H-CC, 37-39	26.95	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	?	Mud lumps.								
169-1035A-4H-CC, 34-36	36.47	?	?	Rare	Poor	Strong	None	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—	—	—	—	—	—	—	II A	Turbidite?	Mineral grains dominate, sulfide grains; pyritized tubes, <i>Chilostomella</i> , and one planktonic foraminifer. The sample is NOT indurated.								
169-1035A-5H-CC, 29-31	45.95	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IIC	Lithified turbidite?	Slightly lithified mud lumps of sand-sized composed of silt grains, a few mineral grains, mostly mica, that are sand sized. Rare sulfide grains.								
169-1035A-6H-CC, 60-62	53.18	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IIC	Lithified turbidite?	Slightly lithified mud lumps of sand sized and made of silt grains, sulfide grains.								
169-1035A-7X-CC, 38-40	57.05	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IVD	Lithified turbidite?	Lithified clay lumps, sulfides, anhydrite?								
169-1035A-8X-CC, 37-39	65.29	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	Lithified turbidite?	Very fine mineral sand with lithified mud lumps, mica, and iron sulfide grains.							
169-1035A-9X-CC, 38-40	79.64	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	Lithified turbidite?	Sand with large crystals of anhydrite?							
169-1035A-10X-CC, 37-39	85.44	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	Lithified turbidite?	Sand, mostly quartz with mica.							
169-1035A-11X-CC, 34-36	90.79	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	Lithified turbidite?	Pyrite rich quartz sand with mica and anhydrite? crystals.							
169-1035A-12X-CC, 32-34	105.87	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II C	Lithified turbidite?	Quartz silt lumps with anhydrite crystals and iron sulfide, tubes replaced by anhydrite and pyrite.							
169-1035A-13X-CC, 30-32	115.96	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II C	Lithified turbidite?	Laminated fine sand and mudstone with iron sulfide, indurated, with large anhydrite? crystals.							
169-1035A-14X-CC, 29-31	128.40	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II C	Lithified turbidite?	Weakly lithified fine quartz sand with pyrite, pyrrhotite, sphalerite?, and anhydrite crystals. Quartz-filled vein in anhydrite.							
169-1035A-15X-CC, 36-38	136.95	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	Lithified turbidite?	Fine white sand weakly lithified into lumps; pyrite, and other sulfides as small grains; chlorite blades.						
169-1035A-16X-CC, 43-45	144.74	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	Lithified turbidite?	White silt and fine sand, anhydrite?, weakly lithified with silt and very fine sand-sized iron sulfides.						
169-1035A-17X-CC, 32-34	147.72	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	Lithified turbidite?	White silt and very fine sand in weakly lithified lumps with sand-sized iron sulfides and anhydrite.						
169-1035A-18X-CC, 21-23	157.31	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	II A	Lithified turbidite?	Fine white sand with iron sulfides and anhydrite. Rare red vitreous mineral.						
169-1035B-1M-1, 0-2	0.00	?	?	Rare	Poor	Strong	None	R										R															Massive sulfide south of Bent Hill	Sulfide debris with rare agglutinated benthic forams.					
169-1035C-1X-1, 0-2	0.00	Holocene	CD1	Common	Poor	Strong	None	A		R				R	R			C	R								R	III	Hydrothermal sediments with pelagics	Sulfide sediment with diverse agglutinated benthic assemblage and also a few calcareous foraminifers. Sponge spicules, diatoms, and radiolarians are few.									
169-1035C-1X-CC, 35-37	1.45	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	III	Massive hydrothermal sulfide	Sulfides.		
169-1035C-3X-CC, 4-6	20.14	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	VA	Massive hydrothermal sulfides	Sulfide masses with slightly lithified clay and silt lumps.	
169-1035C-4X-1, 33-35	30.03	?	?	Barren	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	VA	Massive hydrothermal sulfides	Sulfides with lithified clay lumps and a trace of gypsum or anhydrite.
169-1035D-1H-1, 0-2	0.00	Holocene	CD1	Abundant	Moderate	Moderate	None	C		F				F				C	R		R						C	II	Hemipelagite	Planktonic foraminifers dominate with agglutinated benthic foraminifers, radiolarians, diatoms, iron staining. Is this really Holocene?									
169-1035D-1H-1, 50-52	0.50	Pleistocene	CD2	Abundant	Good	Weak	None	C		F				C	F			C									F	II	Hemipelagite	Planktonic foraminifers dominate the sand. Common radiolarians.									
169-1035D-1H-1, 76-78	0.76	Pleistocene	CD2	Abundant	Good	Weak	None	C	F	F				C	F			C									F	II	Hemipelagite	Planktonic foraminifers dominate the sand with few benthic foraminifers, mineral grains like mica, quartz, etc., a trace of ostracodes, urchin spines.									
169-1035D-1H-1, 109-111	1.09	Pleistocene	CD2	Abundant	Moderate	Moderate	None	C	R	R				C	F			C	R								F	II	Hemipelagite	Planktonic foraminifers dominate with benthic foraminifers rare, no mineral grains in the sand!									
169-1035D-1H-2, 0-2	1.50	Pleistocene	CD2	Abundant	Moderate	Moderate	None	C	R	R				C	R			C									R	IA	Hemipelagite	Planktonic foraminifers dominate with rare benthic foraminifers, mineral grains, a trace of radiolarians, pyrite (framboidal).									
169-1035D-1H-2, 46-48	1.96	Pleistocene	CD2	Abundant	Moderate	Moderate	Crust	C		R				C	F			C									R	IA	Hemipelagite	Planktonic foraminifers dominate with rare benthic foraminifers, a trace of mineral grains, pyrite, and radiolarians. Some of the pyrite is framboidal.									
169-1035D-1H-2, 138-140	2.88	Pleistocene	CD2	Abundant	Moderate	Moderate	Crust	C	F	R				C	F			C									F	III	Turbidite with sulfide clastics	Half planktonic foraminifers and half sulfides. Rare benthic foraminifers, mineral grains, a trace of radiolarians.									
169-1035D-1H-3, 0-2	3.00	Pleistocene	CD2	Common	Poor	Strong	Crust	C	R	R				C				C									R	III	Turbidite of sulfide clastics	Dominated by sulfides with rare planktonic foraminifers, a trace of benthic foraminifers.									
169-1035D-1H-4, 0-2	4.50	Pleistocene	CD2	Few	Poor	Strong	None	C	R	F				C				C									III	Turbidite of sulfide clastics	Dominated by sulfides (pyrrhotite) with rare planktonic foraminifers, a trace of benthic foraminifers. Anhydrite.										
169-1035D-1H-CC, 0-2	4.84	Pleistocene	CD2	Common	Poor	Strong	Crust	C		R				F				C									F	III	Turbidite with sulfides and agglutinated benthic forams	Dominated by sulfides (pyrrhotite) and green clay (chlorite?) with few planktonic foraminifers and rare green tubes of benthic agglutinated foraminifers slumped in with the high-temperature sulfides.									
169-1035D-1H-CC, 15-17	5.01	Pleistocene	CD2	Abundant	Poor	Strong	Crust	C	F	F				C	F			C									F	III	Turbidite with pyrrhotite	Half and half planktonic foraminifers and sulfides (pyrrhotite) with rare benthic foraminifers and a trace of siliceous urchin spines, radiolarians, and anhydrite.									
169-1035D-2H-2, 63-65	7.23	—	—	Barren																																			