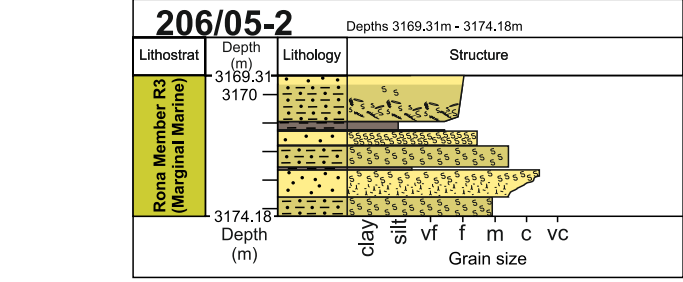
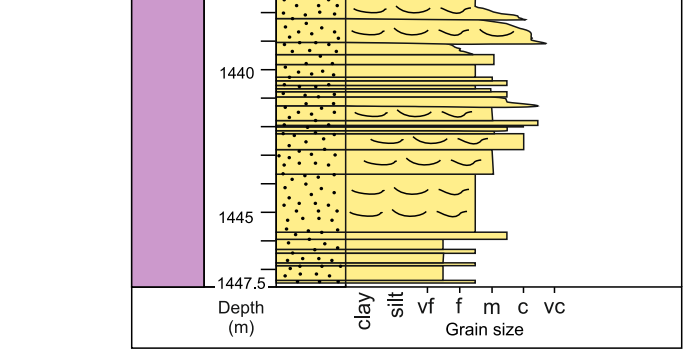
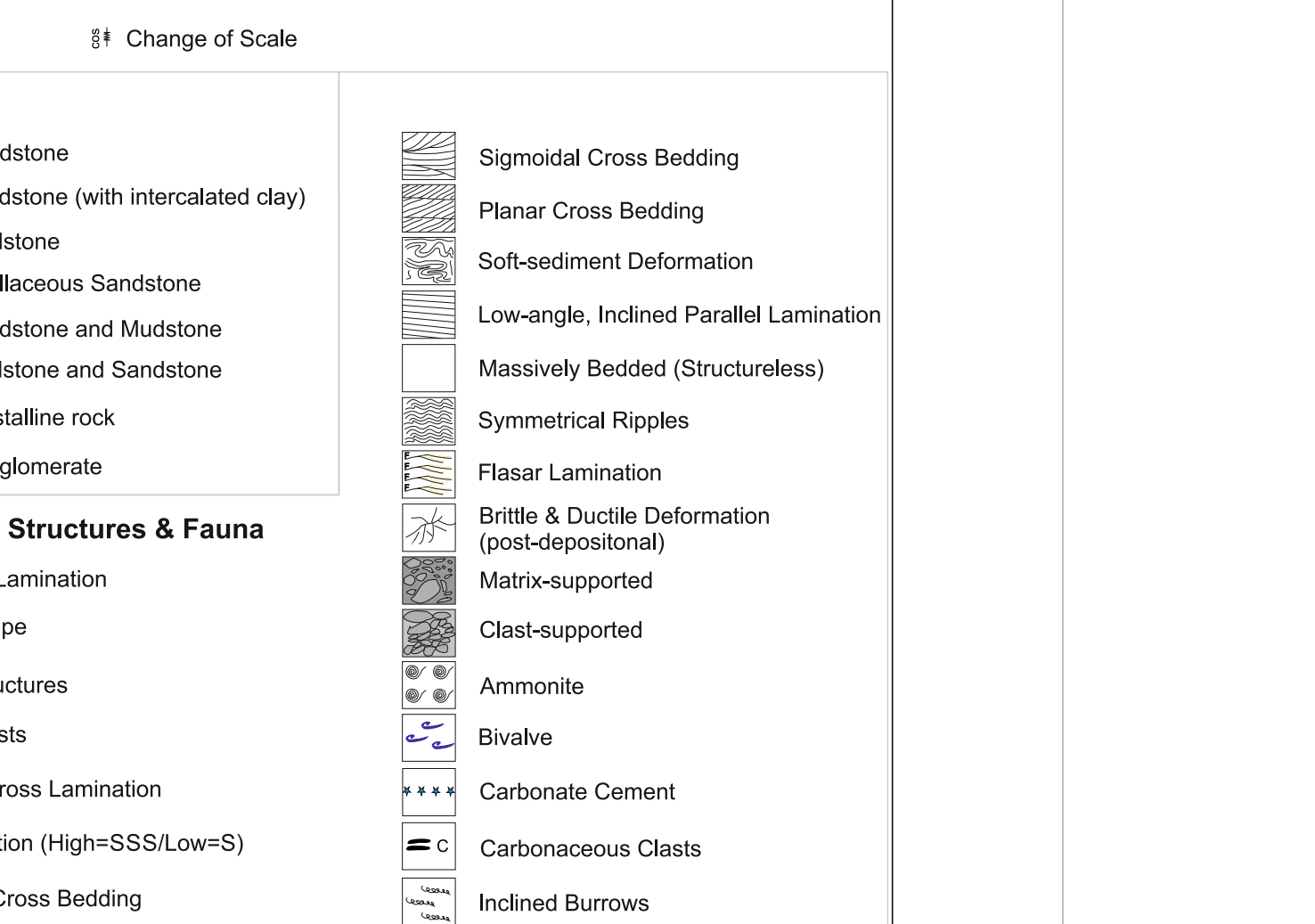
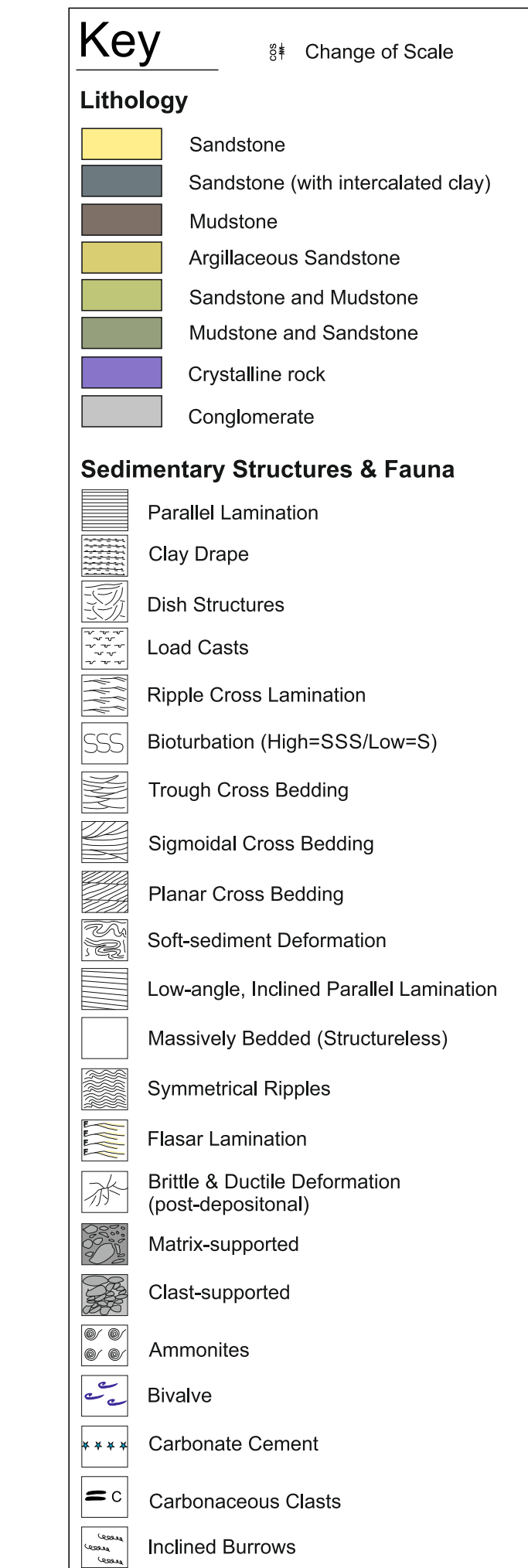
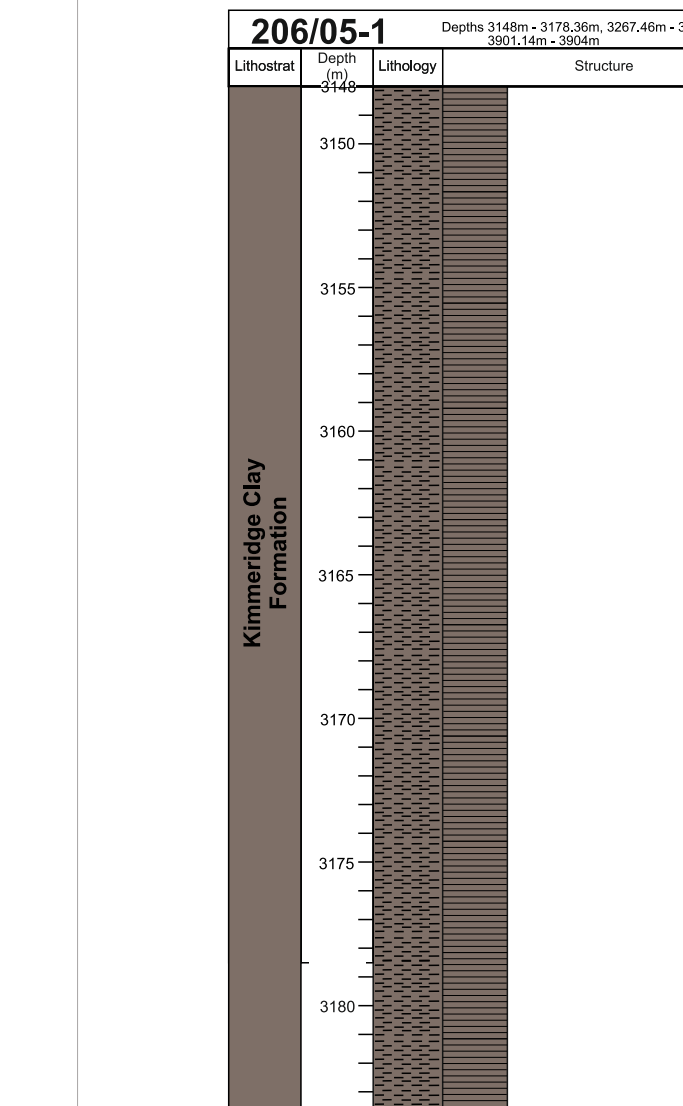
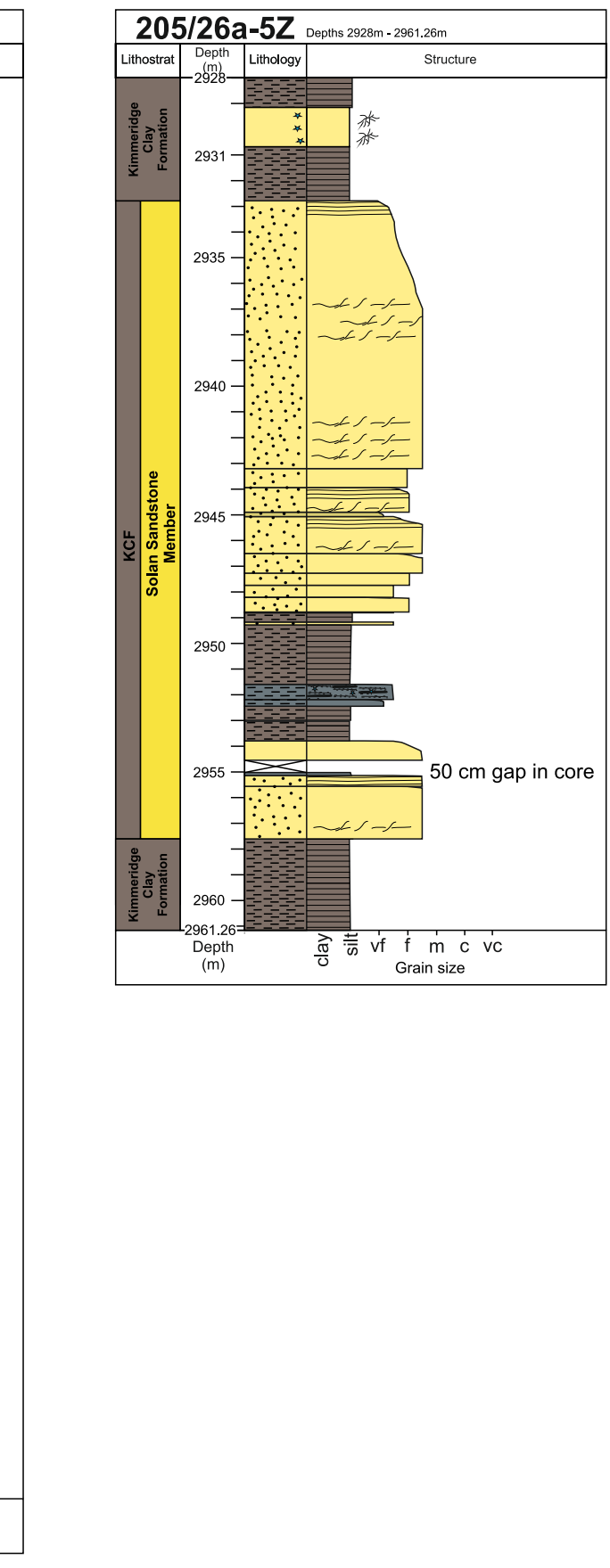
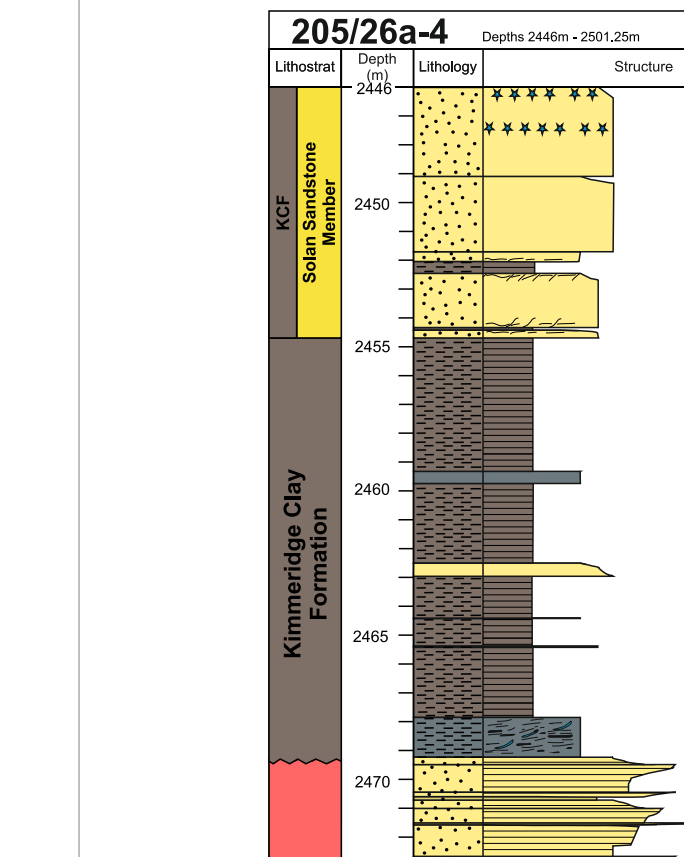
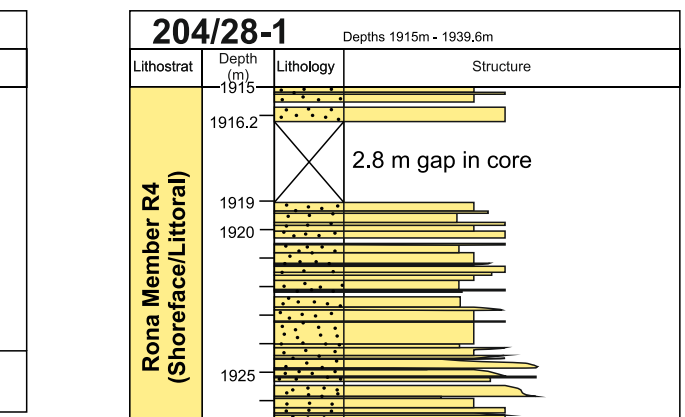
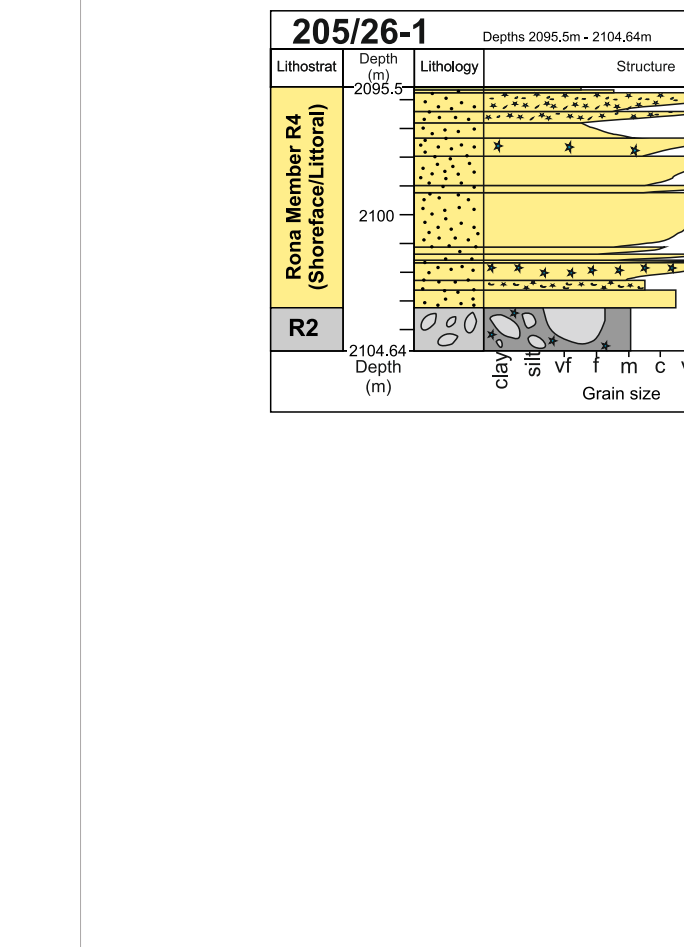
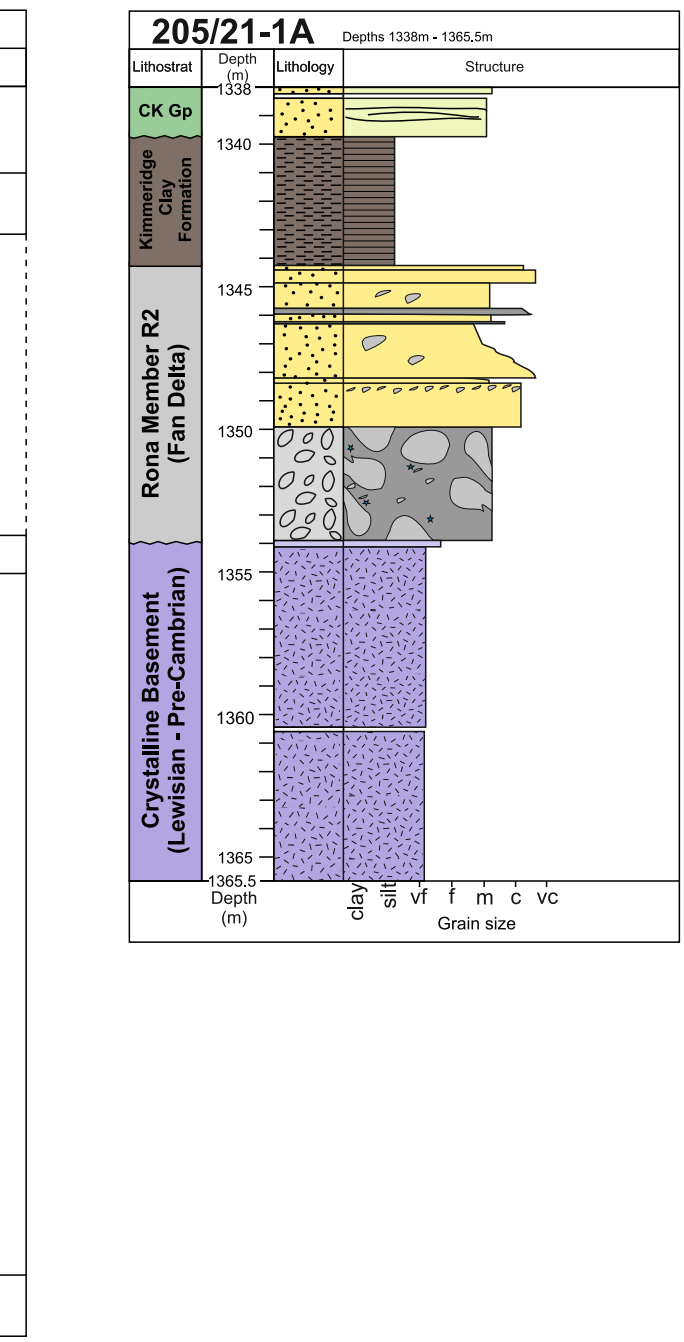
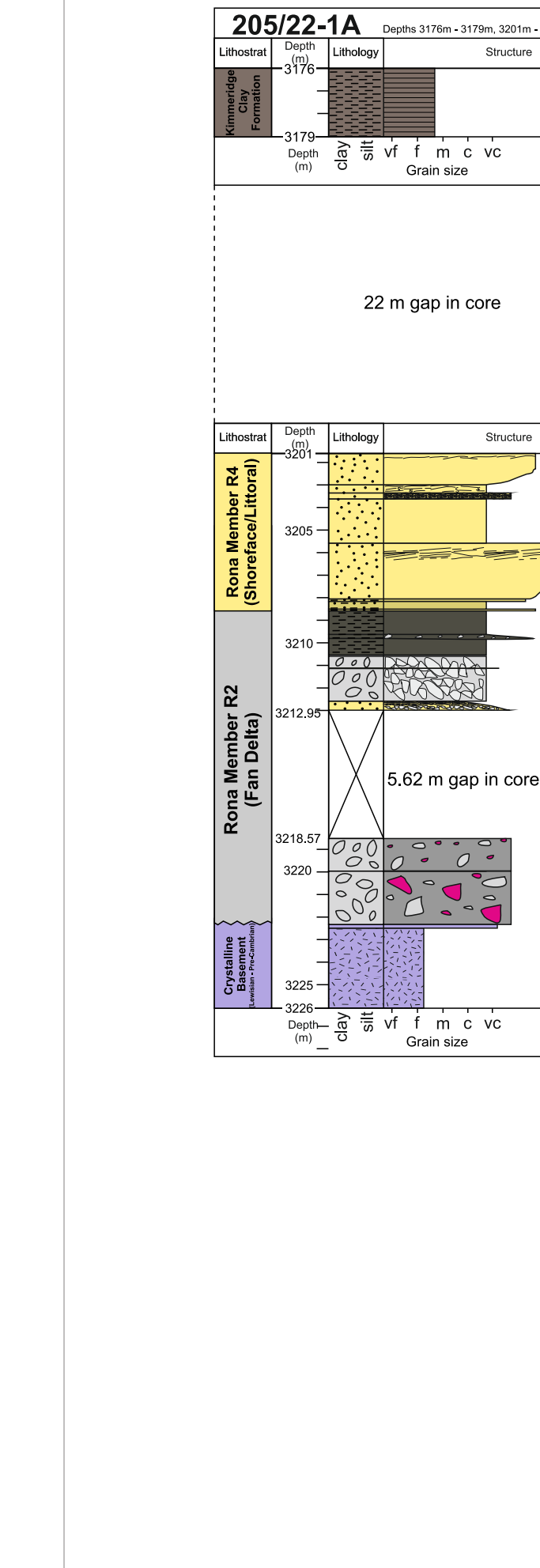
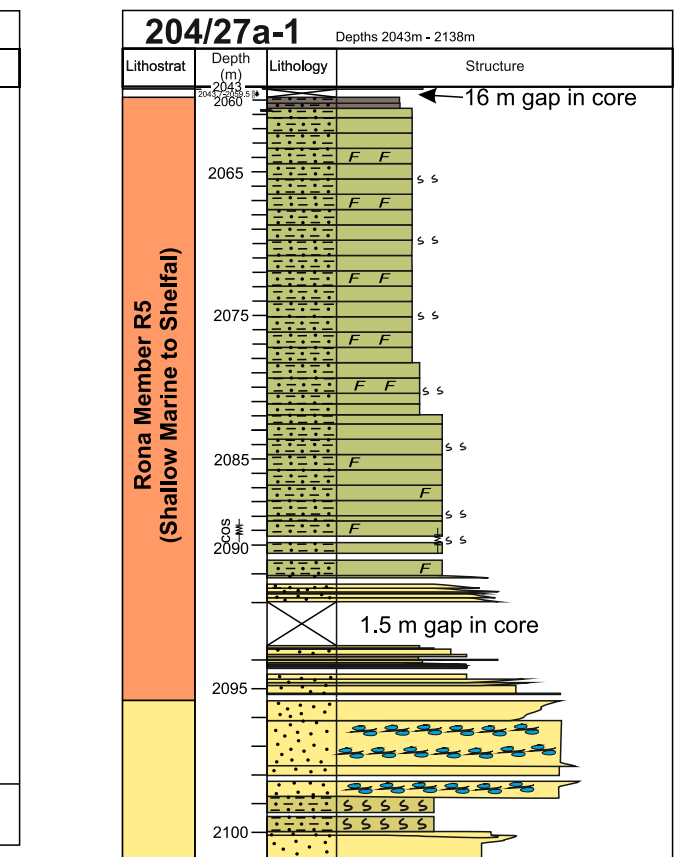
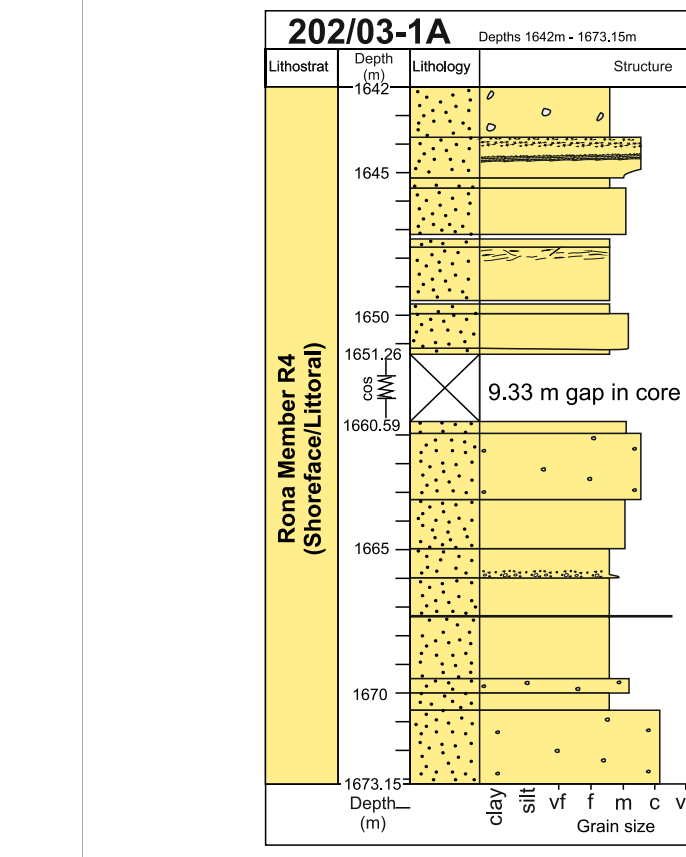
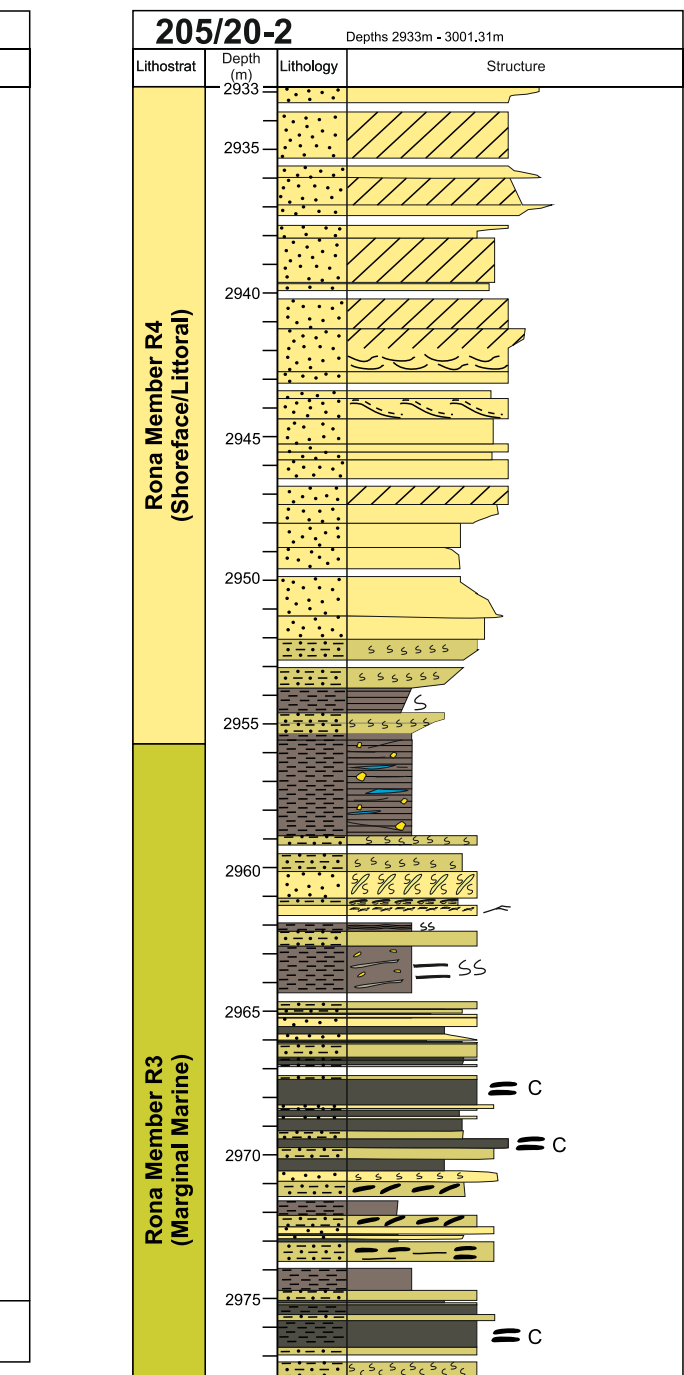
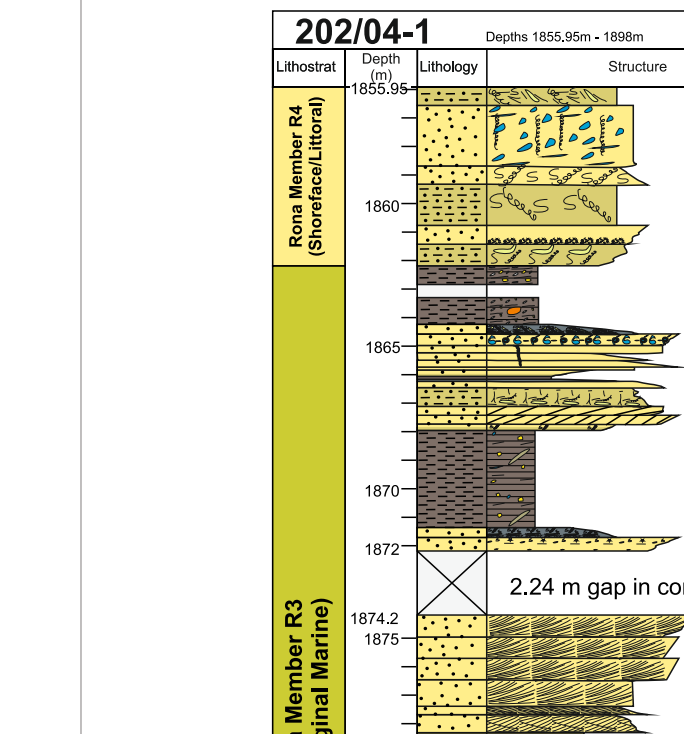
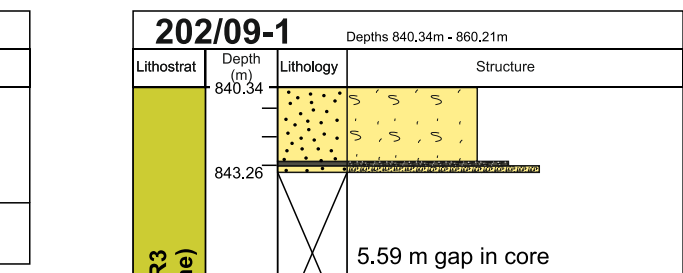
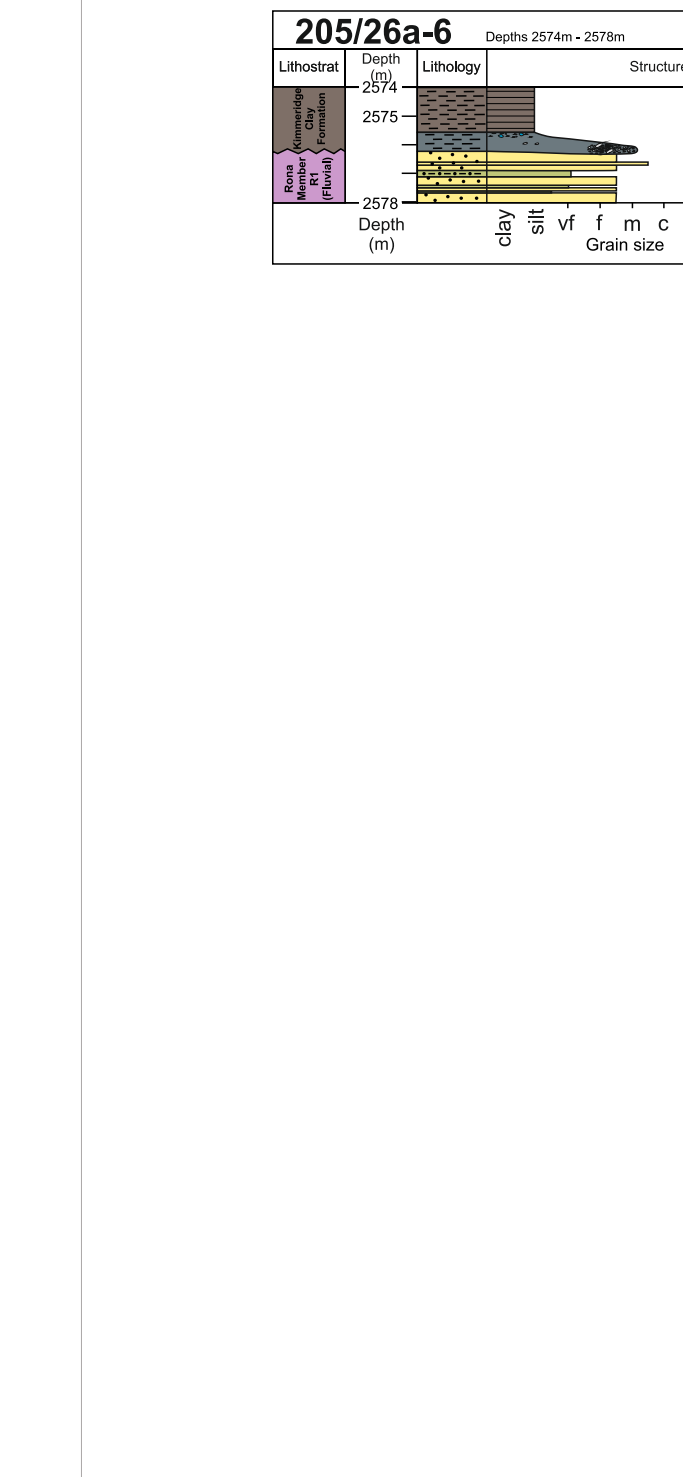
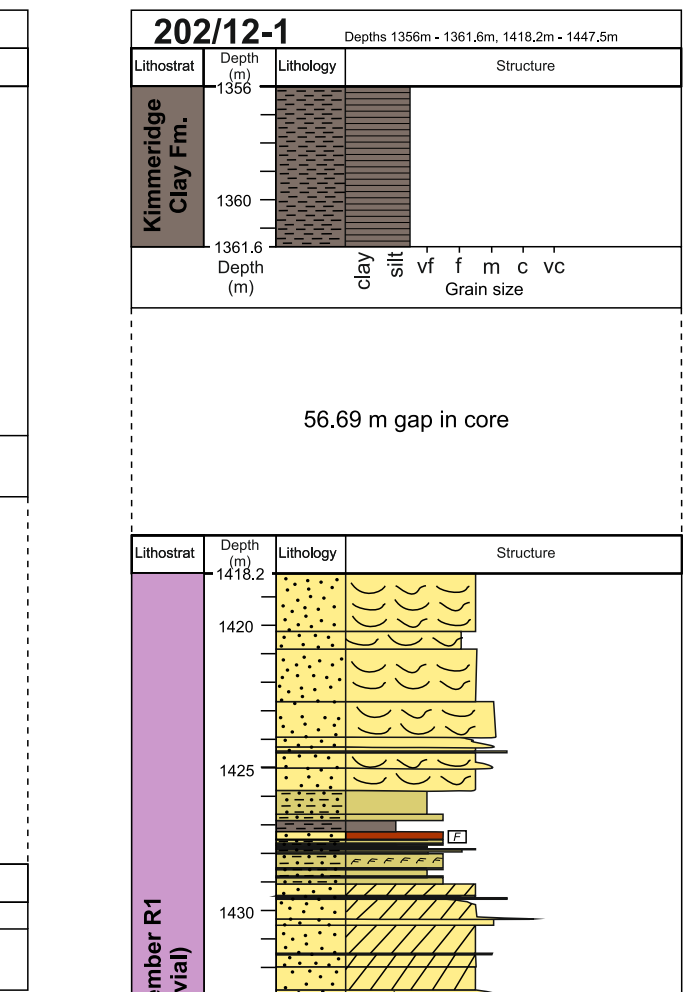
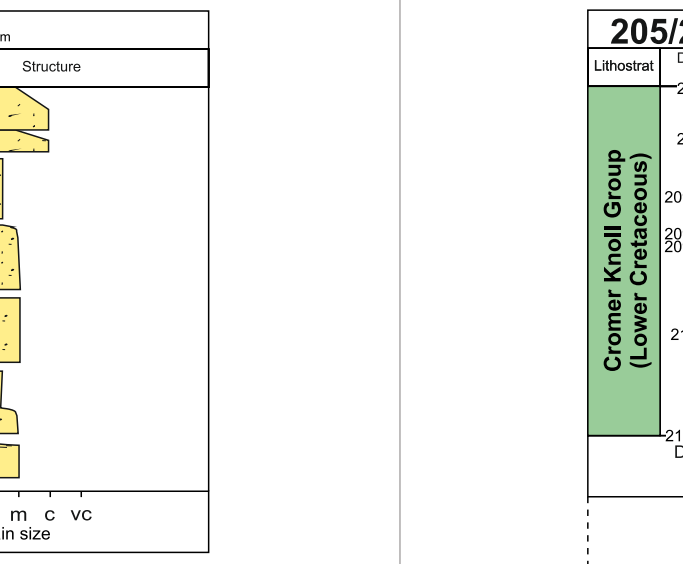
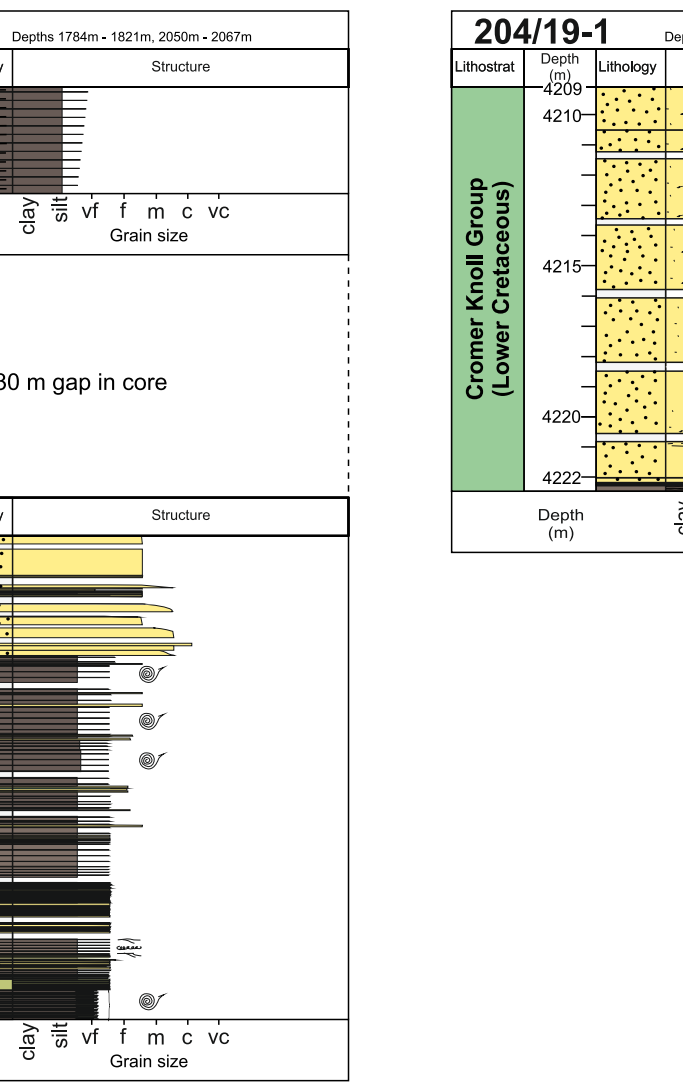


Appendix 1.

Representative Sedimentary Logs



Appendix 2.

**Sedimentary and Palynological
Summary Log Well 202/03-1A**

Appendix 3.

**Sedimentary and Palynological
Summary Log Well 202/03a-3**

Appendix 4.

**Sedimentary and Palynological
Summary Log Well 202/04-1**

Appendix 5.

**Sedimentary and Palynological
Summary Log Well 202/09-1**

Appendix 6.

**Sedimentary and Palynological
Summary Log Well 202/12-1**

Appendix 7.

**Sedimentary and Palynological
Summary Log Well 204/19-1**

204/19-1

Lithostratigraphic Sub-division	Depositional Environment Interpretation	Sedimentary Processes (Elements Level)	Sedimentary Observations										Palynology/Micropal	
			Access Point	Depth (m)	Lab.	Structure	Bed Thickness (cm)	Ichnofossils	Probe No.	Description and notes	MPA	Environment	Marker species	
Cromer Knoll Group (Lower Cteaceous)	Deep Marine Turbidite Fan	High-Density Turbidite Turbidite Fan Axis		4208		148			Fine to medium grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded sandstone. This unit contains a slightly higher argillaceous carbonaceous siltstone content within the matrix, giving it an overall 'fatter' appearance than compared to the rest of the clean sandstone in the rest of the core below. The unit is massively bedded, with no evidence for structuring throughout the bed. The unit contains 2-3% mixture of dark grey carbonaceous clasts and a granular mineral in the matrix. In some examples, the granular green mineral has been identified, which might give an indication that the mineral is glauconite. This would require thin-sectioning to confirm if a composition.	MPA 67553 (4209.4)	Marine	Indeterminate age. Marker species absent.		
				4210									Fine to medium grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded sandstone. The unit is massively bedded, with no evidence for structuring throughout the bed. The unit contains 1-2% mixture of dark grey carbonaceous clasts and a granular green mineral in the matrix. In some examples, the granular green mineral has been identified, which might give an indication that the mineral is glauconite. This would require thin-sectioning to confirm if a composition.	
		High-Density Turbidite Turbidite Fan Axis		4211		76			Fine to medium grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded sandstone. This unit contains a slightly higher argillaceous carbonaceous siltstone content within the matrix, giving it an overall 'fatter' appearance than compared to the rest of the clean sandstone in the rest of the core below. The unit is massively bedded, with no evidence for structuring throughout the bed. The unit contains 1-2% mixture of dark grey carbonaceous clasts and a granular green mineral in the matrix. In some examples, the granular green mineral has been identified, which might give an indication that the mineral is glauconite. This would require thin-sectioning to confirm if a composition.	MPA 67552 (4212.96)	Marine	Indeterminate age. Marker species absent.		
				4212									Fine to medium grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded to rounded sandstone. The unit is massively bedded throughout, with only very subtle, poorly formed evidence for parallel laminations in some sections of the bed. These are depicted by a slightly elevated argillaceous content within the matrix. The unit contains approximately 1-2% dark grey, 1-2mm long carbonaceous clasts along with green, granular mineral, likely to be glauconite.	
		Deep Marine Turbdite Fan	High-Density Turbidite Turbidite Fan Axis		4213		208			Fine to medium grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded sandstone. This unit is, for the most part, massively bedded, with very little evidence for structure. The centre of the bed contains a slightly argillaceous-rich zone of mudstone with better well-sorted structure present. The upper portion of the unit, where the grain size grades into fine grained sandstone, contains some limited evidence for parallel laminations, depicted only by a slightly higher argillaceous content. The matrix contains the granular green mineral, along with approximately 1-2% dark grey carbonaceous clasts.	MPA 67551 (4216.6)	Marine	Indeterminate age. Marker species absent.	
					4214									Fine to medium grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded sandstone. This unit is, for the most part, massively bedded, with very little evidence for structure. The centre of the bed contains a slightly argillaceous-rich zone of mudstone with better well-sorted structure present. The upper portion of the unit, where the grain size grades into fine grained sandstone, contains some limited evidence for parallel laminations, depicted only by a slightly higher argillaceous content. The matrix contains the granular green mineral, along with approximately 1-2% dark grey carbonaceous clasts.
	High-Density Turbidite Turbidite Fan Axis			4215		223			Fine to medium grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded to rounded sandstone. This unit is, for the most part, massively bedded, with very little evidence for structure. The upper portion of the unit, where the grain size grades into the green sandstone, contains some limited evidence for parallel laminations, depicted only by a slightly higher argillaceous content. The matrix contains the granular green mineral, along with approximately 1-2% dark grey carbonaceous clasts.	MPA 67550 (4219.55)	Marine	Indeterminate age. Marker species absent.		
				4216									Fine to medium grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded to rounded sandstone. The unit is massively bedded, with no evidence for structuring present. The matrix contains 1-2% of dark grey, carbonaceous, 1-2mm long clasts mixed with a granular green mineral, most likely to be glauconite.	
	High-Density Turbidite Turbidite Fan Axis			4217		4218			Fine to medium grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded to rounded sandstone. The unit is massively bedded, with no evidence for structuring present. The matrix contains 1-2% of dark grey, carbonaceous, 1-2mm long clasts mixed with a granular green mineral, most likely to be glauconite.	MPA 67551 (4219.55)	Marine	Indeterminate age. Marker species absent.		
				4218									Medium to fine grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded sandstone. The unit is massively bedded, with no evidence for any structuring within the whole unit. Apart from the firing upwards, the only heterogeneity within the unit is presented by scattered, 1-2mm long, 3mm wide, flattened, dark-grey mudclasts. The mudclasts are slightly more concentrated in the lower, fine to medium grained portion of the bed. The unit also contains a high proportion of the green mineral, which is most likely to be glauconite.	
	Deep Marine Turbdite Fan	High-density Turbidite Medial Turbidite Fan		4219		4220			Medium to fine grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded sandstone. The unit is massively bedded, with no evidence for any structuring within the whole unit. Apart from the firing upwards, the only heterogeneity within the unit is presented by scattered, 1-2mm long, 3mm wide, flattened, dark-grey mudclasts. The mudclasts are slightly more concentrated in the lower, fine to medium grained portion of the bed. The unit also contains a high proportion of the green mineral, which is most likely to be glauconite.	MPA 67550 (4219.55)	Marine	Indeterminate age. Marker species absent.		
				4220									Medium to fine grained, firing upward to fine grained, very well sorted, quartz rich, sub-rounded sandstone. The unit is massively bedded, with no evidence for any structuring within the whole unit. Apart from the firing upwards, the only heterogeneity within the unit is presented by scattered, 1-2mm long, 3mm wide, flattened, dark-grey mudclasts. The mudclasts are slightly more concentrated in the lower, fine to medium grained portion of the bed. The unit also contains a high proportion of the green mineral, which is most likely to be glauconite.	
	Deep Marine Turbdite Fan	Hemi-Pelagic Background Sedimentation		4221		17			Dark grey-to-black, all grade, argillaceous and carbonaceous, parallel laminated siltstone. Many of the <1cm laminae within this unit contain a mixture of 0.5-1mm carbonaceous fragments and light green, all grade, mud-clasts. The majority of the bed is parallel laminated, whilst the clay-rich sections are more massive bedded and perhaps slightly coarser-grained, reaching 40-50cm fine grained.	MPA 67549 (4222.8)	Marine	Early Cretaceous (Barremian). Odontochitena operculata, Perrinitesaeophandrium sp., Systematophora spp., Egmontodinium sp., ?Gochtheadina sp.		
				4222									Dark grey-to-black, all grade, argillaceous and carbonaceous, parallel laminated siltstone. Many of the <1cm laminae within this unit contain a mixture of 0.5-1mm carbonaceous fragments and light green, all grade, mud-clasts. The majority of the bed is parallel laminated, whilst the clay-rich sections are more massive bedded and perhaps slightly coarser-grained, reaching 40-50cm fine grained.	
Depositional Environment Interpretation	Depositional Environment Interpretation	Sedimentary Processes (Elements Level)	Access Point	Depth (m)	Lab.	Structure	Bed Thickness (cm)	Ichnofossils	Probe No.	Description and notes	MPA	Environment	Marker species	
204/19-1														

Appendix 8.

**Sedimentary and Palynological
Summary Log Well 204/27a-1**

Appendix 9.

**Sedimentary and Palynological
Summary Log Well 204/28-1**

Appendix 10.

**Sedimentary and Palynological
Summary Log Well 205/20-2**

Appendix 11.

**Sedimentary and Palynological
Summary Log Well 205/21-1A**

Lithostratigraphic Sub-division		Depositional Environment Interpretation		Sedimentary Processes (Elements Level)		Sedimentary Observations										Geological Survey	
						Depth (m)	Core ID	Unit	Structure	Bed Thickness (cm)	Bedrock	Notes	Palynology/Micropal				
Cromer Knoll Group Albian/Cenomanian-aged Sandstone	Deep Marine	High Density Turbidite	9 cm Gap in core										MPA 67041 (1338.04)	Isidimicrinids			
Kimmeridge Clay Formation	Deep Marine	Hemi-pelagic, Background Sedimentation											MPA 67040 (1338.05)	Marine			
			Deep Marine	Hemi-pelagic, Background Sedimentation													
	Deep Marine	Hemi-pelagic, Background Sedimentation													MPA 67039 (1343.04)	Marine	
			Deep Marine	Hemi-pelagic, Background Sedimentation													
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous													MPA 67038 (1343.04)	Isidimicrinids	
		Debris Flow Deposit Subaqueous															
			Turbidite Subaqueous														
Debris Flow Deposit Subaqueous																	
	Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous											MPA 67037 (1343.01)	Terrestrial		
High Density Turbidite Subaqueous																	
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67036 (1343.01)	Isidimicrinids		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67035 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67034 (1339.04)	Isidimicrinids		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67033 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67032 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67031 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67030 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67029 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67028 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67027 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67026 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67025 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67024 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67023 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67022 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67021 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67020 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67019 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67018 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67017 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67016 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67015 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67014 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67013 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67012 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67011 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67010 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67009 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67008 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67007 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67006 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67005 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67004 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67003 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67002 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67001 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 67000 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66999 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66998 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66997 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66996 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66995 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66994 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66993 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66992 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66991 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66990 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66989 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66988 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66987 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66986 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66985 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66984 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66983 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66982 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66981 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66980 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66979 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66978 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66977 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66976 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															
			High Density Turbidite Subaqueous														
Rona Member R2 (Fan Delta)	Subaqueous Debris Flow Fan Delta (Distal)	High Density Turbidite Subaqueous												MPA 66975 (1343.01)	Terrestrial		
		High Density Turbidite Subaqueous															

Appendix 12.

**Sedimentary and Palynological
Summary Log Well 205/22-1A**

Appendix 13.

**Sedimentary and Palynological
Summary Log Well 205/26-1**

Appendix 14.

**Sedimentary and Palynological
Summary Log Well 205/26a-2**

Appendix 15.

**Sedimentary and Palynological
Summary Log Well 205/26a-4**

Appendix 16.

**Sedimentary and Palynological
Summary Log Well 205/26a-5Z**

Appendix 17.

**Sedimentary and Palynological
Summary Log Well 205/26a-6**

Lithostratigraphic Sub-division	Depositional Environment Interpretation	Sedimentary Processes (Elements Level)	Sedimentary Observations										Palynology/Micropal	
			Alveol. Facies	Depth (m)	Lith.	Structure	Bed Thickness (cm)	Ichnofossils	Photo No.	Description and notes				
Kimmeridge Clay Formation	Deep Marine Background Sedimentation (lack of clastic input)	Hemi-Pelagic Deepwater Background Sedimentation		2574		Cone starts at 2474.00m				Clay-to-silt graded, dark grey-to-dark brown, relatively homogeneous, parallel laminated sandstone. The basal contact of this bed is gradational, with the boundary being marked at the point where homogeneity is established and parallel laminations, defined by slight variations in grain size and colour, begin to appear. Occasionally, this sequence contains <1cm thick sandstones, which are generally very fine grained in nature. The distribution of these appears to be sporadic and are likely the product of reworking. These thin, coarser grained sandstone laminae are also associated with sedimentation. The sedimentation is represented by 0.4-6.0cm wide, horizontal burrowing, which is restricted to the coarse grained laminae and the underlying 11 zone of parallel laminated shale. This indicates that the burrowing fauna were fully brought in with the coarser grained sandstone, were able to live for a short time and were subsequently killed-off as local bottom water anoxia was re-established.				
				2575			156							
	Transgressive Lag on Discontinuity Surface	Transgressive Lag Deposit		2576			66			Fine-to-medium grained, fine upwards to clay-to-silt grade, poorly sorted quartz-rich, argillaceous-rich, clay grey, sub-angular sandstone. The basal contact of the bed is highly erosive, widely cutting down into the underlying cross bedded and parallel laminated sediments below. The basal portion of the unit contains a 2-5cm wide, rounded, lithic pebble lag. The pebble lag is confined to the lowermost portion of the bed and the matrix is slightly less well sorted than the upper portions of the bed and coarser grained, parting to fine-to-medium grain sizes. The matrix is very dirty in nature, containing a high amount of argillaceous material in the matrix. The uppermost portion of the bed, where the dominant grain size becomes clay-to-silt grade, contains a high amount of intact shaly material. These shales otherwise match with the addition of 10% HCL, indicating that they are composed of calcite and their general morphology appears to be of bi-valve in nature.	MPN 67523 (2575-47)	Marine	Kimmeridgian to Early Cretaceous. <i>Cyclonephelium hystrix</i> .	
Rona Member R1 (Fluvial)	Discontinuity	Discontinuity												
		Fluvial Overbank and Crevasse Splay Deposits	Sediments deformed by transgressive event (suggesting they were semi- lithified)				37			Fine grained, moderately sorted, quartz-rich, argillaceous rich sandstone. The bed appears to be cross bedded, with the form of cross bedding most likely being cross bedded. The cross-bedded foresets are slightly asymmetrical for sub-aerial sedimentation. The unit also contains a high concentration of 1cm wide, elongate, rounded, light green mudclasts. These tend to align along some of the troughs and then are absent in other examples. The upper contact of the bed is highly erosive, with some of the cross bedding foresets being cut-out completely by the overlying unit. The lower contact is sharp.			Discontinuity	
				11										
				18						Fine grained, well sorted, sub-angular, quartz-rich sandstone. The basal contact is highly erosive and the upper contact is sharp. The unit is relatively clean and nearly completely devoid of all clasts. The bed is ripple cross bedded, with uni-direction ripple foresets.				
				22						Silt to very fine grained, argillaceous-rich, light green siltstone. The unit contains a concentration of light green, clay-grade, rounded, elongate mudclasts. The siltstone is ripple cross bedded, with the rippling being composed mainly of uni-directional ripples. The mudclasts within the unit appear to align along some of the ripple foresets. Both the upper and lower bed contacts are sharp.				
				29						Fine grained, moderate-to-well sorted, sub angular, quartz and lithic-rich sandstone. Additionally, the matrix has an elevated argillaceous component, with a preferentially sorting along some of the structures. The bed is parallel laminated, with the parallel laminations highlighted by the elevated argillaceous material. The upper and lower bed boundaries are both sharp.				
			9						Silt-grade, argillaceous rich, parallel laminated, homogeneous siltstone					
		Fluvial Overbank and Crevasse Splay Deposits					11			Fine grained, well sorted, quartz-rich, slightly argillaceous, sub-angular-to-sub-sorted sandstone. The unit is trough cross bedded, with the troughs being highlighted by elevated argillaceous material within the matrix, which forms a thin ripple on the top of the troughs.				
							7			Silt-grade, argillaceous rich, parallel laminated, homogeneous siltstone				
							34			Fine grained, moderate-to-well sorted, quartz-rich, sub-angular sandstone. The bed is trough cross bedded with preferential sorting along some of the troughs. A small number of the troughs contain 1-2cm wide, sub-angular mudclasts. These seem to be concentrated along some troughs and not others. The bed's base is absent due to the bottom of this section being the bottom of the zone.				
Depositional Environment Interpretation		Sedimentary Processes (Elements Level)	Alveol. Facies	Depth (m)	Lith.	Structure	Bed Thickness (cm)	Ichnofossils	Photo No.	Description and notes	Palynology/Micropal			
				2578		Cone starts at 2573.00m								
Larger Thomas Dodd Data 2018														

10 palynology samples exist between 2578.00m and 2611m. (Core not logged as part of this study)

Appendix 18.

**Sedimentary and Palynological
Summary Log Well 206/05- 1**

Appendix 19.

**Sedimentary and Palynological
Summary Log Well 206/05- 2**

206/05-2

Appendix 20.

**Sedimentary and Palynological
Summary Log Well 209/12-1**



Lithostratigraphic Sub-division	Depositional Environment Interpretation	Sedimentary Processes (Elements Level)	Sedimentary Observations							Palynology/Micropal			
			Alveo. Facies	Depth (m)	Lith.	Structure	Bed Thickness (cm)	Ichnofacies	Photo No.	Description and notes			
Rona Member R3 (Marginal Marine)	Top of Core	Top of Core		3467									Top of Core
	Marginal Marine (Beach Barrier)	Beach Barrier					41						
							17			88-to-very fine grained, well sorted, quartz and argillaceous rich, indurated sandstones. The bed contains little in the way of visible structuring. There is some limited evidence for cross-cutting features, which are most likely the product of induration.	MPA 67701 (3467.55)	Indeterminate	Indeterminate. No key marker.
							80			Fine grained, very well sorted, quartz-rich, sub-angular to sub-rounded indurated sandstones. The sandstones have a dark-grey colour, indicating an elevated argillaceous/carbonaceous content within the matrix. The unit appears to be structureless, with no visible evidence for structuring. The lack of visible structures might be a function of the induration. The induration is most likely the result of metamorphism, with the sandstones appearing with a slightly waxy texture, opposed to completely granular one. The only example of heterogeneity within this unit is a number of scattered, 1-4cm wide, sub-rounded, calcite-filled vugs. These vugs violently effervesce with the addition of 10%HCL. Despite the calcite vugs being present, the matrix does not effervesce, indicating that these vugs were likely primary features deposited within the matrix, which were later re-crystallised.			
							48			Fine grained, very well sorted, quartz and illitic-rich, sub-angular sandstones. The sandstones are well cemented (not calcite cement). Samples are relatively heavy and some have a shaly texture. These sandstones appear to have been metamorphosed, resulting in them being highly indurated, with the pore-spaces likely being in-filled by quartz (overgrowth). There is a complete lack of clasts within the matrix and the bed is well sorted. Some portions of the bed contain a relatively high mica content.			
							23			Fine grained, well sorted, sub-angular, quartz-rich sandstones. The matrix contains an elevated argillaceous content within the matrix. The sandstones are slightly indurated and apart from the upper portion of the unit, no structuring can be identified. The upper portion of the bed contains an elevated mica content within the matrix forming along poorly-formed parallel laminae. This mica is composed of both biotite and muscovite, and is restricted to the upper 2cm of the bed.	MPA 67700 (3468.86)	Indeterminate	Indeterminate. No key marker.
							44			Fine-to-medium grained, well sorted, quartz-rich, slightly argillaceous-rich, sub rounded sandstones. The unit is well sorted, with little in terms of clasts or any other heterogeneity other than that of the argillaceous material. The unit is slightly indurated and more prominently calcite cemented. There is no visible porosity and with the fine-to-medium grained nature of the sediment, this probably indicates that original porosity has now been either in-filled with calcite cement and/or quartz overgrowth. Quartz overgrowth are likely the reason for the induration, indicating that there is some level of metamorphism of these sediments. Due to the heavy overgrowth and cementation, there is no identifiable structuring within the bed, resulting in the unit being assigned to massively bedded. Both the basal and upper contacts are sharp, with the lower-most boundary being the most pronounced of the two.			
	Marginal Marine (Lagoonal)	Lagoonal - Low Energy/Restricted Carbonaceous material derived from the hinterland					6			Clay-to-silt grade, dark-grey-to-black, relatively homogeneous, carbonaceous sand-rich, claystones and siltstones.			
		Debris Flow Deposit					4			Clay-to-silt grade, dark-grey-to-black, relatively homogeneous, carbonaceous sand-rich, claystones and siltstones. The samples are particularly light in terms of weight, indicating a high carbonaceous content within the matrix. The core breaks in a partially-concoidal manner, indicating that the claystone and siltstones have very low resistance prior to some degree.	MPA 67699 (3469.84) MPA 67699 (3469.85)	? Marine Indeterminate	Indeterminate. No key marker. Indeterminate. No key marker.
		Lagoonal - Low Energy/Restricted Carbonaceous material derived from the hinterland					19			There are a number of 2.5cm long, 1cm wide, carbonaceous fragments in this bed which have been partially replaced. The edges of these clasts have a yellow brown rim, indicating presence of at least some sulphur within the carbonaceous fragments. Very fine grained, well sorted, quartz-rich, argillaceous-rich, carbonaceous-rich sub-angular sandstones. The high argillaceous and carbonaceous content within the matrix results in this bed being a dark grey colouration. The basal and upper contacts of this unit are sharp. There is no evidence for structuring within this unit, implying that it is massively bedded. This unit is less indurated than the surrounding sediment. Dark grey-to-black, clay-to-silt grade, argillaceous-rich, siltstone. The unit appears to be structureless, which is likely a result of induration. The matrix contains a high concentration of silt-grade, carbonaceous material. The unit contains a high proportion of carbonaceous clasts. The core is particularly light, further supporting the description of a high carbonaceous content within the matrix. The core breaks in a partially-concoidal manner, indicating that the claystone and siltstones have likely been metamorphosed to some degree.			
Base of Core	Base of Core					46					Base of Core		
Depositional Environment Interpretation	Sedimentary Processes (Elements Level)	Alveo. Facies	Depth (m)	Lith.	Structure	Bed Thickness (cm)	Ichnofacies	Photo No.	Description and notes	Palynology/Micropal			
Sedimentary Observations										Palynology/Micropal			
Logger: Thomas Dodd Date: 2016										British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL			

