

Zamagni et al. B30553/ DATA REPOSITORY 201212

FIGURE CAPTION

Figure DR1: Facies associations and depositional model based on Zamagni et al. (2008). Facies descriptions, textures, and components described in table DR1.

TABLE CAPTIONS

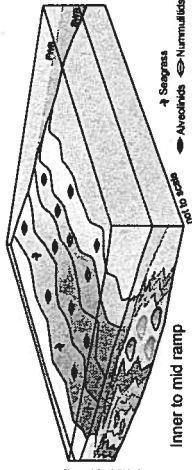
Table DR1: Relationship among facies associations, foraminiferal assemblages (¹), sedimentological features and major components (after Zamagni et al., 2008). Section labels: KZ-Kozina; ČB-Čebulovica; D-Divača; DKE-Divača-Kozina East; DKW-Divača-Kozina West.

Table DR2: Isotope data of bulk rock for the Kozina section.

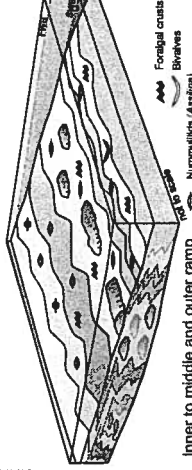
Table DR3: Isotope data of bulk rock for the Čebulovica section.

Table DR4: Isotope data from Čebulovica section across the P - E interval and above of: a) matrix; b) large miliolids/alveolinids; c) nummulitids.

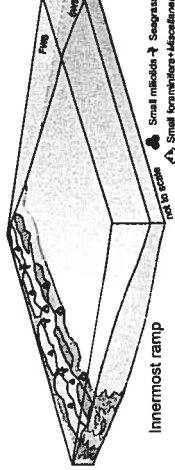
Facies associations			
Early Thonetian	Foraminiferal Lm	Association A	<p>A7 Rotaliid-<i>Miscellanea</i>-echinoid peloidal packstone</p> <p>A6 Miliolid-<i>Miscellanea</i>-coralline peloidal packstone (locally grainstone)</p> <p>A5 <i>Dendrophyllia</i> floatstone</p> <p>A4 Small foraminifera peloidal packstone to wackestone</p> <p>A3 Small foraminifera-echinoid-dasycladacean pack- to grainstone</p> <p>A2 Miliolid-dicorbid-ostracod wackestone to packstone</p> <p>A1 Big gastropod mudstone</p>
Late Thonetian	Foralgal Lm	Association B	<p>B7 <i>Glomalveolina</i>-<i>Assilina</i> peloidal packstone</p> <p>B6 <i>Assilina</i>-coralline algae-<i>Polystrata</i> packstone</p> <p>B5 Nodular fine nummulitoclasic wackestone</p> <p>B4 <i>Discocyclusina</i>-<i>Assilina</i> nodular nummulitoclasic pack- to wackestone</p> <p>B3 Acervulinid-crustose coralline wackestone</p> <p>B2 Microbialite-encrusting foraminifera-coral boundstone</p> <p>B1 <i>Discocyclusina</i>-acervulinid-coraline packstone to wackestone/floatstone</p>
Early Herdian	Biopeloidal Lm	Association C	<p>C4 <i>Nummulites</i>-echinoid pack- to wackestone</p> <p>C3 <i>Nummulites</i>-<i>Assilina</i>-echinoid packstone</p> <p>C2 <i>Alveolina</i>-acervulinid peloidal packstone</p> <p>C1 <i>Alveolina</i> peloidal packstone</p>



Inner to mid ramp



Inner to middle and outer ramp



Innermost ramp

Zamagni et al., Fig.DR1

Facies associations		Facies (occurrence)		Sedimentary and Post-depositional features		Foram. Ass. 1	Main components	Subordinated components	Depositional setting			
Association A Foraminiferal Limestones	A1	Big gastropod mudstone (KZ - CB)	borrowing	1	big gastropods (F)	miolids (R) <i>Zigzagophora</i> (VR) conical foraminifera (F)	Restricted lagoon /brackish lagoon	A2	Miliolid-discorbid-ostracod wackestone to packstone (KZ - CB)	bioherbation, borrowing, dissolution (millimetric-size fenestrate and <i>Microcodium</i> -enriched levels)	miliolids (C), discorbids (C), ostracods (C)	Restricted lagoon, periodically emerged
	A3	Small foraminifera-echinoid-dasycladacean packstone (locally grainstone) (KZ - CB)	bioherbation, dissolution (<i>Microcodium</i> -enriched levels), root-related structures, micritization		miliolids (C), conical foraminifera (C), echinoids (C/A), dasycladaceans (CF), micritised grains and peloids (A)	rotalids (F)	Innermost shoals periodically emerged and vegetated					
	A4	Small foraminifera peloidal packstone to wackestone (D - CB)	bioherbation, borrowing, dissolution (<i>Microcodium</i> -enriched levels), micritization		miliolids (F/C), rotalids and conical foraminifera (F/C), ostracods (C), micritized grains and peloids (A)	echinoid and coralline fragments (F), solitary corals (R), faecal pellets (R), intracrysts of mudstone with <i>Microcodium</i> (VR)	Open lagoon					
	A5	<i>Dendrophyllia</i> floatstone (KZ - D - CB)	bioherbation		dendroid corals (F), crustose corallines and acervulimids (F), rotalids (F), <i>Miscellanea</i> (F), dasycladaceans (F)	miliolids and conical foraminifera (R), gastropods (R), bryozoans (R), faecal pellets (R)	Open lagoonal small coral patches					
	A6	Miliolid- <i>Miscellanea</i> -coralline peloidal packstone to grainstone (D - CB)	thick bedding, gradation from medium to fine at metric scale		miliolids (C/A), abraded coralline debris (C), ostracods (F), <i>Miscellanea</i> (F), echinoid fragments (A), micritized grains and peloids (A), fine debris (C)	conical foraminifera (F), rotalids (R), acervulimids (R), dasycladaceans (R), dendroid corals (VR), intracrysts of mudstone with <i>Microcodium</i> (VR)	Open marine shoals					
	A7	Rotalid- <i>Miscellanea</i> -echinoid peloidal packstone (D - CB)			rotalids (C), <i>Miscellanea</i> (F), micritized grains and peloids (A), echinoid fragments and fine debris (C/A)	bryozoans and coralline debris (FR), conical foraminifera, miliolids and <i>Glomaveolina</i> (FIR), <i>Nummulites gr heberti</i> , <i>Ranikothalia</i> , and <i>Discocyclusina</i> (VR)	Open marine, fore-shoal deposits					
	B1	<i>Discocyclusina</i> -acervulimid-crustose algae packstone to wackestone/floatstone (KZ - DKE - D - CB)	bioherbation, encrustation, bioerosion		acervulimids (C), encrusting foraminifera (F/C, mainly <i>Haldantia</i>), peysommeliaceans and thin crustose corallines (C), small flattened <i>Discocyclusina</i> (F to C), rotalids (F), bryozoans, echinoderm and bivalve debris (F)	massive corals and debris (R) locally encrusted by millimetric-thick microbial crusts, calcareous sponges (R), miliolids and <i>Glomaveolina</i> (VR)	Algal pavements					
Association B Foralgal Limestones				5a			Distal mid ramp with development of mounds and algal pavements					

Facies associations	Facies (occurrence)		Sedimentary and Post-depositional features	Foram. Ass.	Main components	Subordinated components	Depositional setting	
							Distal mid ramp with development of mounds and algal pavements	Microbialite-coral mounds
Association B Fornal Limestones	B2	Microbialite-encrusting foraminifera-coral boundstone (KZ - DKW - D - ÇB)	encrustation, bioerosion	4	microbialitic crusts (C), colonial corals (F), small rotalids (F), encrusting foraminifera (F), bryozoans (F), <i>Discocyclusina</i> (F/R)	calcareous sponges (R), thin crustose corallines and pycnoselmaceans (R), echinoid spines and bivalve fragments (R)	Distal mid ramp	Microbialite-coral mounds
	B3	Microbialite-encrusting foraminifera-coral boundstone (KZ - DKW - D - ÇB)	encrustation, bioerosion	4	thin acervulid-crustose coralline crusts (C), bivalve fragments (C/F), bryozoans (F), fine debris (C)	coral debris (R), <i>Discocyclusina</i> (R)		
	B4	<i>Assilina-Discocyclusina</i> nodular nummulitoclasic packstone to wackestone (locally with chert nodules) (DKE - D)	bioturbation, levels with small benthic foraminifera and matrix oxidized	5b	nummulitid debris (C/A), small rotalids (C/F), big flattened <i>Assilina</i> (F/C), big flattened <i>Discocyclusina</i> (F/C)	small benthic foraminifera stained with oxides (F), planktonic foraminifera (VR)		Algal pavements
	B5	Nodular fine nummulitoclasic wackestone (D)	bioturbation	5b	fine nummulitoclasic debris (C)	<i>Discocyclusina</i> and <i>Assilina</i> (VR)		Fine-grained distal storm/current deposits
	B6	<i>Assilina</i> -coralline algae- <i>Polysira</i> packstone (locally rudstone) (KZ - DKE - DKW - D - ÇB)	bioturbation, micritization, storm-related structures (concentric orientation of <i>Assilina</i> tests), encrustation	3	<i>Assilina</i> (C), nummulitoclasic debris (C), pycnoselmaceans, coralline algae and acervulids as crusts and fragments (C/F)	Small ovate <i>Discocyclusina</i> (F/R), <i>Miscellanea</i> (R), small rotalids (R), miliolids, lacuzanids and <i>Glomaveolina</i> (F/R), coral debris and small massive colonies (R), bryozoans (F), oysters (F/R), encrusting foraminifera (F/R, mainly <i>Haddonia</i>)		Proximal mid ramp to storm-reworked deposits
Association C Bio-Peloidal Limestones	B7	<i>Glomaveolina-Assilina</i> peloidal packstone (KZ - DKW - ÇB)	bioturbation, micritization		miliolids, lacuzanids and <i>Glomaveolina</i> (C), <i>Assilina</i> (F), peloids and micritised grains (C)	rotalids (F/R)		Proximal mid to inner ramp
	C1	<i>Alveolina</i> peloidal packstone (KZ - ÇB)	bioturbation, micritization, bioerosion	6a	<i>Alveolina</i> (C), echinoids (C), <i>Nummulites</i> (F), <i>Assilina</i> (F), dacycladaleans (F) gastropods and bivalves (F), micritised grains and peloids (C)	<i>Orbitolites</i> and <i>Operorbolites</i> (F/R), acervulids (R)		Inner ramp with small or seasonal sea-grasses
	C2	<i>Alveolina</i> -acervulimid peloidal packstone (KZ)	bioturbation, micritization, bioerosion, encrustation	6a	miliolids and <i>Glomaveolina</i> (C), <i>Alveolina</i> spp. (C), acervulids (F), peloids (C)	<i>Assilina</i> (R), <i>Orbitolites</i> and <i>Operorbolites</i> (R)		Inner ramp to proximal mid ramp
	C3	<i>Nummulites-Assilina</i> -echinoid packstone (ÇB)	bioturbation, locally with reddish matrix, encrustation	6b	small ovate <i>Nummulites</i> and <i>Assilina</i> (C), nummulitid debris (C), echinoid fragments (A)	<i>Discocyclusina</i> (VR), <i>Alveolina</i> (VR)		Open marine
C4	<i>Nummulites</i> -echinoid packstone to wackestone (ÇB)	bioturbation, micritization, bioerosion	6b	<i>Nummulites</i> (C), echinoids (A), fine debris (C)	<i>Alveolina</i> (F/R)			

Table DRI

Sample code	$\delta^{13}\text{C}$ (‰ VPDB)	$\delta^{18}\text{O}$ (‰ VPDB)	Stratigraphic position (m)	$\delta^{13}\text{C}$ 3 point moving average (‰)	Standard deviation	$\delta^{18}\text{O}$ 3 point moving average (‰)	Standard deviation
KZ00	2,511	-2,672	0,000				
KZ01	2,453	-3,005	0,470	2,365	0,206	-2,786	0,190
KZ02	2,129	-2,681	0,780	2,356	0,197	-2,816	0,169
KZ03	2,486	-2,761	1,120	2,288	0,181	-2,717	0,041
KZ04	2,248	-2,708	1,420	2,227	0,270	-2,754	0,042
KZ07	1,946	-2,792	2,170	2,008	0,216	-2,934	0,321
KZ09	1,828	-3,302	2,580	1,612	0,481	-3,012	0,262
KZ11	1,061	-2,942	2,950	1,328	0,433	-3,025	0,246
KZ13A	1,096	-2,832	3,470	0,868	0,366	-3,005	0,212
KZ14	0,446	-3,242	3,950	0,831	0,341	-3,191	0,337
KZ15	0,951	-3,499	4,490	0,723	0,256	-3,404	0,140
KZ16	0,774	-3,469	4,800	0,685	0,319	-4,152	1,157
KZ17A	0,332	-5,488	5,160	0,703	0,342	-4,180	1,134
KZ19	1,005	-3,583	5,520	0,563	0,383	-4,489	0,956
KZ20	0,351	-4,396	5,760	0,527	0,419	-4,105	0,453
KZ22	0,224	-4,336	6,380	-0,153	0,766	-4,342	0,052
KZ26	-1,034	-4,294	6,470	-0,171	0,749	-4,325	0,027
KZ28	0,298	-4,344	6,950	-0,341	0,668	-4,586	0,463
KZ31	-0,286	-5,119	7,440	0,017	0,292	-4,376	0,728
KZ33	0,039	-3,663	7,720	-0,121	0,162	-4,404	0,728
KZ34	-0,115	-4,430	8,120	-0,083	0,109	-3,994	0,394
KZ35	-0,171	-3,888	8,610	-0,008	0,236	-4,027	0,354
KZ36	0,263	-3,764	8,880	0,084	0,227	-4,064	0,417
KZ39	0,161	-4,540	9,550	0,642	0,746	-4,019	0,452
KZ41	1,501	-3,751	9,960	1,200	0,926	-3,720	0,836
KZ42	1,938	-2,870	10,420	1,815	0,274	-3,488	0,537
KZ44	2,007	-3,842	11,010	2,073	0,178	-3,507	0,552
KZ48	2,275	-3,808	11,020	2,022	0,247	-3,771	0,096
KZ49	1,783	-3,662	12,240	1,639	0,719	-4,263	0,918
KZ51	0,859	-5,320	12,660	0,470	1,545	-4,375	0,853
KZ53	-1,233	-4,142	13,030	0,025	1,109	-4,146	1,172
KZ55	0,450	-2,976	13,640	0,215	1,345	-3,714	0,642
KZ56pa	1,426	-4,026	14,390	0,938	0,488	-3,718	0,646
KZ57	0,937	-4,153	14,900	1,690	0,914	-3,687	0,700
KZ60	2,707	-2,883	15,280	1,862	0,888	-3,267	0,770
KZ64	1,942	-2,766	16,180	1,995	0,688	-3,002	0,314
KZ67-B	1,335	-3,358	16,980	1,431	0,470	-3,370	0,610
KZ68	1,017	-3,985	17,030	1,785	1,067	-3,543	0,384
KZ69	3,003	-3,286	17,310	2,292	1,107	-3,568	0,368
KZ71pa	2,856	-3,434	18,300	2,857	0,145	-3,464	0,195
KZ72	2,713	-3,673	17,800	2,846	0,128	-3,428	0,249
KZ74	2,968	-3,176	18,940	2,768	0,179	-3,239	0,406
KZ75	2,622	-2,869	19,460	2,674	0,272	-3,132	0,245
KZ77	2,431	-3,353	20,550	2,364	0,297	-3,317	0,432
KZ78	2,039	-3,730	21,170	2,044	0,385	-3,508	0,197
KZ83	1,662	-3,443	21,610	1,810	0,202	-3,489	0,221
KZ85	1,728	-3,295	22,380	1,802	0,189	-3,494	0,229
KZ87	2,018	-3,744	22,820	1,721	0,300	-3,992	0,848
KZ90	1,417	-4,936	23,580	1,076	1,151	-4,694	0,855
KZ91	-0,206	-5,401	23,930	1,038	1,105	-5,328	0,360
KZ92	1,903	-5,645	24,360	1,009	1,091	-5,542	0,126
KZ93pa	1,330	-5,579	24,670	1,950	0,645	-4,801	1,405
KZ97	2,618	-3,179	25,140	2,039	0,654	-4,341	1,202

KZ99	2,169	-4,263	25,770	2,156	0,468	-3,774	0,549
KZ100	1,682	-3,879	26,150	1,785	0,344	-4,342	0,507
KZ102A	1,505	-4,883	26,290	0,378	2,107	-4,565	0,595
KZ103	-2,053	-4,932	26,970	0,359	2,089	-5,019	0,195
KZ106	1,625	-5,243	28,190	-1,415	2,777	-4,860	0,423
KZ108B1	-3,817	-4,405	27,800	-0,405	2,973	-4,288	1,018
KZ110	0,978	-3,217	28,540	-1,149	2,443	-4,144	0,828
KZ112	-0,609	-4,810	29,040	-0,380	1,260	-3,927	0,811
KZ113	-1,511	-3,753	29,640	-1,542	0,948	-4,384	0,557
KZ115	-2,505	-4,588	30,120	-1,542	0,948	-4,043	0,473
KZ118	-0,609	-3,786	30,370	-0,389	2,234	-4,151	0,406
KZ121	1,947	-4,077	31,070	1,153	1,528	-3,745	0,355
KZ123	2,120	-3,371	31,680	1,767	0,470	-3,641	0,381
KZ126	1,233	-3,474	32,350	1,684	0,444	-3,414	0,054
KZ128	1,698	-3,396	32,760	1,581	0,307	-3,821	0,670
KZ129pa	1,813	-4,593	33,300	1,624	0,235	-4,087	0,620
KZ133	1,361	-4,272	33,890	1,433	0,349	-4,101	0,597
KZ135pa	1,126	-3,437	34,010	1,237	0,118	-3,923	0,434
KZ136	1,225	-4,060	34,700	1,203	0,069	-3,568	0,441
KZ137	1,258	-3,208	35,020	1,299	0,102	-3,553	0,449
KZ138	1,415	-3,392	35,390	1,315	0,087	-3,480	0,325
KZ141	1,271	-3,839	35,710	1,533	0,336	-3,829	0,431
KZ139pa	1,913	-4,255	35,880	1,528	0,339	-3,946	0,272
KZ143	1,400	-3,743	36,050	1,540	0,327	-3,808	0,417
KZ149	1,306	-3,427	37,390	1,464	0,198	-3,526	0,188
KZ152	1,687	-3,407	37,540	1,337	0,336	-3,269	0,257
KZ153	1,018	-2,973	37,590	1,405	0,347	-3,479	0,546
KZ155	1,512	-4,058	38,790	1,428	0,375	-3,878	0,830
KZ157	1,754	-4,603	39,650	1,699	0,167	-4,508	0,410
KZ160	1,831	-4,862	40,700	1,682	0,195	-4,253	0,841
KZ163	1,461	-3,294	41,420	1,535	0,268	-4,178	0,803
KZ166	1,312	-4,378	41,910	1,322	0,134	-3,944	0,574
KZ168	1,194	-4,161	42,550	1,142	0,201	-4,459	0,346
KZ169	0,920	-4,839	42,810	1,088	0,147	-4,112	0,753
KZ172	1,150	-3,336	43,300	1,117	0,183	-4,079	0,752
KZ173	1,281	-4,061	43,820	1,263	0,105	-3,779	0,389
KZ175	1,357	-3,941	44,430	1,422	0,182	-4,086	0,159
KZ176	1,628	-4,257	44,920	1,486	0,136	-4,171	0,201
KZ179	1,475	-4,314	45,320	1,593	0,106	-4,128	0,275
KZ181	1,678	-3,812	45,890	1,642	0,152	-4,370	0,588
KZ182	1,773	-4,985	45,890	1,694	0,072	-4,347	0,593
KZ183	1,632	-4,245	46,270	1,470	0,409	-4,319	0,632
KZ184	1,005	-3,728	46,670	1,317	0,313	-4,126	0,354
KZ186	1,313	-4,404	47,520	1,246	0,215	-3,971	0,376
KZ187	1,419	-3,781	48,880	1,376	0,056	-4,242	0,406
KZ188-1	1,397	-4,542	49,240	1,004	0,701	-4,402	0,564
KZ189	0,195	-4,882	49,880	0,710	0,620	-4,592	0,268
KZ193	0,538	-4,353	50,390	0,176	0,372	-4,363	0,515
KZ194	-0,206	-3,853	50,720	0,028	0,442	-4,355	0,503
KZ196	-0,248	-4,860	51,040	-0,078	0,258	-4,509	0,568
KZ195	0,219	-4,814	51,220	0,068	0,274	-4,437	0,693
KZ197	0,234	-3,637	51,520	0,325	0,170	-4,439	0,695
KZ200B	0,521	-4,866	52,040	0,306	0,189	-4,300	0,621
KZ203	0,164	-4,399	52,690	0,443	0,249	-4,361	0,524
KZ204B	0,644	-3,820	53,110	0,613	0,435	-4,444	0,649
KZ208	1,032	-5,115	53,730	0,761	0,236	-4,259	0,742
KZ209	0,607	-3,842	54,290	0,680	0,321	-4,262	0,739
KZ210	0,402	-3,828	54,900	0,946	0,773	-4,286	0,780

KZ211	1,831	-5,187	55,710	1,261	0,757	-4,660	0,729
KZ212	1,551	-4,966	56,240	1,707	0,143	-4,981	0,198
KZ214	1,738	-4,791	56,490	1,690	0,122	-4,618	0,460
KZ216	1,781	-4,096	57,310	2,032	0,472	-4,601	0,442
KZ219	2,577	-4,916	57,910	2,222	0,405	-4,355	0,486
KZ221	2,309	-4,055	58,500	2,397	0,156	-4,326	0,512
KZ223	2,305	-4,007	59,220	2,374	0,115	-4,080	0,088
KZ227	2,507	-4,178	60,110	2,346	0,144	-3,915	0,319
KZ228	2,227	-3,561	60,460	2,387	0,144	-3,970	0,355
KZ229	2,426	-4,172	60,710	2,324	0,100	-3,892	0,309
KZ230B	2,318	-3,944	61,330	2,340	0,077	-4,071	0,116
KZ231	2,276	-4,096	62,220	2,253	0,079	-3,917	0,193
KZ233	2,165	-3,712	63,230	2,176	0,095	-3,751	0,327
KZ236	2,087	-3,444	64,060	2,095	0,066	-3,500	0,190
KZ238	2,034	-3,344	64,380	2,154	0,164	-3,361	0,077
KZ239	2,340	-3,293	64,690	2,118	0,195	-3,750	0,748
KZ241	1,979	-4,613	65,680	2,189	0,188	-4,052	0,682
KZ243	2,248	-4,250	66,090	2,171	0,167	-4,125	0,562
KZ245	2,285	-3,511	66,810	2,341	0,131	-4,092	0,520
KZ246	2,491	-4,514	67,030	2,327	0,147	-3,942	0,516
KZ248	2,205	-3,801	67,630	2,323	0,149	-3,623	0,992
KZ249	2,273	-2,555	68,100	2,206	0,066	-3,526	0,867
KZ250	2,141	-4,223	68,750	2,086	0,220	-3,740	1,033
KZ252	1,843	-4,444	69,080	2,033	0,165	-4,230	0,211
KZ253	2,116	-4,023	69,990	2,003	0,142	-3,839	0,714
KZ254	2,050	-3,052	70,720	2,050	0,066	-3,540	0,485
KZ256	1,983	-3,545	71,240	2,047	0,063	-3,564	0,521
KZ257	2,109	-4,094	71,660	1,888	0,282	-4,030	0,456
KZ258	1,571	-4,451	72,100	1,934	0,314	-4,111	0,332
KZ259	2,121	-3,788	72,510	1,933	0,314	-4,217	0,372
KZ261	2,107	-4,412	73,050	2,067	0,082	-3,790	0,621
KZ263	1,973	-3,170	73,810	1,904	0,245	-3,552	0,746
KZ264	1,632	-3,075	74,240	1,879	0,216	-3,201	0,144
KZ265	2,033	-3,359	74,550	1,969	0,310	-3,605	0,686
KZ266	2,243	-4,380	74,960	2,046	0,191	-3,650	0,636
KZ268	1,861	-3,212	75,350	1,808	0,464	-4,197	0,907
KZ270	1,319	-4,999	76,200	1,805	0,461	-3,997	0,913
KZ271	2,235	-3,782	76,640	1,994	0,592	-4,301	0,628
KZ273	2,427	-4,123	77,430	2,317	0,099	-3,715	0,445
KZ275	2,288	-3,241	78,210	2,148	0,371	-3,398	0,661
KZ277	1,727	-2,830	78,780	2,017	0,281	-2,991	0,220
KZ280pa	2,035	-2,901	79,530	1,950	0,195	-3,256	0,677
KZ283	2,088	-4,036	80,460	2,156	0,166	-3,426	0,572
KZ284	2,345	-3,341	80,560	2,090	0,255	-3,626	0,364
KZ286	1,835	-3,501	81,980	1,997	0,302	-3,242	0,321
KZ289	1,810	-2,883	82,580	1,892	0,121	-3,344	0,406
KZ290	2,031	-3,648	82,970	1,939	0,115	-3,516	0,579
KZ291	1,977	-4,018	83,660	2,044	0,074	-3,653	0,362
KZ294	2,123	-3,293	84,480	1,959	0,173	-3,473	0,481
KZ295	1,778	-3,107	84,910	1,910	0,186	-3,148	0,129
KZ297	1,830	-3,045	85,730	1,891	0,153	-3,073	0,031
KZ298	2,064	-3,068	86,230	1,838	0,222	-2,931	0,219
KZ299	1,621	-2,678	86,790	1,756	0,268	-2,840	0,203
KZ300	1,583	-2,773	87,390	1,742	0,244	-2,912	0,326
KZ302	2,023	-3,284	87,920	1,788	0,222	-2,940	0,298
KZ304	1,759	-2,762	88,500	1,826	0,173	-3,144	0,334
KZ306	1,697	-3,386	89,400	1,805	0,137	-3,120	0,322
KZ307	1,960	-3,211	89,920	1,839	0,133	-3,003	0,518

KZ310	1,861	-2,413	90,830	1,858	0,102	-2,847	0,403
KZ312	1,755	-2,916	91,790	1,765	0,091	-2,609	0,269
KZ315	1,679	-2,498	92,920	1,764	0,090	-2,892	0,382
KZ316	1,859	-3,261	93,540	1,587	0,327	-2,954	0,403
KZ317pa	1,224	-3,104	94,230	1,560	0,319	-3,079	0,196
KZ318	1,595	-2,871	94,960	1,561	0,321	-3,170	0,336
KZ319	1,863	-3,534	95,340	1,714	0,136	-3,142	0,348
KZ320	1,684	-3,020	96,170	1,689	0,172	-3,139	0,350
KZ322	1,519	-2,864	96,990	1,619	0,088	-3,197	0,449
KZ324	1,654	-3,708	97,760	1,603	0,074	-3,470	0,529
KZ325	1,637	-3,839	98,550	1,548	0,170	-3,670	0,191
KZ327	1,352	-3,462	99,230	1,482	0,144	-3,683	0,196
KZ329	1,457	-3,747	100,130	1,244	0,283	-3,551	0,170
KZ330	0,923	-3,443	100,530				

Table DR2

Sample code	$\delta^{13}\text{C}$ (‰ VPDB)	$\delta^{18}\text{O}$ (‰ VPDB)	Stratigraphic position (m)	$\delta^{13}\text{C}$ 3 point moving average (‰)	Standard deviation	$\delta^{18}\text{O}$ 3 point moving average (‰)	Standard deviation
SI-01	-0,926	-2,804	0,000				
SI-02	0,921	-3,658	0,992	0,564	1,347	-3,459	0,581
SI-03	1,696	-3,914	3,215	1,654	0,712	-3,479	0,546
SI-04	2,344	-2,867	4,549	1,949	0,346	-2,836	1,093
SI-05	1,806	-1,728	5,096	2,084	0,269	-2,144	0,628
SI-06	2,103	-1,839	5,130	2,206	0,460	-4,338	4,425
SI-08	2,709	-9,447	5,917	2,293	0,361	-4,520	4,272
SI-09	2,066	-2,274	8,516	2,439	0,334	-4,797	4,032
SI-10	2,541	-2,669	9,644	2,125	0,389	-2,430	0,210
SI-11	1,769	-2,347	11,252	2,178	0,388	-3,008	0,881
SI-12	2,223	-4,008	12,620	2,171	0,378	-3,340	0,877
SI-13	2,520	-3,666	13,646	2,191	0,347	-3,788	0,191
SI-14	1,829	-3,691	14,843	2,271	0,384	-3,380	0,516
SI-15	2,463	-2,785	16,929	2,210	0,336	-2,981	0,635
SI-16	2,337	-2,468	18,400	2,321	0,151	-2,745	0,260
SI-17	2,162	-2,983	20,246	2,491	0,428	-2,563	0,381
SI-18	2,974	-2,239	20,828	2,482	0,433	-3,232	1,138
SI-19	2,310	-4,474	21,683	2,445	0,477	-3,244	1,134
SI-20	2,050	-3,018	22,469	1,929	0,454	-3,741	0,728
SI-21	1,426	-3,730	22,811	1,509	0,505	-3,426	0,367
SI-22B	1,050	-3,529	23,769	1,407	0,348	-3,361	0,475
SI-23	1,745	-2,825	24,214	1,661	0,575	-3,564	0,757
SI-24	2,190	-4,338	25,103	2,112	0,336	-3,404	0,816
SI-25	2,403	-3,050	25,376	2,156	0,265	-3,618	0,657
SI-26	1,875	-3,467	27,326	1,990	0,369	-3,251	0,209
SI-27	1,692	-3,236	28,112	1,966	0,328	-3,332	0,121
SI-28	2,329	-3,292	29,104	2,007	0,318	-3,027	0,411
SI-29	2,001	-2,554	30,335	2,299	0,284	-3,114	0,495
SI-30	2,566	-3,495	31,361	2,243	0,292	-3,637	1,161
SI-31	2,160	-4,863	33,653	2,525	0,346	-3,818	0,927
SI-32	2,848	-3,096	36,218	2,024	0,900	-3,707	1,001
SI-33	1,064	-3,163	37,449	2,262	1,037	-2,852	0,481
SI-34	2,873	-2,298	38,646	2,262	1,037	-2,876	0,501
SI-35A	2,847	-3,167	39,398	2,741	0,206	-2,892	0,515
SI-36	2,503	-3,210	43,468	2,639	0,183	-2,930	0,449
SI-37	2,565	-2,412	44,460	2,564	0,060	-2,659	0,478
SI-38	2,623	-2,354	45,520	2,663	0,123	-2,196	0,326
SI-39	2,802	-1,820	46,991	2,783	0,151	-2,372	0,561
SI-40	2,923	-2,941	47,846	2,823	0,091	-2,450	0,573
SI-41	2,745	-2,589	48,461	2,837	0,090	-2,967	0,391
SI-42	2,844	-3,370	50,171	2,591	0,355	-2,794	0,505
SI-43A	2,185	-2,423	51,232	2,560	0,339	-2,944	0,480
SI-44	2,651	-3,039	52,223	2,342	0,268	-2,998	0,555
SI-45A	2,190	-3,531	53,181	2,414	0,231	-2,831	0,824
SI-46	2,402	-1,922	54,925	2,076	0,396	-2,916	0,869
SI-47	1,635	-3,295	55,712	1,382	1,167	-3,190	1,218
SI-49	0,110	-4,351	56,020	0,654	0,851	-3,822	0,528
SI-51	0,218	-3,820	56,327	0,769	1,049	-3,373	1,262
SI-53	1,978	-1,949	57,114	1,454	1,074	-2,977	0,949
SI-55	2,164	-3,163	58,243	1,926	0,269	-2,593	0,611
SI-56A	1,635	-2,666	58,927	1,586	0,604	-3,381	0,845
SI-57	0,960	-4,314	59,696	1,866	1,041	-3,695	0,897
SI-59	3,004	-4,104	61,765	1,975	1,022	-4,029	0,330
SI-60	1,960	-3,668	63,304	2,378	0,552	-3,681	0,416
SI-61	2,171	-3,272	64,638	1,907	0,295	-3,229	0,462
SI-62A	1,590	-2,747	65,801	1,840	0,299	-2,753	0,516

SI-129	1,394	-2,021	125,114	1,316	0,131	-2,036	0,112
SI-130	1,165	-2,154	126,223	1,245	0,129	-2,134	0,105
SI-131	1,177	-2,228	127,100	0,799	0,645	-2,464	0,474
SI-132	0,054	-3,010	128,055	0,560	0,570	-2,508	0,436
SI-133	0,450	-2,286	128,494	0,347	0,258	-2,382	0,587
SI-134	0,537	-1,849	128,958	0,531	0,078	-2,018	0,235
SI-135	0,605	-1,919	129,422	0,577	0,036	-1,859	0,056
SI-136	0,590	-1,809	130,222	0,648	0,088	-1,822	0,091
SI-137	0,750	-1,738	130,571	0,594	0,153	-1,848	0,135
SI-139	0,443	-1,998	131,538	0,571	0,159	-1,956	0,200
SI-140	0,519	-2,131	131,822	0,546	0,119	-2,061	0,067
SI-141	0,677	-2,053	132,389	0,695	0,185	-2,193	0,179
SI-142	0,888	-2,395	132,918	1,299	0,901	-2,362	0,294
SI-143B	2,333	-2,639	133,344	1,280	0,921	-2,431	0,193
SI-144A	0,620	-2,258	133,834	1,245	0,946	-2,388	0,218
SI-145A	0,782	-2,267	134,299	0,514	0,334	-2,229	0,058
SI-146	0,140	-2,162	134,608	0,322	0,401	-2,199	0,059
SI-147	0,045	-2,168	135,176	0,254	0,285	-2,177	0,022
SI-148	0,578	-2,202	136,105	0,336	0,270	-2,300	0,200
SI-149A	0,385	-2,530	136,724	0,609	0,241	-2,338	0,171
SI-150	0,864	-2,282	137,162	0,457	0,376	-2,295	0,229
SI-151	0,122	-2,073	137,627	0,243	0,570	-2,164	0,107
SI-152	-0,257	-2,137	138,091	-0,024	0,204	-2,069	0,069
SI-154	0,063	-1,999	138,891	-0,085	0,161	-2,239	0,304
SI-155	-0,060	-2,581	139,510	-0,115	0,210	-2,071	0,478
SI-156	-0,347	-1,633	139,742	-0,029	0,334	-2,309	0,589
SI-158	0,320	-2,711	140,671	0,024	0,339	-2,187	0,540
SI-159	0,098	-2,218	140,852	0,028	0,332	-2,363	0,303
SI-160	-0,334	-2,161	141,316	-0,061	0,238	-2,276	0,152
SI-161	0,054	-2,449	141,832	0,033	0,356	-2,389	0,204
SI-162	0,378	-2,556	142,271	0,372	0,316	-2,767	0,460
SI-163	0,685	-3,294	142,580	0,587	0,181	-2,844	0,395
SI-164	0,697	-2,681	142,890	0,837	0,253	-3,088	0,353
SI-165A	1,128	-3,289	143,522	0,849	0,243	-3,111	0,375
SI-167	0,721	-3,364	143,999	0,568	0,650	-3,153	0,303
SI-168	-0,145	-2,805	144,412	0,403	0,477	-3,008	0,309
SI-171	0,634	-2,854	145,264	0,333	0,418	-2,848	0,040
SI-173	0,508	-2,885	145,857	0,778	0,364	-3,077	0,359
SI-175	1,193	-3,491	146,528	0,810	0,349	-3,238	0,315
SI-176	0,729	-3,338	147,018	1,039	0,268	-3,648	0,411
SI-177	1,194	-4,114	147,276	0,786	0,383	-3,541	0,504
SI-179	0,434	-3,170	147,895	0,283	0,996	-3,408	0,622
SI-182	-0,781	-2,939	148,747	-0,800	1,245	-3,239	0,339
SI-185	-2,055	-3,607	150,449	-0,731	1,349	-3,421	0,420
SI-186	0,642	-3,716	151,275	-0,110	1,699	-3,636	0,071
SI-187	1,083	-3,584	151,739	0,659	0,416	-3,566	0,159
SI-189	0,251	-3,399	152,720	0,574	0,446	-3,384	0,207
SI-190	0,390	-3,171	153,958	-0,523	1,462	-3,700	0,728
SI-192	-2,210	-4,530	154,461	-1,225	1,409	-4,679	1,588
SI-193A	-1,855	-6,336	154,990	-2,205	0,347	-5,158	1,021
SI-197C	-2,550	-4,609	155,171	-3,369	2,050	-5,615	0,898
SI-194B	-5,702	-5,899	155,351	-3,759	1,699	-5,005	0,776
SI-195	-3,025	-4,507	155,506	-4,472	1,352	-4,907	0,864
SI-196	-4,690	-4,315	155,738	-4,011	0,874	-3,988	0,740
SI-198	-4,317	-3,140	156,022	-3,494	1,759	-3,683	0,593
SI-199	-1,474	-3,594	156,280	-4,295	2,810	-3,390	0,231
SI-200	-7,093	-3,437	158,060	-3,460	3,151	-3,498	0,085
SI-202	-1,812	-3,462	158,731	-3,982	2,764	-3,710	0,451
SI-203	-3,042	-4,231	158,963	-1,653	1,475	-3,942	0,418

Sample code	$\delta^{13}\text{C}$ (‰ VPDB)	$\delta^{18}\text{O}$ (‰ VPDB)	Stratigraphic position (m)
SI-165A	1,045	-3,349	143,522
SI-168	0,058	-2,953	144,412
SI-171	0,774	-2,991	145,264
SI-175	1,242	-3,660	146,528
SI-177	1,288	-4,142	147,276
SI-182	-0,403	-3,163	148,747
SI-184	0,772	-3,782	149,950
SI-186	1,098	-4,366	151,275
SI-187	1,165	-3,784	151,739
SI-189	0,187	-3,482	152,720
SI-190	0,254	-3,288	153,958
SI-191	-4,313	-4,451	154,310
SI-192	-1,805	-4,591	154,461
SI-193A	-1,393	-7,084	154,990
SI-197C	-5,917	-4,203	155,171
SI-194B	-4,048	-4,097	155,351
SI-195	-10,508	-4,129	155,506
SI-202	-3,814	-3,313	158,731
SI-204	-0,115	-3,955	159,737
SI-208	0,004	-4,325	160,847
SI-211	0,755	-4,715	162,210
SI-214	0,436	-7,648	163,607
SI-217	1,731	-4,343	166,058
SI-218	1,794	-5,587	172,586
SI-220	2,130	-3,707	173,644
SI-226	2,258	-3,201	175,733
SI-227	0,115	-3,011	176,740
SI-229	1,544	-4,415	177,488
SI-230B	0,984	-4,439	178,365
SI-238A	2,415	-3,003	181,435
SI-242	2,448	-3,750	182,416
SI-247A	1,137	-2,733	184,247
SI-250	2,559	-3,667	185,692
SI-256	1,709	-1,995	188,453
SI-258	1,986	-2,563	189,356
SI-259	0,649	-2,841	190,801
SI-263A	2,172	-4,110	191,910
SI-266A	1,914	-3,155	192,658
SI-276	1,934	-4,463	196,167
SI-278	2,585	-4,062	196,864
SI-281	2,329	-3,831	198,360

Table DR4a

Sample code	$\delta^{13}\text{C}$ (‰ VPDB)	$\delta^{18}\text{O}$ (‰ VPDB)	Stratigraphic position (m)
SI-165A	0,261	-4,046	143,522
SI-168	-0,747	-2,935	144,412
SI-171	-0,088	-3,333	145,264
SI-173	0,295	-3,683	145,857
SI-175	0,376	-0,040	146,528
SI-177	0,546	-4,317	147,276
SI-179	-0,596	-3,834	147,895
SI-182	-1,099	-3,677	148,747
SI-184	0,046	-3,655	149,950
SI-185	-3,706	-3,246	150,449
SI-186	0,427	-4,684	151,275
SI-187	0,364	-4,758	151,739
SI-189	-0,545	-3,813	152,720
SI-190	-1,026	-3,518	153,958
SI-191	-7,186	-3,557	154,310
SI-192	-4,810	-3,615	154,461
SI-193A	-4,539	-4,968	154,990
SI-197C	-4,832	-3,455	155,171
SI-195	-7,850	-4,250	155,506
SI-200	-2,686	-4,461	158,060
SI-202	0,496	-3,871	158,731
SI-208	0,926	-4,783	160,847
SI-211	1,532	-4,743	162,210
SI-214	1,089	-7,934	163,607
SI-215B	1,583	-4,799	164,433
SI-217	1,804	-4,365	166,058
SI-218	1,641	-5,951	172,586
SI-220	1,922	-3,992	173,644
SI-223	0,713	-5,100	174,727
SI-226	2,360	-2,972	175,733
SI-227	1,095	-3,222	176,740
SI-230B	1,032	-4,502	178,365
SI232A	0,990	-4,763	179,371
SI-238A	2,729	-2,786	181,435
SI-242	2,580	-3,696	182,416
SI-245	1,920	-2,831	183,344
SI-247A	1,838	-2,387	184,247
SI-250	2,729	-3,291	185,692
SI-252	2,876	-3,031	186,647
SI-254B	2,777	-3,002	187,472
SI-256	2,185	-2,302	188,453
SI-258	2,494	-2,464	189,356
SI-259	1,077	-3,062	190,801
SI-263A	2,238	-3,831	191,910
SI-266A	2,164	-3,970	192,658
SI-269B	2,260	-3,924	193,742
SI-272	1,203	-4,909	194,774
SI-276	1,937	-4,482	196,167
SI-278	2,689	-3,937	196,864

SI-280A	2,239	-3,478	197,999
SI-281	2,298	-3,821	198,360

Table DR4b

Sample code	$\delta^{13}\text{C}$ (‰ VPDB)	$\delta^{18}\text{O}$ (‰ VPDB)	Stratigraphic position (m)
SI-202	0,636	-5,067	158,73
SI-203	-0,209	-5,897	158,96
SI-217	1,739	-4,710	166,06
SI-218	1,927	-6,315	172,59
SI-226	2,404	-2,951	175,73
SI-227	1,659	-4,015	176,74
SI-238A	2,727	-2,704	181,44
SI-247A	2,089	-2,442	184,25
SI-250	2,752	-3,362	185,69
SI-252	2,713	-2,742	186,65
SI-266A	2,097	-3,769	192,66
SI-269B	2,35	-5,162	193,74
SI-276	2,048	-3,997	196,17

Table DR4c

Sample code	$\delta^{13}\text{C}$ (‰ VPDB)	$\delta^{18}\text{O}$ (‰ VPDB)	Stratigraphic position (m)
SI-165A	1,045	-3,349	143,522
SI-168	0,058	-2,953	144,412
SI-171	0,774	-2,991	145,264
SI-175	1,242	-3,660	146,528
SI-177	1,288	-4,142	147,276
SI-182	-0,403	-3,163	148,747
SI-184	0,772	-3,782	149,950
SI-186	1,098	-4,366	151,275
SI-187	1,165	-3,784	151,739
SI-189	0,187	-3,482	152,720
SI-190	0,254	-3,288	153,958
SI-191	-4,313	-4,451	154,310
SI-192	-1,805	-4,591	154,461
SI-193A	-1,393	-7,084	154,990
SI-197C	-5,917	-4,203	155,171
SI-194B	-4,048	-4,097	155,351
SI-195	-10,508	-4,129	155,506
SI-202	-3,814	-3,313	158,731
SI-204	-0,115	-3,955	159,737
SI-208	0,004	-4,325	160,847
SI-211	0,755	-4,715	162,210
SI-214	0,436	-7,648	163,607
SI-217	1,731	-4,343	166,058
SI-218	1,794	-5,587	172,586
SI-220	2,130	-3,707	173,644
SI-226	2,258	-3,201	175,733
SI-227	0,115	-3,011	176,740
SI-229	1,544	-4,415	177,488
SI-230B	0,984	-4,439	178,365
SI-238A	2,415	-3,003	181,435
SI-242	2,448	-3,750	182,416
SI-247A	1,137	-2,733	184,247
SI-250	2,559	-3,667	185,692
SI-256	1,709	-1,995	188,453
SI-258	1,986	-2,563	189,356
SI-259	0,649	-2,841	190,801
SI-263A	2,172	-4,110	191,910
SI-266A	1,914	-3,155	192,658
SI-276	1,934	-4,463	196,167
SI-278	2,585	-4,062	196,864
SI-281	2,329	-3,831	198,360

Table DR4a

Sample code	$\delta^{13}\text{C}$ (‰ VPDB)	$\delta^{18}\text{O}$ (‰ VPDB)	Stratigraphic position (m)
SI-165A	0,261	-4,046	143,522
SI-168	-0,747	-2,935	144,412
SI-171	-0,088	-3,333	145,264
SI-173	0,295	-3,683	145,857
SI-175	0,376	-0,040	146,528
SI-177	0,546	-4,317	147,276
SI-179	-0,596	-3,834	147,895
SI-182	-1,099	-3,677	148,747
SI-184	0,046	-3,655	149,950
SI-185	-3,706	-3,246	150,449
SI-186	0,427	-4,684	151,275
SI-187	0,364	-4,758	151,739
SI-189	-0,545	-3,813	152,720
SI-190	-1,026	-3,518	153,958
SI-191	-7,186	-3,557	154,310
SI-192	-4,810	-3,615	154,461
SI-193A	-4,539	-4,968	154,990
SI-197C	-4,832	-3,455	155,171
SI-195	-7,850	-4,250	155,506
SI-200	-2,686	-4,461	158,060
SI-202	0,496	-3,871	158,731
SI-208	0,926	-4,783	160,847
SI-211	1,532	-4,743	162,210
SI-214	1,089	-7,934	163,607
SI-215B	1,583	-4,799	164,433
SI-217	1,804	-4,365	166,058
SI-218	1,641	-5,951	172,586
SI-220	1,922	-3,992	173,644
SI-223	0,713	-5,100	174,727
SI-226	2,360	-2,972	175,733
SI-227	1,095	-3,222	176,740
SI-230B	1,032	-4,502	178,365
SI232A	0,990	-4,763	179,371
SI-238A	2,729	-2,786	181,435
SI-242	2,580	-3,696	182,416
SI-245	1,920	-2,831	183,344
SI-247A	1,838	-2,387	184,247
SI-250	2,729	-3,291	185,692
SI-252	2,876	-3,031	186,647
SI-254B	2,777	-3,002	187,472
SI-256	2,185	-2,302	188,453
SI-258	2,494	-2,464	189,356
SI-259	1,077	-3,062	190,801
SI-263A	2,238	-3,831	191,910
SI-266A	2,164	-3,970	192,658
SI-269B	2,260	-3,924	193,742
SI-272	1,203	-4,909	194,774
SI-276	1,937	-4,482	196,167
SI-278	2,689	-3,937	196,864

SI-280A	2,239	-3,478	197,999
SI-281	2,298	-3,821	198,360

Table DR4b

Sample code	$\delta^{13}\text{C}$ (‰ VPDB)	$\delta^{18}\text{O}$ (‰ VPDB)	Stratigraphic position (m)
SI-202	0,636	-5,067	158,73
SI-203	-0,209	-5,897	158,96
SI-217	1,739	-4,710	166,06
SI-218	1,927	-6,315	172,59
SI-226	2,404	-2,951	175,73
SI-227	1,659	-4,015	176,74
SI-238A	2,727	-2,704	181,44
SI-247A	2,089	-2,442	184,25
SI-250	2,752	-3,362	185,69
SI-252	2,713	-2,742	186,65
SI-266A	2,097	-3,769	192,66
SI-269B	2,35	-5,162	193,74
SI-276	2,048	-3,997	196,17

Table DR4c