APPENDIX 1

Isotope data and dolomite data from XRD

Buchenberg reef								
X, Y Gauss-Krüger, Z elevation above sea								
level in metres, dolomite% from XRD								
X	Y	Z	sample nr.	$\delta^{13}C$	$\delta^{18}O$ corr	dol%	$^{87}Sr/^{86}Sr$	
11.55919	50.67506	332.2	5	1.3	–6.7	0		
11.55521	50.67754	308.7	10	2.5	–7.1	0		
11.55443	50.67717	307.2	13	–3.3	–6.9	0		
11.55421	50.67682	307.6	14	1.2	–7.1	0		
11.55624	50.67586	321.1	107	–2.8	–6.9	0		
11.55912	50.67792	307.0	146	1.6	–6.9	0		
11.56022	50.67717	311.3	149	3.8	–6.8	0		
11.56022	50.67565	326.0	166	3.1	–6.4	0		
11.55929	50.67538	332.6	174	2.3	–6.5	0		
11.55776	50.67524	329.3	177	2.1	–6.3	0		
11.55606	50.67535	322.6	180	3.3	–7.2	0		
11.55587	50.67790	307.1	7	–3.2	–7.1	1		
11.55657	50.67672	311.3	44	1.6	–6.8	1		
11.55618	50.67644	312.4	48	2.1	–7.0	1		
11.55504	50.67599	315.3	74	2.3	–8.3	1		
11.55914	50.67700	316.6	89	2.7	–6.9	1		
11.55914	50.67655	322.9	92	4.9	–6.0	1		
11.55848	50.67606	329.4	98	2.7	–6.9	1		
11.55716	50.67616	322.0	104	–2.7	–6.8	1		
11.55653	50.67596	321.3	108	2.6	–6.8	1		
11.55780	50.67659	318.1	117	2.2	–6.8	1		
11.56055	50.67637	319.1	159	4.3	–6.7	1		
11.56036	50.67710	312.2	164	0.0	–7.8	1		
11.56027	50.67543	326.3	168	1.4	–7.0	1		
11.55829	50.67600	329.8	100	3.1	–6.9	1		
11.55558	50.67560	320.1	66	2.1	–7.5	1		
11.55607	50.67581	320.5	68	–0.8	–7.0	1		
11.55890	50.67535	332.8	4	4.2	–8.7	2		
11.55567	50.67773	307.6	8	–3.9	–7.0	2		
11.55565	50.67774	307.5	9	–3.1	–6.9	2		
11.55483	50.67737	308.2	12	–3.3	–7.0	2		
11.55489	50.67643	309.9	19	4.3	–7.2	2		
11.55594	50.67659	308.7	23	0.9	–7.1	2		
11.55607	50.67671	308.5	51	–0.7	–7.3	2		
11.55485	50.67630	311.4	58	3.0	–6.9	2		
11.55787	50.67699	314.4	81	1.6	–6.8	2		
11.55844	50.67579	333.1	99	3.9	–6.8	2		
11.55797	50.67606	327.5	101	4.0	–5.3	2		
11.55789	50.67610	326.4	102	3.9	–7.7	2		
11.55545	50.67594	316.6	106	0.4	–7.0	2		
11.55676	50.67600	322.1	109	–0.7	–6.7	2		
11.55704	50.67767	308.9	135	1.6	–6.7	2		
11.55730	50.67821	306.8	139	3.9	–6.9	2		
11.55876	50.67790	307.6	145	–0.1	–6.9	2		
11.56062	50.67588	322.3	158	4.2	–7.0	2		
11.56025	50.67638	319.8	160	3.0	–6.7	2		

11.56054	50.67677	315.9	162	2.7	–6.7	2		
11.56039	50.67745	308.5	165	–3.3	–7.0	2		
11.55984	50.67557	328.9	170	4.8	–6.5	2		
11.55662	50.67539	324.4	179	3.3	–6.9	2		
11.55653	50.67678	310.9	43	3.5	–6.9	2		
11.55614	50.67658	310.1	50	–0.8	–7.1	2		
11.55577	50.67572	319.6	67	3.6	–6.9	2		
11.55621	50.67730	309.1	40	3.2	–6.9	4		
11.55576	50.67677	307.2	24	–1.1	–6.8	4		
11.55571	50.67745	308.9	37	4.2	–6.9	4		
11.55649	50.67671	310.8	45	2.8	–6.8	4		
11.55799	50.67648	320.4	118	2.8	–6.8	4		
11.55848	50.67783	308.4	143	0.5	–6.9	4		
11.56031	50.67683	315.1	150	2.4	–6.9	4		
11.56033	50.67652	318.3	161	3.0	–6.7	4		
11.56054	50.67685	315.1	163	1.3	–7.0	4		
11.56007	50.67534	327.8	169	1.2	–6.8	4		
11.55980	50.67547	329.3	171	4.8	–8.1	4		
11.55946	50.67517	331.2	175	3.4	–7.8	4		
11.55640	50.67636	314.7	54	3.0	–7.0	4		
11.55482	50.67607	313.9	59	0.1	–7.8	4		
11.55505	50.67570	318.4	64	2.2	–7.3	4		
11.55411	50.67655	308.7	15	3.6	–6.9	5		
11.55560	50.67690	307.6	25	3.1	–7.2	5		
11.55531	50.67712	308.1	29	3.6	–7.1	5		
11.55891	50.67779	308.2	134	3.8	–6.8	5		
11.55974	50.67550	329.6	172	3.3	–7.2	5		
11.55952	50.67535	331.1	173	4.5	–7.2	5		
11.55919	50.67535	333.1	1	3.6	–6.8	6		
11.55898	50.67760	309.5	132	3.7	–6.5	6		
11.55652	50.67778	308.2	138	1.6	–6.7	6		
11.55831	50.67772	309.4	142	1.4	–7.1	6		
11.55664	50.67769	308.5	137	1.8	–6.6	6		
11.55532	50.67565	319.3	65	3.0	–6.8	7		
11.55804	50.67797	307.7	141	0.5	–6.6	8		
11.55579	50.67619	313.8	56	3.1	–6.6	11		
11.55925	50.67540	332.9	2	3.4	–7.4	12		
11.55438	50.67621	312.0	17	4.0	–7.6	12		
11.55668	50.67647	314.8	53	4.4	–8.1	13		
11.55909	50.67633	326.4	95	5.0	–3.0	13		
11.56015	50.67555	326.7	167	2.6	–6.6	13		
11.55420	50.67637	310.5	16	4.7	–7.9	14		
11.55714	50.67649	316.9	115	3.2	–6.6	14		
11.55819	50.67710	314.1	82	–2.0	–6.5	16		
11.55691	50.67601	322.8	110	1.8	–6.3	16		
11.55660	50.67627	317.3	113	2.9	–6.9	16		
11.55535	50.67581	318.0	70	3.5	–8.1	17		
11.55686	50.67636	317.4	114	3.6	–6.7	17		
11.55918	50.67637	325.9	94	4.2	–7.2	18		
11.55530	50.67603	315.3	105	3.3	–6.7	18		
11.55543	50.67638	310.7	21	1.3	–6.6	19		
11.55895	50.67758	309.7	131	4.3	–6.2	19		

11.55526	50.67606	314.8	75	4.1	–6.3	20		
11.55915	50.67714	314.7	88	4.2	–6.3	23		
11.55460	50.67634	310.8	18	4.8	–8.4	27		
11.55480	50.67586	316.2	72	3.1	–8.0	27		
11.55986	50.67643	320.7	152	4.9	–7.7	27		
11.55469	50.67588	315.8	62	3.3	–8.7	27		
11.55618	50.67807	306.8	6	0.9	–6.5	30		
11.55447	50.67613	312.8	60	2.9	–5.8	35		
11.55492	50.67594	315.6	73	3.6	–7.6	40		
11.55967	50.67629	323.9	154	4.6	–7.0	43		
11.55873	50.67678	318.2	119	–0.2	–6.2	46		
11.55863	50.67620	327.3	97	3.3	–6.6	52		
11.55681	50.67770	308.6	136	3.9	–5.8	55		
11.55806	50.67513	330.3	176	3.5	–6.8	57		
11.55705	50.67719	311.1	125	1.7	–6.0	61		
11.55705	50.67606	322.9	111	3.0	–7.0	65		
11.55742	50.67620	322.9	103	4.3	–6.0	66		
11.55703	50.67696	312.2	123	3.2	–4.4	66		
11.55623	50.67620	316.2	112	3.0	–5.4	69		
11.55856	50.67789	307.9	144	5.2	–3.0	71		
11.56026	50.67581	325.2	157	3.7	–4.1	71		
11.55850	50.67721	313.5	84	3.7	–5.3	71		
11.55644	50.67765	308.5	39	4.6	–5.3	72		
11.56017	50.67651	318.7	151	4.7	–6.1	72		
11.55649	50.67701	310.1	42	4.1	–2.5	75		
11.55812	50.67751	310.7	129	5.7	–3.8	76		
11.55518	50.67638	310.5	20	5.0	–6.9	77		
11.55552	50.67700	307.8	26	4.8	–5.1	77		
11.55757	50.67730	311.6	127	2.0	–5.0	77		
11.55791	50.67745	310.9	128	0.8	–4.6	77		
11.55966	50.67768	307.3	148	3.5	–2.1	77		
11.55551	50.67717	308.2	27	5.4	–5.5	80		
11.55591	50.67595	317.8	69	5.1	–5.2	80		
11.55633	50.67774	308.2	38	5.4	–0.4	80		
11.55750	50.67654	317.9	116	4.9	–0.6	81		
11.55891	50.67630	326.5	96	5.3	–4.9	83		
11.55902	50.67538	333.1	3	5.3	–3.0	84		
11.55762	50.67814	306.9	140	4.8	–6.2	84		
11.55578	50.67644	310.2	22	4.9	–3.0	86		
11.55485	50.67686	307.5	30	4.3	–0.4	87		
11.55839	50.67716	313.9	83	–0.1	–1.2	87		
11.55673	50.67680	311.8	52	5.2	–1.7	87		
11.55656	50.67656	313.0	47	5.2	–1.5	88		
11.55644	50.67713	309.7	41	5.6	–3.0	89		
11.55883	50.67712	314.7	87	5.3	–0.2	89		
11.55909	50.67690	317.7	90	4.7	–1.4	89		
11.55919	50.67676	319.7	91	4.1	–7.6	89		
11.55946	50.67765	308.1	133	4.8	–4.1	89		
11.55716	50.67675	313.9	79	5.1	–1.8	90		
11.55526	50.67670	307.1	35	5.2	1.6	90		
11.55921	50.67643	324.7	93	4.4	–7.6	90		
11.55743	50.67720	312.0	122	5.1	–4.9	90		

11.55996	50.67595	325.9	156	5.5	–4.8	90		
11.55556	50.67669	307.1	34	3.4	2.0	90		
11.55937	50.67783	307.2	147	3.4	1.2	92		
11.55567	50.67617	314.0	77	5.7	–3.1	92		
11.55755	50.67689	314.5	80	4.2	–0.4	92		
11.55862	50.67734	312.2	85	5.7	0.2	93		
11.55838	50.67745	311.4	120	2.3	–1.0	93		
11.55809	50.67729	312.4	121	3.7	–1.6	93		
11.55514	50.67627	312.0	57	5.6	–5.3	94		
11.55545	50.67611	314.4	76	6.0	–3.9	94		
11.55691	50.67663	313.8	78	5.4	–3.0	94		
11.55894	50.67745	310.9	86	5.7	0.9	94		
11.55729	50.67724	311.4	126	4.2	–6.2	96		
11.55665	50.67709	310.4	124	5.3	–4.4	96		
11.55845	50.67756	310.4	130	6.1	–0.6	96		
11.55534	50.67723	308.3	28	6.1	–4.2	97		
11.55470	50.67676	307.4	31	6.2	–0.5	98		
11.55499	50.67668	307.0	33	5.6	–4.3	98		
11.55514	50.67584	317.2	63	6.0	–1.2	98		
11.55977	50.67628	323.2	153	6.0	0.0	98		
11.55476	50.67658	308.2	32	6.1	–3.7	100		
11.55967	50.67610	326.4	155	6.4	–2.9	100		
Buchenberg stratigraphic section 1, irregular sample interval								
Z stratigraphic position above base quarry floor measured upward								
		1.5	Z16	1.8	–0.1	6	0.70766053	
		2	Z17	3.7	0.0	2	0.707685753	
		6	Z18	5.9	–1.2	99	0.708381465	
		12	Z19	4.4	–0.1	4	0.707522851	
		18	Z20	6.5	–0.9	78	0.707946397	
		22	Z23	3.7	–0.5	42	0.707811229	
		22	Z24	4.40	–0.7	59	0.707762321	
		23	Z21	6.4	–1.1	93	0.708777851	
		23	Z22	3.3	–1.2	99	0.708774595	
			Z15	2.2	–0.1	5		
Buchenberg stratigraphic section 2, 2m sample interval.								
Z stratigraphic position above base quarry floor measured upward								
		–2.5	Z28	6.27	–1.2	96	0.709119429	
		–2	Z29	6.42	–1.2	100	0.708862462	
		–1	Z30	5.91	–1.1	90	0.708965194	
		1.5	Z31	6.47	–1.2	98	0.70766053	
		2	Z32	5.53	–0.9	74	0.707685753	
		6	Z33	4.85	–0.1	11	0.708381465	
		12	Z34	4.32	–0.1	12	0.707522851	
		18	Z35	4.81	0.0	4	0.707946397	
		22	Z36/1	6.14	–1.1	93	0.707811229	
		22	Z37/1	6.08	–1.2	100	0.707762321	
		23	Z38	6.60	–1.2	99	0.708777851	
		23	Z39	6.52	–1.2	100	0.708774595	
			Z40	6.44	–1.2	98		
			Z41	6.36	–1.2	98		
			Z42	6.60	–1.2	100		

			Z43	6.58	–1.2	100		
			Z44	6.39	–1.2	98		
Hand specimen „A“, internal co-ordinates in cm								
dol% interpolated in Petrel from Mg/Ca ratio								
X	Y	$\delta^{13}C$	$\delta^{18}O$ raw	$\delta^{18}O$corr		dol%		
1	1	6.1	0.7	–0.3		94		
2	1	6.0	–2.0	–3.0		95		
3	1	6.1	–1.6	–2.6		89		
4	1	6.3	–1.0	–1.9		85		
5	1	6.2	–1.1	–2.0		84		
6	1	6.3	0.1	–0.8		80		
7	1	6.2	–2.2	–3.0		74		
8	1	6.1	–1.0	–1.8		71		
9	1	5.7	–3.1	–4.1		88		
1	2	6.2	–1.9	–2.9		92		
2	2	6.3	–1.5	–2.5		94		
3	2	5.9	–4.3	–5.3		90		
4	2	5.7	–3.6	–4.6		88		
5	2	6.3	–0.8	–1.8		89		
6	2	6.1	–2.4	–3.4		86		
7	2	6.2	–2.4	–3.3		82		
8	2	6.3	–1.9	–2.8		80		
9	2	5.8	–2.2	–3.2		90		
1	3	5.5	–3.5	–4.5		94		
2	3	6.3	–0.7	–1.7		95		
3	3	6.3	–1.6	–2.6		92		
4	3	6.3	–2.1	–3.1		91		
5	3	6.3	–1.3	–2.3		92		
6	3	6.3	–0.9	–1.9		92		
7	3	6.3	–1.0	–2.0		92		
8	3	6.4	–0.1	–1.1		92		
9	3	5.9	–1.6	–2.6		92		
1	4	5.4	–2.8	–3.8		93		
2	4	6.2	–1.5	–2.5		94		
3	4	6.3	–1.1	–2.1		93		
4	4	6.2	–1.5	–2.5		91		
5	4	6.3	–2.1	–3.1		90		
6	4	6.3	–0.3	–1.3		89		
7	4	6.4	1.6	0.6		91		
8	4	6.2	–0.8	–1.8		93		
9	4	6.4	1.0	0.0		91		
1	5	5.8	–3.2	–4.2		90		
2	5	6.1	–2.3	–3.3		88		
3	5	5.7	–3.2	–4.2		91		
4	5	5.9	–3.3	–4.4		95		
5	5	6.3	–0.9	–2.0		96		
6	5	6.4	0.7	–0.3		90		
7	5	6.3	–0.5	–1.5		88		
8	5	6.2	–1.0	–2.0		90		
9	5	6.1	–0.4	–1.4		90		
1	6	4.6	–4.5	–5.4		85		

2	6	3.4	–5.4	–6.3		83		
3	6	4.5	–3.9	–4.9		90		
4	6	5.7	–3.3	–4.3		91		
5	6	4.9	–4.0	–5.0		90		
6	6	5.2	–1.9	–2.9		89		
7	6	6.4	–0.2	–1.2		88		
8	6	6.4	1.1	0.1		87		
9	6	6.4	0.5	–0.5		92		
1	7	4.0	–4.9	–5.8		81		
2	7	6.1	–1.3	–2.2		85		
3	7	5.1	–3.5	–4.5		90		
4	7	5.2	–3.3	–4.2		86		
5	7	5.3	–3.0	–3.9		83		
6	7	5.7	–2.4	–3.3		82		
7	7	5.8	–1.8	–2.7		84		
8	7	5.7	–2.3	–3.2		85		
9	7	6.3	–1.7	–2.7		91		
1	8	5.7	–2.7	–3.6		82		
2	8	5.6	–3.1	–4.1		88		
3	8	6.1	–2.6	–3.6		89		
4	8	4.8	–4.2	–5.2		87		
5	8	5.7	–2.7	–3.6		85		
6	8	5.4	–3.5	–4.4		78		
7	8	5.8	–2.8	–3.7		79		
8	8	6.1	–2.4	–3.3		85		
9	8	6.2	–2.3	–3.3		89		
10	1	5.3	–2.6	–3.6		91		
11	1	6.3	–1.6	–2.6		88		
12	1	5.8	–2.1	–3.1		87		
13	1	6.1	–0.8	–1.8		94		
14	1	6.3	–1.3	–2.3		90		
15	1	6.3	–2.1	–3.0		85		
16	1	6.4	–1.2	–2.2		87		
17	1	5.6	–2.9	–3.9		90		
18	1	6.5	1.1	0.1		93		
10	2	6.2	–1.2	–2.2		92		
11	2	5.4	–2.8	–3.8		88		
12	2	6.3	–1.4	–2.4		88		
13	2	6.4	–0.3	–1.3		93		
14	2	6.5	0.2	–0.8		86		
15	2	6.4	–0.2	–1.1		80		
16	2	6.4	–1.1	–2.0		86		
17	2	6.4	–0.9	–1.9		90		
18	2	6.4	–0.5	–1.5		92		
10	3	6.5	–0.1	–1.1		93		
11	3	6.3	–1.2	–2.2		90		
12	3	6.4	0.0	–1.0		89		
13	3	6.4	1.1	0.1		92		
14	3	6.3	0.0	–1.0		89		
15	3	6.5	0.1	–0.9		87		
16	3	6.4	–0.6	–1.6		88		
17	3	6.3	–0.8	–1.8		88		

18	3	6.4	–0.3	–1.3		89		
10	4	6.1	–0.5	–1.5		87		
11	4	6.4	1.6	0.6		87		
12	4	6.2	0.0	–1.0		90		
13	4	6.4	–0.2	–1.2		92		
14	4	6.2	–1.7	–2.7		92		
15	4	6.4	–0.3	–1.3		93		
16	4	6.0	–0.7	–1.7		90		
17	4	6.3	–1.2	–2.2		87		
18	4	6.3	–1.4	–2.3		84		
10	5	6.3	0.0	–1.0		86		
11	5	5.9	–1.6	–2.6		88		
12	5	6.2	–0.6	–1.6		92		
13	5	6.0	–0.4	–1.4		94		
14	5	5.6	–2.1	–3.1		90		
15	5	6.3	–0.9	–1.8		85		
16	5	6.2	–0.6	–1.5		83		
17	5	6.3	–1.2	–2.1		84		
18	5	6.4	–0.4	–1.3		80		
10	6	6.5	0.6	–0.4		92		
11	6	6.4	0.2	–0.8		92		
12	6	6.3	0.5	–0.4		82		
13	6	6.4	0.5	–0.4		82		
14	6	6.2	–0.9	–1.8		83		
15	6	6.4	–1.0	–1.8		74		
16	6	6.3	–0.4	–1.2		72		
17	6	6.2	–1.3	–2.1		72		
18	6	6.4	–0.1	–0.9		76		
10	7	6.3	–1.3	–2.3		91		
11	7	5.4	–2.4	–3.4		90		
12	7	6.2	–0.1	–1.0		79		
13	7	6.2	–0.5	–1.3		73		
14	7	6.5	0.5	–0.3		69		
15	7	6.3	–0.6	–1.4		68		
16	7	6.3	–0.2	–1.0		75		
17	7	6.2	–1.6	–2.4		73		
18	7	6.4	–0.5	–1.3		76		
10	8	6.2	–1.9	–2.9		89		
11	8	5.9	–2.6	–3.6		92		
12	8	4.8	–3.5	–4.5		90		
13	8	5.1	–3.5	–4.3		76		
14	8	4.9	–3.0	–3.7		60		
15	8	6.2	–1.1	–1.9		69		
16	8	6.4	0.2	–0.7		83		
17	8	6.5	–0.2	–1.1		84		
hand specimen „B“								
1	1	5.7	–4.1	–4.5		41		
1	3	6.0	–4.1	–4.7		56		
1	5	6.3	–2.8	–3.4		55		
1	7	6.5	–4.2	–4.9		63		
1	9	6.5	–1.2	–2.0		68		
3	1	6.3	–3.8	–4.2		40		

3	3	6.5	–2.8	–3.5		64		
3	5	6.5	–2.8	–3.5		67		
3	7	6.5	–3.7	–4.5		65		
3	9	6.4	–2.9	–3.6		64		
3	11	6.5	–3.6	–4.3		60		
3	14	6.4	–3.4	–4.1		65		
5	1	5.2	–4.1	–4.4		32		
5	3	6.5	–3.2	–3.9		58		
5	5	6.5	–2.2	–2.9		64		
5	7	6.5	–3.0	–3.7		63		
5	9	6.4	–2.8	–3.5		59		
5	11	6.1	–3.9	–4.5		56		
5	13	6.0	–3.4	–4.0		52		
hand specimen „C“								
5	1	6.0	3.4	2.6		75		
9	1	5.8	2.0	1.5		48		
13	1	4.9	–1.3	–1.8		41		
17	1	5.6	0.8	0.3		48		
5	5	5.6	1.4	0.7		70		
9	5	5.3	0.2	–0.5		70		
13	5	5.5	0.5	–0.3		71		
17	5	4.4	–2.1	–2.8		64		
5	9	5.3	–0.6	–1.3		64		
9	9	4.3	–3.4	–3.6		23		
13	9	4.7	–2.4	–3.0		50		
17	9	6.0	2.5	1.7		78		
Römerstein reef								
		sample nr	$\delta^{13}C$	$\delta^{18}O$ raw	$\delta^{18}O$ corr	dol%		
		R 1	6.2	–0.8	–2.0	96		
		R 2	6.0	–1.1	–2.3	100		
		R 3	6.2	–0.9	–2.1	100		
		R 4	5.8	–1.3	–2.5	96		
		R 5	6.1	–1.1	–2.3	98		
		R 6	6.0	–1.2	–2.3	96		
		R 7	6.2	–1.1	–2.2	98		
		R 8	6.1	–1.0	–2.2	98		
		R 9	5.8	–1.4	–2.6	98		
		R 10	6.0	–1.2	–2.4	98		
Totenstein reef								
X, Y internal co-ordinate system, Z elevation in m above sea level								
X	Y	Z	sample nr.	$\delta^{13}C$	$\delta^{18}O$ corr	dol%	$^{87}Sr/^{86}Sr$	
2199.9	1006.4	313.35	8	–3.8	–7.0	0		
2199.9	1006.4	313.35	9	–3.3	–7.1	0		
2194.4	1010.1	313.55	15	–0.1	–7.9	0		
2204.5	1019.3	313.42	28	–3.7	–7.2	0		
2199.9	995.4	312.77	34	–3.0	–7.7	0		
2194.4	1010.1	313.55	38	–1.2	–7.3	0		
2199.9	1006.4	313.35	16	–0.2	–7.4	2		
2198.4	1019.9	313.9	6	–1.0	–7.4	2		
2194.4	1010.1	313.55	13	–3.3	–7.4	2		
2194.4	1010.1	313.55	14	–1.7	–7.5	3		

2204.5	1019.3	313.42	17	–2.5	–7.1	3		
2192.5	1020.2	313.98	39	–1.0	–7.4	3		
2204.5	1019.3	313.42	20	–3.0	–7.2	3		
2199.9	1006.4	313.35	10	–3.3	–7.1	3		
2199.9	1006.4	313.35	12	–3.1	–7.1	3		
2204.5	1019.3	313.42	27	–3.9	–7.4	3		
2194.4	1010.1	313.55	7	–3.3	–7.0	3		
2194.4	1010.1	313.55	11	–3.3	–6.8	3		
2204.5	1019.3	313.42	21	–2.4	–7.3	3		
2204.5	1019.3	313.42	18	–3.1	–7.1	4		
2204.5	1019.3	313.42	19	–3.3	–7.2	4		
2204.5	1019.3	313.42	24	–2.7	–7.3	4		
2198.1	993.6	312.66	33	–2.9	–7.3	4		
2200.8	1000.0	313.06	36	–3.0	–7.5	4		
2204.5	1019.3	313.42	22	–2.5	–7.2	4		
2204.5	1019.3	313.42	25	–3.0	–7.5	4		
2204.5	1019.3	313.42	23	–2.6	–7.3	4		
2203.6	999.1	312.94	35	–2.7	–7.1	4		
2199.9	1003.7	313.23	37	–2.9	–6.9	4		
2208.2	1026.6	313.35	40	–3.5	–7.6	5		
2204.5	1019.3	313.42	26	–3.4	–6.9	5		
1887.0	895.6	276.19	5	–1.6	–7.4	5		
1640.2	1052.5	286.89	72	–1.4	–2.3	5		
1960.7	947.8	301.55	126	–0.6	–2.9	5		
2107.4	912.9	308.95	45	–0.7	–2.5	7		
1574.1	836.6	284.03	111	–1.9	–2.9	7		
2199.3	829.1	275.08	138	2.5	–0.2	11		
2119.5	926.1	310.72	53	2.9	–0.2	44		
2120.1	918.6	309.51	47	0.1	–2.2	51		
2121.2	928.4	311.04	51	0.8	–1.9	53		
1960.7	949.6	301.93	126	0.3	–2.0	57		
2058.1	843.1	294.47	136	0.4	–2.4	57		
1988.3	905.5	300.87	127	1.2	–1.8	63		
1686.1	956.0	286.15	91	–1.4	–2.3	64		
1609.0	849.5	283.63	107	1.5	–0.9	65		
2130.4	932.4	311.53	58	1.9	–1.4	65		
1987.4	907.4	300.81	130	2.0	–1.5	66		
2126.9	930.7	311.31	55	1.0	–1.2	68		
1744.0	981.7	284.26	94	–0.1	–0.6	72		
2121.2	927.2	310.87	50	1.1	–1.7	73		
2122.4	921.5	309.95	48	2.2	–1.7	74		
1814.7	1046.0	286.97	98	–0.6	–1.5	75		
1942.4	980.8	303.59	122	4.5	0.3	75		
2139.0	935.3	311.49	60	1.5	–1.4	75		
1689.8	955.1	285.76	90	0.0	–2.4	76		
2144.2	936.4	311.21	61	2.3	–0.4	76		
2114.3	916.3	309.37	46	4.2	–0.2	77		
2060.8	901.8	307.67	133	2.2	–1.6	77		
2154.5	942.7	311.73	65	1.3	–0.8	77		
2152.2	937.5	310.68	63	1.4	–2.3	77		
2062.7	905.5	308.19	134	2.4	–0.2	78		
2135.0	934.7	311.78	59	3.0	–0.3	80		

1605.3	842.2	283.43	105	1.9	–1.2	80		
1726.5	1067.2	287.34	117	1.7	–0.3	81		
2160.2	947.9	312.49	68	2.0	–1.5	82		
1766.0	1028.6	286.29	97	1.9	–1.6	82		
2135.0	934.1	311.64	57	2.8	0.1	83		
1688.9	951.4	285.85	92	2.2	–1.1	84		
2067.3	900.9	307.5	132	3.1	–1.1	85		
2149.9	935.8	310.46	62	2.8	–0.6	85		
2158.5	945.6	312.08	67	3.7	0.9	86		
2098.2	911.1	308.78	43	2.9	0.2	86		
1504.0	937.0	286.12	71	3.7	–0.7	86		
2124.1	928.9	311.09	54	–0.5	–2.6	86		
2299.7	857.2	295.6	2	3.5	–1.5	86		
2122.4	925.5	310.61	49	4.0	0.1	86		
2156.2	944.4	312	66	4.0	1.0	87		
1768.8	1024.9	286.32	95	3.4	–0.6	87		
2103.4	911.7	308.82	44	3.2	0.6	87		
1743.1	984.5	284.61	93	4.1	0.2	88		
2114.9	923.2	310.36	52	4.0	–0.5	89		
1991.0	904.6	301.53	129	5.5	2.4	90		
1765.1	1032.3	286.29	96	5.0	1.5	90		
1894.6	1013.9	300.64	119	4.7	2.2	91		
1522.7	880.7	286.25	115	4.8	1.4	91		
2153.9	940.4	311.22	64	4.4	1.0	92		
1610.8	846.7	283.21	106	5.3	0.8	92		
1527.3	876.1	286.24	114	5.6	1.6	92		
2214.2	826.8	276.39	139	4.4	–0.5	93		
1504.3	937.7	286.14	70	4.6	–0.5	93		
1899.2	1013.0	300.97	120	5.3	0.8	93		
2130.4	932.4	311.53	56	2.1	–0.9	94		
1571.3	887.2	289.1	83	6.1	0.9	94		
1535.5	767.8	277.18	110	4.8	–5.3	95		
1538.3	765.9	277.24	108	3.9	–0.3	95		
1532.8	765.9	276.89	109	4.5	–5.5	95		
2074.6	806.3	277.37	29	4.5	–5.0	95		
1609.0	878.9	287.44	79	5.7	0.6	95		
2061.7	838.5	291.73	137	5.1	–0.6	95		
1620.0	884.4	286.84	80	5.7	1.4	96		
1594.3	857.8	285.61	75	5.3	1.1	96		
1595.2	864.2	286.47	76	5.6	1.5	96		
1816.5	1054.3	287.53	99	4.8	0.7	96		
2096.6	817.4	275.68	31	2.4	–2.1	96		
1649.4	923.9	287.34	89	5.4	–0.8	96		
1819.3	1059.8	287.75	100	4.0	–0.1	96		
1941.4	982.7	303.73	124	5.3	1.3	96		
1655.8	917.5	285.7	87	4.8	–1.7	96		
1942.4	980.8	303.59	123	5.2	1.4	96		
1958.0	945.0	300.52	125	5.4	1.6	96		
2091.1	811.8	274.29	32	3.0	–1.0	96		
2091.1	814.6	275.52	30	4.0	–5.7	96		
1525.4	880.7	286.5	116	4.7	–0.6	96		
1571.3	839.4	284.36	113	4.2	–0.5	96		

2035.1	781.4	281.17	4	4.2	–5.4	96		
1615.4	879.8	286.84	78	6.0	0.5	96		
2301.4	857.2	295.56	3	3.7	1.0	97		
1653.1	921.1	286.51	88	5.8	–1.1	97		
1577.8	893.6	290.04	81	6.0	0.5	97		
1581.4	893.6	290.1	82	6.0	–0.5	97		
1598.0	839.4	283.71	104	–0.8	–2.9	97		
1502.5	940.4	285.98	69	5.9	1.2	97		
1853.3	1093.8	294.06	103	5.7	1.0	97		
1588.8	866.0	286.61	77	4.9	0.5	97		
1580.5	903.7	290.91	85	6.2	0.3	97		
1824.8	1134.2	289.19	101	5.5	0.6	97		
1843.2	1122.3	291.95	102	–0.1	–2.7	97		
1639.3	1058.9	286.52	73	5.8	–0.7	97		
1570.4	838.5	284.29	112	4.3	–1.5	97		
1636.5	1055.2	286.46	74	6.1	–0.1	97		
1582.4	898.2	290.71	86	6.2	1.1	97		
1901.0	1008.4	301	121	5.8	–0.6	97		
1887.0	895.6	276.19	1	4.3	–3.8	97		
Totenstein spot samples								
X	Y	Z	sample nr.	$\delta^{13}C$	$\delta^{18}O$ corr	dol%	$^{87}Sr/^{86}Sr$	
			Z1	1.7	–7.3	92	0.708965194	
			Z2	4.3	–7.4	100	0.708862462	
			Z3	4.3	–6.4	100	0.709119429	
			Z4	4.9	–6.7	6	0.708611251	
			Z5	–2.6	–9.9	9	0.708839398	
			Z6	–0.8	–5.1	81	0.708340832	
			Z7			68	0.708065048	
			Z8	4.2	–1.2	94	0.707977036	
			Z9	0.2	–2.8	76	0.70791406	
			Z10	1.4	–1.6	75	0.707977452	
			Z11	4.6	0.5	74	0.707893718	
			Z12	3.4	–2.8	89	0.707819639	
			Z13	0.0	–6.5	100	0.707873598	
			Z14			73	0.707721339	