

Map	TMS	Systems Tra	Sequence	MFS age	Map age (Ma)	General Age
1a	AP11	HST	Ng80	0.006	0	Recent
1b	AP11	MFS	Ng80	0.006	0.006	Quaternary
1c	AP11	TST	Ng80	0.006	0.012	very latest Pleistocene
1d	AP11	LST	Ng80	0.006	0.03	Late Pleistocene
2a	AP11	HST	Ng70	1	0.07	Middle Pleistocene
2b	AP11	MFS	Ng70	1	1	Early Pleistocene (Calabrian)
2c	AP11	TST	Ng70	1	3.2	Mid Piacenzian
2d	AP11	LST	Ng70	1	3.5	Early Piacenzian
3a	AP11	HST	Ng60	5	3.8	Late Zanclean
3b	AP11	MFS	Ng60	5	5	Early Zanclean
3c1	AP11	late TST	Ng60	5	5.5	Late Messinian
3c2	AP11	ey TST	Ng60	5	5.97	Late Messinian
3d	AP11	LST	Ng60	5	6	Middle Messinian
4a	AP11	HST	Ng50	7	6.5	Middle Messinian
4b	AP11	MFS	Ng50	7	7	Early Messinian
4c	AP11	TST	Ng50	7	7.2	Earliest Messinian
4d	AP11	LST	Ng50	7	8.1	Late Tortonian
5a	AP11	HST	Ng40	12	9	Early Tortonian
5b	AP11	MFS	Ng40	12	12	Late Serravalian
5c	AP11	TST	Ng40	12	12.5	Mid Serravalian
5d	AP11	LST	Ng40	12	12.8	Mid Serravalian
6a	AP11	HST	Ng30	15.5	13	Early Serravalian
6b	AP11	MFS	Ng30	15.5	15.5	early Langhian
6c1	AP11	late TST	Ng30	15.5	16	latest Burdigalian
6c2	AP11	ey TST	Ng30	15.5	17	Late Burdigalian
6d	AP11	LST	Ng30	15.5	18.5	Mid Burdigalian
7a	AP11	HST	Ng20	18.7	18.6	Early Burdigalian
7b	AP11	MFS	Ng20	18.7	18.7	Earliest Burdigalian
7c	AP11	TST	Ng20	18.7	19	Burdigalian/Aquitanian bdry
7d	AP11	LST	Ng20	18.7	20.2	Latest Aquitanian
8a	AP11	HST	Ng15	20.6	20.3	Late Aquitanian
8b	AP11	MFS	Ng15	20.6	20.6	late Middle Aquitanian
8c	AP11	TST	Ng15	20.6	21	mid Middle Aquitanian
8d	AP11	LST	Ng15	20.6	21.6	early Middle Aquitanian
9a	AP11	HST	Ng10	22.5	22	Early Aquitanian
9b	AP11	MFS	Ng10	22.5	22.5	earliest Aquitanian
9c	AP11	TST	Ng10	22.5	23	Aquitanian/Chattian bdry
9d	AP11	LST	Ng10	22.5	23.2	latest Chattian
10a	AP11	HST	Pg50	24.1	23.3	late Late Chattian
10b	AP11	MFS	Pg50	24.1	24.1	mid Late Chattian
10c	AP11	TST	Pg50	24.1	24.6	early Late Chattian
10d	AP11	LST	Pg50	24.1	24.9	Mid Chattian
11a	AP11	HST	Pg40	28.5	26	Early Chattian
11b	AP11	MFS	Pg40	28.5	28.5	Rupelian/Chattian bdry
11c	AP11	TST	Pg40	28.5	28.7	latest Rupelian
11d	AP11	LST	Pg40	28.5	28.9	Late Rupelian
12a	AP11	HST	Pg30	33	29	Mid Rupelian
12b	AP11	MFS	Pg30	33	33	early Middle Rupelian
12c	AP11	TST	Pg30	33	33.5	Early Rupelian
12d	AP11	LST	Pg30	33	35	Late Priabonian
13a	AP10	HST	Pg25	39	36	Middle Priabonian
13b	AP10	MFS	Pg25	39	39	Middle Bartonian
13c	AP10	TST	Pg25	39	40	Early Bartonian

13d	AP10	LST	Pg25	39	41.2 Lutetian-Bartonian bdry
14a	AP10	HST	Pg20	48	42 Middle-Late Lutetian
14b	AP10	MFS	Pg20	48	48 earliest Lutetian
14c1	AP10	late TST	Pg20	48	49 latest Ypresian
14c2	AP10	early TST	Pg20	48	50 intra-Late Ypresian
14d	AP10	LST	Pg20	48	51 mid Late Ypresian
15a	AP10	HST	Pg15	53	52 early Late Ypresian
15b	AP10	MFS	Pg15	53	53 Mid Ypresian
15c	AP10	TST	Pg15	53	53.5 Early Ypresian
15d	AP10	LST	Pg15	53	54 earliest Ypresian
16a	AP10	HST	Pg10	57	55 latest Thanetian
16b	AP10	MFS	Pg10	57	57 Late Thanetian
16c	AP10	TST	Pg10	57	57.2 Mid Thanetian
16d	AP10	LST	Pg10	57	57.5 Mid Thanetian
17a	AP10	HST	Pg08	59	58 Early Thanetian
17b	AP10	MFS	Pg08	59	59 Late Selandian
17c	AP10	TST	Pg08	59	59.5 Middle Selandian
17d	AP10	LST	Pg08	59	60 Early Selandian
18a	AP10	HST	Pg05	62	61 Late Danian
18b	AP10	MFS	Pg05	62	62 Mid Danian
18c	AP10	TST	Pg05	62	62.5 Early Danian
18d	AP10	LST	Pg05	62	66 K/T boundary
19a	AP09	HST	K190	68	67.5 Late Maastrichtian
19b	AP09	MFS	K190	68	68 Middle Maastrichtian
19c	AP09	TST	K190	68	68.5 early Middle Maastrichtian
19d	AP09	LST	K190	68	69 earliest Middle Maastrichtian
20a	AP09	HST	K185	71	69.5 Early Maastrichtian
20b	AP09	MFS	K185	71	71 earliest Maastrichtian
20c	AP09	TST	K185	71	72 Maa/Camp boundary
20d	AP09	LST	K185	71	72.5 latest Campanian
21a	AP09	HST	K180	74	73.5 Late Campanian
21b	AP09	MFS	K180	74	74 mid-Late Campanian
21c	AP09	TST	K180	74	75 early Late Campanian
21d	AP09	LST	K180	74	76 earliest Late Campanian
22a	AP09	HST	K175	78	77 latest Mid Campanian
22b	AP09	MFS	K175	78	78 late Mid Campanian
22c	AP09	TST	K175	78	78.1 late Mid Campanian?
22d	AP09	LST	K175	78	78.2 Mid Campanian?
23a	AP09	HST	K170	78.5	78.3 Mid Campanian?
23b	AP09	MFS	K170	78.5	78.5 early Mid Campanian
23c	AP09	TST	K170	78.5	79 early Mid Campanian
23d	AP09	LST	K170	78.5	79.5 earliest Mid Campanian
24a	AP09	HST	K165	82.5	80 late Early Campanian
24b	AP09	MFS	K165	82.5	82.5 mid Early Campanian
24c	AP09	TST	K165	82.5	83.5 intra-Late Santonian
24d	AP09	LST	K165	82.5	84 Mid-Late Santonian
25a	AP09	HST	K160	86	84.5 Mid Santonian
25b	AP09	MFS	K160	86	86 earliest Santonian
25c	AP09	TST	K160	86	86.25 latest Coniacian
25d	AP09	LST	K160	86	86.5 Late Coniacian
26a	AP09	HST	K150	88	87 Middle Coniacian
26b	AP09	MFS	K150	88	88 Early Coniacian
26c	AP09	TST	K150	88	90 latest Turonian
26d	AP09	LST	K150	88	90.25 late Late Turonian

27a	AP08	HST	K145	90.75	90.5 middle Late Turonian
27b	AP08	MFS	K145	90.75	90.75 early Late Turonian
27c	AP08	TST	K145	90.75	91 Mid-Late Turonian boundary
27d	AP08	LST	K145	90.75	91.25 latest Middle Turonian
28a	AP08	HST	K142	91.75	91.5 late Middle Turonian
28b	AP08	MFS	K142	91.75	91.75 Middle Turonian
28c	AP08	TST	K142	91.75	92 early Middle Turonian
28d	AP08	LST	K142	91.75	92.4 earliest Middle Turonian
29a	AP08	HST	K140	93.9	92.5 latest Early Turonian
29b	AP08	MFS	K140	93.9	93.9 Turonian-Cenomanian boundary
29c	AP08	TST	K140	93.9	94 latest Cenomanian
29d	AP08	LST	K140	93.9	94.5 mid Late Cenomanian
30a	AP08	HST	K135	95.4	95 early Late Cenomanian
30b	AP08	MFS	K135	95.4	95.4 Mid-Late Cenomanian bdy
30c	AP08	TST	K135	95.4	95.5 latest Middle Cenomanian
30d	AP08	LST	K135	95.4	95.6 late Middle Cenomanian
31a	AP08	HST	K132	96	95.7 mid Middle Cenomanian
31b	AP08	MFS	K132	96	96 early Middle Cenomanian
31c	AP08	TST	K132	96	96.2 early Middle Cenomanian
31d	AP08	LST	K132	96	96.4 early Middle Cenomanian
32a	AP08	HST	K130	97	96.5 earliest Middle Cenomanian
32b	AP08	MFS	K130	97	97 late Early Cenomanian
32c	AP08	TST	K130	97	97.25 late Early Cenomanian
32d	AP08	LST	K130	97	97.5 late Early Cenomanian
33a	AP08	HST	K120	100	98.5 mid Early Cenomanian
33b	AP08	MFS	K120	100	100 Early Cenomanian
33c	AP08	TST	K120	100	100.25 earliest Cenomanian
33d	AP08	LST	K120	100	100.5 Albian-Cenomanian Boundary
34a	AP08	HST	K115	101	100.75 very latest Albian
34b	AP08	MFS	K115	101	101 late Late Albian
34c	AP08	TST	K115	101	101.25 early mid Late Albian
34d	AP08	LST	K115	101	101.5 earliest mid Late Albian
35a	AP08	HST	K110	102	101.75 latest early Late Albian
35b	AP08	MFS	K110	102	102 early Late Albian
35c2	AP08	TST	K110	102	102.25 earliest Late Albian
35d	AP08	LST	K110	102	102.5 Mid-Late Albian boundary
36a	AP08	HST	K100	106	103 late Middle Albian
36b	AP08	MFS	K100	106	106 Middle Albian
36c	AP08	TST	K100	106	106.5 early Middle Albian
36d	AP08	LST	K100	106	107 Early-Middle Albian bdy
37a	AP08	HST	K90	111	108 Early Albian
37b	AP08	MFS	K90	111	111 Earliest Albian
37c	AP08	TST	K90	111	113 Albian/Aptian bdy
37d	AP08	LST	K90	111	113.5 Latest Aptian
38a	AP08	HST	K85	115	114 Late Aptian, late Gargasian
38b	AP08	MFS	K85	115	115 Late Aptian, mid Gargasian
38c	AP08	TST	K85	115	115.5 Late Aptian, mid Gargasian
38d	AP08	LST	K85	115	118.5 Late Aptian, intra-Gargasian
39a	AP08	HST	K80	123	119 Late Aptian, early Gargasian
39b	AP08	MFS	K80	123	123 Early Aptian, mid Bedoulian
39c	AP08	TST	K80	123	123.5 Early Aptian, mid Bedoulian
39d	AP08	LST	K80	123	123.75 Early Aptian, mid Bedoulian
40a	AP08	HST	K70	125	124 Early Aptian, early Bedoulian
40b	AP08	MFS	K70	125	125 Early Aptian, early Bedoulian

40c	AP08	TST	K70	125	125.5 earliest Aptian
40d	AP08	LST	K70	125	125.75 Aptian/Barremian boundary
41a	AP08	HST	K60	127	126 Late Barremian
41b	AP08	MFS	K60	127	127 early Late Barremian
41c	AP08	TST	K60	127	127.2 mid Late Barremian
41d	AP08	LST	K60	127	127.5 Middle Barremian
42a	AP08	HST	K50	129	128 late Early Barremian
42b	AP08	MFS	K50	129	129 mid Early Barremian
42c	AP08	TST	K50	129	129.5 early Early Barremian
42d	AP08	LST	K50	129	130 Hauterivian/Barremian boundary
43a	AP08	HST	K40	131	130.5 late Late Hauterivian
43b	AP08	MFS	K40	131	131 early Late Hauterivian
43c	AP08	TST	K40	131	132 Middle Hauterivian
43d	AP08	LST	K40	131	134 Late Valanginian
44a	AP08	HST	K30	138	135 Middle Valanginian
44b	AP08	MFS	K30	138	138 early Middle Valanginian
44c	AP08	TST	K30	138	139 Early Valanginian
44d	AP08	LST	K30	138	140 Valanginian/Berriasian boundary
45a	AP08	HST	K20	142	141 Latest Berriasian
45b	AP08	MFS	K20	142	142 Late Berriasian
45c	AP08	TST	K20	142	142.2 early Late Berriasian
45d	AP08	LST	K20	142	142.25 earliest Late Berriasian
46a	AP08	HST	K15	143	142.5 late Middle Berriasian
46b	AP08	MFS	K15	143	143 Mid Berriasian
46c	AP08	TST	K15	143	143.1 early Middle Berriasian
46d	AP08	LST	K15	143	143.25 earliest Middle Berriasian
47a	AP08	HST	K10	144	143.5 latest Early Berriasian
47b	AP08	MFS	K10	144	144 late Early Berriasian
47c	AP08	TST	K10	144	144.5 mid Early Berriasian
47d	AP08	LST	K10	144	144.8 early Early Berriasian
48a	AP08	HST	J110	147	145 Berriasian/Tithonian boundary
48b	AP08	MFS	J110	147	147 Late Tithonian
48c1	AP08	late TST	J110	147	147.1 Late Tithonian
48c2	AP08	ey TST	J110	147	147.2 Late Tithonian
48d	AP08	LST	J110	147	147.3 Late Tithonian
49a	AP07	HST	J105	147.5	147.4 Late Tithonian
49b	AP07	MFS	J105	147.5	147.5 Late Tithonian
49c1	AP07	late TST	J105	147.5	147.6 Late Tithonian
49c2	AP07	ey TST	J105	147.5	147.7 Late Tithonian
49d	AP07	LST	J105	147.5	147.8 Late Tithonian
50a	AP07	HST	J100	148	147.9 Late Tithonian
50b	AP07	MFS	J100	148	148 Late Tithonian
50c1	AP07	late TST	J100	148	148.1 Late Tithonian
50c2	AP07	ey TST	J100	148	148.2 Late Tithonian
50d	AP07	LST	J100	148	148.4 Late Tithonian
51a	AP07	HST	J90	149	148.5 Middle Tithonian
51b	AP07	MFS	J90	149	149 Middle Tithonian
51c1	AP07	late TST	J90	149	149.1 Middle Tithonian
51c2	AP07	ey TST	J90	149	149.2 Middle Tithonian
51d	AP07	LST	J90	149	149.4 Middle Tithonian
52a	AP07	HST	J80	150	149.5 Middle Tithonian
52b	AP07	MFS	J80	150	150 Early Tithonian
52c1	AP07	late TST	J80	150	150.1 Early Tithonian
52c2	AP07	ey TST	J80	150	150.2 earliest Tithonian

52d	AP07	LST	J80	150	152.1	Tithonian-Kimmeridgian Boundary
53a	AP07	HST	J70	154	152.5	Latest Kimmeridgian
53b	AP07	MFS	J70	154	154	Middle Kimmeridgian
53c	AP07	TST	J70	154	155	Early Kimmeridgian
53d	AP07	LST	J70	154	157	earliest Kimmeridgian
54a	AP07	HST	J60	159	157.5	Latest Oxfordian
54b	AP07	MFS	J60	159	159	Late Oxfordian
54c	AP07	TST	J60	159	159.25	Late Oxfordian
54d	AP07	LST	J60	159	159.5	Late Oxfordian
55a	AP07	HST	J50	162	160	Middle-Late Oxfordian bdry
55b	AP07	MFS	J50	162	162	late Middle Oxfordian
55c	AP07	TST	J50	162	163	early Middle Oxfordian
55d	AP07	LST	J50	162	164	Callovian-Oxfordian bdry
56a	AP07	HST	J40	165	164.5	Late Callovian
56b	AP07	MFS	J40	165	165	Middle-Late Callovian
56c	AP07	TST	J40	165	165.5	Middle Callovian
56d	AP07	LST	J40	165	166	Earliest Callovian
57a	AP07	HST	J30	167.6	166.5	Callovian/Bathonian bdry
57b	AP07	MFS	J30	167.6	167.6	Early Bathonian
57c	AP07	TST	J30	167.6	168	Late Bajocian
57d	AP07	LST	J30	167.6	168.5	Middle Bajocian
58a	AP07	HST	J20	169.6	169	Early Bajocian
58b	AP07	MFS	J20	169.6	169.6	Earliest Bajocian
58c	AP07	TST	J20	169.6	170.3	Bajocian/Aalenian boundary
58d	AP07	LST	J20	169.6	171	latest Aalenian
59a	AP07	HST	J18	173	172	Late Aalenian
59b	AP07	MFS	J18	173	173	Middle Aalenian
59c	AP07	TST	J18	173	173.5	Early Aalenian
59d	AP07	LST	J18	173	174.1	Toarcian/Aalenian boundary
60a	AP06	HST	J15	175	174.5	latest Toarcian
60b	AP06	MFS	J15	175	175	mid Late Toarcian
60c	AP06	TST	J15	175	176	early Late Toarcian
60d	AP06	LST	J15	175	177	Mid/Late Toarcian boundary
61a	AP06	HST	J10	178.4	178	late Middle Toarcian
61b	AP06	MFS	J10	178.4	178.4	Middle Toarcian
61c	AP06	TST	J10	178.4	183.7	Toarcian/Pliensbachian boundary
61d	AP06	LST	J10	178.4	183	Latest Pliensbachian
62a	AP06	HST	J05	186	184	Late Pliensbachian
62b	AP06	MFS	J05	186	186	Middle Pliensbachian
62c	AP06	TST	J05	186	188.5	Early Pliensbachian
62d	AP06	LST	J05	186	190	Earliest Pliensbachian
63a	AP06	HST	J02	196	191	Late Sinemurian
63b	AP06	MFS	J02	196	196	Middle Sinemurian
63c	AP06	TST	J02	196	199	Early Sinemurian
63d	AP06	LST	J02	196	201	Hettangian
64a	AP06	HST	TR100	208	202	Rhaetic
64b	AP06	MFS	TR100	208	208	Norian-Rhaetic boundary
64c	AP06	TST	TR100	208	210	latest Norian
64d	AP06	LST	TR100	208	212	Late Norian
65a	AP06	HST	TR90	216	213	late Middle Norian
65b	AP06	MFS	TR90	216	216	Middle Norian
65c	AP06	TST	TR90	216	218	early Middle Norian
65d	AP06	LST	TR90	216	220	late Early Norian
66a	AP06	HST	TR80	225	221	Early Norian

66b	AP06	MFS	TR80	225	225 Earliest Norian
66c	AP06	TST	TR80	225	227 Carnian-Norian boundary
66d	AP06	LST	TR80	225	229 Latest Carnian
67a	AP06	HST	TR70	236	230 early Late Carnian
67b	AP06	MFS	TR70	236	236 Early Carnian
67c	AP06	TST	TR70	236	237 earliest Carnian
67d	AP06	LST	TR70	236	238 Ladinian/Carnian boundary
68a	AP06	HST	TR60	240	239 Late Ladinian
68b	AP06	MFS	TR60	240	240 Middle-Late Ladinian
68c	AP06	TST	TR60	240	240.5 Middle Ladinian
68d	AP06	LST	TR60	240	240.75 Early-Middle Ladinian
69a	AP06	HST	TR50	242	241 Early Ladinian
69b	AP06	MFS	TR50	242	242 Anisian/Ladinian bdry
69c	AP06	TST	TR50	242	242.5 latest Anisian
69d	AP06	LST	TR50	242	243 Late Anisian
70a	AP06	HST	TR40	246	244 Mid-Late Anisian
70b	AP06	MFS	TR40	246	246 Middle Anisian
70c	AP06	TST	TR40	246	246.25 Earliest Anisian
70d	AP06	LST	TR40	246	246.5 Anisian/Olenekian boundary
71a	AP06	HST	TR30	247	246.75 latest Olenekian
71b	AP06	MFS	TR30	247	247 late Late Olenekian
71c1	AP06	TST(lt)	TR30	247	247.2 mid Late Olenekian
71c2	AP06	TST(ey)	TR30	247	247.3 mid Late Olenekian
71d	AP06	LST	TR30	247	247.5 earliest Late Olenekian
72a	AP06	HST	TR20	248.5	248 late Early Olenekian
72b	AP06	MFS	TR20	248.5	248.5 mid Early Olenekian
72c1	AP06	TST(lt)	TR20	248.5	249 early Early Olenekian
72c2	AP06	TST(ey)	TR20	248.5	249.3 early Early Olenekian
72d	AP06	LST	TR20	248.5	249.5 Earliest Olenekian
73a	AP06	HST	TR10	250.5	250 Late Induan
73b	AP06	MFS	TR10	250.5	250.5 Middle Induan
73c	AP06	TST	TR10	250.5	251 P-T boundary
73d	AP06	LST	TR10	250.5	251.5 latest Changhsingian
74a	AP06	HST	P40	252.5	252 Late Changhsingian
74b	AP06	MFS	P40	252.5	252.5 Middle Changhsingian
74c	AP06	TST	P40	252.5	253.2 Early Changhsingian
74d	AP06	LST	P40	252.5	253.8 Changhsingian/Wuchipangian bdry
75a	AP06	HST	P30	258	254 Late Wuchipangian
75b	AP06	MFS	P30	258	258 Middle Wuchipangian
75c	AP06	TST	P30	258	260 Early Wuchipangian
75d	AP06	LST	P30	258	261 Late Capitanian
76a	AP06	HST	P20	266	265 Early Capitanian
76b	AP06	MFS	P20	266	266 Late Wordian
76c	AP06	TST	P20	266	267 Early Wordian
76d	AP06	LST	P20	266	269 Middle Roadian
77a	AP05	HST	P15	277	270 latest Artinskian
77b	AP05	MFS	P15	277	277 Late Artinskian
77c	AP05	TST	P15	277	282 Early Artinskian
77d	AP05	LST	P15	277	284 earliest Artinskian
78a	AP05	HST	P10	290	286 Latest Sakmarian
78b	AP05	MFS	P10	290	290 Middle Sakmarian
78c	AP05	TST	P10	290	292 late Early Sakmarian
78d	AP05	LST	P10	290	294 Early Sakmarian
79a	AP05	HST	C30	307	295 Late Asselian

79b	AP05	MFS	C30	307	307 Moscovian/Sakmarian bdry
79c	AP05	TST	C30	307	307.5 Latest Moscovian
79d	AP05	LST	C30	307	308 Late Moscovian
80a	AP04	HST	C20	325	309 Early Moscovian
80b	AP04	MFS	C20	325	325 Mid Serpukhovian
80c	AP04	TST	C20	325	325.5 Mid Serpukhovian
80d	AP04	LST	C20	325	326 Early Serpukhovian
81a	AP04	HST	C10	333	327 Earliest Serpukhovian
81b	AP04	MFS	C10	333	333 early Late Visean
81c	AP04	TST	C10	333	333.5 earliest Late Visean
81d	AP04	LST	C10	333	334 latest Mid Visean
82a	AP04	HST	C08	342	335 Mid Visean
82b	AP04	MFS	C08	342	342 Tournaisian/Visean boundary
82c	AP04	TST	C08	342	342.5 Latest Tournaisian CM zone
82d	AP04	LST	C08	342	343 Latest Tournaisian CM zone
83a	AP04	HST	C06	345	344 Tournaisian CM zone
83b	AP04	MFS	C06	345	345 Tournaisian CM zone
83c	AP04	TST	C06	345	345.5 Tournaisian CM zone
83d	AP04	LST	C06	345	346 Tournaisian CM zone
84a	AP04	HST	C04	350	347 Tournaisian PC zone
84b	AP04	MFS	C04	350	350 Tournaisian PC zone
84c	AP04	TST	C04	350	350.5 Tournaisian PC zone
84d	AP04	LST	C04	350	351 Tournaisian PC zone
85a	AP04	HST	C02	352	351.5 Tournaisian PC zone
85b	AP04	MFS	C02	352	352 Tournaisian IV zone
85c	AP04	TST	C02	352	352.5 Tournaisian IV zone
85d	AP04	LST	C02	352	353 Tournaisian IV zone
86a	AP04	HST	D30	354	353.5 Tournaisian IV zone
86b	AP04	MFS	D30	354	354 Famennian/Tournaisian bdry
86c	AP04	TST	D30	354	354.5 Latest Famennian
86d	AP04	LST	D30	354	355 late Late Famennian
87a	AP04	HST	D25	356	355.5 mid Late Famennian
87b	AP04	MFS	D25	356	356 Late Famennian
87c	AP04	TST	D25	356	356.5 early Late Famennian
87d	AP04	LST	D25	356	357 earliest Late Famennian
88a	AP03	HST	D20	402	392 Late Eifelian
88b	AP03	MFS	D20	402	402 late Late Emsian
88c	AP03	TST	D20	402	402.5 early Late Emsian
88d	AP03	LST	D20	402	403 Mid Emsian
89a	AP03	HST	D10	408	404 Early Emsian
89b	AP03	MFS	D10	408	408 late Late Praghian
89c	AP03	TST	D10	408	408.5 early Late Praghian
89d	AP03	LST	D10	408	409 Early Praghian
90a	AP03	HST	S20	420	411 Late Lockhovian
90b	AP03	MFS	S20	420	420 Late Pridoli
90c	AP03	TST	S20	420	420.5 Late Ludlow
90d	AP03	LST	S20	420	421 Early Ludlow
91a	AP03	HST	S15	429	422 Late Wenlock
91b	AP03	MFS	S15	429	429 latest Llandovery (Telchyan)
91c	AP03	TST	S15	429	429.5 latest Llandovery (early Telchyan)
91d	AP03	LST	S15	429	430 Late Llandovery (Telychian/Fronian boundary)
92a	AP03	HST	S10	440	431 Mid Llandovery (Fronian)
92b	AP03	MFS	S10	440	440 Early Llandovery
92c	AP03	TST	S10	440	444 earliest Llandovery

92d	AP03	LST	S10	440	445.6 Hirnantian
93a	AP02	HST	O40	453	446 Katian
93b	AP02	MFS	O40	453	453 Katian
93c	AP02	TST	O40	453	457 Sandbian
93d	AP02	LST	O40	453	458 Sandbian
94a (1	AP02	HST	O30	465	459 Darriwillian
94b	AP02	MFS	O30	465	465 Darriwillian
94c	AP02	TST	O30	465	465.5 Darriwillian
94d	AP02	LST	O30	465	469 Dapingian
95a	AP02	HST	O20	477	470 Floian
95b	AP02	MFS	O20	477	477 Floian
95c	AP02	TST	O20	477	478 early Late Tremadoc
95d	AP02	LST	O20	477	480 late Middle Tremadoc
96a	AP02	HST	O10	484	481 early Middle Tremadoc
96b	AP02	MFS	O10	484	484 earliest Tremadoc
96c	AP02	TST	O10	484	487 Cm Stage 10
96d	AP02	LST	O10	484	488 Cm Stage 10
97a	AP02	HST	Cm30	498	489 Pabian-Jiangshanian
97b	AP02	MFS	Cm30	498	498 U. Guzhangian
97c	AP02	TST	Cm30	498	500 L. Guzhangian
97d	AP02	LST	Cm30	498	501 U. Drumian
98a	AP02	HST	Cm25	504	502 M. Drumian
98b	AP02	MFS	Cm25	504	504 L. Drumian
98c	AP02	TST	Cm25	504	504.5 Stage 5/Drumain boundary
98d	AP02	LST	Cm25	504	505 Cm U. Stage 5
99a	AP02	HST	Cm20	510	506 Cm L. Stage 5
99b	AP02	MFS	Cm20	510	510 Cm U. Stage 4
99c	AP02	TST	Cm20	510	511 Cm U Stage 4
99d	AP02	LST	Cm20	510	512 Cm U. Stage 4
100a	AP02	HST	Cm15	518	513 Cm L. Stage 4
100b	AP02	MFS	Cm15	518	518 Cm U. Stage 3
100c	AP02	TST	Cm15	518	519 Cm L. Stage 3
100d	AP02	LST	Cm15	518	525 Cm U. Stage 2
101a	AP01	HST	Cm10	537	527 Cm L Stage 2/U.Furtonian
101b	AP01	MFS	Cm10	537	537 L. Furtonian
101c	AP01	TST	Cm10	537	541 Pc-Cm boundary
101d	AP01	LST	Cm10	537	548 latest Ediacaran
102a	AP01	HST	Pc20	556	580 Ediacaran/Dozon 38, 39
102b	AP01	MFS	Pc20	580	580 Ediacaran/Dozon 40B,C
102c	AP01	TST	Pc20	590	580 Ediacaran/Dozon 40A, Orbiton 41
102d	AP01	LST	Pc20	600	580 Ediacaran/Orbiton 42
103a	AP01	HST	Pc10	610	620 Ediacaran/Orbiton 43
103b	AP01	MFS	Pc10	620	620
103c	AP01	TST	Pc10	625	620
103d	AP01	LST	Pc10	630	620
104a	AP01	HST	Pc05	635	640
104b	AP01	MFS	Pc05	640	640
104c	AP01	TST	Pc05	654	640
104d	AP01	LST	Pc05	660	640
105a1		HST	Najd	670	
105a2		HST	Najd	680	650 orogeny (2)
105b		MFS	Najd	690	maximum rifting
105c		TST	Najd	740	onset rifting
105d		LST	Najd	880	thermal doming