

APPENDIX A – Tables

The location of each Region Number listed in Table I is shown on the Tectonic Regions image on the main page. The Stage Pole files are listed in Table II below and available as digital files accessed through the main page.

Table I Plates and Regions

Region Number	Antarctic Plate	Subsidence Rate ⁽¹⁾		Stage Pole File
	Description	Value (m/√my)	Reference	
1	Southeast Indian Abyssal Plain	270	calc.	-
2	Southeast Indian - West of the Kerguelen Plateau	270	calc.	-
3	Southwest Indian Ocean	350	calc.	-
4	Weddell Sea	410	calc.	-
5	Drake passage	260	calc.	-
6	Northern Bellingshausen Plain	375	calc.	-
7	South of the Chile Ridge	260	calc.	-
8	Amundsen Abyssal Plain	340	calc.	-
22	Antarctic continent	Not applicable	(na)	-
25	Scotia Sea - central Drake Plateau	270	calc.	sam_ant_pole.d
25	Scotia Sea - southern Drake Plateau	270	calc.	sam_ant_pole.d, scotia_sam_pole.dz
25	Scotia Sea - Discovery Island	270	calc.	sam_ant_pole.d, scotia_sam_pole.dz, discovery_pole.d
25	Scotia Sea - South Georgia Island	270	calc.	sam_ant_pole.d, scotia_sam_pole.dz, georgia_pole.d
25	Scotia Sea - Herdman Seamount	270	calc.	sam_ant_pole.d, scotia_sam_pole.dz, herdman_pole.d
25	Scotia Sea - Orkney Islands	270	calc.	sam_ant_pole.d, scotia_sam_pole.dz, orkney_pole.d
25	Scotia Sea - Shag Rocks	270	calc.	sam_ant_pole.d, scotia_sam_pole.dz, shagrocks_pole.d
27	Kerguelen Plateau	330	(2)	-
	Subducted crust	480	calc.	cz_weddell_ant_pole.d3
	Subducted crust	480	calc.	cz_weddell_ant_pole.d3
	Subducted crust	480	calc.	cz_sandwich_ant_pole.d3

Table I Plates and Regions, continued

Region Number	Australian Plate Description	Subsidence Rate ⁽¹⁾		Stage Pole File
		Value (m/√my)	Reference	
15	South Australian Basin	310	(3) (#23)	australia_pole.dz
16	Western Tasman Sea	350	calc.	australia_pole.dz
17	Eastern Tasman Sea	270	calc.	australia_pole.dz, lord_australia_pole.dz
18	Australian continent	na	na	australia_pole.dz
19	Lord Howe Rise	na	na	australia_pole.dz, lord_australia_pole.dz
coast	Australian coastline	na	na	australia_pole.dz
coast	Tasmanian coastline	na	na	australia_pole.dz

Region Number	African Plate Description	Subsidence Rate ⁽¹⁾		Stage Pole File
		Value (m/√my)	Reference	
13	S. Atlantic ocean - Africa	290	(4) (#16)	africa_pole.dz
14	SW Indian ocean - Africa	279	(4) (#20)	africa_pole.dz
26	Africa continent	na	na	africa_pole.dz
coast	Africa coastline	na	na	africa_pole.dz

Region Number	South American Plate Description	Subsidence Rate ⁽¹⁾		Stage Pole File
		Value (m/√my)	Reference	
12	South Atlantic	389	(5) (#15)	sam_ant_pole.dz
23	South American continent	na	na	sam_ant_pole.dz
coast	South American coastline	na	na	sam_ant_pole.dz

Region Number	Pacific Plate Description	Subsidence Rate ⁽¹⁾		Stage Pole File
		Value (m/√my)	Reference	
9	Southwest Pacific Basin	369	(6) (#29)	pacific_pole.dz
10	South Pacific	301	(6) (#28)	pacific_pole.dz
20	Campbell Plateau	na	na	australia_pole.dz
-	Subducted crust - western Pacific	369	(6) (#29)	pacific_pole.dz

Table I Plates and Regions, continued

Region Number	Nazca Plate Description (7)	Subsidence Rate ⁽¹⁾		Stage Pole File
		Value (m/√my)	Reference	
11	Chile Basin	255	(8) (#31)	naz_ant_pole.dz
-	Subducted crust - Chilean ridge	255	(8) (#31)	cz_nazca_pacific_pole.dz, pacific_pole.dz
-	Subducted crust - east Nazca	255	(8) (#31)	cz_nazca_pacific_pole.dz, pacific_pole.dz
-	Subducted crust - southeast Nazca	255	(8) (#31)	na

Region ⁽⁹⁾ Number	Indian Ocean Description	Subsidence Rate ⁽¹⁾		Stage Pole File
		Value (m/√my)	Reference	
44	W. Indian Ocean (N. of 30°S)	240	calc.	africa_pole.dz
45	E. Indian Ocean (N. of 30°S)	320	calc.	australia_pole.dz
46	Central Indian Ocean (N. of 30°S)	320	calc.	india_pole.dz
47	S. Central Indian Ocean (N. of 30°S)	320	calc.	india_pole.dz
48	Indian subcontinent	na	na	india_pole.dz

(1) "calc" indicates that the subsidence rate was calculated from the data; (2) Coffin (1992); (3) (#23) refers to region #23 of Marty and Cazenave (1989); (4) (#16) and (#20) refer to regions 16 and 20 respectively of Marty and Cazenave (1989); (5) (#15) refers to region 15 of Marty and Cazenave (1989); (6) (#28) and (#29) refer to regions 28 and 29 respectively of Marty and Cazenave (1989); (7) Three different subducted regions are required to recreate the bathymetry; (8) (#31) refers to region 31 of Marty and Cazenave (1989); (9) There are areas in the Indian Ocean, currently outside the study area (i.e. north of 30°S), that rotate into the study area in the older reconstructions and must therefore be included in the initial database.

Table II Stage Poles

Longitude and latitude in degrees. Negative values for west longitude and south latitude.
 Angle in degrees. Age in millions of years.

./p0/cz_sandwich_ant_pole.d3

Longitude	Latitude	Angle	Age
-26.9431	82.9374	0.5260	1.9
-18.0575	76.2202	1.3282	5.9
5.8194	71.3820	1.5533	10.6
9.9526	19.9043	1.5610	14.0
-8.4151	24.5682	1.9450	26.0
-25.2948	26.4387	1.9814	33.0
5.5374	21.9426	2.8435	49.0
55.9476	2.9574	1.1635	62.0
20.4367	17.6867	2.0180	79.1
59.3892	55.2410	1.2741	83.0
59.3892	55.2410	21.8200	160.0

./p0/cz_weddell_ant_pole.d3

Longitude	Latitude	Angle	Age
9.9526	19.9043	0.0000	10.6
9.9526	19.9043	1.5610	14.0
-8.4151	24.5682	1.9450	26.0
-25.2948	26.4387	1.9814	33.0
5.5374	21.9426	2.8435	49.0
55.9476	2.9574	1.1635	62.0
20.4367	17.6867	2.0180	79.1
59.3892	55.2410	1.2741	83.0
59.3892	55.2410	21.8200	160.0

./p0/discovery_pole.d

Longitude	Latitude	Angle	Age
-45.0000	-65.0000	35.0000	10.0
-60.0000	-65.0000	8.0000	20.0
-50.0000	-50.0000	9.0000	30.0
-50.0000	-50.0000	0.0000	40.0

./p0/georgia_pole.d

Longitude	Latitude	Angle	Age
-37.0000	-54.0000	-90.0000	10.0
-20.0000	-60.0000	19.0000	20.0
-20.0000	-60.0000	0.0000	30.0

./p0/herdman_pole.d

Longitude	Latitude	Angle	Age
-45.0000	-65.0000	41.0000	10.0
-60.0000	-70.0000	5.0000	20.0
-30.0000	-60.0000	-2.0000	30.0
-30.0000	-60.0000	0.0000	40.0

./p0/orkney_pole.d

Longitude	Latitude	Angle	Age
-44.5000	-61.4000	56.0000	10.0
-70.0000	-65.0000	13.8000	20.0
-55.0000	-65.0000	-23.0000	30.0
-55.0000	-65.0000	0.0000	40.0

./p0/sam_ant_pole.d

Longitude	Latitude	Angle	Age
-26.9431	82.9374	0.5260	1.9
-18.0574	76.2202	1.3282	5.9
5.8194	71.3820	1.5533	10.6
-0.3303	71.1611	2.8359	20.0
-1.3942	71.6037	0.1518	20.5
3.5501	80.6555	2.1154	27.7
-133.3920	73.9880	2.6967	35.5
-157.4680	69.1272	0.8156	37.7
82.6240	65.6445	2.5744	46.2
147.2850	66.4121	1.2514	49.6
-175.6130	78.9318	2.6801	56.1
-141.5910	84.4089	2.0830	60.8
175.7190	81.4942	1.6528	64.0
-108.5170	86.8084	0.1764	64.3
-20.9814	81.7234	1.0167	66.2
25.6782	49.8053	0.8753	68.4
139.8690	65.7042	2.2345	71.7
161.4260	80.1142	4.495	80.2
138.2430	41.1662	1.3767	84.0
82.9348	52.7224	6.9871	116.0

./p0/scotia_sam_pole.dz

Longitude	Latitude	Angle	Age
-25.7371	-3.6454	0.0000	10.0
-25.7371	-3.6454	-3.9000	20.0
-40.0000	-70.0000	38.0000	30.0
-40.0000	-70.0000	0.0000	40.0

./p0/shagrocks_pole.d

Longitude	Latitude	Angle	Age
-50.0000	-50.0000	0.0000	20.0
-60.0000	-60.0000	-8.4000	30.0
-60.0000	-60.0000	0.0000	40.0

./p1/australia_pole.dz

Longitude	Latitude	Angle	Age
37.7000	13.3000	-6.6200	10.5
29.9050	16.4320	-5.4140	20.5
32.2790	11.8860	-5.7400	30.0
32.2790	11.8860	-2.8900	35.5
15.4320	37.3610	-3.5940	42.0
-134.9700	32.3900	1.1050	46.2
-162.9040	6.7110	1.0920	56.1
-108.3980	60.4720	2.5420	68.5
118.5770	58.1660	1.5300	80.2
68.7620	11.0480	-13.2970	84.0
-76.8900	20.3320	15.3660	96.0

./p1/lord_australia_pole.dz

Longitude	Latitude	Angle	Age
10.0000	10.0000	0.0000	50.0
138.5000	1.0000	-1.4800	60.0
138.5000	1.0000	-0.6000	65.0
-38.3800	10.0750	4.0630	69.0
-38.1270	17.7350	6.2240	75.0
-37.8830	19.3580	6.2910	82.0
-38.0000	14.0000	4.0000	90.0

./p2/africa_pole.dz

Longitude	Latitude	Angle	Age
-36.4100	18.5500	-0.3300	1.9
-45.0080	3.3730	-0.5000	5.9
-64.4850	6.7660	-0.6490	10.6
-58.8590	18.4340	-1.3650	20.5
-44.3800	14.1430	-1.2240	27.7
-9.8440	0.1940	-2.7320	37.7
-65.7310	16.5750	-2.0820	46.2
-35.9800	1.9290	-0.9800	49.6
156.4950	15.5900	1.3860	56.1
156.2450	31.0950	0.8550	60.8
152.7140	38.1860	0.9270	64.3
136.5100	36.7180	0.3380	66.2
-103.0390	25.7680	-0.5990	68.4
142.5090	21.4500	1.7510	71.7
151.2330	17.7830	2.7100	80.2
-38.5660	20.7220	-1.9820	84.0

./p3/sam_ant_pole.dz

Longitude	Latitude	Angle	Age
-26.9431	82.9374	0.5260	1.9
-17.0766	76.1391	1.3285	5.9
7.2915	70.8409	1.5564	10.6
2.1472	69.9682	2.8408	20.0
2.4443	69.3585	0.1521	20.5
9.5334	78.1502	2.1054	27.7
-150.3290	72.6414	2.6768	35.5
-130.9270	81.8610	1.2975	37.7
41.7975	72.5103	1.2407	40.0
71.7672	51.3470	2.1938	46.2
110.1100	61.7130	1.2886	49.6
100.2410	77.9509	0.1635	50.0
129.8310	78.5297	2.3588	56.1
91.6015	83.7335	1.6283	60.0
107.2770	80.8413	0.2793	60.8
123.4510	75.7064	1.3673	64.0
93.7731	79.2089	0.1383	64.3
49.5806	73.3780	0.7828	66.2
44.2258	27.0639	0.8168	68.4
124.9060	53.0208	1.9787	71.7
116.2250	65.8198	3.5278	80.2
120.0010	14.0261	1.4465	84.0

./p4/cz_nazca_pacific_pole.dz

Longitude	Latitude	Angle	Age
-89.4300	58.8600	-7.3920	4.7
-89.7620	61.1150	-9.6130	10.6
-90.7550	68.7500	-27.1902	25.8
-156.7070	69.7670	-7.3674	30.0
137.5790	82.0220	-7.0314	35.7
127.5740	76.7080	-8.3754	42.0
127.4550	76.7100	-3.2962	49.6
127.6680	76.6910	-5.5787	58.9
127.4540	76.7340	-3.3410	64.3
128.0450	76.7380	-2.6253	69.0
127.7020	76.7070	-6.9462	84.0

./p4/naz_ant_pole.dz

Longitude	Latitude	Angle	Age
-94.0049	46.5276	-2.5706	4.7
-94.1766	44.0774	-6.4132	10.6
-96.0278	55.7102	-20.3552	25.8
-106.7210	54.2515	-23.4173	30.0
-117.0060	55.7481	-25.4127	35.7
-130.5160	57.4747	-29.4042	42.0
-137.3740	54.3392	-28.7086	49.6
-144.9170	48.3781	-28.2956	58.9
-151.0320	45.6167	-29.3101	64.3
-151.7820	37.0639	-28.7553	69.0
-159.5190	28.1418	-31.2411	84.0

./p4/pacific_pole.dz

Longitude	Latitude	Angle	Age
-83.5000	66.2000	4.1300	4.7
-74.2460	73.9390	5.0940	10.6
-66.5540	75.5980	10.4290	25.8
-47.7190	77.6040	3.5430	30.0
-46.8760	73.5900	3.9810	35.7
-52.4270	66.0250	3.1450	42.0
-53.1690	67.6640	4.2520	49.6
-53.4950	71.5300	6.7360	58.9
-53.8120	51.0670	3.2890	64.3
-15.7800	71.8900	5.8460	69.0
-52.3510	55.1980	8.7480	84.0
-5.7430	55.5050	5.1380	90.0

./p5/australia_pole.dz

Longitude	Latitude	Angle	Age
37.7000	13.3000	-6.6200	10.5
26.9050	16.4320	-5.4140	20.5
32.2790	11.8860	-5.7400	30.0
32.2790	11.8860	-2.8900	35.5
15.4320	37.3610	-3.5940	42.0
-134.9700	32.3900	1.1050	46.2
-162.9040	6.7110	1.0920	56.1
-108.3980	60.4720	2.5420	68.5
118.5770	58.1660	1.5300	80.2
68.7620	11.0480	-13.2970	84.0
-76.8900	20.3320	15.3660	96.0

./p5/pacific_pole.dz

Longitude	Latitude	Angle	Age
-83.5000	66.2000	4.1300	4.7
-74.2460	73.9390	5.0940	10.6
-66.5540	75.5980	10.4290	25.8
-47.7190	77.6040	3.5430	30.0
-46.8760	73.5900	3.9810	35.7
-52.4270	66.0250	3.1450	42.0
-53.1690	67.6640	4.2520	49.6
-53.4950	71.5300	6.7360	58.9
-53.8120	51.0670	3.2890	64.3
-15.7800	71.8900	5.8460	69.0
-52.3510	55.1980	8.7480	84.0
-5.7430	55.5050	5.1380	90.0

./indian/africa_pole.dz

Longitude	Latitude	Angle	Age
-36.4100	18.5500	-0.3300	1.9
-45.0080	3.3730	-0.5000	5.9
-64.4850	6.7660	-0.6490	10.6
-58.8590	18.4340	-1.3650	20.5
-44.3800	14.1430	-1.2240	27.7
-9.8440	0.1940	-2.7320	37.7
-65.7310	16.5750	-2.0820	46.2
-35.9800	1.9290	-0.9800	49.6
156.4950	15.5900	1.3860	56.1
156.2450	31.0950	0.8550	60.8
152.7140	38.1860	0.9270	64.3
136.5100	36.7180	0.3380	66.2
-103.0390	25.7680	-0.5990	68.4
142.5090	21.4500	1.7510	71.7
151.2330	17.7830	2.7100	80.2
-38.5660	20.7220	-1.9820	84.0

./indian/australia_pole.dz

Longitude	Latitude	Angle	Age
37.7000	13.3000	-6.6200	10.5
26.9050	16.4320	-5.4140	20.5
32.2790	11.8860	-5.7400	30.0
32.2790	11.8860	-2.8900	35.5
15.4320	37.3610	-3.5940	42.0
-134.9700	32.3900	1.1050	46.2
-162.9040	6.7110	1.0920	56.1
-108.3980	60.4720	2.5420	68.5
118.5770	58.1660	1.5300	80.2
68.7620	11.0480	-13.2970	84.0
-76.8900	20.3320	15.3660	96.0

./indian/india_pole.dz

<u>Longitude</u>	<u>Latitude</u>	<u>Angle</u>	<u>Age</u>
37.7000	13.3000	-6.6200	10.5
26.9050	16.4320	-5.4140	20.5
32.2790	11.8860	-5.7400	30.0
32.2790	11.8860	-3.4600	35.5
15.4320	37.3610	-3.6100	42.7
11.2000	7.5000	-2.4300	46.2
8.3000	-3.0000	-3.8400	50.0
8.3000	-3.0000	-8.0600	56.1
9.2000	-2.5000	-7.2800	60.0
9.2000	3.5000	-10.9700	68.5
3.4000	-2.9000	-10.6500	80.2
13.5000	-0.1000	-2.9500	85.0