

TABLE DR1. SINUOSITY AND LATITUDE DATA AS REPORTED IN FIGURE 2

System	Peak Sinuosity	Latitude (degrees)	Source	Sensor type**
Almeria	2	36	Alonso and Ercilla, 2003	SIMRAD EM12
Amazon	2.5	6	Pirmez and Flood, 1995*	Seabeam
Arguello	1.54	33	Clark et al., 1992†	GLORIA S/S
Astoria	1.07	46	Clark and Pickering, 1996	GLORIA S/S
Atlantis	1.14	38	Clark et al., 1992†	GLORIA S/S
Baltimore	1.07	38	Clark et al., 1992†	GLORIA S/S
Belgica Trough Channel	1.02	70	Dowdeswell et al., 2008§	SIMRAD EM120
Bengal	3.5	16.5	Schwenk et al., 2003	Hydrosweep DS
Benin-Major	2.5	5	Deptuck et al., 2007	3D Seismic††
Bering	1.22	55	Clark and Pickering, 1996	GLORIA S/S
Cape Timiris	4.2	19	Antobreh and Krastel, 2006	Hydrosweep
Cascadia	1.41	45	Clark et al., 1992†	GLORIA S/S
DeSoto	2.2	28	Clark et al., 1992†	GLORIA S/S
Grand Banks	1.07	44	Clark et al., 1992†	GLORIA S/S
Greenland Basin	1.37	73.5	Dowdeswell et al., 2002§	SIMRAD EM120
Hudson	1.48	39	Clark et al., 1992†	GLORIA S/S
Indus a	2.45	17	Clark and Pickering, 1996	GLORIA S/S
Indus A	3.13	17	Clark et al., 1992†	GLORIA S/S
La Aguja Submarine Canyon	2.5	11.5	Restrepo-Correa and Ojeda, 2010	30 kHz MBES
Laurentian	1.22	44	Clark et al., 1992†	GLORIA S/S
Magdalena	1.6	12	Estrada et al., 2005	SIMRAD EM12
Mississippi	1.74	25	Clark et al., 1992†	GLORIA S/S
Monterey	1.6	35	Clark et al., 1992†	GLORIA S/S
NAMOC	1.125	57	Klaucke et al., 1997#	HAWAII-MR1 S/S
Pine Island Bay, Antarctica	1.07	71.3	Dowdeswell et al., 2006§	SIMRAD EM120
Pochnoi	1.07	52	Clark et al., 1992†	GLORIA
Porcupine	1.15	53	Clark et al., 1992†	GLORIA
Rhone	1.48	42	Clark et al., 1992†	GLORIA
Toyama	1.9	39.5	Nakajima et al., 1998	3.5 kHz seismic reflection§§
Umnak	1.13	54	Clark et al., 1992†	GLORIA
Zaire	5	6	Babonneau et al., 2002	SIMRAD EM12/EM300

*Note: Clark et al., (1992) and Clark and Pickering, (1996) are internally inconsistent.

†Data values from Clark et al., (1992) plot, with actual values reported in Clark and Pickering, (1996). Reach length varies for these examples which will have an effect on sinuosity estimation (see Babonneau et al., 2002).

‡Calculated using Image J.

#From their Figure 3, omitting marked areas where channel is affected by basement structure / seamounts

**Multibeam sonar (MBES) systems, or Sidescan Sonar as denoted by 'S/S'.

††Seafloor channel system imaged with 3D seismic data. Note however that a number of buried systems in the same area also have similar peak sinuosities.

§§Based on a dense grid of 3.5 kHz seismic reflection profiles and older bathymetry.

REFERENCES CITED

- Alonso, B., and Ercilla, G., 2003, Small turbidite systems in a complex tectonic setting (SW Mediterranean Sea): morphology and growth patterns: *Marine and Petroleum Geology*, v. 19, 1225-1240.
- Antobreh, A.A., and Krastel, S., 2006, Morphology, seismic characteristics and development of Cap Timiris Canyon, offshore Mauritania: a newly discovered canyon preserved-off a major arid climatic region: *Marine and Petroleum Geology*, v. 23, p. 37-59.
- Babonneau, N., Savoye, B., Cremer, M., and Klein, B., 2002, Morphology and architecture of the present canyon and channel system of the Zaire deep-sea fan: *Marine and Petroleum Geology*, v. 19, p. 445-467.
- Clark, J.D., and Pickering, K.T., 1996, *Submarine channels: Process and Architecture*, Vallis Press, London, 231 p.
- Clark, J.D., Kenyon, N.H., and Pickering, K.T., 1992, Quantitative analysis of the geometry of submarine channels: implications for the classification of submarine fans: *Geology*, v. 20, p. 633-636.
- Deptuck, M.E., Sylvester, Z., Pirmez, C., and O'Byrne, C., 2007, Migration-aggradation history and 3-D seismic geomorphology of submarine channels in the Pleistocene Benin-Major Canyon, western Niger Delta slope: *Marine and Petroleum Geology*, v. 24, p. 406-433.
- Dowdeswell, J.A., O'Cofaigh, C., Taylor, J., Kenyon, N.H., Mienert, J., and Wilken, M., 2002, On the architecture of high-latitude continental margins: the influence of ice-sheet and sea-ice processes in the Polar North Atlantic. In: Dowdeswell, J.A., and O'Cofaigh, C., (eds), *Glacier-Influenced Sedimentation on High-Latitude Continental Margins*, Geological Society, London, Special Publications, v. 203, p. 33-54.
- Dowdeswell, J.A., Evans, J., O'Cofaigh, C., and Anderson, J.B., 2006, Morphology and sedimentary processes on the continental slope off Pine Island Bay, Amundsen Sea, West Antarctica: *Geological Society of America Bulletin*, v. 118, p. 606-619.
- Dowdeswell, J.A., O'Cofaigh, C., Noormets, R., Larter, R.D., Hillenbrand, C.-D., Benetti, S., Evans, J. and Pudsey, C.J., 2008, A major trough-mouth fan on the continental margin of the Bellingshausen Sea, West Antarctica: The Beligica Fan: *Marine Geology*, v. 252, p. 129-140.
- Estrada, F., Ercilla, G. and Alonso, B., 2005, Quantitative study of Magdalena submarine channel (Caribbean Sea): implications for sedimentary dynamics: *Marine and Petroleum Geology*, v. 22, p. 623-635.
- Klaucke, I., Hesse, R., and Ryan, W.B.F., 1997, Flow parameters of turbidity currents in a low-sinuosity giant deep-sea channel: *Sedimentology*, v. 44, p. 1093-1102.
- Nakajima, T., Satoh, M., and Okamura, Y., 1998, Channel-levee complexes, terminal deep-sea fan and sediment wave fields associated with the Toyama Deep-sea Channel system in the Japan Sea: *Marine Geology*, v. 147, p. 25-41.
- Pirmez, C. and Flood, R.D., 1995. Morphology and structure of Amazon Channel: In: Flood, R.D., Piper, D.J.W., Klaus et al., (Eds.), *Proceedings of the Ocean drilling Program, Initial Reports*, v. 155, College Station, TX, p. 23-45.

Restrepo-Correa, I.C. and Ojeda, G.Y., 2010, Geologic controls on the morphology of La Aguja submarine canyon: Journal of South American Earth Sciences, v. 29, p. 861-870.

Schwenk, T., Spieß, V., Hübscher, C., Brietzke, M., 2003, Frequent channel avulsions within the active channel-levee system of the middle Bengal Fan – an exceptional channel-levee development derived from Parasound and Hydrosweep data: Deep-Sea Research Part II, v. 50, p. 1023-1045.