

Table DR1. Holocene turbidite recurrence intervals measured in cores from along the Pacific Margin of North America

Region	Study	Estimated Average Recurrence Interval of Turbidites (years)	Water Depth of Cores (m)
Barkley, Juan de Fuca, Wilapa, and Cascadia	Goldfinger et al., (2012)*	530	2376-3211
Juan de Fuca, Wilapa, and Cascadia, and Astoria and Rogue Canyon	Adams (1990)	590 +/-170	2000-2500
Astoria Canyon	Goldfinger et al., (2012)*	430	1763-3054
Hydrate Ridge	Goldfinger et al., (2012)*	320	1869-2250
Rogue Canyon	Goldfinger et al., (2012)*	240	~3100
Smith Canyon	Goldfinger et al., (2012)*	180	3093
Klamath Canyon	Goldfinger et al., (2012)*	125	3118
Trinidad Pool	Goldfinger et al., (2012)*	72	~3050
Eel Channel	Goldfinger et al., (2012)*	70	~2800
Mendocino Channel	Goldfinger et al., (2012)*	34	2620
Monterey Fan	Johnson et al., (2005)	~230	~3200
Monterey Fan	Stevens et al., (2013)	150-250	~3500
Santa Monica Basin	Romans et al., (2009)	300-360	912
Santa Monica Basin	Gorsline et al., (2000)	~470	<1012
Alfonso Basin	Gorsline et al., (2000)	~300	~420

* and earlier references

Table DR2. Location and 14C age data for samples from Eel Scours, arranged by descending water depth by ROV dive

Sample ID	Latitude (°N)	Longitude (°W)	Water Depth (m)	Depth in Core (cm)	Raw Age (yrs BP)	Error (± yrs)	Calibrated Age (yrs BP)	d ¹³ C (‰)	NOSAMS Lab Number	Foram. Sample Weight (mg)
DR283 VC-151^	40.6277	124.9676	2605.3	64-67	3080	30	1283	-1.85	OS-94330	3.42
DR283 VC-151^	40.6277	124.9676	2605.3	70-73	3600	30	1856	-0.89	OS-94323	6.93
DR283 VC-150^	40.6276	124.9706	2613.6	7-11	2270	30	523	-0.12	OS-95120	1.04
DR283 VC-150^	40.6276	124.9706	2613.6	80-84	3520	40	1764	-0.88	OS-94367	3.31
DR283 PsC-79*	40.6277	124.9713	2620.4	h	7030	30	6089	-0.64	OS-93467	8.39
DR283 PsC-5*	40.6277	124.9716	2625.9	h	9540	35	8680	-1.04	OS-99609	5 ^a
DR283 PsC-49* ^w	40.6277	124.9716	2630.6	h	7480	30	7480	-27.65	OS-99957	n.a.
DR283 PsC-55*	40.6278	124.9718	2635.8	h	10300	40	9598	-1.78	OS-99612	2 ^a
DR283 PsC-2*	40.6277	124.9718	2639.4	h	10250	40	9544	-1.34	OS-99608	3 ^a
DR283 PsC-57	40.6276	124.9718	2645.5	h	11150	40	10713	-1.42	OS-99633	7 ^a
DR283 PsC-46*	40.6276	124.9720	2650.4	h	11300	50	10923	-0.85	OS-99753	10 ^a
DR283 PsC-60*	40.6277	124.9721	2655.9	h	12000	40	11993	-2.13	OS-99631	6 ^a
DR283 PsC-60* ^w	40.6277	124.9721	2655.9	h	10050	40	10050	-27.24	OS-99961	n.a.
DR283 PsC-52*	40.6277	124.9725	2674.6	h	15300	55	16313	-1.06	OS-99611	7 ^a
DR283 PsC-52* ^w	40.6277	124.9725	2674.6	h	11150	50	11150	-23.79	OS-99960	n.a.
DR283 PsC-51*	40.6277	124.9726	2680.6	h	13200	45	13319	-0.91	OS-98487	9.80
DR283 PsC-51* ^w	40.6277	124.9726	2680.6	h	10400	45	10400	-25.38	OS-99959	n.a.
DR283 PsC-58*	40.6277	124.9728	2685.0	h	12500	50	12654	-1.22	OS-98560	5.30
DR283 PsC-62*	40.6276	124.9730	2690.5	h	12350	60	12555	-1.45	OS-99613	4 ^a
DR283 PsC-62* ^w	40.6276	124.9730	2690.5	h	11000	50	11000	-26.49	OS-99962	n.a.
DR283 PsC-65* ^w	40.6276	124.9732	2695.0	h	11200	50	11200	-26.29	OS-99965	n.a.
DR283 PsC-23*	40.6275	124.9734	2701.0	h	9550	40	8698	-1.21	OS-94322	10.92
DR283 PsC-50*	40.6267	124.9741	2707.0	h	13750	55	13880	-1.43	OS-99610	7 ^a
DR283 PsC-24* ^w	40.6265	124.9741	2707.0	h	12600	55	12600	-27.59	OS-99956	n.a.
DR283 PsC-50* ^w	40.6267	124.9741	2707.0	h	12350	55	12350	-27.10	OS-99958	n.a.
DR504 PsC-43*	40.6278	124.9473	2625.4	h	9120	35	8242	-1.31	OS-106323	6 ^a
DR504 PsC-66^	40.6277	124.9480	2603.6	h	11650	40	11285	-1.41	OS-106328	8 ^a
DR504 PsC-80*	40.6279	124.9470	2620.5	h	7690	30	6805	-1.21	OS-106334	6 ^a
DR504 PsC-69*	40.6277	124.9478	2635.5	h	12850	40	12977	-1.64	OS-106330	7 ^a
DR504 PsC-63*	40.6277	124.9485	2647.2	h	10750	35	10229	-1.17	OS-106326	8 ^a
DR504 W-1* ^w	40.6276	124.9488	2648.3	h	8930	35	8930	-25.80	OS-106336	n.a.
DR504 PsC-76*	40.6277	124.9488	2648.4	h	12550	40	12686	-1.48	OS-106332	7 ^a
DR504 PsC-64*	40.6275	124.9491	2652.4	h	7900	30	7070	-1.15	OS-106327	10 ^a
DR504 W-2* ^w	40.6276	124.9490	2652.4	h	8910	35	8910	-28.80	OS-106337	n.a.
DR504 W-3* ^w	40.6276	124.9494	2657.1	h	9490	35	9490	-21.96	OS-106338	n.a.
DR504 PsC-73*	40.6276	124.9493	2660.0	h	13350	40	13438	-1.19	OS-106331	6 ^a
DR504 PsC-68*	40.6277	124.9502	2662.9	h	13400	40	13487	-1.55	OS-106329	7 ^a
DR504 PsC-49*	40.6277	124.9495	2663.5	h	12900	40	13030	-1.34	OS-106325	10 ^a
DR504 PsC-44*	40.6279	124.9500	2664.6	h	13950	40	14085	-1.80	OS-106324	7 ^a
DR504 PsC-56* ^w	40.6279	124.9500	2664.9	h	12450	45	12450	-24.34	OS-106341	n.a.
DR507 W-4* ^w	40.6344	124.9713	2631.5	h	7260	30	7260	-24.21	OS-106513	n.a.
DR507 W-3* ^w	40.6345	124.9713	2636.4	h	8050	40	8050	-23.03	OS-106512	n.a.
DR507 PsC-54a*	40.6343	124.9718	2657.8	h	14650	50	15396	-0.68	OS-106380	6 ^a
DR507 PsC-54b*	40.6343	124.9718	2657.8	h	20100	70	22228	-0.07	OS-106381	3 ^a
DR507 PsC-54c*	40.6343	124.9718	2657.8	h	15000	50	15922	-1.98	OS-106382	10 ^a
DR507 W-2* ^w	40.6344	124.9721	2667.8	h	12400	45	12400	-22.17	OS-106511	n.a.
DR507 W-1* ^w	40.6348	124.9725	2699.3	h	13100	45	13100	-23.97	OS-106460	n.a.
DR507 PsC-66*	40.6348	124.9725	2700.2	h	13650	40	13771	-1.53	OS-106333	6 ^a

Measurements were made on mixed benthic foraminifera unless identified as wood (w). Locations of ROV dives are indicated in Figure 2 (DR283 -south side of large scour; DR504 - smaller eastern scour; DR507 -north side of large scour) and samples were collected from either the scarp face (*) or top of scarp (^) with a push core (PsC) or a vibracore (VC). Subsamples a, b, and c from DR507 PsC-54 were separated during picking into inner shelf, shelf break, and upper middle slope iassemblages, respectively. Most push cores were taken horizontally

(h) into the edge of the exposed beds on the scarp face. Some foraminiferal sample weights visually approximated (a) using picked standards. Radiocarbon ages were calculated using 5,568 years as the ^{14}C half-life and measurements on foraminifera were converted to reservoir corrected ages using the CALIB 7.0.1 program (Stuiver and Reimer 1993; <http://calib.qub.ac.uk/calib/calib.html>) with a reservoir correction of 1,750 years (Mix et al., 1999). NOSAMS – National Ocean Sciences Accelerator Mass Spectrometry. Cores and visual logs are archived at U.S. Geological Survey in Menlo Park, California under cruise numbers W-06–11-NC and W-03–13-NC (<http://walrus.wr.usgs.gov/infobank>).

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