Deep-sea sands - Valloni									
	Q	F	L	Qm	F	Lt	C/Q	P/F	Lv/L
Lamont-Doherty piston cores									
V19-284	0.5	7	92.5	0.5	7	92.5	0	0	0.98
V19-285 (35)	73.2	26.1	0.7	70.272	26.1	3.628	0.04	0.44	0
V19-285 (80)	56.6	40.9	2.5	52.6	40.9	6.5	0.07	0.43	0
V19-286	68.8	28.1	3.1	66.0	28.1	5.9	0.04	0.47	0
V23-15	63.6	26.5	9.9	57.2	26.5	16.3	0.1	0.65	0
V23-8	60	30.2	9.8	58.2	30.2	11.6	0.03	0.69	0
V24-128	19.2	37.8	43	14.6	37.8	47.6	0.24	0.8	1
V24-129	8	35.2	56.8	8.0	35.2	56.8	0	0.86	0.98
V24-131	4.1	41.3	54.6	4.1	41.3	54.6	0	0.93	0.97
V24-137	1.2	53.5	45.3	1.2	53.5	45.3	0	0.99	1
V24-153	0.3	35.2	64.5	0.3	35.2	64.5	0	0.97	1
V24-258	77.6	17	5.4	70.6	17.0	12.4	0.09	0.16	0
V24-260	88.3	9.7	2	83.0	9.7	7.3	0.06	0	0
V27-3	53.2	16.6	30.2	40.4	16.6	43.0	0.24	0.13	0.01
V27-8	47.1	31.8	21.8	42.4	31.8	26.5	0.1	0.3	0
V27-9	89.3	9.5	1.2	86.6	9.5	3.9	0.03	0	0
V27-14	55.8	27.8	16.4	47.4	27.8	24.8	0.15	0.16	0.02
V27-93	64.8	29.1	6.1	61.6	29.1	9.3	0.05	0.28	0
V27-98	50.4	29	20.6	46.4	29.0	24.6	0.08	0.57	0.78
V27-130	86.8	9.4	3.8	77.3	9.4	13.3	0.11	0	0
V28-257 (>100)	0.05	7.6	92.4	0.1	7.6	92.4	0	0	1
V28-257 (100)	0.05	5.9	94.1	0.1	5.9	94.1	0	0	1
V28-258	0.8	5.5	93.7	0.8	5.5	93.7	0	0	1
V28-264	0.2	1	98.8	0.2	1.0	98.8	0	0	1
V28-271	1.7	8.3	90	1.7	8.3	90.0	0	0	0.98
V28-272	13.1	41.6	45.4	7.7	41.6	50.8	0.41	0.73	0.98
V28-273	19.8	46.9	33.3	13.9	46.9	39.2	0.3	0.68	0.95
V28-283	3.8	18.3	77.9	3.8	18.3	77.9	0	0.9	0.99
V28-327	1.9	8.8	89.3	1.9	8.8	89.3	0	0	1
V28-357	54.8	35.4	9.8	45.5	35.4	19.1	0.17	0.47	0
V29-1	2.7	19.7	77.6	2.7	19.7	77.6	0	0.96	1
V29-19	45.1	32.3	22.6	36.1	32.3	31.6	0.2	0.4	0.01
V29-20	64	33.6	2.4	62.7	33.6	3.7	0.02	0.27	0
V29-22	54.4	35.6	10	41.3	35.6	23.1	0.24	0.37	0
RC10-84	1.7	43.9	54.4	1.7	43.9	54.4	0	0.93	0.99
RC10-87	10.1	74.6	15.3	6.9	74.6	18.5	0.32	0.78	0.99
RC12-24	22.5	39.9	37.6	12.6	39.9	47.5	0.44	0.85	0.86
RC12-25	76.6	16.2	7.2	74.3	16.2	9.5	0.03	0.68	0
RC12-41 (100)	7.4	62.8	29.8	7.4	62.8	29.8	0	0.84	0.99
RC12-41 .(146)	5.4	52.6	42	5.4	52.6	42.0	0	0.85	1
RC12-41 (210)	13.9	60.9	25.2	9.3	60.9	29.8	0.3	0.7	1.0
RC12-41 (375)	9.9	59.6	30.5	9.9	59.6	30.5	0.0	0.6	1.0
RC12-44	5.8	63.2	31.0	5.8	63.2	31.0	0.0	0.7	1.0

	Q	F	L	Qm	F	Lt	C/Q	P/F	Lv/L
Lamont-Doherty piston cores									
RC12-242	19.9	47.5	32.6	15.9	47.5	36.6	0.2	0.7	1.0
RC12-243	21.3	47.8	30.9	18.1	47.8	34.1	0.2	0.7	1.0
RC12-245	27.3	46.4	26.3	23.8	46.4	29.8	0.1	0.8	1.0
RC12-368	57.5	34.2	8.3	51.2	34.2	14.6	0.1	0.4	0.0
RC12-371	47.7	49.8	2.5	41.5	49.8	8.7	0.1	0.3	0.0
RC12-374	52.9	37.9	9.2	39.1	37.9	23.0	0.3	0.2	0.0
RC13-220	47.3	50.8	1.9	40.7	50.8	8.5	0.1	0.3	0.0
RC13-222	62.5	36.1	1.4	54.4	36.1	9.5	0.1	0.3	0.0
RC14-114	0.1	9.4	90.6	0.1	9.4	90.6	0.0	0.0	1.0
RC14-117	6.6	38.5	54.9	6.6	38.5	54.9	0.0	0.9	1.0
RC14-122	22.3	41.7	36.0	15.8	41.7	42.5	0.3	0.8	0.9
RC14-123	13.3	42.6	44.1	10.2	42.6	47.2	0.2	0.8	0.8
RC14-132	11.8	31.7	56.5	7.3	31.7	61.0	0.4	0.8	0.9
RC14-134	22.9	29.3	47.8	14.0	29.3	56.7	0.4	0.7	0.8
RC14-141	2.3	28.7	69.0	2.3	28.7	69.0	0.0	0.9	1.0
RC14-151	0.1	19.7	80.3	0.1	19.7	80.3	0.0	1.0	1.0
RG14-154	43.0	46.5	10.5	31.0	46.5	22.5	0.3	0.5	0.5
RC14-160	36.3	46.2	17.5	22.5	46.2	31.3	0.4	0.4	0.2
RC15-2	30.0	24.7	45.3	23.4	24.7	51.9	0.2	0.6	1.0
RC15-26	20.6	22.3	57.1	15.0	22.3	62.7	0.3	0.7	1.0
RC15-67	25.0	29.2	45.8	22.0	29.2	48.8	0.1	0.4	0.9
RC15-77	28.0	31.8	40.2	24.6	31.8	43.6	0.1	0.4	1.0
RC15-79	76.1	19.1	4.8	67.0	19.1	13.9	0.1	0.1	0.0
RC15-128	11.8	43.7	45.4	7.1	43.7	50.1	0.4	0.5	1.0
RC15-129	19.0	41.2	39.8	13.5	41.2	45.3	0.3	0.6	1.0
RC15-132	15.6	48.1	36.3	7.6	48.1	44.3	0.5	0.5	1.0
DSDP Samples									
87-1-2	18.3	57.8	23.9	13.5	57.8	28.7	0.26	0.67	0.89
118-2-6	75.5	20.5	4	67.2	20.5	12.3	0.11	0.21	0
131A-4-2-(10-11)	83.1	11.8	5.1	70.6	11.8	17.6	0.15	0.45	0
131A-4-2(78-79)	81.9	17	1.1	73.7	17.0	9.3	0.1	0.25	0
131A-5-2	63.2	27.7	9.1	60.7	27.7	11.6	0.04	0.27	0
173-11-3	30.2	8	61.8	13.3	8.0	78.7	0.56	0	0
174A-16-3	26.5	55.9	17.6	23.3	55.9	20.8	0.12	0.7	0.52
191-14-2-(77-78)	5.3	38.9	55.8	5.3	38.9	55.8	0	0.76	0.99
191-14-2-(118-119)	10.9	27.8	61.3	8.9	27.8	63.3	0.18	0.64	0.91
299-16-4	16.50	27.01	56.48	12.7	27.0	60.3	0.23	0.7	0.9

Valloni, R. and Maynard, J.B., 1981
Detrital modes of recent deep sea sands and their relation to tectonic setting: a first approximation.
Sedimentology, *28* (1), pp.75-83.A61

Maynard, J.B., Valloni, R. and Yu, H.S., 1982.
Composition of modern deep-sea sands from arc-related basins.
Geological Society, London, Special Publications, *10* (1), pp.551-561.

	Q	F	R	Sand Type	Basin Type
Lamont-Doherty piston cores					
V19-284	0.5	5	94.5	Vv	TE
V19-285 (35)	72.3	25.4	2.3	F	TE
V19-285 (80)	53.9	40.1	6	F	TE
V19-286	66.8	27.8	5.4	F	TE
V23-15	58.9	24.3	16.8	F	TE
V23-8	57.8	27	15.2	F	TE
V24-128	14.4	31.7	53.9	Vp	BA
V24-129	6.5	29.9	63.6	Vp	BA
V24-131	2.4	35.7	61.9	Vp	BA
V24-137	0.8	36.6	62.6	Vp	BA
V24-153	0.05	21.8	78.2	Vp	FA
V24-258	72.9	16.4	10.7	Q	TE
V24-260	84.3	9.6	6.1	Q	TE
V27-3	47	15.7	37.3	Lk	TE
V27-8	42.4	31.7	25.9	Lk	TE
V27-9	88.7	9.4	1.9	Q	TE
V27-14	48.5	27.5	24	Lk	TE
V27-93	61.7	24.5	13.8	F	TE
V27-98	48	23.7	28.3	Lp	TE
V27-130	81.5	8.1	10.4	Q	TE
V28-257 (>100)	0.05	3.2	96.8	Vv	FA
V28-257 (100)	0.05	2.3	97.7	Vv	FA
V28-258	0.8	4.4	94.8	Vv	FA
V28-264	0.2	1	98.8	Vv	BA
V28-271	1	6.7	92.3	Vv	BA
V28-272	7.7	38.8	53.5	Vk	BA
V28-273	10.6	40	49.4	Vk	BA
V28-283	2.6	15.7	81.7	Vv	FA
V28-327	0.9	8.8	90.3	Vv	BA
V28-357	48.2	30.5	21.3	F	CA
V29-1	0.05	19.7	80.3	Vv	CA
V29-19	38.1	28.2	33.7	Lk	TE
V29-20	63	33	4	F	TE
V29-22	44.7	29.9	25.4	Lk	TE
RC10-84	0.6	31.8	67.6	Vp	CA
RC10-87	6.9	69.7	23.4	Vk	CA
RC12-24	14.7	36.8	48.5	Lp	BA
RC12-25	74.5	14.5	11	Q	BA
RC12-41 (100)	5.9	54.1	40	Vp	CA
RC12-41 .(146)	3.3	46.3	50.4	Vp	CA
RC12-41 (210)	10.0	53.4	36.6	Vk	CA
RC12-41 (375)	6.5	54.9	38.6	Vk	CA
RC12-44	3.5	52.9	43.6	Vk	SS

	Q	F	R	Sand Type	Basin Type
Lamont-Doherty piston cores					
RC12-242	15.9	44.4	39.7	Vk	BA
RC12-243	18.0	42.4	39.6	Vk	BA
RC12-245	23.7	38.2	38.1	Vk	BA
RC12-368	51.7	31.9	16.4	F	TE
RC12-371	41.4	47.6	11.0	F	TE
RC12-374	39.4	37.0	23.6	F	BA
RC13-220	40.5	47.9	11.6	F	TE
RC13-222	54.6	33.8	11.6	F	TE
RC14-114	0.1	9.0	91.0	Vv	FA
RC14-117	3.9	26.2	89.9	Vp	BA
RC14-122	17.8	37.3	44.9	Vk	BA
RC14-123	10.3	39.1	50.6	Lp	BA
RC14-132	5.2	26.5	68.3	Vk	BA
RC14-134	11.3	27.0	61.7	Lp	BA
RC14-141	0.8	19.0	80.2	Vp	BA
RC14-151	0.1	14.6	85.4	Vv	FA
RG14-154	31.6	41.2	27.2	Lp	LE
RC14-160	22.6	41.4	36.0	Lk	LE
RC15-2	23.5	21.3	55.2	Vk	LE
RC15-26	15.1	17.9	67.0	Vk	FA
RC15-67	22.0	26.2	51.8	Vk	TE
RC15-77	24.6	29.7	45.7	Vk	CA
RC15-79	72.8	16.9	10.3	Q	TE
RC15-128	6.9	38.8	54.3	Vk	BA
RC15-129	13.5	34.3	52.2	Vk	BA
RC15-132	6.3	41.7	52.0	Vk	BA
DSDP Samples					
87-1-2	13.5	49.8	36.7	Vk	TE
118-2-6	71.2	20.5	8.3	Q	TE
131A-4-2-(10-11	78.1	10	11.9	Q	TE
131A-4-2(78-79)	79.8	16.5	3.7	Q	TE
131A-5-2	62.8	27.3	9.9	F	TE
173-11-3	16.4	8	75.6	Lk	SS
174A-16-3	23.5	52.1	24.4	Lp	SS
191-14-2-(77-78)	3	36.9	60.1	Vk	BA
191-14-2-(118-11	8.9	25.2	65.9	Vk	BA
299-16-4	12.8	23.5	63.7	Vk	BA

Cascade sand petrology

		Q	F	L	Px-Am-Bt
Mt Rainier sands					
SC4456	Nisqually R	1	22.5	74	2.5
SC4480	**Tahoma Cr**	1	34	57.5	7.5
SC4481	Mashel R	2	28	66.5	3.5
SC4482	Kapowsin Cr	3	31	61.5	4.5
SC4483	Puyallup R	1.5	25	67.5	6
SC4484	Brooks Cr	0.5	30.5	65.5	3.5
SC4485	Carbon R	3	38	55	4
sc4486	S Prairie Cr	3	28.5	66.5	2
SC4487	White R	0.5	25	68.5	6
SC4488	W Twin Cr	3	19	75	3
SC4489	**White R**	0.5	31.5	64.5	3.5
SC4492	White R	1	30	66.5	2.5
SC4490	Nisqually R				
SC4491	Puyallup R				
Hood1	Bull Run	1	40	59	
Hood3	Zig-Zag R	2	47	44	7
Hood4	Sandy R	3	37	39	21
Hood5	Polalie Cr	1	47	33	19
Hood6	E Fork Hood R	0.5	45.5	40	14
Helens1	Skookumchuck	4	33	59	4
Helens2	Toutle down	2	51	35.5	11.5
Helens3	Toutle up	2.5	48.5	37.5	11.5
Helens4	Lewis R down	1	33.5	56	9.5
Helens5	Toutle R mouth	1	55.5	31	12.5
Helens6	Lahar N Fork Toutle	2	41	49.5	7.5
Helens7	Toutle up	3	49.5	40	7.5
Helens8	S Fork Toutle	1	45	40	14
Helens15	**Cowlitz below confl**	1	44	37	18
Helens50	Lewis R up	2	37	35	26

Zero values for QFL have been replaced by 0.5 (half the detection limit) to enable log calculations
PAB = pyroxene+amphibole+biotite

	Lfels	Llath	Lmicro	Lvitr
SC4456	29	35	19	17
SC4480	31	40	9	20
SC4481	25	14	18	33
SC4482	26	40	11	23
SC4483	11	55	10	24
SC4484	26	35	16	23
SC4485	21	55	11	13
sc4486	40	30	16	14
SC4487	7	46	9	38
SC4488	17	32	16	35
SC4489	1	1	47	51
SC4492	39	18	22	21
SC4490				
SC4491				
Hood1		32	20	48
Hood3	40	19	26	15
Hood4	26	24	20	30
Hood5	32	21	22	25
Hood6	38	30	22	10
Helens1	20	12	28	40
Helens2	37	18	21	24
Helens3	38	17	23	22
Helens4	45	16	19	20
Helens5	33	13	25	29
Helens6	57	12	5	26
Helens7	38	17	9	36
Helens8	45	14	13	27
Helens15	55	22	3	20
Helens50	40	30	6	24

Data of Marsaglia and Ingersoll 1992 GSA Bull 104:1637-1649									
Site	age	category	n	Q	F	L	Qm	K	P
184	Plioc	BA	8	5	17	78	10	1	89
184	Mioc	BA	5	1	31	68	2	0	98
185	Plioc	BA	2	2	14	84	8	3	89
185	Mioc	BA	1	0	10	90	4	0	96
290	Olig	BA	2	0	4	96	0	0	100
296	Olig	BA	11	0	20	80	2	5	93
299	Quat	BA	9	13	25	62	28	22	50
447	Olig	BA	1	0	1	99	0	0	100
448	Olig	BA	4	0	16	84	2	0	98
450	Mioc	BA	11	0	12	88	1	0	99
451	Mioc	BA	30	0	20	80	2	0	98
453	Plioc	BA	7	1	14	85	5	0	95
457	Quat	BA	2	0	24	76	1	0	99
154	Plioc	CA	10	18	38	44	27	3	70
173	Plioc	CA	1	18	23	59	41	6	53
434	Plioc	CA	2	4	18	78	22	6	72
435	Quat	CA	3	5	49	46	13	0	87
438	Quat	CA	6	5	29	66	13	7	80
438	Plioc	CA	6	4	30	66	12	3	85
438	Mioc	CA	1	6	31	63	16	9	75
440	Quat	CA	5	7	33	60	20	4	76
494	Quat	CA	3	6	39	55	10	6	84
494	Cret	CA	1	2	11	87	12	6	82
497	Quat	CA	1	6	36	58	8	4	88
497	Plioc	CA	1	5	40	55	9	6	85
498	Mioc	CA	1	7	32	61	13	19	68
499	Quat	CA	8	5	41	54	8	4	88
500	Quat	CA	6	6	42	52	12	5	83
565	Plioc	CA	2	0	19	81	2	0	98
566	Mioc	CA	2	4	30	66	10	3	87
567	Quat	CA	3	5	34	61	11	6	83
568	Quat	CA	1	1	27	72	2	2	96
569	Quat	CA	1	1	45	54	3	1	96
569	Mioc	CA	2	9	19	72	16	5	79
570	Quat	CA	3	4	24	72	19	11	70
570	Plioc	CA	1	2	53	45	3	3	94
570	Mioc	CA	2	10	39	51	18	11	71
570	Eoc	CA	2	6	42	52	11	11	78
584	Plioc	CA	1	8	43	49	15	1	84
584	Mioc	CA	2	7	21	72	21	7	72

Site	age	category	n	Q	F	L	Qm	K	P
186	Quat	FA	5	4	22	74	9	2	89
286	Eoc	FA	8	0	27	73	1	0	99
455	Quat	FA	8	0	26	74	0	0	100
458	Mioc	FA	1	0	7	93	3	0	97
459	Mioc	FA	9	0	15	85	2	0	98
459	Olig	FA	2	0	21	79	2	0	98
32	Quat	SS	4	28	40	32	41	12	47
32	Plioc	SS	4	21	35	44	37	10	53
34	Quat	SS	1	24	38	38	37	10	53
34	Plioc	SS	6	20	31	49	38	10	52
174	Quat	SS	22	36	40	24	46	14	40
174	Plioc	SS	3	21	27	52	29	9	62
177	Plioc	SS	15	29	58	13	33	9	58
178	Plioc	SS	9	32	42	26	44	7	49
179	Quat	SS	5	25	40	35	37	10	53
179	Plioc	SS	3	16	28	56	25	8	67
180	Quat	SS	4	43	40	17	51	5	44
181	Quat	SS	4	26	38	36	39	7	54
182	Quat	SS	1	33	38	29	44	8	48
297	Plioc	SS	7	44	26	30	57	12	31
298	Quat	SS	6	33	23	44	52	8	40
486	Quat	SS	7	54	34	12	59	15	26
488	Quat	SS	9	57	37	6	59	14	27
490	Plioc	SS	6	42	39	19	59	12	29
491	Plioc	SS	21	55	40	5	57	13	30
492	Mioc	SS	6	48	47	5	49	17	34
493	Mioc	SS	18	39	52	9	41	25	34
493	Quat	SS	1	48	47	5	49	11	40

Data of Marsaglia and Ingersoll 1992 GSA Bull 104:1637-1649						felsitic	microlitic	lathwork
			Lm	Lv	Ls	Lvf	Lvmi	Lvl
184	Plioc	BA	5	91	4.00	5.000	83.0	12.0
184	Mioc	BA	0	97	3.00	1.000	47.0	52.0
185	Plioc	BA	1	99	0.25	1.000	92.0	7.0
185	Mioc	BA	0	100	0.25	3.000	95.0	2.0
290	Olig	BA	0	98	2.00	0.250	45.0	55.0
296	Olig	BA	0	100	0.25	0.250	81.0	19.0
299	Quat	BA	7	81	12.00	6.000	87.0	7.0
447	Olig	BA	0	100	0.25	0.250	62.0	38.0
448	Olig	BA	1	98	1.00	1.000	97.0	2.0
450	Mioc	BA	0	100	0.25	2.000	92.0	6.0
451	Mioc	BA	0	99	1.00	1.000	87.0	12.0
453	Plioc	BA	1	99	0.25	1.000	94.0	5.0
457	Quat	BA	1	98	1.00	1.000	82.0	17.0
154	Plioc	CA	7	90	3	1	79	20
173	Plioc	CA	18	11	71	27	20	53
434	Plioc	CA	2	22	76	16	56	28
435	Quat	CA	0	90	10	14	50	36
438	Quat	CA	3	91	6	12	69	19
438	Plioc	CA	3	90	7	9	68	23
438	Mioc	CA	2	95	3	0	86	14
440	Quat	CA	5	82	13	9	59	32
494	Quat	CA	0	100	0	6	81	13
494	Cret	CA	0	99	1	1	87	12
497	Quat	CA	0	100	0	19	77	4
497	Plioc	CA	3	96	1	7	88	5
498	Mioc	CA	5	94	1	34	52	14
499	Quat	CA	1	99	0	15	77	8
500	Quat	CA	1	97	2	7	82	11
565	Plioc	CA	0	100	0	0	100	0
566	Mioc	CA	5	64	31	2	76	22
567	Quat	CA	2	97	1	3	85	12
568	Quat	CA	1	99	0	0	96	4
569	Quat	CA	1	99	0	3	96	1
569	Mioc	CA	1	99	0	13	87	0
570	Quat	CA	0	100	0	8	91	1
570	Plioc	CA	0	100	0	0	100	0
570	Mioc	CA	4	93	3	9	81	10
570	Eoc	CA	6	93	1	3	89	8
584	Plioc	CA	0	96	4	15	45	40
584	Mioc	CA	14	66	20	15	77	8

						felsitic	microlitic	lathwork
			Lm	Lv	Ls	Lvf	Lvmi	Lvl
186	Quat	FA	4	95	1	2	87	11
286	Eoc	FA	0	100	0	0.25	81	19
455	Quat	FA	0	94	6	4	86	10
458	Mioc	FA	0	100	0	4	94	2
459	Mioc	FA	0	100	0	2	94	4
459	Olig	FA	0	100	0	2	94	4
32	Quat	SS	43	28	29	17	19.0	64.0
32	Plioc	SS	38	23	39	18	14.0	68.0
34	Quat	SS	63	15	22	26	16.0	58.0
34	Plioc	SS	35	29	36	11	10.0	79.0
174	Quat	SS	30	47	23	24	46.0	30.0
174	Plioc	SS	25	69	6	10	48.0	42.0
177	Plioc	SS	27	25	48	38	19.0	43.0
178	Plioc	SS	45	19	36	26	20.0	54.0
179	Quat	SS	24	33	43	20	55.0	25.0
179	Plioc	SS	12	70	18	8	47.0	45.0
180	Quat	SS	44	29	27	30	36.0	34.0
181	Quat	SS	41	30	29	22	47.0	31.0
182	Quat	SS	30	23	47	26	26.0	48.0
297	Plioc	SS	31	43	26	33	63.0	4.0
298	Quat	SS	39	38	23	9	70.0	21.0
486	Quat	SS	75	21	4	33	59.0	8.0
488	Quat	SS	62	33	5	32	64.0	4.0
490	Plioc	SS	66	34	0	71	29.0	0.3
491	Plioc	SS	57	41	2	27	66.0	7.0
492	Mioc	SS	60	40	0	50	50.0	0.3
493	Mioc	SS	66	34	0	51	43.0	6.0
493	Quat	SS	22	78	0	0.25	100.0	0.3

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