

Layer Number	Horizon at base	Horizon at top	Rock Type	Fluid	k	Vo	Vs	Density
001_Water	H001-wb	-	water	water	0	1500	0	1.01
002	002	H001-wb	shale	water	3.2	60	Vs transform	ρ transform
003	003	002	shale	water	2.333	472	Vs transform	ρ transform
004	004	003	shale	water	0.25	1534	Vs transform	ρ transform
005	005	004	shale	water	0.25	1634	Vs transform	ρ transform
006	006	005	shale	water	0.25	1484	Vs transform	ρ transform
007	007	006	sandstone	water	0.25	1534	Vs transform	ρ transform
008	008	007	shale	water	0.25	1584	Vs transform	ρ transform
009	009	008	shale	water	0.25	1444	Vs transform	ρ transform
010	010	009	shale	water	0.25	1484	Vs transform	ρ transform
011	011	010	shale	water	0.25	1534	Vs transform	ρ transform
012	012	011	shale	water	0.25	1404	Vs transform	ρ transform
013_wet	013	012	sandstone	water	0.25	1484	Vs transform	ρ transform
013_gas	013	012	sandstone	gas	0	1028	607	1.59
014	014	013	shale	water	0.25	1564	Vs transform	ρ transform
015	015	014	shale	water	0.25	1484	Vs transform	ρ transform
016	016	015	shale	water	0.25	1414	Vs transform	ρ transform
017	017	016	shale	water	0.25	1464	Vs transform	ρ transform
018	018	017	shale	water	0.25	1534	Vs transform	ρ transform
019	019	018	shale	water	0.25	1454	Vs transform	ρ transform
020	020	019	shale	water	0.25	1414	Vs transform	ρ transform
021	021	020	shale	water	0.25	1444	Vs transform	ρ transform
022	022	021	shale	water	0.25	1584	Vs transform	ρ transform
023	023	022	shale	water	0.25	1534	Vs transform	ρ transform
024	024	023	shale	water	0.25	1604	Vs transform	ρ transform
025	025	024	shale	water	0.25	1474	Vs transform	ρ transform
026	026	025	shale	water	0.25	1444	Vs transform	ρ transform
027	027	026	sandstone	water	0.25	1554	Vs transform	ρ transform
028	028	027	shale	water	0.25	1484	Vs transform	ρ transform
029	029	028	shale	water	0.25	1414	Vs transform	ρ transform
030	030	029	shale	water	0.25	1484	Vs transform	ρ transform
031	031	030	shale	water	0.25	1604	Vs transform	ρ transform
032	032	031	shale	water	0.25	1474	Vs transform	ρ transform
033_wet	033	032	sandstone	water	0.25	1424	Vs transform	ρ transform
033_oil	033	032	sandstone	oil	0	1640	652	1.85
034	034	033	shale	water	0.25	1484	Vs transform	ρ transform
035	035	034	shale	water	0.375	1826	Vs transform	ρ transform
036	036	035	shale	water	0.375	1856	Vs transform	ρ transform
037	037	036	shale	water	0.375	1806	Vs transform	ρ transform
038	038	037	shale	water	0.375	1916	Vs transform	ρ transform
039	039	038	shale	water	0.375	1826	Vs transform	ρ transform
040	040	039	shale	water	0.375	1786	Vs transform	ρ transform
041	H041_levee	040	shale	water	0.375	1906	Vs transform	ρ transform
042-levee	H042	H041_levee	sandstone	water	0	2800	1395	2.30
043-channel	H043_channel	H042	sandstone	water	0	3000	1556	2.21
044	044	H043_channel	shale	water	0.375	1846	Vs transform	ρ transform
045	045	044	shale	water	1.625	584	Vs transform	ρ transform
046	046	045	shale	water	1.625	724	Vs transform	ρ transform
047	047	046	shale	water	1.625	544	Vs transform	ρ transform
048	048	047	shale	water	1.625	644	Vs transform	ρ transform
049_wet	049	048	sandstone	water	0.625	1409	Vs transform	ρ transform
049_gas	H048-049_GAS	H048	sandstone	gas	0	1770	988	1.77
050	050	049	shale	water	0.625	1309	Vs transform	ρ transform
051_wet	051	050	sandstone	water	0.625	1659	Vs transform	ρ transform
051_gas	H050-051_GAS	H050	sandstone	gas	0	2131	1209	1.86
052	052	051	shale	water	0.625	1389	Vs transform	ρ transform
053_wet	053	052	sandstone	water	0.625	1359	Vs transform	ρ transform
053_gas	H052-053_GAS	H052	sandstone	gas	0	1584	881	1720.00
054	054	053	shale	water	0.625	1389	Vs transform	ρ transform
055	055	054	shale	water	0	2400	981	2.20

Layer Number	Horizon at base	Horizon at top	Rock Type	Fluid	k	Vo	Vs	Density
056	056	055	sandstone	water	0	2400	981	2.20
056_noAlp	H055-056_noAlp	H055	sandstone	water	0	2400	1074	2.20
057	057	056	shale	water	0	2400	981	2.20
058	058	057	shale	water	0	2650	1174	2.26
059	059	058	shale	water	0	3550	1867	2.44
060	060	059	shale	water	0	3350	1713	2.40
061	061	060	shale	water	0	3500	1828	2.43
062	062	061	shale	water	0.625	1409	Vs transform	ρ transform
063	063	062	shale	water	0.625	1289	Vs transform	ρ transform
064	064	063	shale	water	0.625	1559	Vs transform	ρ transform
065	065	064	shale	water	0.625	1409	Vs transform	ρ transform
066	066	065	shale	water	0.625	1609	Vs transform	ρ transform
067	067	066	shale	water	0.625	1409	Vs transform	ρ transform
068	068	067	shale	water	0.625	1339	Vs transform	ρ transform
069	069	068	shale	water	0.625	1409	Vs transform	ρ transform
070	070	069	shale	water	0.625	1609	Vs transform	ρ transform
071_wet	071	H070	sandstone	water	0.625	1809	Vs transform	ρ transform
071_oil	H071-070_OIL	H070	sandstone	oil	0	2874	1604	2.14
071_gas	H071	H070	sandstone	gas	0	2783	1645	2.03
072	072	071	shale	water	0.625	1609	Vs transform	ρ transform
073	073	072	shale	water	0	4000	2213	2.52
074	074	073	shale	water	0	4450	2560	2.59
075	075	074	shale	water	0	4000	2213	2.52
076	076	075	shale	water	0	3770	2036	2.48
077	077	076	shale	water	0	4000	2213	2.52
078	078	077	shale	water	0	2500	1058	2.22
079	079	078	shale	water	0	2650	1174	2.26
080	080	079	shale	water	0	2440	1012	2.21
081	081	080	shale	water	0	2500	1058	2.22
082	082	081	marl	water	0	3200	1616	2.24
083	083	082	marl	water	0	3800	2053	2.34
084	084	083	marl	water	0	3550	1873	2.30
085	085	084	marl	water	0	3300	1690	2.25
086	086	085	marl	water	0	3600	1909	2.31
087	087	086	marl	water	0	3650	1945	2.31
088	088_Top_Salt	087	marl	water	0	3500	1836	2.29
089_salt	089_UC	088_Top_Salt	salt	water	0	4500	2600	2.14
090	090	089_UC	shale	water	0	3750	2021	2.47
091	091	90	shale	water	0	4200	2367	2.55
092	092	091	shale	water	0	4300	2444	2.57
093	093	092	shale	water	0	3300	1674	2.39
094	094	093	shale	water	0	3550	1867	2.44
095	095	094	shale	water	0	3250	1636	2.38
096	096	095	shale	water	0	3900	2136	2.50
097	097	096	shale	water	0	3700	1982	2.47
098	098	097	shale	water	0	4440	2552	2.59
099	099	098	shale	water	0	4550	2637	2.60
100	100	099	sandstone	water	0	3540	1990	2.30
101	101	100	shale	water	0	3800	2059	2.48
102	102	101	shale	water	0	3450	1790	2.42
103	103	102	shale	water	0	3120	1535	2.36
104	104	103	shale	water	0	3380	1736	2.41
105	105	104	shale	water	0	3500	1828	2.43
106	106	105	shale	water	0	3200	1597	2.37
107	107	106	shale	water	0	3350	1713	2.40
108	108	107	shale	water	0	3540	1859	2.44
109	109	108	shale	water	0	4300	2444	2.57
110	110	109	shale	water	0	4200	2367	2.55
111	111	110	shale	water	0	3550	1867	2.44
112	112	111	shale	water	0	4120	2305	2.54

Layer Number	Horizon at base	Horizon at top	Rock Type	Fluid	k	Vo	Vs	Density
113	113	112	shale	water	0	3500	1828	2.43
114	114	113	shale	water	0	3900	2136	2.50
115	115	114	shale	water	0	4230	2390	2.55
116	116	115	shale	water	0	4560	2644	2.61
117	117	116	shale	water	0	3450	1790	2.42
118	118	117	shale	water	0	3900	2136	2.50
119	119	118	shale	water	0	3700	1982	2.47
120	120	119	shale	water	0	3600	1905	2.45
121	121	120	shale	water	0	4120	2305	2.54
122	122	121	shale	water	0	4440	2552	2.59
123	123	122	shale	water	0	4550	2637	2.60
124	124	123	shale	water	0	3500	1828	2.43
125	125	124	shale	water	0	3380	1736	2.41
126	126	125	shale	water	0	3750	2021	2.47
127	127	126	shale	water	0	3450	1790	2.42
128	128	127	shale	water	0	3120	1535	2.36
129	129	128	sandstone	water	0	3900	2280	2.36
130	130	129	shale	water	0	3800	2059	2.48
131	131	130	shale	water	0	3540	1859	2.44
132	132	131	shale	water	0	3380	1736	2.41
133	133	132	shale	water	0	3400	1751	2.41
134	134	133	shale	water	0	3900	2136	2.50
135	135	134	shale	water	0	4200	2367	2.55
136	136	135	shale	water	0	4300	2444	2.57
137	137	136	shale	water	0	3300	1674	2.39
138	138	137	shale	water	0	3200	1597	2.37
139	139	138	shale	water	0	3050	1482	2.34
140	140	139	shale	water	0	3550	1867	2.44
141	141	140	shale	water	0	3250	1636	2.38
142	142	141	shale	water	0	3900	2136	2.50
143	143	142	shale	water	0	3700	1982	2.47
144	144	143	shale	water	0	3600	1905	2.45
145	145	144	shale	water	0	3350	1713	2.40
146	146	145	sandstone	water	0	3200	1717	2.24
147	147	146	shale	water	0	3600	1905	2.45
148	148	147	shale	water	0	4120	2305	2.54
149	149	148	shale	water	0	4440	2552	2.59
150	150	149	shale	water	0	4550	2637	2.60
151	151	150	shale	water	0	3500	1828	2.43
152	152	151	shale	water	0	3380	1736	2.41
153	153	152	shale	water	0	3200	1597	2.37
154	154	153	shale	water	0	3750	2021	2.47
155	155	154	shale	water	0	3450	1790	2.42
156	156	155	shale	water	0	3120	1535	2.36
157	157	156	shale	water	0	3900	2136	2.50
158	158	157	shale	water	0	3800	2059	2.48
159	159	158	shale	water	0	3540	1859	2.44
160	160_UC	159	shale	water	0	3380	1736	2.41
161	161	160	shale	water	0	3450	1790	2.42
162	162	161	shale	water	0	3120	1535	2.36
163	163	162	shale	water	0	3900	2136	2.50
164	164	163	shale	water	0	3800	2059	2.48
165	165	164	shale	water	0	3540	1859	2.44
166	166	165	shale	water	0	3380	1736	2.41
167	167	160_UC	shale	water	0	3700	1982	2.47
168	168	166	sandstone	water	0	4230	2545	2.41
169	169	168	shale	water	0	4560	2644	2.61
170	170	169	shale	water	0	4670	2729	2.62
171	171	170	sandstone	water	0	3580	2022	2.31
172	172	171	shale	water	0	3470	1805	2.42

Layer Number	Horizon at base	Horizon at top	Rock Type	Fluid	k	Vo	Vs	Density
173	173	172	shale	water	0	3300	1674	2.39
174	174	173	shale	water	0	3530	1851	2.44
175	175	174	shale	water	0	4230	2390	2.55
176	176	175	shale	water	0	4000	2213	2.52
177_gas	177	176	sandstone	gas	0	4045	2564	2.36
178_oil	178	177	sandstone	oil	0	4123	2538	2.41
179	179	178	sandstone	water	0	3800	2199	2.34
180	180	179	sandstone	water	0	4200	2521	2.41
181	181	180	sandstone	water	0	3800	2199	2.34
182	182	181	sandstone	water	0	4400	2682	2.44
183	183	182	sandstone	water	0	4600	2482	2.46
184	184	183	shale	water	0	4700	2752	2.63
185	185	184	shale	water	0	3800	2059	2.48
186	186	185	shale	water	0	3700	1982	2.47
187	187	186	sandstone	water	0	3550	1998	2.30
188	188	187	shale	water	0	4050	2252	2.53
189	189	188	shale	water	0	3750	2021	2.47
190	190	189	shale	water	0	4400	2521	2.58
191	191	190	shale	water	0	4200	2367	2.55
192	-	191	shale	water	0	4100	2290	2.53

Key			
	shale	Vs transform ρ transform	Greenburg and Castagna (1992) shear wave transform Castagna <i>et al.</i> (1993) density transform
	wet sand		
	gas sand		
	oil sand		
	water		
	marl		
	salt		

Table 2.8. Marmousi2 horizons, layers, and elastic properties. Details of the shear wave velocity and density transforms are presented in Table 2.3