

Table 1-8. Chemical and isotopic data for Mahogany zone samples from the SHELL core (see text for description of analytical methods).  
[blanks indicate no data]

Field ID	Depth (ft)	Depth (m)	Description	Thin section	C <sub>organic</sub> %	C <sub>carbonate</sub> %	$\delta^{13}\text{C}_{\text{calcite}} \text{‰ (PDB)}$	$\delta^{18}\text{O}_{\text{calcite}} \text{‰ (PDB)}$	$\delta^{18}\text{O}_{\text{calcite}} \text{‰ (SMOW)}^1$	$\delta^{13}\text{C}_{\text{dolomite}} \text{‰ (PDB)}$	$\delta^{18}\text{O}_{\text{dolomite}} \text{‰ (PDB)}$	$\delta^{18}\text{O}_{\text{dolomite}} \text{‰ (SMOW)}^1$
S1020.6	1020.6	311.1	oil shale	polished	12	6.0	8.2	-1.9	28.9	10.0	-0.3	30.6
S1022	1022	311.5	pyritic oil shale	polished								
S1023	1023	311.8	oil shale	polished	3.3	4.8	7.4	-1.4	29.4	7.7	0.6	31.4
S1026	1026	312.7	oil shale	polished	2.0	6.6	8.4	-1.1	29.7	7.1	1.3	32.2
S1030	1030	313.9	pyritic oil shale	polished								
S1032	1032	314.5	oil shale	polished	3.1	5.8	7.2	-1.7	29.1	7.7	-0.6	30.3
S1035	1035	315.5	oil shale	polished	1.5	3.6	5.8	-4.8	25.9	5.9	-3.2	27.6
S1038	1038	316.4	fissile oil shale	polished	5.9	5.1				8.8	-0.3	30.6
S1041	1041	317.3	oil shale	polished	11	5.0	9.7	0.5	31.4	10.4	1.5	32.4
S1041V	1041	317.3	pyritic oil shale	polished								
S1044	1044	318.2	oil shale	polished	5.2	8.9	8.3	-2.0	28.8	9.6	-0.1	30.8
S1047	1047	319.1	oil shale w/silty lenses	polished	5.6	7.8	9.6	-0.5	30.3	10.2	0.3	31.2
S1050	1050	320.0	oil shale w/large silty tuffaceous lense & possible nahcolite	polished	14	3.0	9.5	-0.8	30.0	11.6	0.8	31.7
S1053	1053	320.9	oil shale w/siltyense	polished	9.8	5.6	7.5	-2.9	27.9	10.5	0.0	30.8
S1053S	1053	320.9	pyritic oil shale w/lenses of tuffaceous material	polished								
S1056	1056	321.9	oil shale w/ silty lenses and stringers	polished	24	3.4	7.2	-2.8	28.0	11.8	-0.1	30.8
S1059	1059	322.8	oil shale	polished	14	2.6	9.9	-2.1	28.7	13.3	0.4	31.2
S1062	1062	323.7	oil shale	polished	11	4.1	7.2	-2.8	28.0	8.7	4.2	35.2
S1065	1065	324.6	oil shale	polished	6.4	5.9	7.2	-2.6	28.2	9.2	-0.2	30.7
S1068	1068	325.5	oil shale w/small lenses and stringers of tuffaceous, silty material	polished	5.1	4.4	9.0	-1.0	29.8	9.8	0.2	31.0
S1071	1071	326.4	oil shale w/silty lense of tuffaceous material	polished	7.6	4.2	7.3	-0.7	30.2	8.0	-0.3	30.6
S1074	1074	327.3	oil shale	polished	6.6	5.2	6.3	-2.5	28.3	8.3	-0.1	30.8
S1077	1077	328.3	oil shale	polished	19	3.4	8.1	-1.8	29.0	9.9	-0.1	30.8
S1080	1080	329.2	oil shale w/silty laminae, lenses & stringers	polished	11	1.6	9.5	-1.6	29.2	10.7	0.3	31.2
S1083	1083	330.1	oil shale	polished	9.5	5.0	9.3	-1.9	28.9	11.8	0.6	31.4
S1086	1086	331.0	Mahogany bed, oil shale	polished	26	1.1	10.4	0.4	31.3	11.2	1.5	32.4
S1087.8	1087.8	331.5	pyritic oil shale	polished								
S1088	1088	331.6	pyritic oil shale	polished								
S1089	1089	331.9	oil shale	polished	32	2.8	11.8	-0.1	30.8	13.5	1.3	32.2
S1092	1092	332.8	oil shale w/lenses of silty material	polished	28	2.1	7.8	-2.5	28.3	11.8	0.3	31.1
S1095	1095	333.7	oil shale	polished	22	3.4	13.6	0.9	31.8	14.2	1.8	32.7
S1098	1098	334.7	oil shale	polished	15	4.9	8.6	2.6	33.6	11.3	0.2	31.1
S1101	1101	335.6	oil shale	polished	20	4.5	13.5	1.1	32.0	14.6	2.2	33.1
S1101V	1101	335.6	oil shale	polished								
S1104	1104	336.5	oil shale	polished	13	6.6	6.7	-3.5	27.2	9.6	-1.3	29.5
S1107	1107	337.4	oil shale	polished	14	6.2	10.2	-1.5	29.3	13.2	1.0	31.8
S1107V	1107	337.4	vuggy oil shale	polished								
S1110	1110	338.3	oil shale	polished	10	7.4	7.7	-2.4	28.4	9.7	0.5	31.3
S1113	1113	339.2	oil shale	polished	19	3.8	12.9	0.6	31.5	15.0	1.8	32.8
S1116	1116	340.1	oil shale	polished	13	5.6	5.9	-3.2	27.6	8.5	-0.8	30.0
S1119	1119	341.1	oil shale	polished	21	2.5	10.0	-0.7	30.1	11.2	0.9	31.8
S1122	1122	342.0	oil shale	polished	10	6.9	5.9	-3.7	27.1	9.1	-0.9	29.9
S1122S	1122	342.0	pyritic oil shale w/lenses and nodules of crumbly mineral	polished								
S1125	1125	342.9	oil shale w/ crumbly nacholite	polished	11	6.6	9.2	-0.9	29.9	10.1	0.6	31.5
S1128	1128	343.8	oil shale	polished	11	6.6	9.0	-0.5	30.3	9.9	0.4	31.3
S1129	1129	344.1	oil shale w/fracture of crumbly mineral	polished								
S1131	1131	344.7	oil shale	polished	6.5	5.6	6.9	-2.9	27.9	7.9	-1.4	29.5
S1134	1134	345.6	oil shale	polished	16	6.1	9.3	0.1	30.9	11.2	0.8	31.7
S1137	1137	346.5	oil shale	polished	16	6.5	7.9	-2.9	27.9	12.1	0.0	30.8
S1137S	1137	346.5	oil shale	polished								
S1140	1140	347.5	oil shale	polished	6	5.0	6.7	-2.8	28.0	9.1	-0.7	30.1
S1143	1143	348.4	oil shale	polished	17	7.1	7.7	-1.6	29.2	9.7	0.3	31.2
S1146	1146	349.3	oil shale	polished	20	5.0	8.9	-0.2	30.7	10.0	0.5	31.4
S1148	1148	349.9	oil shale	polished								
S1149	1149	350.2	oil shale w/pyritic nodules and silty lenses	polished	15	5.4	8.1	-1.6	29.2	9.8	0.3	31.1
S1152	1152	351.1	oil shale w/silty lenses	polished	8.5	7.4	7.5	-2.1	28.7	9.2	0.1	31.0
S1155	1155	352.0	oil shale w/small calcite-filled fractures	polished	7.8	7.3	8.5	-1.6	29.2	9.4	0.6	31.5
S1158	1158	352.9	oil shale	polished	11	7.1	8.2	-1.2	29.7	9.5	0.4	31.2
S1161	1161	353.9	oil shale	polished	7.4	6.2	6.6	-3.0	27.7	7.8	0.2	31.1
S1164	1164	354.8	rubblized oil shale w/crumbly mineral	polished	8	5.9	7.0	-0.3	30.5	6.9	-1.3	29.5
S1167	1167	355.7	oil shale	polished	13	5.6	8.1	-0.1	30.7	8.4	0.3	31.1
S1170	1170	356.6	oil shale	polished	5.3	3.8	8.9	-0.3	30.6	8.8	-0.1	30.8
S1173	1173	357.5	oil shale w/lenses of siltyer material	polished	18	5.4	7.7	-1.1	29.7	7.9	-0.4	30.4
S1176	1176	358.4	oil shale	polished	13	5.8	5.9	-2.3	28.5	6.8	-1.2	29.7
S1179	1179	359.3	oil shale w/siltyer layers	polished	23	4.9	6.4	-2.9	27.9	8.2	-1.1	29.7
S1182	1182	360.3	rubblized oil shale	polished	8.2	6.1	5.8	-2.8	28.0	5.8	-1.1	29.7
S1185	1185	361.2	pyritic oilshale	polished	11	5.7	5.4	-3.2	27.5	4.2	-2.7	28.1
S1188	1188	362.1	oil shale w/ rubblized bedding and silty lenses	polished	8.5	5.7	5.5	-2.8	27.9	6.4	-0.6	30.2
S1189	1189	362.4	pyrite nodules in a lense of tuffaceous silty material	polished								
S1191	1191	363.0	oil shale w/silty lenses	polished	12	5.7	7.4	-1.9	28.9	9.3	-0.3	30.5
S1194	1194	363.9	oil shale w/silty stringers	polished	13	4.7	5.2	-3.2	27.5	5.8	-1.9	28.9
S1197	1197	364.8	oil shale w/black pyritic stringers	polished	9.5	5.6	8.2	-1.2	29.6	9.9	0.3	31.2
S1200	1200	365.7	rubblized, pyritic oil shale		6.8	6.6	7.1	-2.2	28.6	7.2	-1.2	29.6
S1203	1203	366.7	rubblized oil shale		7.6	6.7	6.5	-1.8	29.0	6.5	-1.5	29.3
S1206	1206	367.6	rubblized, pyritic oil shale	polished	7	6.1	5.7	-2.7	28.1	5.9	-2.1	28.7
S1212	1212	369.4	rubblized, silty, pyritic oil shale	polished	11	4.6	5.7	-3.0	27.8	6.0	-2.3	28.4
S1215	1215	370.3	oil shale	polished	11	6.6	4.6	-5.8	24.9	5.0	-2.8	28.0
S1218	1218	371.2	oil shale w/silty lenses	polished	15.3	2.8	3.8	-3.1	27.6	4.0	-2.6	28.2
S1221	1221	372.1	rubblized oil shale	polished	3.2	3.7	3.2	-4.6	26.1	3.2	-1.5	29.4
S1233	1233	375.8	pyritic oil shale	polished	1.8	2.9	3.9	-3.1	27.7	3.4	-1.1	29.7

<sup>18</sup>O data converted from PDB to SMOW using  $\delta^{18}\text{O}_{\text{SMOW}} = 1.03086 (\delta^{18}\text{O}_{\text{PDB}}) + 30.86$  (Hoefs, 1980)