

Table S2. Relative abundance of DnaE2 in the Peru Margin sediment of different depths.

<b>Depth</b>	<b>GC%</b>	<b>DnaE1+DnaE3</b>	<b>DnaE2</b>	<b>PolC</b>	<b>DnaE2%</b>	<b>Average DnaE2%</b>
5m	48±10%	10	5	3	50.00	42.39%
30m	48±10%	46	16	5	34.78	
50m	55±11%	8	8	1	100.00	84.52%
70m	52±10%	6	8	9	100.00 <sup>a</sup>	
91m	53±10%	7	5	5	71.43	
159m	54±10%	15	10	6	66.67	

**Note:** <sup>a</sup>There are more DnaE2 sequences identified than DnaE1+DnaE3 at this depth due to biased sample size and we manually set DnaE2% to 100%.