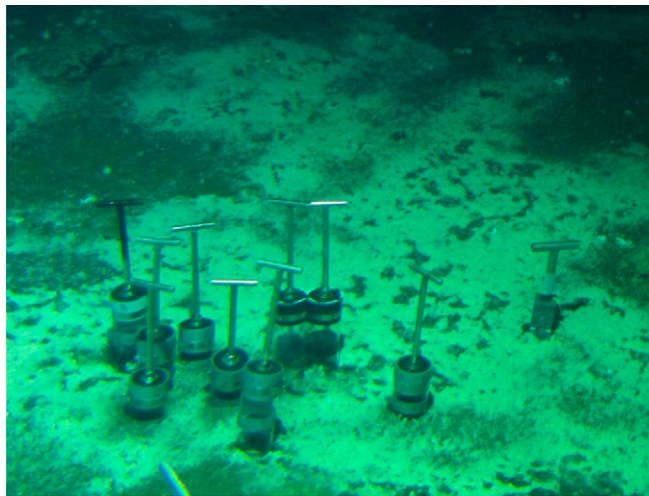


# Supporting Information

Sivan et al. 10.1073/pnas.1412269111



**Fig. S1.** Sample collection from a Hydrate Ridge methane seep colonized by a sulfide oxidizing bacterial mat. The push core used for this experiment (PC-9) is on the right-hand side of the cluster (diameter of the push core is ~4 in for scale).



**Fig. S2.** The bottles treated with hematite addition after 180 d. The two on the *Right* are the killed control, and their color remained brown throughout the experiment, whereas the two on the *Left* have become black with time, likely due to precipitation of Fe(II) sulfide particles.

**Table S1. List of bottles used in the experiment and treatments**

No. bottle	<sup>13</sup> C-glucose	<sup>13</sup> C-methane	Hematite	Autoclave
1a	X			
1b	X			
2a	X	X		
2b	X	X		
3a		X		
3b		X		
4a		X	X	
4b		X	X	
5a	X	X	X	X
5b	X	X	X	X