

**Table 1. Comparison of  $^{230}\text{Th}$  ages and V6 tag sequence diversity measurements for carbonate chimney samples from the Lost City Hydrothermal Field**

Chimney sample <sup>†</sup>	Max fluid temperature, °C	Age, yr	Archaea*				Bacteria*			
			OTUs <sup>‡</sup>	ACE richness estimator <sup>4</sup>	Chao1 richness estimator <sup>§</sup>	Simpson's Reciprocal Index <sup>§</sup>	OTUs <sup>‡</sup>	ACE richness estimator <sup>§</sup>	Chao1 richness estimator <sup>§</sup>	Simpson's reciprocal index <sup>§</sup>
1	88	34.3 ± 8.1	342	448–568	441–599	2.04–2.13	177	283–388	217–319	5.6–5.9
2	70	43 ± 23	265	336–438	310–405	1.56–1.61	270	458–587	360–522	8.3–9.1
3	70	128 ± 57	265	322–410	301–386	1.64–1.69	428	859–1,061	648–925	20.0
4	Nd	1,245 ± 257	135	131–170	129–191	1.22–1.25	307	582–744	434–630	16.7

\*Archaeal diversity is reported for OTU relative abundances normalized down to 16,260 tags; bacterial diversity is reported for OTU relative abundances normalized down to 5,567 tags. [Table S1](#) compares both archaeal and bacteria diversity at 5,567 tags.

<sup>†</sup>DSV *Alvin* numbers for samples 1–4 are 3881–1408, 3869–1404, 3869–1443, and 3876–1133, respectively.

<sup>‡</sup>OTUs (operational taxonomic units) defined at 3% sequence difference.

<sup>§</sup>Ranges of diversity indices include 95% confidence intervals as calculated by DOTUR (39).