

Table 3

Mg concentrations and Sr isotope ratios of Lost City vent fluids

Sample ID <sup>a</sup>	Site	Depth (m)	Temp (°C)	pH	Mg (mmol/kg)	Sr (mmol/kg)	Mg/Sr	<sup>87</sup> Sr/ <sup>86</sup> Sr <sup>b</sup>
3862m11	Poseidon, S side	730	59	10.20	8.13	0.1006	80.81	0.70682
3863m11	Poseidon	731	81	10.67	3.02	0.1051	28.76	0.70662
3864m23	Imax Flange	764	62	10.97	2.32	0.1040	22.27	0.70654
3866p23	Marker 7	801	47	8.70	35.44	0.0950	372.97	0.70802
3866b16	Near Marker 7	801	51	9.33	24.90	0.0975	255.24	0.70749
3870bf17	Marker 8	802	51	9.96	7.05	0.0980	71.96	0.70683
3874b9	Marker C	780	73	10.06	12.02	0.0957	125.66	0.70701
3874b18	Beehive	743	91	10.71	0.91	0.0948	9.56	0.70651
3880m24	Marker H	845	30	9.76	24.09	0.0945	254.89	0.70741
3870b19	Background seawater	789	10	7.98	53.12	0.0880	603.33	0.70914
3882m23	Background seawater	~3680	~7	~8	54.29	0.0903	601.50	0.70917

<sup>a</sup> Fluid samples were collected using a variety of sampling devices: m, titanium major bottles; b or p, HFPS; bf, filtered HFPS samples.

<sup>b</sup> Sr isotope ratios measured at ETHZ. All ratios are normalized to <sup>86</sup>Sr/<sup>88</sup>Sr = 0.1194 and NBS 987 <sup>87</sup>Sr/<sup>86</sup>Sr = 0.71024.