

Samples recovered from Mariner vent field on TUIM05MV, April-May 2005

Sample Number J2-	VV Event #	Date/ Time (UTC)	Position (X,Y)	Nav version #	Lat/lon (origin -22 -14.000 -176 -39.00)	Vehicle depth (m)	Vehicle hdg	Vehicle altitude (m)	Sample Type/collection method	Contact person	Comments
130-1-W1-IGT1	26535	04/15 23 22	5027, 5831	April-May 05		1907.575	54.93	13.139	IGT1 Water Sample	Geoff Wheat, Jeff Seewald, Mike Mottl	From orifice of large (> 10m) vigorous black smoker chimney. T = 332 °C
130-1-W2-IGT2	26567	04/15 23 29	5027, 5831	April-May 05		1907.588	55.28	13.139	IGT2 Water Sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Replicate fluid sample. Same orifice. T ~ 329 °C
130-1-W3-Mred	26608	04/15 23 43	5027, 5831	April-May 05		1907.683	55.69	13.139	Majors Water Sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Same orifice as gas-tight water samples IGT1&2. No T data.
130-1-W4-Mgreen	26638	04/15 23 50	5027, 5831	April-May 05		1907.731	55.59	13.139	Majors Water Sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Replicate sample. Same orifice as IGT1&2.
130-1-R1	26670	04/16 00 09	5027, 5831	April-May 05		1908.09	59.95	13.139	Active sulfide chimney/grab	Meg Tivey	Mixed sulfide w/ cpy-lined conduit and interspersed anhydrite. Fluid-rock pair.
130-1-R2	26680	04/16 00 12	5027, 5831	April-May 05		1908.07	60	13.139	Active sulfide chimney/grab	Meg Tivey	Large sulfide (~ 10 kg) piece from adjacent chimney. Given to Tongans

131-1-W1-IGT7	28521	04/22 06 12	4966, 5764	April- May 05		1919.368	243.18	2.475	IGT7 fluid sample	Geoff Wheat, Jeff Seewald, Mike Mottl	High T, black smoker chimney fluid. T ~ 298 °C (top of spire).
131-1-W2-IGT8	28548	04/22 06 22	4966, 5764	April- May 05		1919.361	243.84	2.475	IGT8 fluid sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Replicate sample, same orifice. Temp 289 – 297 °C
131-1-R1	28611	04/22 06 52	4966, 5764	April- May 05		1919.32	245.45	2.475	Active sulfide chimney/grab	Meg Tivey	Small chimlet of large BS chimney complex. Mixed Cu-Fe(?) sulfide. NEXT TO orifice sampled for fluids.
131-2-W1-IGT3	29561	04/22 13 18	5003, 5856	April- May 05		1909.855	307.67	5.626	IGT3 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Vigorous BS fluid from large chimney complex. T~ 363 °C
131-2-W2-IGT4	29596	04/22 13 33	5003, 5856	April- May 05		1909.848	307.89	5.876	IGT4 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Replicate sample, same orifice. T ~ 364 °C (corrected)
131-2-B1	29730	04/22 14 20	5002, 5855	April- May 05		1909.576	337.12	5.538	Shrimp/slurp	Stacy Kim	From side of sulfide chimney near black smoker chimlet.
131-3-RB1	29994	04/22 15 44	5004, 5848	April- May 05		1907.677	347.47	10.476	Lollipops/Dandelions/grab	Stacy Kim	Silica “lollipops” on surface of Fe- oxide coated relict sulfide.
131-4-W1-IGT5	30277	04/22 17 43	5071, 5885	April- May 05		1918.011	261.43	1.875	IGT5 water sample	Geoff Wheat, Jeff	Diffuse flow from tabular

			(5048, 5896?)							Seewald, Mike Mottl	sulfide structure w/ extensive white microbial mat. T ~ 26 °C
131-4- W2-IGT6	30306	04/22 17 53	5071, 5885	April- May 05		1918.011	262.51	1.938	IGT6 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Replicate fluid sample, same diffuse flow T~ 39 to 54 °C.
131-4-B1	30330	04/22 18 01	5071, 5885	April- May 05		1917.997	264.05	2.063	Microbial Mat/slurp	A-L. Reysenbach	Thick (mm's) biological mat from diffuse flow sample.
131-4-R1	30376	04/22 18 22	5071, 5885	April- May 05		1918.214	262.31	2.113	Active sulfide flange/grab	Meg Tivey	Largely homogenous(?) medium-grained (Zn?) sulfide, from flange next to fluid samples MA4.
131-5-R1	30509	04/22 19 02	5036, 5925	April- May 05		1915.012	207.82	1.313	Andesite/grab	Meg Tivey	Ropy andesite w/ Fe/Mn staining. No clear vesicular or glassy texture.
131-6- R1(RB1)	30677	04/22 19 36	5057, 5927	April- May 05		1919.402	286.09	2.45	Andesite/grab	Meg Tivey	Jagged, ropery andesite w/ minor Fe-oxide staining. With "lollipops" attached.
131-7-R1	31133 31188	04/22 22 35	4980, 5864	April- May 05		1910.75	198.73	4.563	Active sulfide chimney/grab	Meg Tivey	Friable, beehive structure, Cu- rich toward center? No T data.
131-8-R1	31325	22 54	4983, 5859	April- May 05		1903.904	176.87	11.477	Relict sulfide chimney/grab	Meg Tivey	Several Pieces. Hard outer casing w/ botryoidal

											textures. Cu/Fe rich interior.
135-1-W1-IGT7	44746	04/28 22 58	4981, 5838	April- May 05		1918.445	229.05	3.563	IGT7 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	White smoker fluid from top surface of flange structure. White mat coating. Tmax 261 °C.
135-1-W2-IGT8	44778	04/28 23 08	4981, 5838	April- May 05		1918.574	234.24	3.638	IGT8 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Replicate fluid sample, same flow T ~ 244 °C.
135-2-W1-IGT1	44890	04/28 23 51	4974, 5834	April- May 05		1917.902	349.75	3.751	IGT1 fluid sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Black smoker chimney fluid. Not v. vigorous. T ~ 240 °C.
135-3-B1	44950	04/29 00 13	5021, 5794	April- May 05		1922.814	283.58	198.214	Sediment/scoop	Stacy Kim	Patchy sediment cover w/ Fe-oxide surfaces. Sulfide fragments included.
135-4-B1	45052	04/29 00 49	4909, 5753	April- May 05		1935.115	24.76	2.513	Microbial Mat/slurp	A-L. Reysenbach	Low T, diffuse flow from sulfide mound. Thick (mm's) orange microbial mat from sulfide. T > 23 °C
135-5-W1-IGT2	45205	04/29 01 48	5057, 5887	April- May 05		1917.793	121.69	1.275	IGT2 fluid sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Diffuse flow from tabular sulfide. Same fluid as MA4. T ~ 41 °C.
135-5-RB1	45224	04/29 01 54	5057, 5887	April- May 05		1917.766	122.02	1.4	Active sulfide flange/grab	Meg Tivey	Flange, sulfide pair for fluids MA4 and MA7. Adjacent to 131-4-R1.

Japanese Markers;

93 (X5004, Y5854) High temperature site.

94 (X5011, Y5864) High temperature site.

95 (X4975, Y5834, Depth 1917 m, Hdg 336) High temperature site.