

Samples recovered from Tui Malila Vent Field on TUIM05MV, April-May 2005

Sample Number J2-	VV Event #	Date/ Time (UTC)	Position (X,Y)	Nav version #	Lat/lon (origin -22 -01.000 -176 -35.00)	Vehicle depth (m)	Vehicle hdg	Vehicle altitude (m)	Sample Type/collection method	Contact person	Comments
132-1-R1	33131	04/24 08 20	1492, 2929	April-May 05		1851.58	207.08	8.239	Active sulfide chimney/grab	Meg Tivey	Small sulfide piece w/ fluid pair from active black smoker chimney.
132-1-W1-IGT1	33272	04/24 08 47	1493, 2929	April-May 05		1851.648	238.46	8.239	IGT1 fluid sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Fluid pair for chimney sample 132-1-R1. T ~ 277 °C
132-1-R2	?	04/24 ~ 08 47	1493, 2929	April-May 05					Active sulfide chimney/grab	Meg Tivey	Volunteer from same active sulfide structure.
Mkr 14	33461	04/24 09 29	1493, 2928	April-May 05		1851	240	8	Marker 14		At base of active chimney complex (samples taken)
132-2-W1-IGT3	33743	04/24 10 11	1472, 2890	April-May 05		1843.924	283.49	8.239	IGT3 fluid sample	Geoff Wheat, Jeff Seewald, Mike Mottl	High T, focused black smoker. No sulfide pair. T ~ 312 °C
132-3-B1	34143	04/24 13 27	1567, 3046	April-May 05		1886.294	117.96	0.925	Mussels, snails (w/ andesite) /grab	Stacy Kim	<i>Bathymodiolus Alviniconcha</i> , and <i>Ifremeria</i> scooped from andesite.
132-4-W1-IGT7	34207	04/24 13 53	1567, 3046	April-May 05		1883.587	121.97	1.85	IGT7 fluid sample	Geoff Wheat, Jeff Seewald, Mike Mottl	In area of diffuse flow colonized by mussels. T ~ 31 °C.
Mkr 24	34240	04/24 14:24	1566, 3047	April-May 05		1884.998	146.1	3.3	Marker 24		To left of rich mussel and snail community.
132-5-RB1	34227	04/24 14 12	1557, 3047	April-May 05		1883.879	112.26	1.813	Barnacles (w/ andesite) /grab	Stacy Kim	Sampled from volcanic flow at bottom of sulfide pile. Ropy andesite, little surface

											alteration.
132-6-RB1	34255	04/24 14 31	1570, 3047	April- May 05		1884.991	121.37	2.938	Anemones (w/ andesite) /grab	Stacy Kim	Ropey andesite with surfacial Mn(?) oxide coating.
132-7-B1	34274	04/24 14 46	1568, 3041	April- May 05		1882.433	143.58	4.463	Shrimp/slurp	Stacy Kim	Shrimp (sp?) & crab (<i>Galatheid</i>) from volcanic basement surface.
Mkr 25	34372	04/24 16 39	1574, 2996	April- May 05		1875	155	2	Marker 25		On top of large "mothership" flange structure. High T, diffuse flow area.
132-8-R1	34375	04/24 16 46	1574, 2996	April- May 05		1875.219	155.41	2.063	Active sulfide flange/grab	Meg Tivey	Piece of active sulfide from outer edge of "mothership" flange.
132-8-W1-IGT5	34453	04/24 17 24	1574, 2996	April- May 05		1876.631	152.88	0.738	IGT5 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	High T, diffuse floe from active flange for sulfide pair. T(max) 175 °C.
132-9-R1	34517 – 34533	04/24 18 12	1515, 2992	April- May 05		1867.469	281.19	3.188	Active sulfide chimney/grab	Meg Tivey	Fe-Zn(?) -rich interior w/ outer globular Fe- oxide coating. Sampled for microbiology.
132-9-R2	34537	04/24 18 17	1515, 2992	April- May 05		1867.374	285.78	3.038	Relict sulfide chimney/grab	Meg Tivey	Fe-Zn(?) -rich sulfide w/ outer Fe-oxide and microbial coatings
132-10-R1	34810 – 34834	04/24 21 47	1532, 2946	April- May 05		1880.913	271.84	1.6	Hydrothermal talus/ breccia/grab	Meg Tivey	Extensively altered talus and hydrothermal breccia.
132-11-R1	34875- 34884	04/24 22 04	1537, 2931	April- May 05		1874.941	211.59	5.763	Andesite/grab	Meg Tivey	Highly fractured and ropey andesite tableaus. Exterior of piece has Fe/Mn oxides. Some sedimentation.
132-12-R1	34908 – 34924	04/24 22 12	1531, 2927	April- May 05		1867.014	212.75	5.688	Relict sulfide mound/grab	Meg Tivey	Large relict sulfide mound w/ extensive Fe-oxide crust

132-13-R1	35033	04/24 22 30	1529, 2912	April- May 05		1863.627	169.58	4.363	Active sulfide chimney/grab	Meg Tivey	Small active spire from larger sulfide structure. T(int) 246 °C; T(ext) 2.2 °C
132-14-W1-IGT6	35612	04/25 00 15	1486, 2841	April- May 05		1863.213	206.42	3.413	IGT6 fluid sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Temp for large gray/white smoker chimney. T during sampling ~ 213 – 227 °C. Tmax = 264 °C.
132-14-R1	35629	04/25 00 21	1486, 2841	April- May 05		1863.254	206.15	3.363	Active sulfide chimney/grab	Meg Tivey	Thin walled cpy-lined active chimney sulfide. Pair for fluid sample TM5.
132-15-R1	35675	04/25 00 39	1481, 2841	April- May 05		1868.636	159.77	1.675	Relict sulfide chimney/grab	Meg Tivey	From base of large sulfide structure. Some microbial mat of surfaces
132-16-B1	35770	04/25 01 01	1516, 2893	April- May 05		1861.646	255.24	3.188	Shrimp/slurp	Stacy Kim	Shrimp, scaleworms, white microbial mat from large sulfide mound
134-1-R1	39063	04/28 07 44	1566, 2769	April- May 05		1869.898	144.42	12.502	Pillow lava/grab	Meg Tivey	Andesite pillow lava w/ low amount of surface alteration/staining. Sediment.
134-2-R1	39094	04/28 07 47	1565, 2768	April- May 05		1870.163	140.34	12.502	Pillow lava/grab	Meg Tivey	Piece of large andesitic lava flow.
134-3-W1-Mgreen	39714	04/28 09 52	1479, 2875	April- May 05		1844.576	283.79	12.502	Majors water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Same orifice as sampled by J2-132-2-W1-IGT3 (TM2). T ~ 285 – 295 °C.
134-3-W1-Mred	39746	04/28 10 01	1479, 2875	April- May 05		1844.671	283.58	12.502	Majors water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Replicate sample as above. Same orifice. No T data repeated.
134-4-R1	39809	04/28 10 16	1479, 2880	April- May 05		1844.813	309.59	12.502	Hydrothermal talus/breccia/grab	Meg Tivey	Highly altered sulfide talus from base of chimney complex/escarpment.

134-5-W1-IGT5	40000	04/28 11 15	1572, 2999	April- May 05		1875.362	176.27	12.502	IGT5 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	High T, diffuse flow. Replicate fluid sample for TM4. Tip of "mothership" flange. T (max) ~ 175 °C.
134-6-B1	40550	04/28 15 02	1568, 3065	April- May 05		1886.545	102.49	2.113	Sediment/scoop	Stacy Kim	Sediment gathered for biological studies.
134-7-W1-IGT3	42105	04/28 01 40	1599, 3181	April- May 05		1894.614	196.77	1.5	IGT3 fluid sample	Geoff Wheat, Jeff Seewald, Mike Mottl	From white/grey smoker. T ~ 264 – 265 °C.
134-7-W2-IGT6	42220	04/28 02 21	1614, 3177	April- May 05		1894.994	196.08	1.588	IGT6 fluid sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Replicate sample. ICL6 temp probe not working.
134-7-R1	42250	04/28 02 35	1599, 3181	April- May 05		1894.852	189.73	1	Active sulfide chimney/grab	Meg Tivey	271 °C (in); 5–16 °C (out); 4.2 °C (ambient)
Mkr 22	42271	04/28 02 36	1599, 3181	April- May 05		1894.18	195.19	2.125	Marker 22		Base of white/grey smoker complex; site of sampling. <i>Nav. poor ±10m.</i>
134-8-R1	42720	04/28 05 46	1599, 3181	April- May 05		1895.829	185.66	0.738	Inactive sulfide chimney/grab	Meg Tivey	Part of same chimney complex. Friable Zn-rich beehive sulfide. No direct focused flow from this spire.
134-8-R2	42729	04/28 05 50	1599, 3181	April- May 05		1895.808	185.96	0.738	Inactive sulfide chimney/grab	Meg Tivey	Smaller friable sulfide piece from adjacent spire. Cpy-lining conduits?
134-9-R1	43456	04/28 09 02	1599, 3198	April- May 05		1901.624	245.02	9.501	Active sulfide chimney/grab	Meg Tivey	Mixed green/grey/brown sulfide w/ anhydrite. Several Cu-Fe rich conduits. Surface orange colliform textures
134-9-W1-IGT4	43543	04/28 09 12	1599, 3198	April- May 05		1901.665	245	9.501	IGT4 water sample	Geoff Wheat, Jeff Seewald,	Focused, Grey smoker. Fluid pair for sulfide 134-9-R1 (R17). T ~

										Mike Mottl	195 °C.
134-10-R1	43902	04/28 09 42	1602, 3215	April- May 05		1901.373	326.43	9.501	Active sulfide flange/grab	Meg Tivey	Small white flange, porous dendritic textures w/ anhydrite interspersed No T data. Dense snail population.
Mkr 26	43941	04/28 09 50	1602, 3215	April- May 05		1901.346	325.17	9.501	Marker 26		Base of flange structure.
134-11-RB1	44057	04/28 10 08	1590, 3207	April- May 05		1899.798	198.44	9.501	Anemone (sp?) w/ host rock/grab.	Stacy Kim	Small anemone from ropey andesite escarpment. Near small sulfide spires.
138-1-W1-IGT2	51559	05/04 22 10	1594, 3225	April- May 05		1897.797	175.34	1.988	IGT2 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Focused, white/gray smoker. T ~ 229 °C.
138-1-W2-IGT4	51587	05/04 22 19	1594, 3225	April- May 05		1897.736	169.96	1.725	IGT4 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Replicate sample, same orifice. T ~ 229 °C.
138-2-R1	51730	05/04 22 57	1595, 3226	April- May 05		1898.923	325.66	1.875	Relict sulfide/grab	Meg Tivey	Relict spire close to sampled fluids.
138-3-R1	51906	05/04 23 59	1573, 3226	April- May 05		1888.71	305.37	3.526	Basalt/grab	Meg Tivey	Columnar basalt from exposed outcrop. Possible dike intrusion?
138-4-R1	51916	05/05 00 04	1576, 3234	April- May 05		1885.996	276.87	5.638	Relict sulfide flange/grab	Meg Tivey	Barite-rich flange, knobs on upper surfaces, coating of dark, colliform oxide(?)
138-5-R1	52106	05/05 01 28	1577, 2994	April- May 05		1876.108	145.26	1.425	Relict sulfide “flange” /grab	Meg Tivey	Sulfide near “ <i>mothership</i> ” flange. Mixed light/dark grey sulfide w/ amorphous Si coating?

138-6-W1-IGT6	52210	05/05 02 03	1573, 3040	April- May 05		1885.48	190.69	2.125	IGT6 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Diffuse flow from flow in fissures of andesite. T ~ 16 – 24 °C. <i>Alviniconcha</i> snails present.
138-7-R1	52446	05/05 03 20	1529, 2983	April- May 05		1867.279	316.17	9.864	Active sulfide chimney/grab	Meg Tivey	Layered mixed Fe-Zn sulfide; sph crystals(?) in conduits. From edge of larger sulfide chimney.
138-7-W1-IGT7	52454	05/05 03 47	1529, 2983	April- May 05		1867.421	318.04	9.714	IGT7 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Focused, white smoker fluid. Pair to sulfide 138-7-R1. T ~ 272 °C.
138-7-W2-IGT8	52540	05/05 03 55	1529, 2983	April- May 05		1867.163	302.99	3.376	IGT8 water sample	Geoff Wheat, Jeff Seewald, Mike Mottl	Replicate fluid sample. Same orifice. T ~ 263 °C.
138-8-R1	52626	05/05 04 15	1534, 2931	April- May 05		1879.237	218.53	1.6	Hydrothermal talus/breccia/grab	Meg Tivey	Highly altered and cemented talus or possible sulfide stockwork.
138-9-B1	52746	05/05 04 58	1521, 2924	April- May 05		1873.645	230.75	1.85	Sediment/scoop	Stacy Kim	Several cm thick sediment. Microbial activity giving rise to bright yellow/brown color?
138-10-R1	52902	05/05 05 50	1576, 2906	April- May 05		1872.437	310.43	1.713	Relict sulfide chimney/grab	Meg Tivey	Mixed sulfide upto ~ 4 cm thick w/ extensive halo of oxides/silicates from large, inactive sulfide dome.