

Samples recovered from TowCam vent field on TUI05MV, April-May 2005

| Sample Number J2- | VV Event # | Date/ Time (UTC) | Position X,Y | Nav version | Lat/lon (origin-20 -22.000 -176 -12.00) | Vehicle depth (m) | Vehicle hdg | Vehicle altitude (m) | Sample Type/collection method | Contact person | Comments |
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| 126-1-W1-IGT2 | 9372 | 04/09 12 49 | 6651, 5560 | April/May 05 | | 2703.151 | 150.41 | 14.902 | IGT2 Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Active high temp smoker from fragile chimney. Tmax ~ 325 °C. |
| 126-1-W2-IGT3 | 9454 | 04/09 12 58 | 6651, 5560 | April/May 05 | | 2703.178 | 150.68 | 7.038 | IGT3 Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Replicate sample, same orifice. Temp 325 °C. |
| 126-1-R1 | 9490 | 04/09 13 09 | 6651, 5560 | April/May 05 | | 2703.131 | 150.33 | 15.54 | Active sulfide chimney/grab | Meg Tivey | Black/grey sulfide w/ multiple growth sequences?. Relict wall w/ later growth and anhy. veining? Pair for TC1 fluids. |
| Mkr 8 | 9521 | 04/09 13 20 | 6649, 5564 | April/May 05 | | 2717.334 | 177.06 | 2.813 | Marker 8 | | Base of ~ 2 m tall chimney, active flow at top. White microbial mat. |
| 126-2-B1 | 9846, 9974 | 04/09 15 39 | 6654, 5542 | April/May 05 | | 2713.122 | 71.22 | 1.163 | Brittle Star w/ pillow basalt. /grab | Stacy Kim | Glassy basalt from base of chimney. Fe-oxide staining on exterior of sample. |
| 126-2-B2 | 10005 - | 04/09 16 12 | 6654, 5542 | April/May 05 | | 2708.931 | 140.39 | 2.763 | Anemone w/ pillow basalt/grab | Stacy Kim | Glassy basalt w/ ~ 2 cm thick brown oxide staining. Broken surfaces have Fe±Mn oxide staining. |

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| 126-2-B3 | 10024 - 10091 | 04/09 16 27 | 6654, 5542 | April/May 05 | | 2708.775 | 129.29 | 2.863 | Small anemones w/ pillow basalt/grab. | Stacy Kim | Basaltic glass – as above. |
| 126-3-B1 | 10206 | 04/09 17 12 | 6614, 5538. | April/May 05 | | 2703.962 | 109.47 | 1.313 | Tubeworms/grab | Stacy Kim | White “spaghetti” tubeworms from diffuse (?) flow sulfide mound. |
| 126-3-B2 | 10251 | 04/09 17 25 | 6614, 5538. | April/May 05 | | 2704.26 | 108.88 | 1.125 | <i>Alviniconcha</i> Snails/grab | Stacy Kim | Snails from same location as tubeworms. Diffuse flow sulfide mound. |
| 126-3- W1- IGT4 | 10325 | 04/09 17 51 | 6614, 5538. | April/May 05 | | 2704.341 | 110.15 | 1.238 | IGT4 Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Low T, diffuse flow from cracks in sulfide mound. T ~ 24°C. |
| 126-3- W2- IGT8 | 10385 | 04/09 18 13 | 6614, 5538. | April/May 05 | | 2704.253 | 108.83 | 1.463 | IGT8 Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Replicate sample, same orifice. T ~ 24°C (max). |
| Mkr 9 | 10469 11831 | 04/09 18 37 2208 | 6629, 5549 6617, 5550 | April/May 05 | | 2704.199 2704 | 116.1 120 | 0.938 2 | Marker 9 | | Benchmark for low T diffuse flow site. |
| 126-4-R1 | 10547 | 04/09 19 06 | 6629, 5554 | April/May 05 | | 2706.152 | 238.18 | 0.775 | Pillow Basalt /grab | Meg Tivey | Glassy basalt w/ advanced Fe/Mn oxide formation on exterior faces. Biological coating? |
| 126-5- W1- IGT7 | 11030 – 11161 | 04/09 20 40 | 6651, 5533 | April/May 05 | | 2707.004 | 201.86 | 1.55 | IGT7 Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | High T, grey smoker from base of small discrete sulfide chimneys. T ~ 318 °C. T (exterior) ~ 19 °C. |

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| 126-5-R1 | 11265 | 04/09 20 57 | 6651, 5533 | April/May 05 | | 2706.984 | 203.14 | 1.45 | Active sulfide chimney/grab | Meg Tivey | Dense black/brown sulfide grading into interior dendritic cpy/sph zone. Pair to fluid 126-5-W1 (TC3). |
| Mkr 7 | 12372 | 04/09 23 30 | 6651, 5533 | April/May 05 | | 2703 | 239 | 3.9 | Marker 7 | | ~ 1 m to periphery of sampled spire. |
| 126-5-R2 | 11597 | 04/09 21 17 | 6651, 5533 | April/May 05 | | 2706.666 | 149.58 | 2.938 | Inactive sulfide chimney/grab | Meg Tivey | Dendritic Zn-rich (?) textured sulfide w/ sph or cpy lined conduits. Thick (~ 2 mm) exterior Fe-oxide coating. |
| 126-5-B1 | 11623 | 04/09 21 20 | 6651, 5533 | April/May 05 | | 2706.409 | 139.05 | 3.863 | Barnacles (w/ relict sulfide) /grab | Stacy Kim | Composition/Texture of sulfide similar to 126-5-R2. |
| 126-6-W1-IGT6 | 11962 - 12018 | 04/09 22 30 | 6627, 5564 | April/May 05 | | 2710.324 | 38.62 | 1.625 | IGT6 Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Several m tall BS chimney complex. Fluid from cpy-lined orifice T~ 314 °C. No sulfide pair. |
| 126 -7-B1 | 12129 | 04/09 22 49 | 6625, 5565 | April/May 05 | | 2710.648 | 109.46 | 5.051 | Gastropods (w/ small sulfide piece) /grab | Stacy Kim | Gastropods (sp?) from chimney surfaces from which BS/GS fluid discharging. |
| Mkr 10 | 12316 | 04/09 23 12 | 6632, 5562 | April/May 05 | | 2714.623 | 99.79 | 0.738 | Marker 10 | | Placed on pillow basalt flow, near to snail and barnacle community. |
| Mkr 11 | 13049 | 04/10 04 35 | 6570, 5416 | April/May 05 | | 2718.415 | 200.47 | 14.614 | Marker 11 | | Base of small sulfide mound, low T flow. |
| Mkr 12 | 13166 | 04/10 05 04 | 6539, 5404 | April/May 05 | | 2714.251 | 265.2 | 14.614 | Marker 12 | | Low lying sulfide mound w/ ~ 1 m tall discrete chimneys. Bacterial mat in fissures in basalt. |

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| 127-1-W1-IGT1 | 13930 | 04/11 03 05 | 6539, 5404 | April/May 05 | | 2714.38 | 329.06 | 2.075 | IGT1 Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | High T, black smoker orifice from small active spire. Tmax 300 °C |
| 127-1-W1-IGT2 | 13980 | 04/11 03 15 | 6539, 5404 | April/May 05 | | 2714.292 | 329.76 | 2.038 | IGT2 Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Replicate sample, same orifice. T ~ 303 °C. |
| 127-1-R1 | 14055 | 04/11 03 45 | 6539, 5404 | April/May 05 | | 2714.184 | 342.04 | 2.25 | Active sulfide chimney/grab | Meg Tivey | White smoker, dark grey Fe-Zn rich sulfide. White oxide coating. Base of spire of more focused flow. |
| 127-1-R2 | 14125 | 04/11 04 13 | 6539, 5405 | April/May 05 | | 2715.001 | 312.66 | 2.075 | Active sulfide chimney/grab | Meg Tivey | cpy±sph rich (?) sulfide lining of Fe- Zn rich chimney. Proximal to TC5. |
| 127-2-W1-MGreen | 14468 | 04/11 06 38 | 6651, 5533 | April/May 05 | | 2706.998 | 216.93 | 10.001 | Major Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Complement to sulfide 126-5-R1 (R3) and fluid 126-5-W1- IGT7 (TC3). |
| 127-2-W2-Mred | 14529 | 04/11 06 54 | 6651, 5533 | April/May 05 | | 2707.018 | 216.8 | 10.001 | Major Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Replicate major water sample, from same orifice (marker 7 site). |
| 127-2-B1 | 14607 | 04/11 07 22 | 6652, 5533 | April/May 05 | | 2707.004 | 156.5 | 10.001 | Mussels/grab | Stacy Kim | Side of (relict? Inactive?) sulfide mound ~ 1 m from black smoker chimneys. |
| 127-3-R1 | 14950 | 04/11 09 24 | 6567, 5401 | April/May 05 | | 2721.052 | 283.91 | 10.001 | Relict sulfide chimney/grab | Meg Tivey | Mixed fine-grained green/grey w/ |

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| | | | | | | | | | | | intermixed cpy/sph (?). Fe-oxide coating on interior. |
| 127-4-R1 | 15282 - 15387 | 04/11 10 00 | 6579, 5409 | April/May 05 | | 2719.977 | 9.91 | 10.001 | Active sulfide chimney/grab | Meg Tivey | Mixed Fe-Zn and Fe-Cu sulfide w/ massive anhydrite (veins?). |
| 127-4-W1-IGT6 | 15522 | 04/11 10 18 | 6580, 5409 | April/May 05 | | 2719.869 | 8.13 | 10.001 | IGT6 Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Focused, high T grey smoker. T ~ 287 °C. Complement to sulfide 127-4-R1. |
| 127-4-W2-IGT5 | 15642 | 04/11 11 08 | 6580, 5409 | April/May 05 | | 2719.551 | 11.35 | 10.001 | IGT5 Water Sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Replicate fluid sample. Same orifice. T ~ 265°C. |
| 127-5-R1 | 15700 | 04/11 11 30 | 6564, 5423 | April/May 05 | | 2719.274 | 302.37 | 10.001 | Active sulfide chimney/grab | Meg Tivey | Grey/White smoker. Beehive texture, green/grey sulfide w/ sph (?). Anhydrite lining conduits? T ~ 182 °C. |
| 127-5-B1 | 15712 | 04/11 11 31 | 6564, 5423 | April/May 05 | | 2719.145 | 301.25 | 10.001 | Cucumber/Worm/grab | Stacy Kim | Volunteer worm <i>Synaptid</i> or <i>Remertian</i> ? |
| 127-6-B1 | 15783 | 04/11 12 14 | 6565, 5389 | April/May 05 | | 2715.833 | 184.54 | 1.725 | Seastars/grab | Stacy Kim | On inactive (large) sulfide mounds. Significant population of seastars. |
| Mkr 13 | 15871 | 04/11 12 29 | 6565, 5389 | April/May 05 | | 2716.279 | 182.77 | 1.638 | Marker 13 | | At base of large mound where seastars collected. South of markers 11 and 12. |
| 127-6-B2 | 15911 | 04/11 12 41 | 6565, 5389 | April/May 05 | | 2716.036 | 178.73 | 1.913 | Snails/grab | Stacy Kim | Several <i>Provannid</i> (?) snails sampled from base of inactive sulfide mound. |

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| 127-6-B3 | 16215 | 04/11 14 40 | 6562, 5386 | April/May 05 | | 2715.711 | 194.1 | 1.95 | Egg cases/grab | Stacy Kim | Bivalve egg cases (species?), secured to basalt substrate. |
| 127-7-B1 | 16167 | 04/11 14 15 | 6559, 5374 | April/May 05 | | 2715.299 | 13.7 | 1.263 | Snails/grab | Stacy Kim | <i>Ifremeria</i> from basalt (?) substrate. |
| 139-1-R1 | 53444 | 05/05 23 01 | 6543, 5400 | April/May 05 | | 2713.061 | 320.71 | 4.388 | Active sulfide chimney/grab | Meg Tivey | Layered chimney wall, 6 – 10 cm diam. Inner green/grey friable sulfide w/ thin outer cohesive (cpy±sph?) rich casing |
| 139- Toaster1 | 53541 | 05/05 23 40 | 6540, 5405 | April/May 05 | | 2713.528 | 298.91 | 4.451 | Toaster (Kadko) | Dave Kadko | For Radon measurements. In plume of active vents at Marker 12. |
| 139- Toaster 2 | 53622 | 05/06 00 17 | 6568, 5413 | April/May 05 | | 2717.807 | 339.82 | 2.725 | Toaster (Kadko) | Dave Kadko | For Radon measurements. In plume of active vents at Marker 11. |
| 139-2-R1 | 54211 | 05/06 04 12 | 6637, 5549 | April/May 05 | | 2708.093 | 99.07 | 8.951 | Active sulfide chimney/grab | Meg Tivey | Chimney fragments from spire. Friable interior, cohesive crust w/ oxide/silicate coating? No fluid pair |
| 139-2- W1- IGT5 | 54248 | 05/06 04 42 | 6637, 5549 | April/May 05 | | 2708.147 | 100.16 | 9.114 | IGT5 water sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Focused, high T fluid sample from top of complex. T ~ 308 °C. Not a pair. |
| 139-2- W2- IGT6 | 54323 | 05/06 05 04 | 6637, 5549 | April/May 05 | | 2708.167 | 100.61 | 9.026 | IGT6 water sample | Geoff Wheat, Jeff Seewald, Mike Mottl | Replicate sample, same orifice. No temp data. |
| 139-2-R2 | | 05/06 | 6637, 5549 | April/May 05 | | | | | Active sulfide chimney/grab | Meg Tivey | Large active sulfide. Cpy-rich and Anhy- rich? Volunteer, |

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| | | | | | | | | | | | possible fluid pair. |
| 139-3-B1 | 54475 | 05/06 06 02 | 6614, 5537 | April/May 05 | | 1.663 | 1.663 | 1.663 | Anemones/grab | Stacy Kim | Base of sulfide mound of diffuse, low T flow |