

Sample # (Dive#_Stn#_Type)		Vvan #	Date	Time (UTC)	Marker#	Renav X	Renav Y	Renav Depth	Heading	Altitude (m)	Type/Collection Meth'd	Comments/Description
J2-202-1-R1	Vienna Woods	5620	7/25	10:00		3313	5819	2485	245	2.1	Sediment/ Grab	Coalesced sediment piece from base of large, active (~ 255 °C) sulfide mound
J2-202-2-R1	Vienna Woods	5651	7/25	10:09		3295	5827	2485	345	1.4	Hydrothermal Talus/ Breccia/ Grab	Weathered/Altered clay-silica-oxide (formerly sulfide-rich?) 'apron' from Fe-oxide rich horizon
J2-202-10-R1	Vienna Woods	6410	7/25	13:05		3138	5865	2484	248	2.0	Sediment/ Grab	Clay-silica-sulfate precipitate encrusted in Mn-oxide casing (early or late?) lying within sulfide-sediment mound.
J2-202-13-R1	Vienna Woods	7600	7/25	20:25		3279	5799	2485	120	0.7	Volcanic Rock/ Grab	Partly altered basalt, glassy rind in places; interior tubes of drained lava flows.
J2-202-14-R1	Vienna Woods	7653	7/25	20:42		3253	5786	2486	177	1.0	Sediment / Grab	Mn-oxide coating inner amorphous oxide-clay mass from exterior of base of large, collapsed sulfide chimney.
J2-203-1-R1	Bronze Age Fort	8926	7/26	15:53		5717	8464	2461	240	3.2	Volcanic Rock/ Grab	Altered, non-glassy basalt from rubble front. Some surface colonization.
J2-203-2-R1	Bronze Age Fort	9005	7/26	16:43		5613	8387	2402	235	0.7	Volcanic Rock/ Grab	Protruding, glassy, fresh pillowbud from edge of outcrop. Navigation questionable.
J2-203-4-R1	Bronze Age Fort	9520	7/26	20:27		5557	8135	2445	045	1.2	Volcanic Rock/ Grab	Altered basalt from top of 'hogback' or 'razorback' wall (~ 15 m high)
J2-203-6-R1	Bronze Age Fort	10140	7/26	23:41		5346	8290	2429	319	3.1	Volcanic Rock/ Grab	Basalt w/ bi-modal vesicle population taken from basal section of most NW wall.
J2-203-7-R1	Bronze Age Fort	10349	7/27	0:54		5244	7870	2467	191	0.7	Volcanic Rock/ Grab	Hackly sheet flow. Partly glassy, folded sheet flow from SW of wall
J2-203-7-R2	Bronze Age Fort	10380	7/27	0:59		5244	7870	2467	191	0.7	Volcanic Rock/ Grab	2nd sample of same sheet flow
J2-205-1-R1	Tufar 3	13648	7/28	19:20		12165	11408	2520	202	1.0	Volcanic Rock/ Grab	Pillow w/ glassy rind. Some plg-olv phenocrysts. Incipid alteration to clay.
J2-206-1-R1	Un-named Vienna Woods	14230	7/29	10:34		20755	16285	2640	032	1.0	Pumice/ Grab	Pumice from surface of sediment
J2-206-2-R1	Un-named Vienna Woods	15486	7/29	17:34		20187	15252	2585	249	1.2	Volcanic Rock/ Grab	Weathered pillow from sedimented axial ridge
J2-206-3-R1	Un-named Vienna Woods	15820	7/29	19:30		20666	15332	2621	002	3.4	Hydrothermal Talus/ Breccia/ Grab	Altered brecciated clasts (volcanic? Perlitic textures) cemented by minor sulfide (Py)
J2-206-4-R1	Un-named Vienna Woods	16230	7/29	22:00		21181	16014	2592	163	1.6	Volcanic Rock/ Grab	Small piece of broken pillow from small, irregular largely sedimented mound
J2-206-5-R1	Un-named Vienna Woods	16427	7/29	23:18		21170	15906	2602	318	3.1	Sediment/ Grab	Orange, friable/soft clay-oxide encrusted in Mn-oxide from small exposed volcanic face on sedimented mound
J2-206-6-R1	Un-named Vienna Woods	16500	7/29	23:38		21149	15808	2605	231	0.8	Pumice/ Grab	Pumice piece from small trench with sea cucumbers
J2-207-4-R1	Vienna Woods	17683	7/30	18:25		3148	5872	2484	067	1.0	Sediment/ Grab	Solid, platy sediment at base of chimney
J2-207-6-R1	Vienna Woods	17871	7/30	19:15		3156	5854	2487	066	1.3	Volcanic Rock/ Grab	Moderately vesicular basalt from near base of sulfide chimney
J2-207-7-R1	Vienna Woods	18076	7/30	20:12		3173	5883	2483	300	1.3	Volcanic Rock/ Grab	Underside of old pillow flow from section under a relict sulfide chimney
J2-208-3-R1	Roman Ruins	19962	8/02	15:56		2782	3221	1683	326	2.1	Hydrothermal Talus/ Breccia/ Grab	Rock from talus pile at base of sulfide rampart; i) mineralized and altered volcanic breccia or ii) degraded massive sulfide?

J2-208-5-R1	Roman Ruins	20458	8/02	18:10		2679	3160	1670	130	2.5	Volcanic Rock/ Grab	Relatively fresh volcanic pillow flow from edge of flat-topped conical hill.
J2-209-3-R1	Satanic Mills	22655	8/03	14:45		2455	2623	1683	027	2.7	Volcanic Rock/ Grab	Black, holohyaline lava, numerous vesicles. Some surface staining. From area of seafloor w/ shimmering flow.
J2-209-8-R1	Satanic Mills	24136	8/03	21:49		2464	2550	1688	256	2.2	Hydrothermal Talus/ Breccia/ Grab	Large breccia of grey clastic altered volcanic lava cemented between Cu-rich and Qtz veins.
J2-209-9-R1	Satanic Mills	24242	8/03	22:26		2430	2495	1689	296	1.8	Volcanic Rock/ Grab	Glassy, aphyric, lobate flow w/ minor surface staining from heavily sedimented terrain.
J2-210-2-R1	Snowcap	25190	8/04	13:25		2154	2421	1642	088	2.8	Sulfur/ Grab	Predominantly amorphous sulfur (dark grey). Forms vein within 2-R2 type rock
J2-210-2-R2	Snowcap	25284	8/04	13:51		2151	2417	1643	150	3.5	Volcanic Rock/ Grab	Fresh, sparsely phyrlic (plg?) volcanic lava. Isolated and loose from slope of sedimented ridge w/ bacterial mats.
J2-210-3-R1	Snowcap	25520	8/04	15:08		2211	2402	1635	209	0.1	Sediment/ Scoop	Sediment scoop of white sediment material from top of ridge. Recovered only coarse gravel.
J2-210-5-R1	Fenway	26104	8/04	18:15		2515	2394	1702	007	2.5	Volcanic Rock/ Grab	Fractured volcanic lava, moderately surface staining. Colonized w/ extensive mussel and alvinellid populations.
J2-210-6-R1	Fenway	26270	8/04	18:56		2513	2412	1699	220	1.4	Sediment/ Scoop	Scoop at top of ridge. Recovered clastic sediment of angular lava, pumice, Pele's Hair and FeOOH platy precipitates.
J2-210-8-R1	Fenway	26916	8/04	22:08		2462	2370	1717	211	0.9	Massive Anhydrite/ Grab	Euhedral, massive anhydrite exposed on seafloor at/near base of sedimented scarp/ slope.
J2-210-8-R2	Fenway	26944	8/04	22:14		2462	2370	1717	211	0.9	Massive Anhydrite/ Grab	Euhedral, massive anhydrite exposed on seafloor at/near base of sedimented scarp/ slope.
J2-211-2-R1	Tsukushi	27932	8/05	12:42		1837	2237	1660	274	0.9	Sediment/ Grab	Piece of ~1 cm thick ferrihydrite exterior layer from mound; coated w/ colloform Mn-oxide.
J2-211-2-R2	Tsukushi	27956	8/05	12:47		1837	2236	1660	274	0.9	Volcanic Rock/ Grab	Fresh pillow lava fragment exposed at surface at base of mound.
J2-211-3-R1	Tsukushi	28173	8/05	14:10		1805	2440	1626	307	0.6	Volcanic Rock/ Grab	Mostly fresh, glassy to aphanitic lava from top of a [volcanic] dome.
J2-211-5-R1	Snowcap	28870	8/05	18:37		2138	2414	1646	073	0.2	Sulfur / Grab	Native sulfur from flow exposed on seafloor. Mostly amorphous (grey), some ortho (yellow).
J2-211-6-R1	Snowcap	28989	8/05	19:02		2143	2422	1645	171	0.9	Volcanic Rock/ Grab	bedded, looks like hyaloclastite
J2-211-8-R1	Snowcap	29250	8/05	20:35		2098	2400	1649	290	0.7	Volcanic Rock/ Grab	Weathered volcanic substratum from variably sedimented and Fe-oxide coated ridge.
J2-212-7-R1	Fenway	31345	8/06	18:54		2456	2352	1712	138	3.1	Massive Anhydrite/ Grab	Massive anhydrite intergrown w/ sulfide talus from scarp base of Fenway mound.
J2-212-8-R1	Fenway	31430	8/06	19:21		2456	2349	1711	144	2.6	Sediment/ Scoop	Scoop bag of sediment from atop microbial-rich mound.
J2-213-1-R1	Roman Ruins	32620	8/07	12:36		2730	3135	1682	321	3.3	Hydrothermal Talus/ Breccia/ Grab	Piece of loose talus/ altered rock from slope of rugged, broken volcanic terrain.
J2-213-1-R2	Roman Ruins	32639	8/07	12:39		2728	3134	1682	321	3.3	Volcanic Rock/ Grab	Fresh volcanic flow; from same locale as 213-1-R1.
J2-213-4-R1	Roman Ruins	33071	8/07	15:26		2704	3188	1683	258	2.0	Volcanic Rock/ Grab	Slightly weathered volcanic piece from base next to inactive sulfide mound (stump).
J2-213-5-R1	Roman Ruins	33194	8/07	16:12		2698	3194	1688	294	0.9	Volcanic Rock/ Grab	Altered rock from Fe-oxide and microbially stained volcanic outcrop/wall.

J2-214-5-R1	Transit (Snowcap)	35568	8/08	14:56		2434	2360	1709	245	2.8	Clastic rock/ Grab	Crust of clastic rock of tube pumice and Pele's hair w/ Mn-oxide coating. Slope of Fe-, Mn-oxide and microbial mats.
J2-214-6-R1	Transit (Snowcap)	35610	8/08	15:13		2435	2360	1708	255	3.5	Volcanic Rock/ Grab	Massive lava. Glassy w/ incipient alteration, from same outcrop as 214-5-R1.
J2-214-7-R1	Snowcap	35790	8/08	16:18		2290	2311	1668	247	5.5	Volcanic Rock/ Grab	Massive lava. Aphyric; moderately vesicular; stretched vesicles. From pervasively sedimented slope.
J2-214-8-R1	Crater South (Snowcap)	35915	8/08	17:06		2133	2259	1660	343	-	Volcanic Rock/ Grab	Massive lava from interior floor of crater. Cooling cracks and incipient alteration along cracks.
J2-214-9-R1	Transit (Snowcap)	36002	8/08	17:44		2142	2338	1660	322	-	Volcanic Rock/ Grab	Exterior of possibly volcanic bomb (sub-spherical vesicles; onion-skin cooling cracks). Slightly scoracious on exterior.
J2-214-10-R1	Snowcap	36140	8/08	18:42		2152	2419	1644	030	1.3	Volcanic Rock/ Grab	Hyaloclastite exposed on fractured and blocky flow. Cementing clasts is native S; locally
J2-214-10-R2	Snowcap	36185	8/08	19:05		2149	2422	1644	69	1.7	Volcanic Rock/ Grab	2nd piece. Hyaloclastite from same outcrop.
J2-214-11-R1	Snowcap	36231	8/08	19:25		2150	2421	1646	215	0.2	Clastic rock/ Grab	Polymictic clastic rock (altered larger volcanic clasts and smaller sulfidic clasts). Clasts cemented by sulfide, sulfate and native sulfur?
J2-214-11-R2	Snowcap	36265	8/08	19:40		2150	2421	1646	215	0.2	Volcanic Rock/ Grab	Massive lava w/ irregular, frothy, scoracious surface textures. Some cementation w/ S.
J2-214-13-R1	Snowcap	36489	8/08	21:22		2184	2405	1640	216	1.5	Volcanic Rock/ Grab	Clastic rock OR strongly fractured massive volcanic rock. Orth native S wetting cracks.
J2-214-14-R1	Tsukushi	36715	8/08	22:57		1840	2241	1660	244	0.2	Sediment/ Grab	Fe-oxide deposit from mound surrounding ~60 °C flow. Mn-oxide surface coating. PAIR to fluids 211-2 and 214-14.
J2-214-14-R2	Tsukushi	36715	8/08	23:01		1840	2240	1660	244	0.2	Sediment/ Grab	2nd piece. Fe-oxide deposit.
J2-215-2-R1	-	38393	8/9	20:37		3929	4028	1663	295	2.0	Volcanic Rock/ Grab	Surficially altered (oxide stained?) volcanic rock from area of shimmering hydrothermal activity. Rich Fe-oxide surface coatings on mounds and ridges.
J2-216-1-R1	Fenway	39046	8/10	10:47		2458	2359	1712	138	2.4	Massive Anhydrite/ Grab	Massive anh protruding from beneath small active chimney complex.
J2-216-4-R1	Fenway	39447	8/10	13:03		2473	2352	1712	330	0.9	Sediment/ Scoop	Scoop of sulfidic sediment from which black smoke fluids are discharging.
J2-216-5-R1	Fenway	39670	8/10	14:28	10	2462	2359	1710	108	3.0	Massive Anhydrite/ Grab	Massive Anh (possibly Ba?); w/ Ba or Gypsum rosettes on outer surface? Need confirmation.
J2-216-6-R1	Fenway	39731	8/10	14:45		2464	2355	1710	094	1.1	Sediment/ Scoop	2nd scoop from slope of sulfide-sulfate rich sediment at base of upper terrace.
J2-216-10-R1	Fenway	40400	8/10	19:04		2486	2337	1726	223	2.8	Volcanic Rock/ Grab	Incipiently altered volcanic lava from basal Fe-oxide coated and sedimented slope.
J2-216-11-R1	Fenway	40474	8/10	19:33		2492	2355	1725	331	2.3	Volcanic Rock/ Grab	Incipiently altered volcanic lava from basal Fe-oxide coated and sedimented slope.
J2-216-11-R2	Fenway	40480	8/10	19:37		2493	2358	1724	331	2.3	Volcanic Rock/ Grab	Piece of clastic stockwork. Clasts show gradation of alteration extent or type. Cemented w/ veined sulfides.

J2-216-12-R1	Fenway	40679	8/10	20:53		2451	2365	1716	224	0.2	Massive Anhydrite/ Grab	Massive anhydrite (barite?) w/ disseminated sulfide; exposed on flanks of sedimented slope.
J2-216-13-R1	Fenway	40865	8/10	22:15		2460	2411	1705	001	1.3	Volcanic Rock/ Grab	Somewhat altered volcanic lava w/ Mn-oxide coating. Lying on patch of sediment w/ rich microbial S.
J2-216-14-R1	Fenway	41017	8/10	23:11		2482	2359	1717	273	1.2	Massive Anhydrite/ Grab	Massive anhydrite (barite?) w/ disseminated sulfide; exposed on flanks of sedimented slope.
J2-217-6-R1	Suzette	42223	8/12	17:20		3185	4867	1489	018	1.3	Volcanic Rock/ Grab	Altered volcanic lava exposed on Fe-oxide rich sediment.
J2-217-11-R2	Suzette	43235	8/12	22:06		3043	4973	1497	69	2.0	Sediment/ Grab	Partial, mixed volcanogenic clastic rock and indurated sulfide sand?
J2-218-4-R1	NE Paul	44715	8/13	16:42		4896	4596	1875	083	0.9	Volcanic Rock/ Grab	Ropey folded lava; fresh except for minor surficial staining with Mn-oxide.
J2-218-5-R1	NE Paul	44765	8/13	16:52		4901	4600	1875	197	1.7	Volcanic Rock/ Grab	Black lava w/ taffy stretched surface appearance on exterior and smooth walled cavity on underside.
J2-218-7-R1	NE Paul	44995	8/13	18:33		5031	4573	1868	191	4.0	Volcanic Rock/ Grab	Crudely triangular, prismatic massive lava w/ hackly surface texture from crater pit.
J2-218-8-R1	NE Paul	45225	8/13	20:48		4800	4585	1879	349	1.5	Sediment/ Scoop	Cohesive, primarily clay-like sediment material w/ minor oxide material from sediment surface.
J2-218-9-R1	NE Paul	45363	8/13	23:38		5545	5458	1915	054	0.7	Volcanic Rock/ Grab	Incipiently altered volcanic fragment w/ minor Mn-oxide surficial staining.
J2-219-1-R3	Suzette	45945	8/14	10:12		2519	4802	1607	179	1.9	Sediment/ Scoop	Clay-rich sediment collected w/ push core. To be sampled for organic content (Seewald, WHOI).
J2-219-11-R1	Suzette	48312	8/14	22:54		3195	4940	1509	234	0.5	Volcanic Rock/ Grab	Relatively fresh volcanic rock; phenocrysts; from crust of large, broken pillow flow.
J2-220-2-R1	Desmos	48868	8/15	10:53		1801	2452	1995	342	3.3	Volcanic Rock/ Grab	Aphyric, ~ 10 % vesicular, fresh, glassy lava from lightly sedimented pillow outcrop
J2-220-3-R1	Desmos	49179	8/15	12:35		1433	2723	1917	272	0.8	Volcanic Rock/ Grab	Pervasively bleached; advanced argillic alteration, hard but brittle. Sulfur veining and filling of vesicles obvious. From hyaloclastite outcrop.
J2-220-5-R1	Desmos	49703	8/15	15:45		1361	2790	1908	245	2.2.	Volcanic Rock/ Grab	Mostly fresh volcanic lava w/ some surficial alteration. Cracks and cavities filled w/ abundant
J2-220-5-R2	Desmos	49727	8/15	16:00		1361	2790	1908	256	2.2	Sulfur/ Scoop	Predominantly native/ elemental sulfur scooped from surface of flow.
J2-220-6-R1	Desmos	49846	8/15	16:20		1357	2794	1908	252	2.6	Volcanic Rock/ Grab	From surface w/ T measurement. Relatively fresh w/ stainings and encrustations of whitish-yellow S and rusty Fe-oxide.
J2-220-7-R1	Desmos	50002	8/15	17:36		1438	3023	1894	341	3.6	Volcanic Rock/ Grab	Slightly stained and altered volcanic lava from rubbly, broken flow. Sulfur present in light-grey altered areas - early argillic?
J2-220-8-R1	Desmos	50150	8/15	18:20		1481	3050	1863	322	7.7	Volcanic Rock/ Grab	Lava with argillaceous alteration (light-grey - to - cream); soft and friable. Py + ba(?) disseminated within matrix.
J2-220-9-R1	Desmos	50176	8/15	18:31		1482	3047	1892	010	3.5	Volcanic Rock/ Grab	Pervasively altered (brown interior; light-brown/ cream exterior), brittle and hard rock. Base of [fault] w/ small talus pile.

J2-220-10-R1	Desmos	50409	8/15	20:07		1426	2822	1915	006	1.3	Volcanic Rock/ Grab	Fresh, glassy lava w/ irregularly folded and stretch upper surface. Rich Fe-oxide coatings originally on surface.
J2-220-11-R1	Desmos	50524	8/15	20:54		1368	2792	1918	234	2.7	Volcanic Rock/ Grab	Altered (bleached) volcanic lava. Micro-vesicular; white to pale-grey. Mostly soft. Disseminated, trace black, opaque grains. Sulfur along internal fractures. Lava dome?
J2-220-12-R1	Desmos	50637	8/15	21:27		1360	2779	1905	335	2.3	Sulfur/ Grab	Very friable native sulfur. Several distinct and interesting textures. From highly fissured volcanic
J2-220-12-R2	Desmos	50660	8/15	21:51		1358	2778	1905	268	2.5	Sulfur-cemented clastic rock/ Grab	Mixed sulfur and (glassy) broken volcanics from a sharp faulted ridge S of the Onsen field.
J2-220-13-R1	Desmos	50776	8/15	22:27		1348	2778	1901	260	0.7	Volcanic Rock/ Grab	Surficially stained (FeOx), incipiently altered volcanic pillow from edge of vertical wall.
J2-220-14-R1	Desmos	50880	8/15	22:53		1372	2731	1903	259	4.0	Volcanic Rock/ Grab	Aphyric, vesicular lava from field of altered hyaloclastite. Sooty, sulfur-sulfate that is very soft and rubs off.
J2-220-14-R2	Desmos	50912	8/15	22:57		1372	2731	1903	259	4.0	Volcanic Rock/ Grab	Massive, hyaloclastitic lava from talus field. Incipient alteration on surfaces.
J2-220-14-R3	Desmos	50932	8/15	22:59		1372	2731	1903	259	4.0	Volcanic Rock/ Grab	Aphanitic, vesicular (~ 40 % porosity) rock; also from rugged, broken hyaloclastite field.
J2-221-4-R1	North Su	52072	8/16	14:33		3743	3555	1261	034	4.4	Clastic Rock/ Grab	Polymictic breccia from base of volcanic slump; S slope. Abundant white smoker activity up slope.
J2-221-4-R2	North Su	52087	8/16	14:34		3743	3555	1261	034	4.4	Clastic Rock/ Grab	Brecciated volcanic rock from same outcrop. Trace Py disseminated?
J2-221-5-R1	North Su	52156	8/16	14:41		3751	3553	1259	065	1.6	Clastic Rock/ Grab	Polymictic clastic rock w/ trace dissem. sulfur and py? From area of intense acidic, cloudy flow.
J2-221-6-R1	North Su	52408	8/16	16:25		3768	3619	1203	047	7.4	Clastic Rock/ Grab	Monomictic breccia w/ porphyritic (plg+ cpx) clasts and sulfur/sulfide + clay matrix. From steep faced wall.
J2-221-7-R1	North Su	52516	8/16	17:08		3757	3657	1192	105	8.7	Clastic Rock/ Grab	Hyaloclastite, friable, several pieces. From edge of volcanic flow. Sulfur matrix. No sulfide.
J2-221-8-R1	North Su	52620	8/16	17:42		3798	3653	1164	053	4.6	Volcanic Rock/ Grab	Glassy, porphyritic lava coated w/ well-developed Fe-oxide staining and ochreous matter.
J2-221-11-R1	North Su	53200	8/16	19:48		3805	3698	1158	201	0.9	Sediment/ Scoop	Scoop to determine the nature of the sediment piles. Sulfide?
J2-221-12-R1	North Su	53309	8/16	19:58		3802	3691	1154	227	1.1	Clastic Rock/ Grab	Coarse-grained sandy, laminated and cross-bedded mineralised sediment structure?? Formed ledge overhang w/ flow from under.
J2-221-13-R1	North Su	53502	8/16	20:59		3876	3606	1217	357	1.2	Sulfur/ Grab	Native S w/ botryoidal lime-green sulfur on exterior. From crust of 70 °C flow.
J2-221-13-R2	North Su	53555	8/16	21:16		3876	3606	1217	357	1.4	Clastic Rock/ Grab	Altered, breccia containing (plg) clasts in minor sulfide matrix, but likely mostly volcanic. Minor sulfur in voids.
J2-221-14-R1	North Su	53625	8/16	21:33		3836	3613	1208	360	2.1	Clastic Rock/ Grab	Highly altered rubbly piece from S slope on FeOx and bact. Mat-rich sediment. Volcanic breccia-tpe sample.

J2-221-15-R1	North Su	54019	8/16	23:33		3745	3547	1262	085	1.5	Volcanic Rock/ Grab	Massive lava pillow, plg-crysts (1 - 4 mm). Mostly fresh; superficial staining.
J2-221-16-R1	North Su	54047	8/16	23:40		3746	3551	1260	083	1.6	Volcanic Rock/ Grab	Plg-cpx phyric, vesicular lava. 15 - 20 % phenocrysts. From mostly fresh rubbly lava flow.
J2-221-16-R2	North Su	54047	8/16	23:40		3746	3551	1260	083	1.6	Volcanic Rock/ Grab	2nd piece from same outcrop. Sparse-plg phenocrysts. Possibly surface of flow w/ ropey outer surface.
J2-222-2-R1	-	54870	8/17	12:04		2633	3379	1714	237	2.3	Volcanic Rock/ Grab	Glassy rubble flow, from large steep flow front of coulee.
J2-222-5-R1	Roman Ruins	55680	8/17	16:37		2719	3273	1695	137	3.5	Oxide Crust/ Grab	TWO pieces of Fe-Mn-oxide rich crust from rugged and ropey surface lava flows and relict sulfide chimneys? One piece given to Nautilus
J2-222-6-R1	Roman Ruins	55730	8/17	16:58		2727	3230	1683	176	3.0	Volcanic Rock/ Grab	Aphyric, aphanitic lava w/ crumbly and botryoidal Fe-Mn-oxide coatings from side of steep scarp face.
J2-222-9-R1	Roman Ruins	56127	8/17	19:03		2729	3177	1678	228	0.8	Volcanic Rock/ Grab	Aphyric, aphanitic lava w/ few stretched vesicles. Sub-part displays pervasive clay (greenish) alteration.
J2-222-9-R2	Roman Ruins	56134	8/17	19:05		2729	3178	1678	228	0.8	Volcanic Rock/ Grab	2nd piece. Same outcrop of rubbly, and fallen lava flows.
J2-222-11-R1	-	56453	8/17	21:18		2486	3095	1671	054	2.7	Volcanic Rock/ Grab	Mostly fresh, volcanics from ropey, rugged small flow ridge.
J2-222-12-R1	-	56696	8/17	23:00		2374	2892	1651	338	2.5	Volcanic Rock/ Grab	Fresh, aphyric lava block from top of volcanic knoll.
J2-223-3-R1	North Su	57414	8/18	12:37		3850	3706	1170	173	1.9	Volcanic Rock/ Grab	Volcanic rock from rubble, at base of blocky, steep sided lava flow (possibly a dike?)
J2-223-5-R1	North Su	57694	8/18	14:20		3894	3667	1198	285	5.3	Volcanic Rock/ Grab	Exterior of lava flow from prominent escarpment/ faulted mound.
J2-223-6-R1	North Su	57875	8/18	15:15		3844	3671	1166	004	8.1	Clastic Rock/ Grab	Altered breccia w/ volcanic clasts and native sulfur veins; from exposed side of mound below fissures.
J2-223-7-R1	North Su	57939	8/18	15:41		3819	3689	1159	253	4.2	Clastic Rock/ Grab	Dominantly volcanic clasts; matrix is poorly preserved but possibly barite and black sulfur. Some barite rosettes visible. Top of elongate volcanic mound.
J2-223-8-R1	North Su	58030	8/18	16:02		3796	3709	1162	041	0.9	Clastic Rock/ Grab	Sulfur/oxide crust from unconsolidated debris flow at base of low-lying ridge.
J2-223-9-R1	North Su	58140	8/18	16:50		3809	3760	1190	106	8.7	Sulfur / Grab	Friable, ropey flow of native sulfur. Colors metallic grey to yellow-green. Side of large elongate volcanic mound.
J2-223-9-R2	North Su	58173	8/18	16:59		3809	3760	1190	106	8.3	Volcanic Rock/ Grab	Plg-cpx-phyric volcanic rock; moderately vesicular. Patchy, thin deposits of Py along cracks/veins and vesicle walls.
J2-223-10-R1	North Su	58259	8/18	17:25		3856	3772	1198	228	1.9	Volcanic Rock/ Grab	Three pieces, volcanic talus from slope of area of ~ 30 °C fluid flow. Encrusted in juvenile snails.
J2-223-11-R1	North Su	58735	8/18	19:34		3788	3782	1204	206	2.3	Clastic Rock or Cust/ Grab	Mixed sulfide-sulfate-oxide crust ~ 2 cm thick overlying diffuse, high temperature flows.

J2-223-11-R2	North Su	58771	8/18	19:44		3787	3784	1205	206	2.3	Sediment / Scoop	Larger scoop of the overlying sediment. Collecting sediment and crust.
J2-223-12-R2	North Su	58961	8/18	20:40		3778	3784	1209	100	3.8	Volcanic Rock/ Grab	Altered volcanic lava with dense sulfide (Py?) vein network. Sulfides sometimes in preserved vesicles.
J2-223-14-R1	North Su	59160	8/18	21:49		3767	3766	1207	133	2.1	Volcanic Rock/ Grab	Vesicular, mostly fresh volcanic lava w/ outer Fe-oxide and white microbial stainings.
J2-223-16-R1	North Su	50508	8/18	23:58		3736	3650	1208	056	4.8	Volcanic Rock/ Grab	Piece of large talus rubble. Mostly fresh interior; but with Fe-oxide staining and wispy microbial organic matter coating surface.
J2-224-1-R1	South Su	59852	8/19	10:08		4145	2861	1357	188	5.2	Volcanic Rock/ Grab	Highly altered, bleached, soft volcanic rock from rugged outcrop. Locally abundant microbial (?) mats
J2-224-2-R1	South Su	60210	8/19	12:52		4106	2821	1340	192	1.9	Volcanic Rock/ Grab	Bleached rock, from steep sided volcanic outcrop or slope. Suspected advanced argillic alteration
J2-224-3-R1	South Su	60585	8/19	15:19		4014	2691	1349	125	3.1	Volcanic Rock/ Grab	Volcanic outcrop. Piece collected from exposed surface. Has significant brecciation, mineralization and Fe-oxide surface staining.
J2-224-9-R1	South Su	61547	8/19	20:43		4333	2789	1330	187	1.5	Volcanic Rock/ Grab	Altered volcanic rock from exposed "pinnacle" on slope of dominantly volcanic ridge.
J2-224-10-R1	South Su	61647	8/19	21:25		4368	2780	1365	222	1.7	Volcanic Rock/ Grab	Fresh, vesicular lava from broken flows.
J2-226-3-R1	Suzette	63420	8/21	15:12		3013	4943	1506	211	2.6	Sediment / Grab	Heavily cemented sand(+sulfide?) from surface, cracked blocks.
J2-226-8-R1	Suzette	64429	8/21	21:28		2776	4594	1591	011	1.5	Hydrothermal Talus/ Breccia/ Grab	Zn-(+ minor Cu) massive sulfide talus piece w/ exterior Fe-oxide and Atacamite staining; from block, rubble (partly sed.) slope.
J2-226-8-R2	Suzette	64444	8/21	21:33		2775	4594	1591	010	1.6	Volcanic Rock/ Grab	Mostly fresh, vesicular volcanic rock from same slope as 8-R1.
J2-227-1-R1	West of South Su	64939	8/22	10:35		3602	2007	1549	018	1,2	Volcanic Rock/ Grab	Fresh, surficially stained volcanic talus from faulted scarp
J2-227-1-R2	West of South Su	65020	8/22	10:40		3603	2008	1549	018	1,2	Sediment/ Grab	Muddy sediment from faulted scarp w/ abundant volcanic clasts.
J2-227-2-R1	West of South Su	65206	8/22	12:25	15	3239	2348	1641	094	0.9	Volcanic Rock/ Grab	Small piece of bleached volcanic rock. Altered exterior; fresh interior.
J2-227-2-R2	West of South Su	65265	8/22	12:30	15	3239	2348	1641	159	1.9	Volcanic Rock/ Grab	Fresh volcanic lava from incipiently sedimented rubbly lava flow.
J2-227-2-R3	West of South Su	65285	8/22	12:33	15	3240	2348	1642	158	1.7	Volcanic Rock/ Grab	Small piece of bleached volcanic rock from rubbly outcrop.
J2-227-4-R1	South Su	65830	8/22	16:15		4221	2529	1365	329	3.3	Volcanic Rock/ Grab	Fresh volcanic lava from rugged and fissured prominent volcanic mound. Mussels in cracks.
J2-227-5-R1	South Su	65864	8/22	16:24		4218	2542	1363	022	2.3	Volcanic Rock/ Grab	Fresh volcanic lava from exposed, flat outcrop above sediment.
J2-227-5-R2	South Su	65864	8/22	16:24		4218	2542	1363	022	2.3	Clastic Rock/ Grab	Native sulfur-cemented crust with volcanic clasts; from beneath sample 5-R1.
J2-227-6-R1	South Su	65951	8/22	16:49		4277	2562	1366	302	3.2	Sulfur/Oxide Crust/ Grab	Native sulfur and Fe-oxide rich "crust" (highly altered?) from collapsed, broken volcanic flows.
J2-227-6-R2	South Su	65970	8/22	16:52		4277	2562	1366	302	3.2	Sulfur/Oxide Crust/ Grab	2nd piece. Similar mineralogy/composition from same outcrop.

J2-227-7-R2	North Su	66200	8/22	19:06		3751	3697	1190	063	4.4	Massive Anhydrite/ Grab	Massive Anh sampled from base of edifice, above volcanic pillows.
J2-227-11-R1	North Su	66888	8/22	22:04		3823	3690	1159	283	1.5	Volcanic Rock/ Grab	Mostly fresh, surficially stained vesicular rock from interior of summit mound.
J2-227-12-R1	North Su	66990	8/22	22:42		3765	3693	1183	156	3.3	Volcanic Rock/ Grab	Volcanic talus piece - relatively fresh - from base of black smoker complex
J2-227-13-R1	North Su	67179	8/22	23:47		3866	3511	1229	201	2.1	Volcanic Rock/ Grab	Small clast from sediment-hosted ridge on SE flank of Su mound.
J2-228-1-R1	Umbo	68250	8/28	20:12		6523	6006	1818	258	0.9	Volcanic Rock/ Grab	Fresh, plg-olv phyric, vesicular lava from summit of Umbo mound.
J2-228-2-R1	Umbo	68560	8/28	23:08		8063	5492	2100	312	3.0	Volcanic Rock/ Grab	Concentrically-layered mostly fresh lava from top of fault wall; lots of talus rubble.