

Awi 1-2 Corehole Plug Porosity and Permeability Data

Depth (ft)	Grain Density (g/cc)	Porosity (pu)	Perm (md)	Lithology
2516.5	2.76	19.4	0.023	LAHAR
2567.9	2.73	12.3	0.004	LAHAR
2614.1	2.74	11.0	5.575	TUFF
2684.1	2.81	18.7	0.011	BRECCIA
2719.9	2.64	9.1	0.007	LAHAR
2795.1	2.7	18.0	0.005	LAHAR
2827.4	2.73	14.1	0.009	LAHAR
2864.8	2.77	17.7	0.001	LAHAR
2886.2	2.58	8.3	0.002	LAHAR
2907.5	2.71	9.3	0.138	LAHAR
2982.6	2.72	14.1	0.013	BRECCIA
3012.6	2.72	16.8	0.013	BRECCIA
3051.2	2.81	18.3	4.805	FLOW
3060.7	2.75	17.9	0.015	FLOW
3084.7	2.68	12.2	0.005	FALLOUT TUFF
3140.0	2.75	12.3	0.007	BRECCIA
3215.2	2.72	17.9	0.022	TURBIDITE
3281.1	2.76	20.7	0.015	BRECCIA
3368.1	2.73	15.6	0.009	BRECCIA
3481.4	2.75	15.4	0.008	BRECCIA
				HYDROTHERMAL
3543.3	2.78	17.6	0.006	BRECCIA
				HYDROTHERMAL
3616.1	2.71	13.4	0.016	BRECCIA
3683.1	2.72	13.3	0.028	BRECCIA
3718.4	2.77	8.4	0.074	BRECCIA
3727.2	2.74	8.0	0.015	FLOW
3735.5	2.81	12.5	0.020	FLOW
3764.6	2.82	17.6	0.019	BRECCIA
3838.0	2.78	8.8	0.006	BRECCIA
3858.2	2.81	12.2	0.009	BRECCIA
3915.3	2.8	15.4	0.061	LAHAR
3997.1	2.76	18.8	0.076	INTRUSIVE
4061.9	2.81	16.6	0.008	LAHAR
4167.3	2.78	18.3	0.023	LAHAR
4296.4	2.78	10.9	0.013	LAHAR
4369.8	2.87	13.5	0.015	LAHAR

Depth (ft)	Grain Density (g/cc)	Porosity (pu)	Perm (md)	Lithology
4406.4	2.61	7.7	1.551	LAHAR HYDROTHERMAL
4442.6	2.79	14.1	1.190	BRECCIA
4459.7	2.81	13.2	0.009	FLOW
4503.3	2.78	11.7	0.019	FLOW
4539.9	2.82	14.2	0.237	LAHAR
4623.2	2.82	10.4	0.160	ASH FLOW
4661.1	2.79	13.7	0.082	PUMICE
4726.9	2.83	14.2	0.020	LAHAR
4779.8	2.82	14.6	0.027	FLOW
4804.4	2.83	10.5	0.021	FLOW
4921.8	2.82	6.7	0.014	FLOW
4959.3	2.86	10.6	0.008	FLOW
5021.3	2.82	10.0	0.677	FLOW HYDROTHERMAL
5035.9	2.61	12.0	0.059	BRECCIA
5068.4	2.86	12.3	0.002	LAHAR
5171.0	2.87	11.8	0.036	ASH FLOW
5216.3	2.62	11.3	0.022	FALLOUT TUFF
5252.1	2.84	9.8	0.028	FLOW
5279.5	2.87	13.4	0.012	BRECCIA
5327.0	2.82	4.7	0.006	FLOW
5355.7	2.77	7.3	0.002	FLOW
5423.9	2.82	10.3	0.027	FLOW
5479.1	2.83	13.8	0.008	ASH FLOW
5517.8	2.94	16.0	0.083	LAHAR
5570.2	2.79	2.4	0.008	INTRUSIVE
5616.8	2.79	4.9	0.011	INTRUSIVE
5667.1	2.78	3.8	0.019	INTRUSIVE
5713.4	2.8	11.3	0.016	BRECCIA
5786.1	2.8	8.1	0.009	TUFF
5826.3	2.83	11.0	0.018	FALLOUT TUFF
5916.3	2.87	8.6	0.020	VITRIC TUFF
5934.7	2.76	1.0	0.021	FLOW
5978.1	2.78	9.4	0.044	FALLOUT TUFF
Arith Mean	2.78	12.3	0.229	
Geom Mean	2.77	11.3	0.022	

Awi 1-2 Corehole Stressed Porosity and Permeability Measurements

Depth (ft)	Perm (md)	OVB Perm (md)	Liquid Perm (md)	Stress (psi)	Porosity (pu)	OVB Porosity (pu)
2516.5	0.023	0.019	0.008	1890	19.4	19.1
2795.1	0.005	0.002	0.001	2100	13.0	12.3
3281.1	0.015	0.013	0.005	2460	20.7	20.5
3718.4	0.074	0.006	0.004	2790	8.4	8.3
4061.9	0.008	0.005	0.002	3050	15.6	15.5
4779.8	0.027	0.028	0.018	3590	14.3	14.3
5216.3	0.021	0.026	0.022	3910	11.3	11.1
5517.8	0.083	0.08	0.042	4140	16.0	15.8
5616.8	0.011	0.001	0.001	4210	4.9	NA
5826.3	0.018	0.013	0.006	4370	11.0	10.8

Average change in porosity with overburden loading:	-0.2 pu	-1%
Average change in permeability with overburden loading:	-0.009 md	-31%
Average difference between air and liquid permeability:	-0.018 md	-42%