Appendix D

Petrographic Data

Michael S. Smith

Prior to petrographic analysis, each sherd was photographed and described (see Chapter 3 and Appendix A). Sherds and clay test tiles were then sawed into three pieces using a water-cooled, diamond-coated slow speed saw blade. One piece was submitted to a commercial firm for thin-sectioning, and the other two pieces were retained for additional analyses and reference purposes. Standard size (27 × 46 mm) petrographic thin sections (30 μm) were prepared such that both the inner and outer vessel surfaces could be examined. Because of the friable nature of some samples, epoxy impregnation (both surface treatment and vacuum impregnation) was used for binding.

Thin sections were examined using an Olympus BH-2 research grade petrographic microscope utilizing transmitted light. The overall matrix color of the sherd and other textural and structural features were examined and described under plane-polarized light. Cross-polarized light was used to define the identity of the aplastic components and to distinguish mineral grains and rock fragments. Examination under cross-polarized light also allowed the evaluation of the paste's isotropic behavior, variation in firing atmospheres (oxidized versus reduced), and void spaces. During thin-sectioning, mineral or rock fragment grains are sometimes accidentally "plucked" out of the matrix by the saw, producing voids that mimic natural matrix voids. Often the difference between artificial and natural voids can be detected under cross-polarized light.

Grain sizes of sherd components (minerals, rock fragments, grog, etc.) were measured using a calibrated micrometer at 25× magnification and evaluated according to the Wentworth scale (very fine, 0.0625–0.125 mm; fine, 0.125–0.25 mm; medium, 0.25–0.49 mm; coarse, 0.50–1.0 mm; and very coarse, greater than 1.0 mm). A quick strip-grid count was implemented to evaluate whether the grain size distribution was uniform, bimodal, or trimodal.

Proportions of components and physical parameters such as grain shape and form were estimated by visual examination under plane-polarized light. A more quantitative determination of the proportions of components was accomplished using point counting techniques modified from Stoltman (1989) and Stoltman et al. (1992). Due to the variability in grain size distribution among samples, point counts with an *n* value greater than 300 were taken to provide the smallest possible error (Chayes 1956; van der Plas and Tobi 1965).

Table D.1 summarizes the diagnostic petrographic characteristics of the 70 pottery samples. Table D.2 provides point count data (%) for the pottery samples.

Table D.1. Selected Petrographic Characteristics of Pottery Samples.

	Diagnostic Minerals[a]				Diagnostic Rock Fragments						
Sample ID	Mafic	Feldspar	Mica	Other	Diabase	Quartz + Feldspar + Mafic	Quartz + Feldspar	Quartz	Sedimentary/ Metasedi-mentary	Other Diagnostic Inclusions	Comments
JMH001	Am	Pl; Kfs	Ms	Op; Zrn	-	-	-	x	-	grog; ACF	coarse muscovite lathes; rutile needles in quartz; petrified wood fragment
JMH002	Am	Pl; Kfs	Bt; Ms	Op; Zrn	-	-	-	x	-	grog; ACF	-
JMH003	Am	Pl	Bt; Ms	Op; Zrn	-	-	-	x	-	grog; ACF	fluid inclusions in quartz
JMH004	Am	-	Ms	Op; Zrn	-	-	-	x	-	grog; ACF	-
JMH005	Am	Pl; Kfs	Ms	Op	-	-	-	x	-	grog; ACF	-
JMH006	Px	Pl	-	-	x	-	-	x	-	grog	no quartz mineral grains; fresh diabase rock fragments
JMH007	-	-	Ms	Op	-	-	-	x	-	grog; ACF	-
JMH008	Am	Pl; Kfs	Ms	Op	-	-	-	-	x	ACF	-
JMH009	-	Kfs	Ms	-	-	-	x	x	-	grog; ACF	-
JMH010	-	Kfs	Ms	Op; Tur; Zrn	-	-	-	x	-	grog; ACF	-
JMH011	Am	Kfs	Ms	-	-	-	-	x	-	grog; ACF	-
JMH012	-	Kfs	Ms	Op; Tur	-	-	-	x	-	grog; ACF	rutile needles in quartz
JMH013	Am	Kfs	Ms	Op	-	-	-	-	-	ACF	-
JMH014	Am	-	Ms	Op	-	x	-	x	-	grog	-
JMH015	-	Kfs	Ms	-	-	-	-	x	-	-	-
JMH016	-	Kfs	Ms	-	-	-	-	x	-	ACF	-
JMH017	Am	Kfs	Ms	Op	-	-	-	x	-	grog; ACF	-
JMH018	Am	Pl; Kfs	Ms	-	-	-	-	x	-	-	-
JMH019	Am	-	Ms	Op	-	-	-	x	-	ACF	-
JMH020	-	Pl; Kfs	Ms	-	-	x	x	x	-	grog; ACF	-
JMH021	-	Kfs	Ms	Op	-	x	x	x	-	grog; ACF	-
JMH022	-	Kfs	Ms	-	-	-	-	x	-	-	rutile/fluid inclusions
JMH023	-	-	Bt; Ms	Zrn	-	-	-	x	-	ACF	rutile/fluid inclusions

Table D.1. Selected Petrographic Characteristics of Pottery Samples (continued).

	Diagnostic Minerals[a]				Diagnostic Rock Fragments						
Sample ID	Mafic	Feldspar	Mica	Other	Diabase	Quartz + Feldspar + Mafic	Quartz + Feldspar	Quartz	Sedimentary/ Metasedi-mentary	Other Diagnostic Inclusions	Comments
JMH024	Am	-	Bt; Ms	Op; Tur; Zrn	-	-	-	x	x	grog; ACF	-
JMH025	-	Pl; Kfs	Ms	Tur	-	x	-	x	x	grog; ACF	-
JMH026	Am	-	Ms	Op; Tur	-	x	-	x	-	grog; ACF	-
JMH027	-	-	Ms	Op; Tur	-	x	-	x	x	grog; ACF	-
JMH028	-	Pl; Kfs	Ms	Zrn	-	-	-	x	-	grog; ACF	-
JMH029	-	-	Bt; Ms	Tur	-	-	-	x	x	grog; ACF	-
JMH030	-	Pl	Ms	Op; Tur; Zrn	-	-	-	x	x	grog; ACF	petrified wood fragments
JMH031	Px	Pl; Kfs	Ms	-	x	-	-	x	x	grog	-
JMH032	Am	Pl; Kfs	Ms	-	-	-	x	x	-	-	-
JMH033	Am	Pl; Kfs	Bt; Ms	Tur	-	x	x	x	-	-	sericite-altered rock fragments
JMH034	Am	Pl	Bt; Ms	-	-	x	x	x	x	-	altered feldspar
JMH035	Am	Pl; Kfs	Bt; Ms	Op; Tur	-	-	x	x	-	ACF	-
JMH036	Am	Pl; Kfs	Ms	Op; Zrn	-	-	x	x	-	ACF	-
JMH037	Am	-	Ms	Op	-	x	x	x	-	grog	altered quartz + k-feldspar
JMH038	Am	Pl; Kfs	Ms	Zrn	-	-	x	x	-	grog; ACF	altered quartz + feldspar; heavily altered k-feldspar
JMH039	Am	Pl; Kfs	Ms	Op; Tur; Zrn	-	-	-	x	-	-	altered k-feldspar
JMH040	Am	Pl; Kfs	Bt	Op	-	x	x	x	-	ACF	petrified wood
JMH041	Am	Pl	Ms	Op; Zrn	-	-	x	x	-	ACF	heavily altered feldspar
JMH042	-	Pl; Kfs	Bt	Op	-	-	x	x	-	ACF	heavily altered feldspar
JMH043	Am	Pl	Ms	Op; Tur	-	-		x	-	ACF	-
JMH044	-	Pl; Kfs	Bt; Ms	Op	-	-	x	x	-	-	heavily altered feldspar; exsolution textures
JMH045	Am	Pl; Kfs	-	Op	-	x	x	x	-	-	heavily altered feldspar; exsolution textures
JMH046	Px	-	Ms	Zrn	x	-	-	x	-	-	-
JMH047	Px	Pl	Bt; Ms	Op	x	-	-	x	-	ACF	some carbonate infill in voids

Table D.1. Selected Petrographic Characteristics of Pottery Samples (continued).

	Diagnostic Minerals[a]				Diagnostic Rock Fragments						
Sample ID	Mafic	Feldspar	Mica	Other	Diabase	Quartz + Feldspar + Mafic	Quartz + Feldspar	Quartz	Sedimentary/ Metasedi-mentary	Other Diagnostic Inclusions	Comments
JMH048	Px	Pl; Kfs	Bt; Ms	Tur; Zrn	-	x	x	x	-	-	heavily altered feldspar; exsolution textures
JMH049	-	Pl	Bt	Zrn	-	x	x	x	-	ACF	heavily altered feldspar; exsolution textures
JMH050	Am	Pl; Kfs	-	Op; Tur	-	x	x	x	-	ACF	heavily altered k-feldspar
JMH051											cut too thin
JMH052											cut too thin, but resembles JMH068
JMH053	Am	Pl	Ms	Op	-	-	-	x	-	ACF	-
JMH054	Am	-	Ms	Op; Tur	-	-	-	x	-	ACF	-
JMH055	Am	Kfs	Ms	Zrn	-	x	-	x	-	-	-
JMH056	-	Pl; Kfs	Ms	-	-	-	-	x	-	ACF	resembles JMH034
JMH057	Am	Pl; Kfs	Ms	Tur; Zrn	-	-	x	x	-	grog; ACF	-
JMH058	Am	Kfs	Ms	Zrn	-	x	-	x	x	ACF	resembles JMH034
JMH059	-	Kfs	Ms	-	-	-	-	-	-	ACF	-
JMH060	-	-	Ms	Op; Tur	-	-	-	x	-	ACF	resembles JMH018
JMH061	-	Pl; Kfs	Ms	Tur	-	-	-	x	-	ACF	-
JMH062	-	Kfs	Ms	Tur	-	-	-	x	-	ACF	-
JMH063	-	-	Ms	Tur	-	-	-	x	-	grog; ACF	-
JMH064	Am	Pl	Ms	Zrn	-	-	-	x	x	grog	-
JMH065	-	-	Ms	Op; Tur	-	-	-	-	-	grog; ACF	-
JMH066	Am	Kfs	Ms	Tur	-	x	-	x	-	-	resembles JMH070
JMH067	Am	Kfs	Ms	-	-	-	-	-	-	grog; ACF	-
JMH068	-	-	Ms	Tur	-	-	-	x	-	grog; ACF	resembles JMH052
JMH069	-	-	Ms	-	-	x	-	x	-	-	quartz + zircon fragments
JMH070	-	Pl	Ms	Op; Tur; Zrn	-	x	-	x	-	-	reduced

[a] Key: Am, amphibole; Bt, biotite; Kfs, K-feldspar; Ms, muscovite; Op, opaque; Pl, plagioclase; Px, pyroxene; Tur, tourmaline; Zrn, zircon.

Table D.2. Point Count Data for Pottery Samples.

		Minerals[a]											Rock Fragments[b]												
			Feldspar			Mica		Mafic						Qtz + Fsp	Qtz + Pl	Qtz + Kfs	Qtz + 2 Fsp	Qtz + Fsp + Mafic	Siltstone/ Metasilt-stone						
Sample ID	Total Points	Qtz (%)	Pl (%)	Kfs (%)	Unid (%)	Bt (%)	Ms (%)	Px (%)	Am (%)	Op (%)	Tur (%)	Other (%)	Qtz (%)	(%)	(%)	(%)	(%)	(%)	(%)	Diabase (%)	Other (%)	Grog (%)	ACF[c] (%)	Void (%)	Paste (%)
JMH001	529	15.3	0.2	0.4	2.8	0.0	7.0	0.0	0.2	1.7	0.0	0.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	12.3	5.1	50.3
JMH002	752	31.0	0.8	0.3	1.6	0.1	7.0	0.0	0.3	1.5	0.0	1.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	3.1	51.6
JMH003	324	29.6	0.3	0.0	0.9	0.3	3.4	0.0	0.3	0.6	0.0	2.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	3.1	53.7
JMH004	478	25.5	0.0	0.0	2.1	0.0	4.4	0.0	0.8	1.3	0.0	0.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.7	18.4	3.1	41.2
JMH005	488	30.7	0.8	1.2	2.7	0.0	7.8	0.0	0.6	1.0	0.0	0.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	1.8	2.5	43.0
JMH006	421	0.0	4.0	0.0	7.8	0.0	0.0	10.5	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	28.0	1.9	1.0	0.0	5.7	39.9
JMH007	566	22.6	0.0	0.0	0.9	0.0	1.2	0.0	0.0	0.7	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	21.0	1.6	43.5
JMH008	461	34.1	0.4	0.9	0.7	0.0	8.5	0.0	0.4	0.2	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.4	0.0	11.9	2.6	36.7
JMH009	420	30.7	0.0	6.0	1.7	0.0	15.2	0.0	0.0	0.0	0.0	0.2	5.2	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.2	37.6
JMH010	419	35.3	0.0	0.5	1.7	0.0	2.6	0.0	0.0	2.6	1.0	0.5	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.5	4.3	39.4
JMH011	391	27.9	0.0	1.0	0.5	0.0	5.1	0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	14.1	1.3	48.3
JMH012	440	25.7	0.0	4.1	2.0	0.0	4.5	0.0	0.0	0.2	0.5	0.9	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.3	2.7	53.4
JMH013	361	26.3	0.0	1.4	0.3	0.0	6.4	0.0	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	61.8
JMH014	372	6.2	0.0	0.0	4.6	0.0	0.3	0.0	5.4	0.3	0.0	0.0	2.4	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	21.5	0.0	4.3	53.2
JMH015	433	33.0	0.0	2.3	8.1	0.0	3.9	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	45.5
JMH016	391	14.8	0.0	0.3	0.8	0.0	14.8	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0	7.7	3.6	47.3
JMH017	406	29.6	0.0	3.2	0.7	0.0	1.5	0.0	1.0	0.2	0.0	0.7	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.0	2.5	55.7
JMH018	320	22.8	1.6	7.5	0.0	0.0	6.3	0.0	1.3	0.0	0.0	0.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	58.1
JMH019	387	27.6	0.0	0.0	2.1	0.0	4.7	0.0	1.8	0.5	0.0	1.3	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	56.1
JMH020	364	17.0	1.1	4.1	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	1.6	1.9	0.0	0.0	0.0	3.0	0.0	2.5	50.0
JMH021	456	22.1	0.0	1.3	2.2	0.0	12.1	0.0	0.0	1.3	0.0	0.0	3.5	0.2	0.0	0.0	0.0	0.4	0.0	0.0	0.0	5.9	5.7	3.1	42.1
JMH022	513	29.8	0.0	2.3	2.1	0.0	2.3	0.0	0.0	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	52.6
JMH023	671	19.4	0.0	0.0	1.2	1.6	4.6	0.0	0.0	0.0	0.0	0.3	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	4.6	65.3
JMH024	656	26.7	0.0	0.0	1.4	0.6	12.5	0.0	0.6	0.5	0.9	0.5	2.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	6.1	3.8	3.0	40.4
JMH025	717	21.6	1.3	2.0	1.5	0.0	18.5	0.0	0.0	0.0	0.1	0.0	3.3	0.0	0.0	0.0	0.0	0.4	5.4	0.0	0.0	2.5	1.3	2.1	39.9
JMH026	455	19.3	0.0	0.0	2.2	0.0	13.8	0.0	0.7	0.2	1.5	0.0	1.8	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.8	11.4	1.5	44.6
JMH027	639	25.2	0.0	0.0	0.5	0.0	14.7	0.0	0.0	0.2	3.3	0.0	7.7	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	3.9	8.1	0.5	35.7
JMH028	501	27.9	1.0	1.2	1.0	0.0	6.6	0.0	0.0	0.0	0.0	0.6	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	2.4	47.1
JMH029	473	26.8	0.0	0.0	0.4	0.4	10.1	0.0	0.0	0.0	0.2	0.0	1.7	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	3.2	8.9	1.5	45.7
JMH030	526	24.7	0.2	0.0	2.1	0.0	9.1	0.0	0.0	0.8	1.1	1.0	4.4	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	2.7	5.3	2.7	44.5
JMH031	451	26.8	2.2	0.2	2.9	0.0	0.7	1.1	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	3.8	15.1	0.0	0.7	0.0	4.2	39.5
JMH032	431	11.8	0.9	2.3	3.7	0.0	4.4	0.0	14.6	0.0	0.0	0.0	7.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	49.4
JMH033	536	10.3	0.7	0.4	2.6	7.1	21.8	0.0	0.9	0.0	2.4	0.0	3.9	1.7	0.4	0.0	0.0	12.7	0.0	0.0	0.0	0.0	0.0	1.9	33.2
JMH034	463	5.6	2.4	0.0	4.1	6.5	1.5	0.0	17.3	0.0	0.0	0.0	7.6	0.9	0.0	0.0	0.0	1.5	1.3	0.0	0.0	0.0	0.0	1.9	49.5
JMH035	502	27.9	2.6	2.6	2.8	1.0	1.2	0.0	4.0	2.2	4.2	0.8	3.6	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	44.4
JMH036	434	18.9	2.3	0.5	2.5	0.0	2.8	0.0	3.9	0.9	0.0	0.7	7.8	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	54.1

Table D.2. Point Count Data for Pottery Samples (continued).

		Minerals[a]											Rock Fragments[b]												
			Feldspar			Mica		Mafic						Qtz + Fsp	Qtz + Pl	Qtz + Kfs	Qtz + 2 Fsp	Qtz + Fsp + Mafic	Siltstone/ Metasilt-stone						
Sample ID	Total Points	Qtz (%)	Pl (%)	Kfs (%)	Unid (%)	Bt (%)	Ms (%)	Px (%)	Am (%)	Op (%)	Tur (%)	Other (%)	Qtz (%)	(%)	(%)	(%)	(%)	(%)	(%)	Diabase (%)	Other (%)	Grog (%)	ACF[c] (%)	Void (%)	Paste (%)
JMH037	488	27.5	0.0	0.0	2.7	0.0	2.7	0.0	0.8	0.4	0.0	0.0	8.4	0.4	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.7	0.0	4.3	47.3
JMH038	576	22.9	1.2	5.7	6.4	0.0	1.9	0.0	0.3	0.0	0.0	1.2	2.8	1.6	0.0	1.2	0.0	0.0	0.0	0.0	0.0	3.3	0.0	3.6	47.7
JMH039	474	34.6	1.7	1.9	2.3	0.0	0.8	0.0	1.9	5.3	0.4	1.1	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	43.9
JMH040	494	10.9	2.2	3.0	6.5	4.0	0.0	0.0	3.2	2.0	0.0	3.6	0.4	3.0	0.0	0.0	0.0	11.9	0.0	0.0	0.0	0.0	0.0	1.8	47.2
JMH041	394	19.8	0.5	0.0	4.1	0.0	0.8	0.0	0.8	1.5	0.0	1.5	7.1	0.3	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	58.6
JMH042	394	26.6	0.3	2.5	3.6	1.5	0.0	0.0	0.0	1.0	0.0	3.3	6.3	2.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	3.3	47.5
JMH043	437	21.5	1.1	0.0	3.7	0.0	2.1	0.0	0.9	3.9	0.5	8.5	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	47.6
JMH044	568	31.0	2.3	3.3	3.7	1.1	16.0	0.0	0.0	1.1	0.0	0.2	3.7	1.9	0.0	1.4	1.2	0.0	0.0	0.0	1.1	0.0	0.0	0.5	31.5
JMH045	464	9.3	1.3	1.3	9.5	0.0	0.0	0.0	3.0	0.4	0.0	0.2	1.5	8.0	0.9	0.9	6.5	11.4	0.0	0.0	0.0	0.0	0.0	2.2	43.8
JMH046	411	14.4	0.0	0.0	4.9	0.0	2.7	14.4	0.0	0.0	0.0	0.5	7.1	0.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	1.0	49.4
JMH047	471	7.9	0.2	0.0	5.5	0.8	0.6	5.7	0.0	0.6	0.0	3.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	2.1	3.0	58.8
JMH048	439	9.3	3.9	1.8	13.7	0.7	0.2	1.6	0.0	0.0	0.2	0.7	0.2	6.6	0.0	0.9	6.4	5.0	0.0	0.0	0.0	0.0	0.0	1.8	46.9
JMH049	400	15.3	1.5	0.0	3.8	3.0	0.0	0.0	0.0	0.0	0.0	0.8	14.8	2.0	2.3	0.0	0.5	9.8	0.0	0.0	0.0	0.0	0.0	3.3	43.3
JMH050	455	24.2	1.8	1.5	2.9	0.0	0.0	0.0	0.9	0.4	0.4	0.4	7.7	2.6	0.7	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	3.3	50.8
JMH053	447	28.6	0.4	0.0	0.7	0.0	2.7	0.0	0.2	0.4	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	3.8	2.5	53.5
JMH054	481	18.9	0.0	0.0	0.0	0.0	13.9	0.0	0.2	0.6	0.2	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	5.6	2.3	53.2
JMH055	355	13.8	0.0	3.1	0.6	0.0	13.5	0.0	0.6	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	1.7	58.6
JMH056	430	26.5	0.2	0.5	0.5	0.0	2.3	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	65.8
JMH057	426	25.8	1.2	0.9	2.6	0.0	9.2	0.0	0.5	0.0	0.2	0.7	7.3	0.7	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.5	0.0	3.1	46.0
JMH058	416	27.2	0.0	0.5	1.4	0.0	2.2	0.0	0.2	0.0	0.0	0.2	1.7	0.0	0.0	0.0	0.0	0.5	7.7	0.0	0.0	0.0	0.0	2.6	55.8
JMH059	320	29.4	0.0	1.3	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	62.8
JMH060	458	25.3	0.0	0.0	2.6	0.0	5.9	0.0	0.0	0.7	0.9	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	4.1	0.9	55.7
JMH061	452	20.4	1.1	0.7	0.9	0.0	1.8	0.0	0.0	0.0	0.2	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	2.0	3.3	63.1
JMH062	433	25.4	0.0	0.7	1.2	0.0	0.7	0.0	0.0	0.0	0.5	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	3.7	64.2
JMH063	561	33.5	0.0	0.0	0.4	0.0	1.6	0.0	0.0	0.0	0.2	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.4	8.0	4.1	49.2
JMH064	347	28.2	0.3	0.0	0.9	0.0	0.9	0.0	0.3	0.0	0.0	0.3	3.5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	12.1	52.4
JMH065	290	20.3	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.3	1.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	0.0	1.4	58.6
JMH066	401	22.9	0.0	1.5	1.2	0.0	1.0	0.0	0.2	0.0	0.2	0.5	6.7	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	7.5	57.9
JMH067	353	30.9	0.0	1.4	1.4	0.0	1.4	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	5.9	49.3
JMH068	386	22.8	0.0	0.0	1.3	0.0	2.6	0.0	0.0	0.0	0.8	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	7.3	58.3
JMH069	375	28.5	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5	6.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	4.8	58.9
JMH070	427	33.3	0.2	0.0	0.9	0.0	3.7	0.0	0.0	0.7	0.2	0.2	8.9	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	2.6	48.9

[a] Key: Am, amphibole; Bt, biotite; Kfs, K-feldspar; Ms, muscovite; Op, opaque; Pl, plagioclase; Px, pyroxene; Qtz, quartz; Tur, tourmaline; Unid, unidentified.

[b] Key: Fsp, feldspar; Kfs, K-feldspar; Pl, plagioclase; Qtz, quartz.

[c] Point-count data for some samples do not accurately reflect the abundance of argillaceous clay clots, which blend into the surrounding paste under cross-polarized light.