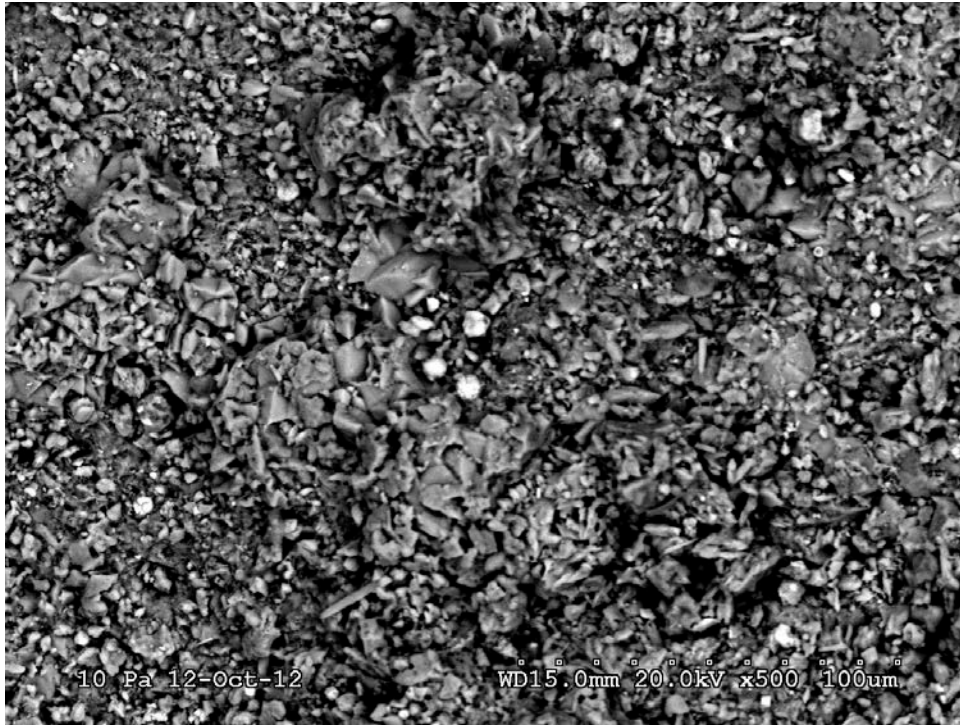


**Appendix 8-A. SEM imaging prepared by John Barnes of the
Pennsylvania Geological Survey**

Antes Outcrop – Top at Reedsville Ramp

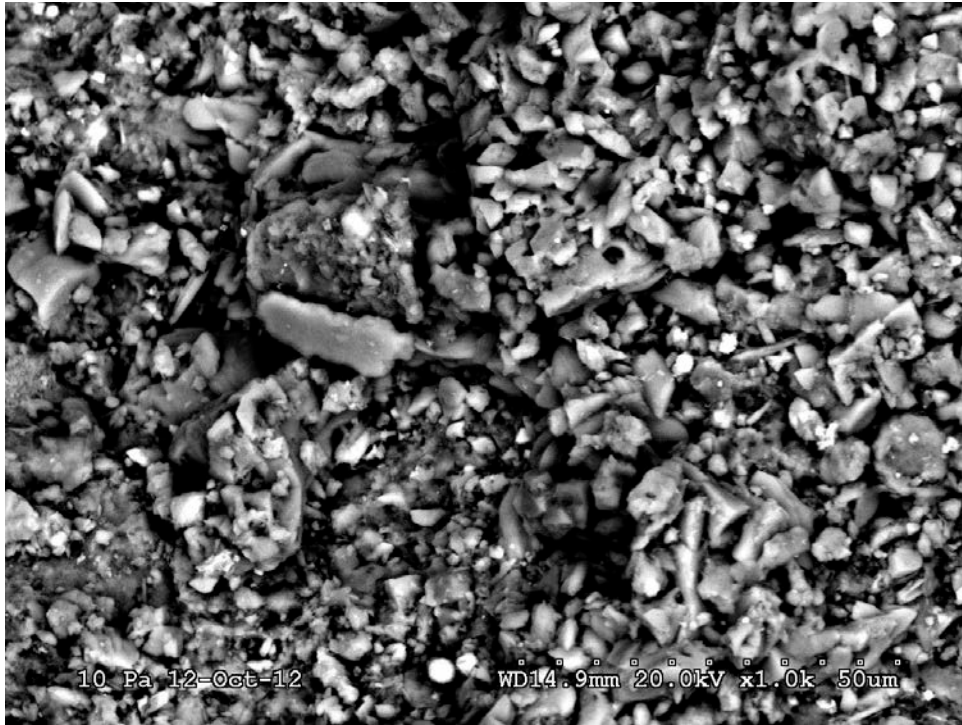


S12-060-001



S12-060-002

Antes Outcrop – Top at Reedsville Ramp



S12-060-003

Antes Outcrop – Mid at Reedsville Ramp



S12-061-001



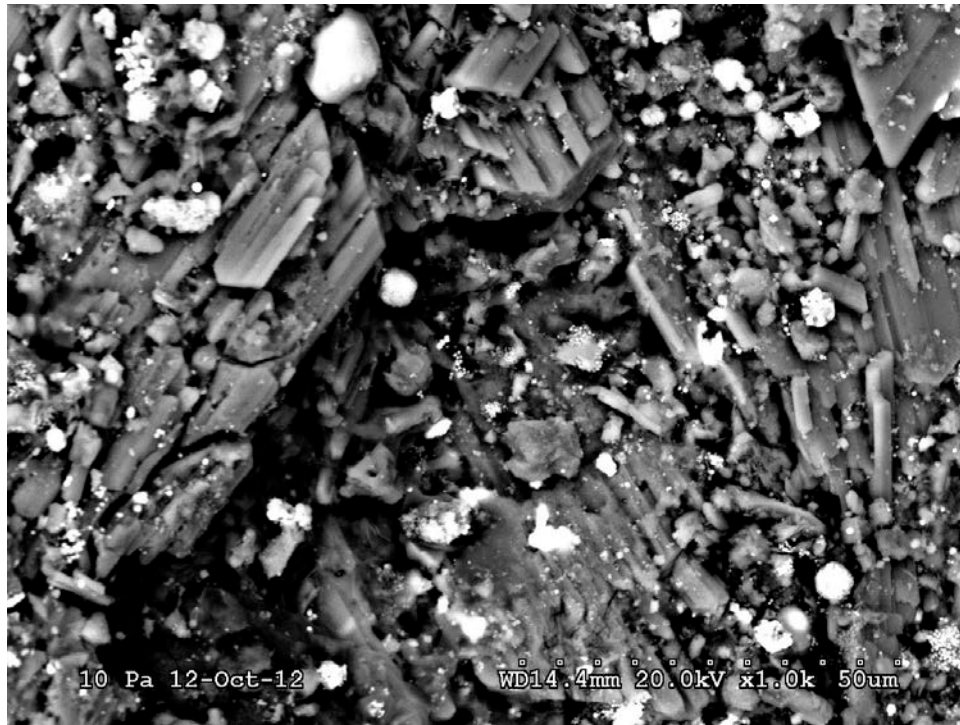
S12-061-002

Antes Outcrop – Mid at Reedsville Ramp

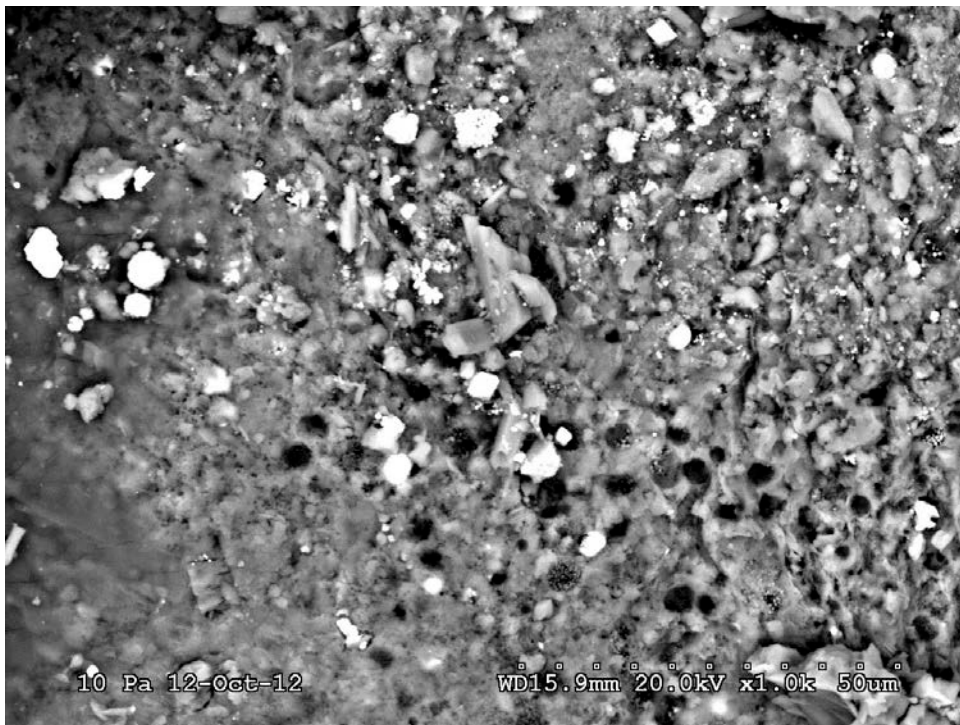


S12-061-003

Antes Outcrop – Base at Reedsville Ramp

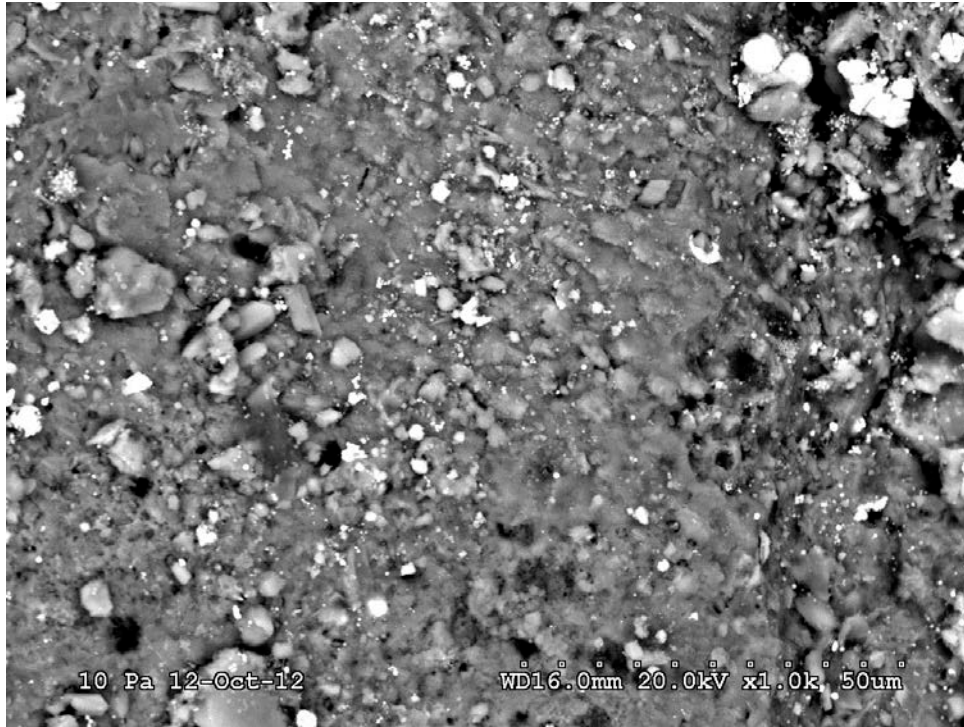


S12-062-001

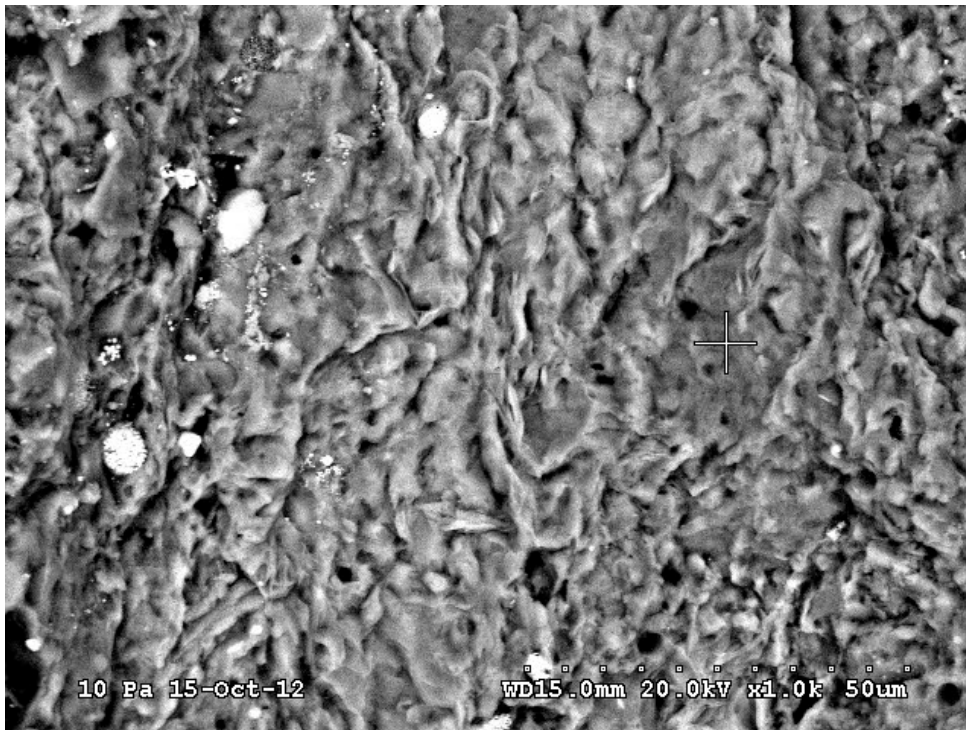


S12-062-002

Antes Outcrop – Base at Reedsville Ramp

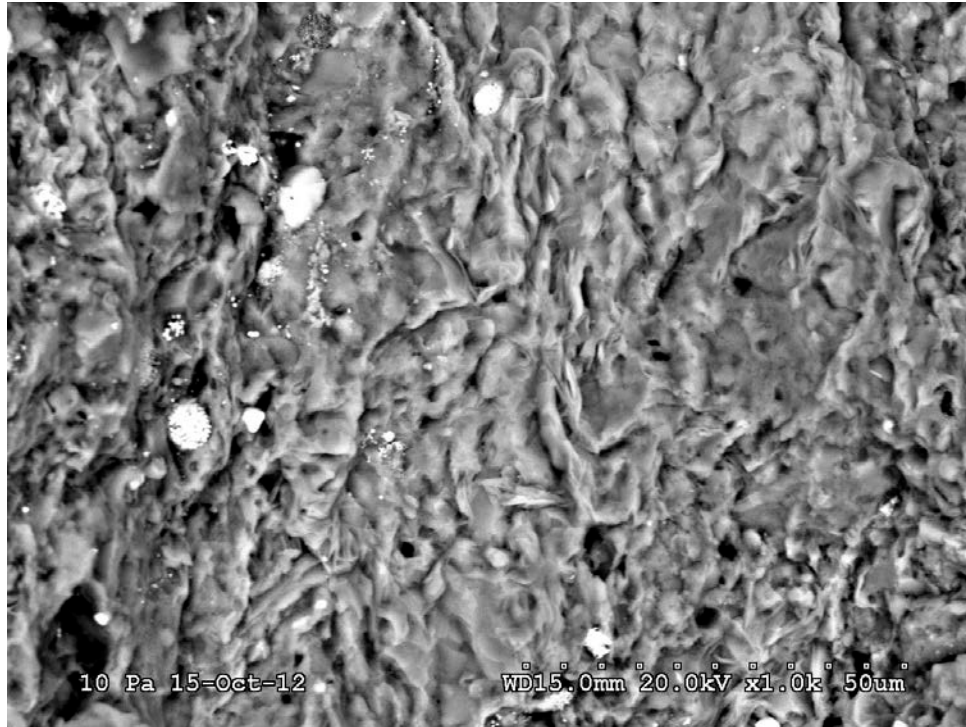


S12-062-003

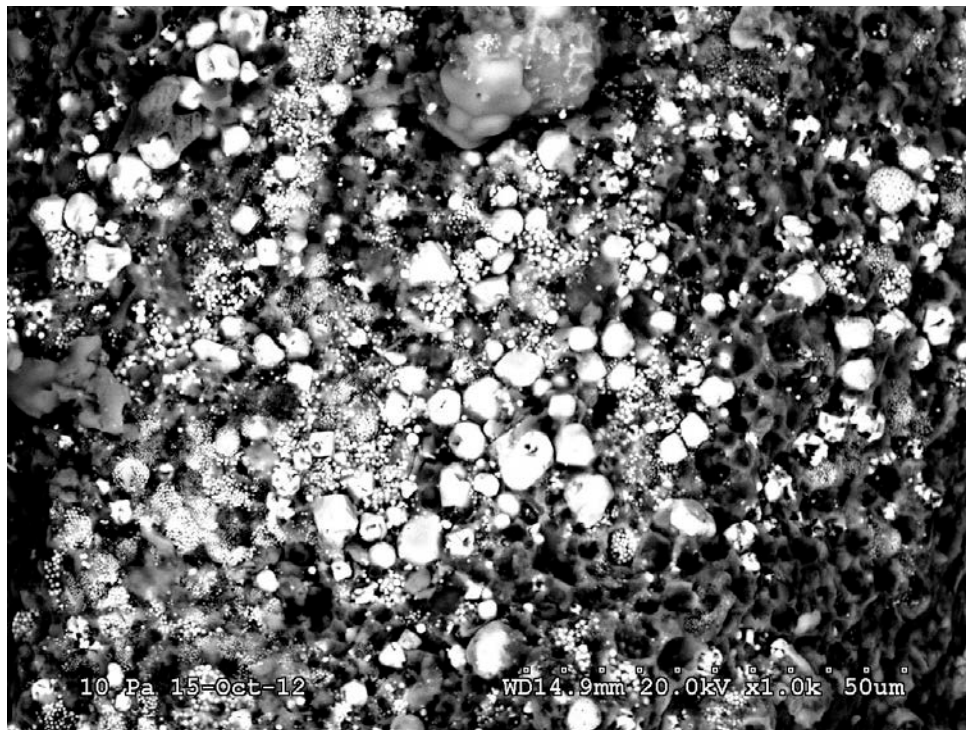


S12-062-005

Antes Outcrop – Base at Reedsville Ramp

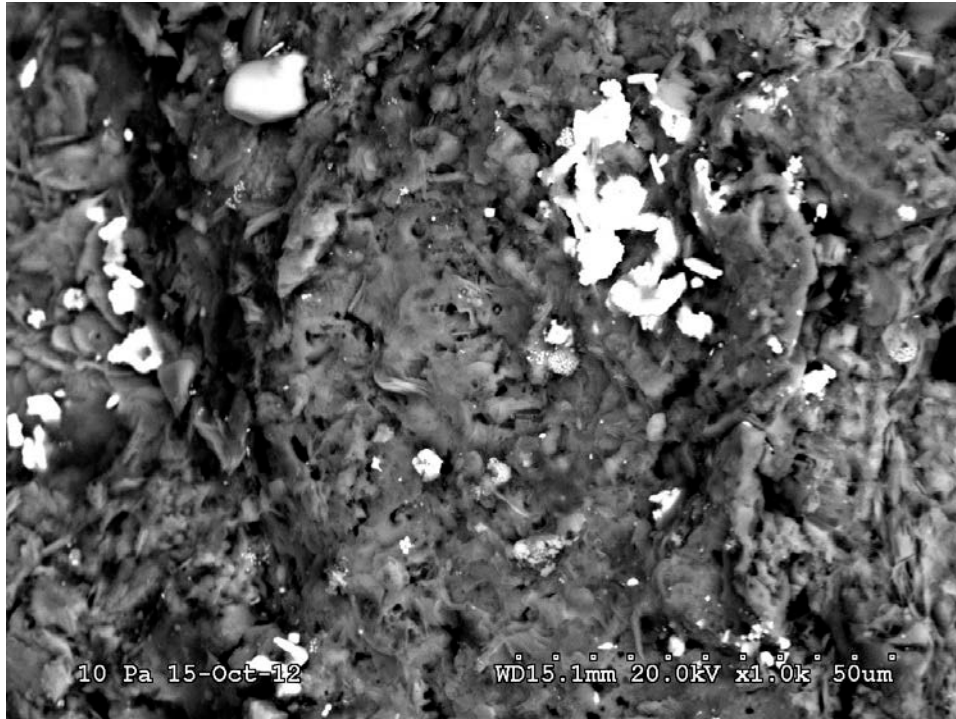


S12-062-009

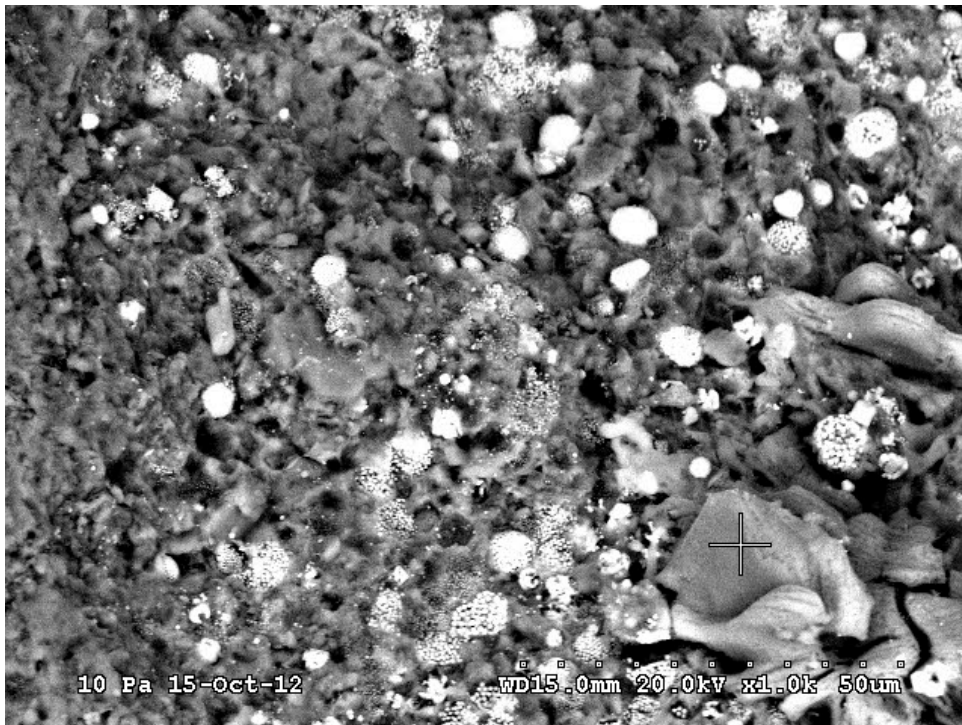


S12-062-014

Antes Outcrop – Base at Reedsville Ramp

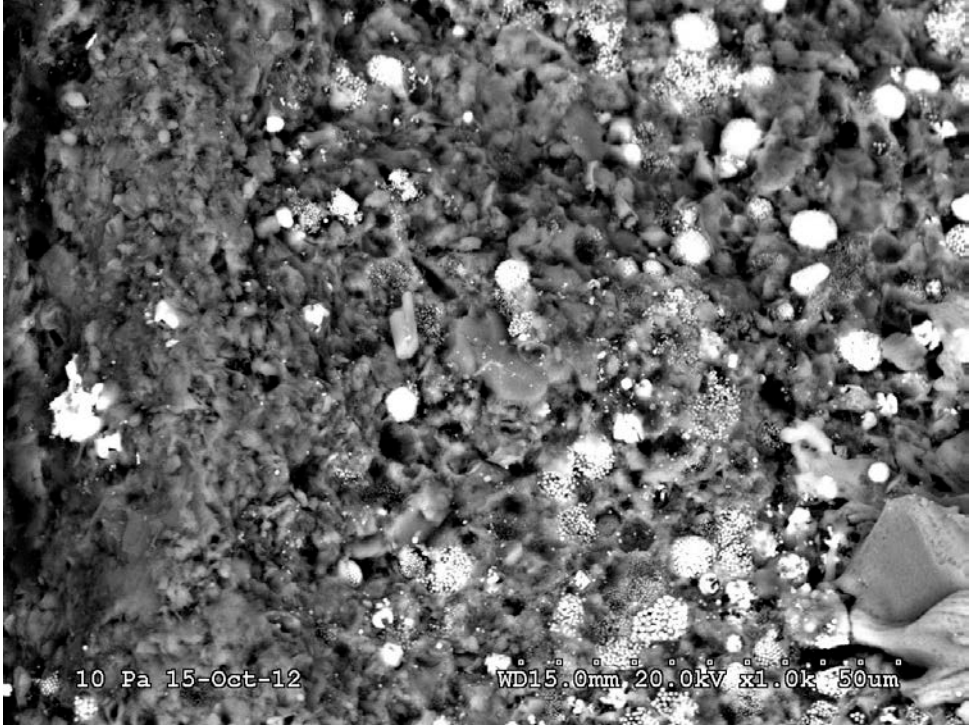


S12-062-028



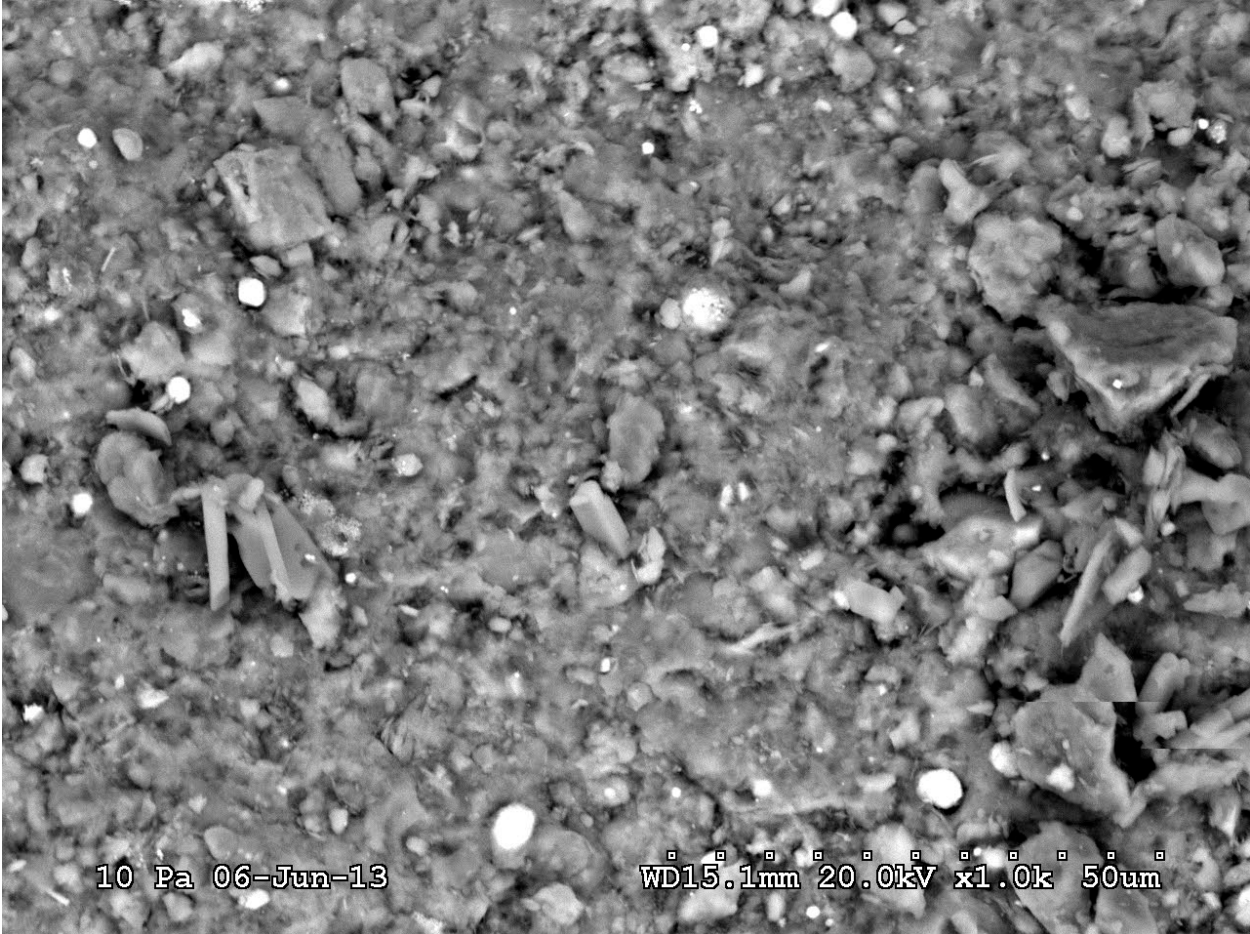
S12-062-034

Antes Outcrop – Base at Reedsville Ramp



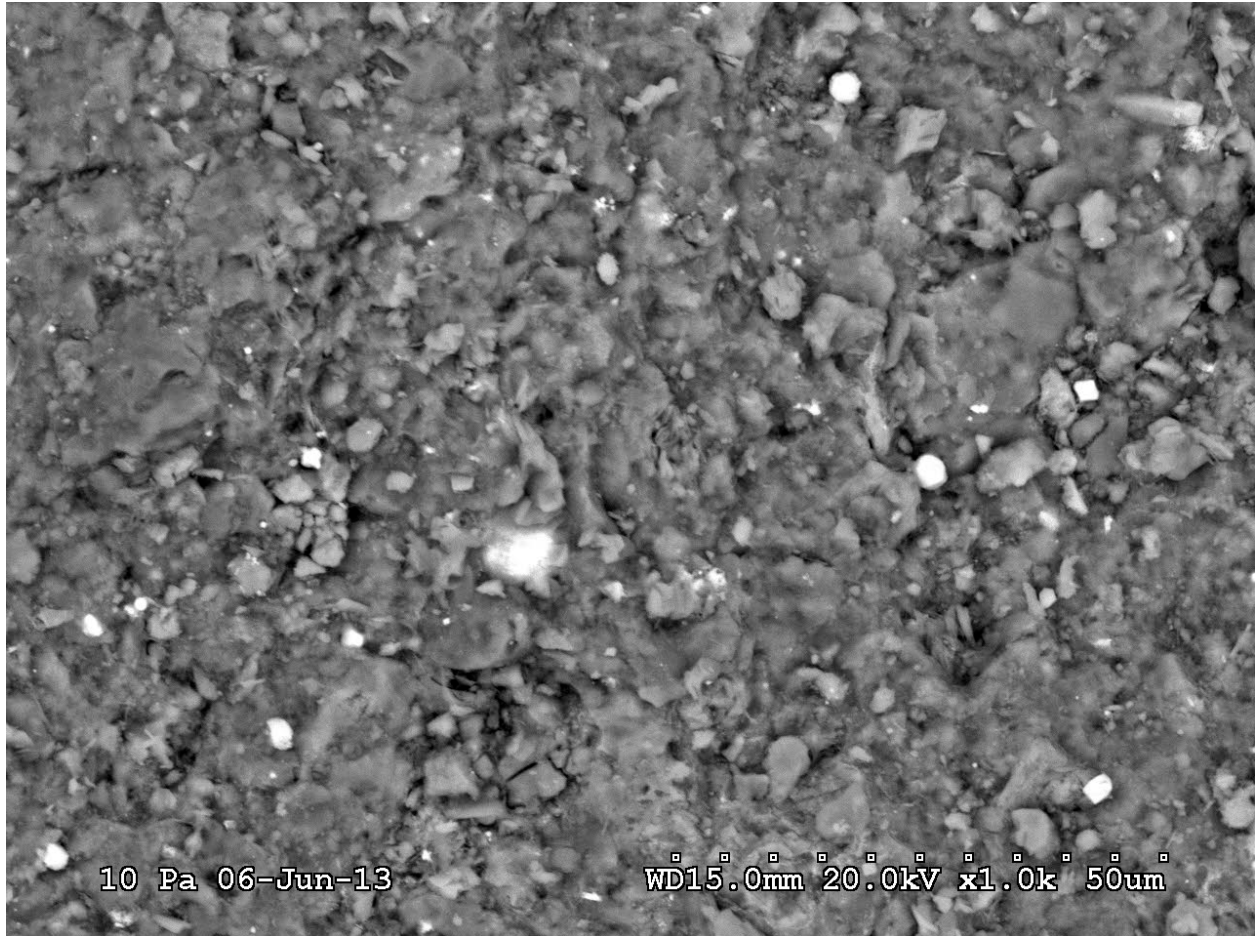
S12-062-035

API# 3701990063, Hockenberry No. 1 – 8504-8513 ft



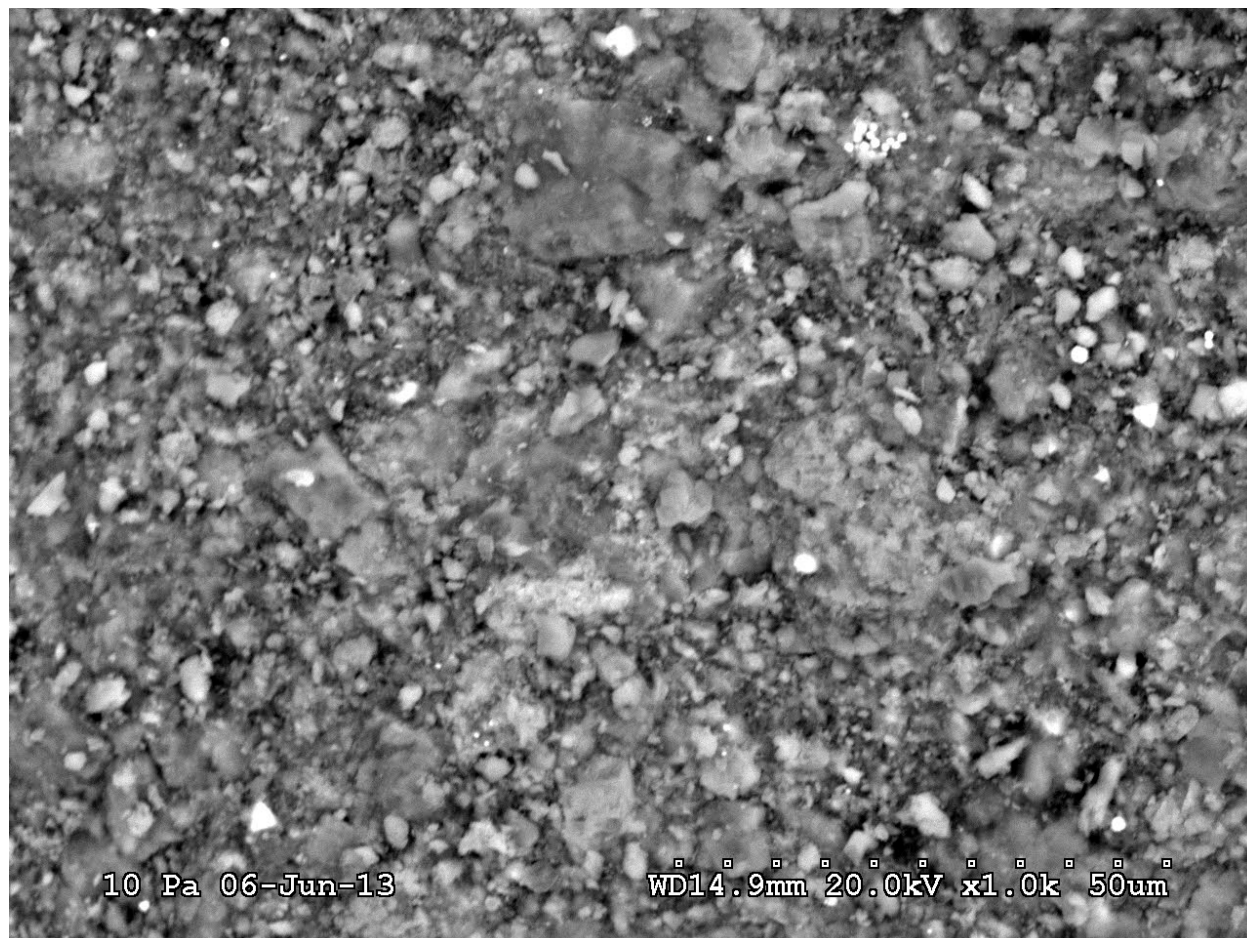
S13-013-001

API# 3701990063, Hockenberry No. 1 – 8619-8632 ft



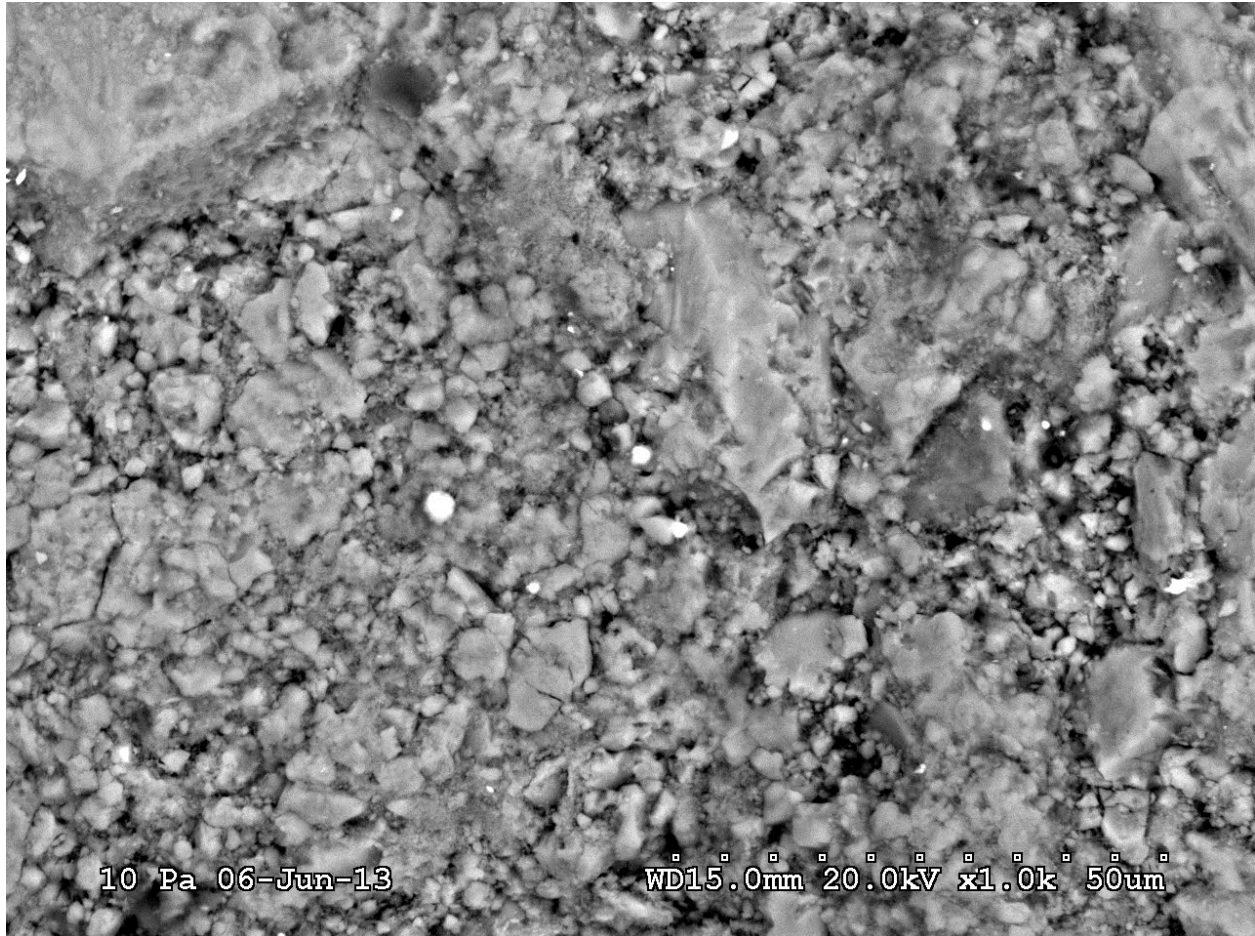
S13-013-005

API# 3701990063, Hockenberry No. 1 – 8710-8722 ft



S13-013-007

API# 3701990063, Hockenberry No. 1 – 8784-8795 ft



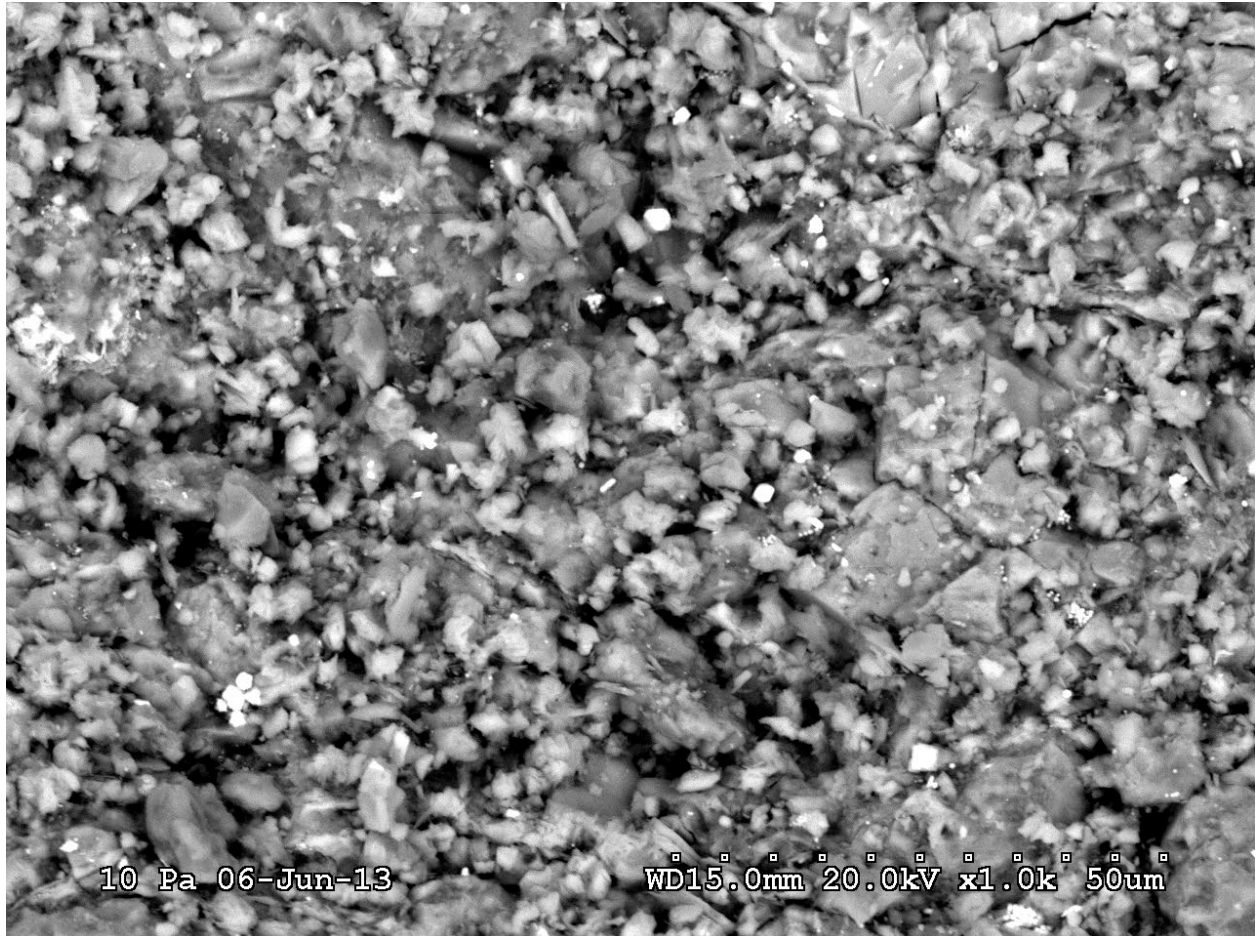
S13-013-009

API# 3706720001, Shade Mt. No. 1 – 3720-3730 ft



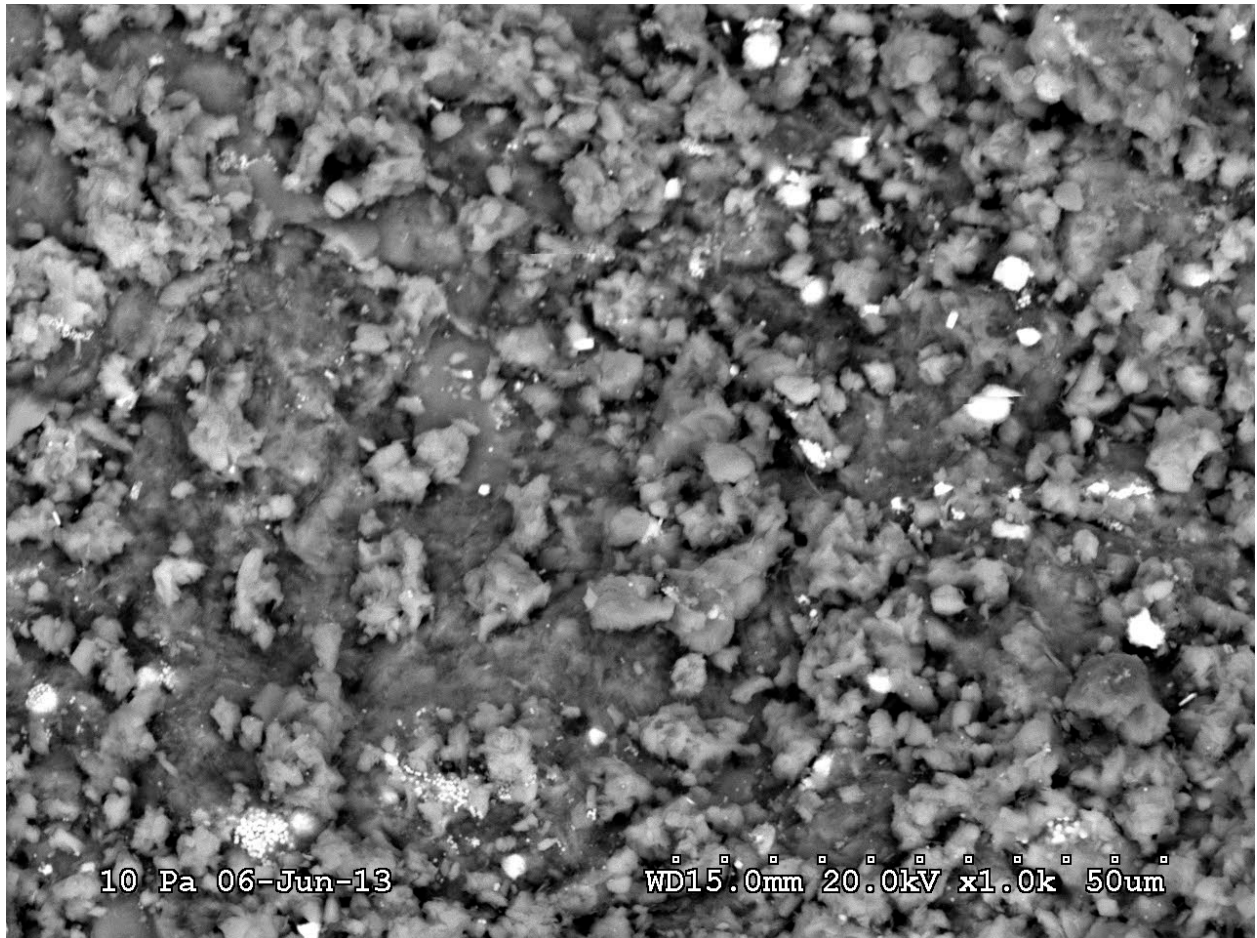
S13-014-001

API# 3706720001, Shade Mt. No. 1 – 3750-3760 ft



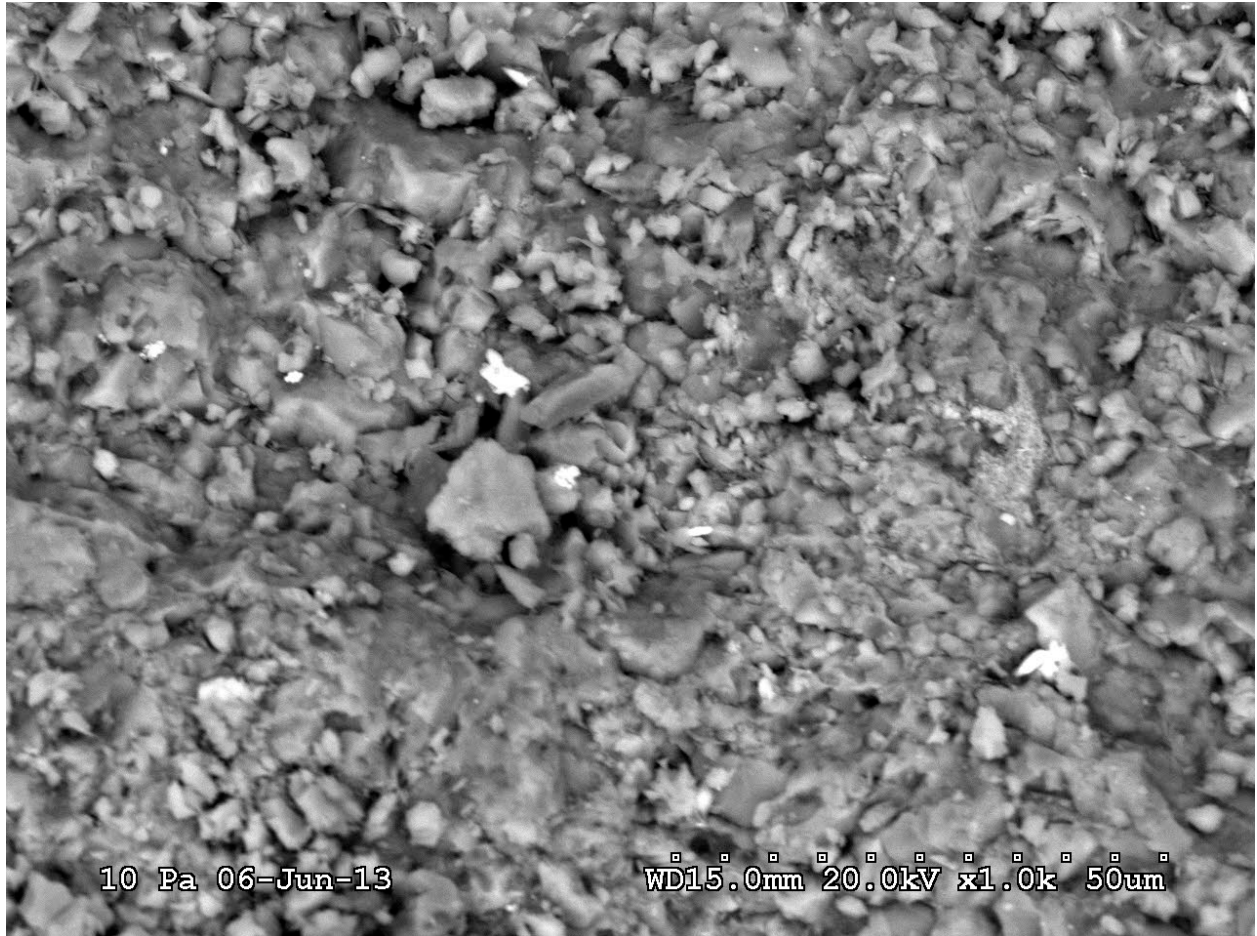
S13-014-003

API# 3706720001, Shade Mt. No. 1 – 3770-3780 ft



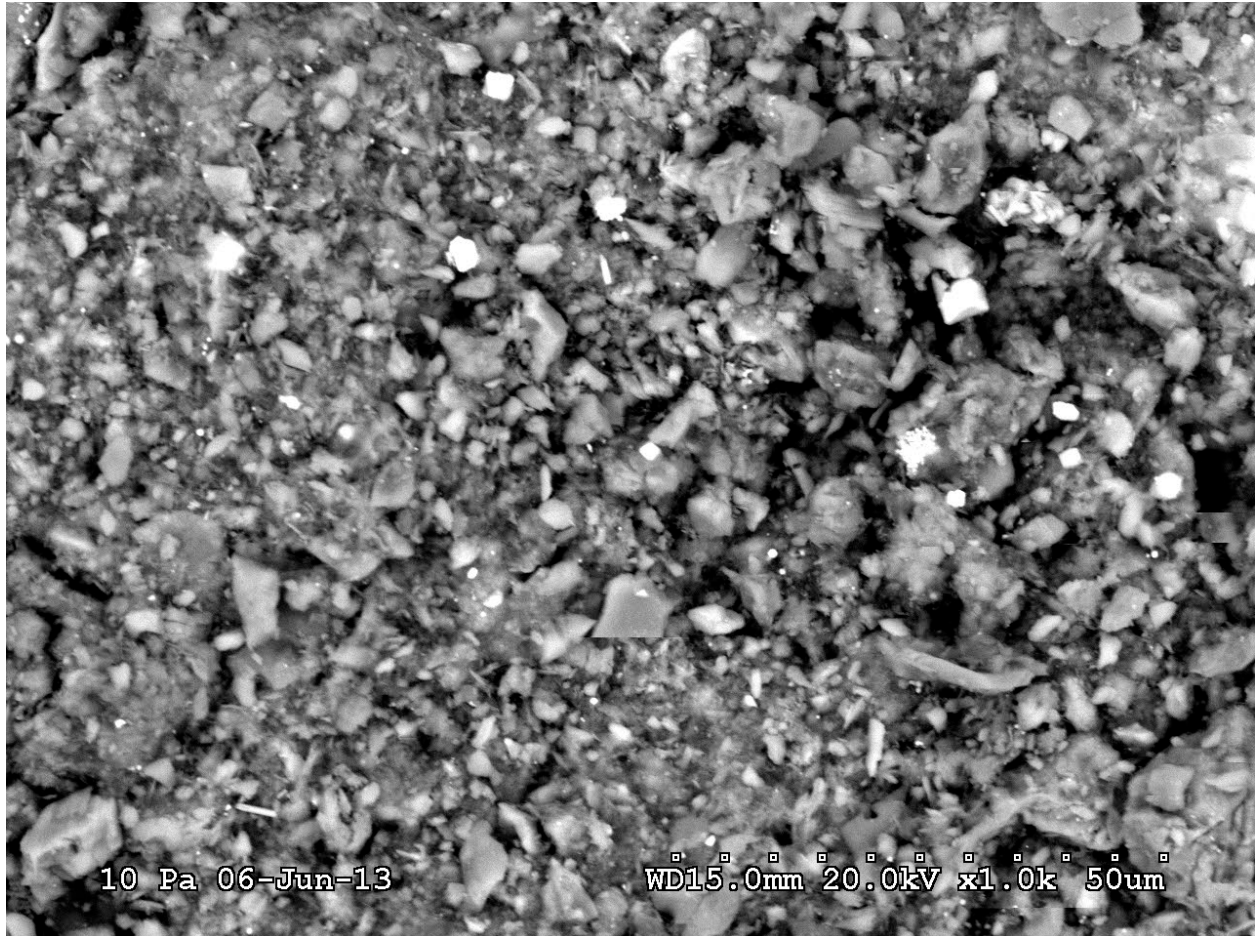
S13-014-005

API# 3706720001, Shade Mt. No. 1 – 3800-3810 ft



S13-014-007

API# 3710320003, Commonwealth of PA Tr. 163 No. C-1 – 13,440-13,450 ft



S13-015-001