

Outcrop-to-Subsurface Stratigraphic Correlations of the Upper Desmoinesian and Lower Missourian Stages (Pennsylvanian) in Eastern Kansas

Regional Assessment of Group Boundaries from Type, Principal, and Neostratotype Sections

Supplemental File 5

Analysis of Type Exposure of Guthrie Mountain Shale and Section ~1.7 miles (~2.7 km) East of Type Exposure

Stephan C. Oborny
Franek Hasiuk
Anthony L. Layzell
Jon J. Smith

Bulletin 265
Kansas Geological Survey
Lawrence, Kansas 66047
2025



The Kansas Geological Survey does not guarantee this document to be free from errors or inaccuracies and disclaims any responsibility or liability for interpretations based on data used in the production of this document or decisions based thereon.

Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Analysis of type exposure of Guthrie Mountain Shale and section ~1.7 miles (~2.7 km) east of type exposure.



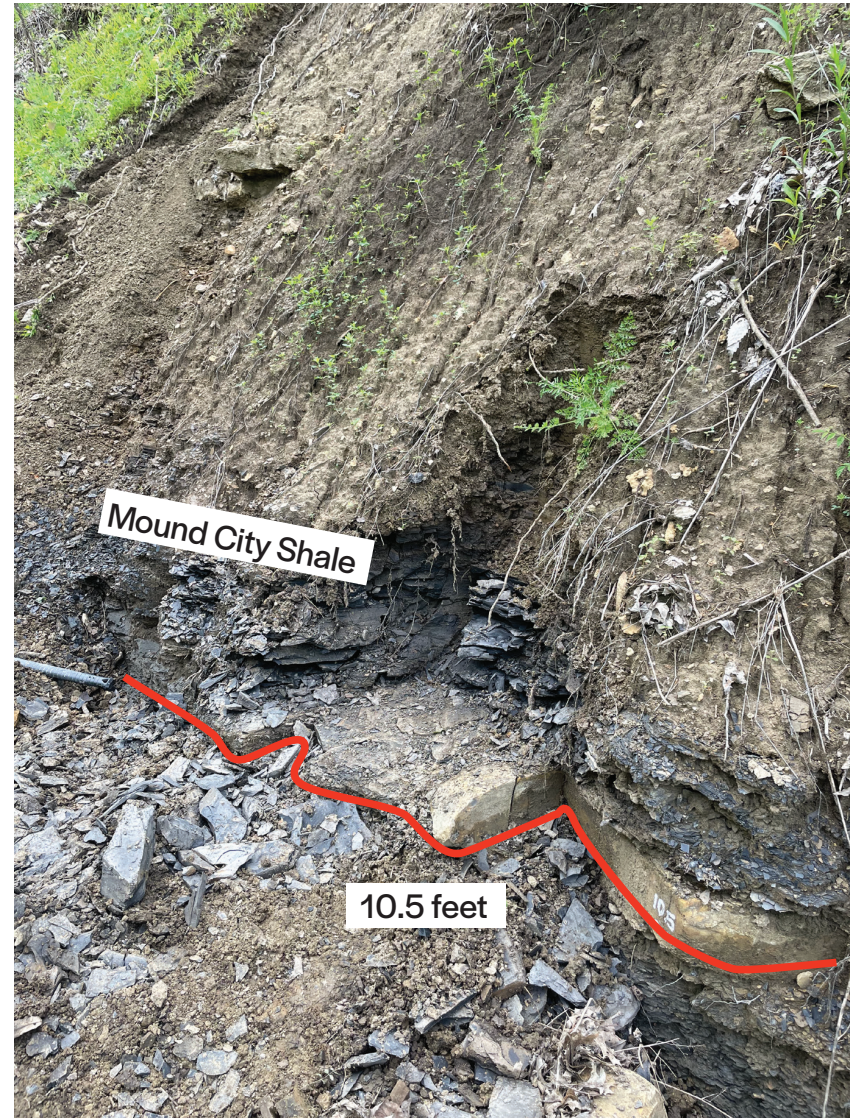
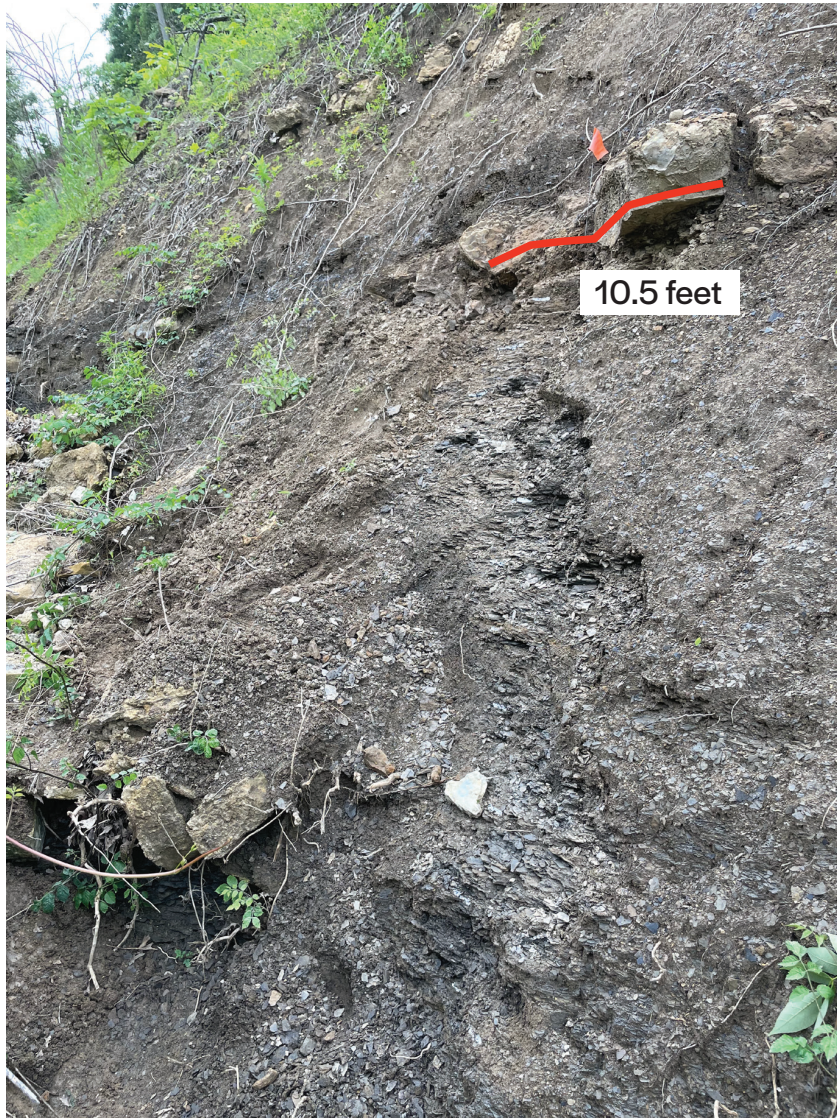
Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



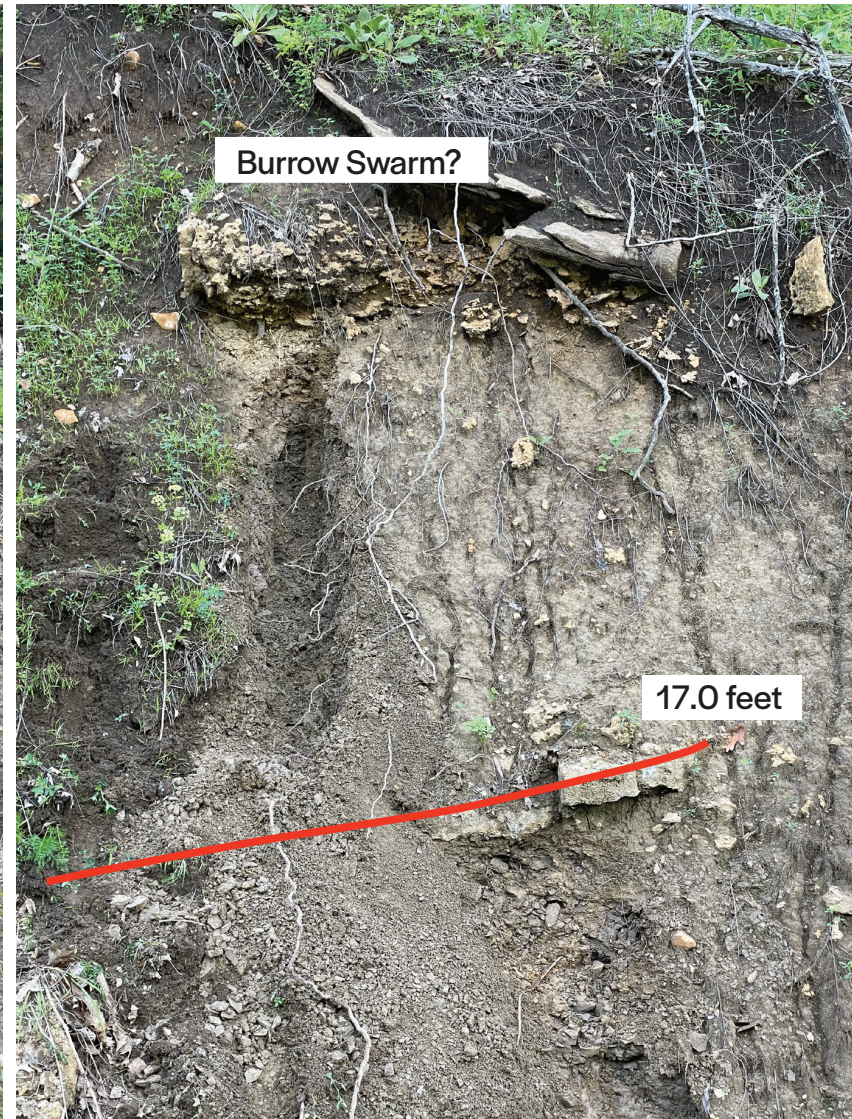
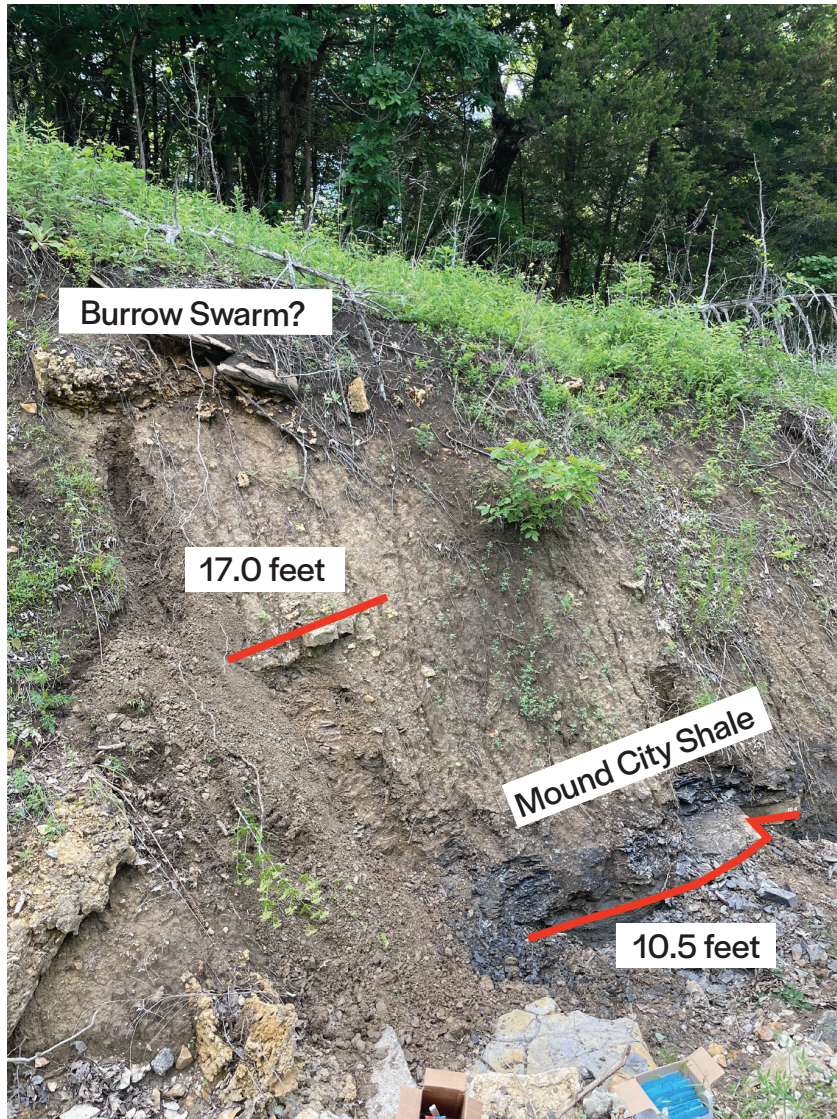
Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



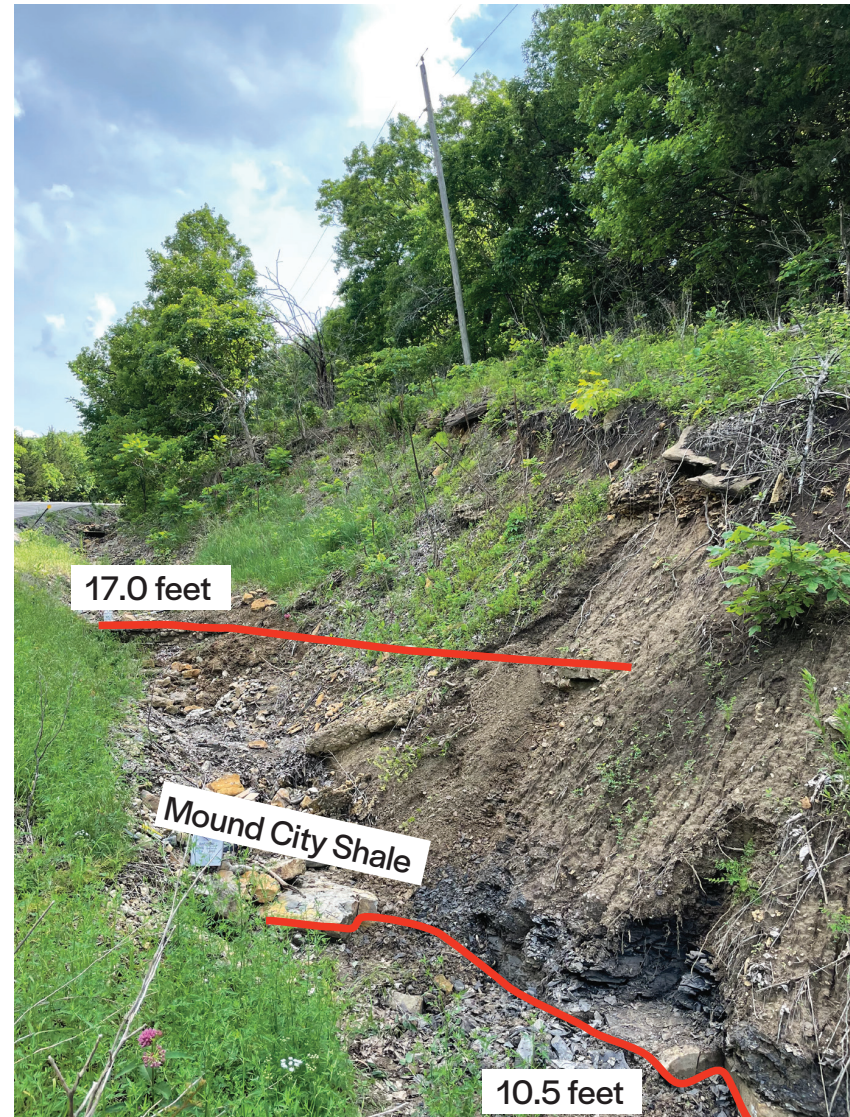
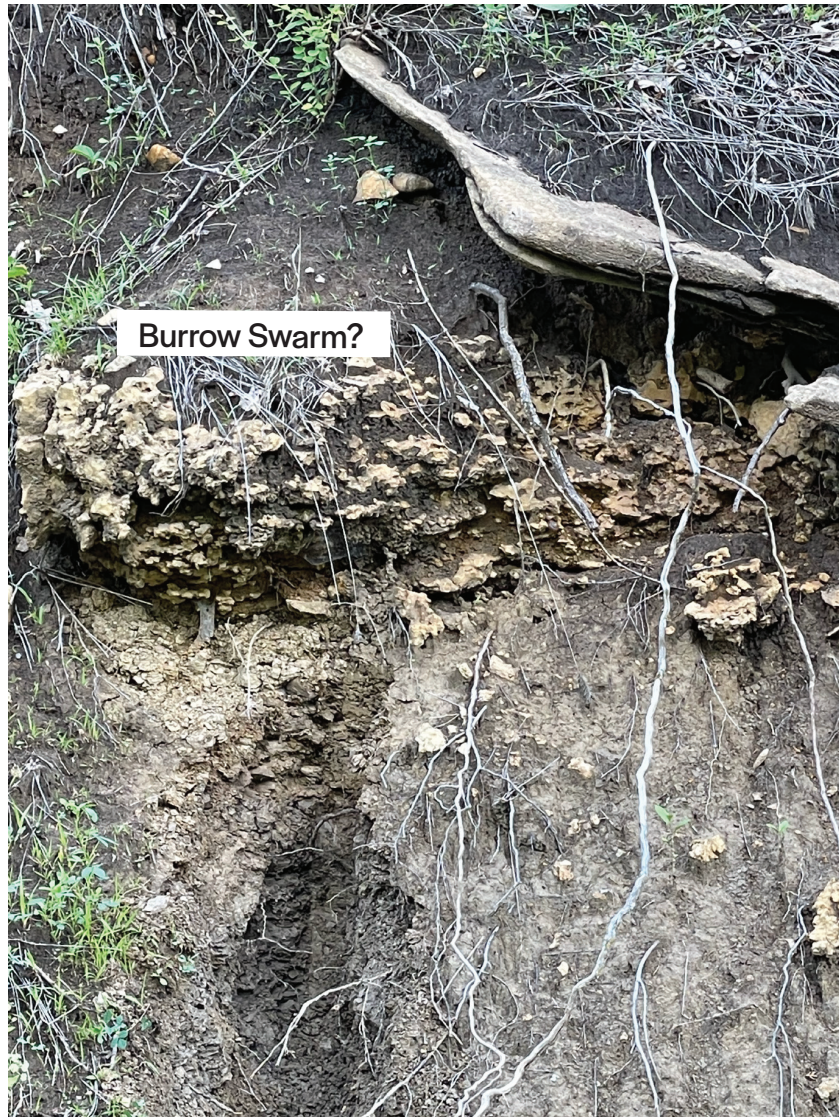
Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



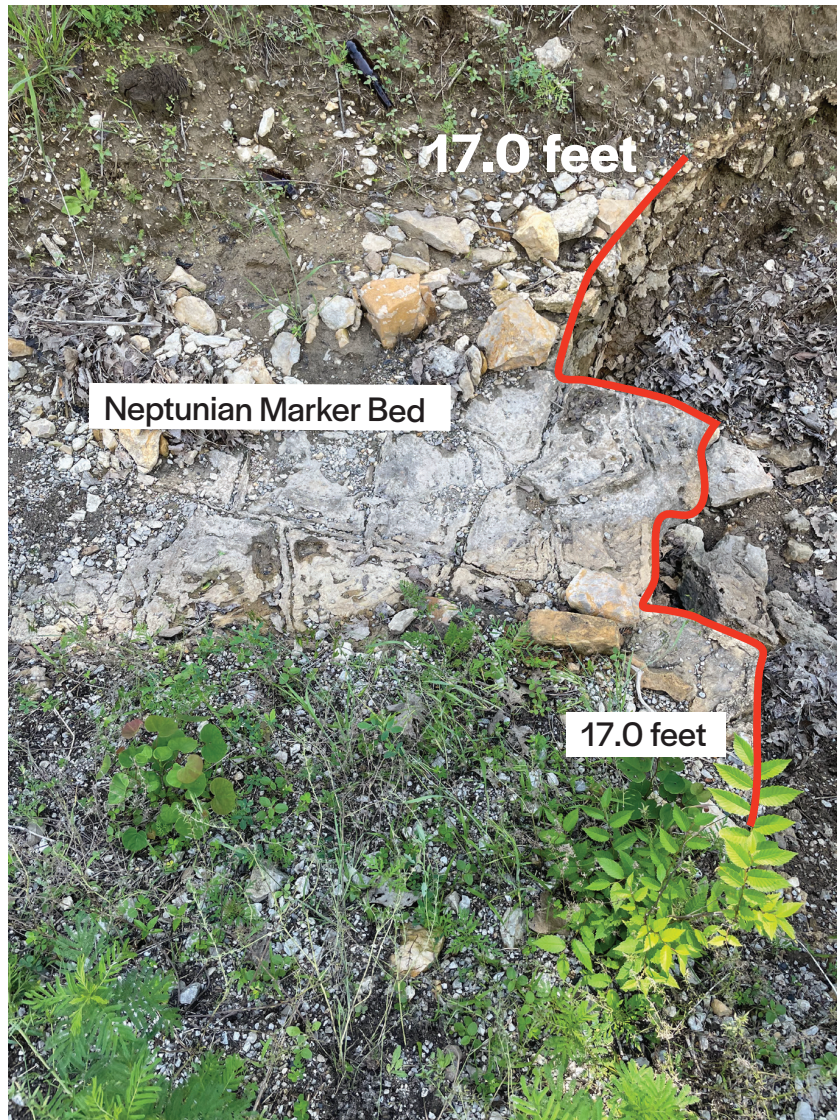
Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



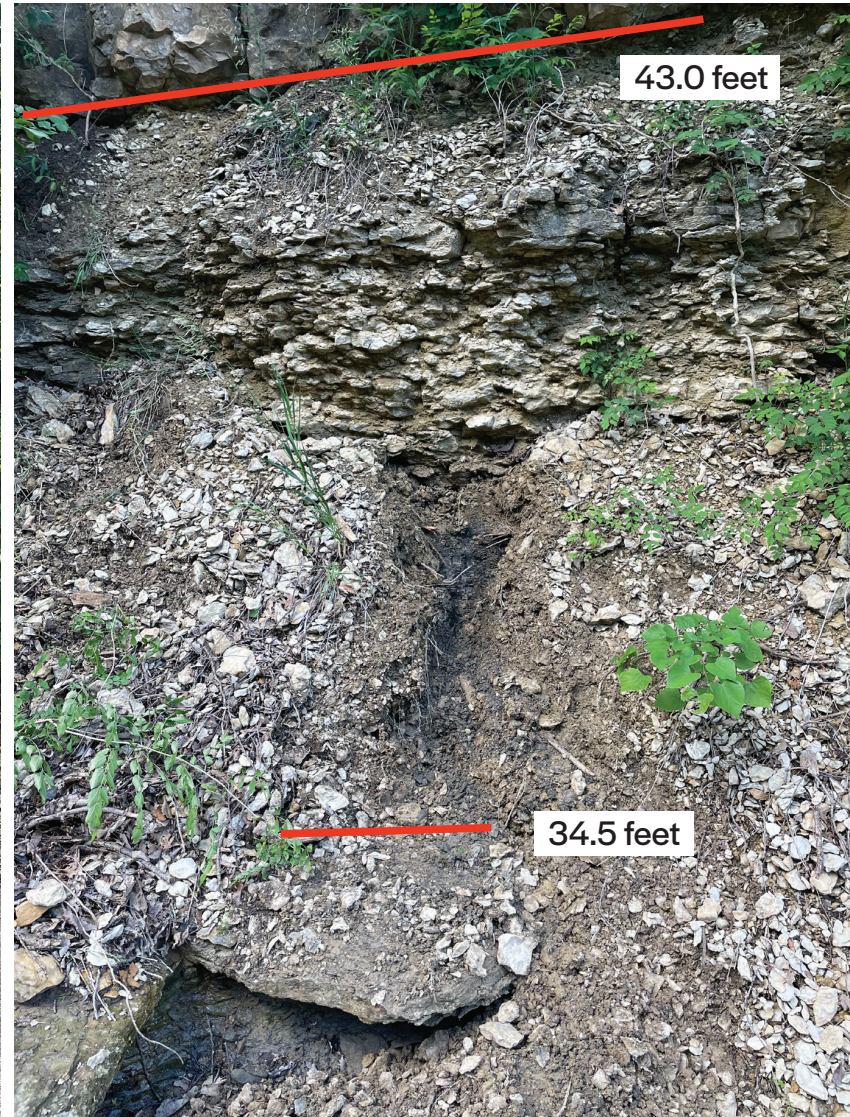
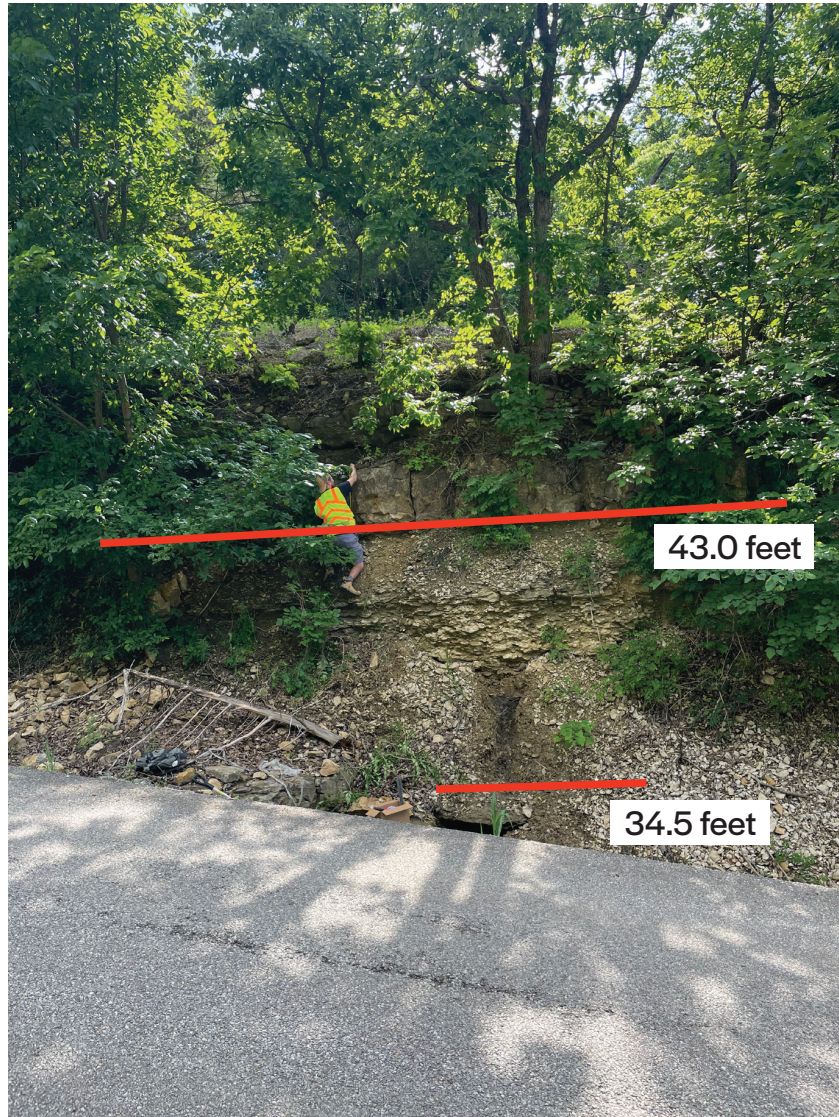
Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



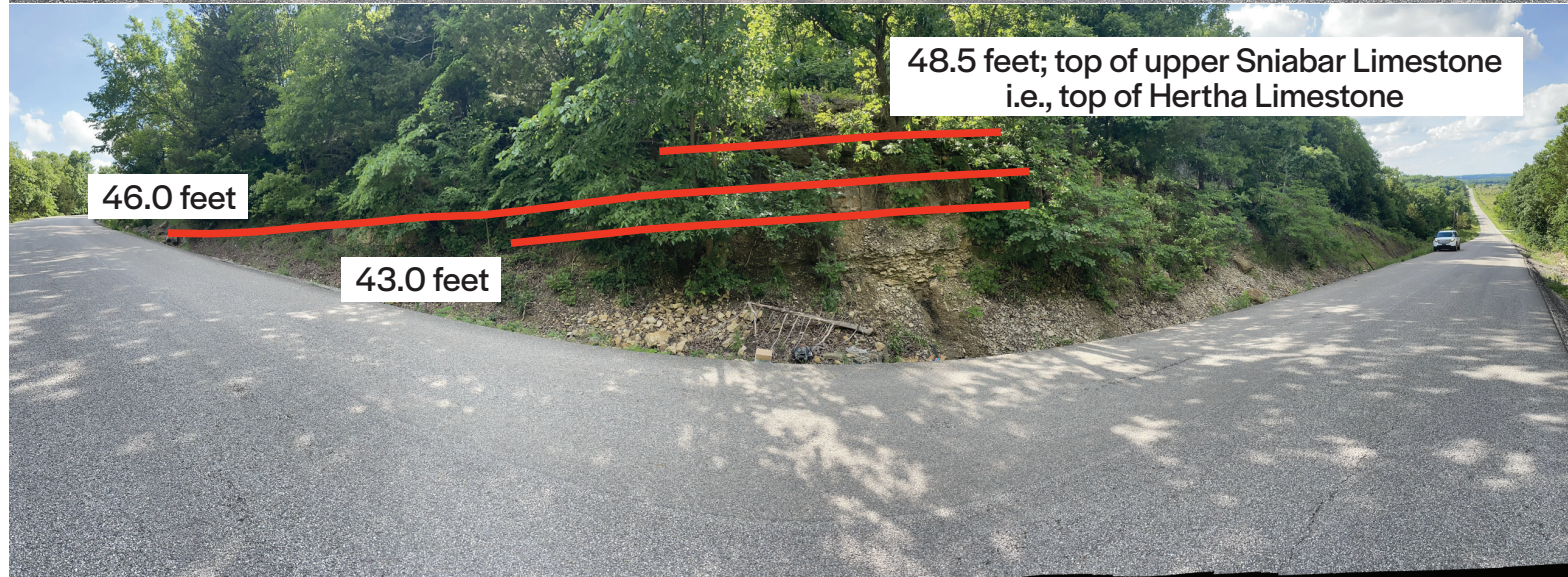
Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



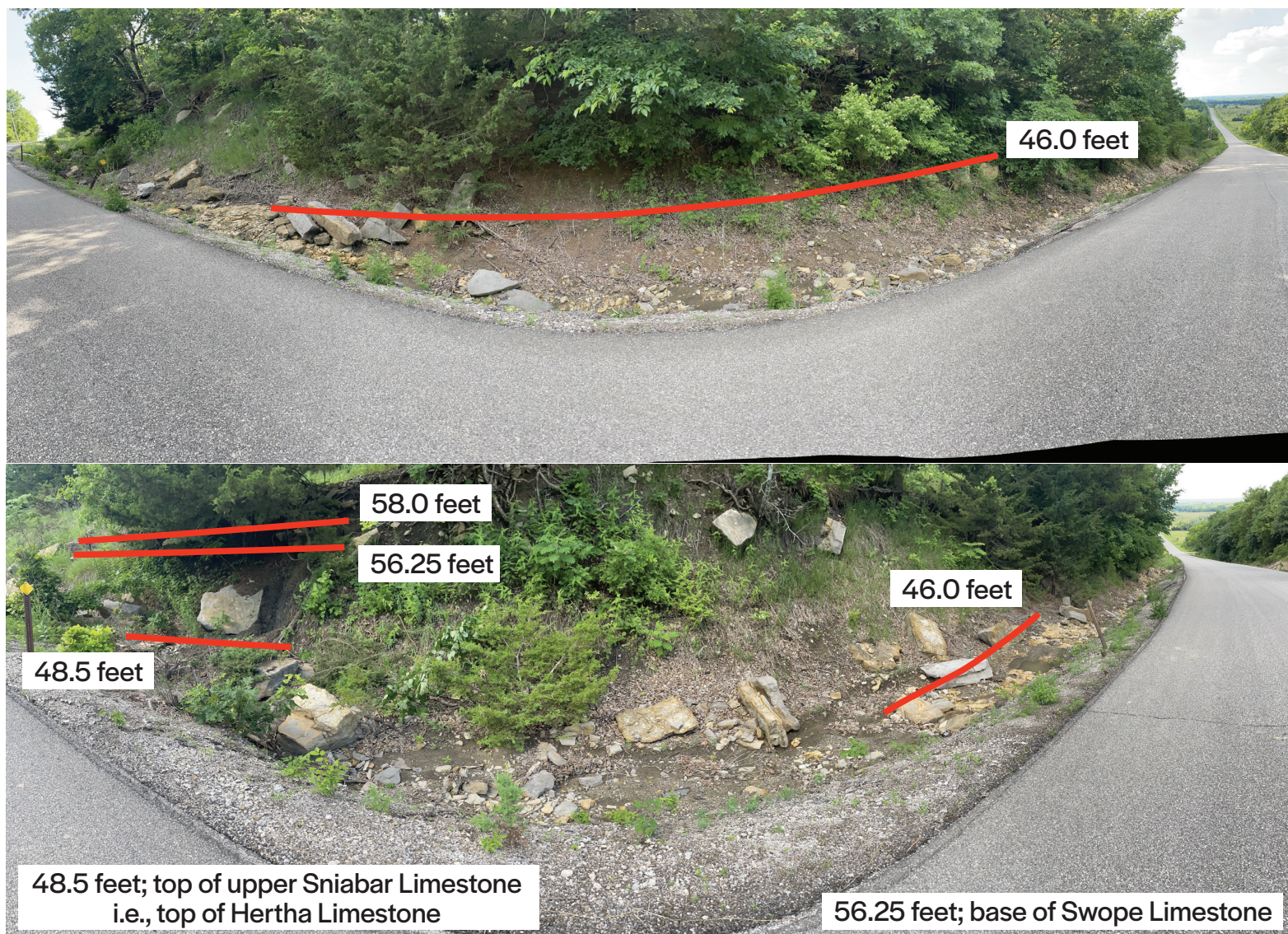
Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



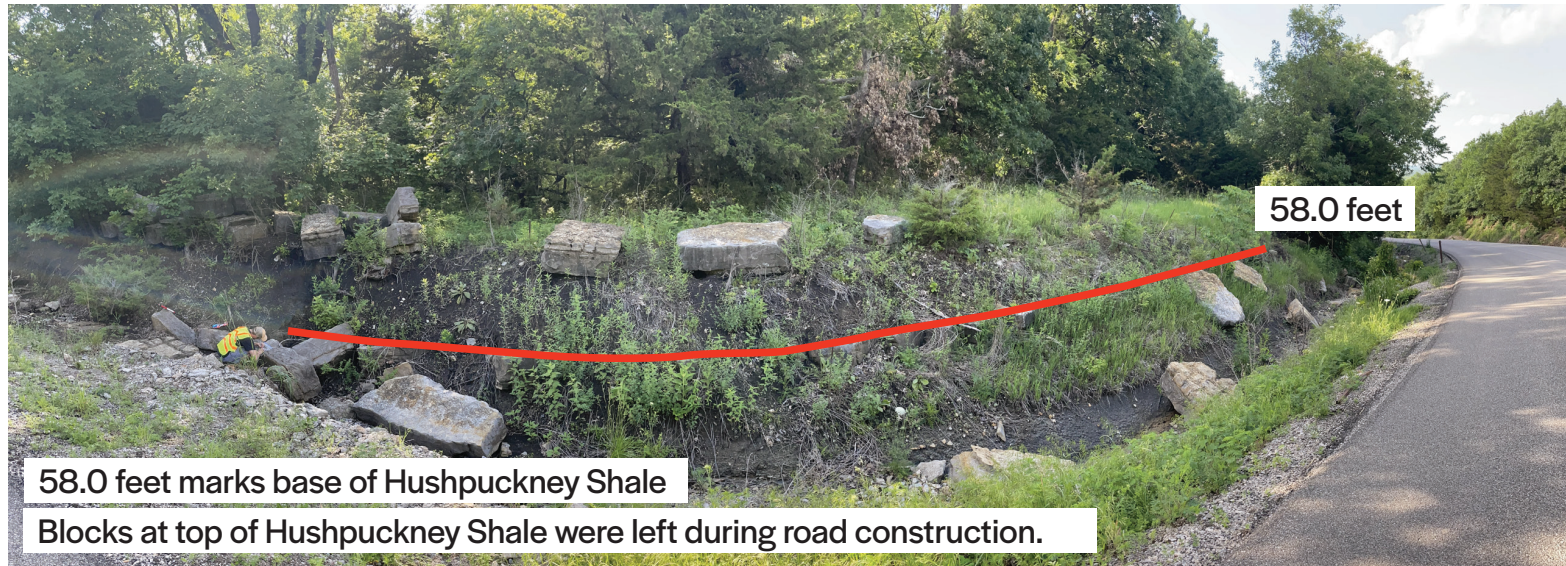
Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



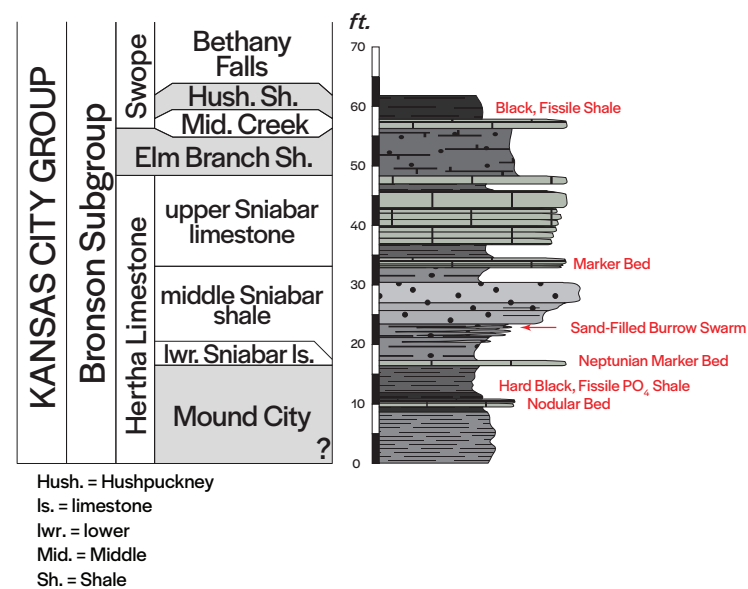
Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street
Bourbon County, Kansas



Summary of Findings

~1.7 miles (~2.7 km) east of Type Guthrie Mountain Shale
center east line sec. 9, T. 24 S., R. 23 E.
along 125th Street in Bourbon County, Kansas

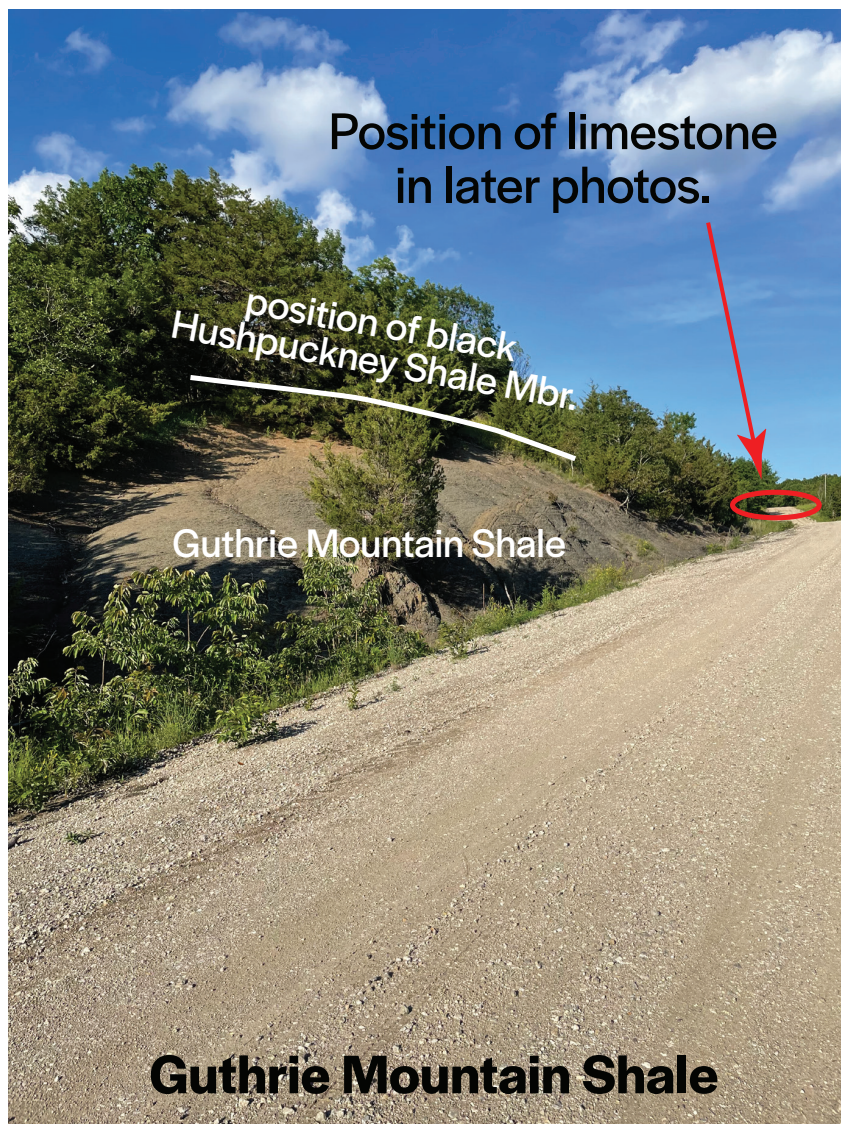


Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Type Guthrie Mountain Shale Member (Heckel, 1992; Heckel and Watney, 2002)
south half of NW sec. 8, T. 24 S., R. 23 E.

Bourbon County, Kansas. **West side of hill looking east.**

The Critzer and Exline Limestone members reported by Heckel and Watney (2002) were not observed.

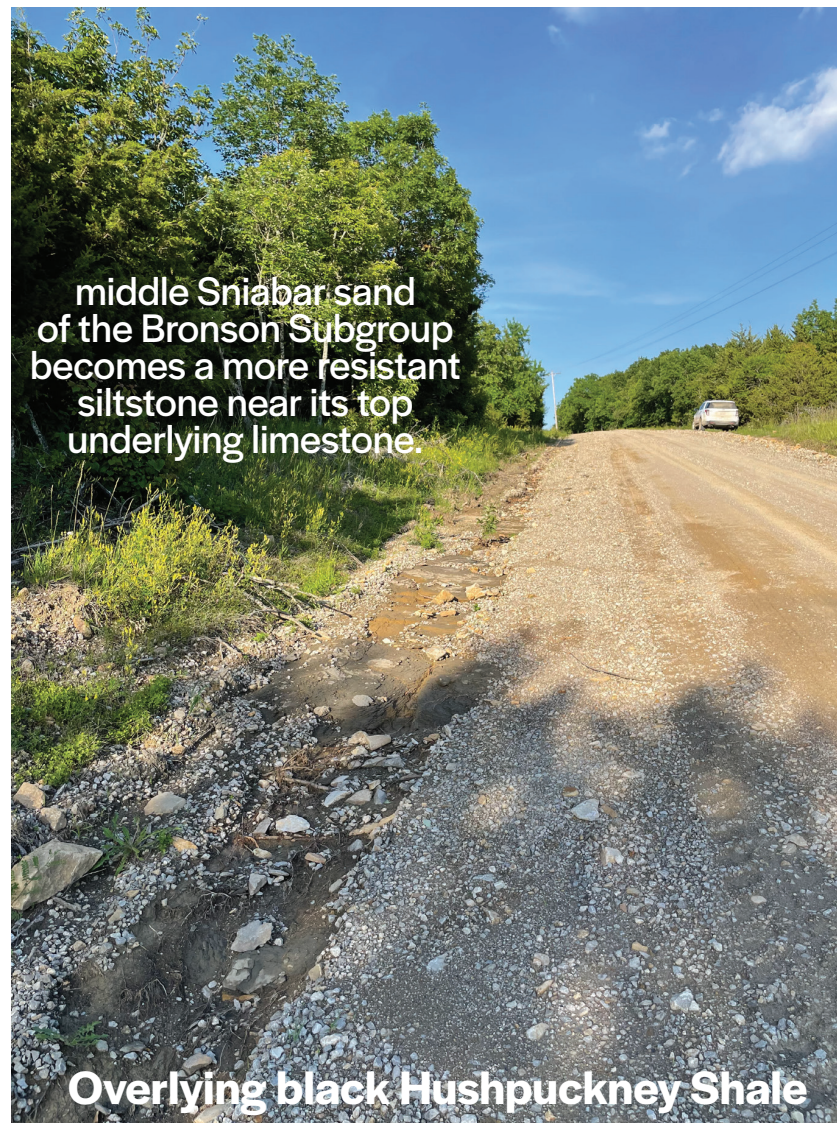


Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Type Guthrie Mountain Shale Member (Heckel, 1992; Heckel and Watney, 2002)
south half of NW sec. 8, T. 24 S., R. 23 E.

Bourbon County, Kansas. **West side of hill looking east.**

The Critzer and Exline Limestone members reported by Heckel and Watney (2002) were not observed.



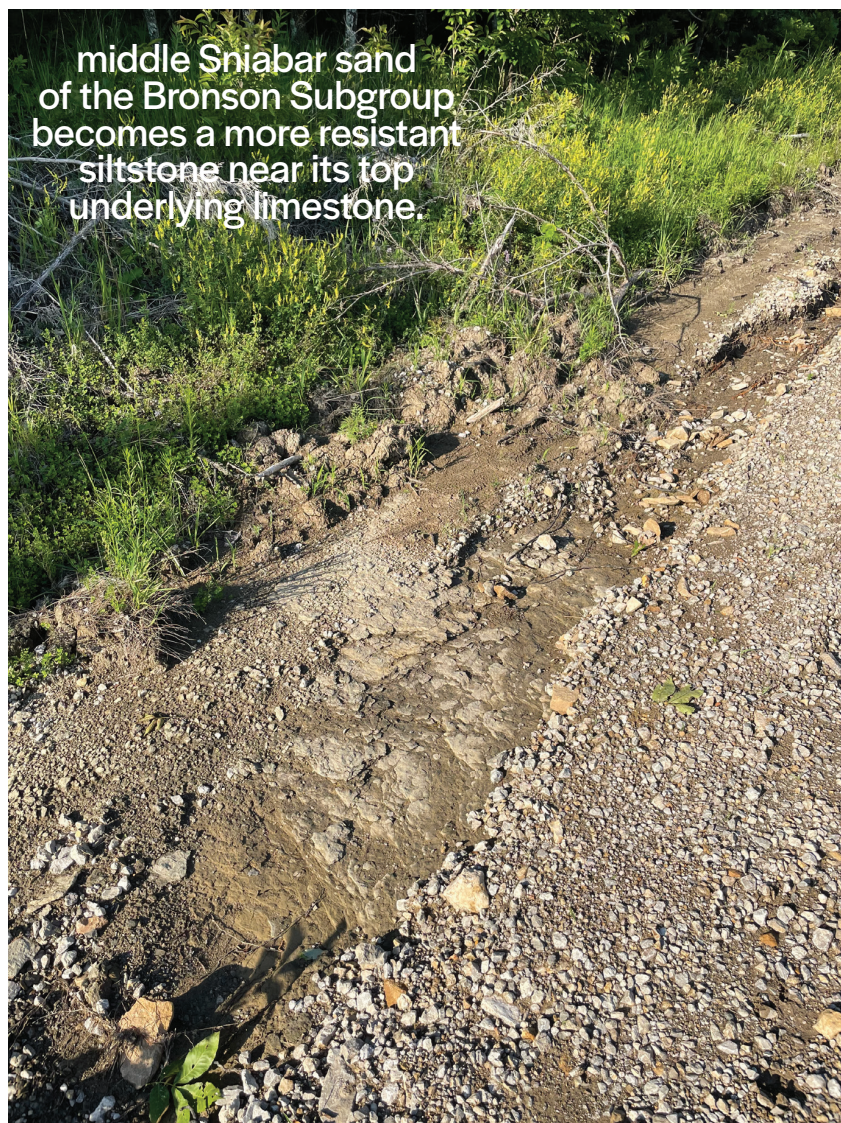
Overlying black Hushpuckney Shale

Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Type Guthrie Mountain Shale Member (Heckel, 1992; Heckel and Watney, 2002)
south half of NW sec. 8, T. 24 S., R. 23 E.

Bourbon County, Kansas. **West side of hill looking east.**

The Critzer and Exline Limestone members reported by Heckel and Watney (2002) were not observed.



Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Type Guthrie Mountain Shale Member (Heckel, 1992; Heckel and Watney, 2002)
south half of NW sec. 8, T. 24 S., R. 23 E.

Bourbon County, Kansas. **West side of hill looking east.**

The Critzer and Exline Limestone members reported by Heckel and Watney (2002) were not observed.

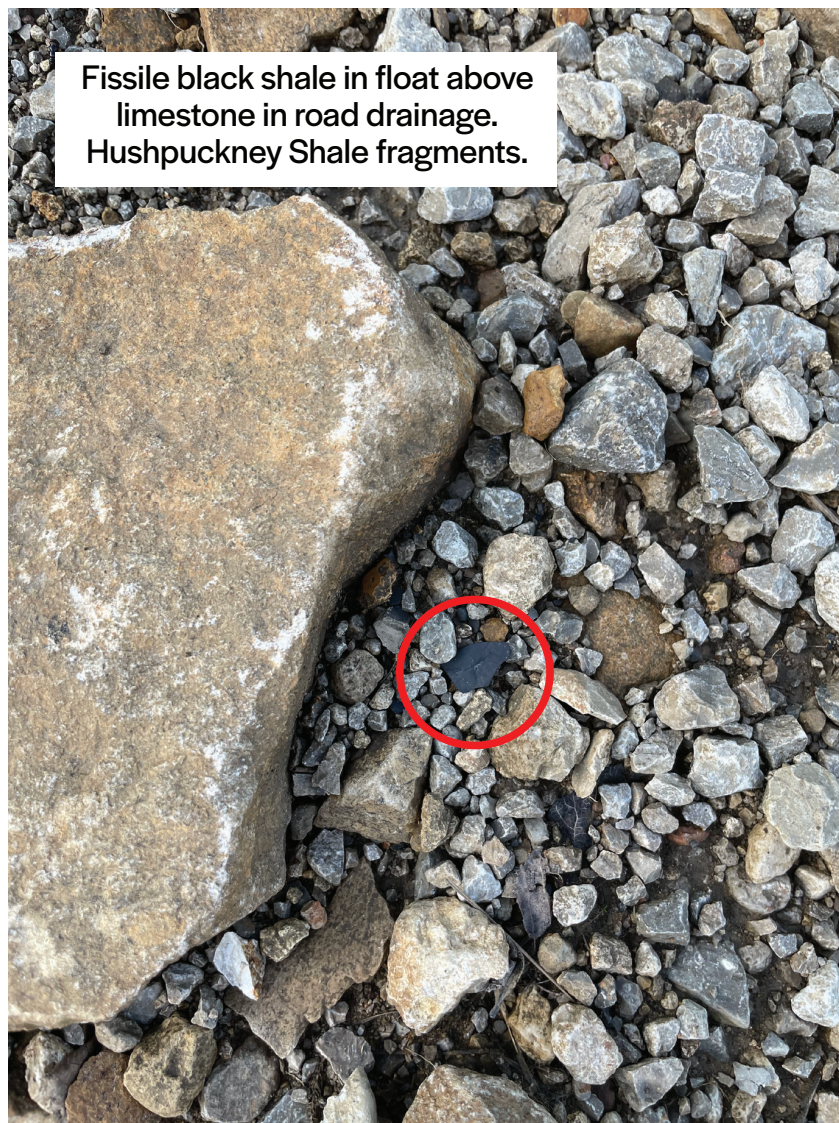


Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Type Guthrie Mountain Shale Member (Heckel, 1992; Heckel and Watney, 2002)
south half of NW sec. 8, T. 24 S., R. 23 E.

Bourbon County, Kansas. **West side of hill looking east.**

The Critzer and Exline Limestone members reported by Heckel and Watney (2002) were not observed.



Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Type Guthrie Mountain Shale Member, **east side of hill looking west.**



Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Type Guthrie Mountain Shale Member, **east side of hill looking west.**

Blue, yellow, green, and red ovals or circles are provided to assist the reader in identifying common objects among photos on pages S5-19–S5-22.



Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Type Guthrie Mountain Shale Member, **east side of hill looking west.**

Blue, yellow, green, and red ovals or circles are provided to assist the reader in identifying common objects among photos on pages S5-19–S5-22.



Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Type Guthrie Mountain Shale Member, **east side of hill looking west.**

Blue, yellow, green, and red ovals or circles are provided to assist the reader in identifying common objects among photos on pages S5-19–S5-22.



Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Type Guthrie Mountain Shale Member, **east side of hill looking west.**

Red circle correlates to previous image.



Critzer Limestone (?) blocky calcareous siltstone-to-silty limestone bed.

Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

Comparison of the Neptunian marker bed observed overlying the Mound City Shale Member at the type exposure of the Guthrie Mountain Shale to that observed at more complete measured section ~1.7 miles (~2.7 km) to the east.



Supplemental File 5: Analysis of Type Exposure of Guthrie Mountain Shale

