



1. Chalk, pale-grayish-yellow, silty, fossiliferous, with *Hamulus onyx*, *Gryphaea* sp., and sharks' teeth
2. Chalk, pale-grayish-yellow, silty, argillaceous, fossiliferous
3. Chalk, pale-grayish-yellow, silty, fossiliferous
4. Chalk, pale-grayish-yellow, argillaceous, fossiliferous
5. Chalk, pale-grayish-yellow, argillaceous, fossiliferous
6. Chalk, pale-grayish-yellow, finely sandy, fossiliferous; overlain by grayish-green chalk that weathers grayish yellow, is very finely sandy, and contains fossils of *Inoceramus*
7. Chalk, pale-grayish-yellow, argillaceous, fossiliferous; contains calcareous concretions
8. Chalk, grayish-yellow, finely sandy, argillaceous, fossiliferous; overlain by 1.5 feet of silty ferruginous soil
9. Clay, silty, greenish-gray weathering to grayish yellow; dark yellowish-orange iron stain. In bottom of stream bed
10. Chalk, pale-olive weathering grayish yellow, argillaceous
11. Chalk, pale-olive weathering grayish yellow, silty, fossiliferous
12. Chalk, pale-olive weathering grayish yellow, argillaceous
13. Chalk, argillaceous, ferruginous, pale-olive weathering grayish-yellow; light-brown-olive stain on surface
14. Chalk, sandy, ferruginous, yellowish-gray; light-brown iron stain on surface
15. Chalk, silty, fossiliferous, yellowish-gray; light-brown iron stain on surface. In stream bed 6 feet below road surface
16. Chalk, sandy, glauconitic, yellowish-gray; light-brown iron stain on surface
17. Chalk, very finely sandy, pale-olive weathering grayish orange; iron stain
18. Chalk, very finely sandy, yellowish-gray weathering light brown; iron stain. Abundant joints and fractures filled with calcium carbonate
19. Limestone, very pale orange, silty, hard, dense, very fractured, fossiliferous. Forms hard, resistant bed
20. Chalk, pale-olive weathering light brown on surface; overlain by sandy soil
21. Chalk, finely sandy, pale-olive weathering light brown; iron stain on surface. Overlain by sandy soil
22. Two beds 1-foot thick of limestone, grayish-orange weathering very pale orange, dense, hard, very fractured, fossiliferous with phosphatic molds of fossils in upper bed; limestone beds are separated by 3 feet of dusky-yellow finely sandy chalk. Limestone forms hard resistant beds. Top of section at road surface
23. Chalk, very finely sandy, fossiliferous, yellowish-gray weathering light brown; iron stain
24. Chalk, dark-yellowish-orange, finely sandy, deeply weathered
25. Chalk, yellowish-gray, weathering moderate reddish brown, very finely sandy

26. Chalk, pale-olive weathering yellowish gray, silty, jointed and fractured with weathered surface of fractures stained light brown, breaks into small flakes, fossiliferous
27. Chalk, pale-olive weathering light brown, silty
28. Chalk, pale-olive, weathering light brown, silty, fossiliferous
29. Chalk, pale-olive, weathering dark yellowish orange, finely sandy
30. Chalk, pale-olive, weathering pale yellowish orange, very finely sandy. Surface of road cut fractured and slumped; light-brown stain along fractures
31. Chalk, pale-olive, weathering pale yellowish orange, very finely sandy
32. Chalk, yellowish-gray, finely sandy, fossiliferous; overlain by dark-yellowish-orange sandy chalk
33. Chalk, pale-olive, weathering light brown, very finely sandy
34. Chalk, sandy, pale-olive, weathering grayish orange; iron stain on surface
35. Chalk, grayish-yellow, weathering pale yellowish orange, finely sandy, some poorly preserved fossils. Surface of road cut covered with calcium carbonate concretions
36. Chalk, grayish-yellow, finely sandy, fossiliferous
37. Chalk, grayish-yellow, fossiliferous. Surface of road cut littered with calcareous concretions and fossil fragments
38. Chalk, grayish-yellow, fossiliferous. Surface of road cut littered with calcareous concretions and prisms of *Inoceramus*
39. Chalk, grayish-yellow, finely sandy, fossiliferous. Surface of road cut littered with calcareous concretions and fossil fragments
40. Chalk, grayish-yellow, weathering light brown in upper 1 foot of bed, finely sandy, fossiliferous. Surface of road cut littered with calcareous concretions and fossil fragments
41. Chalk, pale-olive, finely sandy. Overlain by yellowish-gray finely sandy chalk that weathers moderate reddish brown; iron stain on surface
42. Chalk, light-olive-brown, weathering grayish yellow, finely sandy, fossiliferous
43. Chalk, very finely sandy, micaceous, fossiliferous, yellowish-gray weathering grayish orange; iron stain. Overlain by yellowish-gray to pale-olive very finely sandy, micaceous chalk that weathers moderate reddish brown. Surface of exposure littered with small calcium carbonate concretions
44. Chalk, very finely sandy, micaceous pale-olive, weathering moderate reddish brown; iron stain
45. Chalk, pale-olive, weathering moderate reddish brown, very finely sandy, hackly fracture, micaceous
46. Chalk, light-olive-gray, very finely sandy, micaceous, weathered surface iron stained and fractured. Grades upward into fine-grained sand of the Ripley formation

47. Sand, yellowish-gray, weathering very light gray; fine-grained, well-sorted, subangular, micaceous with some poorly preserved boring
48. Sand, pale-yellowish-orange, weathering grayish orange, massive, fine- to medium-grained, angular to subangular, micaceous, ferruginous, limonitic concretions, with borings of *Halymenites* sp. in lower part
49. Alternating beds 2 to 6 inches thick of sand, pale-yellowish-orange, fine- to medium-grained, well-sorted, angular to subangular, micaceous, arkosic, and medium-reddish-brown, fine- to medium-grained sand with abundant ferruginous-cemented sand borings
50. Sand, medium-grained, well-sorted, subangular to subrounded, micaceous, pale-greenish-yellow, weathering grayish yellow; iron stain on surface. Bedding obscured by slumping and weathering
51. Sandstone, very light gray, medium-grained, well-sorted angular to subangular, calcareous, with *Gryphaea mutabilis*, *Ezogyrta cancellata*, *Anomia tellinoides*, *Anomia argentea*, *Paranomia scabra*, *Ostrea falcata*, *Ostrea* sp., and *Pecten* sp. Forms ledge
52. Clay, silty, calcareous, fossiliferous, pale-olive, weathering dusky yellow; iron stain on surface
53. Sand, medium-grained, well-sorted, subangular to subrounded, micaceous, pale-greenish-yellowish weathering grayish yellow; iron stain on surface. Bedding obscured by slumping
54. Sandstone, very light gray, medium-grained, well-sorted, angular to subangular, calcareous, fossiliferous
55. Clay, pale-olive, silty, calcareous, fossiliferous
56. Chalk, dark-greenish-gray, very finely sandy, argillaceous micaceous, fossiliferous. Weathers to a dark-gray clayey soil
57. Sandstone, olive-gray, weathering light gray, fine- to medium-grained, angular to subangular, argillaceous, glauconitic, micaceous, calcareous, becoming more calcareous at top of bed, fossiliferous; forms resistant ledges. Overlain by yellowish-gray to pale-greenish sandstone that weathers grayish yellow, is fine grained, well sorted, subangular, glauconitic, calcareous, micaceous, ferruginous, and fossiliferous; overlain in turn by yellowish-gray sandstone that weathers grayish yellow, is fine grained, well sorted, subangular, micaceous, calcareous, and fossiliferous with poorly preserved boring of *Halymenites* sp. Contains several irregular concretionary sandstone stringers at different levels within the bed
58. Sandstone, yellowish-gray, weathering grayish yellow, fine-grained, well-sorted, subangular, micaceous, calcareous, fossiliferous. Forms resistant ledge
59. Sandstone, yellowish-gray, fine-grained, well-sorted subangular; micaceous, calcareous, with many poorly preserved fossils; overlain by dark-yellowish-orange fine- to medium-grained, subangular, ferruginous sandstone. Unit badly weathered and without bedding

60. Sandstone, olive-gray, weathering light greenish gray to yellowish gray, fine-grained, well-sorted, subangular, glauconitic, calcareous, micaceous, fossiliferous. Contains resistant ledges
61. Sandstone, grayish-yellow to olive-gray, fine-grained, well-sorted, subangular, glauconitic, calcareous, micaceous, ferruginous, contains poorly preserved fossils. Resistant ledge at top of bed
62. Sand, grayish-yellow, massive, fine-grained, well-sorted, subangular, micaceous, ferruginous
63. Sand, grayish-yellow, weathering moderate yellow, fine-grained subangular, micaceous, glauconitic, some limonitic concretions, contains poorly preserved fossils. Bedding obscured by weathering
64. Sand, yellowish-gray, fine-grained, well-sorted, subangular, glauconitic, micaceous, fossiliferous; interlaminated with greenish-gray fissile, thin-bedded clay with many thin bands of yellowish-gray limonitic sand along bedding planes. Base of bed is an irregular limonitic zone forming a wavy band
65. Sand, thinly laminated, fine- to medium-grained, poorly sorted, subangular to subrounded, calcareous, micaceous, fossiliferous with abundant boring of *Halymenites* sp. in upper 5 feet, pale-olive, weathering pale yellowish orange; iron stain on surface. Overlain by white medium- to very coarse grained, angular to subangular sand
66. Sand, grayish-yellow, weathering moderate yellow, medium-grained, well-sorted, subangular, micaceous, glauconitic, calcareous, with *Ostrea falcata*, *Ezogyrta costata*, *Anomia argentea*, *Turritella* sp., and *Ostrea* sp. Bedding obscured by slumping and vegetation
67. Sandstone, light-olive-gray thinly laminated, medium-grained, well-sorted, subangular, glauconitic, calcareous, micaceous, fossiliferous. Forms resistant ledge
68. Sandstone, light-olive-gray, medium-grained, subangular, calcareous, argillaceous, micaceous
69. Sand, grayish-yellow, weathering pale yellowish orange, fine-grained, well-sorted, subangular, glauconitic, micaceous. A 4-inch limonitic zone separates this bed from bed 68
70. Sand, light-greenish-gray, coarse-grained, subrounded, glauconitic, with some poorly preserved fossil imprints
71. Clay, dusky-yellow, sandy, hackly fracture
72. Clay, dark-gray, fissile, silty, micaceous; overlain by pale-olive to dusky-yellow silty micaceous clay that breaks with conchoidal fracture
73. Sand, grayish-yellow, fine-grained, subangular, micaceous, glauconitic, with *Ostrea tectostea*, *Anomia argentea*, *Ezogyrta* sp., and other fossils. Forms steep cliff
74. Chalk, white, sandy, glauconitic, with *Ostrea* sp. and *Gryphaea compta*
75. Sand, light-greenish-gray, coarse-grained, subrounded, glauconitic
76. Clay, dusky-yellow, sandy
77. Clay, dark-gray, fissile, silty, micaceous; overlain by pale-olive to dusky-yellow, silty, micaceous jointed clay that breaks with conchoidal fracture, and has 3-inch calcareous concretionary zone at top of bed
78. Sand, grayish-yellow, fine-grained, subangular, micaceous glauconitic, fossiliferous. Resistant bed forming steep cliff
79. Chalk, silty, with *Gryphaea mutabilis*, *Ezogyrta costata*, *Anomia argentea*, *Ostrea* sp., *Cardium* sp., *Turritella* sp., and other fossils, yellowish-orange to moderate-reddish-brown; iron stain on surface. Surface of road cut slumped and littered with calcareous concretions
80. Chalk, grayish-yellow weathering reddish brown, massive, silty, fossiliferous. Surface of road cut slumped and littered with calcareous concretions
81. Chalk, light-olive-gray, weathering yellowish gray, hackly fracture, silty, micaceous, glauconitic, fossiliferous. Forms resistant bed at base of road cut. Grades into bed 82
82. Chalk, pale-greenish-yellow, weathering moderate reddish brown, massive, silty. Upper 5 feet of bed contains many limonitic concretions in fractures and joints
83. Chalk, pale-olive, weathering dark yellowish orange to yellowish gray, silty, micaceous. Surface of road cut littered with small limonitic concretions
84. Chalk, yellowish-gray, weathering grayish orange, silty, micaceous; overlain by moderate-reddish-brown silty littered with limonitic concretions
85. Chalk, very finely sandy, micaceous, with many borings of *Halymenites* sp., light-greenish-gray; grayish-orange iron stain on surface
86. Sand, very fine to fine-grained, well-sorted, micaceous, ferruginous, yellowish-gray; pale-yellowish-orange iron stain on surface. Overlain by yellowish-gray sand that weathers pale yellowish orange, is very fine to fine grained, well sorted, micaceous, ferruginous, calcareous, and contains irregular borings. Limonitic concretionary zones give bedded appearance

PROFILE SHOWING GEOLOGY ALONG U.S. HIGHWAY 331, MONTGOMERY COUNTY, ALABAMA