

UNITED PRODUCING COMPANY

W. H. Matney No. 1

Topographic Location: 21,000' South of 37° 20'; 15,000' West of 82° 00'.  
Hurley Quadrangle (SE), Buchanan County, Virginia.

Elevation: 1769.86'.

Interval

- 24-32 Siltstone, medium gray (N5), micaceous.
- 32-38 Like 24-38.
- 38-44 Like 32-38.
- 44-51 Like 32-44.
- 51-62 Shale, medium dark gray (N4), silty, micaceous, with thin bed of siltstone, medium gray (N5), calcareous.
- 62-69 Siltstone, medium light gray (N6), sandy, micaceous, slightly calcareous.
- 69-76 Shale, medium dark gray (N4), fissile, slightly micaceous.
- 76-82 Shale, dark gray (N3), carbonaceous, with coal partings.
- 82-92 Sandstone, medium light gray (N6), fine-grained, subangular, poorly sorted, slightly porous, silty, abundant rock fragments, micaceous, slightly calcareous, few sideritic nodules, 3/4 quartzose.
- 92-100 Like 82-92.
- 103-111 Siltstone, medium gray (N5) to medium dark gray (N4), sandy, micaceous, slightly sideritic, with thin interbeds of shale, medium dark gray (N4), silty; micaceous.
- 111-119 Like 103-111.
- 119-127 Sandstone, medium light gray (N6), very fine-grained to fine-grained, subangular to subrounded, poorly sorted, very slightly porous, silty, micaceous, calcareous, sideritic, scattered black mineral; abundant shale partings, 3/4 quartzose.
- 127-134 Like 119-127.

Interval

- 134-143 Siltstone, medium dark gray (N4), micaceous.
- 143-150 Like 134-143.
- 150-155 Like 143-150.
- 155-162 Like 150-155.
- 162-170 Sandstone, medium light gray (N6), very fine-grained, angular to subangular, poorly sorted, slightly porous, silty, micaceous, 3/4 quartzose; with thin interbeds of siltstone like 155-162.
- 170-179 Like 162-170.
- 179-186 Like 170-179.
- 186-200 Like 179-186.
- 200-205 Sandstone, very light gray (N8), fine-grained to medium-grained, subangular, moderately well sorted, slightly porous, micaceous, abundant partings of coal and carbonaceous shale, abundant sideritic nodules, scattered green mineral, 3/4 quartzose.
- 205-210 Like 200-205.
- 210-215 Like 205-210.
- 215-220 Sandstone, white (N9), fine-grained to medium-grained, subangular to subrounded, moderately well sorted, slightly porous, slightly silty, scattered black mineral, and green mineral, 90% quartzose.
- 220-227 Like 215-220.
- 227-234 Like 200-205.
- 234-239 Like 227-234.
- 239-245 Like 215-220.
- 245-254 Like 239-245.
- 254-266 Like 245-254.
- 266-271 Sandstone, very light gray (N8), fine-grained to medium-grained, subangular to subrounded, moderately well sorted, slightly porous, slightly silty, calcareous, scattered green mineral and black mineral, 90% quartzose.
- 271-277 Siltstone, medium dark gray (N4), sandy, micaceous to shaly, sideritic.

Interval

- 277-282 Siltstone, like 271-277; and shale, medium dark gray (N4), silty, fissile, micaceous.
- 282-288 Siltstone, medium light gray (N6), sandy, micaceous; shale, dark gray (N3), carbonaceous; and sandstone, light gray (N7), fine-grained to medium-grained, subangular to subrounded, very poorly sorted, slightly porous, silty, 1/2 quartzose.
- 288-295 Sandstone, light gray (N7), fine-grained, subangular, very poorly sorted, slightly porous, silty, micaceous, scattered black mineral, 3/4 quartzose.
- 295-304 Like 288-295.
- 304-310 Sandstone, like 295-304; and siltstone, medium dark gray (N4), micaceous.
- 310-319 Shale, medium dark gray (N4), micaceous.
- 319-327 Like 310-319.
- 327-335 Like 319-327.
- 335-352 Like 327-335, with thin bed of shale, dark gray (N3), carbonaceous.
- 342-367 Siltstone, medium gray (N5), micaceous.
- 367-375 Like 342-367.
- 375-384 Shale, medium dark gray (N4), silty, micaceous.
- 384-391 Sandstone, very light gray (N8), very fine-grained to fine-grained, subangular, well sorted, slightly porous, scattered black mineral, and green mineral, slightly micaceous, scattered scattered sideritic nodules, 90% quartzose.
- 391-397 Like 384-391.
- 397-416 Sandstone, white (N9), fine-grained, subangular, well sorted, moderately porous, few scattered sideritic nodules, and small amount of scattered green mineral, 90% quartzose.
- 416-423 Sandstone, light gray (N7), fine-grained to medium-grained, subangular to subrounded, moderately well sorted, slightly porous, slightly silty, slightly calcareous, moderately micaceous, abundant black mineral, and sideritic nodules, scattered green mineral, 90% quartzose.
- 423-430 Like 416-423.

Interval

- 430-435 Like 423-430.
- 435-439 Like 430-435.
- 439-445 Like 435-439; and shale, medium dark gray (N4), fissile, finely micaceous.
- 445-451 Shale, like 439-445; and siltstone, medium gray (N5), sandy, micaceous.
- 451-457 Like 445-451.
- 457-464 Shale, medium dark gray (N4), fissile, finely micaceous.
- 464-473 Like 457-464; and siltstone, medium gray (N5), micaceous.
- 473-483 Like 464-473.
- 483-494 Like 473-483.
- 494-499 Sandstone, light gray (N7), very fine-grained to fine-grained, subangular, poorly sorted, slightly porous, silty, calcareous, micaceous, scattered black mineral, 3/4 quartzose.
- 499-502 Like 494-499.
- 502-507 Like 499-502.
- 507-512 Siltstone, brownish gray (5YR 4/1), very sideritic, micaceous, with thin bed of shale, dark gray (N3), carbonaceous, and small amount of coal.
- 512-516 Sandstone, very light gray (N8), subangular, moderately well sorted, slightly porous, slightly silty, scattered mica, 90% quartzose.
- 516-521 Like 512-516.
- 521-527 Like 516-521, with scattered sideritic nodules.
- 527-532 Sandstone, very light gray (N8), fine-grained to medium-grained, moderately well sorted, subangular to subrounded, slightly porous, slightly silty, abundant sideritic nodules, scattered carbonaceous, material, 90% quartzose.
- 532-536 Like 527-532.
- 536-541 Like 532-536 with few coarse grains.
- 541-548 Like 536-541 with siltstone, dark gray (N3), carbonaceous, micaceous, and small amount of coal.

Interval

- 548-555 Sandstone, light gray (N7), very fine-grained to fine-grained, subangular, poorly sorted, very slightly porous, silty, abundant sideritic nodules, slightly micaceous, scattered black mineral and carbonaceous material, 3/4 quartzose.
- 555-562 Like 548-555.
- 562-573 Siltstone, medium gray (N5), micaceous; and shale, medium dark gray (N4), silty, micaceous, to dark gray (N3), fissile, carbonaceous.
- 573-579 Shale, medium dark gray (N4), silty, micaceous,
- 579-586 Like 573-579, with interbedded sandstone, medium light gray (N6), fine-grained, subangular, poorly sorted, very slightly porous, very silty, micaceous, abundant carbonaceous partings, 3/4 quartzose.
- 586-595 Like 579-586.
- 595-600 Like 586-595.
- 600-604 Sandstone, light gray (N7), fine-grained, subangular, moderately well sorted, slightly porous, slightly silty, micaceous, scattered carbonaceous material, 90% quartzose, thin partings of coal.
- 604-605 Like 600-604, but be coal.
- 605-607 Like 604-605.
- 607-609 Like 605-607.
- 609-616 Like 607-609.
- 616-620 Like 609-616 grading into siltstone, medium gray (N5), sandy, micaceous.
- 620-623 Like 616-620.
- 623-628 Siltstone, medium dark gray (N4), micaceous.
- 623-628 Siltstone, medium gray (N5), sandy, micaceous.
- 628-634 Like 623-628.
- 634-640 Like 628-634 with shale, medium dark gray (N4), silty, micaceous, sideritic.
- 640-646 Like 634-640.

Interval

- 646-650 Like 640-646 with sandstone, medium light gray (N6), fine-grained, subangular, poorly sorted, very slightly porous, very silty, micaceous, abundant sideritic nodules, 1/2 quartzose.
- 650-654 Siltstone, medium gray (N5), sandy, micaceous; and shale, medium dark gray (N4), silty, micaceous, sideritic.
- 645-662 Shale, medium dark gray (N4), silty, micaceous, moderately fissile.
- 662-669 Like 654-662, interbedded with siltstone, medium gray (N5), sandy, micaceous.
- 669-676 Like 662-669.
- 676-683 Like 669-676.
- 683-688 Like 676-683 with sandstone, medium light gray (N6), very fine-grained, subangular, poorly sorted, very slightly porous, very silty, micaceous, 1/2 quartzose.
- 688-691 Siltstone, medium gray (N5), sandy, micaceous, interbedded with shale, medium dark gray (N4), silty, fissile, micaceous.
- 691-698 Shale, dark gray (N3), carbonaceous, fissile, few pyritized plant fossils; coal; and small amount of shale, brownish gray (5YR 4/1), sideritic.
- 698-700 Sandstone, light gray (N7), fine-grained, subangular, moderately well sorted, slightly porous, slightly silty, calcareous, micaceous, abundant sideritic nodules, 90% quartzose.
- 700-703 Sandstone, very light gray (N8), fine-grained, subangular, moderately well sorted, slightly porous, calcareous, micaceous, scattered green mineral, 90% quartzose.
- 703-706 Like 700-703.
- 706-718 No sample.
- 718-723 Sandstone, white (N9), fine-grained to coarse-grained, subangular, to subrounded, well sorted, moderately porous, slightly calcareous, scattered carbonaceous material, scattered pyrite, 90% quartzose; and shale, dark gray (N3), carbonaceous, with small amount of coal.
- 723-728 Like 718-723.
- 728-733 Siltstone, medium gray (N5) to medium dark gray (N4), sandy, micaceous.

Interval

- 733-743 Siltstone, medium light gray (N6) to medium gray (N5), very calcareous; and shale, medium dark gray (N4), silty, micaceous.
- 743-752 No sample.
- 752-761 Sandstone, very light gray (N8), fine-grained, subangular, moderately well sorted, slightly porous, slightly calcareous, scattered sideritic nodules and green mineral, 90% quartzose.
- 761-766 Like 752-761.
- 766-771 Sandstone, light gray (N7), fine-grained, subangular, poorly sorted, very slightly porous, silty, sideritic, micaceous; and shale, medium dark gray (N4), silty, fissile, micaceous.
- 771-776- Like 766-771.
- 776-780 Like 771-776.
- 780-786 Sandstone, white (N9), fine-grained, subangular, well sorted, moderately porous, calcareous, scattered bluish gray chert (?); and carbonaceous material, 95% quartzose.
- 786-788 Like 780-786.
- 788-790 Like 786-788.
- 790-798 Sandstone, white (N9), very fine-grained to fine-grained, subangular, well sorted, slightly porous, calcareous, 95% quartzose.
- 798-803 Like 790-798.
- 803-812 Sandstone, medium light gray (N6), very fine-grained, subangular, very poorly sorted, very slightly porous, very silty, micaceous, 1/2 quartzose, and sandstone, white (N9), conglomeratic, medium-grained to pebbles, subangular to rounded, slightly calcareous, slightly micaceous, scattered black mineral, 95% quartzose.
- 812-820 Sandstone, white (N9), conglomeratic, like 803-812.
- 820-828 Like 812-820.
- 828-837 Sandstone, light gray (N7), fine-grained, subangular, poorly sorted, very slightly porous, very silty, calcareous, micaceous, abundant sideritic nodules, scattered black mineral; interbedded with siltstone, medium gray (N5), sandy, micaceous, with siderite concretions (?), 3/4 quartzose.
- 837-843 Like 828-837.

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- 843-849 Like 837-843.
- 849-857 Like 843-849.
- 857-861 Sandstone, light gray (N7), very fine-grained to fine-grained, angular to subangular, poorly sorted, slightly porous, moderately silty, slightly calcareous, micaceous, abundant black mineral, abundant sideritic nodules, 90% quartzose; and siltstone, medium dark gray (N4), micaceous.
- 861-865 Like 857-861.
- 865-872 Sandstone, light gray (N7) to medium light gray (N6), fine-grained, subangular to subrounded, moderately well sorted, moderately porous, slightly silty, micaceous, abundant silty partings, 90% quartzose.
- 872-880 Like 865-872.
- 880-889 Siltstone, medium gray (N5), sandy; and shale, medium dark gray (N4), fissile.
- 889-895 Siltstone, medium gray (N5) to medium dark gray (N4), micaceous.
- 895-902 Like 889-895 with small amount of shale, dark gray (N3), fissile, carbonaceous, and coal.
- 902-914 Siltstone, medium gray (N5), micaceous.
- 914-920 Sandstone, light gray (N7), fine grained, subangular, moderately well sorted, slightly porous, silty, 90% quartzose.
- 920-922 Sandstone, medium light gray (N6), with brownish tint, very fine-grained to fine-grained, subangular, poorly sorted, silty, sideritic, small amount of weathered feldspathic material, scattered black mineral, 3/4 quartzose.
- 922-929 Like 920-922.
- 929-938 Sandstone, light gray (N7), very fine-grained to fine-grained, subangular, moderately well sorted, slightly porous, slightly silty, calcareous, scattered sideritic nodules, 90% quartzose.
- 938-946 Like 922-929.
- 946-953 Sandstone, light gray (N8), very fine-grained to fine-grained, subangular, poorly sorted, very slightly porous, silty, abundant sideritic nodules, 3/4 quartzose.
- 953-963 Sandstone, very light gray (N8), fine-grained to medium-grained, subangular, moderately well sorted, moderately porous, slightly silty, micaceous, abundant sideritic nodules,

Interval

scattered black mineral and green mineral, 90% quartzose.

- 963-973 Sandstone, medium light gray (N6), fine-grained, subangular, poorly sorted, very slightly porous, silty, micaceous, abundant partings of carbonaceous shale, 3/4 quartzose.
- 973-980 Like 963-973.
- 980-988 Siltstone, medium dark gray (N4), slightly sandy, micaceous.
- 988-998 Like 980-988; and sandstone, medium light gray (N6), very fine-grained, subangular, poorly sorted, slightly porous, silty, micaceous, sideritic, 3/4 quartzose.
- 998-1008 Sandstone, light gray (N7), fine-grained, subangular, poorly sorted, slightly porous, moderately silty, slightly calcareous, micaceous, abundant sideritic nodules, scattered black minerals, scattered green mineral, 3/4 quartzose.
- 1008-1019 Like 998-1008 grading into sandstone, white (N9), fine-grained to medium-grained, subangular to subrounded, well sorted, moderately porous, 95% quartzose.
- 1019-1027 Sandstone, white (N9), like 1008-1019.
- 1027-1036 Sandstone, white (N9), fine-grained to coarse-grained, subangular to subrounded, well sorted, moderately porous, scattered green mineral, 95% quartzose.
- 1036-1043 Like 1027-1036.
- 1043-1050 Like 1036-1043 and siltstone, medium dark gray (N4), micaceous, shaly with small amount of shale, dark gray (N3), carbonaceous and coal.
- 1050-1054 Sandstone, light gray (N7), very fine-grained, subangular, well sorted, slightly porous, slightly silty, 95% quartzose.
- 1054-1059 Like 1050-1054 with siltstone, medium gray (N5), to medium dark gray (N4), sandy; and shale, dark gray (N3), carbonaceous and coal.
- 1059-1064 Sandstone, light gray (N7), like 1050-1054 with partings of siltstone, medium dark gray (N4), micaceous.
- 1064-1070 Like 1059-1064 grading into sandstone, medium dark gray (N4), very fine-grained, subangular, very poorly sorted, very slightly porous, very silty, abundant carbonaceous material, micaceous, 1/2 quartzose.
- 1070-1076 Like 1064-1070.

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- 1076-1084 Sandstone, very light gray (N8), fine-grained, subangular, well sorted, slightly porous, slightly silty, scattered mica, 90% quartzose, with partings of medium dark gray (N4) carbonaceous material.
- 1082-1087 Like 1076-1087.
- 1087-1092 Sandstone, white (N9), very fine-grained, subangular, well sorted, moderately porous, scattered mica, scattered green mineral, 95% quartzose.
- 1092-1098 Sandstone, light gray (N7), very fine-grained, subangular, moderately well sorted, slightly porous, silty, scattered black mineral, 90% quartzose, with lenses of siltstone, medium dark gray (N4), sandy, carbonaceous, micaceous.
- 1098-1102 Like 1092-1098.
- 1102-1106 Sandstone, white (N9), very fine-grained, subangular, well sorted, slightly porous, very slightly silty, scattered carbonaceous material, 95% quartzose.
- 1106-1112 Like 1102-1106.
- 1112-1118 Like 1106-1118.
- 1118-1124 Like 1112-1118.
- 1124-1129 Like 1118-1124.
- 1129-1135 Like 1124-1129.
- 1135-1141 Like 1129-1135.
- 1141-1146 Like 1135-1141.
- 1146-1153 Like 1141-1146.
- 1153-1161 Sandstone, white (N9), very fine-grained to fine-grained, subangular, well sorted, slightly porous, very slightly porous, very slightly silty, calcareous, scattered green mineral, scattered carbonaceous material, 95% quartzose.
- 1161-1167 Siltstone, medium gray (N5), sandy to medium dark gray (N4), shaly; micaceous.
- 1167-1175 Like 1161-1167 with disseminated pyrite, and abundant coal.
- 1175-1182 Shale, dark gray (N3), carbonaceous, fissile; and sandstone, light gray (N7), fine-grained, subangular, poorly sorted, slightly porous, silty, slightly calcareous, 3/4 quartzose.

Interval

- 1182-1196 Siltstone, medium gray (N5) to medium dark gray (N4), sandy, micaceous; and shale, dark gray (N3), carbonaceous.
- 1196-1204 Shale, medium dark gray (N4), fissile.
- 1204-1212 Sandstone, light gray (N7), very fine-grained, subangular, poorly sorted, slightly porous, silty, micaceous, 3/4 quartzose.
- 1212-1221 Shale, medium dark gray (N4), silty; and dark gray (N3), carbonaceous with little coal.
- 1221-1230 Shale, medium dark gray (N4), silty, micaceous.
- 1230-1239 Siltstone, medium dark gray (N4), calcareous; and thin sandstone, light gray (N7), very fine-grained, subangular, moderately well sorted, very slightly porous, very calcareous, 3/4 quartzose.
- 1239-1246 Shale, medium dark gray (N4), silty, micaceous.
- 1246-1253 Like 1239-1246.
- 1253-1260 Like 1246-1253.
- 1260-1265 Like 1253-1260.
- 1265-1275 Like 1260-1265.
- 1275-1283 Like 1239-1246.
- 1283-1292 Sandstone, medium light gray (N6), very fine-grained, subangular, very poorly sorted, very slightly porous, silty, calcareous, sideritic, abundant carbonaceous material, 3/4 quartzose; and siltstone, medium gray (N5), sandy, micaceous.
- 1292-1310 Like 1283-1292.
- 1310-1322 Shale, dark gray (N3), carbonaceous, scattered pyrite crystals, and coal.
- 1322-1332 Siltstone, medium gray (N5), sandy.
- 1332-1337 Sandstone, light gray (N7), very fine-grained, subangular, moderately well sorted, slightly porous, slightly silty, micaceous, 90% quartzose.
- 1337-1342 Like 1332-1337 with coal.
- 1342-1347 Like 1337-1342.

Interval

- 1347-1352 Sandstone, very light gray (N8), very fine-grained, subangular, well sorted, slightly porous, slightly silty, scattered carbonaceous material, 90% quartzose.
- 1352-1358 Sandstone, light gray (N7), to medium gray (N5), very fine-grained, subangular, poorly sorted, slightly porous, silty, micaceous, abundant carbonaceous material, partings of siltstone, medium dark gray (N4), micaceous, 3/4 quartzose.
- 1358-1364 Sandstone, light gray (N7), very fine-grained, subangular, moderately well sorting, slightly porous, slightly silty, micaceous, 90% quartzose.
- 1364-1370 Like 1358-1364.
- 1370-1374 Like 1364-1370.
- 1374-1377 Like 1370-1374.
- 1377-1382 Sandstone, light gray (N7), very fine-grained, subangular, moderately well sorted, slightly porous, slightly silty, scattered sideritic nodules, scattered carbonaceous material, scattered green mineral, 90% quartzose.
- 1382-1386 Like 1377-1382.
- 1386-1390 Like 1382-1386.
- 1390-1393 Like 1386-1390.
- 1393-1398 Like 1390-1393 with thin bed of siltstone, medium dark gray (N4), shaly, micaceous.
- 1398-1402 Sandstone, very light gray (N8), very fine-grained to fine-grained, subangular, well sorted, slightly porous, scattered dark gray (N3), argillaceous material, 95% quartzose.
- 1402-1406 Like 1398-1402.
- 1406-1409 Like 1402-1506.
- 1409-1413 Like 1406-1409.
- 1413-1418 Like 1409-1413.
- 1418-1421 Like 1413-1418.
- 1421-1425 Like 1418-1421 with scattered medium to coarse grains.
- 1425-1429 Sandstone, white (N9), very fine-grained, subangular to sub-rounded, well sorted, slightly porous, 95% quartzose.

Interval

1429-1433	Sandstone, white (N9), conglomeratic, fine-grained to very coarse-grained, subangular to subrounded, scattered argillaceous material, 95% quartzose.
1433-1436	Like 1429-1433.
1436-1440	Sandstone, white (N9), fine-grained, subrounded, well sorted, moderately porous, very well cemented, scattered carbonaceous material, 95% quartzose.
1440-1444	Like 1436-1440.
1444-1448	Like 1440-1444.
1448-1452	Like 1444-1448.
1452-1455	Like 1448-1452.
1455-1458	Like 1452-1455.
1458-1461.	Like 1455-1458.
1461-1466	Like 1461-1466.
1466-1469	Like 1461-1466.
1469-1471	Like 1466-1469.
1471-1474	Sandstone, like 1469-1471, but very fine-grained to fine-grained, slightly silty.
1474-1477	Like 1471-1474.
1477-1479	Like 1474-1477.
1479-1481	Like 1477-1479.
1481-1485	Like 1479-1481.
1485-1489	Sandstone, white (N9), fine-grained to medium-grained, subrounded, well sorted, moderately porous, well cemented, scattered black mineral, 95% quartzose.
1489-1493	Like 1485-1489.
1493-1497	Like 1489-1493.
1497-1502	Like 1493-1497.
1502-1508	Like 1497-1502.

Interval

- 1508-1513 Sandstone, white (N9), conglomeratic, fine-grained to coarse-grained, subrounded, well sorted, moderately porous, well cemented, scattered silty, carbonaceous material, 95% quartzose; and sandstone, medium light gray (N6), fine-grained, subangular to subrounded, poorly sorted, slightly porous, silty, calcareous, abundant carbonaceous material, scattered green mineral, 3/4 quartzose.
- 1515-1518 Sandstone, light gray (N7), fine-grained, subangular to subrounded, poorly sorted, slightly porous, slightly calcareous, abundant silty, carbonaceous material, scattered green mineral, small amount of mica, 90% quartzose.
- 1518-1524 Like 1515-1518.
- 1524-1528 Sandstone, very light gray (N8), fine-grained to medium-grained, subangular to subrounded, well sorted, moderately porous, well cemented, 95% quartzose.
- 1528-1532 Like 1524-1528.
- 1532-1536 Sandstone, white (N9), fine-grained, subangular to subrounded, well sorted, moderately porous, well cemented, 95% quartzose.
- 1536-1538 Like 1532-1536.
- 1538-1540. Like 1536-1538.
- 1540-1544 Like 1538-1540.
- 1544-1547 Like 1540-1544.
- 1547-1550 Like 1544-1547.
- 1550-1554 Like 1547-1550.
- 1554-1557 Like 1550-1554.
- 1557-1560 Like 1554-1557.
- 1560-1564 Like 1557-1560.
- 1564-1568 Like 1560-1564.
- 1568-1572 Like 1564-1568 with thin bed of siltstone, medium dark gray (N4), argillaceous, calcareous, micaceous.
- 1572-1575 Siltstone, like 1568-1572; and sandstone, white (N9), medium-grained to coarse-grained, subrounded, well sorted, moderately porous, very well cemented, scattered medium dark gray (N4), silty material, 95% quartzose.

Interval

- 1575-1580 Sandstone, white (N9), fine-grained to medium-grained, sub-angular to subrounded, well sorted, slightly porous, well cemented, scattered green mineral, 95% quartzose.
- 1580-1585 Like 1575-1580.
- 1585-1589 Like 1580-1585.
- 1589-1594 Like 1585-1589.
- 1594-1598 Like 1589-1594.
- 1598-1603 Like 1594-1598.
- 1603-1605 Sable, dark gray (N3), carbonaceous; and coal.
- 1605-1613 Coal, siltstone, medium gray (N5), micaceous; and sandstone, medium light gray (N6), very fine-grained, subangular to subrounded, poorly sorted, slightly porous, silty, abundant carbonaceous material, 90% quartzose.
- 1613-1618 Sandstone, medium gray (N5), very fine-grained, subangular, very poorly sorted, slightly porous, very silty, 3/4 quartzose; shale, medium dark gray (N4), finely micaceous; and coal (cavings?).
- 1618-1624 Sandstone, medium light gray (N6) to medium gray (N5), fine-grained to medium-grained, subangular, poorly sorted, slightly porous, silty, sideritic, 3/4 quartzose, and coal (cavings?).
- 1624-1630 Sandstone, very light gray (N8), very fine-grained, subangular, well sorted, slightly porous, slightly silty, scattered carbonaceous material, 95% quartzose, and coal (cavings) (?).
- 1630-1635 Like 1624-1630.
- 1635-1640 Like 1630-1635.
- 1640-1645 Like 1635-1640.
- 1645-1652 Sandstone, light gray (N7), very fine-grained, subangular, poorly sorted, very slightly porous, silty, and coal (cavings?).
- 1652-1659 Like 1645-1652.
- 1659-1667 Shale, medium dark gray (N4), moderately fissile; and shale, dark gray (N3), carbonaceous, fissile, with small amount of coal.

Matney #1

Interval

- 1667-1671 Shale, dark greenish gray (5GY 4/1) calcareous; with small amount of shale, dusky red (5R 3/4) finely micaceous.
- 1671-1677 Shale, dark gray (N3), fissile.
- 1677-1687 Siltstone, medium gray (N5), sandy.
- 1687-1696 Sandstone, light gray (N7), very fine-grained, subangular, poorly sorted, slightly porous, silty, calcareous, scattered sideritic nodules, abundant carbonaceous partings, 90% quartzose.
- 1696-1701 Like 1687-1696.
- 1701-1708 Like 1696-1701 interbedded with siltstone, medium dark gray (N4), sandy.
- 1708-1715 Like 1701-1708.
- 1715-1721 Like 1708-1715.
- 1721-1728 Like 1715-1721 with thin bedded shale, medium dark gray (N4), fissile, micaceous.
- 1728-1734 Like 1721-1734.
- 1734-1738 Sandstone, very light gray (N8), very fine-grained, subangular, moderately well sorted to poorly sorted, slightly porous, silty, slightly calcareous, 90% quartzose; with interbedded siltstone, medium dark gray (N4), sandy to argillaceous, micaceous.
- 1738-1742 Like 1734-1738.
- 1742-1747 Like 1738-1742.
- 1747-1752 Sandstone, very light gray (N8) to light gray (N7), very fine-grained to fine-grained, subangular to subrounded, moderately well sorted, slightly porous, slightly silty, scattered carbonaceous material, 90% quartzose.
- 1752-1757 Like 1747-1752 and siltstone, medium dark gray (N4), sandy to argillaceous, micaceous.
- 1757-1763 Sandstone, white (N9), very fine-grained to fine-grained, subangular, well sorted, slightly porous, 95% quartzose.
- 1763-1769 Like 1757-1763 with thin bed of shale, dark gray (N3), carbonaceous, fissile, and coal.
- 1769-1772 Sandstone, like 1763-1769.

Interval

- 1772-1775 Like 1769-1772.
- 1775-1779 Sandstone, white (N9), fine-grained to medium-grained, subangular to subrounded, well sorted, slightly porous, with thin lenses of coal and carbonaceous shale, 95% quartzose.
- 1779-1784 Sandstone, white (N9), fine-grained, subangular to subrounded, well sorted, slightly porous, well cemented, 95% quartzose.
- 1784-1789 Like 1779-1784 with scattered carbonaceous material.
- 1789-1794 Like 1784-1789, fine- to medium-grained.
- 1794-1798 Like 1789-1794.
- 1798-1801 Like 1794-1798.
- 1801-1805 Like 1798-1801.
- 1805-1807 Like 1801-1805.
- 1807-1812 Like 1805-1807.
- 1818-1817 Sandstone, white (N9), fine-grained subangular, well sorted, slightly porous, scattered carbonaceous material, scattered green mineral, thin lense of dark gray (N3) carbonaceous shale, 95% quartzose.
- 1817-1821 Sandstone, white (N9), fine-grained, subangular, well sorted, slightly porous, scattered carbonaceous material, 95% quartzose.
- 1821-1825 Like 1817-1821.
- 1825-1829 No sample.
- 1829-1833 Sandstone, white (N9), fine-grained, subangular, well sorted, slightly porous, calcareous, scattered carbonaceous material, 95% quartzose.
- 1833-1837 Like 1829-1833.
- 1837-1841 Like 1833-1837, non-calcareous.
- 1841-1845 Like 1837-1841.
- 1845-1850 Like 1841-1845.
- 1850-1860 Siltstone, light bluish gray (5B 7/1) to light brownish gray (5YR 6/1) slightly calcareous.

Interval

- 1860-1869 Like 1850-1860 interbedded with sandstone, very light gray (N8), fine-grained to medium-grained, subangular to subrounded, moderately well sorted, slightly porous, calcareous, 90% quartzose.
- 1869-1873 Sandstone, very light gray (N8), very fine-grained to fine-grained, subangular, moderately well sorted, very slightly porous, calcareous, abundant green mineral, scattered carbonaceous material, 90% quartzose; siltstone, dusky red (5R 3/4); and small amount of shale, medium gray (N5), slightly silty.
- 1873-1880 Like 1869-1873.
- 1880-1883 Sandstone, like 1873-1880.
- 1883-1889 Like 1880-1883.
- 1889-1895 Shale, grayish red (10R 4/2) silty, lumpy; shale, medium light gray (N6), with greenish tint, silty; and thin bed of limestone, grayish red (10R 4/2) finely crystalline, silty.
- 1895-1900 Like 1889-1895 with limestone, light gray (N7), dense.
- 1900-1906 Like 1895-1900.
- 1906-1913 Like 1900-1906.
- 1913-1919 Siltstone, medium dark gray (N4).
- 1919-1925 Like 1913-1919 grading into shale, dark gray (N3), moderately fissile; and sandstone, light gray (N7), very fine-grained, subangular, poorly sorted, very slightly porous, calcareous, 3/4 quartzose.
- 1925-1931 Like 1919-1925.
- 1931-1937 Sandstone, medium light gray (N6), very fine-grained, subangular, poorly sorted, very slightly porous, very silty, calcareous, abundant carbonaceous material, scattered pyrite crystals, abundant green mineral, 3/4 quartzose; siltstone, medium dark gray (N4), sandy, slightly calcareous, carbonaceous with abundant pyrite.
- 1937-1943 Like 1931-1937.
- 1943-1948 Sandstone, light gray (N7), very fine-grained, angular to subangular, poorly sorted, very slightly porous, very silty, calcareous, scattered carbonaceous material, scattered green mineral, slightly micaceous, 3/4 quartzose.

Matney #1

Interval

- 1948-1953 Like 1943-1948, and siltstone, medium gray (N5) to medium dark gray (N4), sandy, carbonaceous, slightly calcareous, with few clusters of pyrite crystals.
- 1953-1960 Like 1948-1953.
- 1960-1966 Like 1953-1960.
- 1966-1972 Like 1960-1966.
- 1972-1978 Like 1966-1972.
- 1978-1983 Like 1972-1978.
- 1983-1989 Siltstone, medium gray (N5) to medium dark gray (N4), sandy, slightly calcareous.
- 1989-1996 Sandstone, light gray (N7) to medium light gray (N6), very fine-grained, angular to subangular, poorly sorted, very slightly porous, silty, calcareous, scattered carbonaceous material, 3/4 quartzose.
- 1996-2002 Siltstone, medium dark gray (N4), micaceous, non-calcareous, interbedded with siltstone, medium gray (N5), sandy, calcareous; and sandstone, light gray (N7), like 1989-1996.
- 2002-2007 Sandstone, very light gray (N8), very fine-grained to fine-grained, subangular, poorly sorted, slightly porous, silty, calcareous, scattered green mineral, scattered carbonaceous material, and sideritic nodules, few clusters of pyrite crystals, 90% quartzose; siltstone, medium dark gray (N4), micaceous, non-calcareous; and limestone, brownish gray (5YR 5/1), dense, silty.
- Sand line measurement: 2009'.
- Steel line measurement: 2019.
- 2017-2019 Sandstone, white (N9), very fine-grained, subangular, well sorted, slightly porous, scattered carbonaceous material, 95% quartzose.
- 2019-2021 Like 2017-2019 with small amount of siltstone, medium dark gray (N4), sandy, carbonaceous.
- 2021-2026 Like 2019-2021.
- 2026-2031 Sandstone, white (N9), very fine-grained, subangular, moderately well sorted, slightly porous, slightly silty, calcareous; 90% quartzose; and siltstone, medium gray (N5), micaceous.
- 2031-2036 Sandstone, very light gray (N8), very fine-grained, subangular,

Interval

moderately well sorted, slightly porous, slightly silty, abundant thin silty partings, slightly micaceous, 90% quartzose; and siltstone, medium dark gray (N4), sandy, micaceous to dark gray (N3), carbonaceous, micaceous.

2036-2039	Like 2031-2036.
2039-2047	Like 2036-2039.
2047-2055	Like 2039-2047.
2055-2062	Like 2047-2055.
2062-2070	Like 2055-2062.
2070-2077	Like 2062-2070.
2077-2085	Like 2070-2077.
2085-2094	Shale, medium dark gray (N4), silty, moderately fissile, micaceous.
2094-2104	Like 2085-2094.
2104-2114	Like 2094-2104.
2114-2124	Like 2104-2114.
2124-2134	Shale, medium dark gray (N4), fissile.
2134-2144	Like 2124-2134.
2144-2158	Like 2134-2144.
2158-2165	Like 2144-2158.
2165-2172	Like 2158-2165.
2172-2180	Sandstone, light brownish gray (5YR 8/1), very fine-grained, sub-angular, poorly sorted, slightly porous, silty, calcareous, abundant carbonaceous material, scattered green mineral, scattered pyrite crystals, 3/4 quartzose, grading into siltstone, medium dark gray (N4), calcareous, micaceous.
2180-2186	Like 2172-2180 interbedded with shale medium dark gray (N4), fissile.
2186-2191	Like 2180-2186.
2191-2201	Like 2186-2191 with small amount of sandstone, light gray (N7), very fine-grained, subangular, moderately well sorted, slightly porous, slightly silty, non-calcareous, 90% quartzose.

Interval

- 2201-2211 Sandstone, light gray (N7) to medium gray (N5), very fine-grained to fine-grained, angular to subangular, poorly sorted, slightly porous, silty, calcareous, abundant argillaceous inclusions, scattered green mineral, 3/4 quartzose.
- 2211-2221 Shale, medium dark gray (N4), fissile.
- 2221-2231 Like 2211-2221 with small amount of siltstone, medium gray (N5).

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May, 1950.