

Operator: Clinchfield Coal Company
 Farm: Virginia Iron, Coal & Coke Company
 Well No.: 207

Location: Wise County
 9800' S. of 37°00'
 4750' W. of 82°25'

Elevation: 2099.44'

Total Depth: 6277'

Drilling Commenced: October 12, 1957

Well Completed: March 12, 1958

Result: Gas well

Geologic log samples studied by K. Robinson, Virginia Division of
 Mineral Resources, April 1962

Geologic summary and correlations by Marshall S. Miller

- 0 - 69 Siltstone, locally shaly, gray, and brown, micaceous, and locally siliceous
- 69 - 79 Siltstone and coal, silty
- 79 - 99 Sandstone, medium to fine grain, with abundance of accessory minerals. Mica, medium sorted, interstitially silty. Also gray and reddish siltstones.
- 99 - 165 Siltstone, gray to reddish brown, micaceous, occasional stringers of coal and sandstone coal (132-140). Becomes shalier downward
- 170 - 193 Sandstone, medium to fine grained, continued abundance of accessory minerals, muscovite, biotite, chlorite, feldspar. Becomes more finer grained downward with fragments of clean looking coal. Unusually large mica flakes in lower interval (188-193) along with the shiny vitreous luster of the concoidal fractured coal give an unusual appearance.
- 193 - 227 Shale, micaceous and locally silty. Some stringers of sandstone, dirty, and siltstone.
- 227 - 230 Sandstone, medium grained, and medium-sorted with chlorite, biotite, muscovite, carbonaceous material and interstitially silty. Coal has been reworked into the sandstone.
- 230 - 320 Shale, finely micaceous and locally silty. Gray to reddish brown. Local stringers and silty sandstone.

- 320 - 362 Sandstone, medium grained, 60-70% quartz with carbonaceous material, biotite, muscovite and chlorite, with siltstone, gray, becomes more siltier and coaly downward.
- 362 - 370 Siltstone
- *370- 410 Sandstone, (according to Robinson the McClure sandstone) medium to fine grained, interstitially silty, carbonaceous and micaceous, some ironstone, and siltstone present. Becomes cleaner and more coarser grained downward, but only approaches a very moderately quartzose condition. At the most 75% quartz. Is slightly conglomeratic in interval (395-410) with quartz and "chlorite" pebbles present. Coal fragments are present throughout entire interval.
- 410 - 444 Siltstone with some ironstone
- 444 - 468 Sandstone, medium to fine grained, gray to dark gray depending on the amount of coal material within the sandstone. Micaceous and silty
- 468 - 535 Siltstone with some ironstone, micaceous, some coal in bottom interval (529-535)
- 535 - 549 Sandstone and siltstone as above with some coal
- 549 - 587 Siltstone
- 592 - 626 Sandstone, medium to coarse grained, medium sorted with fairly large granules of quartz, coal, chlorite, and feldspar. Interstitially silty and micaceous.
- 626 - 741 Siltstone, locally shaly and siliceous
- 741 - 815 Sandstone like interval (592-626) occasionally large quartz pebbles from (756-784) up to 75% to 80% quartz
- 815 - 830 Shale locally silty and gray and red siltstone, some ironstone
- 830 - 843 Sandstone, silty and fine grained
- 843 - 890 Siltstone
- 890 - 938 Sandstone, medium to fine grained with "salt and pepper" like appearance. Well sorted with dark minerals, biotite and coal. Interstitially silty. Also micas and feldspar and chlorite. About 70% quartz

- 938 - 963 Siltstone
- 973 - 1006 Sandstone fine grained and silty with siltstone
- 1006 - 1050 Shale mostly
- 1050 - 1138 Sandstone, quartzose. First type sand of Lee lithology, over 90% quartz medium grained for the most part, considerable amount of fine grained sandstone. "Bee Rock" sand interval is missing, this is the Middlesboro equivalent
- 1138 - 1176 Shale, dark gray
- 1176 - 1231 Sandstone, medium to fine grained, 60% quartz, interstitially silty and abundance of mica flakes, biotite, coal fragments, chlorite and feldspar. Approaches moderately quartzose in lower interval (1215-1231)
- 1231 - 1243 Sandstone, conglomeratic, quartz pebbles
- 1243 - 1372 Siltstone, locally siliceous (1258-1289) locally micaceous and shaly
- 1372 - 1420 Sandstone, medium grained with large mica flakes, biotite and chlorite. 60% quartz. Rare feldspar.
- 1420 - 1465 Shale, gray and silty and siltstone, carbonaceous and micaceous
- 1465 - 1490 Sandstone, fine grained, well sorted, interstitially silty, with chlorite, biotite and feldspar. About 60% quartz
- 1490 - 1563 Siltstone. Sandstone in lower interval 1534-1569
- 1563 - 1599 Sandstone, much like interval 1465-1490, a little more quartzose, 70-80% (1563-1575) Siltier downward.
- 1599 - 1625 Siltstone, some coal 1599-1610 and locally siliceous and micaceous
- 1625 - 1640 Shale, dark gray
- 1665 - 1716 Sandstone, fine grained, silty and moderately quartzose, occasional biotite and feldspar
- 1716 - 1785 Shale, dark gray, silty. Coal in interval (1731-1740)

- 1785 - 1820 Shale, siltstone, coal and moderately quartzose sandstone to a dirty feldspathic sandstone
- 1820 - 1907 Siltstone, gray, locally sandy and slightly calcareous, rare mica. Also some fine grained sandstone with feldspar and dark minerals
- *1907 - 1970 Sandstone, quartzose, medium grained siltstone in upper interval (1907-1911), consistly less siltstone interbeds downward, conglomeratic (1911-1923), (1947-1948), but interval remains essentially medium grained and over 90% quartz, with clean white appearance. Few accessory minerals with rare mica, chlorite and carbonaceous material. Sand is well sorted and subangular. This is the last interval of Lee quartzose sandstone, and marks bottom of Lee Formation. Underlain by Pocahontas Formation.
- 1970 - 2011 Siltstone, gray, finely micaceous and siliceous and occasionally carbonaceous coal material (1991-2001)
- *2011 - 2100 Sandstone, light gray, fine grained, medium sorted, interstitially silty, slightly calcareous, and containing considerable amount of mica flakes, chlorite and coal fragments. A Pocahontas sandstone. Generally subrounded and iron-stained
- 2100 - 2218 Shale, gray, finely micaceous, poorly fissile, locally silty and carbonaceous and rarely brown
- 2218 - 2279 Siltstone, shale, coal and moderately quartzose sandstone. Siltstone is dark gray micaceous and carbonaceous. Shale is dark gray, poorly fissile micaceous and carbonaceous. Coal is throughout interval. Sandstone is fine grained with finely dispersed reworked coal fragments, interstitially silty. Coal
- 2279 - 2294 Siltstone, gray, siliceous and finely micaceous
- 2294 - 2320 Interbedded siltstone and sandstone
- 2320 - 2450 Interbedded variegated siltstone and shale. Siltstone, reddish, ferruginous varicolored; green, gray, grayish green
- Norton Formation - surface - 1050
- Lee Formation - 1050 - 1970
- Pocahontas Formation - 1970 - 2320
- Bluestone Formation - 2320 -

Lee Sandstone

1. White appearance
2. Medium grained
3. Well sorted
4. Quartzose, more than 90% quartz
5. Subangular
6. Few accessory minerals

7. Occasionally conglomeratic

Pocahontas Sandstone

- light gray appearance
fine grained
medium sorted
60% to 75% quartz
subrounded
abundant mica flakes
coal fragments
chlorite and feldspar
no conglomerate