

Operator: United Producing Company, Inc.
 Farm: Yukon Pocahontas Coal Co. et al
 Well No.: 8-1673

Samples for this well were examined by Mr. David Bowen in preparing a Master's thesis entitled, "Subsurface Study of the Lee Formation in Buchanan County, Virginia," for the Virginia Polytechnic Institute. A microfilm copy of the thesis, containing a detailed description of the Post-Princeton strata in this well, is available for reference in the Library of the Virginia Division of Mineral Resources.

Formation boundaries stated in this thesis are as follows:

System

Formation

Pennsylvanian

Post-Lee Strata, Undivided	in bottom	0' 165'
Lee Formation	top bottom	165' 1646'

Mississippian

Bluestone Formation	top bottom	1646' 2096'
TALLEY 82 JKP - NEW INFORMATION Princeton Sandstone	top bottom	2096' --

UNITED PRODUCING COMPANY

8-1673 YUKON-POCAHONTAS COAL COMPANY WELL

Buchanan County, Virginia

Location: 1.23 miles west of 81° 55',
2.70 miles north of 37° 10'

Derrick floor elevation: 1648

Total depth: 4793

Drilling commenced: November 19, 1949

Drilling completed: April 3, 1950

Water: 40, 1 BPH; 70, 5 BPH; 80, HW; 590, 1/2 BPH; 1307

Gas: 310, show; 1045, show; 1307, show

Oil: None

Casing record: 13 3/8 at 35, 10 3/4 at 507, 8 5/8 at 1979, 7 at 3545

Depth corrections: 1959 = 1976

Samples examined by David G. Bowen, 1958

POST-LEE FORMATION BEDS (PENNSYLVANIAN) UNDIVIDED

- 0 - 46 No sample
- 46 - 95 Sandstone, white, medium-to fine-grained, subangular, quartzose, moderately chloritic and micaceous
- 95 - 147 Siltstone, brownish-gray, quartzose, argillaceous, micaceous
- 147 - 158 Shale, dark-gray, pyritic
- 158 - 165 Sandstone, white, medium-to fine-grained, subangular, quartzose, slightly chloritic and micaceous; and shale, gray, micaceous; a little coal

TOP LEE FORMATION 165

- 165 - 175 Sandstone, white, medium-to fine-grained, subangular, quartzose, slightly chloritic and micaceous, some pieces with much carbonaceous material; some shale, gray, in part sandy to silty, micaceous
- 175 - 211 Sandstone, white, medium-to fine-grained, subangular, quartzose, slightly chloritic and micaceous; a little siltstone, gray, quartzose, highly micaceous
- 211 - 246 Sandstone, white, fine-grained, subangular, quartzose, slightly chloritic and micaceous; a little siltstone, gray, quartzose, very micaceous; a little shale, gray

- 246 - 270 Sandstone, gray to tan, fine-grained, subangular, quartzose, moderately chloritic and micaceous; and siltstone, gray to light-gray, quartzose, micaceous, carbonaceous material; a little shale, gray, micaceous
- 270 - 300 Shale, gray; at the top and bottom some siltstone, gray to dark-gray, quartzose
- 300 - 306 Sandstone, white to light-gray, medium-to fine-grained, subangular, quartzose, moderately chloritic and micaceous; some shale, gray; some siltstone, gray, quartzose, carbonaceous material
- 306 - 316 Siltstone and fine-grained sandstone, both light-to dark-gray, quartzose, chloritic, micaceous; some shale, gray
- 316 - 336 Sandstone, gray, fine-grained, subangular, quartzose, slightly micaceous, in part much carbonaceous material; and siltstone, gray to brown, quartzose, micaceous, much carbonaceous and argillaceous material; a little shale, gray, at the top silty
- 336 - 350 Sandstone, gray, medium-to fine-grained, subangular, quartzose, much mica and carbonaceous material on bedding planes
- 350 - 370 Siltstone, light-to dark-gray, quartzose, micaceous, argillaceous, carbonaceous
- 370 - 377 Siltstone, same as above; and shale, gray, moderately micaceous
- 377 - 390 Shale, dark-gray, slightly pyritic; a little siltstone, same as above
- 390 - 395 Shale, same as above; and sandstone, gray, medium-to fine-grained, subangular, quartzose, finely pyritic, very chloritic and micaceous, much argillaceous to carbonaceous material
- 395 - 401 Sandstone and siltstone, both same as sandstone above, but containing a great amount of argillaceous to carbonaceous material
- 401 - 412 Shale, gray, slightly silty
- 412 - 422 Shale, same as above; and siltstone, light-gray, quartzose, very micaceous and chloritic

- 422 - 430 Sandstone, light-gray, medium-to fine-grained, subangular, quartzose, very micaceous and chloritic, moderate amount of carbonaceous material and coal (?) grains
- 430 - 437 Shale, dark-to very light gray, in part very silty and micaceous, 60%; coal, 40%
- 437 - 453 Sandstone, white, fine-grained to silt, subangular to sub-rounded, quartzose, slightly micaceous and chloritic, some carbonaceous material on bedding planes
- 453 - 487 Shale, gray to dark-gray, in part silty, micaceous, and carbonaceous; a little siltstone, gray, quartzose, micaceous
- 487 - 521 Sandstone, white to brownish, fine-grained to silt, sub-rounded to subangular, quartzose, moderately micaceous and chloritic, some carbonaceous material on bedding surfaces
- 521 - 530 Shale, gray, very micaceous and silty
- 530 - 542 Siltstone, white to light-gray, quartzose, micaceous; some shale, light-gray, micaceous; some coal
- 542 - 558 Sandstone, white with a little brown, fine-grained to silt, subangular to subrounded, quartzose, moderately chloritic and micaceous, much carbonaceous material in part
- 558 - 575 Sandstone, white, medium-to fine-grained, subangular, quartzose, clear grains, slightly micaceous and chloritic
- 575 - 580 Sandstone, white, medium-grained, subangular, quartzose, slightly micaceous and chloritic, a few green grains
- 580 - 587 Sandstone, same as above, but in part light-gray and fine-grained to silt; a little shale, dark-to light-gray, moderately micaceous; a little coal
- 587 - 600 Siltstone, light-gray, quartzose, moderately micaceous and chloritic
- 600 - 630 Siltstone, light-gray to gray, quartzose, micaceous, in part chloritic; some shale, gray to dark-gray, silty, micaceous
- 630 - 638 Sandstone, gray, mostly fine-grained to silt, a little medium-grained, subangular, quartzose, micaceous,

considerable argillaceous to carbonaceous material;
and shale, dark-gray, in part very silty

- 638 - 649 Sandstone, light-gray, medium-to fine-grained, subangular, quartzose, micaceous, a little carbonaceous material; a little siltstone, gray, quartzose, carbonaceous material on bedding surfaces; some shale, same as above
- 649 - 684 Siltstone, same as above
- 684 - 712 Shale, dark-gray, slightly pyritic and micaceous, occasional floating grains of clear, medium-to fine-grained, subangular, quartz
- 712 - 723 Sandstone, white, medium-to fine-grained, subangular, quartzose, slightly micaceous, many bright-reddish orange grains
- 723 - 733 Siltstone, gray, quartzose, micaceous, slightly chloritic; a little shale, light-gray, siderite nodules
- 733 - 745 Shale, gray, coal on bedding surfaces
- 745 - 750 Siltstone, gray, quartzose, red grains, chloritic, very micaceous; and shale, gray, silty, very micaceous
- 750 - 756 Shale, gray, a little brown, in part very micaceous and silty
- 756 - 762 Shale, gray, a little dark-gray, carbonaceous in part; some sandstone, light-gray, medium-to fine-grained, subangular, quartzose, chloritic, micaceous in part, some carbonaceous material on bedding surfaces
- 762 - 800 Sandstone, white, medium-to fine-grained, subangular to subrounded, quartzose, slightly micaceous and chloritic; at 783-794 a bed of siltstone, gray to brown, quartzose, argillaceous, very micaceous, coaly laminations
- 800 - 805 Sandstone, same as above, 80%; coal, cannel, 20%
- 805 - 824 Shale, gray to dark-gray, micaceous and silty in part; some siltstone, gray, quartzose, a few red grains, coaly laminations
- 824 - 870 Sandstone, white (at 860-870 light-gray with coaly laminations) fine-grained, subangular, quartzose, clean

- 870 - 884 Siltstone, gray to dark-gray, quartzose, argillaceous to carbonaceous laminations
- 884 - 893 Shale, gray, micaceous and silty in part; some siltstone, same as above
- 893 - 906 Shale, same as above
- 906 - 915 Shale, gray, micaceous, silty; and sandstone, light-gray, fine-grained to silt, subangular, quartzose, red grains, micaceous in part, small amount of coaly material
- 915 - 934 Shale, gray to light-gray, micaceous, slightly silty in part
- 934 - 943 Sandstone, light-gray, fine-grained to silt, subangular, quartzose, some red grains, slightly micaceous; and shale, light-to dark-gray
- 943 - 951 Shale, gray, micaceous, silty in part
- 951 - 961 Shale, same as above; a little siltstone, gray; a little sandstone, white, medium-grained
- 961 - 989 Siltstone, gray, quartzose, micaceous, with some coaly laminations in the lower two-thirds
- 989 - 995 Shale, gray to dark-gray, very micaceous, very silty
- 995 - 1054 Sandstone, white to ^{LT. GR. GR} light-gray, fine-grained to silt, subangular, quartzose, micaceous, in upper part slightly pyritic, coaly laminations locally throughout
- 1054-1080 Shale, gray to light-gray, micaceous and silty in part, at 1068-1074 siderite nodules; some interbedded siltstone, gray, quartzose, coaly laminations; at 1060-1068 coal comprises 10% of the sample
- 1080-1118 Shale, dark-gray, slightly pyritic in part
- 1118-1125 Shale, same as above, but in part tan, 80%; sandstone, light-tan to dark-gray, medium-to fine-grained, subrounded, quartzose, slightly micaceous and pyritic, a little carbonaceous material, 10%; coal with pyritized plant fossils, 10%
- 1125-1142 Sandstone, light-greenish gray, at the top some light-tan, fine-grained with a few medium grains at the top and

rather silty toward the bottom, subangular to sub-rounded, quartzose, scattered mica and chlorite, a little carbonaceous material at the top

- 1142-1147 Shale, gray to light-gray, micaceous, very silty
- 1147-1167 Siltstone, gray, quartzose, micaceous, argillaceous; and shale, gray to light-gray, micaceous, silty, at the bottom becoming darker with coaly plant impressions
- 1167-1230 Sandstone, light-gray to white, medium-grained, in the upper part some is fine-grained to silt, subangular, quartzose, moderately micaceous and chloritic, at 1190-1200 much carbonaceous material; at 1217-1222 a bed of shale, gray to light-gray, carbonized leaf and stem impressions
- 1230-1268 Shale, gray to light-gray, faint greenish cast at bottom, micaceous and silty with coaly impressions toward the top, numerous siderite nodules
- 1268-1277 Siltstone, gray, quartzose, rather argillaceous; some shale, gray, rather silty
- 1277-1290 Sandstone, light-gray, fine-grained, subangular to sub-rounded, quartzose, moderately micaceous and chloritic, a little carbonaceous material in lower part
- 1290-1305 Siltstone, gray, quartzose, argillaceous; and shale, gray, micaceous, silty
- 1305-1315 Coal, 50%; shale, light-gray to light-tan, scattered carbonaceous material, 50%
- 1315-1325 Shale, light-gray, micaceous in part
- 1325-1340 Siltstone, gray to light-gray, trace of light-maroon, quartzose, in part micaceous
- 1340-1357 Shale, gray to light-gray, in part micaceous, coaly plant fossils; and siltstone, gray to light-gray to brown, quartzose, micaceous
- 1357-1370 Sandstone, white, medium-to fine-grained, subangular to sub-rounded, quartzose, slightly micaceous and chloritic, 50%; siltstone, light-greenish gray, quartzose, micaceous, moderately chloritic, 35%; shale, light-gray to light-greenish gray, 15%

- 1370-1410 Sandstone, same as above, but at 1390-1405 with some red grains; at 1382-1405 a little interbedded shale, light-gray to light-tan, siderite nodules
- 1410-1417 Shale, gray with a little brown, silty; some sandstone, same as 1357-1370
- 1417-1422 Sandstone, dark-gray, fine-grained to silt, subangular, quartzose, slightly micaceous
- 1422-1432 Shale, gray, in part silty and micaceous
- 1432-1472 Sandstone, white, medium-to fine-grained, subangular to subrounded, quartzose, moderately chloritic, slightly micaceous, at 1459-1465 some is brown with coaly material
- 1472-1477 Shale, light-tan to dark-gray and carbonaceous
- 1477-1486 Sandstone, white, fine-grained to silt, subangular, quartzose, red spots
- 1486-1498 Shale, light-greenish gray to light-gray, siderite nodules
- 1498-1527 Sandstone, very light green with some light-tan toward the bottom, fine-to medium-grained, subangular, quartzose, slightly micaceous, some red spots
- 1527-1534 Sandstone, white with some very light green, fine-to medium-grained, subangular, quartzose, slightly micaceous, some red spots
- 1534-1605 Sandstone, white with some gray to light-gray, medium-to fine-grained, subangular to subrounded, quartzose, moderately micaceous, small amount of chlorite, occasional carbonaceous material on bedding surfaces; at 1575-1593 some shale, gray to light-gray, in part silty, micaceous, and pyritic
- 1605-1614 Shale, gray, micaceous in part, some chips contain floating quartz grains as in sandstone above; some sandstone, same as above
- 1614-1620 Sandstone, same as above; some shale, same as above
- 1620-1631 Sandstone, same as above; and sandstone, gray, fine-grained, quartzose, dirty
- 1631-1646 Sandstone, white, medium-grained, subangular, quartzose,

extremely small amount of accessory minerals

TOP BLUESTONE FORMATION (MISSISSIPPIAN) 1646

- 1646-1660 Shale, very light greenish gray to light-yellowish tan, a little is light-gray
- 1660-1665 Shale, same as above; and sandstone, light-greenish gray, fine-grained to silt, subangular, quartzose, moderately chloritic, slightly micaceous
- 1665-1704 Shale, red to light-green, silty at top and bottom, micaceous at bottom
- 1704-1714 Siltstone, green, quartzose, micaceous, in part calcareous
- 1714-1747 Siltstone to very fine grained sandstone, green grading downward to pale-green, quartzose; at 1726-1731 interbedded with shale, gray to olive to pale-green
- 1747-1765 Siltstone, light-gray, quartzose, in part slightly calcareous, laminated with coaly to argillaceous material
- 1765-1778 Sandstone, light-gray, very fine grained, quartzose, laminated with coaly to argillaceous material
- 1778-1785 Sandstone, light-gray, very fine grained to silt, quartzose; laminated with shale, gray
- 1785-1803 Shale, dark-gray, hard, slightly silty at bottom
- 1803-1820 Shale, dark-gray, hard, slightly silty; laminated with a little siltstone, gray, quartzose, very slightly calcareous
- 1820-1834 Shale, dark-gray, hard, slightly silty in lower half
- 1834-1855 Shale, dark-gray, hard; laminated with some siltstone, same as 1803-1820; at 1849-1855 siltstone content increases to 50%
- 1855-1905 Shale, dark-gray, hard, slightly silty toward bottom
- 1905-1912 Shale, dark-gray, hard; some shale, variegated purple to white, very slightly calcareous (cavings ?)
- 1912-1941 Shale, dark-gray, hard, finely micaceous
- 1941-1950 Shale, same as above; and sandstone, light-tannish gray,

fine-grained, angular to subangular, quartzose, very calcareous; a little limestone, yellowish-tan, argillaceous

- 1950-1955 Sandstone, same as above
- 1955-1959 Sandstone, white, fine-grained, subangular to subrounded, quartzose, clean except for a few dark specks
- 1959-1976 Depth correction
- 1976-1981 Sandstone, same as 1955-1959
- 1981-1985 Sandstone, light-gray, very fine grained to silt; and shale, dark-gray
- 1985-2002 Shale, gray, grading downward to dark-gray and silty
- 2002-2007 Shale, gray to dark-gray, silty; a little interbedded sandstone, white, fine-grained, subangular to subrounded, quartzose
- 2007-2013 Shale, gray, silty, finely micaceous; and sandstone, olive to white, very fine grained to silt, quartzose, calcareous
- 2013-2028 Shale, olive at top grading downward to gray to light-gray, soft, finely micaceous, in part slightly silty, in part calcareous
- 2028-2035 Sandstone, gray, very fine grained, subangular, quartzose; and shale, gray, finely micaceous
- 2035-2043 Shale, same as above, but sandy
- 2043-2053 Shale, same as above; a little limestone, light-tan, fine-crystalline, sparsely fossiliferous
- 2053-2063 Shale, light-green, finely micaceous, in part sandy; and limestone, same as above
- 2063-2087 Shale, same as above, but grading downward to light-gray and becoming silty rather than sandy; a little siltstone throughout, grading from green at top to olive at bottom
- 2087-2096 Siltstone, olive, quartzose, very slightly argillaceous; interbedded at the top with a little siltstone,

gray, argillaceous

TOP PRINCETON SANDSTONE 2096