

LEWIS MAXWELL NO. 11-F WELL (Permit-Dod-71)-▷

West Union District, Doddridge County, W. Va.

Altitude 1,138' L.

0.60 mi. W. of 80° 45' and 4.10 mi. S. of 39° 20'

Drilled in 1916, deepened June 13, 1934 to July 13, 1936, by Columbian Carbon Company.

Deepening commenced at 2,656'

Samples examined by Dr. James H. C. Martens, Results reprinted from pages 104-109, Vol. XI, W. Va. Geological Survey.

| Top | Bottom | Thickness | Lithology |
|------|--------|-----------|--|
| 3493 | 3507 | 14 | Shale, greenish-gray, sandy |
| 3507 | 3558 | 51 | Sandstone, very fine, light grayish-green, shaly, with much gray silty and sandy shale |
| 3558 | 3760 | 202 | Shale, greenish-gray, silty and sandy, with some very fine gray to light-green sandstone; the samples vary in the proportion of shale and sandstone but probably none are more than half sandstone; muscovite flakes and quartz grains are plainly visible in the coarser fragments, and there are small pieces of black carbonaceous material in the finer ones |
| 3760 | 4019 | 259 | Shale, gray to greenish-gray, silty and sandy, with some very fine light-gray to green sandstone; very similar to last group of samples but more of the shale is neutral gray rather than slightly green and in the lower part of the interval there is a little real dark shale |
| 4019 | 4051 | 32 | Shale, gray, silty, and sandy, with a considerable proportion of brown sandy shale with more pyrite than the gray; there is also some very fine light grayish-green sandstone |
| 4051 | 4094 | 43 | Shale, gray to greenish-gray, silty and sandy, with some very fine greenish-gray sandstone; small spherical pyrite concretions in sample from 4075-81 |
| 4094 | 4354 | 260 | Shale, gray to slightly greenish, silty and sandy, with some very fine light-gray sandstone; many of the samples in this group contain a little real dark shale but otherwise are about the same as the preceding |
| 4354 | 4365 | 11 | Sandstone, very fine, gray, shaly |
| 4365 | 4404 | 39 | Shale, medium to dark-gray, silty and sandy |
| 4404 | 4467 | 63 | Shale, gray and brown, silty and sandy; the gray particles vary in color from medium-gray to nearly black |
| 4467 | 4573 | 106 | Shale, light- to dark-gray, silty and sandy; more pyrite than in most samples from this well below 3500'; a few small spherical concretions of pyrite |
| 4573 | 4807 | 234 | Shale, medium- to dark-gray, silty; slightly darker and a little finer textured than last group of samples; a few small spherical concretions of pyrite |
| 4807 | 4838 | 31 | Shale, gray and dark-brown, silty, with a few small spherical concretions of pyrite |
| 4838 | 4882 | 44 | Shale, light- to dark-gray |
| 4882 | 4905 | 23 | Shale, medium- to dark-gray, and dark-brown, silty and sandy |
| 4905 | 5148 | 243 | Shale, gray to slightly greenish, silty and sandy; some fragmentary carbonized plant fossils; a little pyrite throughout. |
| 5148 | 5214 | 66 | Shale, dark-brown, very sandy, with some gray shale which is not quite so sandy |
| 5214 | 5712 | 498 | Shale, gray, partly silty and sandy; a little pyrite throughout; practically the same as the shale from 4905-5148; some |

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LEWIS MAXWELL NO. 11-F WELL (CONTINUED)

| Top | Bottom | Thick- ness | |
|------|--------|----------------|---|
| | | | ORISKANY SANDSTONE, 143 FEET |
| 6960 | 6982 | 22 | No samples |
| 6982 | 7017 | 35 | Sandstone, medium- to fine-grained; probably light-gray to white, but samples are much contaminated with shale fragments, metallic iron, and iron rust |
| 7017 | 7055 | 38 | Sandstone, hard; the 25 samples from this interval are all mostly shale, but each one contains some sand and the large amount of metallic iron in the samples and the fact that samples represent one or two feet only shows that the rock drilled through could hardly have been shale; only slightly calcareous |
| 7055 | 7103 | 48 | Sandstone, calcareous, fine; samples much contaminated by shale, metallic iron, and iron rust |
| | | | HELDERBERG GROUP, 278 FEET |
| 7103 | 7124 | 21 | Sandstone, gray, very fine, calcareous, cherty, with a little dolomite in part of the samples and a little glauconite at 7121-7124' |
| 7124 | 7127 | 3 | Sandstone, gray, very fine, calcareous, very cherty, with considerable fine pyrite |
| 7127 | 7129 | 2 | Chert, gray, very sandy, calcareous, with a little dolomite and a very little glauconite |
| 7129 | 7132 | 3 | Sandstone, gray, very fine, cherty, calcareous, with a little dolomite |
| 7132 | 7146 | 14 | Chert, gray, very sandy, calcareous, with fairly abundant small grains of pyrite |
| 7146 | 7169 | 23 | Sandstone, gray to brownish, very fine, cherty, calcareous, with a very few grains of glauconite and small specks of pyrite |
| 7169 | 7182 | 13 | Sandstone, gray, very fine, highly calcareous, but only slightly cherty |
| 7182 | 7184 | 2 | Sandstone, brownish-gray, very fine, cherty, and highly calcareous; a little dolomite |
| 7184 | 7190 | 6 | Chert, gray, sandy, calcareous, with a little dolomite and considerable fine pyrite |
| 7190 | 7192 | 2 | Sandstone, brownish-gray, very fine, cherty and highly calcareous; a little dolomite |
| 7192 | 7198 | 6 | Chert, gray to brownish, very sandy, calcareous, with a little dolomite and glauconite; fragments mostly porous after acid treatment; many small specks of pyrite |
| 7198 | 7216 | 18 | Limestone, medium- to fairly dark-gray, very cherty; insoluble residue mostly porous masses of silica with a few pieces of light-gray compact chert |
| 7216 | 7236 | 20 | Chert, gray, considerably stained with iron rust; highly calcareous but the insoluble residue has a much higher proportion of light-gray compact chert than the last group of samples |
| 7236 | 7240 | 4 | Sandstone, gray, with rusty stain, very fine, highly calcareous, cherty |
| 7240 | 7260 | 20 | Limestone, gray, highly siliceous, containing large amounts of chert and very fine to fine sand; similar to the last group of samples |
| 7260 | 7273 | 13 | Sandstone, very fine, calcareous and cherty, with a few small specks of glauconite; samples much contaminated by rusty iron and by shale cavings |
| 7273 | 7289 | 16 | Chert, gray, calcareous, and sandy |
| 7289 | 7295 | 6 | Sandstone, gray, very cherty, highly calcareous, with abundant small specks of pyrite, some dolomite, and a very little glauconite |

(Continued on p. 4)

LEWIS MAXWELL NO. 11-F WELL (CONCLUDED)

| Top | Bottom | Thick- ness | |
|------|--------|----------------|---|
| 7758 | 7764 | 6 | Rock salt, with some shale and anhydrite |
| 7764 | 7780 | 16 | Anhydrite, gray, with dolomite and calcite |
| 7780 | 7820 | 40 | Rock salt, with some shale; probably the shale is from above |
| 7820 | 7825 | 5 | Anhydrite and shale |
| 7825 | 7829 | 4 | Anhydrite and salt |
| 7829 | 7833 | 4 | Anhydrite-dolomite rock, with some shale |
| | 7837 | | TOTAL DEPTH |