

LE-13

VDMR Well No. W-875

Operator: J. W. Miloncus
Farm: Roy E. and Thelma Bledsoe
Well No. : 1
Location: Lee County
3800' N. of 36°42'30" approx.
300' W. of 83°05'
Elevation: 1855' (reported altimeter elevation)
Total Depth: 2207' (Trenton Limestone)
Commenced: May 27, 1963
Completed: About November 1, 1963
Result: Oil Well

Formation Tops

(Reported from sample examination by R. L. Miller, U. S. G. S.)

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| Clinton | 0 - 297' |
| Poor Valley Ridge ss. member of Clinch | 297 - 518' |
| Hagan Shale member of Clinch | 518 - 575' |
| Sequatchie | 575 - 835' |
| Reedsville | 835 - 1595' |
| Trenton | 1595 - T. D. |

Shows of oil at 1606', 1639 1/2, and 2189' (best show)

Remarks: This test was drilled with cable tools in the Sulphur Springs Fenster. The well was completed as an oil well and tanks on the location were filled with oil. The well is currently (October 1, 1964) reported to be producing about 7 BOPD.

Operator: J. W. Miloncus
 Farm: Roy E. and Thelma Bledsoe
 Well No.: 1
 Location: Lee County
 11,400' S. of 36°45' approximate
 300' W. of 83°05'

Geologic Log:
 Samples examined by
 Warren J. Souder,
 Virginia Division of
 Mineral Resources,
 July, 1964

Elevation:
 Total Depth: 2207' (Trenton Formation)
 Commenced: 1963
 Completed: 1963
 Result: Oil well

GEOLOGIC LOG

Samples are available from 0' to total depth of 2207'
 The first samples (0-10') are sandstone of the Clinton Formation
 of Silurian age.

| <u>Depth</u> | <u>Thickness</u> | <u>Description</u> |
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| Clinton Formation (Silurian) | | |
| 0-10 | 10' | Sandstone, white to light yellowish-tan, medium-to fine-grained, sub-rounded, well-sorted, slightly micaceous, friable, weathered, iron-stained, with some clay matrix. Porous. |
| 10-60 | 50' | Shale, clay, grey, siliceous and silty to sandy, medium-hard. 20-30 - with an increase in sand content 45-60 - with sandstone having greenish tints, very fine-grained, well-cemented and no porosity. |
| 60-102 | 42' | Shale, clay, dull maroon, micaceous, moderately soft, and interbedded shale, grey-green, silty, to very fine grained sand. |
| 102-125 | 23' | Shale, clay, dark maroon, platy, moderately soft, and interbedded shale, grey-green, siliceous to silty. |
| 125-180 | 55' | Shale, clay, grey, siliceous, with thin interbedded shale, dark maroon, siliceous. |
| 180-192 | 12' | Shale, clay, dark maroon, finely micaceous with interbedded shale, clay, grey-green, siliceous, medium-hard. |

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| 192-204 | 12' | Shale, grey-green, siliceous, silty, to fine-grained sandstone, calcareous, with traces of pyrite crystals. |
| 204-218 | 14' | Sandstone, grey-green, very fine-grained, well-sorted, calcareous, minute fractures filled with calcite. |
| 218-254 | 36' | Shale, clay, dark maroon, fine mica flakes, siliceous. 231-241 - with a broken brachiopod print. 241-249 - with a trace of pyrite, and slightly more siliceous. 249-254 - with a trace of sandstone, grey-green, very fine-grained. |
| 254-258 | 4' | Sandstone, grey-green, very fine-grained, very calcareous, moderately hard, no porosity. |
| 258-297 | 39' | Shale, clay, maroon to dark maroon, slightly siliceous and calcareous with interbedded shale, grey-green, siliceous to sandy, calcareous. 270-277 - the sample is predominantly maroon shale. |
| Clinch Formation Poor Valley Ridge Sandstone Member (Silurian) | | |
| 297-313 | 16' | Sandstone, light grey-green, medium-to fine-grained, friable, calcareous, trace of pyrite, with some vitreous, quartzitic grains that represent pebbles or larger size, being present in the formation. Low porosity. 308-313 - with shale, clay, grey-green platy. |
| 313-320 | 7' | Sandstone, grey, fine-grained, less friable, calcareous, pyritic with some shale, clay, grey, platy. |
| 320-351 | 31' | Sandstone, white, fine-grained, well-sorted, calcareous, black iron stains, pyritic, limited porosity. 329-342 - with shale, clay, dark-green platy. 343-351 - with friable sandstone. |

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| 351-360 | 9' | Shale, clay, grey, siliceous, fine mica flakes. |
| 360-439 | 79' | Sandstone, white, medium-to fine-grained, with a few scattered sub-rounded, frosted, coarse sand grains, slightly calcareous, friable, occasional iron stains. 431-439 - with shale, clay, dark-grey, platy. |
| 439-449 | 10' | Shale, clay, dark-grey, siliceous to silty, fine mica flakes, platy, medium-hard. |
| 449-464 | 15' | Sandstone, light-grey, very fine-grained, friable. 449-464 - with a thin bed of "Clinton type", reddish-brown and black iron containing pellets of reddish iron having shallow central depressions. |
| 464-484 | 20' | Sandstone, grey, fine-grained, sub-rounded, well-sorted, a few frosted larger grains, siliceous cement, limited porosity, with some shales, clay, grey, siliceous, platy. 480-484 - no sample |
| 484-518 | 34' | Sandstone, light-grey to white, fine-grained, well-sorted, sub-rounded, black iron stains, with some interbedded shale, clay, dark grey. The sandstone has fair to good porosity. |
| Clinch Formation Hagan shale member (Silurian) | | |
| 518-575 | 57' | Shale, clay, grey, siliceous, platy, fine mica flakes, moderately hard, with interbedded siltstones and very fine-grained sandstones that are calcareous and hard. 542-548 - with pyrite impregnations 551-555 - with maroon, "Clinton type" iron, having centrally depressed pellets that are somewhat flattened, siliceous, calcite crystals, fossiliferous |

Sequatchie Formation
(Ordovician)

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| 575-590 | 15' | Shale, clay, maroon, slightly calcareous, fine mica flakes, platy, medium-hard, with interbedded sandstone, grey, medium-to fine-grained, calcareous and hard. 583-590 - with a few red iron pellets, flattened, fossiliferous. |
| 590-610 | 20' | Shale, grey, with some shale, clay, red, slightly calcareous, fine mica flakes, siliceous, moderately hard. |
| 610-679 | 69' | Shale, clay, red to dull maroon, siliceous, slightly calcareous, fine mica flakes, a few calcite veins, and some shale, green, very calcareous. |
| 679-747 | 68' | Shale, clay, grey, very calcareous, silty, fine mica flakes, a few calcite veins and pyrite crystals. 705-747 - with interbedded limestone, dark-grey to light-grey mottled, finely crystalline, fossiliferous. 716-726 - with many fossils and a few small oolites. |
| 747-764 | 17' | Shale, clay, maroon, calcareous, fine mica flakes, platy, medium-hard. |
| 764-781 | 17' | Limestone, grey to tinted grey-green, finely crystalline, argillaceous, with interbedded maroon shale, clay, calcareous fine mica flakes, platy, medium-hard. |
| 781-835 | 54' | Shale, clay, dark-grey, calcareous, platy, medium-hard, with interbedded limestone, dark-grey to whitish mottled, calcite veins, fossiliferous, and a few small oolites. 805-835 - with alternating red and grey-green shales. |

Reedville Shale
(Ordovician)

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| 835-926 | 91' | Shale, dark-grey, clay, calcareous, platy, medium-hard with interbedded limestone, dark-grey to light-grey mottled, argillaceous, fine mica flakes, calcite fillings, a few pyrite crystals, fossiliferous. 897-919 - with some shale, clay, brown to dull maroon, calcareous, fine mica flakes, fossiliferous. |
| 926-936 | 10' | Limestone, dark-grey to whitish mottled, medium-crystalline, very fossiliferous. |
| 936-968 | 32' | Shale, clay, dark-grey, calcareous, platy, medium-hard, with interbedded limestone, dark-grey to whitish mottled, argillaceous, calcite fillings. |
| 968-1017 | 49' | Limestone, dark-grey to whitish mottled, very fossiliferous with interbedded shale, clay, dark-grey, calcareous, platy. |
| 1017-1022 | 5' | Sandstone, fine-grained, sub-rounded, a few medium frosted grains, friable, some reddish-brown iron stains (Note: Sample may be mislabeled. In samples above and below these is no sand. Sandstone has not been reported from the Reedville shale surface sections. |
| 1022-1029 | 7' | Shale, clay, dark-grey, calcareous, fine mica flakes, platy, medium-soft with interbedded limestone, grey to grey-white mottled, medium-crystalline, fossiliferous. |
| 1029-1037 | 8' | Limestone, dark-grey, grey to white mottled, medium-crystalline, fossiliferous, with dark grey shale. |
| 1037-1127 | 90' | Shale, clay, dark-grey, siliceous, gritty, platy, medium-hard, with interbedded limestone, grey to white mottled, medium crystalline, fossiliferous. 1172-1127 - with an increase in silicification of both the shale and limestone. |

1127-1573

446'

Shale, clay, dark-grey, siliceous, platy, hard to medium-hard, with occasional interbedded limestone.

(Note: This section has considerably less limestone interbedded than the section above.)

1180-1202 - with limestone, grey to white mottled, siliceous, with calcite veins that are partly silicified, fossiliferous.

1211-1219 - with limestone, grey to white mottled, medium-crystalline, fossiliferous.

1219-1257 - poor samples, possible drilling trouble.

1265-1269 - with limestone, dark-grey, finely crystalline, argillaceous, siliceous.

1369-1377 - with limestone, grey, medium-crystalline, siliceous.

1435-1439 - with limestone, grey, medium-crystalline, siliceous, cherty.

1453-1464 - with limestone, grey, medium-crystalline, siliceous.

1504-1528 - with limestone, grey, medium-crystalline, siliceous.

1552-1560 - with limestone, grey, medium-crystalline, siliceous.

1573-1595

22'

Limestone, dark-grey to whitish mottled, medium-to coarse-crystalline, very fossiliferous, with interbedded shale, clay, dark-grey, calcareous, siliceous, platy.

Trenton Limestone
Upper Trenton
(Ordovician)
1595-1609

14'

Limestone, light-to dark-grey mottled with a brown tint, medium-fine to coarse-crystalline, with calcite crystals and a few pyrite crystals, fossiliferous.

1606-1609 - reported oil show. Limestone, light-to dark-grey, mottled, coarse-crystalline and fine-grained granular, with porosity in both the coarse crystalline and the granular limestone.

1609-1713 104'

Limestone, light-to dark-grey mottled with a brown tint, medium-to coarse-crystalline, fossiliferous, with interbedded shale, clay, black, calcareous, platy, soft to medium-soft.

1639 $\frac{1}{2}$ - reported oil show. Limestone, light-to dark-grey mottled, coarse-crystalline, to fine-grained granular, with porosity in both the coarse-crystalline and fine grained granular.

1650-1713 - the section becomes somewhat siliceous.

1655-1663 - with smokey chert.

Middle Trenton (Ordovician)

1713-2014 301'

Limestone, light-grey, whitish to dark-grey mottled, coarse-to fine-crystalline, siliceous, clear to white splintery chert, fossiliferous.

1804-1820 - with smokey and milky chert.

1949-1953 - with milky chert.

1992-2000 - with black to smokey chert.

Lower Trenton (Ordovician)

2014-TD 2207 193'

Limestone, dark-grey to light-grey mottled, coarse-crystalline, slightly argillaceous, siliceous, fossiliferous with shale, clay, dark-grey to black, siliceous, calcareous, platy, hard.

2189 - reported oil show, "best show". Limestone, dark-grey to light-grey mottled coarse-crystalline, to fine-grained granular crystalline, coquina, with porosity in both