

GEOLOGICAL REPORT

Lawrence West #1
660' FSL, 1980' FEL
Section 1, T23S-R17E
Anderson Co., Kansas

Operator: Quest Energy Service, Inc., P. O. Box 100, Benedict, Kansas 66714

Drilling Contractor: Well Refined Drilling, Jeff Kephart, Driller
Schramm air rotary drill rig with auxiliary compressor

Wellsite geologist: Michael L. Ebers - On location from 425' to T.D.

Date Drilled: May 1, 2002

Size Hole: 6 1/4"

Total Depth: 1185'

Elevation: 1022' (estimated from topographic map)

Drilling Fluid: Compressed air with injected water

Surface Casing: 40' of 7" casing cemented to the surface

Electric Logs Run: Gamma ray and Neutron Logs

Rock Color Description: GSA rock color chart

Notes: Samples from 435 to 655' examined at drill site and discarded. Samples from 655' to T.D. examined at drill site and 10' samples collected and examined in the laboratory with a binocular microscope.

Wellsite Sample Examination

Top of Stark Shale at 436' (+586')

436-444' Shale, dark gray to grayish black, no gas

444-462' Limestone

Top of Hushpuckney Shale at 462' (+560')

462-467' Shale, dark gray, grayish black in lower 2', 15% flat joint faces

467-486' Limestone

Base of Kansas City at 486' (+536')

486-544' Shale, gray

544-549' Sandstone, light gray, very fine grained, very silty, poorly sorted, micaceous, very poor porosity, tight, no show, no fluorescence

549-648' Shale, gray, locally greenish gray and silty

648-652' Shale, dark gray

Microscopic Sample Examination

652-696' Limestone, tan, fine grained, shale break at 652-660'

696-724' Sandstone, fine grained, very silty, poorly sorted, tight, no show, no fluorescence, local shale breaks

724-748' Shale, medium light gray

748-750' Limestone, dark brownish gray, fine grained, fossiliferous, trace coal at base

750-756' Shale, medium dark gray

756-764' Limestone, light grayish brown, fine to medium grained, very fossiliferous & pelletal

764-779' Shale, silty, medium light gray

779-782' Limestone, tan, fine grained

782-786' Shale, dark gray & grayish black

786-801' Shale, clayey, soft, light gray and shale, medium dark gray

801-803' Limestone, tan, fine grained

803-818' Shale, light greenish gray, medium gray, and medium dark gray in lower 8'

Top of Oswego Lime at 818' (+204')

818-826' Limestone, grayish brown, fine grained, massive

Top of Summit Shale at 826' (+196')

GAS CHECK @ 823' - no gas

826-833' Shale, dark gray, platy, trace flat joint faces, no flat bedding planes

833-836' Limestone, tan, fossiliferous

GAS CHECK @ 833' - no gas

Top of Mucky Coal and Shale at 836' (+186')

836-839' Shale, dark gray

839-841' Shale, dark gray and grayish black, scattered flat joint faces (<5%)

841-842' Coal, massive with irregular to conchoidal surfaces, few cleat faces, vitreous

842-843' Shale

GAS CHECK @ 843' - no gas

Top of Squirrel Sand at 843' (+179')

843-850' Sandstone, light greenish gray, fine grained, very silty, poorly sorted, poor porosity (6-8% max.), no show, no odor, no fluorescence

850-911' Shale, medium gray, limestone at 871-872'

911-913' Bevier Coal, vitreous, semi-blocky, scattered good cleat faces, locally calcite filled fractures and cleats

913-922' Shale, medium gray

922-923' Limestone, grayish brown, fine grained

GAS CHECK @ 923' - no gas

923-924' Croweburg Coal, massive and blocky, very vitreous/glassy, locally cleat faces

924-954' Shale, gray

954-955' Coal

955-968' Shale, light gray, minor limestone, olive gray

968-969' Coal, vitreous, semi blocky

969-994' Siltstone, shaly, laminated, light gray to medium gray

994-995' Coal

995-1010' Shale, dark gray

1010-1011' Shale, grayish black with trace of coal (Weir Coal)

1011-1045' Shale, gray

1045-1060' Shale, dark gray

1060-1070' Shale, gray and greenish gray, locally silty

Top of Lower Bartlesville Sand at 1070' (-48')

1070-1079' Sandstone, very fine grained, light gray, very silty, poor porosity, no show, no odor, no fluorescence

1079-1100' Shale, medium gray, locally silty

1100-1130' Sandstone, light gray, silty, poorly sorted, poor porosity, laminated with shale, no show, no fluorescence

1130-1150' Sandstone, medium grained, light gray, locally tan, subrounded, mostly very silty, locally clean sand, poor to excellent porosity, overall fair porosity (10-12%), 30% gray shale, no show or odor, no fluorescence, 30 to 40 gpm water at 1135'

1150-1160' Siltstone, medium to medium dark gray, streak of coal at 1150', very faint odor at 1153'

1160-1166' Shale, medium gray

Top of Tucker Sand at 1166' (-144')

1166-1185' Sandstone, medium grained, very light gray, subrounded, fairly well sorted, minor silt, excellent porosity (18-20%+), no oil show or odor, no fluorescence, hit 50+ gpm additional water

@1185' Watered out, well making ~100 gpm. Unable to continue drilling with air hammer

1185' Total Depth