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Geological Report

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Kircher #1-9-16-25 (1st well with new "gas detector")

792 FEL, 660 FNL (N 38° 40.599', W 94° 38.472')

Section 9-T16S-R25E

Miami, Co. Kansas

API #15-121-27726

Elevation: 1106 GL (est. from Topo. Map)

Drilling Contractor: Glaze Drilling Co., (Lic. #5885)

Spud: 7/26/2003

Surface: 11 1/4" bore hole, set 20' of 8 5/8" csg. cmt'd with 6 sx

Production bore hole: 7 7/8"

Rotary Total Depth: 680' on 7/26/03

Drilling fluid: Air

E-Log Total Depth: No Open Hole Run (GR-N run on 8/05/03 to check packer depth)

Production Csg.: Used 5 1/2" 15.50#/ft., set at 530'

<u>Formation</u>	<u>Driller Log Tops</u>	<u>E-Log Tops</u>	<u>Datum</u>
Stark Shale	247	251	855
Hushpuckney Shale	276	280	826
Base Kansas City	294	297	809
"Upper" Knobtown Sand	No Call	----	----
"Middle" Knobtown Sand	327	328	778
"Lower" Knobtown Zone	No Call	364	742
Carbonaceous Zone in Tacket Fm.	No Call	414	692
"Big Lake" Sand	No Call	----	----
South Mound Zone	465	467	639
Hepler (Wayside) Sand	No Call	----	----
"Upper" Mulberry Zone	No Call	488	618
Mulberry Zone	No Call	496	610
Weiser Sand	No Call	508	598
Myrick Station	525	527	579
Anna Shale (Lexington Coal Zone)	529	531	575
Peru Sand	No Call	----	----
Summit Shale Zone	574	573	533
Mulky Coal/Shale Zone	587	598	508
Squirrel Sand	657	618	488
Bevier Coal Zone	No Call	Not logged	----
Rotary Total Depth	680	----	426
Cased Hole Log TD (8/05/03)	----	658	448

Major Zones of Interest (Depths based on Cased Hole GR-N Log run on 8/05/03).

Note: Gas test(s) depths and gas readings not corrected to E-Log, need to add 3 +/- feet.

“BG” = Background gas in units

“T” = Total gas reading in units.

“Ch” = Chromatograph reading in units.

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** 247' BG, T = 14.5 & Ch = 0 (adjusted or “zeroed” each to 10+/- units)

Stark Shale, 251-255. Shale, black, angular to blocky, trace gritty textured, “peppered” in part with micro pyrite crystals, no shows of free gas. No increase in gas units.

** Gas test at 260', no open flow and Driller reported zone as “damp”.

** 270' BG, T = 15.2 & Ch = 9.0

Hushpuckney Shale, 280-284. Shale, black, very-very dark grays, blocky to angular cuttings, somewhat gritty textured in part, trace pyritic, no show. No increase in gas units.

** Gas test at 280', no open flow and no increase in water.

** 295 BG, T = 15.2 & Ch = 8.9

** 305' Re-zeroed T & Ch to 10 units +/-

** At 319', bumped attenuation knob - not a gas kick.

“Middle” Knobtown Sand, 328-333 & 338-351. Sandstone, very light gray with green tint, light gray to gray, very fine to fine grain, sub-angular to angular, poor to moderately sorted, well consolidated, semi-firm to firm, mostly poor with trace fair intergranular porosity, micaceous, shaly, and carbonaceous in part, no shows. No increase in gas units.

** Gas test at 340', no open flow.

** At 356', adjusted T & Ch.

** Gas test at 360', no open flow and no increase in water.

** 390' BG, T = 10.3 & Ch = 12.0

Carbonaceous Zone found in the Tacket Formation, 414-416. Not recorded on Driller Log. Sample bag covering this footage contained a few coal and “coaly shale” fragments, trace were “floaters”, both exhibited very-very weak scattered shows of free gas, no apparent increase in gas units.

** 420' very slight increase in “connection gas”, 2.5 to 3, but dropped back.

"Big Lake" Sand. Not developed.

** 440' BG, T = 10.2 & Ch = 11.9

** 461' BG, T = 9.4 & Ch = 8.6

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South Mound Zone, 467-470. Shale, black, mostly blocky, trace angular and platy cuttings, gritty textured and pyritic in part, very-very weak scattered shows of free gas. At 471' "T" started climbing, flipped to x4, had a 326 unit initial gas kick. Slowly kept rising and stabilized at 443.2 units. Ran manual sample through "Ch" and showed 400 units of methane.

** Gas test at 480', too small to measure (TSTM), est. less than 1 MCF, no apparent increase in water.

** At 485' run manual sample through Ch, showed 1760 units of methane and no other gasses.

"Upper" Mulberry Zone, 488-490. In the sample bag covering this footage, no carbonaceous material was found. No increase in gas units.

Mulberry Coal Zone, 496-499. No carbonaceous material or black shale was found in the sample bag covering this footage. No increase in gas units.

** Checked lag time from diverter/flow line to gas detector, 57 seconds.

** 504' BG, T = 249.6, Ch = 2411.2 (increase due to Ch auto sampling at connection "connection gas")

Weiser Sand Zone, 508-512. Poorly developed, pale green, very fine grain sandstone, no shows, and no increase in gas units.

Myrick Station Limestone, 517-531. Limestone, various shades of brown, fine to medium crystalline, poor to very poor porosity, dense, scattered staining, no show of free oil or gas. No increase in gas units.

** 529' BG, T = 228.8, Ch = 1860.8

Anna Shale (Lexington Coal Zone), 531-534. Shale, black, mostly angular cuttings, gritty textured in part, very-very weak scattered shows of free gas. 8 to 10% of the sample consisted of coaly shale and coal, trace "floaters", exhibited very-very weak shows of free gas (less than 1/2 of 1%). Neither the coaly shale nor the coal contained secondary crystallization. T = 1142.2 unit increase. Manual sample through Ch = 11,995.2 units of methane.

Peru Sand, 534-538. Sandstone, pale/dull grayish-green, very fine to fine grain, angular, mostly poor with trace moderately sorted, well consolidated, firm, poor to fair intergranular porosity, silty in part, weak to fair odor, no fluorescence, weak to fair show of free oil, breaks out readily when diluted HCl acid applied to sand clusters.

** Gas test at 540', open flowed 90+/- MCF and no apparent increase in water.

Note: There was some concern or question that the open flow gas reported above was coming from the Peru Sand and not the Lexington. Based on the lag time and time it took to drill through the Lexington Zone. The open flow is from the Lexington and not the Peru Sand.

** 555' BG, T = 1326.4 & Ch = 1984.0

** 560' BG, T = 1299.2 & Ch = 2027.2

Note: At 566', drilling depth or apx. 568/69' log depth, BG was T=1497.6 or an increase of 198.4 units, but Ch was 1820.8 or a decrease of 206.4 units, (Ch was not cycling at time). If this is or was a "gas kick", occurred just prior to drilling the Summit, because the top of Summit is 574 drilling depth or 573 log depth. No carbonaceous material found in sample bag. Think possibly Lexington give up a little "burp".

Summit Shale Zone, 573-576. Shale, black, mostly angular cuttings, just a trace gritty textured, no shows of free gas.

** Gas test at 580', open flowed 94 MCF or an increase of 4 MCF, no apparent increase in water. No "real" increase in gas units.

** 599' BG, T = 1318.4

Mulky Shale/Coal Zone, 598-603. Shale, black, blocky to angular, just a trace platy, trace pyritic, trace coal and coaly shale, trace "floaters", no shows of free gas.

** 600' BG, T = 1593.6 or a 275.2 increase, (made connection)

** Gas test at 600', open flowed 175 MCF, an 81 MCF increase. Re-tested at 620', open flowed 208 MCF or and 33 MCF increase (surging a little). Total open flow for Mulky is 114 MCF.

** At 609' run manual check through Ch, showed 22,227.2 units. Less the BG of 1820.8 units, had an increase of 20,406.4 units. The Lexington had manual check of 11,995.2 units. Cannot explain why no significant increase in "T" unless saturated, which effects the "Wheatstone Bridge". Will order a "diluter" to help correct this "if" part of problem. At 640' checked flow line, no crimps to obstruct flow, and blew out same. Placed exhaust tube to outside of trailer. Turned flow rate down from .8 to .2. Blew hole clean and circulated hole for a while.

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Note: After blowing hole clean and checking everything, BG was, T = 1462.4 and Ch = 278.4 (not manual check).

Squirrel Sand ("Middle"). 618-637. Sandstone, very-very light gray, light tan-grays, very fine to fine grain, poorly sorted, well consolidated, firm, poor intergranular porosity, silty to shaly in part, broken by shale and silty/sandy shale beds, very-very faint odor, no fluorescence, very weak spotty shows of free oil and trace hydrocarbon residue with depth. Does not merit further testing. No increase in gas units.

Squirrel Sand ("Lower"), not logged, drilling depth top is 657-669. Sandstone, gray, fine grain, trace medium grain, angular, poorly sorted, well consolidated, firm, poor porosity, silty to shaly, trace carbonaceous, weak odor, no fluorescence, scattered speckled to spotty hydrocarbon residue, sheen on sample wash bucket. Sand becomes lighter gray with depth and has a "pungent" odor.

Bevier Coal Zone. No top called and not logged. Sample bag 670-680 contained coaly shale and coal, trace were "floaters", fracture, trace shows of free gas. Estimated thickness of coal to be between 6 to 8 inches.

** Gas test at 680' (Rotary Total Depth), no increase in open flow or gas units. Still open flowing 208 MCF, but not surging now.

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Brief Summary:

Stark	No open flow, "damp"
Hushpuckney	No open flow, no increase in water
"Big Lake"	Poorly developed, no open flow
South Mound	Less than 1 MCF (TSTM)
Mulberry(s)	No open flow
Lexington	90 MCF, no increase in water
Summit	4 MCF, no increase in water
<u>Mulky</u>	<u>114 MCG "no increase in water", think this is questionable.</u>
Total	208 MCF open flow

** Structural comparison of the subject well using the Top of the Mulky Zone:

<u>Kircher 1-9</u>	Kircher #1	Truman 1-8	Truman 2-8	Niebaum 8-4	Truman 15-5
508	449	482	469	500	481

End Report
Rex R. Ashlock