

**BEREXCO LLC**

**KENNETH 1-35**

**S2 SW SW SEC 35 T1S R36W**

**RAWLINS COUNTY, KANSAS**

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## SUMMARY

The Berexco LLC Kenneth 1-35 in Rawlins County, Kansas spud January 23, 2014 and reached a total depth of 4740' on February 1, 2014. The test drilled into the Pennsylvanian Cherokee for wireline logs. Wellsite geological supervision commenced at 3000'. The primary objective was the Pennsylvanian Missourian Lansing-Kansas City carbonate benches, which produce nearby. Secondary zones of interest were the Foraker and Oread Limestones. The Kenneth 1-35 was drilled using seismic and nearby well control.

Evaluation of the primary zones of interest was by drill stem testing after sample analysis. Five DSTs were run.

### **Foraker, Oread, Lansing-Kansas City, and Pawnee**

Samples of the Foraker revealed clean, nonporous limestone that did not warrant testing.

DST 1 in the Oread recovered 800 ft of muddy water. Samples were fossiliferous packstone with poor interparticle porosity, scattered oil stain, and good cuts.

The Lansing A was circulated out for evaluation. The limestone was nonporous with no hydrocarbons evident. The lower sandstone was very fine grained with fair porosity and abundant black dead oil specks and flakes. The decision was made to drill deeper to the Lansing B before testing. Lansing B limestone displayed scattered poor vuggy and interparticle porosity with spotty black oil stain. DST 2 tested the Lansing A lower sandstone and Lansing B. Recovery was 2400 ft of water and 40 ft of oil and water cut mud.

DST 3 in the Lansing C recovered 10 ft of mud with poor flow pressures. The limestone had only trace porosity and trace hydrocarbon shows. Wireline logs showed the Lansing C was tight.

The Lansing D was a thin tight mudstone with very poor sample shows and porosity. The decision was made to drill through the Lansing E limestone and test the D and E zones together. The Lansing E limestone was mudstone to packstone with scattered heavy oil specks and stain. DST 4 in the combined D and E zones recovered 100 ft of mud with oil spots. Wireline logs confirmed lack of porosity in the E.

The Lansing F was nonporous limestone with no sample shows.

Structurally the Kenneth 1-35 was 17 ft low to the nearby Berexco Lillie 1-26 F interval. With the lack of potential production the test was deepened through the Pawnee and into the Cherokee. No shows in traces of poor porosity were observed in the Pawnee. The Cherokee was nonporous. After wireline logs DST 5 tested the Pawnee with anchor pipe run to TD. Recovery was 500 ft of water and mud.

### **Plugged and Abandoned**

Subsequent to wireline logs the Kenneth 1-35 was plugged and abandoned according to orders from the Oil & Gas Conservation Division of the Kansas Corporation Commission.

Peter J. Vollmer  
Consulting Wellsite Geologist, WPG #3369  
February 2014

Berexco LLC  
Kenneth 1-35

## WELL DATA

OPERATOR: Berexco LLC  
2020 North Bramblewood Drive  
Wichita, Kansas 67206

WELL NAME: Kenneth 1-35

SURFACE LOCATION: 330' FSL & 660' FWL  
S2 SW SW, Sec 35, T1S, R36W  
Rawlins County, Kansas

LATITUDE & LONGITUDE: 39.9164827, -101.3330731 (From State, calculated from footages)

BOTTOM HOLE LOCATION: Vertical hole

ELEVATIONS: 3313' GL      3326' KB

API NUMBER: 15-153-20979

BASIN: Mid-Continental Arch

FIELD: Wildcat

HOLE SIZE: 12 ¼" to 310'; 7 7/8" to 4740'

CASING: 8 5/8" J-55 24# STC set to 310' KB

SPUD DATE: January 23, 2014

TD DATE: February 1, 2014

TOTAL DEPTH: 4740' Rig TD    4736' Log TD

LAST FORMATION: Pennsylvanian Cherokee

WELL STATUS: Plugged and abandoned

OPERATOR REPRESENTATIVE: Dana Wreath - Vice President

WELLSITE GEOLOGIST: Peter J. Vollmer

**FORMATION TOPS**

Formation	Sample Top	Log Top	Log TVD	Log Datum
KB				3326
Pierre Sh	Cased	Cased	N/A	N/A
Niobrara Fm	N/A	1206	1206	+2120
Fort Hays Ls Mbr	N/A	1753	1753	+1573
Carlile Sh	N/A	1807	1807	+1519
Dakota	N/A	2050	2050	+1276
Cheyenne	N/A	2718	2718	+608
Blaine	N/A	3004	3004	+322
Stone Corral Anhydrite	3218	3216	3216	+110
Base Anhydrite	3251	3248	3248	+78
Neva	3708	3714	3714	-388
Foraker	3816	3826	3826	-500
Wabaunsee	3946	3946	3946	-620
Topeka	4046	4040	4040	-714
Deer Creek Sand	4090	4084	4084	-758
Oread	4164	4172	4172	-846
Lansing-Kansas City				
"A"	4270	4266	4266	-940
"B"	4325	4323	4323	-997
"C"	4387	4382	4382	-1056
"D"	4431	4424	4424	-1098
"E"	4473	4466	4466	-1140
"F"	4510	4504	4504	-1178
Pawnee	4657	4654	4654	-1328
Cherokee	4688	4677	4677	-1351
TD Driller	4740			
TD Logger		4736	4736	-1410

## LITHOLOGY AND SHOWS

The following descriptions are interpretive. Rig crew members collected unlagged samples from 3500' to 4625' TD. Depths are rig depths except where noted as wireline.

3500' - 3550'	SHALE: red to gray, firm, blocky, very silty, occasional sandy in part, non calcareous, trace Limestone stringers.
3550' - 3600'	SHALE: reddish brown, soft to firm, sub blocky to platy, non to slightly calcareous, occasionally silty.
3600' - 3650'	SHALE: reddish brown, soft to firm, sub blocky to platy, non to slightly calcareous, occasional silty, trace limestone.
3650' - 3708'	SHALE: reddish brown, soft to firm, sub blocky, non calcareous, occasional silty.
NEVA	SAMPLE TOP: 3708'      LOG TOP: 3714'      SUBSEA: -388'
3708' - 3715'	LIMESTONE: white to light gray, firm to hard, chalky, fossil fragment, tight, no shows.
3715' - 3750'	SHALE: reddish brown, soft to firm, sub blocky to sub fissile, non calcareous, occasionally silty.
3750' - 3784'	SHALE: reddish brown to brown, soft to firm, sub blocky, non calcareous, occasional silty, with interbedded LIMESTONE: white to light gray, firm to hard, cryptocrystalline, fossil fragment, tight, no shows.
3784' - 3816'	SHALE: reddish brown to reddish orange, soft to firm, sub blocky to sub fissile, non calcareous, occasional silty.
FORAKER	SAMPLE TOP: 3816'      LOG TOP: 3826'      SUBSEA: -500'
3816' - 3830'	LIMESTONE: white to light gray, firm to hard, cryptocrystalline, chalky, fossil fragment, clean, tight, no shows.
3830' - 3848'	SHALE: gray, firm, blocky, non to slightly calcareous, fossil fragments.
3848' - 3878'	LIMESTONE: light tan to light gray to white to cream, firm to soft, cryptocrystalline, slightly chalky, sandy/silty, rare fossil fragments, argillaceous in part, occasional light gray Shale, tight, no shows.

## LITHOLOGY AND SHOWS

3878' - 3896'	SHALE: reddish brown to gray green, soft to firm, sub blocky, non calcareous, occasionally silty.
3896' - 3905'	LIMESTONE: light tan to light gray to white to cream, firm to soft, cryptocrystalline, slightly chalky, occasional sandy, rare fossil fragments, argillaceous in part, occasional light orange Shale stringers, trace light orange chert, tight, no shows.
3905' - 3926'	SHALE: reddish brown, soft to firm, sub blocky, non calcareous, occasional silty.
3926' - 3932'	LIMESTONE: cream to gray, hard, slightly silica, embedded dark gray rounded fine grained sand, tight, no shows.
3932' - 3946'	SHALE: dark gray to black, firm, fissile to blocky, non calcareous, carbonaceous in part.
WABAUNSEE	SAMPLE TOP: 3946'      LOG TOP: 3946'      SUBSEA: -620'
3946' - 3980'	SHALE: red brown, soft to firm, blocky, non to slightly calcareous, with interbedded LIMESTONE: white to cream, occasional light reddish brown mottling, hard to firm, cryptocrystalline, fossil fragments, tight, no shows.
3980' - 4018'	SHALE: reddish brown, soft to firm, sub blocky, non calcareous, occasional LIMESTONE stringers.
4018' - 4030'	LIMESTONE: white to very light gray, firm to hard, cryptocrystalline, chalky, fossil fragment, clean, tight, no shows.
4030' - 4046'	SHALE: reddish brown, soft to firm, sub blocky, non calcareous.
TOPEKA	SAMPLE TOP: 4046'      LOG TOP: 4040'      SUBSEA: -714'
4046' - 4060'	LIMESTONE: light gray to white, hard to firm, cryptocrystalline, fossil fragments, sparry calcareous, algal stain, (dead oil), micro fractures with dead oil, tight, no shows.
4060' - 4072'	LIMESTONE: light gray to white, hard to firm, packstone, fossil fragments, clear calcareous fill in vugs, opaque chert, black live oil stain, tight, bright yellowish white fluorescence, streaming bright yellowish white cuts, fair shows.
4072' - 4084'	LIMESTONE: white, hard to firm, cryptocrystalline, fossil fragments, chalky, algal stain, (dead oil), no shows.

## LITHOLOGY AND SHOWS

4084' - 4090'	SHALE: gray, firm, platy, non to slightly calcareous, dull, plant remains.
DEER CREEK SAND	SAMPLE TOP: 4090'      LOG TOP: 4084'      SUBSEA: -758'
4090' - 4106'	SANDSTONE: light gray to white, friable to soft, very fine grained, well rounded, well sorted, calcareous, clay filled, plant remains, black dead oil specks, no visible porosity, no show.
4106' - 4118'	SHALE: reddish brown, soft to firm, sub blocky, non calcareous, occasional silty.
4118' - 4130'	LIMESTONE: white to cream, with reddish brown mottlings and partings, hard to firm, cryptocrystalline, chalky, trace black dead oil, interbedded SHALE, red, firm, calcareous.
4130' - 4164'	SHALE: reddish brown, maroon, soft to firm, sub blocky, non calcareous, moderately to very silty in part, white LIMESTONE partings.
OREAD	SAMPLE TOP: 4164'      LOG TOP: 4172'      SUBSEA: -846'
4164' - 4174'	LIMESTONE: white to cream, hard, microcrystalline, patchy black oil stain, tight, dull yellowish white fluorescence, instant blooming yellowish white cuts, with slow streaming bright yellowish white cuts, fair show.
4174' - 4181'	LIMESTONE: cream to white, firm to hard, wackestone to packstone, trace oolites, chalky in part, fossil fragments, tight to trace interparticle porosity, scattered black to dark brown live oil stain, bright yellowish white fluorescence, instant blooming yellowish white cuts, fair show.
4181' - 4195'	LIMESTONE: white to cream, very hard, cryptocrystalline, slightly chalky, fossil fragment, very thin black Shale partings, clean, tight, no shows.
4195' - 4228'	SHALE: gray to very dark gray,, firm, platy to fissile, n to slightly calcareous, occasional very carbonaceous and silty, interbedded LIMESTONE.
4228' - 4236'	SHALE: reddish brown to reddish orange, soft to firm, sub blocky, non calcareous.
4236' - 4244'	SHALE: grayish black to dark gray, firm, sub fissile, carbonaceous, non to very slightly calcareous.
4244' - 4252'	LIMESTONE: white to light brown to cream, very hard, cryptocrystalline, rare fossil fragment, clean, tight, no shows.
4252' - 4270'	SHALE: reddish brown, soft to firm, sub blocky, non calcareous.

## LITHOLOGY AND SHOWS

### LANSING- KANSAS CITY "A"

SAMPLE TOP: 4270' LOG TOP: 4266' SUBSEA: -940'

4270' - 4292'

LIMESTONE: very light gray to cream to white, hard, cryptocrystalline, occasional very thin micro fracture faces with dark brown dead oil, no visible matrix porosity, mineral fluorescence, no cut.

4292' - 4300'

SANDSTONE: very light gray to white, very friable, very fine grained, well rounded, well sorted, very weak calcareous cement, abundant black dead oil specs, fair intergranular porosity, no show.

4300' - 4325'

SHALE: reddish brown, soft to firm, sub blocky, non calcareous, interbedded white to light gray LIMESTONE.

### LANSING- KANSAS CITY "B"

SAMPLE TOP: 4325' LOG TOP: 4323' SUBSEA: -997'

4325' - 4334'

LIMESTONE: white, firm, mudstone to packstone, fossil(Crinoid, Fusulinids), trace intergranular and pin point vuggy porosity, spotty live heavy black oil, bright yellowish white fluorescence, blooming yellowish white cuts with slow streaming cuts, fair show.

4334' - 4350'

SHALE: dark gray, firm, platy, slightly carbonaceous in part, interbedded light gray LIMESTONE.

4350' - 4357'

LIMESTONE: light tan, hard, cryptocrystalline, dense, tight, no shows.

4357' - 4387'

SHALE: reddish brown to gray to maroon, firm, sub blocky, slightly calcareous, dull, fossil fragments.

### LANSING- KANSAS CITY "C"

SAMPLE TOP: 4387' LOG TOP: 4382' SUBSEA: -1056'

4387' - 4399'

LIMESTONE: white to light gray, hard to firm, packstone to mudstone, chalky, very fossil, poor intergranular porosity and trace pin-point vuggy porosity, occasional spotty black heavy oil, dull yellowish white fluorescence, bright streaming and blooming yellowish white cuts, poor show.

4399' - 4423'

SHALE: gray to dark gray, firm, sub blocky, slightly carbonaceous in part, interbedded light gray LIMESTONE.

4423' - 4431'

SHALE: reddish brown to gray, firm, sub blocky, slightly calcareous, dull.

## LITHOLOGY AND SHOWS

### LANSING- KANSAS CITY "D"

SAMPLE TOP: 4431' LOG TOP: 4424' SUBSEA: -1098'

4431' - 4441'

LIMESTONE: light gray to white to grayish brown, hard, mudstone grainstone, occasional abundant oolites heavily included by sparry calcite, fossil fragments, no stain, no visible porosity, no shows.

4441' - 4448'

SHALE: grayish black to dark gray, firm, sub fissile, slightly carbonaceous in part, non calcareous.

4448' - 4453'

LIMESTONE: light brown to tan, firm, argillaceous, fossil fragments, tight.

4453' - 4473'

SHALE: gray to dark gray, firm, platy, non to slightly calcareous, interbedded light gray LIMESTONE.

### LANSING- KANSAS CITY "E"

SAMPLE TOP: 4473' LOG TOP: 4466' SUBSEA: -1140'

4473' - 4488'

LIMESTONE: white to very light brown, firm, grainstone to wackestone, scattered fossil fragment, rare oolites, slightly chalky, scattered dark brown to black oil stain, free oil in vugs, trace intergranular and vuggy porosity, bright yellowish white fluorescence, instant blooming bright yellowish white cuts, fast streaming cuts, good show.

4488' - 4494'

SHALE: gray to dark gray, firm, platy, non to slightly calcareous, occasional fossil (Brachiopod), dull.

4494' - 4510'

SHALE: reddish brown, soft to firm, sub blocky, non to slightly calcareous, silty.

### LANSING- KANSAS CITY "F"

SAMPLE TOP: 4510' LOG TOP: 4504' SUBSEA: -1178'

4510' - 4520'

LIMESTONE: cream to white, firm to hard, mudstone to very fine crystalline,, trace fossil fragment, trace black asphalt specs(dead oil), no visible porosity, faint yellow grain fluorescence, weak residual green cuts, very poor show.

4520' - 4525'

SHALE: gray to dark gray, firm, fissile to platy, n to slightly calcareous, dull, slightly carbonaceous in part.

4525' - 4532'

LIMESTONE: very light gray to white, hard, cryptocrystalline, clean, chalky, tight, no shows.

## LITHOLOGY AND SHOWS

4532' - 4563'	SHALE: light gray to reddish brown, mottled in part, firm, sub fissile to sub blocky, non calcareous, interbedded white to light gray LIMESTONE.
4563' - 4584'	SHALE: maroon to reddish brown, soft to firm, sub blocky to sub fissile, non calcareous.
4584' - 4592'	LIMESTONE: cream to white, firm to hard, mudstone, chalky, clean, tight, no shows.
4592' - 4598'	SANDSTONE: white to light gray, very friable, very fine grained, well rounded, well sorted, weak calcareous cement, clean, poor porosity, no shows.
4598' - 4622'	SHALE: gray to reddish brown to maroon to brown, mottled in part, firm, blocky to sub fissile, silty in part, non to moderately calcareous, thin white Limestone stringers.
4622' - 4632'	LIMESTONE: white, hard, mudstone, chalky, very fine rounded black Phosphatic pellets, trace black algal stain (dead oil), tight, no shows.
4632' - 4657'	SHALE: gray to dark gray to black, firm, fissile to platy, non to slightly calcareous, dull, slightly carbonaceous in part.
PAWNEE	SAMPLE TOP: 4657'      LOG TOP: 4654'      SUBSEA: -1328'
4657' - 4670'	LIMESTONE: white to very light gray, hard, mudstone, rare fossil fragment, clean, tight to trace intercrystalline porosity, no shows.
4670' - 4688'	LIMESTONE: white to very light gray, hard, mudstone, occasional fossil, occasional sandy, occasional black rounded Phosphatic concretions, tight, no shows.
CHEROKEE	SAMPLE TOP: 4688'      LOG TOP: 4677'      SUBSEA: -1351'
4688' - 4694'	SHALE: black to dark gray to gray, firm, blocky to fissile, occasional carbonaceous, trace pyrite, plant remains.
4694' - 4716'	LIMESTONE: white to light gray, firm to hard, mudstone, occasional sandy in part, argillaceous, tight, no shows.
4716' - 4740' TD	LIMESTONE: light gray to gray, firm to hard, mudstone, argillaceous, sandy in part, occasional dark gray moderately to non carbonaceous SHALE partings, tight, no shows.

Berexco LLC  
Kenneth 1-35

## SERVICES

CONTRACTOR:	Beredco Drilling Inc., Rig 2	
Toolpusher:	Milo Salinas	
DRILLING FLUIDS:	Morgan Mud, Inc.	McCook, ND
Mud Type:	Freshwater Chemical	308-340-5946
Engineer:	Dave Lines, Cade Lines	
MUD LOGGING:	None	
WELLSITE GEOLOGY:	T. M. McCoy & Co., Inc.	Wilson, WY
	Peter J. Vollmer	307-733-4332
DRILL STEM TESTING:	Trilobite Testing, Inc.	Hays, KS
	Ryan Nichols	
	DST 1: 4126' - 4180' Oread	
	DST 2: 4284' - 4340' LKC "A" & "B"	
	DST 3: 4356' - 4410' LKC "C"	
	DST 4: 4396' - 4490' LKC "D & E"	
	DST 5: 4625' - 4736' TD (wireline depth) Pawnee	
DIRECTIONAL DRILLING:	None	
WIRELINE LOGS:	Pioneer Wireline Services	Hays, KS
	RAG: Surface casing - TD	785-625-3858
	Engineer: Josh Ruiz	