BEREXCO LLC

MICHAEL 6-22

NE NE SW NE SEC 22 T1S R36W

RAWLINS COUNTY, KANSAS

WELL FILE

WELLSITE GEOLOGISTS' REPORT

CONFIDENTIAL

T. M. MCCOY & CO., INC.

CONSULTING GEOLOGISTS

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RAWLINS COUNTY, KANSAS

SUMMARY

The Berexco LLC Michael 6-22 in Rawlins County, Kansas spud November 21, 2013 and reached a total depth of 4490' on December 7, 2013. The test drilled below the below the Lansing-Kansas City F zone for wireline and completion rathole but did not penetrate the Pennsylvanian Pawnee. Wellsite geological supervision commenced at 3000'. The primary objective was the Pennsylvanian Missourian Lansing-Kansas City carbonate benches, which produce in the East Fork field. A secondary zone of interest was the Virgilian Oread Limestone. The Michael 6-22 was drilled using seismic and nearby well control.

Evaluation of the primary zones of interest was by drill stem testing after sample analysis and correlation. Five DSTs were run based on sample shows.

Lost circulation beginning at 2080' resulted in over 600 B of drilling fluid pumped into the Dakota. Periodic lost circulation continued until 3252' where the PDC bit was pulled. While tripping in with a tri-cone bit, two days of reaming and conditioning with LCM were required to gain full returns and resume drilling.

Oread Limestone and Lansing-Kansas City

DST 1 in the Oread recovered 828 ft of water and mud. Samples were fossiliferous packstone with poor interparticle porosity, scattered oil staining, and good cuts. The 49,500 ppm chlorides water was from the "Deer Creek Sand" below the Topeka Formation. Based on drill rate correlation and cuttings only 2 ft of upper non-porous Oread had been drilled and tested in DST 1.

DST 2 over the complete Oread Limestone recovered 543 ft of oil and mud with 180 ft of watery mud.

DST 3 in the Lansing A was run after moldic porosity with spotty black oil was observed in cuttings. Recovery was 360 ft of watery mud with oil spots. The sandstone below the Lansing A limestone may have contributed the water. Wireline logs confirmed good porosity in the lower sandstone.

The Lansing B exhibited fossiliferous packstone and mudstone with poor to trace vuggy porosity, live black oil staining, and fair cuts. DST 4 recovered 365 ft of slightly oil cut watery mud with poor flow pressures. Wireline logs confirmed the lack of porosity.

DST 5 in the Upper and Lower Lansing C was based on spotty live black oil stain, good fluorescence and cuts in a grainstone with fair moldic porosity. Recovery was 310 ft of oil and oil cut mud with good flow pressures.

The Lansing D was grainstone to mudstone with good fluorescence, cuts, and poor porosity that warranted a DST. After pulling 9 stands of pipe the floor motor failed. The hole was circulated during motor replacement but the drill string became stuck. Spotting 80 B of lease crude freed the drill string. Drilling resumed to TD after the stand pipe and kelly hose were thawed. No further testing was attempted. The Lansing E was packstone with uniform black heavy oil staining; intergranular and vuggy porosity was poor. The Lansing F was nonporous limestone with no sample shows.

Oil Well Completion

5 ½" production casing was run to complete the Michael 6-22 as an oil producer.

Peter J. Vollmer
Consulting Wellsite Geologist, WPG #3369
December 2013

WELL DATA

OPERATOR:	Berexco LLC 2020 North Bramblewood Drive Wichita, Kansas 67206
WELL NAME:	Michael 6-22
SURFACE LOCATION:	1630’ FNL & 1500’ FEL NE NE SW NE Sec 22, T1S, R36W Rawlins County, Kansas
LATITUDE & LONGITUDE:	39.954623, -101.3411796
BOTTOM HOLE LOCATION:	Vertical Hole
ELEVATIONS:	3217’ GL 3230’ KB
API NUMBER:	15-153-20963
BASIN:	Mid-Continental Arch
FIELD:	East Fork
HOLE SIZE:	12 ¼” to 310’; 7 7/8” to 4525’
CASING:	8 5/8” J-55 24# STC set to 310’ KB
SPUD DATE:	November 21, 2013
TD DATE:	December 7, 2013
TOTAL DEPTH:	4490’ Rig TD 4492’ Log TD
LAST FORMATION:	Pennsylvanian Lansing-Kansas City
WELL STATUS:	Ran 5 ½” production casing for oil well completion
OPERATOR REPRESENTATIVE:	Dana Wreath - Vice President
WELLSITE GEOLOGIST:	Peter J. Vollmer

FORMATION TOPS

Formation	Sample Top	Log Top	Log TVD	Log Datum
KB				3230
Pierre Sh	Cased	Cased	N/A	N/A
Niobrara Fm	N/A	1118	1118	+2112
Fort Hays Ls Mbr	N/A	1652	1652	+1578
Carlile Sh	N/A	1698	1698	+1532
Dakota	N/A	2250	2250	+980
Cheyenne	N/A	2540	2540	+690
Blaine	N/A	2972	2972	+258
Anydrite	3126	3119	3119	+111
Base Anydrite	3167	3159	3162	+68
Neva	3609	3612	3612	-382
Foraker	3722	3724	3724	-494
Topeka	3949	3940	3940	-710
Deer Creek Sand	3980	3976	3976	-746
Oread	4053	4053	4053	-823
Heebner Sh	4111	4104	4104	-874
Lansing-Kansas City				
"A"	4153	4156	4156	-926
"B"	4216	4213	4213	-983
"C"	4276	4276	4276	-1046
"D"	4322	4320	4320	-1090
"E"	4368	4364	4364	-1134
"F"	4408	4402	4402	-1172
TD Driller	4490			
TD Logger		4492	4492	-1262

LITHOLOGY AND SHOWS

The following descriptions are interpretive. Rig crew members collected unlagged samples from 3500’ to 4540’ TD. Depths are rig depths except where noted as wireline.

3500’ - 3609’	SHALE: red, firm to hard, fissile to blocky, very silty, sandy in part, non to slightly calcareous, trace tan LIMESTONE.

NEVA	SAMPLE TOP: 3609’	LOG TOP: 3612’	SUBSEA: -382’

3609’ - 3614’	LIMESTONE: white to light gray, firm to hard, chalky, fossil fragment, tight, no shows.
3614’ - 3680’	SHALE: red brown, soft to firm, sub blocky, non calcareous, occasional silty, with interbedded LIMESTONE: white to light gray, firm to hard, cryptocrystalline, tight, no shows.
3680’ - 3722’	SHALE: red brown, soft to firm, sub blocky, non calcareous, occasional silty.

FORAKER	SAMPLE TOP: 3722’	LOG TOP: 3724’	SUBSEA: -494’

3722’ - 3730’	LIMESTONE: white to light gray, firm to hard, cryptocrystalline, chalky, fossil fragment, trace black oil stain, dull yellowish white fluorescence, slow streaming yellowish white cuts from tight Limestone, no visible porosity.
3730’ - 3748’	SHALE: gray to grayish green, firm, blocky, n to slightly calcareous, fossil fragment.
3748’ - 3760’	LIMESTONE: white to light gray, firm to hard, cryptocrystalline, chalky, fossil fragment, algal stain, slightly sandy at base, tight, no shows
3760’ - 3773’	SANDSTONE: white, friable, very fine grained, subangular, well sorted, calcareous cement, clay fill, tight to trace porosity, no shows.
3773’ - 3832’	SHALE: red brown, soft to firm, sub blocky, non calcareous, occasional silty.
3832’ - 3862’	SHALE: dark gray to black, firm, fissile to blocky, non calcareous, carbonaceous in part, fossil fragment (Brachiopod).
3862’ - 3949’	SHALE: brownish red, soft to firm, blocky, n to slightly calcareous, interbedded LIMESTONE: white to light gray, light reddish brown mottled, hard, cryptocrystalline, fossil fragment, tight, no shows.

LITHOLOGY AND SHOWS

TOPEKA	SAMPLE TOP: 3949’	LOG TOP: 3940’	SUBSEA: -710’

3949’ - 3956’	LIMESTONE: light gray to white, hard to firm, cryptocrystalline, fossil fragment, sparry calcareous, trace black oil stain, tight, bright yellowish white fluorescence, good streaming yellowish white cuts.
3956’ - 3968’	SHALE: gray, firm, platy, non to slightly calcareous, subwaxy, plant remains.
3968’ - 3980’	LIMESTONE: light gray to white, hard to firm, cryptocrystalline, fossil fragment, clear calcareous fill in vugs, opaque chert, tight, no shows.

DEER CREEK SAND	SAMPLE TOP: 3980’	LOG TOP: 3976’	SUBSEA: -746’

3980’ - 4000’	SANDSTONE: light gray to grayish brown, friable to soft, very fine grained, well rounded, well sorted, calcareous, clay filled, plant remains, abundant loose grains, no visible porosity, no show.
4000’ - 4053’	SHALE: reddish brown, maroon, gray, mottled in part, soft to firm, blocky, non calcareous, moderately to very silty in part.

OREAD	SAMPLE TOP: 4053’	LOG TOP: 4053’	SUBSEA: -823’

4053’ - 4068’	LIMESTONE: cream to white, firm to hard, wackestone to packstone, chalky in part, fossil fragments, occasional Peloids, tight to fair interparticle and vuggy porosity, scattered black to dark brown live oil stain, bright yellowish white fluorescence, immediate blooming milky yellowish white cuts, good show.
4068’ - 4078’	LIMESTONE: white to cream, very hard, cryptocrystalline, slightly siliceous, fossil fragments, tight, no shows.
4078’ - 4083’	SHALE: grayish black to dark gray, firm, sub fissile, carbonaceous, non to very slightly calcareous.
4083’- 4100’	SHALE: gray, firm, platy, non to slightly calcareous, fossil fragments.
4100’ - 4111’	SHALE: reddish brown, gray, firm, blocky, non to slightly calcareous, silty.

LITHOLOGY AND SHOWS

HEEBNER SH.	SAMPLE TOP: 4111’	LOG TOP: 4104’	SUBSEA: -874’

4111’ - 4118’	SHALE: dark gray to black, firm, subfissile, slightly carbonaceous, noncalcareous.
4118’ - 4124’	LIMESTONE: gray to grayish brown, firm, mudstone, argillaceous, tight.
4124’ - 4153’	SHALE: gray to reddish brown, firm, blocky, non to slightly calcareous.

LANSING- KANSAS CITY “A”	SAMPLE TOP: 4153’	LOG TOP: 4156’	SUBSEA: -926’

4153’- 4176’	LIMESTONE: white to cream, firm to hard, mudstone to grainstone, occasional interclasts, fossil fragments, trace black heavy oil stain, trace to fair interparticle porosity, bright yellowish white fluorescence, poor show, show and porosity decrease with depth.
4176’ - 4182’	SHALE: gray to dark gray, firm, blocky, non to slightly calcareous.
4182’ - 4190’	SANDSTONE: white to light brown to light reddish brown, hard to friable, very fine grained, well rounded, well sorted, calcareous cement, pyrite, clay filled, occasional black heavy oil specs, predominant tight, bright yellowish white fluorescence, slow diffuse yellowish white cut.
4190’ - 4216’	SHALE: gray to maroon to reddish brown, mottled, firm, blocky, non to slightly calcareous.

LANSING- KANSAS CITY “B”	SAMPLE TOP: 4216’	LOG TOP: 4213’	SUBSEA: -983’

4216’ - 4232’	LIMESTONE: white, firm, packstone, fossil(Crinoid, Fusulinids, Brachiopod), poor intergranular and poor vuggy porosity, spotty live heavy black oil, bright yellowish white fluorescence, good diffuse yellowish white cut.
4232’ - 4248’	SHALE: dark gray, firm, platy, slightly carbonaceous in part.
4248’ - 4252’	LIMESTONE: white to light gray, firm, cryptocrystalline, dark gray Shale partings, fossil fragment (Brachiopod), argillaceous, tight, no show.
4252’ - 4276’	SHALE: brownish red to gray to maroon, firm, platy, slightly calcareous, silty in part, Limestone partings.

LITHOLOGY AND SHOWS

LANSING- KANSAS CITY "C"	SAMPLE TOP: 4276'	LOG TOP: 4276'	SUBSEA: -1046'

4276' - 4290'	LIMESTONE: white, firm, grainstone, very fossiliferous, poor intergranular and pin point vuggy porosity, free oil, spotty live black heavy oil, dull yellowish white fluorescence, blooming yellowish white cuts, good show.
4290' - 4296'	SHALE: dark gray, firm, blocky, calcareous.
4296' - 4310'	LIMESTONE: white to dark gray, mottled in part, hard to firm, grainstone, fossiliferous, poor intergranular porosity, spotty live black oil, patchy yellowish white fluorescence, fair milky yellowish white cut, fair show.
4310' - 4322'	SHALE: dark gray to black, firm, blocky, calcareous, carbonaceous in part.

LANSING- KANSAS CITY "D"	SAMPLE TOP: 4322'	LOG TOP: 4320'	SUBSEA: -1090'

4322' - 4334'	LIMESTONE: white, firm to hard, grainstone to mudstone, fossil fragment, poor to trace intergranular porosity, trace spotty black oil, bright yellowish white fluorescence, blooming yellowish white cuts, fair show.
4334' - 4368'	SHALE: dark gray firm, blocky, white chalky Limestone partings.

LANSING- KANSAS CITY "E"	SAMPLE TOP: 4368'	LOG TOP: 4364'	SUBSEA: -1134'

4368' - 4382'	LIMESTONE: white, firm, mudstone to packstone, fossilferous in part, secondary clear calcareous crystals in vugs, trace intergranular and occasional poor vuggy porosity, scattered black heavy oil stain, bright yellowish white fluorescence, dull yellowish white diffuse cut, fair to good show.
4382' - 4388'	SHALE: dark gray, firm, sub fissile, non calcareous, slightly carbonaceous.
4388' - 4408'	SHALE: gray, firm, platy, non to slightly calcareous, trace fossils, dull.

LITHOLOGY AND SHOWS

LANSING- KANSAS CITY "F"	SAMPLE TOP: 4408'	LOG TOP: 4402'	SUBSEA: -1172'

4408' - 4418'	LIMESTONE: cream to white, firm to hard, mudstone to wackestone, scattered fossil fragments, trace black dead oil, very tight, no shows.
4418' - 4450'	SHALE: dark gray, firm, blocky, slightly to non calcareous, fossil fragments, with LIMESTONE: gray to white, firm to hard, mudstone, occasional fossil fragments, clear calcareous fill in vugs, argillaceous in part, tight, no show.
4450' - 4464'	LIMESTONE: cream to white, firm to hard, mudstone, fossil fragment, chalky, dense, with interbedded dark gray Shale partings, tight, no shows.
4464' - 4490' TD	SHALE: dark gray, firm, platy, non to very slightly calcareous, fossil fragment, interbedded white chalky Limestone.

SERVICES

CONTRACTOR: Toolpusher:	Beredco Drilling Inc., Rig 2 Milo Salinas	
DRILLING FLUIDS: Mud Type: Engineer:	Morgan Mud, Inc. Freshwater Chemical Dave Lines	McCook, ND 308-340-5946
MUD LOGGING:	None	
WELLSITE GEOLOGY:	T. M. McCoy & Co., Inc. Peter J. Vollmer	Wilson, WY 307-733-4332
DRILL STEM TESTING:	Trilobite Testing, Inc. Tester: Kevin Mack DST 1: 3974’ - 4055’ Oread DST 2: 4020’ - 4108’ Oread DST 3: 4076’ - 4190’ Lansing-KC “A” DST 4: 4190’ - 4230’ Lansing-KC “B” DST 5: 4280’ - 4310’ Lansing-KC “C”	Hays, KS 785- 625-4778
DIRECTIONAL DRILLING:	None	
WIRELINE LOGS:	Pioneer Wireline Services RAG: 3100’ - TD Micro: Surface casing to TD Engineer: J. Henrickson	Hays, KS 785-625-3858