

Sean Deenihan

Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY: New Gulf Operating, LLC
 LEASE: #11Jordan
 FIELD: Wildcat
 LOCATION: 964' ENL & 670' FWL

SEC: 32 TWSF 24 S RGE 9 W
 COUNTY: Reno STATE: Kansas
 CONTRACTOR: Val Brewery Bldg #2
 SPUD: 6-13-11 COMP: 6-23-11
 RTD: 4320' LTD: 4300'
 MUD UP: 3118' TYPE MUD: Chemical

SAMPLES SAVED FROM: 3000' TO RTD
 DRILLING TIME KEPT FROM: 3000' TO RTD
 SAMPLES EXAMINED FROM: 3000' TO RTD
 GEOLOGICAL SUPERVISION FROM: 2750'

GL 1707'
 Measurements Are All From Kelly Bushing
CASING
 CONDUCTOR: SURFACE 8.5/8" at 222'
 PRODUCTION 5.5" @ 4300'

ELEVATIONS
 KB 1717'
 DF

REFERENCE WELL: New Gulf-Dealy (Sec. 31)

Formation	Sample Tops	E-log Tops	Struct.
Heebner Shale	3174 (-1453)	3167 (-1450)	+1
Brown Lime	3350 (-1633)	3342 (-1625)	+1
Lansing	3365 (-1648)	3360 (-1643)	+4
Stark Sh.	3656 (-1939)	3645 (-1928)	+8
Cherokee Sh	3826 (-2109)	3818 (-2101)	-2
Mississippi Ch	3852 (-2135)	3846 (-2129)	-6
Mississippi Ls	3915 (-2198)	3910 (-2193)	-8
Viola	4112 (-2395)	4120 (-2408)	-17
Simpson Sd	4202 (-2485)	4190 (-2473)	-18

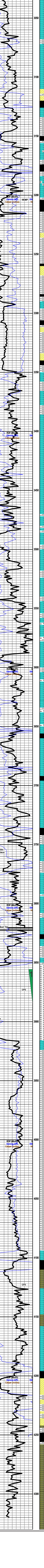
REMARKS: Sample evaluation indicated commercial reservoir potential in the Mississippian Chert.
 14 Sidewall cores were taken and 5.5" casing was run to further evaluate this location.
 The Caliper Log indicated washouts of up to 20" borehole diameter from 1000-1368' MD.

Respectfully Submitted,
 Sean P. Deenihan

API #15-155-21574

Curve Track 1
 ROP (Min/Ft)
 Gamma (API)
 Caliper (inches)

Correction: Gamma increased 8' from depth on log.



Geological Descriptions

3000' - Ls., wh, crm, vf gr, sme cherty, n/s

3050' - Ls., wh, chily, vf gr, n/s

3100' - Ss., wh, gy, vf gr, fr intgran Por, dirty, n/s

3150' - Sh., gy, teal, rd

3200' - Ls., crm, vf gr, sing, p intgran por, firm, n/s

Heebner Sh. 3174 (-1453)
 Sh., blk, gas bubbles

3200' - Ls., crm, tn, vf gr, ool IP, p oom Por, sme all chily. Ls., wh, vf gr, scaly, rr brn sin, no fluor, NSFO

Douglas Sh. 3202 (-1485)
 Sh., dk gy-blk, silty
 Sh., gy, Pyr, silty
 Sh., gy, silty, soft

3250' - Ss., vf fr, mod srt, sb ang, fr intgran Por, rr Gils edge Stn (frac?), NSFO, no odor
 Sh., lt-dk gy, soft

3300' - Ls., crm, tn, vf gr, NVP, scaly dense, n/s

3350' - Sh., blk, gy, sme silty, abd Ss., aa
 Sh., w/ Ss., stringers a.a

Brown Lime 3350 (-1633)
Lansing 3365 (-1648)
 Ls., crm, tn, p-occ fr intgran Por, dense, fos, rr vug Por, occ gas bubble, NSFO
 Sh., gy-dk gy
 Ls., crm, off wh, chily, f gr, soft, n/s
 Cong, tn, hd, p Por, n/s
 Ls., crm, brn, hd, cherty, NVP
 Ls., crm, vf gr, p intgran Por, sii cherty, sme scaly, n/s
 Ls., a.a
 Ls., crm, abd fos, fr iso vug Por, p infos Por, FSFO - lt-md brn O., ft odor
 Ls., crm, tn, vf gr, p intgran Por, occ mottled, firm, no odor
 Ls., crm, vf gr, sme chily, p intgran Por, NSFO
 Ls., crm, f gr, occ fos (Fus), sme cherty, no show
 Sh., gy
 Ls., wh, chily, n/s
 Ls., tn, vf gr, rr fos, p vis Por, sme chily, firm-hd, n/s
 Sh., gy
 Ls., crm, vf gr, p intgran por, frac, no odr
 Ls., crm, vf gr, sii chily, p ivis Por, NSFO
 Sh., gy-dk gy
 Ls., a.a w/ inc. in fresh Ch, wh-smoky gy, sharp
 Ls., wh, crm, brn, hd, Cherty, n/s
 Ls., wh, v chily, fri, n/s
 Sh., dk gy
 Ls., crm, vf gr, cherty IP, p vis Por, sme mottled, firm, rr brn O stn, no odr/fluor
 Ls., crm, brn, cherty, hd, NVP, no odor
 Ls., a.a sme Crin, inc. Pyr, n/s
 Ls., crm, vf gr, p Por, chily, firm, n/s

Stark Sh. 3656 (-1939)
 Sh., blk
 Ls., tn, crm, fos frags, p-fr intgran Por, occ gas bubble?, NSFO
 Ls., brn, vf gr, hd scaly
 Ls., crm, brn, fos, vf gr, p Por, n/s
 Sh., Blk
 Ls., wh, crm, vf gr, p intgran Por, sme chily, no odor
 Ls., wh, vf gr, abd fos, re-xtl Ool, p-occ fr vug por, p infos Por, FSFO - md brn, wk odr
 Ls., crm, vf gr, dense, scaly, p vis Por, n/s

BKC 3736 (-2047)
 Sh., gy-dk gy, blk, carb
 Ls., crm, vf gr, firm, p intgran Por
 Sh., varic, soft
 Ls., wh, crm, chily, fri, n/s
 Ls., crm, tn, vf gr, p intgran Por, sing, chily IP, NSFO

Cherokee Sh 3826 (-2109)
 Ls., tn, crm, vf gr, p vis Por, scaly hd, n/s
 Sh., gy-dk gy
 Ls., crm, vf gr, p intgran Por, occ vug, rr O stn, no odor

Miss Cht 3852 (-2131)
 Cht., lt-off wh, trip, fr vug por, Good show of live oil, rapid bleed, mod odor, spotty fluor
 Cht., wh, trip, sme sat w/ oil, spic, inc. in sli weathered Cht, GSFO, mod odor, bright fluor
 Cht., wh, sli weathered, dec show of live oil, ft odor, sme fresh wh Cht
 Cht., wh, sli weath-occ trip, inc. in fresh, sharp chert, sme yel, FSFO, mod odr, bright fluor

Miss LS 3915 (-2198)
Kinderhook 3924 (-2207)
 Sh., gy-dk gy, firm
 Sh., dk gy, hd
 Sh., gy-dk gy, soft
 Sh., gy
 Sh., gy
 Sh., gy-dk gy

4100' - Ls., wh, vf gr, fos, hd, n/s

Viola 4112 (-2395)
 Dol., tn, vf xln, fr-gd intxn Por, fri, n/s
 Dol., brn, suc, fr -gd intxn Por, fri, n/s
 Sh., gy, dk gy
 Ls., wh-crm, vf gr, p-occ fr intgran Por, sii chily, no show
 Dol., vf xln, chily, p intxn Por, n/s
 Ls., tn, vf gr, fos, firm, p intgran Por, n/s
 Sh., grn/gy, blk

Simpson Sd 4202 (-2485)
 Ss., wh, vf gr, dirty, sb ang, fri, mod srtid, no odr, n/s
 Ss., dr, wh, f gr, p intgran por, firm, n/s
 Ls., crm, vf gr, fos, p vis Por, no show
 Ss., gy, vf gr, rd-sb rd, abd hvy min, black asphaltic stn, fri, NSFO, no odor, no fluor
 Sh., blk

Arbuckle 4258 (-2541)
 Dol., crm, tn, p-fr intxn Por, Oom IP, fri-firm, no show
 Dol., crm, p intxn Por, vug, n/s
 Dol., crm, p intxn Por, barren, no odor
 Dol., a.a

RTD 4320 (-2603)
LTD 4300 (-2583)

