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DRILLING TIME AND SAMPLE LOG

OPERATOR:	Prolific Resources LLC
LEASE:	Roesler — WELL NO.: 5
FIELD:	Eddy Northwest
LOCATION:	NE¼ NE¼ SE¼ (2310' FSL, 330' FEL)
SEC.:	3 — TWP: 22S — RANGE: 18W
COUNTY:	Pawnee — STATE: KS.
API NO.:	15-145-21805-00-00
CONTRACTOR:	Royal Drilling Inc., Rig #1
COMMENCED:	July 7, 2015 — COMPLETED: 7/16/15
ROTARY TOTAL DEPTH:	4367' — LOG TOTAL DEPTH: 4370'
GEOLOGICAL SUPERVISION FROM:	3500' to T.D.
MUD-UP DEPTH:	3450' — MUD TYPE: Chemical Polymer

ELEVATIONS
KB 2049
GL 2043
Measurements are all from KB

CASING RECORD
SURFACE: New 8 5/8" 23# @ 1114', 1" to surf.
PRODUCTION: 5½", 15.50# @ 4364' w/ 175 sx AA-2 by Basic.

WIRELINE SURVEYS
C-L-T/Nabors: Comp. Density-Neutron, Dual Induction and Micro Logs were run.

FORMATION	SAMPLE TOP	SAMPLE DATUM	LOG TOP	LOG DATUM	STRUCTURAL COMPARISON
Stone Corral Anhydrite	N.A.		1110'	(+939')	+1
Heebner Shale	3536	(-1487)	3540	(-1491)	-4'
Lansing Group	3630	(-1581)	3634	(-1585)	-3'
'J' Zone Porosity	3825	(-1776)	3826	(-1777)	+2'
Stark Shale	3849	(-1800)	3852	(-1803)	-4'
Base of KS City Gp.	3919	(-1870)	3922	(-1873)	-4'
Pawnee Ls.	4012	(-1963)	4017	(-1968)	-6'
Cherokee Shale	4052	(-2003)	4055	(-2006)	-6'
Cherokee Sandstone	4066	(-2017)	4070	(-2021)	-5'
Miss. Osage Fm.	4134	(-2085)	4137	(-2088)	-1'
Viola Fm.	4178	(-2129)	4182	(-2133)	-3'
Simpson Shale	4249	(-2200)	4252	(-2203)	-4'
Arbuckle Fm.	4295	(-2246)	4297	(-2248)	-4'
Total Depth	4367		4370		

LOCATION MAP
Ritchie Concept 3AB #1 Key Well
3
Location of Prolific #5 Roesler

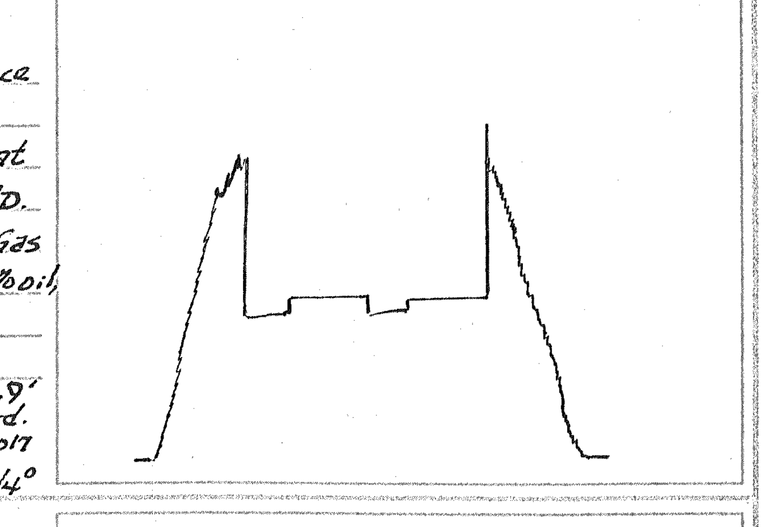
Reference Well for Structural Comparison: Ritchie Expl. Concept 3AB #1 S½ SE¼ NE¼ 3
Comments and Recommendations: Recommended Setting Casing for Completion.

DST # 1 ZONE: Cherokee Sandstone
INTERVAL: 4046'-4095'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		1944 psi	Gas to surface
2. Initial Flow: Start	0	936 psi	in 2 Min.
3. Initial Flow: End	30	983 psi	stabilized at
4. Initial Shut-in: End	60	1082 psi	5 MMCFG/D.
5. Final Flow: Start	0	948 psi	15' Sli. Oil + Gas
6. Final Flow: End	30	992 psi	Cut Mud (5% oil,
7. Final Shut-in: End	60	1080 psi	20% gas)
8. Final Hydrostatic		1922 psi	Pipe strap 1.9' long to board. No correction. Deviation 3/4°

BHT: 117°F
Rw:

DST # 1 — 30046 Chart — Interval: 4046'-4095' — Depth: 4049'

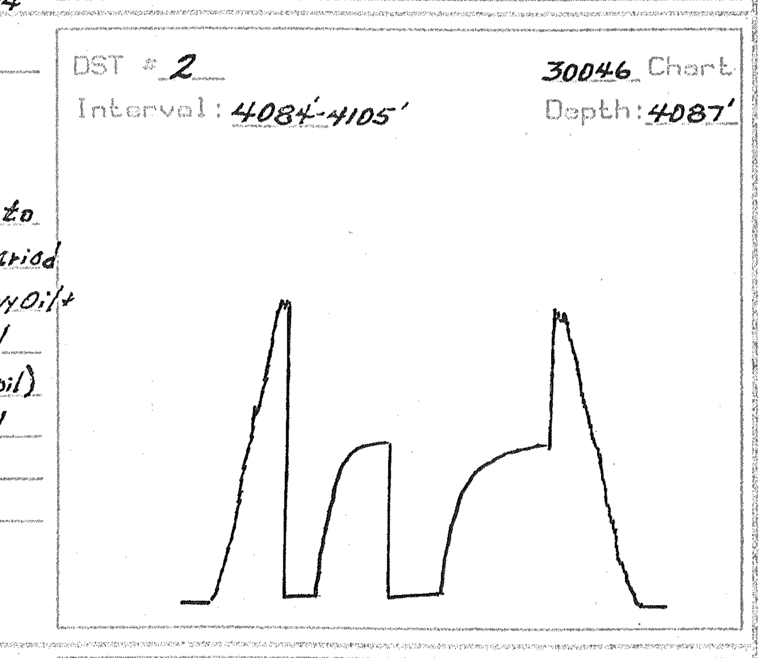


DST # 2 ZONE: Conglomerate Sandstone
INTERVAL: 4084'-4105'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		2002 psi	GTS. 3 min into
2. Initial Flow: Start	0	27 psi	final flow period
3. Initial Flow: End	30	44 psi	Rec. 130' Heavy Oil +
4. Initial Shut-in: End	60	1096 psi	Gas cut Mud
5. Final Flow: Start	0	42 psi	(30% gas, 30% oil)
6. Final Flow: End	45	71 psi	60' Gassy Oil
7. Final Shut-in: End	90	1083 psi	(80% oil)
8. Final Hydrostatic		1979 psi	39° gravity

BHT: 115°F
Rw:

DST # 2 — 30046 Chart — Interval: 4084'-4105' — Depth: 4087'

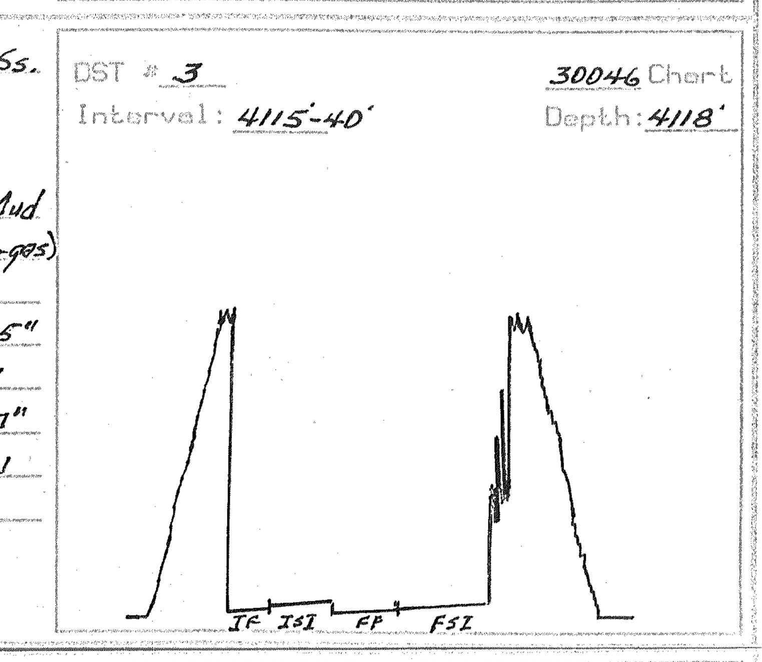


DST # 3 ZONE: Miss. Osage Cht. + Kinderhook Ss.
INTERVAL: 4115'-4140'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		1984 psi	20' Drilling Mud
2. Initial Flow: Start	0	20 psi	(No show of oil or gas)
3. Initial Flow: End	30	16 psi	Blow Desc:
4. Initial Shut-in: End	60	83 psi	I.F.-Built to 5"
5. Final Flow: Start	0	15 psi	ISI-No blow
6. Final Flow: End	45	27 psi	F.F.-built to 7"
7. Final Shut-in: End	90	81 psi	FSI-No blow
8. Final Hydrostatic		1936 psi	

BHT: 111°F
Rw:

DST # 3 — 30046 Chart — Interval: 4115'-40' — Depth: 4118'

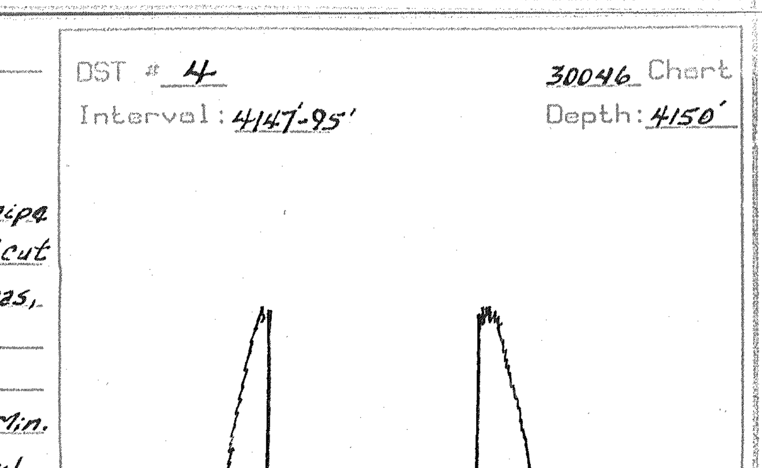


DST # 4 ZONE: Miss and Viola Fms.
INTERVAL: 4147'-4195'

Pressures:	Time	Press.	RECOVERY
1. Initial Hydrostatic		1975 psi	350' Gas in pipe
2. Initial Flow: Start	0	21 psi	80' Gas + Oil cut
3. Initial Flow: End	30	32 psi	Mud (25% gas,
4. Initial Shut-in: End	60	706 psi	20% oil)
5. Final Flow: Start	0	38 psi	Blow Desc:
6. Final Flow: End	30	49 psi	I.F.-BOB-5 Min.
7. Final Shut-in: End	60	610 psi	ISI-No blow
8. Final Hydrostatic		1976 psi	F.F.-BOB-1 Min. FSI-No blow

BHT: 111°F
Rw:

DST # 4 — 30046 Chart — Interval: 4147'-95' — Depth: 4150'



ABBREVIATIONS USED

ROCK TYPES:
Ls - Limestone
Sh - Shale
Ss - Sandstone
Slts - Siltstone
Cg - Conglomerate
Cht - Chert
Qtz - Quartzite
Gran - Granite
Dol - Dolomite
Chlk - chalky

COLOR:
Wh - White
Crm - Cream
Clr - Clear
Rd - Red
Grn - Green
Gry - Gray
Blk - Black
Mot - Mottled

HARDNESS:
Sft - Soft
M.Sft - Moderately soft
Hrd - Hard
V. Hrd - Very hard

FABRIC:
Fn.grn - Finegrained
VFG - Very fine grained
Med - Medium
Crs - Coarse
Dst - Detrital
Foss - Fossiliferous
Xln - Crystalline
Mxln - Microcrystalline
Ool - Oolitic
Oom - Oomoldic
Mat - Matrix

OTHER TERMS:
Fl - Fluorescence (of oil)
min fl - mineral fluorescence
pyr - pyritic
glau - glauconitic
carb - carbonaceous
stn - stain (of oil)
cut - oil cut
AA - as above
Ø - porosity
NSFOC - no stain, fluorescence, odor, or cut (of oil)
smpl - sample
perm - permeability

MODIFIERS:
gd - Good
fr - Fair
pr - Poor
ex - excellent
v - very
w - well
tr - trace
occ - occasional
vis - visible
N - no
gran - granular
intgran - intergranular
pp - pinpoint
dd - dead
gsy - gassy

TEXTURE:
Dns - Dense
Cly - Clayey
Fri - Friable
Earth - Earthy
Hack - Hackly
Fiss - Fissile
Vit - Vitreous
Vug - Vugular
Mic - Micritic

OIL SHOWS:
○ Weak Oil Show
◔ Fair Oil Show
◑ Good Oil Show
● Excellent Oil Show

Rate of Penetration in Minutes per foot

"Mud-up" @ 3450'

Mud Check @ 3466': M.W. 8.7 lbs./gal. Vis. 66 sec./qt. W.L. 7.2 ml./30 min. Chl. 2600 ppm. Solids 2.7%. LCM. 2 lbs./bbl.

Note: Sample/Drilling Time Tops 4' high to Log Tops.

Ls: crm-tan, hrd-sft, + chky, VFG-mxln, tr. wh. cht, foss., tr. sh. stnd, tr. v. pr. vug. moldic? Ø NSFOC

Ls: crm-tan, tr. lt. gry, hrd-sft + chky, VFG-mxln, tr. cht, foss., occ. pyr., tr. pr. moldic Ø NSFOC

Ls: crm-tan, tr. lt. gry, hrd-sft + chky, VFG-mxln, foss. sh. stnd. pyr. NØNSFOC

Ls: crm-tan-lt. gry, hrd, dns, VFG-mxln, tr. chky, tr. cht, foss., pyr., sh. stnd. NØNSFOC

Sh: blk, m. sft, dns, earthy, carb. — **Heebner Shale (-1487')**

Sh: blk, m. sft, earthy, carb.

Ls: crm-tan, hrd, dns, foss, VFG-mxln, mic. NØNSFOC

Sh: gry-grn, m. sft, earthy

Sh: A.A.

Ls: crm-brn, hrd, dns, VFG-mxln, mic, tr. gry. cht, foss. sh. stnd. NØNSFOC

Ls: A.A. NØNSFOC

Sh: gry-lt. gry, sft-m. sft, occ. slty + mica, earthy — **Douglas Shale (-1512')**

Sh: lt.-dk. gry, m. sft-m. hrd, slty., earthy, mica, tr. Ss: gry, hrd, dns, VFG, mod. srtd. w. cmtd., ? Ø NSFOC

Sh: gry, m. sft, dns, tr. slty.-sndy, mica, earthy. Abun. Ls. from above

Sh: lt.-dk. gry, m. sft-m. hrd, dns, tr. slty + mica, earthy, tr. Ss: gry-wh, m. sft, VFG, fria., mod. srtd, mod. cmtd., ? Ø NSFOC

Sh: gry, m. sft, dns, tr. slty, tr. mica, earthy

Sh: gry-dk. gry, m. sft-m. hrd, dns, occ. pyr., earthy-hackly, tr. Ls: tan-brn, hrd, dns, VFG-mxln, mic, occ. foss. NØNSFOC

Ls: tan-dk. brn, hrd, dns, mxln, mic, tr. foss. NØNSFOC

Sh: gry-dk. gry, m. hrd, dns, hackly-earthy, tr. pyr.

Ls: crm-wh, hrd, dns, mxln, occ. chky + sli. chky, VFG-mxln, occ. foss., tr. sndy, tr. pr. moldic foss. Ø NSFOC — **Lansing Group (-1581')**

Ls: crm-wh, hrd, dns, VFG-mxln, foss. NØNSFOC

tr. Sh: gry-dk. gry, m. sft, earthy

Ls: crm-tan, hrd-m. sft, dns, occ. foss., tr. sh. stnd, tr. mic. NØ NSFOC

Sh: dk. gry, m. hrd, dns, hackly

Ls: crm-tan-lt. gry, hrd, dns, occ. sft + chky, VFG-mxln, occ. mic, tr. cht, tr. foss, sh. stnd. NØNSFOC

Ls: crm-lt. gry, hrd, dns, VFG-mxln, tr. chky, occ. foss. + sh. stnd, tr. cht. NØ NSFOC

Sh: gry-dk. gry, m. hrd, dns, hack.

Ls: crm-brn-gry, hrd-sft + chky, occ. foss.-v. foss, sh. stnd, cht, pyr. NØ NSFOC

Sh: gry, m. sft, dns, earth-hack.

Ls: crm-lt. gry, hrd, dns, tr. sft + chk, foss. + sh. stnd, chty, tr. rexl'zd ls. NØNSFOC

Ls: crm-tan, hrd-sft + chky, occ. foss. + ool, sh. stnd, occ. cht. NØNSFOC

Ls: crm-tan, m. hrd-sft, foss + v. ool, w/ pr.-ex. oom. Ø NSFOC — **'G' Zone Porosity (-1658')**

Ls: crm-tan, m. hrd-sft, ool, grn. stn, gd-ex. oom. vug. Ø NSFOC

Ls: crm-tan, m. hrd, fnxln-mxln, tr. mic, tr. rexl'zd, ool, grn stn, w/ gd-ex. oom. vug. Ø NSFOC

Ls: crm-tan, hrd-m. sft, dns, sli. chk, fnxln-mxln, mic, tr. ool. w/ tr. pr. oom. Ø NSFOC

Ls: crm-tan, hrd, dns, VFG-mxln, mic, tr. cht, tr. sli. chky, occ. foss. + ool. NØNSFOC

Ls: crm-tan, hrd, dns, VFG-mxln, mic, chky, occ. foss, tr. ool. NØNSFOC

Sh: gry-gry. grn, m. sft, earthy-hack.

Sh: A.A., earthy-hackly

Ls: crm-tan, hrd, dns, VFG-mxln, mic, tr. foss.

Ls: crm-tan, hrd-m. sft, fnxln-mxln, tr. mic, foss + ool. w/ pr.-gd. oom. vug Ø, tr. cht. NSFOC — **'H' Zone**

Ls: crm-tan, hrd-m. hrd, dns, VFG-mxln, tr. chky, occ. foss + sh. stnd.

Sh: gry-dk. gry, m. hrd, dns, hackly

Sh: A.A., occ. rd. brn, earthy-hackly

Ls: crm-tan, hrd-m. sft, fnxln-mxln, tr. mic, occ. oom, w/ pr.-gd. oom. vug. Ø

Ls: A.A., tr. pr. oom. Ø NSFOC

Sh: gry-blk-rd. brn, m. sft, earthy-hackly, tr. carb.

Sh: A.A.

Ls: crm, hrd, dns, occ. sft + chky, fnxln-mxln, occ. ool-v. ool. w/ pr.-gd. oom. Ø NSFOC

Ls: A.A., tr. odor, No show of oil. — **'J' Zone**

CFS — Ls: crm-lt. gry, hrd-sft + chk, VFG-mxln, mic, occ. foss + ool. NØNSFOC

Ls: crm-lt. gry, hrd, dns, VFG-mxln, mic, rare foss. NØNSFOC

Sh: dk. gry-blk, m. hrd, dns, earthy-hackly, occ. carb.

Sh: blk, m. sft-m. hrd, earthy, carb. — **Stark Shale (-1800')**

Ls: crm, hrd-sft + chk, VFG-mxln, mic, rare foss, tr. pyr. NØNSFOC

Ls: crm-tan-lt. gry, hrd, dns, VFG-mxln, mic, occ. foss. + ool. w/ pr.-fr. moldic vug. Ø, sh. stnd. NSFOC

Ls: crm-tan-lt. gry, hrd, dns, VFG-mxln, mic, rare foss, tr. sh. stnd, tr. chky. NØNSFOC

Ls: A.A. NØ NSFOC

Sh: blk, m. sft, flaky, carb.

Sh: blk-gry, m. sft-sft, occ. slty-sndy, earthy

Ls: crm-lt. gry, hrd, dns, tr. chky, VFG-mxln, mic. NØNSFOC

Ls: crm-lt. gry, hrd, dns, occ. sft + chky, VFG-mxln, mic, tr. foss + ool. w/ tr. pr. oom. Ø NSFOC

Ls: A.A. occ. sh. stnd, tr. sndy, more foss. NØNSFOC

Sh: dk. gry, m. sft, dns, earthy

Sh: dk. gry, m. sft, earthy, pyr. — **Base of Kansas City Group (-1870')**

Ls: crm-lt. gry, hrd, dns, VFG-mxln, mic, rare foss. NØNSFOC

Ls: crm-brn, hrd, dns, mxln, mic, rare foss, occ. sh. stnd, poss. pebble surface NØNSFOC

tr. Sh: gry-dk. gry, m. sft, earthy

Sh: lt.-dk. gry, m. sft, dns, earthy

Ls: crm-brn-lt. gry, hrd, dns, VFG-mxln, occ. foss + sh. stnd. NØNSFOC

Ls: crm-gry, hrd, dns, occ. sft + chk, VFG-mxln, mic, occ. foss-v. foss. NØ NSFOC

Mud Check @ 3961': M.W. 9.1 lb./gal. Vis. 48 sec./qt. W.L. 8.8 ml./30 m. Chl. 6,000 ppm. Solids 5.4%. LCM. 1#

Sh: gry-rd. brn, m. sft, earthy

Ls: crm-brn-gry, hrd, occ. sft + chky, rare foss, tr. sh. stnd, VFG-mxln.

Ls: A.A., sli. more chky. NØNSFOC

Sh: gry-grn-rd. brn, sft-m. sft, earthy

Ls: crm-brn, hrd, dns, v. FG-mxln, mic, tr. cht, occ. chky, occ. foss, occ. rd. sh. stnd. NØNSFOC

Sh: gry, rd. brn, m. sft, earthy

Sh: rd. brn-gry. grn, mott, sft, earthy, tr. clayey

Ls: crm-gry, sft + chk, hrd, dns, mxln, mic, sh. stnd. NØNSFOC

Sh: rd. brn-gry. grn, sft, earthy, occ. mott, occ. clayey.

Ls: crm-gry, sft + chky, hrd, dns, mic, mxln, sh. stnd. NØNSFOC

tr. Sh: A.A.

Ls: crm-lt. gry, hrd, dns, VFG-mxln, mic, tr. chky, rare foss, tr. sh. stnd. NØNSFOC — **Pawnee Ls. (-1963')**

Ls: crm-tan-lt. gry, hrd, dns, VFG-mxln, mic, tr. chky, occ. sh. stnd, tr. pebb. surf. NØNSFOC

Ls: A.A., more pebb. NØ NSFOC

Sh: rd. brn-gry, sft, earthy, occ. pebb, occ. mott.

DST #1 4046-75': GTS, stabil rate 5 MMCFG/D. Strap 1.9' long-No correction. Deviation 3/4°

Sh: dk. gry-blk, m. sft-m. hrd, dns, tr. carb.

Ls: crm-brn, hrd, dns, VFG-mxln, mic, foss, pyr. NØNSFOC

Ls: A.A., tr. sh. stnd. NØNSFOC

Sh: dk. gry-gry. grn-rd. brn, mott, m. sft, earthy, tr. ls. pebb. — **Cherokee Shale (-2003')**

Sh: A.A., tr. sndy, tr. orng. cht.

tr. Ss: wh-clr, sft-m. sft, fria, fn. grnd, subang, w. srtd, mod. cmtd, pr.-fr. int. part. Ø, wk. fr. cut + fl. No odor. — **(-2017') Cherokee Ss.** — Weak Show

○ Ss: A.A., occ. w. cmtd, pr. srtd, No Ø, occ. fr. gd. Ø w/ blk. gil. st. part., wk. fl. — Weak Show

CFS — Cg/Sh: gry-rd. brn, m. hrd-m. sft, sndy, tr. cht, lg. sd. grns, earthy

Cg/Sh: dk. gry-rd. brn, m. sft-m. hrd, tr. cht, wh, devit, occ. ls. + ss. grns, earthy. No vis. Ø NSFOC

DST #2 4084-4105': 130' HO + GCM, 60' GCO

Cg/Sh: A.A., Ss: wh, med-fn. grnd, mod.-w. srtd, mod.-w. cmtd, subang, pr. int. part. Ø, lt. brn. stn, tr. F.O. on brk, gd. cut + fl, wk. odor, ? perm.

◔ Ss: A.A., fn-VFG, pr. vis. Ø, tr. blg. Dng, tr. gd. cut + fl, sl. F.O. on brk, wk. odor — Weak-Fair Show, Fair-Weak Show

CFS — Ss: A.A., w/ show A.A.

Cg/Sh: dk. gry-rd. brn, m. sft, earthy

Cg/Sh: dk. gry-rd. brn, mott, m. sft-m. hrd, dns, abun. rd.-ylw. cht + ls. pebbles, occ. lg. sd. grns, earthy

Mud Check @ 4105': M.W. 9.3, Solids 6.7, Vis. 52, LCM 1, W.L. 7.2, Chl. 8,000

◔ Cht: wh-crm-pink, hrd, dns, vit, occ. devit, tr. trip. w/ VFG pp. Ø, occ. unif. brn. stn, tr. F.O. on brk, wk. odor, fr.-gd. cut + fl, ? perm. — Fair Show

Cht: A.A. w/ shows A.A.

◔ Ss: wh, hrd, dns, fn-VFG, mod.-w. srtd, w. cmtd, tr. fria, subrnd, unif. brn. stn, wk. odor, gd. cut + fl, wk. odor, ? perm — **Miss. Osage Cht. (-2085')** — Fair Show

CFS — Cht: wh, hrd, dns, vit.-devit, abun. Cg. Sh. cavings (90%)

Cht: wh, hrd, dns, vit-devit, + sli. trip. w/ VFG pp. Ø, lt. brn. stn, fr. wk. cut + fl, wk. odor, No F.O., ? perm. Very Weak Show

DST #3 4115-40': Rec: 20' Mud

Mud Check @ 4146': M.W. 9.2, Solids 5.8, Vis. 46, LCM 1, W.L. 9.6, Chl. 8000

Cht: wh-pink, hrd, dns, vit-devit, rare pc. w/ VFG pp Ø, lt. stn, wk. cut + fl, No odor, abun. Sh. cavings. Very Wk. Show

Cht: A.A. tr. foss. w/ pr.-fr. vug, moldic? Ø, lt. brn. stn, wk.-fr. cut + fl, No odor, No F.O. V. Very Wk. Show

Sh: gry, m. sft, dns, earthy-hackly

Sh: A.A., abun. Cg. Sh.

Cht: wh-gry, hrd, vit.-devit, tr. trip, tr. pr. tr. VFG. pp. vug. Ø, lt. brn. stn, tr. wk. cut + fl, No F.O., No odor — **Viola Fm. (-2129')** — Very Weak Show

Cht: A.A., tr. pp. vug. Ø w/ mott stn, fr. cut + fl. Very Weak Show

CFS — Cht: A.A., tr. Ls: tan, hrd, VFG, fr. xln, w/ pp Ø, w/ lt. brn. stn, tr. cut + fl, ? perm V. wk. show

Cht: wh, hrd, dns, vit-devit. NØNSFOC

tr. Ls: crm-gry, hrd, dns, VFG xln.

DST #4 4147-95': Rec: 350' GIP, 80' G + OCM

Abun. cavings

Cht: wh-pink, hrd, dns, vit. NØ NSFOC

Ls: crm-tan, hrd, dns, VFG xln, tr. foss.

± 50% cavings

Ls: crm-tan, hrd, dns, VFG xln, foss.-v. foss. NØNSFOC

Cht: wh-pink, hrd, dns, vit. NØNSFOC

Ls: wh-crm, hrd, dns,-sft + chky, fn. xln-mxln, foss, tr. pr. int. part.

Cht: wh-pink, hrd, dns, vit.

Ls: A.A., occ. intxln. Ø NSFOC

Sh: gry-gry. grn, m. hrd, dns, hackly

tr. Ss: wh, hrd, dns, fn-VFG, mod. srtd, subrnd, w. cmtd, tr. pr. Ø NSFOC

tr. Ss: A.A., subang-subrnd, w. cmtd, fr. pr. intpart. Ø NSFOC

Sh: dk. gry-gry. grn, m. hrd, dns, hack, abun. Cg. cavings — **Simpson Shale (-2200')**

tr. Ss: wh, hrd, dns, fn-med. grnd, pr. srtd, w. cmtd, blk. sh. pels + frags, v. pr. int. part. Ø NSFOC

Sh: A.A.

tr. Ss: A.A., pr. vis. Ø NSFOC

Sh: dk. gry-gry. grn, m. hrd-m. sft, dns, earthy-waxy, tr. sndy.

tr. Calc. Dol: crm, hrd, fn-VFG. NØNSFOC

tr. Dol. Ls: crm-tan, hrd, dns, VFG-mxln, occ. cht. NØ NSFOC

Sh: dk. gry, m. hrd-m. sft, hackly, abun. Cg. cavings, tr. blu. grn. sh.

Sh: A.A.

Dol: crm-lt. gry, hrd, dns, VFG xln. No vis. Ø

± 80% cavings

Dol: wh-tan, hrd, dns, fn xln-VFG xln, tr. fr. intxln. Ø w/ ersl. xls, occ. wh. chky. Dol. no Ø NSFOC — **Arbuckle Fm. (-2246')**

Dol: crm-tan, hrd, dns, occ. fria, fn-VFG xln, occ. tr. gd. intxln Ø NSFOC

tr. Cht, tr. Sh: blu. grn, m. hrd, dns, waxy, poss. cavings

Dol: wh-crm, hrd, dns, fn-med. xln, w/ gd.-ex. intxln. Ø, occ. VFG dns. w/ no Ø NSFOC

Dol: crm, hrd, dns, med-VFG xln, occ. gd. vug. + intxln. Ø. NSFOC

Dol: wh-tan, hrd-sft + chky, fn-VFG xln, occ. tr. vug Ø, fn-pr. intxln. Ø, occ. chk. in xln. Ø NSFOC

Mud Check @ 4367': M.W. 9.2 lb./gal. Vis. 54 sec./qt. W.L. 6.8 ml./30 min. Chl. 7,000 ppm. Solids 6.0%. LCM 1.5 lb./bbl.

Dol: wh-tan, hrd, fn-VFG xln, tr. chk, tr. chk. in Ø, occ. tr. gd. vug, tr. pr. intxln Ø NSFOC

Dol: wh-tan, hrd, dns, fn. xln.-mxln, mic, occ. pr. intxln. Ø, pr.-fr. vug. Ø, tr. wh. chk. filling Ø, tr. wh. cht. NSFOC

D.T.D. 4367'
L.T.D. 4370'

Robert Stolzle
7/16/15

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