

SHAKESPEARE OIL COMPANY UNRUH #1-13

2540' FNL & 520' FWL of Section 13 T16S R34W
SCOTT COUNTY, KANSAS
API# 15-171-20950-00-00

Geologist's Report WellSight Systems

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Unruh #1-13
Location: 2540' FNL & 520'FWL of Section 13 T16S R34W
License Number: API#15-171-20950
Spud Date: 6/20/2013
Surface Coordinates: 2540' FNL & 520' FWL
Region: Scott County, Kansas
Drilling Completed: 6/29/2013

Bottom Hole Coordinates: Vertical Test P & A
Ground Elevation (ft): GL 3106 K.B. Elevation (ft): KB 3113
Logged Interval (ft): RTD To: 3800 Total Depth (ft): RTD 4850 LTD 4848
Formation: Mississippi
Type of Drilling Fluid: Chemical (Displace @ 3486)

Operator

Company: Shakespeare Oil Company, Inc. KLN# 7311
 Address: 202 W Main
 Salem, IL 62881

Geologist

Name: Richard S.(Steve) Davis Jr.
 Company: Consulting Geologist
 Address: 221 N. Market, Suite 268
 Wichita, Kansas 67202

KB 3113	E-Log Top	Sample Top	Datum
Anhydrite	2444	NA	+669
B/Anhydrite	2463	NA	+650
Heebner	3983	3986	-870
Toronto	4003	4003	-890
Lansing	4025	4027	-912
Muncie Creek	4205	4207	-1092
Stark	4303	4303	-1190
Hushpuckney	4345	4347	-1232
BKC	4387	4392	-1274
Marmaton	4435	4440	-1322
Pawnee	4515	4517	-1402
Fort Scott	4567	4567	-1454
Cherokee SH	4595	4592	-1482
Johnson Zone	4652	4652	-1539
Mississippi	4748	4753	-1635
Total Depth	4848	4850	-1735

DAILY PENETRATION: 7:00 AM

Date	Depth	Activity
06/20/13		spud
06/21	453	drlg
06/22	1990	drlg
06/23	3079	drlg
06/24	3740	drlg
06/25	4225	drlg
06/26	4300	drlg
06/27	4515	CTCH/DST 2
06/28	4635	drlg
06/29	4770	drlg
06/30	4850	P & A

CONTRACTOR:

HD Drilling Rig #3
 Toolpusher: Lew Tresner

MUD:

Mud Co (displacement complete @ 3486)
 Tony Maestas

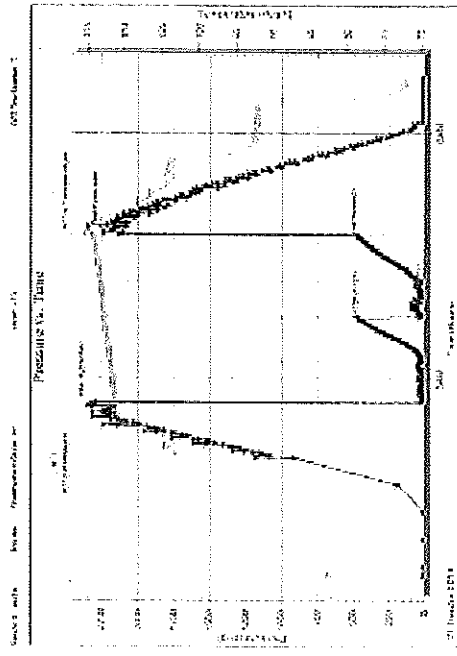
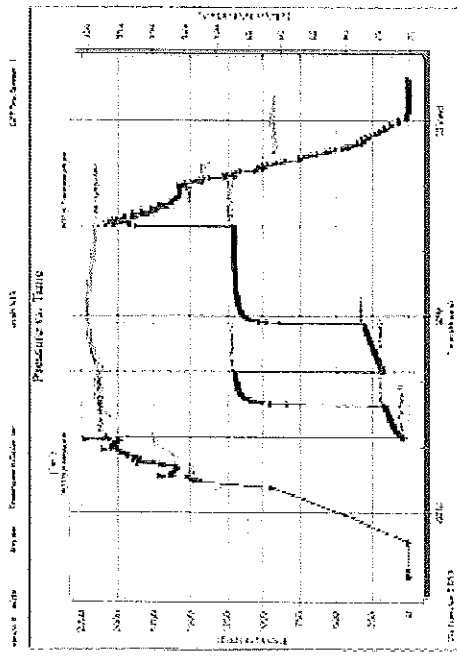
CASING RECORD:

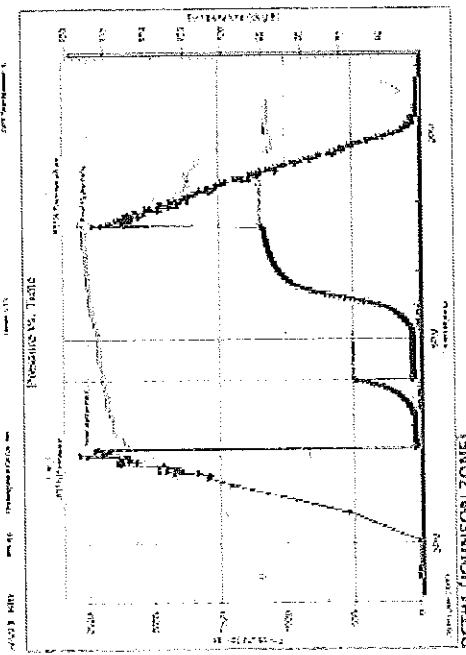
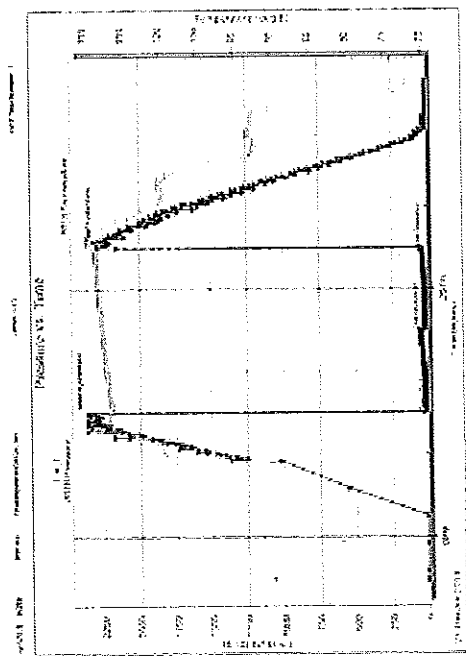
Surface: 8 5/8" @ 252
 Production: None

ELECTRIC LOG: Weatherford
 (DIL, CDJ/CNL, PE, MEL & Sonic)

BIT RECORD:

Bit No./Size	Maker/Type	Out	Ftg	Hrs
#1/ 12 1/4"	JZ/RT	265	265	1 1/2
#2/ 7 7/8"	JZ/ENP0123	4850	4585	120 1/4





Rock Types

- | | | | | |
|------|-------|------|-------|-------|
| Anhy | Clyst | Gyp | Mrlst | Shgy |
| Bent | Coal | Igne | Salt | Slrst |
| Brec | Congl | Lmst | Shale | Ss |
| Cht | Dol | Meta | Shcol | Till |

ROP (min/ft)	Depth	Lithology	Geological Descriptions	Remarks
ROP (min/ft) 				

ROP (min/hr)

3800

3850

3900

conn

conn

conn

Samples most Shale, vol

Samples most shale, vol, non descript

AA

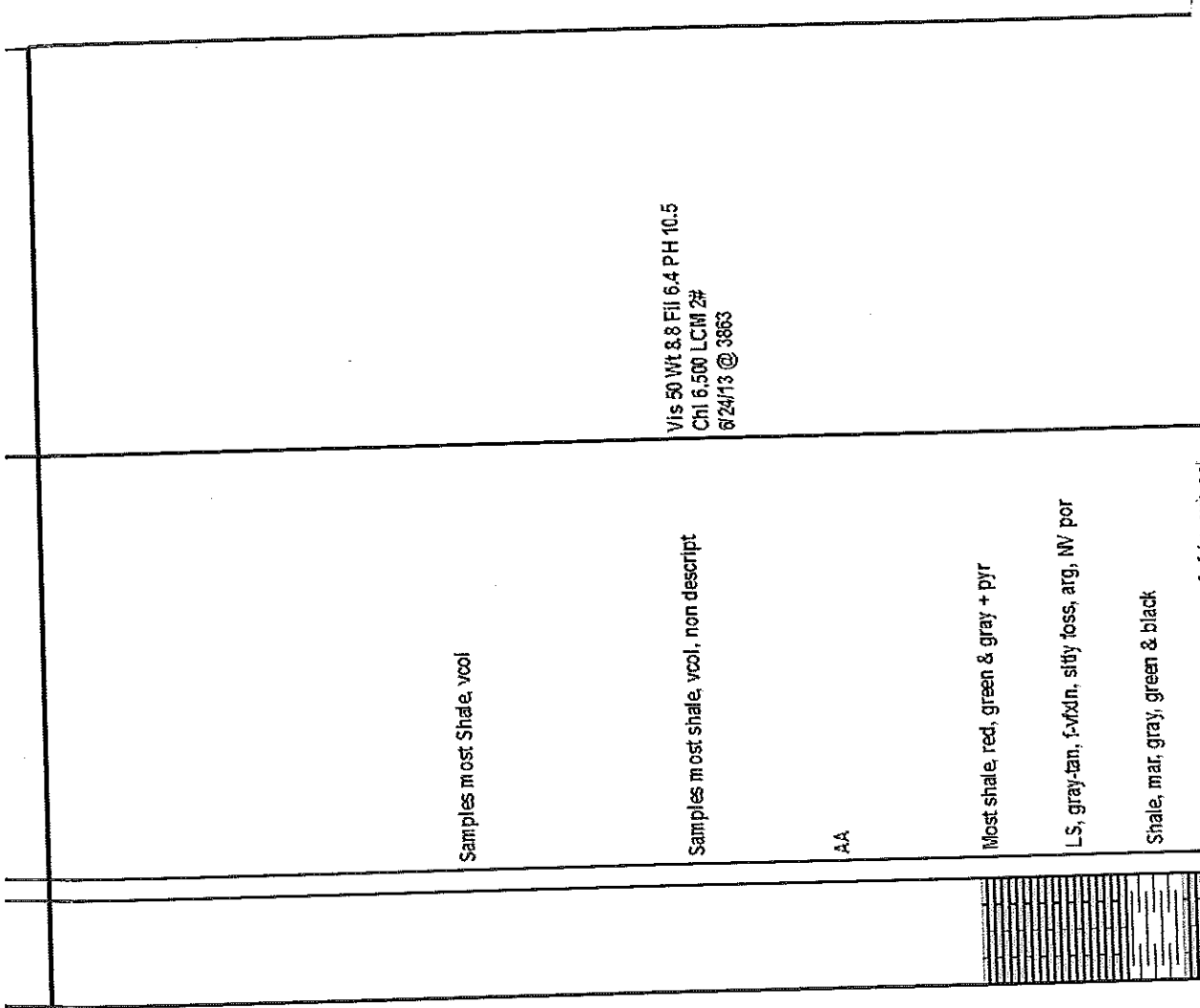
Most shale, red, green & gray + pyr

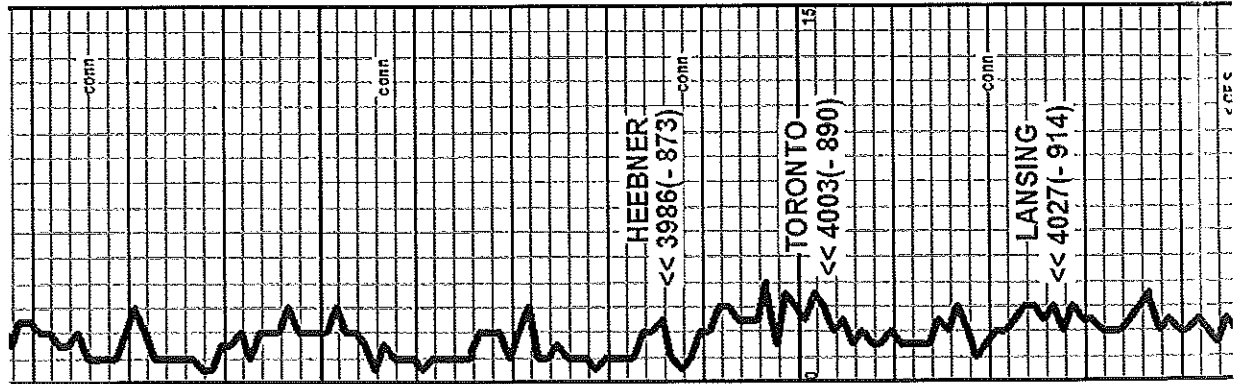
LS, gray-tan, f-fxln, silty loss, arg, NV, por

Shale, mar, gray, green & black

Vis 50 Wt & 8 Fil 6.4 PH 10.5
Chi 6.500 LCM 2#
6/24/13 @ 3863

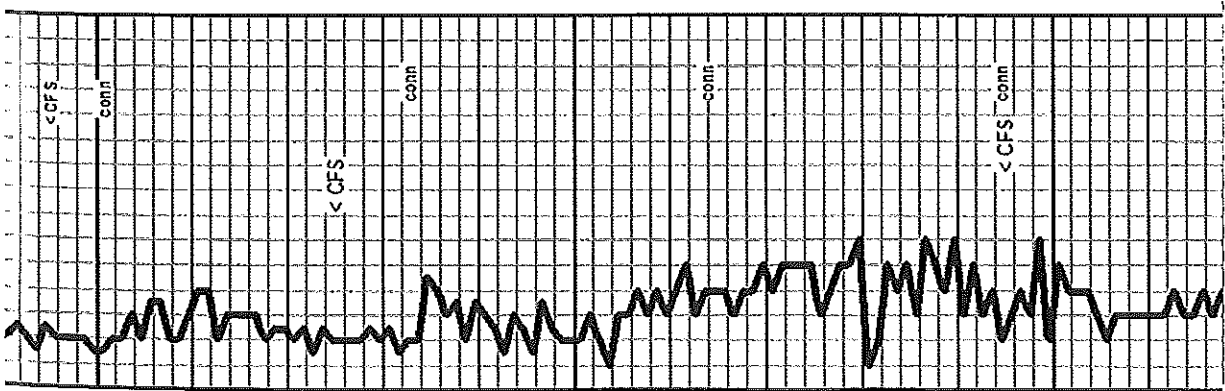
Shale, mar, gray, green & black





mud shale, v. ol. + L.S., gray-shale, mod. sh. sub v. ol.
 foss, P pp por, NS
 L.S., gray-orm, f. in, chky IP, ool & foss, tr P com
 por, NS, Most shale v. ol
 Shale, gray-green & Stst. gray
 L.S., tan-gray, f. in, arg. silty foss, NV por + shale
 v. ol
 (Samples poor, most shale v. ol)
 L.S., tan-gray, f. v. in, chky IP, silty foss & ool, P
 mold por, NS + Shale, v. ol
 L.S., brown-gray, v. in, sub ool. foss, NV por,
 dense + L.S., gray-tan, f. in, silty foss, arg, NV por
 L.S., gray-tan, v. in, ool & foss, NV por
 Shale, black carb + pyr
 L.S., brown-dk gray, v. in, few foss frag, NV por,
 dense, Most shale, v. ol
 L.S., orm-white, f. in, chky IP, sub ool, P com por,
 NS + Ch. white, silty foss, Abnt shale, v. ol
 Most shale, red, green gray, black
 Shale, dk gray, black green & mar
 L.S., tan-gray, f. in, foss & ool, chky, P f. in por,
 NS, hd, abnt shale v. ol
 L.S., tan-gray, v. in, chky IP, silty foss, NV por, hd

Vis 53 Wit 8.7



4050 L.S., gray-tan, f-xln, foss & ool, dense, NV por

Shale, dk gray, green & mar

L.S., crm-white, f-xln, chky, foss & ool, P ipart por, SSFO (hw), spt'd asph stn, dull spt'd fluor, N odor

L.S., tan-crm, f-xln, silty foss, NV por, dense

L.S., gray-white, f-xln, foss & ool, P ipart por, spt'd asph stn, NSFO, N odor + Cht, gray, opq

L.S., gray-tan, f-xln, foss & ool, P ipart por & P pp por, S S hv res scummy oil, spt'd asph stn, N fluor, N odor

L.S., tan-gray, f-xln, silty foss, NV por, dense

Shale, black carb + pjf

L.S. brown-gray, v-micoxln, NV por, dense

Shale, lt gray-green & black

L.S., white-gray, f-xln, foss & ool, P ipart por, spt'd asph stn, NSFO, N odor + Cht, gray-white, trnsi-opq

Cht, gray-white, trnsi-opq + L.S., tan-crm, f-xln, silty foss, NV por, dense

AA w/inc Shale, dk gray-green

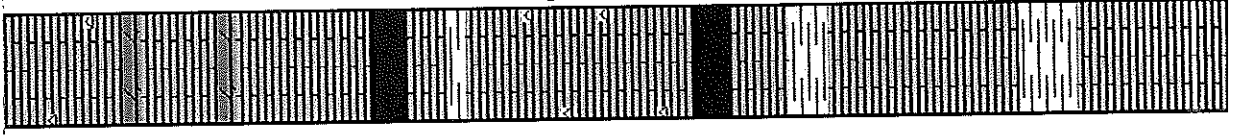
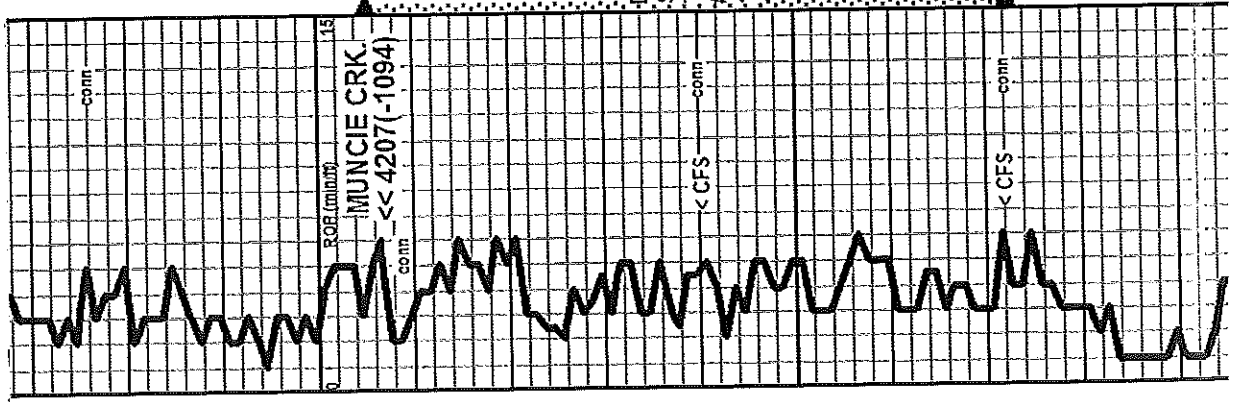
L.S., crm-white, f-m xln, ool, F-P oom por, NS, barren + Shale AA

L.S., tan-gray, v-micoxln, silty foss, NV por, ss

4050

4100

4150



LS, crm-white, fxdn, sub ool, NV por + Cht, white, opq

LSAA + Dolo, tan, f-vxin, P ixin por, NS, hd

LS, dolo, tan-crm, f-vxin, sub ool, NV por

LS, brown-gray, vxln, foss & ool, NV por, dense

Shale, black, carb

LS, brown-gray, vxln, NV por, dense

Shale, black, gray, m a

LS, crm-white, fxdn, sub ool, chky, VP oom & iool por, NSFO, ? spt'd stn + LS, dolo, tan-brown, f-vxin, P ixin por, VS SFO, spt'd lt stn, dull spt'd fluor, N odor + Cht, white-gray, opq

Shale, black carb-sub carb

LS, gray-brown, f-vxin, silty foss, NV por, dense

Shale, black-dk gray & green

LS, gray-brown, f-vxin, few pc's F-P ixin por, FSFO, spt'd stn, dull fluor, V fnt odor + LS, brown-gray, silty mot, f-vxin, chky IP, silty foss, NV por, hd

Shale, gray, green & black

LS, gray-tan, fxdn, ool, chky IP, G oom & F-G ooc por, 2 pc's black asph stn (dry spl), NSFO, N fluor, N odor

LS, tan-brown, vxln, sub ool, NV por, dense

Pipe Strap @ 4272, .11 strap long
Survey 1

DST#1 4205 - 4272
(Lansing H & I)
30 30 45 90

BLOW:
IF BOB 16 min
FF BOB 18 min
(No return ISI or FSI)
RECOVERY:
156' WM (20% w 80% m)
492' W (100% w)
648' TOTAL FLUID
(Chl 52,000, oil spots in tool)
IHP 2051
IFP 26 - 164
ISIP 1193
FFP 168 - 307
FSIP 1205
FHP 2082 BHT 119 F
Vis 48 Wt 9.2 FI 8.8 PH 11
Chl 6,000 LCM 2#
@ 25/13 @ 4240

Vis 54 Wt 9.1 FI 8.8 PH 11
Chl 7 non I C M 2#

Vis 54 Wt 9.1 Fli 8.8 PH 11
 Chi 7.000 LCM 3#
 6/26/13 @ 4298

L.S. tan-brown, vfxln, sub ool, NV por, dense
 Shale, black carb
 L.S. tan-brown, f-vfxln, NV por, dense
 Shale, gray, mar & black
 L.S. tan-gray, f-vfxln, F-P oom-vgy por, SS
 scummy res oil, rare sp't'd asph sm, N fluor, N
 odor
 L.S. crm-gray, f-vfxln, chly, sub ool, P oom por,
 most NV por, NS
 L.S. tan-crm, f-mxln, sub ool, P oom por, NS,
 most NV por, dense
 Shale, black carb
 Abnt Shale, black, green, mar & gray
 L.S. brown-gray, f-mxln, silly foss, NV por, dense
 (Abnt shale vcol)
 L.S. brown-gray, vfxln, silty foss & ool, P oom
 por-pp por, NS (Abnt shale vcol)
 Most shale, black, gray, green & mar +L.S,
 brown-gray, f-vfxln, silty foss, NV por
 Shale, black, gray, green & mar
 L.S. crm-tan-dk brown, vfxln, ool & foss, few pc's
 por vgy por, dense + Shale vcol
 Shale, mar, black, gray & green some silty + pyr

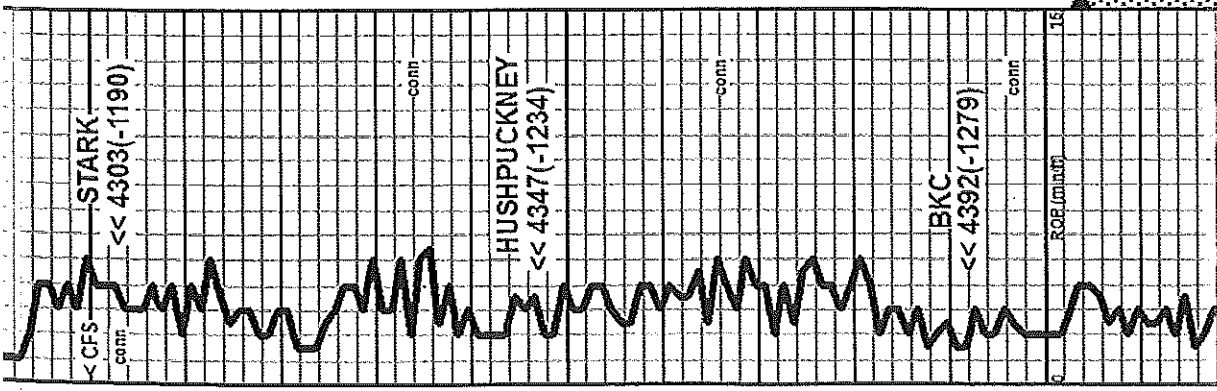
Vis 54 Wt 9.1

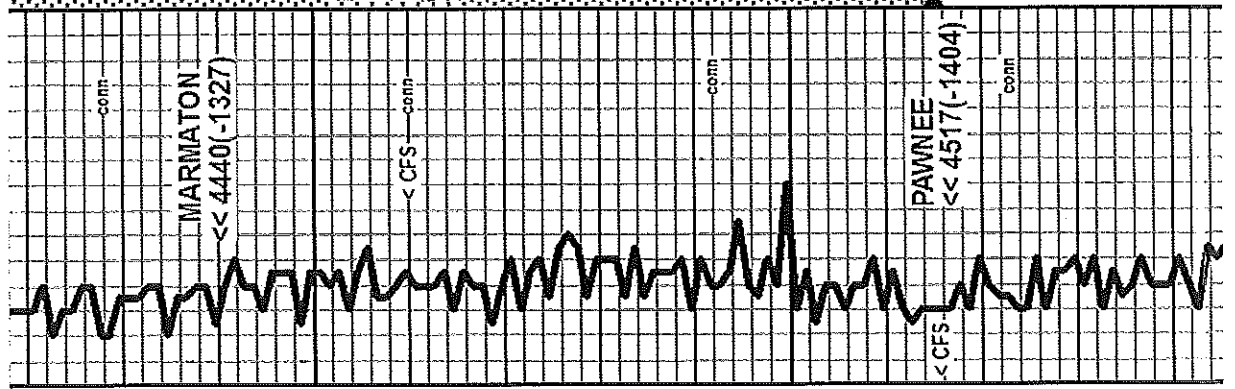


4300

4350

4400





L.S., tan-brown, v. xln, silty ool & foss, rare vgy por, ? spt'd str, NSFO, N fl uor, N odor

Most shale, vool + L.S., gray-green, xln, arg, NV por

L.S., crm-white, v. xln, foss & ool, F-P oom-vg por, hd, rare spt'd gils str, NSFO, N fl uor, N odor

dfs spls, inc shale, black, gray, brown & mar + L.S., brown-gray, v. xln, NV por, dense

Most shale, gray, black, mar & dk green

L.S., brown-tan & gray, mot, v. xln, foss & ool, NV por

L.S., dk brown-gray, v. m. oro xln, NV por, dense

Shale, mar, black, gray & green

L.S., brown-gray, f. v. xln, foss & sub ool, few pc's P vgy por, NS, dense + Shale vool

Shale, black carb, dk gray, mar & green + pyr + L.S., brown-tan, v. xln, silty foss, NV por, dense

Shale, gray, green & mar

L.S., crm-tan, f. m. xln, sub ool, P. ixln & P. vgy-pp por, SFO, spt' d. unf lit str, dull fluor, v. int odor + Cht, tan-gray, frmsl

L.S., tan-gray, m. ot, f. m. xln, silty foss, NV por, dense

DST#2 4404 - 4515

(Marmaton A, B & C)

30 30 30

BLOW:

IF Surface blow died 25 min

FF No blow

RECOVERY:

10'M (100% m)

IHP 2320

IFP 22 - 24

ISIP 457

FFP 25 - 30

FSIP 470

FHP 2231 BHT 114 F

Vis 48 Wt 9.2 Fl 9.6 PH 10

CHI 7,000 LCM 3#

6/27/13 @ 4515

DST#3 4507 - 4596

(Pawnee-Fort Scott)

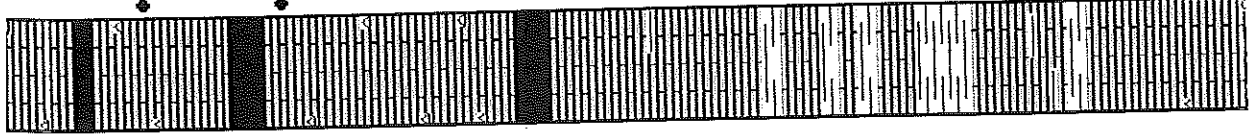
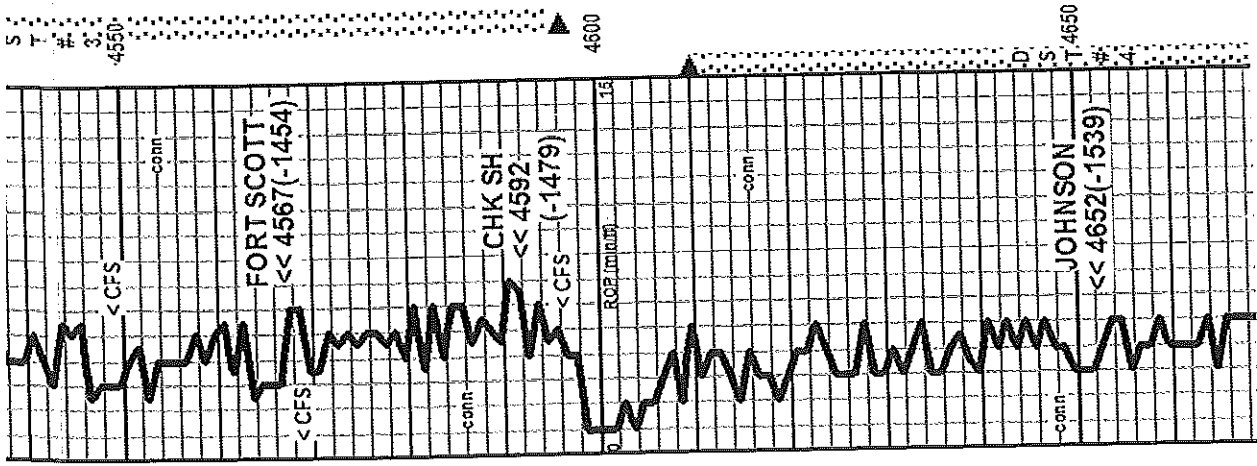
30 30 30

BLOW:

IF Surface died 20 min

FF No blow

RECOVERY:



Shale, black carb
 LS, crm-tan, f-mxin (few crs), sub ool, P ixln por, FSFO on brk w/ gas bub, unf str, dull spt'd fluor, F odor + Cht dk brown-gray, trnsl-opq

Shale, black carb
 LS, brown-tan, f-mxin, foss & ool, P ixln por & P vgy-pp por, FSFO on brk w/ gas bub, unf str, dull unf fluor, F odor + Cht, brown-gray, foss, trnsl-opq

Shale, black carb
 LS, dk gray-brown, f-vxin, foss & ool, NV por, dense + Cht, brown-gray, stly foss, opq

Shale, black carb
 LS, gray-brown, foss & ool, P pp por, spt'd str, NSFO + LS, white-gray, f-lyn, sub ool, chky, NV por

Shale, gray, green & mar + LS, gray-brown, vxin, stly foss & ool, NV por, hd

Shale, black, mar, green & gray + LS crm-tan, f-lyn, chky IP, ool & foss, P vgy por, NS

Abnt Shale vcol + LS, brown-gray, f-vxin, foss & sub ool, NV por, dense

Shale, black, gray green & mar
 LS, tan-gray, f-vxin, foss & ool, NV por + Shale vcol

Shale, dk gray-black & mar
 LS, brown-gray, f-vxin, stly foss, rare P vgy-pp por, S SFO, spt'd dk str, spt'd dull fluor, V int odor (abnt shale, vcol)

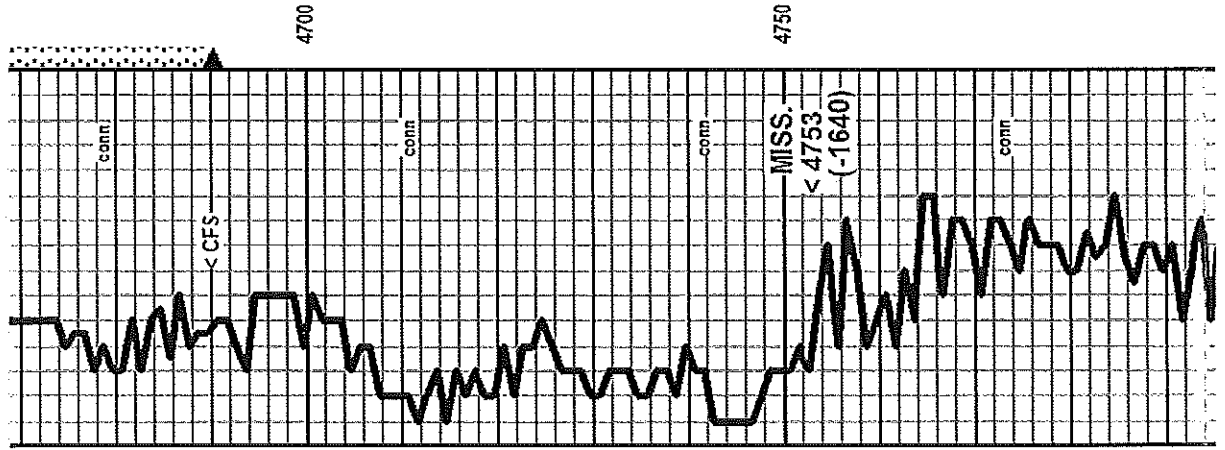
LS, brown-gray, f-vxin, stly foss, dense NV por + Cht, brown-tan, trnsl-opq, stly foss (abnt shale, vcol)

FF No blow
 RECOVERY:
 5' M
 IHP 2348
 IFF 20-22
 ISIP 53
 FFP 21-23
 FSIP 39
 FHP 2284 BHT 144 F

Vis 55 Wt 9.4 Fil 9.6 PH 10.5
 Cht 8,000 LCM 2#
 @28/13 @ 4658

DST #4 4610 - 4690
 (Johnson Zone)
 30 30 46 90

IP Surface Area 40 m²



L.S. brown-gray, f-xln, foss & ool, few pc's P
 vgy-pp por, S SFO, spf d lt st, N fluor, fnt odor
 (abnt shale, vcol), V fnt odor

 L.S. gray-white, f-xln, P pp por, S SFO(mw),
 spf d dk str, N fluor + L.S. tan-gray, fxdn, chky IP,
 NV por, dense
 L.S. A wifnc Shale, mat, gray, green & black

 Abnt shale, vcol + SS, green, white-df qtz,
 f-vfgm, sub rd, mod sort, fri-comp, F-G ig por,
 NS

 Few clus SS, gray-green, vfgm, rd, well sort.
 comp, F ig por, NS + Shale, gray, black, mar &
 green

 Most Shale, gray, green, mat, black + few SS clus,
 gray-green, vfgm, well sort, rd, comp, F-P ig por,
 NS

 SS, dr qtz-gray & green, f-vfgm, rd-sub rd, stly
 glauc, comp-fri, G ig por, NS + Shale, vcol

 L.S. white-tan, fxdn, chky IP, sdy, f-vfgm, NV por
 (Spl 95% shale slough)

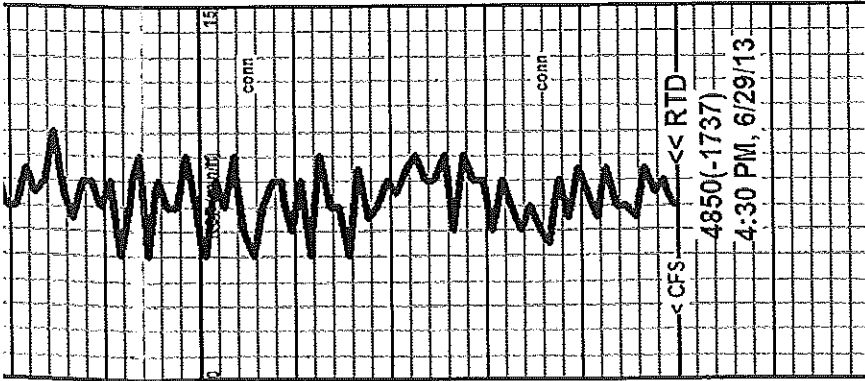
 L.S. white-crm, fxdn, chky, sdy, f-vfgm, NV por, hd
 (m ost shale vcol)

 L.S. white-crm, chky, sdy, fgm, NV por

 L.S. white-crm, chky IP, sdy, f-vfgm, sub ool, NV
 por (Spl most shale slough)

DLW:
 IF Weak built to 5"
 FF BOB 44 min
 (No return ISI or FSI)
 RECOVERY: 170' GIP
 15' GOCM (10% g 35% o 55% m)
 60' GOCM (20% g 25% o 55% m)
 75' TOTAL FLUID
 IHP 2436
 IIP 21-35
 ISIP 469
 FFP 34-49
 FSIP 1164
 FHP 2447 BHT 119 F

Vis 53 Wt 9.3 Fil 8.8 PH 10
 Chi 7,400 LCM 2#
 6/29/13 @ 4785



LS, white-cream, chky IP, sdy, f-vfgn, sub ool, NV por (Spl most shale slough)

LS, white-lt gray, fxdn, sly sdy & ool, chky, NV por, V fine (Spl 95% shale slough)

(Shale vcol, slough)

LS, white, f-vfgn, chky, sub ool, NV por, hd

LS, white-cream, fxdn, chky IP, sub ool, NV por, hd

95% Shale, gray, black, green, mar & red + LS, tan-white, f-vfgn, chky IP, sub ool

Vis 53 Wt 9.3 Fil 8.8 PH 10
 Cht 7.400 LCM 2#
 6/29/13 @ 4785

Vis 54 Wt 9.5