

TIM PRIEST
Petroleum Geologist
 (316)-213-6115

GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

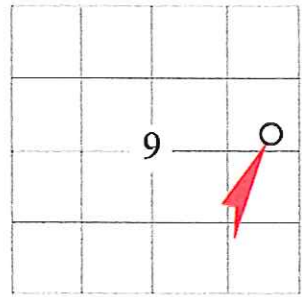
COMPANY SHAKESPEARE OIL CO.
 LEASE Ottley 1-9
 FIELD Wildcat
 LOCATION 1670' FNL, 407' FEL
 SEC 9 TWSP 14S RGE 32W
 COUNTY Logan STATE Kansas
 CONTRACTOR HD DrillingRig #2
 SPUD 3-12-12 COMP 3-24-12
 RTD 4544' LTD 4541'
 MUD UP 3500' TYPE MUD Chemical
 SAMPLES SAVED FROM 3650' to RTD
 DRILLING TIME KEPT FROM 3660' to RTD
 SAMPLES EXAMINED FROM 3650' to RTD
 GEOLOGICAL SUPERVISION FROM 3700' to RTD
 GEOLOGIST ON WELL Tim Priest

ELEVATIONS
 KB 2833'
 DF _____
 GL 2823'
 Measurements Are All
 From KB

CASING
 CONDUCTOR N/A
 SURFACE 8-5/8" @ 224'
 PRODUCTION _____

ELECTRICAL SURVEYS
 CND;D/SP;P.E.
Micro
 By: Weatherford

| FORMATION TOPS | ELECTRIC LOG | SAMPLE |
|----------------|--------------|--------------|
| Anhydrite | 2294 (+539) | 2297 (+536) |
| Heebner Shale | 3791 (-958) | 3794 (-961) |
| Lansing | 3829 (-996) | 3833 (-1000) |
| Stark | 4087 (-1254) | 4091 (-1258) |
| BKC | 4158 (-1325) | 4162 (-1329) |
| Fort Scott | 4343 (-1510) | 4345 (-1512) |
| Cherokee Shale | 4370 (-1537) | 4371 (-1538) |
| Mississippian | 4480 (-1647) | 4476 (-1643) |
| | | |
| | | |

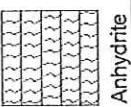
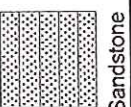
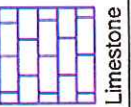

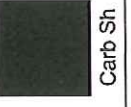
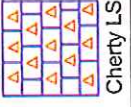
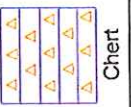
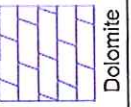
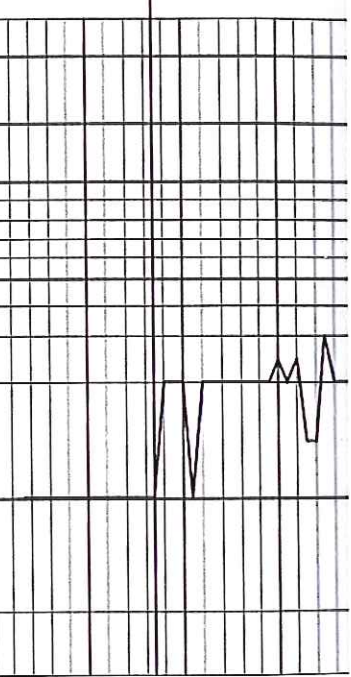


REMARKS Due to the results of DST #2, it was decided to set production casing to further test the well.

Respectfully Submitted,

Tim Priest
 Petroleum Geologist

API #15-109-21042-00-00

| LITHOLOGY | DEPTH | DRILLING TIME IN MINUTES PER FOOT Rate of Penetration Decreases | SAMPLE DESCRIPTION | REMARKS |
|---|-------|--|-------------------------|-----------------|
|  Anhydrite  Sandstone  Limestone  Shale  Carb Sh  Cherty LS  Chert  Dolomite | 2300 |  | Anhydrite 2297(+536) | Base/ Anhydrite |

Base/ Anhydrite
2318(+515)

Ls crm-gry, fn xtl, dnse

Sh blk, carb

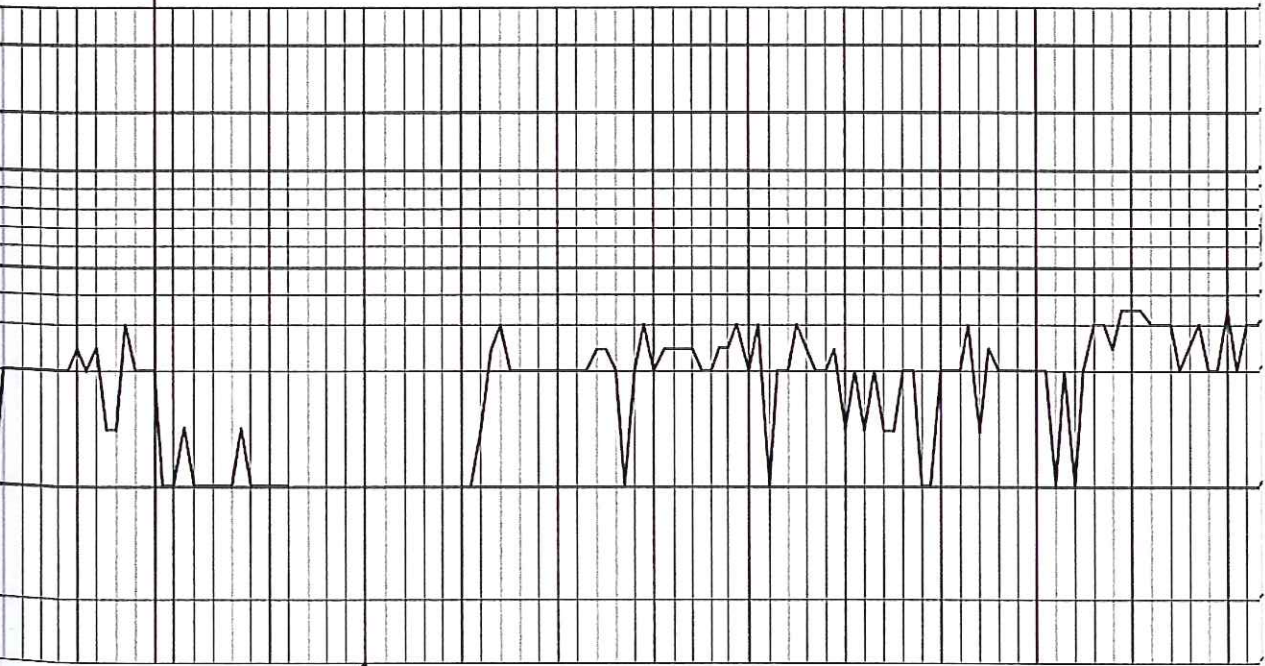
Sh red-gry, silty, w/clear fn gm
SS

Ls crm-gry, fn xtl, dnse

Ls crm-lt gry, fn xtl, fos, chky,
f int xtl-pp por, NS

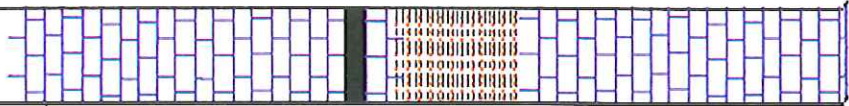
Ls crm-gry, fn xtl, dnse

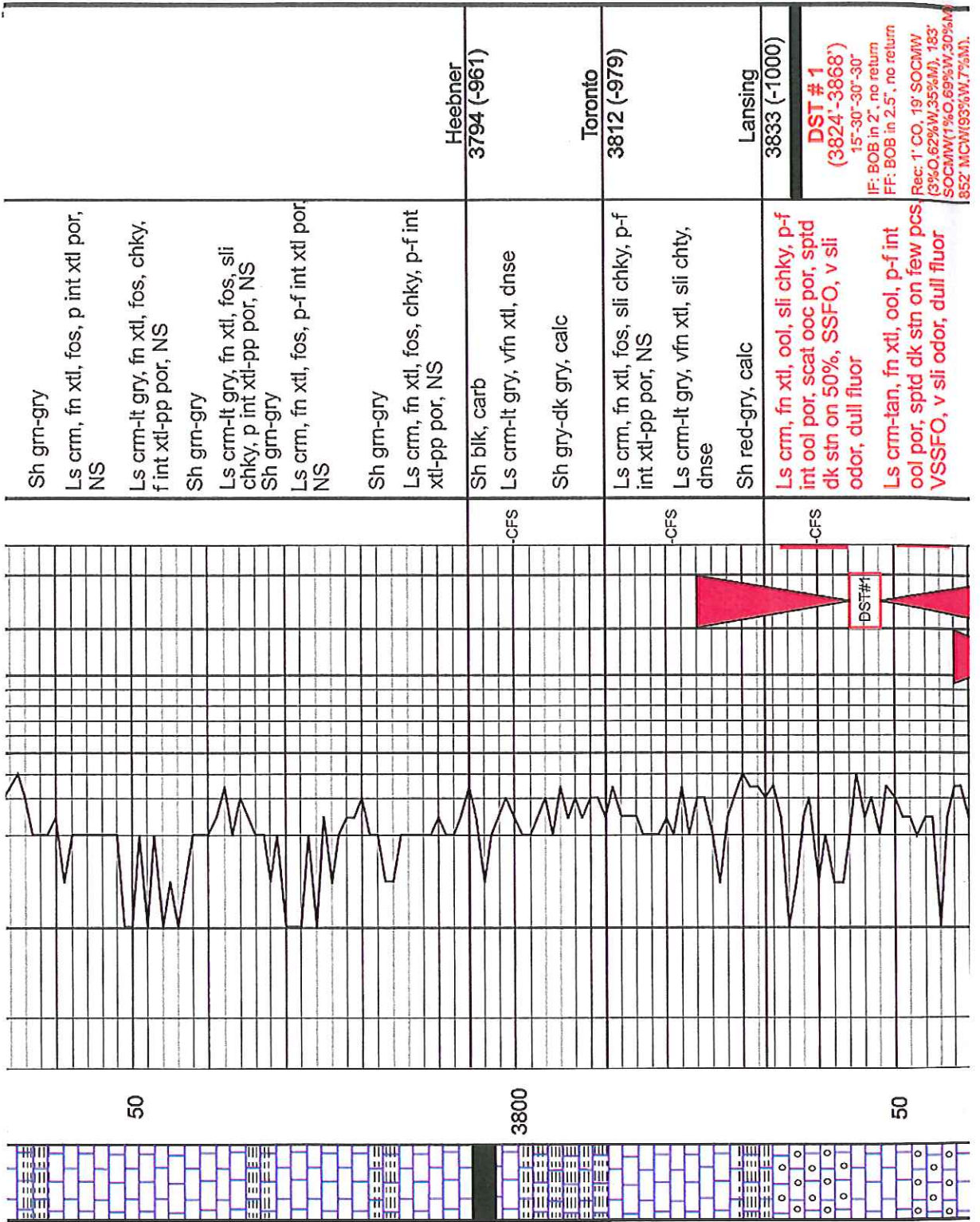
Ls crm, fn xtl, fos, p int xtl por,
NS



50

3700





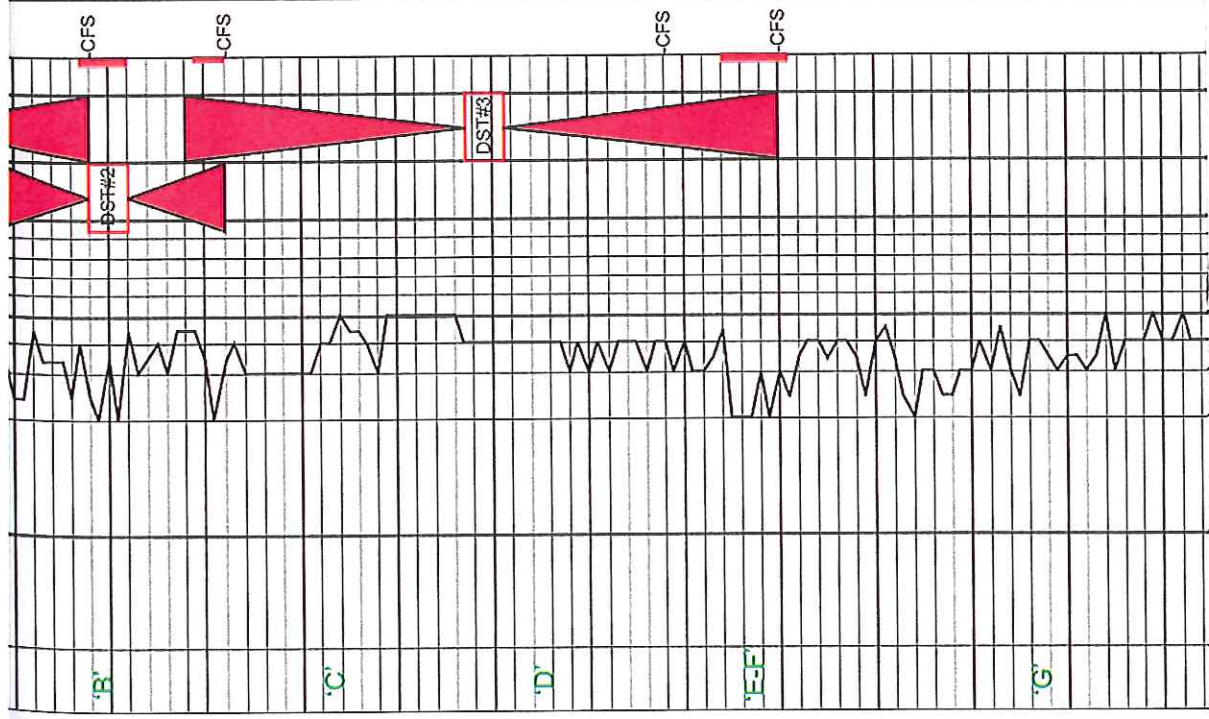
DST #1
 (3824'-3868')
 15'-30"-30"-30"
 IF: BOB in 2', no return
 FF: BOB in 2.5', no return
 Rec: 1' CO, 19' SOCMW
 (3%O.62%W,35%M), 183'
 SOCMW(1%O,69%W,30%M)
 852' MCW(93%W,7%M).

1055' Total Fluid
 Fps: 48-236#/249-496#
 SIPs: 1150#/1122#
 HSPs: 1841#/1736#
 BHT: 115 deg F
 Chlor: 71,000ppm

DST # 2
(3858'-3882')
 15'-30'-30'-60"
 IF: BOB in 3", no return
 FF: BOB in 4", surface blow
 Rec: 101' GO(15%G,85%O)
 183' GO(30%G,70%O), 71'
 MCGO(30%G,66%O,4%M),
 111' GWOCM(15%G,10%O,
 30%W,45%M), 244' MCW
 (88%W,12%M), Total 710'
 Fps: 35-169#/177-339#
 SIPs: 1166#/1162#
 HSPs: 1865#/1807#
 BHT: 116 deg F
 Grav: 25
 Chlor: 48,000ppm

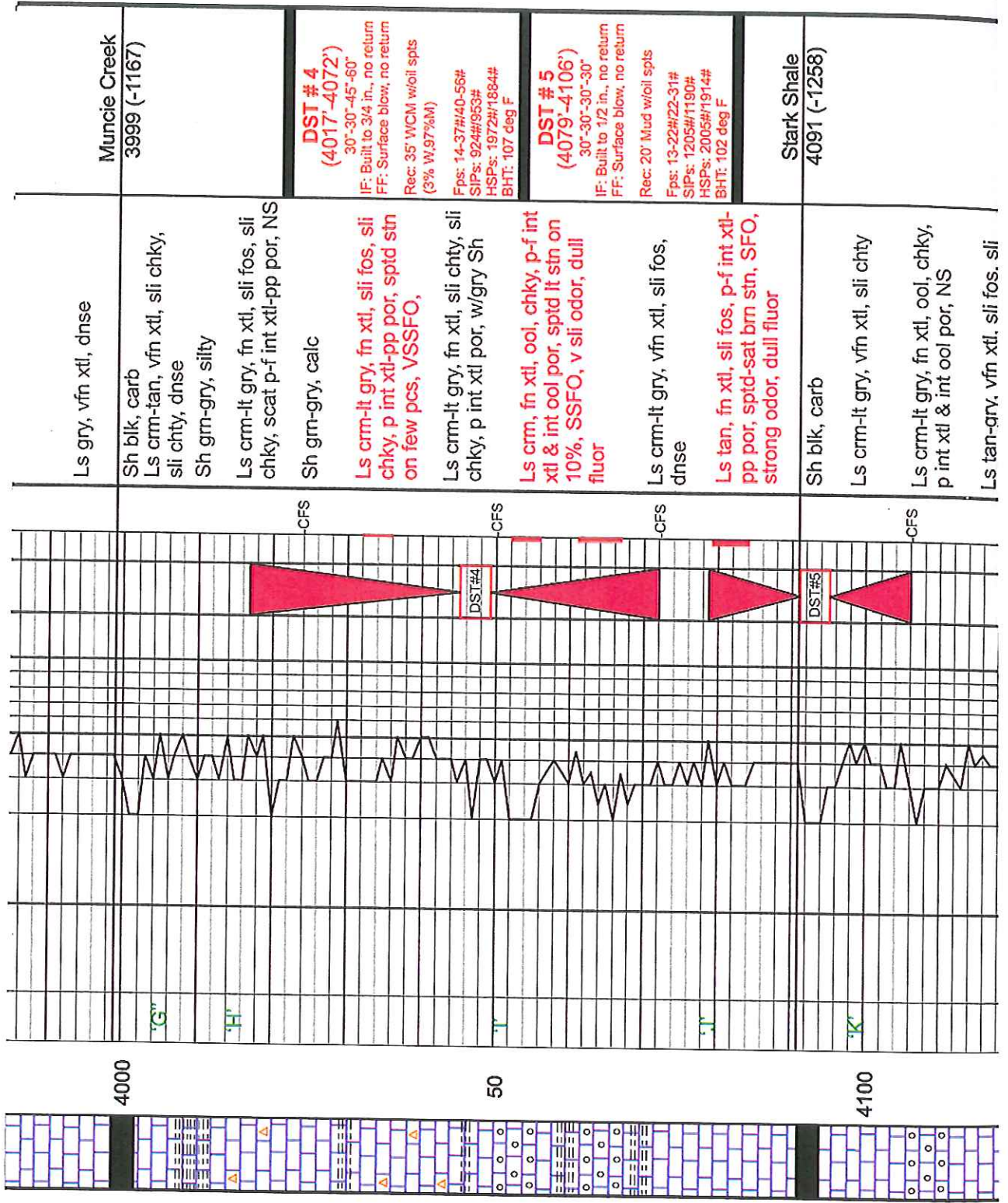
DST # 3
(3878'-3940')
 30'-30'-45'-60"
 IF: BOB in 23", no return
 FF: Built to 6 1/2in, no return
 Rec: 20' GO(5%G,95%O),
 56' GOCMW(3%G,4%O,53%
 W,40%M), 61' SOCMW(1%O,
 77%W,22%M), 122' SOCM
 W(2%O,82%W,16%M), 120'
 SOCMW(1%O,95%W,4%M)
 Total Fluid: 379'
 Fps: 19-116#/119-185#
 SIPs: 1185#/1179#
 HSPs: 1874#/1765#
 BHT: 113 deg F
 Grav: 26
 Chlor: 45,000ppm

Sh red-gry, calc
 Ls crm, fn xtl, fn ool, f int ool &
 pp-vug por, spdt-sat dk stn,
 SFO, f odor, dull fluor
 Ls crm-lt gry, fn xtl, sli chky,
 scat p-f pp-vug por, spdt stn,
 SSFO, sli odor, dull-f fluor
 Sh red-gry
 Ls crm-lt gry, vfn xtl, sli chky,
 dnse
 Ls lt gry, vfn xtl, dnse
 Ls crm-lt gry, fn xtl, sli chky, sli
 fos, scat p int xtl-pp por, NS
 Sh grn-gry
 Ls crm-lt gry, fn xtl, fos-sli ool,
 sli chky, f int xtl & pp-vug por,
 spdt-sat stn, SFO, sli odor,
 dull-f fluor
 Sh gry-dk gry
 Ls crm-lt gry, fn xtl, sli ool, p-f
 int xtl & ooc por, NS
 Ls crm-lt gry, vfn xtl, sli chky,
 dnse
 Ls crm-lt gry, vfn xtl, arg in prt



3900

50



Muncie Creek
3999 (-1167)

Ls gry, vfn xtl, dnse

Sh blk, carb
Ls crm-tan, vfn xtl, sli chky,
sli chty, dnse
Sh gm-gry, silty

Ls crm-lt gry, fn xtl, sli fos, sli
chky, scat p-f int xtl-pp por, NS

Sh gm-gry, calc

Ls crm-lt gry, fn xtl, sli fos, sli
chky, p int xtl-pp por, sptd strn
on few pcs, VSSFO,

Ls crm-lt gry, fn xtl, sli chty, sli
chky, p int xtl por, w/gry Sh

Ls crm, fn xtl, ool, chky, p-f int
xtl & int ool por, sptd it strn on
10%, SSFO, v sli odor, dull
fluor

Ls crm-lt gry, vfn xtl, sli fos,
dnse

Ls tan, fn xtl, sli fos, p-f int xtl-
pp por, sptd-sat brn strn, SFO,
strong odor, dull fluor

Sh blk, carb

Ls crm-lt gry, vfn xtl, sli chty

Ls crm-lt gry, fn xtl, ool, chky,
p int xtl & int ool por, NS

Ls tan-gry, vfn xtl, sli fos, sli

Stark Shale
4091 (-1258)

DST # 4
(4017'-4072')

30'-30"-45'-60"
IF: Built to 3/4 in., no return
FF: Surface blow, no return
Rec: 35' WCM w/oil spts
(3% W, 97%M)

Fps: 14-37#/40-56#
SIPs: 924#/953#
HSPs: 1972#/1884#
BHT: 107 deg F

DST # 5
(4079'-4106')

30'-30"-30'-30"
IF: Built to 1/2 in., no return
FF: Surface blow, no return
Rec: 20' Mud w/oil spts

Fps: 13-22#/22-31#
SIPs: 1205#/1190#
HSPs: 2005#/1914#
BHT: 102 deg F

4000

50

4100

G

H

T

T

K

-CFS

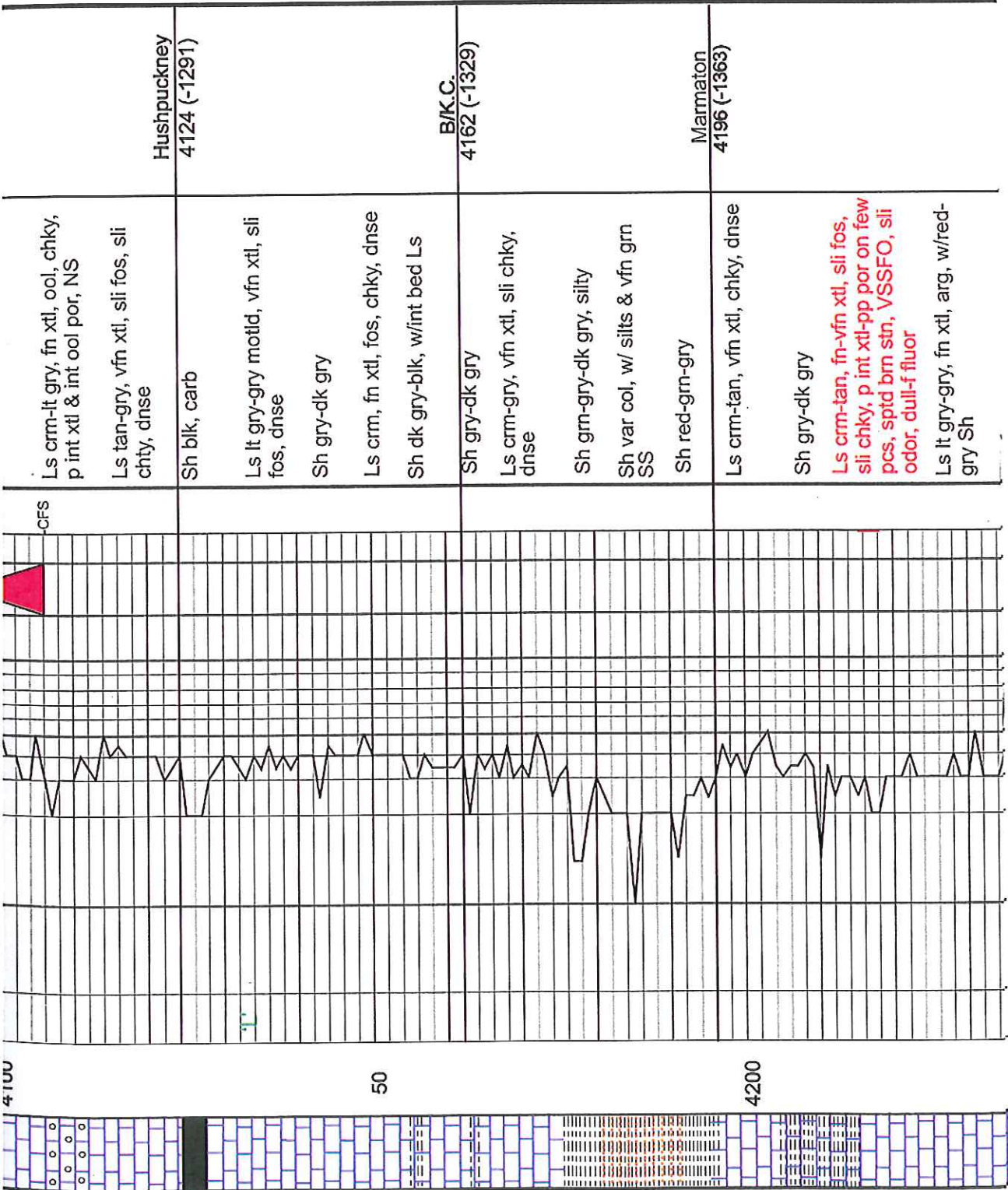
-CFS

-CFS

-CFS

DST#4

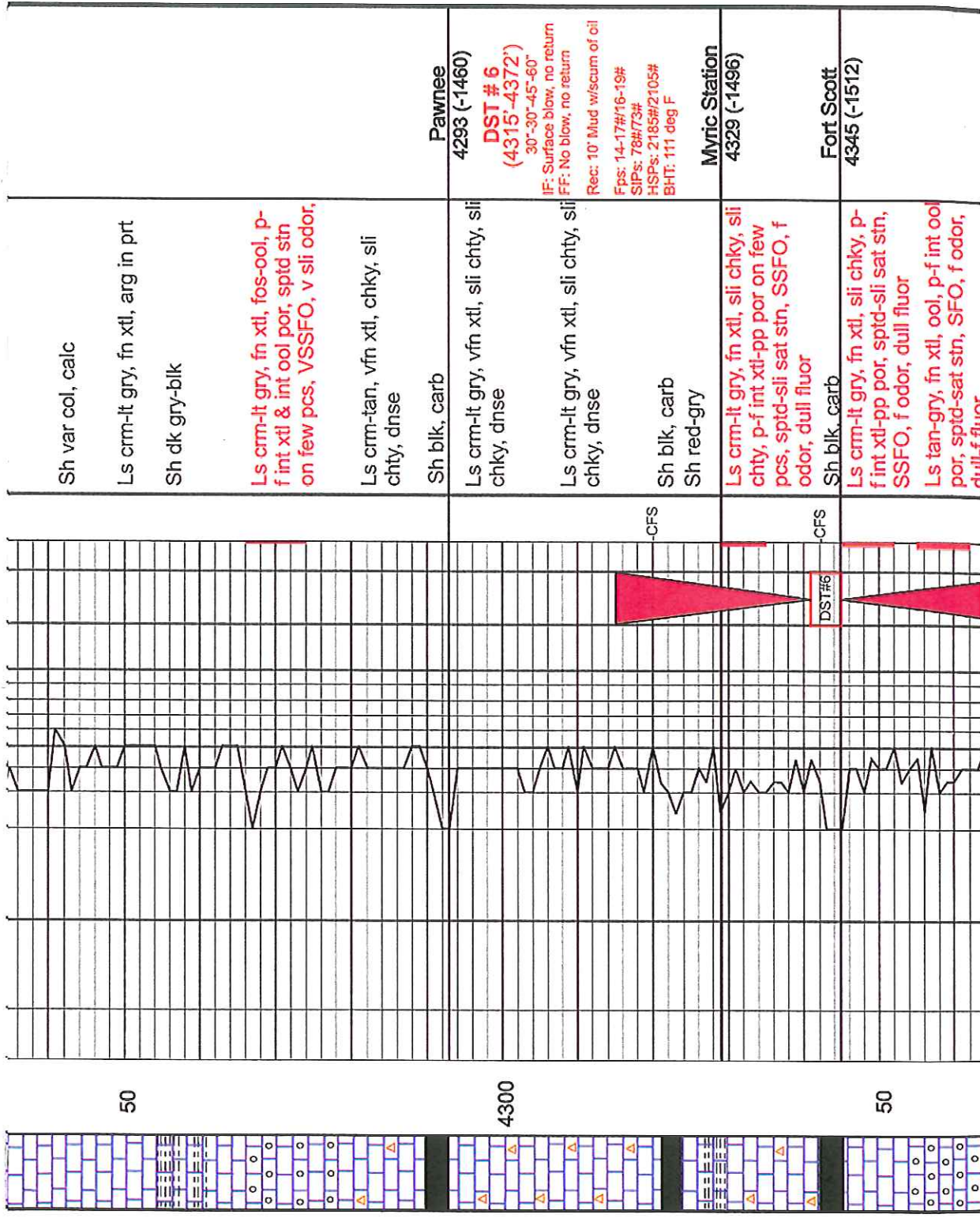
DST#5



4100

50

4200



50

4300

50

Sh var col, calc

Ls crm-lt gry, fn xtl, arg in prt

Sh dk gry-blk

Ls crm-lt gry, fn xtl, fos-ool, p-f int xtl & int ool por, sptd strn on few pcs, VSSFO, v sli odor,

Ls crm-tan, vfn xtl, chky, sli chty, dnse

Sh blk, carb

Ls crm-lt gry, vfn xtl, sli chty, sli chky, dnse

Ls crm-lt gry, vfn xtl, sli chty, sli chky, dnse

Sh blk, carb
Sh red-gry

Ls crm-lt gry, fn xtl, sli chky, sli chty, p-f int xtl-pp por on few pcs, sptd-sli sat strn, SSFO, f odor, dull fluor

Sh blk, carb

Ls crm-lt gry, fn xtl, sli chky, p-f int xtl-pp por, sptd-sli sat strn, SSFO, f odor, dull fluor

Ls tan-gry, fn xtl, ool, p-f int ool por, sptd-sat strn, SFO, f odor, dull fluor

Pawnee
4293 (-1460)

DST # 6
(4315'-4372')
30'-30"-45"-60"

IF: Surface blow, no return
FF: No blow, no return

Rec: 10' Mud w/iscum of oil

Fps: 14-17#16-19#

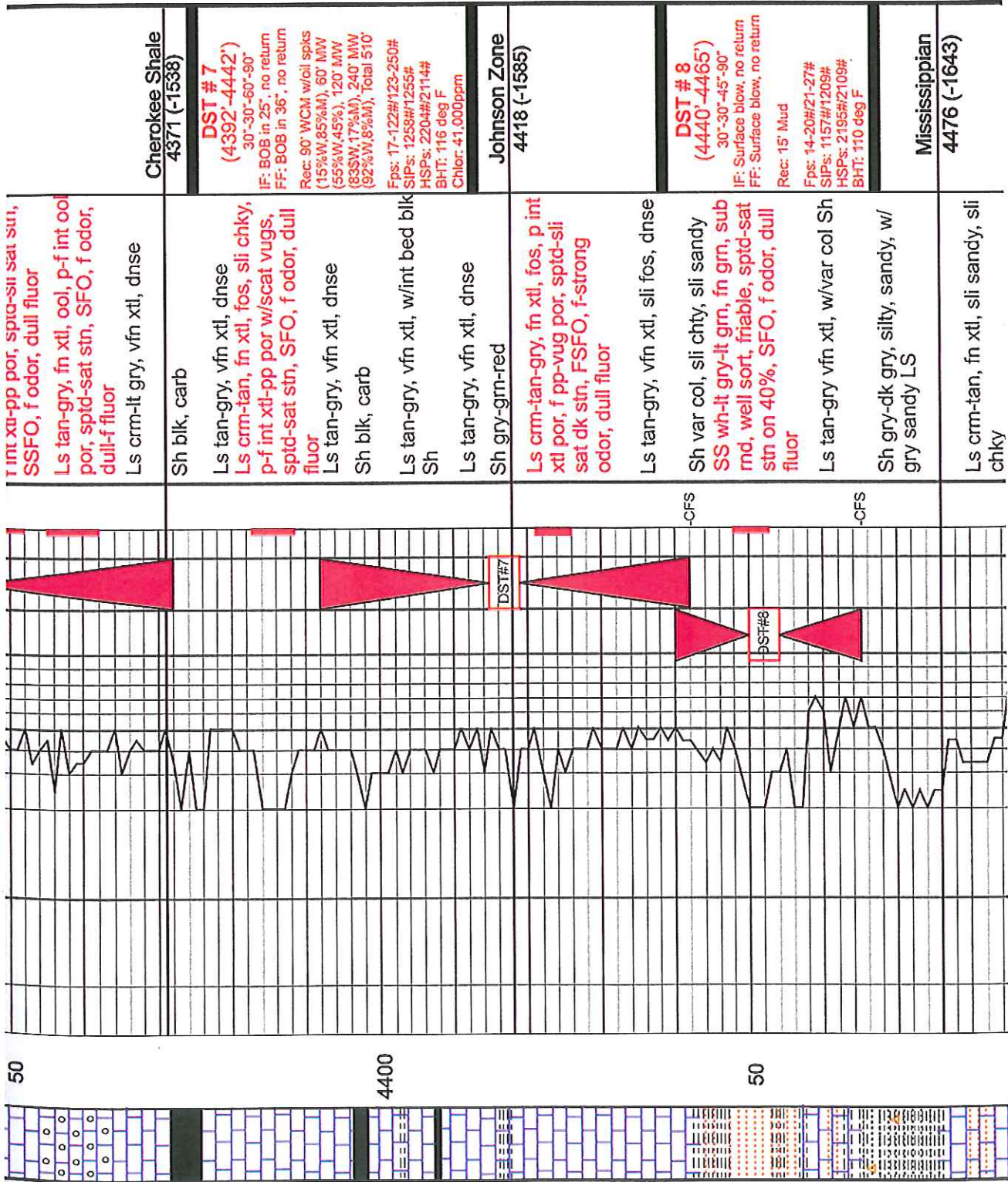
SIPs: 76#173#

HSPs: 2185#2105#

BHT: 111 deg F

Myric Station
4329 (-1496)

Fort Scott
4345 (-1512)



Cherokee Shale
4371 (-1538)

DST # 7
(4392'-4442')
30"-30"-60"-90"
IF: BOB in 25", no return
FF: BOB in 36", no return
Rec: 90' WCM w/oil spks
(15%W,85%M), 60' MW
(55%W,45%), 120' MW
(83%W,17%M), 240' MW
(92%W,8%M), Total 510'
Fps: 17-122#/123-250#
SIPs: 1255#/1255#
HSPs: 2204#/2114#
BHT: 116 deg F
Chlor: 41,000ppm

Johnson Zone
4418 (-1585)

DST # 8
(4440'-4465')
30"-30"-45"-90"
IF: Surface blow, no return
FF: Surface blow, no return
Rec: 15' Mud
Fps: 14-20#/21-27#
SIPs: 1157#/1209#
HSPs: 2195#/2109#
BHT: 110 deg F

Mississippian
4476 (-1643)

Int XU-pp por, sptd-sli sat stn,
SSFO, f odor, dull fluor
Ls tan-gry, fn xtl, ool, p-f int ool
por, sptd-sat stn, SFO, f odor,
dull-f fluor
Ls crm-lt gry, vfn xtl, dnse

Sh blk, carb
Ls tan-gry, vfn xtl, dnse
Ls crm-tan, fn xtl, fos, sli chky,
p-f int xtl-pp por w/scat vugs,
sptd-sat stn, SFO, f odor, dull
fluor
Ls tan-gry, vfn xtl, dnse
Sh blk, carb

Ls tan-gry, vfn xtl, w/int bed blk
Sh
Ls tan-gry, vfn xtl, dnse
Sh gry-grn-red

Ls crm-tan-gry, fn xtl, fos, p int
xtl por, f pp-vug por, sptd-sli
sat dk stn, FSFO, f-strong
odor, dull fluor

Ls tan-gry, vfn xtl, sli fos, dnse
Sh var col, sli chty, sli sandy
SS wh-lt gry-lt grn, fn grn, sub
rnd, well sort, friable, sptd-sat
stn on 40%, SFO, f odor, dull
fluor

Ls tan-gry vfn xtl, w/var col Sh
Sh gry-dk gry, silty, sandy, w/
gry sandy LS

Ls crm-tan, fn xtl, sli sandy, sli
chky

50

4400

50

