



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

Well Name: HALBOWER A #2-3
Location: C - SE - NW of Sec. 3 - T. 34 S. - R. 08 W.
License Number: A.P.I. #15-077-21,915-00-00
Spud Date: 03/25/2013
Surface Coordinates: SPOT: 1980' FNL & 1980' FWL

Region: HARPER CO., KS
Drilling Completed: 04/04/2013

**Bottom Hole
Coordinates:**
Ground Elevation (ft): 1368' **K.B. Elevation (ft):** 1377'
Logged Interval (ft): 270' **To:** 4438' **Total Depth (ft):** 4740'
Formation: MISSISSIPPIAN
Type of Drilling Fluid: CHEMICAL/POLYMER/GEL

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: McCOY PETROLEUM CORPORATION KCC LIC. NO. # 5003
Address: 8080 E. CENTRAL, STE. 300
WICHITA, KANSAS 67206-2366

GEOLOGIST

Name: DAVID P. WILLIAMS, P.G.
Company: DW ENERGY, LLC
Address: 312 N. BROADVIEW STREET
WICHITA, KANSAS 67208

Casings & Deviation

Surface Casing Data: Spud at 9:45 AM on 03/25/13. Drilled 12-1/4" hole to 275'. Ran 6 joints of new 24# 8-5/8" surface casing, Tallied 259.11', set at 270.11' KB. Welded straps on bottom 3 joints. Cemented with 175 sks 60/40 POZ; 2% Gel; 3% CC; 1/4# CF. Plug down at 6:00 PM on 03/25/13. Cement did circulate. Basic Energy Cementing ticket #07932.

Deviation Survey's Taken: @ 275' = 1 1/2 degree; @ 4642' = 1 1/2 degrees @ 4740' = degrees.

DSTs

DST # 1: 4616'-4642'. Times: 30"-60"-60"-90" Blow: IF=Strong BOB/1.5". FF = BOB//0" NO GTS.
 Recovery: 1400' G.I.P; TF= 135' (125' WCM (20% W & 80% M); & (10' SW (100% SW). Chl.= 124,000 Ppm.
 Pressures: IH = 2380#; FH= 2316#; IF = 21-39#; FF= 27-75#;
 ISIP= 730#; FSIP= 698#; Temp= 132 degrees F;


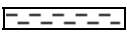

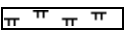
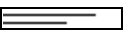
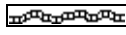




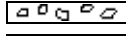




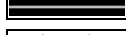


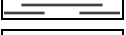

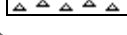


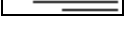
DST # 2: 4642'-4662'. Times: 30"-60"-60"-90" Blow: IF=Weak 0.5"/Weak Surface Blow. FF = Weak/1" Throughout.
 Recovery: 60' G.I.P. TF= 5 Drilling Mud' (100% M).
 Pressures: IH= 2402#; FH= 2292#; IF=12-17#; FF=13-18#; ISIP= 93#; FSIP= 98#; Temp = 127 degrees F;

DST # 3: 4662'-4685'. Times: 30"-60"-60"-90" Blow: IF= Weak / 1/4"-3/4" Blow; FF = Weak/ 1" Throughout.
 Recovery: 70' G.I.P. TF= 10' Drilling Mud' (100% M).
 Pressures: IH= 2384#; FH= 2280#; IF=16-19#; FF=17-25#;
 ISIP= 87#; FSIP= 98#; Temp =125 degrees F.











































































DST # 4: 4700'-4740'. Times: 30"-60"-60"-90" Blow: IF=Good/1"-10". FF=Strong/1/4"-BOB/57".
 Recovery: 285' G.I.P. TF=150': 30' DM (100% M); 60' Sli. WOGCM (5% G; 4% O 1% W & 90% M); & 60' DGWCM (7% G; 5% O;8% W; & 80% M). Not Enough Wtr. For Chl. Analysis.
 I.F.= Sli. Plugging Observed.
 Pressures: IH = 2455#; FH= 2292#; IF = 30-58#; FF= 53-90#;
 ISIP = 1587#; FSIP = 1583#; Temp= 133 degrees F;

Comments

ROCK TYPES

 Anhy	 Clyst	 Gry sh	 Mrlst	 Shgy
 Bent	 Coal	 Gyp	 Red shale	 Sltst
 Brec	 Congl	 Igne	 Salt	 Ss
 Carb sh	 Dol	 Lmst	 Shale	 Till
 Cht	 Grn sh	 Meta	 Shcol	

ACCESSORIES

MINERAL  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau  Gyp	 Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff FOSSIL  Algae  Amph	 Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Fuss  Gastro  Oolite  Oomold  Ostra  Pelec	 Pellet  Pisolite  Plant  Strom STRINGER  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst  Sltstrg  Sltstn  Ssstrg	TEXTURE  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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OTHER SYMBOLS

- POROSITY**
 [E] Earthy
 [B] Fenest
 [F] Fracture
 [X] Inter
 [Z] Moldic
 [O] Organic
 [P] Pinpoint

- [V] Vuggy
SORTING
 [W] Well
 [M] Moderate
 [P] Poor

- ROUNDING**
 [R] Rounded
 [r] Subrnd
 [a] Subang
 [A] Angular

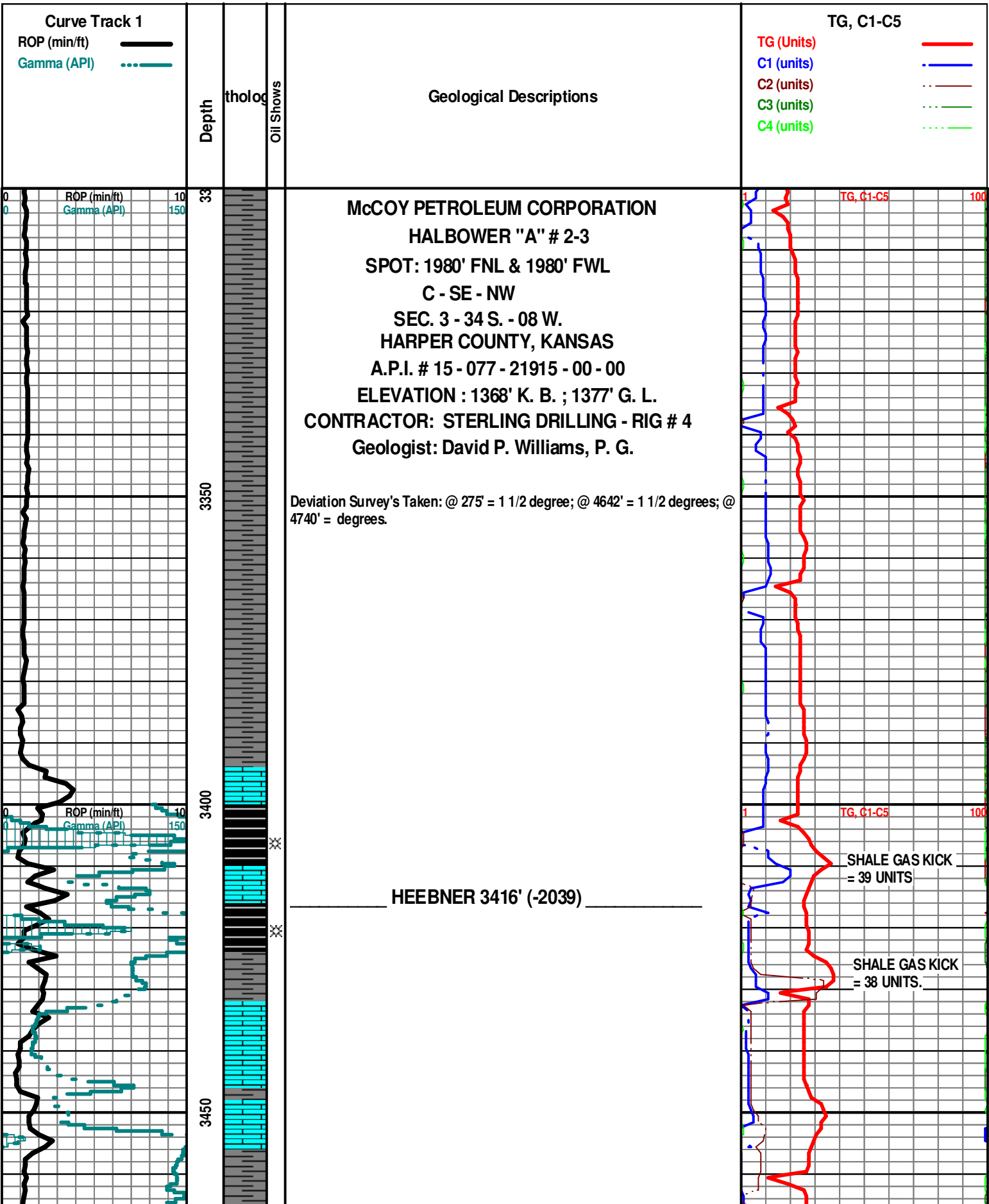
- OIL SHOW**
 [X] Gas show

- [●] Even
 [◉] Spotted
 [◌] Ques
 [◻] Dead

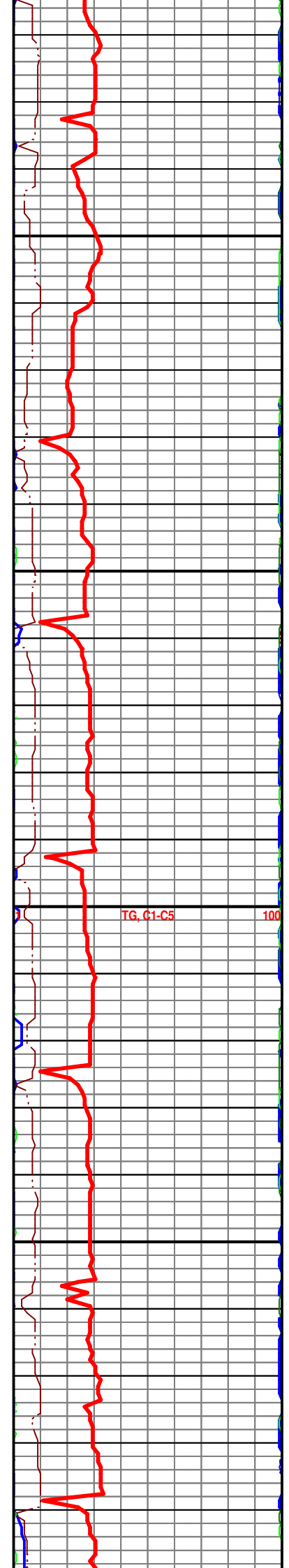
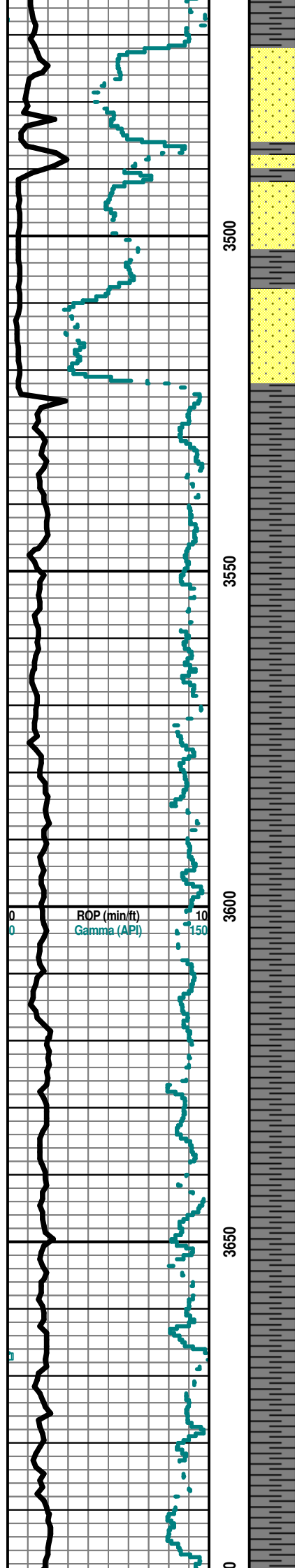
- INTERVAL**
 [■] Core
 [■] Dst

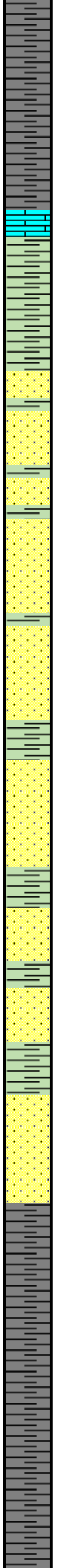
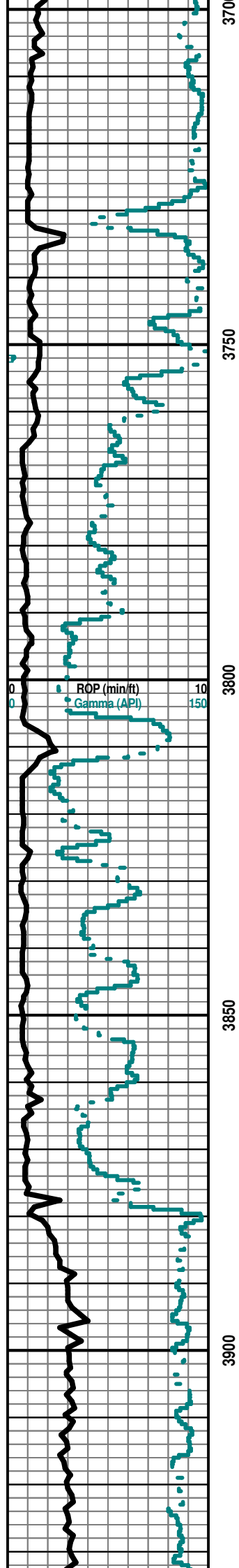
- [■] Dst_alt
 [■] Straddle test tail pi

- EVENT**
 [▽] Rft
 [▽] Sidewall



DOUGLAS SAND 3472' (-2095)

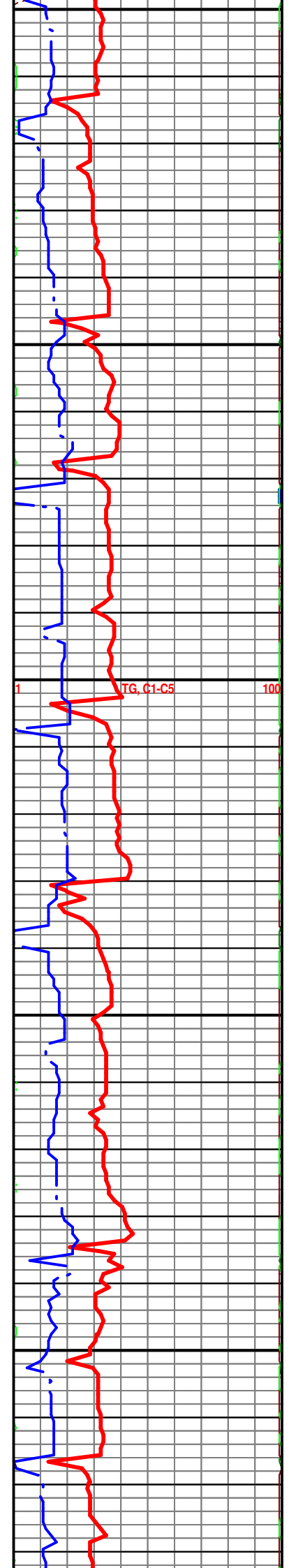


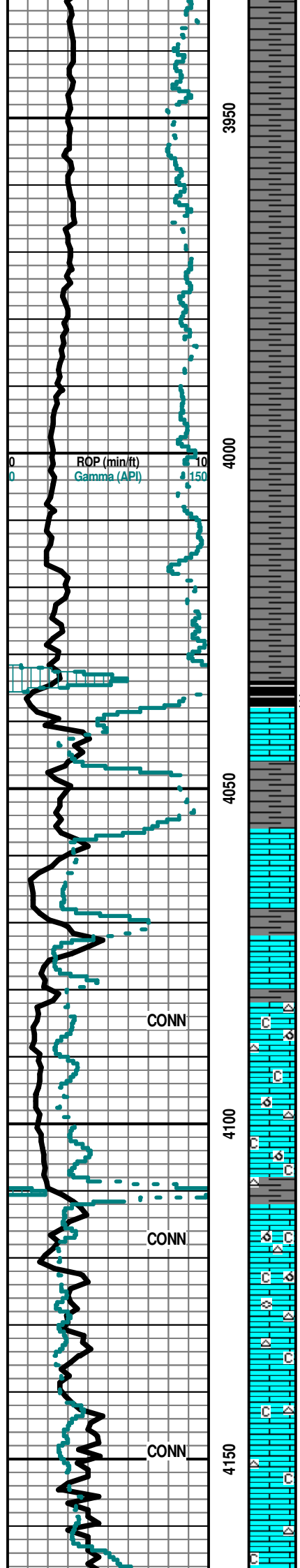


IATAN 3730' (- 2353)

STALNAKER 3754' (- 2377)

BASE STALNAKER 3878' (- 2501)





Geologist's Call Depth @ 4000' @ 5:29 AM on 3/30/13.

KANSAS CITY 4038' (- 2665)

Note: All samples have been lagged to depth by calculated time.

Geologist on location @ (4100') 10:30 AM 3-30-13

Begin 10' Sample Examination @ 4100'.

Ls Crm-Lt Tan FxIn Micritic Grad Poor-Fair OOM Por Barren Poor Leaching
 Poor InterOOM Develop Cht Wht-Lt Gry Op Shp Vit Chalk V Abd Sh
 Char-Gry-Blk Carb Tr Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Lt Tan FxIn Micritic Grad Poor-Fair OOM Por Barren Poor Leaching
 Poor InterOOM Develop Cht Wht-Lt Gry Op Shp Vit Chalk V Abd Sh
 Char-Gry-Blk Carb Tr Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Lt Tan FxIn Micritic Grad Poor-Fair OOM Por Barren Poor Leaching
 Poor InterOOM Develop Cht Wht-Lt Gry Op Shp Vit Chalk Dec Sh
 Char-Gry-Blk Carb Tr Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Lt Tan FxIn Micritic Barren Cht Wht-Lt Gry Op Shp Vit Chalk Dec Sh
 Char-Gry-Blk Carb Tr Soft-Fissil No Odor No Stn No Flor NS

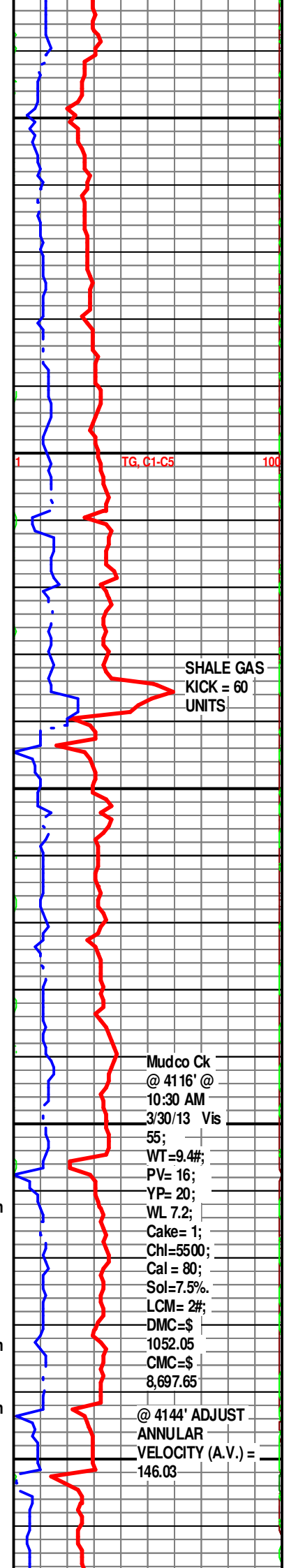
Ls Wht-Crm-Lt Tan FxIn Micritic Barren Grad Poor OOM Por Por
 Develop-Poor Leaching Barren Cht Lt Gry (w Fos (Fuss) Includ)-Amber Op
 Shp Vit Chalk Dec Sh Char-Gry-Blk Carb Tr Soft-Fissil No Odor No Stn No
 Flor NS

Ls Crm-Lt Tan FxIn Micritic Barren Cht Wht-Lt Gry Op Shp Vit Chalk Dec Sh
 Char-Gry-Blk Carb Tr Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Lt Tan FxIn Micritic Barren Cht Wht-Lt Gry Op Shp Vit Chalk Dec Sh
 Char-Gry-Blk Carb Tr Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Lt Tan FxIn Micritic Grad Poor-Fair IxIn Por Barren Cht Wht-Lt Gry
 Op Shp Vit Sh Char-Gry Soft-Fissil No Odor No Stn No Flor NS

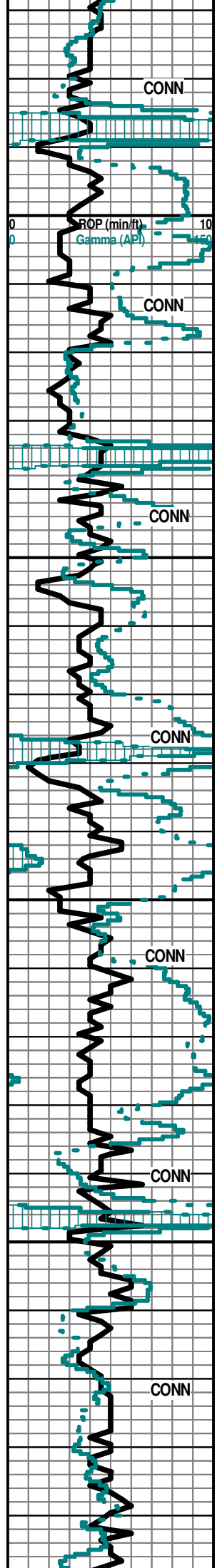
Ls Wht-Crm-Tan FxIn Micritic Grad Poor IxIn Por Barren Cht Lt Gry Op Shp
 Vit Chalky Sh Char-Gry-Aqua Tr Soft-Fissil No Odor No Stn No Flor NS



SHALE GAS
KICK = 60
UNITS

Mudco Ck
@ 4116' @
10:30 AM
3/30/13 Vis
55;
WT=9.4#;
PV= 16;
YP= 20;
WL 7.2;
Cake= 1;
Chl=5500;
Cal = 80;
Sol=7.5%.
LCM= 2#;
DMC=\$
1052.05
CMC=\$
8,697.65

@ 4144' ADJUST
ANNULAR
VELOCITY (A.V.) =
146.03



Ls Crm-Tan Fxn-Mxn Micritic Grad Poor Ixn Por Barren Cht Wht-Smoky Gry Transl-Op Shp Vit Chalk Sh Char-Gry Soft-Fissil No Odor No Stn No Flor NS

Ls Crm-Tan Fxn-Mxn Micritic Grad Poor Ixn Por Barren Cht Wht-Smoky Gry Transl-Op Shp Vit Chalk Sh Char-Gry Soft-Fissil No Odor No Stn No Flor NS

STARK SHALE 4184' (- 2807)

Sh Blk Carb-Char-Gry Fissil Ls Crm-Tan Mxn Micritic Barren Cht Clear-Smoky Gry-Amber Op Shp Vit No Odor No Stn No Flor NS

SHALE GAS KICK = 50 UNITS

Ls Crm-Tan-Lt Gry Fxn Micritic Barren Cht Wht (w/Fos (Fuss) Inclus) -Smoky Gry-Amber Op Shp Vit Sh Char-Gry-Grn (w/Carb Inclus) Soft-Fissil No Odor No Stn No Flor NS

TG, C1-C5 100

Ls Crm-Tan-Drk Tan Microxn Micritic Barren Cht Wht-Smoky Gry Op Shp Vit Chalky Sh Char-Gry Soft-Fissil SiltStn Gry (w/Carb Inclus) No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry Microxn Micritic Barren Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS

HUSHPUCKNEY SHALE 4233' (- 1856)

Sh Blk Carb-Char-Gry Fissil Ls Crm-Tan Microxn-Fxn Micritic Barren Chalk SiltStn Gry (w/Carb Inclus) No Odor No Stn No Flor NS

Ls Crm-Tan-Gry-Drk Brn Microxn Micritic Barren Chalky Sh Blk Carb-Char-Gry-Grn Fissil SiltStn Gry (w/Carb Inclus) No Odor No Stn No Flor NS

Ls Crm-Tan-Gry-Drk Brn Microxn Micritic Barren Chalky Sh Blk Carb-Char-Gry-Grn Fissil SiltStn Gry (w/Carb Inclus) No Odor No Stn No Flor NS

BASE KANSAS CITY 4270' (- 2893)

Sh Blk Carb-Gry Fissil Ls Crm-Tan Mxn Micritic Barren Chalk No Odor No Stn No Flor NS

MARMATON 4283' (- 2906)

SHALE GAS KICK = 45 UNITS

Sh Blk Carb-Gry Fissil Ls Crm-Tan Microxn Micritic Barren Chalk No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry Microxn-Fxn Micritic Barren Chalky Sh Blk Carb-Char-Gry-Red-Maroon Fissil No Odor No Stn No Flor NS

SET MUD PUMP = 54 SPM.

Ls Wht-Crm-Tan-Gry Microxn Micritic Barren Chalky Sh Blk Carb-Char-Gry-Grn Fissil No Odor No Stn No Flor NS

Sh Blk Carb-Char - Gry-Grn Soft-Fissil Ls Wht-Crm-Tan-Gry Microxn Micritic Barren Chalky No Odor No Stn No Flor NS

Sh Maroon-Gry-Grn-Aqua-Maroon Soft-Fissil Ls Wht-Crm-Tan Mxn Micritic Barren Chalky No Odor No Stn No Flor NS

Sh Gry-Grn-Aqua Inc-Maroon Soft-Fissil Ls Wht-Crm-Tan Microxn Micritic Barren Chalky No Odor No Stn No Flor NS

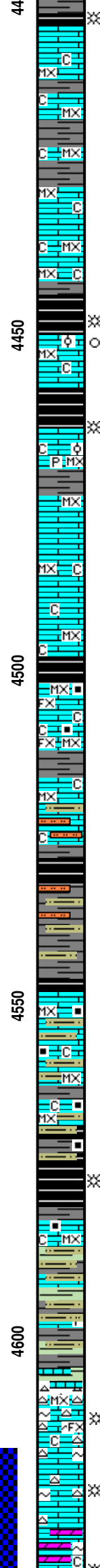
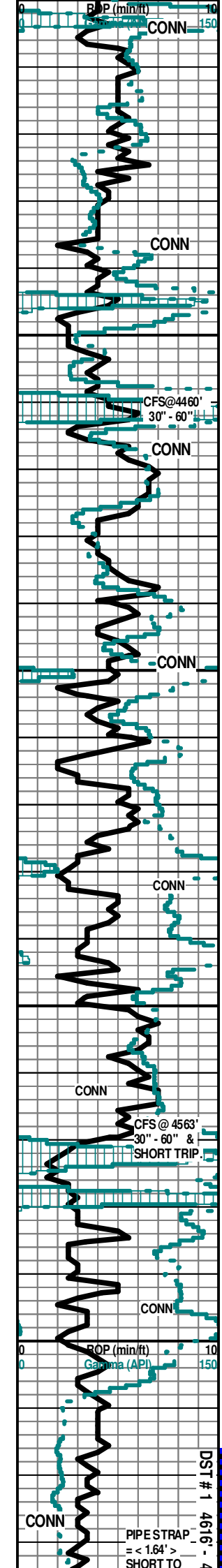
Ls Wht-Crm-Tan Microxn Micritic Barren Chalky Sh Gry-Grn-Aqua-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Microxn Micritic Barren Chalky Sh Blk Carb-Char-Gry-Grn-Aqua-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry Microxn Micritic Barren Chalky Sh Char-Gry-Grn-Aqua-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry Microxn Micritic Barren Chalky Sh Char-Gry-Grn-Aqua-Maroon Soft-Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry Microxn Micritic Barren Cht Yell Translu Shp Vit Chalky Sh Char-Gry-Grn-Aqua-Maroon Soft-Fissil No Odor No Stn No Flor NS



PAWNEE 4405' (- 3028)

Ls Wht-Crm-Tan MicroIn Micritic Barren Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroIn Micritic Barren Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Tan MicroIn Micritic Barren Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS

30" CFS @ 4460' Ls Wht-Crm-Tan MicroIn Micritic Tr Poor IxIn Por (w/Sli ? Scat Flor (Lt Grn) Chalky Sh Char-Gry Fissil ? Faint Odor No Stn NS

FORT SCOTT 4449' (- 3072)

60" CFS @ 4460' Ls Wht-Crm MicroIn Micritic Tr Poor IxIn Por (w/Sli ? Scat Flor (Lt Grn) Grad Poor OOL Por (Small OOL in pl) Poor No Dissolu Poor Leaching Chalky Sh Char-Gry Fissil ? Faint Odor NS

CHEROKEE SHALE 4458' (- 3081)

Sh Blk Carb-Char-Gry Fissil Ls Wht-Crm MicroIn Micritic Tr Poor IxIn Por Grad Poor OOL Por (1 Pc Small OOL in pl w/Poor - No Dissolu Poor-No Leaching w/Pyr Includ) Chalky No Odor No Stn NS

Ls Wht-Crm-Tan-Gry MicroIn Micrite Dns Barren Grad FxIn Granular w/Poor IxIn Gran Por Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry MicroIn Micrite Dns Barren Grad FxIn Granular w/Poor IxIn Gran Por Chalky Sh Char-Gry-Blk Carb-Brn (w/Pyr Includ) Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry MicroIn Micrite Dns Barren Grad FxIn Chalky Sh Char-Gry-Blk Carb Fissil No Odor No Stn No Flor NS

Sh Char-Gry-Blk Carb-Aqua (w/Carb Includ) Fissil Ls Wht-Crm MicroIn-FxIn Micrite Dns Barren Chalk Abd No Odor No Stn No Flor NS

Sh Char-Gry-Blk Carb-Aqua (w/Carb Includ) Fissil Ls Wht-Crm MicroIn-FxIn Micrite Dns Barren Chalk Abd No Odor No Stn No Flor NS

Ls Crm-Tan-Gry MicroIn Micrite Dns Barren Qtz Siltstn Wht-Aqua Poor Well Sort Well Rd P-F Igran Por Barren Chalky Sh Char-Gry-Aqua Fissil No Odor No Stn No Flor NS

Sh Char-Gry-Blk Carb-Aqua Fissil Ls Crm-Tan-Gry MicroIn Micrite Qtz Siltstn Wht-Aqua Barren Chalk No Odor No Stn No Flor NS

Ls Crm-Tan MicroIn Micrite Qtz Siltstn Wht-Aqua Barren Chalk Sh Char-Gry-Blk Carb-Aqua Fissil No Odor No Stn No Flor NS

30" CFS @ 4563' Sh Char-Gry (w/Carb Includ) Blk Carb-Aqua Fissil Ls Crm-Tan-Gry MicroIn Micrite Qtz Siltstn Wht-Aqua Barren Chalk No Odor No Stn No Flor NS

60" CFS @ 4563' Sh Char-Gry (w/Carb Includ) Blk Carb-Aqua Fissil Ls Crm-Tan-Gry MicroIn Micrite Qtz Siltstn Wht-Aqua Barren Chalk No Odor No Stn No Flor NS

Sh Char-Gry (w/Carb Includ) Blk Carb-Aqua Fissil Ls Crm-Tan-Gry MicroIn Micrite Qtz Siltstn Wht-Aqua AA Barren Chalk No Odor No Stn No Flor NS

Sh Char-Gry (w/Carb Includ) Blk Carb-Aqua Fissil Ls Crm-Tan-Gry MicroIn Micrite Qtz Siltstn Wht-Aqua Barren Chalk No Odor No Stn No Flor NS

Sh Char-Gry (w/Carb Includ) Blk Carb-Aqua-Red-Purple Soft- Fissil Ls Crm-Tan-Gry MicroIn Micrite Qtz Siltstn Wht-Aqua Barren Chalk No Odor No Stn No Flor NS

Sh Varicolored Char-Gry-Blk Carb-Aqua-Maroon-Red Fissil Ls Crm-Tan MicroIn Micrite (w/Pyr Includ) Siltstn Wht-Aqua Barren Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

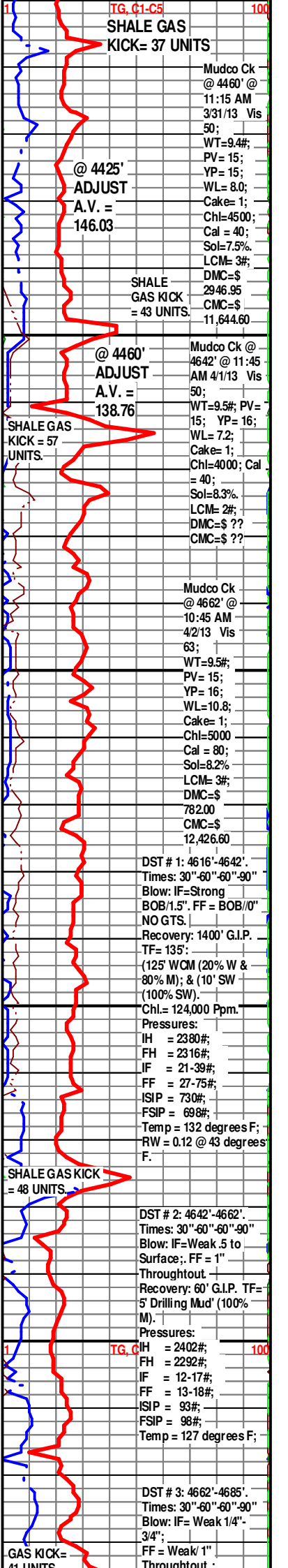
MISS. SALEM (SPERGEN) 4607' (- 3230)

Cht Wht-Crm Trip (Few Pcs Drk Brn Stn) Translu-Op Shp Vit (w/Glacu Includ) Por Ls Crm-Tan MicroIn-FxIn Micrite (w/Glacu Includ) Barren Grad Poor-Fair Pin-Pt IxIn Por (w/SSG) Chalky Sh Varicolored AA Dec Faint Odor Sli Scat Flor (Lt Grn-10 Pcs) SSG

30" CFS @ 4642' Ls Crm-Tan FxIn Fair Inc Poor Pin-Pt IxIn Por (w/SSG & Tr Glacu Includ) Grad Dolo Tan Fair Sucrosic Por Fair IxIn Por Inc Cht Wht-Lt Brn Trip (w/SG) Chalky Sh AA Fair Inc Flor (Lt Grn > 35% in Spl) Fair Inc Stn (Lt Brn) Fair Inc Odor SG

MISS. SALEM "B" (SPERGEN) 4630' (-3253)

60" CFS @ 4642' Ls Crm-Tan FxIn Fair Inc Poor Pin-Pt IxIn Por (w/SSG & Tr Glacu Includ) Grad



SHALE GAS KICK= 37 UNITS

@ 4425' ADJUST A.V. = 146.03

SHALE GAS KICK = 43 UNITS.

@ 4460' ADJUST A.V. = 138.76

SHALE GAS KICK = 57 UNITS.

Mudco Ck @ 4460' @ 11:15 AM 3/31/13 Vis 50;
WT=9.4#; PV= 15; YP= 15; WL= 8.0; Cake= 1; Chl=4500; Cal = 40; Sol=7.5%; LCM= 3#; DMC=\$ 2946.95 CMC=\$ 11,644.60

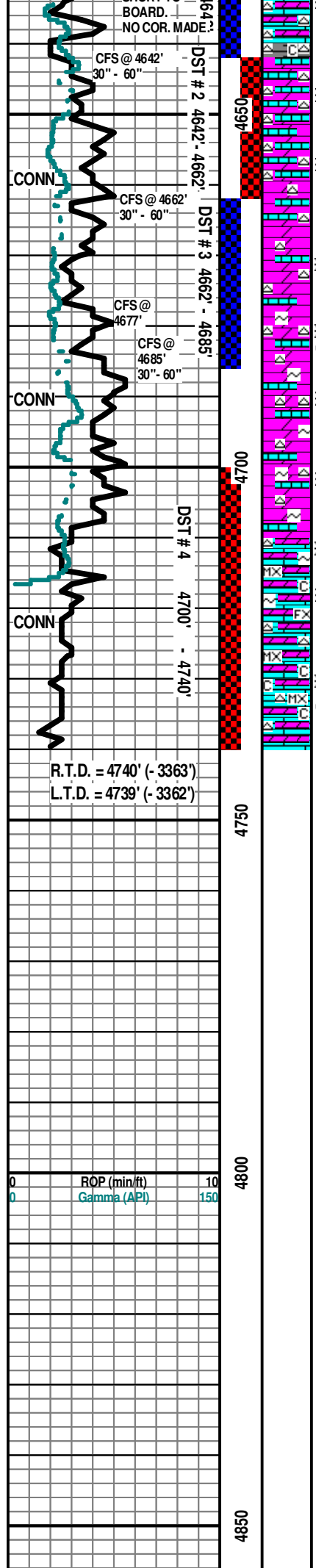
Mudco Ck @ 4662' @ 11:45 AM 4/1/13 Vis 63;
WT=9.5#; PV= 15; YP= 16; WL= 7.2; Cake= 1; Chl=4000; Cal = 40; Sol=8.3%; LCM= 2#; DMC=\$?? CMC=\$??

Mudco Ck @ 4662' @ 11:45 AM 4/1/13 Vis 63;
WT=9.5#; PV= 15; YP= 16; WL=10.8; Cake= 1; Chl=5000 Cal = 80; Sol=8.2%; LCM= 3#; DMC=\$ 782.00 CMC=\$ 12,426.60

DST # 1: 4616'-4642'.
Times: 30"-60"-60"-90"
Blow: IF=Strong
BOB/1.5". FF = BOB/0'
NO GTS.
Recovery: 1400' G.I.P.
TF= 135'.
(125' WCM (20% W & 80% M); & (10' SW (100% SW).
Chl.= 124,000 Ppm.
Pressures:
IH = 2380#;
FH = 2316#;
IF = 21-39#;
FF = 27-75#;
ISIP = 730#;
FSIP = 698#;
Temp = 132 degrees F;
RW = 0.12 @ 43 degrees F.

DST # 2: 4642'-4662'.
Times: 30"-60"-60"-90"
Blow: IF=Weak .5 to Surface.; FF = 1"
Throughout
Recovery: 60' G.I.P. TF= 5' Drilling Mud' (100% M).
Pressures:
IH = 2402#;
FH = 2292#;
IF = 12-17#;
FF = 13-18#;
ISIP = 93#;
FSIP = 98#;
Temp = 127 degrees F;

DST # 3: 4662'-4685'.
Times: 30"-60"-60"-90"
Blow: IF= Weak 1/4"-3/4";
FF = Weak/ 1"
Throughout



BOARD. NO COR. MADE. Dolo Tan Fair Sucrosic Por Fair Ixln Por Inc Cht Wht-Lt Brn Trip (w/SG) Inc Chalky Sh AA Fair Inc Flor (Lt Grn > 15% in Spl) Fair Inc Stn (Lt Brn) Fair Inc Odor SG

30" CFS @ 4662' Dolo/Ls Wht-Tan MicroIn Poor Ixln Pin-Pt Por Grad Fair Ixln Pin-Pt "Salt & Pepper" Por (w/Tr Lt Brn Stn & SG) Cht Wht-Lt Brn Trip (w/SG) AA Chalky Sh AA Fair Inc Flor (Lt Grn > 25% in Spl) Fair Stn (Lt Brn) Fair Inc Odor SG

60" CFS @ 4662' Dolo/Ls Wht-Tan MicroIn Fair Ixln Pin-Pt Por Fair Ixln "Salt & Pepper" Por (w/Tr Lt Brn Stn & SG) Cht Wht-Lt Brn Trip (w/SG) AA Chalky Sh AA Fair Inc Flor (Lt Grn > 30% in Spl) Fair Stn (Lt Brn) Fair Odor SG

MISSISSIPPIAN WARSAW 4664' (- 3287)

30" CFS @ 4685' Dolo/Ls Wht-Tan MicroIn Fair Inc Ixln Pin-Pt Sucrosic "Salt & Pepper" (Banded w/Cht Wht & Glacu Inklus) Por (w/Lt Brn Stn & MSG & SFO) Inc Cht Wht-Lt Brn Trip (w/SG & SFO) Op Vit Shp Chalky Sh AA Fair-Med Flor (Lt Grn > 50% in Spl & Both Gas & Oil Do Flor) Med Stn (Lt Brn) Fair-Med Odor Inc MSG & MSFO

60" CFS @ 4685' Dolo/Ls Wht-Tan MicroIn-Fxln Fair-Med Ixln Pin-Pt Sucrosic "Salt & Pepper" (Banded w/Cht Wht & Glacu Inklus) Por (w/Lt Brn Stn & GSG & GSFO) Cht Wht-Lt Brn Trip (w/GSG & GSFO) Op Vit Shp Chalky Sh AA Med Flor (Lt Grn > 60% in Spl & Both Gas & Oil Do Flor) Med-Good Stn (Lt Brn) Good Odor Inc GSG & GSFO

Dolo/Ls Wht-Tan MicroIn-Fxln Fair Ixln Pin-Pt Sucrosic "Salt & Pepper" (Banded w/Cht Wht & Glacu Inklus) Por (w/Tr Lt Brn Stn & SSG & SSO) AA Cht Wht-Lt Brn Trip (w/SSG & SSO) Op Vit Shp Chalky Sh AA Sli Flor (Lt Grn > 30% in Spl & Both Gas & Oil Do Flor) Sli Stn (Lt Brn) Faint Odor SSSG & SSFO AA

Dolo/Ls Wht-Tan MicroIn-Fxln Fair Ixln Pin-Pt Sucrosic "Salt & Pepper" (Banded w/Cht Wht & Glacu Inklus) Por (w/Tr Lt Brn Stn & SSG & SSO) AA Cht Wht-Lt Brn Trip (w/SSG & SSO) Op Vit Shp Chalky Sh AA Sli Flor (Lt Grn > 30% in Spl & Both Gas & Oil Do Flor) Sli Stn (Lt Brn) Faint Odor SSSG & SSFO AA

Ls/Dolo Wht-Crm-Gry MicroIn-Fxln Fair-Med Ixln Pin-Pt Sucrosic "Salt & Pepper" (Banded w/Cht Wht & Glacu Inklus) Friable Por (w/Lt Brn Stn & MSG Cht Wht-Gry Translu-Op Vit Shp Chalky Inc Sh AA Med Inc Flor (Lt Grn > 50% in Spl (Gas Does Flor) Fair Inc Stn (Lt Brn) Fair-Med Odor Inc MSG

30" CFS @ 4740' Ls/Dolo Wht-Crm-Gry MicroIn-Fxln Med Ixln Pin-Pt Sucrosic "Salt & Pepper" (Banded w/Cht Wht & Glacu Inklus) Friable Por (w/Lt Brn Stn & GSG & GSFO (Lt Brn Droplets)) Cht Wht-Gry Translu-Op Vit Shp Chalk Abd Sh AA Med-Good Inc Flor (Lt Grn > 60% in Spl (Gas & Oil Do Flor) Med-Good Odor Inc GSG & GSFO

60" CFS @ 4740' Ls/Dolo Wht-Crm-Gry MicroIn-Fxln Med-Good Ixln Sucrosic Pin-Pt "Salt & Pepper" (Banded w/Cht Wht & Glacu Inklus) Friable Por (w/Lt Brn Stn & GSG & GSFO (Lt Brn Droplets)) Cht Wht-Gry Translu-Op Vit Shp Chalk Abd Sh AA Good Flor (Lt Grn > 70% in Spl (Gas & Oil Do Flor)) Good Odor GSG & GSFO

Electric Logs Run: By Pioneer Logging: Dual Induction; Compensated Density-Neutron; & Microresistivity Logs.

Geologist Left Location at: : PM on 04/04/2013

41 UNITS. Recovery: 70' G.I.P. TF= 10' Drilling Mud' (100% M). Pressures: IH = 2384#; FH = 2280#; IF = 16-19#; FF = 17-25#; ISIP = 87#; FSIP = 98#; Temp = 125 degrees F;

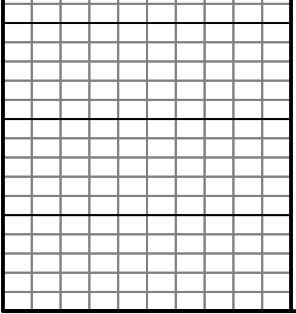
GAS KICK= 37 UNITS. GAS KICK= 43 UNITS. GAS KICK= 41 UNITS. GAS KICK= 46 UNITS. Mudco Ck @ 4685' @ 10:00 AM 4/3/13 Vis=48; WT=9.5#; PV= 14; YP= 15; WL=10.4; Cake= 1; Chl=4000 Cal = 80; Sol=8.3% LCM= 3#; DMC=\$ 447.45 CMC=\$ 12,874.05

GAS KICK= 60 UNITS. GAS KICK= 87 UNITS. GAS KICK= 84 UNITS. Mudco Ck @ 4740' @ 10:00 AM 4/4/13 DMC=\$ 637.80 CMC=\$ 13,511.85

DST # 4: 4700'-4740'. Times: 30"-60"-60"-90" Blow: IF=Good/1"-10". FF=Strong/1/4"-BOB/57". Recovery: 285' G.I.P. TF=150': (30' DM (100% M); 60' Sli WOGCM (5% G; 4% O 1% W & 90% M); & 60' DGWCM (7% G; 5% O; 8% W; & 80% M). Not Enough. Wtr For Chl. Annalysis. I.F.= Sli. Plugging. Pressures: IH = 2455#; FH = 2292#; IF = 30-58#; FF = 53-90#; ISIP = 1587#; FSIP = 1583#; Temp = 133 degrees F;

ROP (min/ft) 10
Gamma (API) 150

1 TG, C1-C5 100



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