

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Panning #1-19
Location: 2306' FSL & 990' FWL, Sec. 19-T20S-R13W, Barton Co., KS.
Licence Number: 15-009-25655-0000 Region: Pritchard North
Spud Date: 2/10/2012 Drilling Completed: 2/18/12
Surface Coordinates: 2306' FSL & 990' FWL, Sec. 19-T20S-R13W

Bottom Hole Same as above
Coordinates:
Ground Elevation (ft): 1885' K.B. Elevation (ft): 1894'
Logged Interval (ft): 1700' To: 3600' Total Depth (ft): 3600'
Formation: Arbuckle at Total Depth.
Type of Drilling Fluid: Freshwater/Gel to 2566'; Chemical Gel 2566' to 3600'
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Herman L. Loeb, LLC.
Address: P.O. Box 838
Lawrenceville, IL. 62439-0838

GEOLOGIST

Name: Jon D. Christensen
Company: Consulting Petroleum Geologist
Address: 9002 W. Silver Hollow St.
Wichita, KS. 67205-8856

Cores

None Taken

DSTs

DST #1(Lansing 'A') 3266' - 3281'(Corrected Depths to Log) Test Times 15"-45"-30"-60" IFP Weak 0.5" Blow, FFP Weak 0.75" Blow, no Blowback on SI's; REC: 3' VSOCM(1%O, 99%M), no water; IFP 12-19#, ISIP 68#, FFP 13-19#, FSIP 44#, IHP 1663#, FHP 1510#, BHT 103 Deg. F.

DST #2(Lansing 'B' - 'E' zones) 3282' - 3338'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Fair 4" Blow, FFP Fair Blow building to Strong Blow BOB/31", no Blowback on SI's; REC: 620' Gas in Pipe, 61' GWM w/few oil specks(2%G, 10%W, 88%M)CI 87,000, Mud 5000; IFP 20-28#, ISIP 673#, FFP 29-49#, FSIP 629#, IHP 1672#, FHP 1713#, BHT 102 Deg. F.

DST #3(KC. 'I' & 'J' zones) 3409' - 3430'(Corrected Depths to Log) Test Times 15"-45"-30"-60" IFP Weak Surface Blow, FFP Weak Surface Blow, no Blowback on SI's; REC: 2' Drilling Mud, no Shows; IFP 18-24#, ISIP 188#, FFP 21-23#, FSIP 67#, IHP 1620#, FHP 1649#, BHT 103 Deg. F.

DST #4(Arbuckle) 3515' - 3537'(Corrected Depths to Log) Test Times 15"-45"-60"-90" IFP Fair 3.5" Blow, FFP No Blow - Flush tool - Good Surge - Fair Blow built to 10", no Blowback on SI's; REC: Trc. Gas in Pipe, 230' GOCM(avg. 2%G, 12%O, 86%M), no Water; IFP 33-49#, ISIP 1166#, FFP 52-128#, FSIP 1127#, IHP 1747#, FHP 1683#, BHT 107 Deg. F.

Comments

2/10/12 MIRU Sterling Drilling Co. Rig #4, Spud at 7:30 PM.; 2/11/12 Drilling at 500'; 2/12/12 TD. 795' - WOC; 2/13/12 Drilling at 1950'; 2/14/12 Drilling at 2640'; 2/15/12 TD. 3283' - Short trip for DST #1; 2/16/12 TD. 3340' - DST #2; 2/17/12 Drilling at 3455'; 2/18/12 RTD. 3600' - Reached TD. at 4:10 AM., TOH for Logs; 2/19/12 RTD. 3600'/LTD. 3600' Production Casing set - Tear down rig.

Set new 8 5/8"(24#) Surface Casing at 792' w/ 400 sx. Cement did Circulate to Cellar(Basic Energy Services). PD. 10:30 PM. 2/11/12.

Set new 5 1/2"(15.5#) Production Casing at 3591' w/ 85 sx. of "Loeb Blend". PD. 3:45 AM. 2/19/12. Port Collar at 2728'.

Surveys: 0.75 Deg. at 795'(Surface Casing); 0.75 Deg. at 3283'(DST #1); 0.75 Deg. at 3432'(DST #3); 0.75 Deg. at 3600' RTD.

Pipe Strap at 3283'(DST #1): Strap 0.32' Short to the Board, no correction made to the Board.

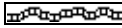
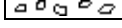
After review of the Superior Well Services Logs, DST data, structural position, and positive shows of commercial amounts of hydrocarbons, the operator elected to set new 5 1/2" Production Casing for completion in the Arbuckle.

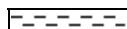

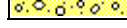

LOG TOPS: Chase(Herington) 1734(+160), Stotler/Tarkio Lmst. 2596(-702), Tarkio SS 2626(-732), Howard 2792(-898), Topeka 2868(-974), Queen Hill Shale 3043(-1149), Heebner Shale 3138(-1244), Toronto 3156(-1262), Douglas Shale 3173(-1279), Brown Lmst. 3252(-1358), Lansing 'A' 3262(-1368), Base Kansas City 3490(-1596), Conglomerate 3498(-1604), Arbuckle 3510(-1616).





Prior to abandonment of the Panning #1-19, the Tarkio Sand should be perforated and tested from 2626' - 2632' due to gas kick and oil shows. Also, the Falls City Lmst. should be perforated and tested from 2440' - 2442' due to the gas kick. Also, the upper Chase Herington and Krider zones should be perforated and tested from 1736' - 1746', and 1758' - 1764', respectively, based on the gas kicks observed while drilling.

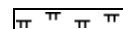
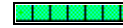
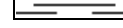
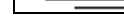
NOTE: This log was shifted upward by 1' - 2' for correlation purposes with the Superior Well Services Logs.



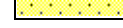
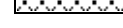
ROCK TYPES

	Anhy
	Bent
	Brec
	Cht

	Clyst
	Coal
	Congl
	Dol

	Gyp
	Igne
	Lmst
	Meta

	Mrlst
	Salt
	Shale
	Shcol

	Shgy
	Sltst
	Ss
	Till

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclfrag
- Calc
- Carb
- Chtdk
- Chtlit
- 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
- Gastro
- Oolite

- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst

- Siltstrg
- Ssstrg

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint

- Vuggy

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

- Spotted
- Ques
- Dead

INTERVAL

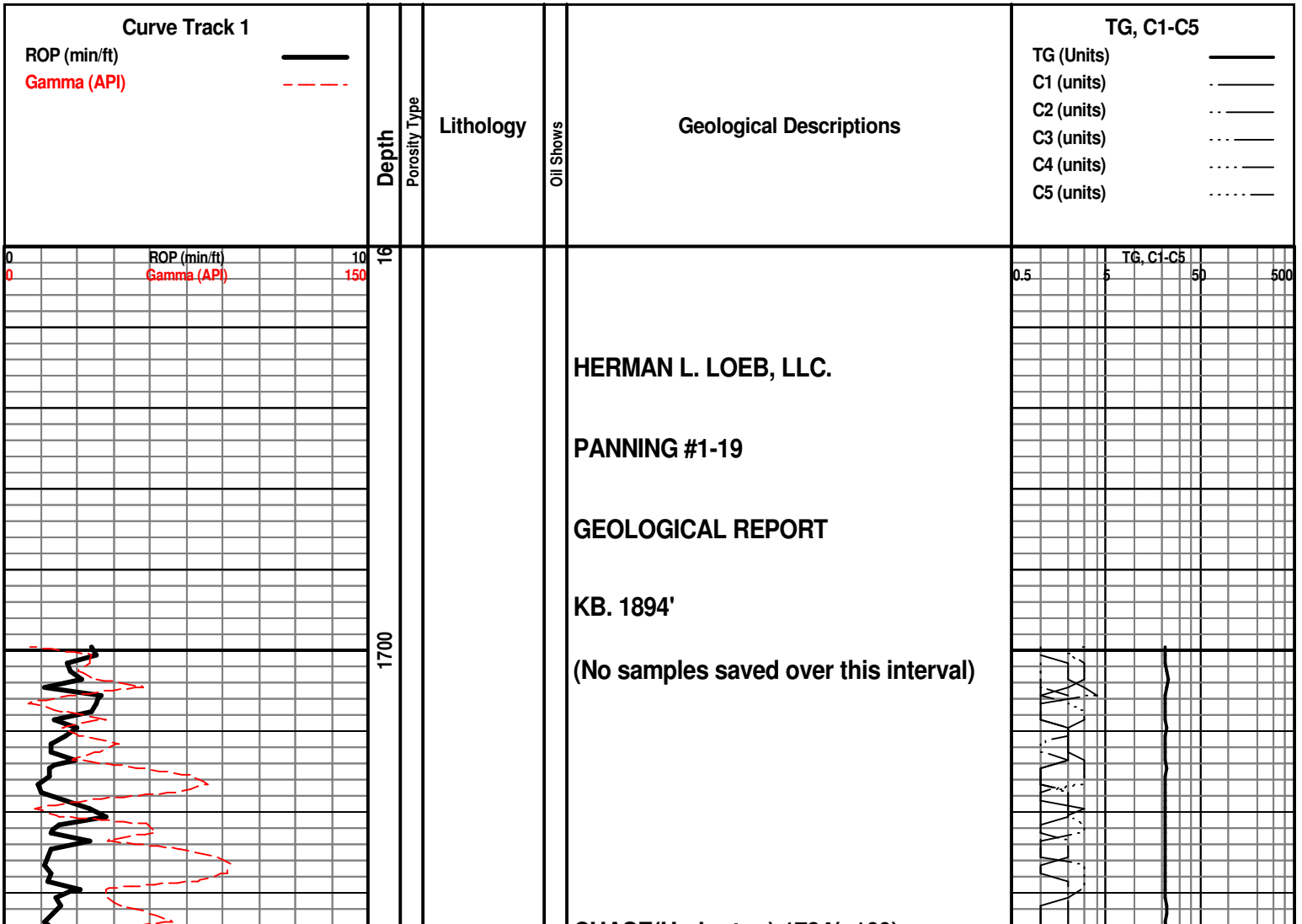
- Core
- Dst

EVENT

- Rft
- Sidewall

OIL SHOW

- Even

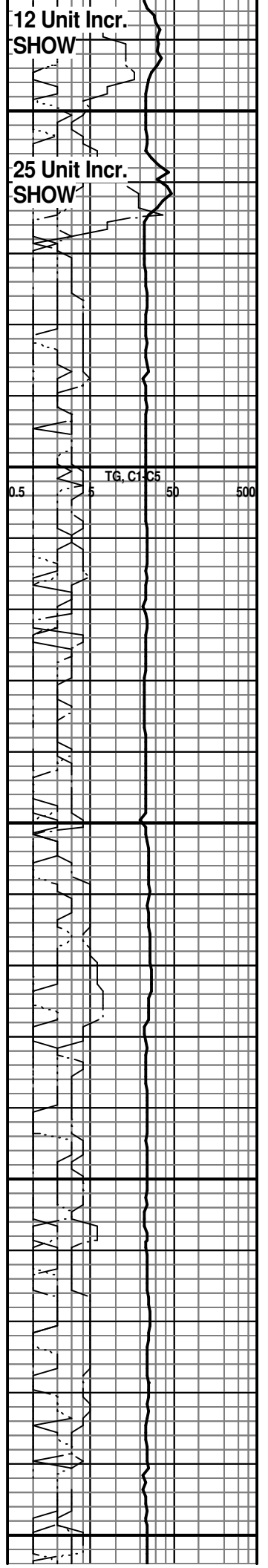
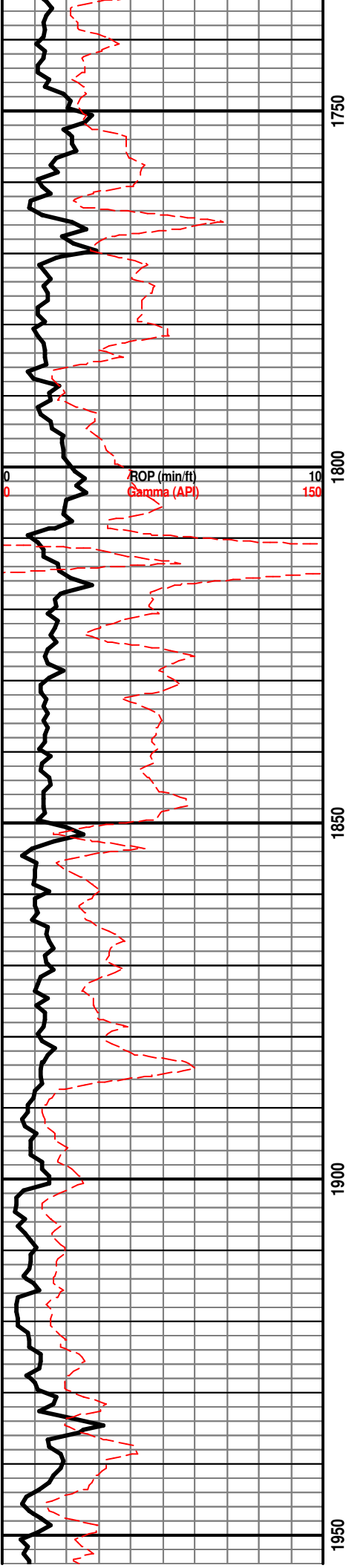


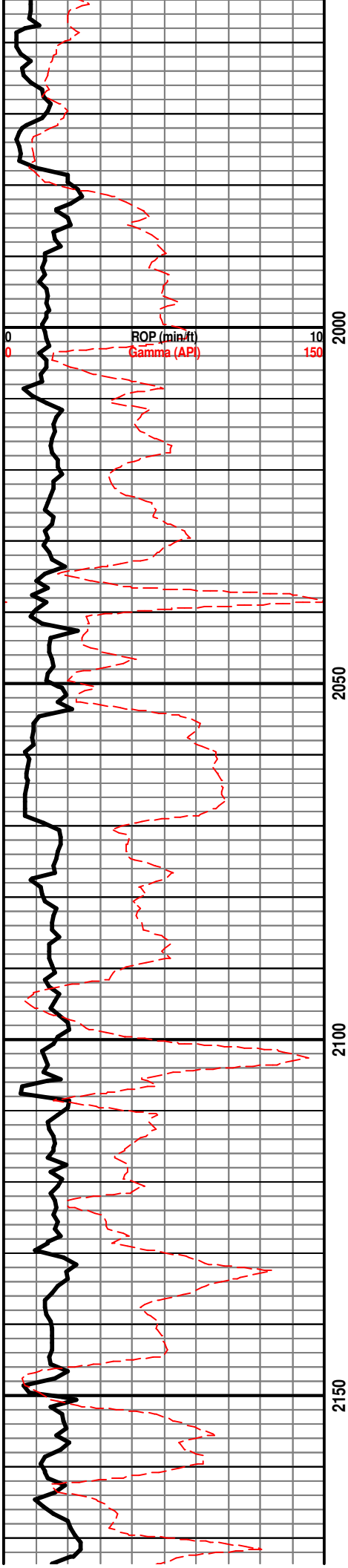
CHASE(Herrington) 1734(+160)

CHASE(Krider) 1756(+138)

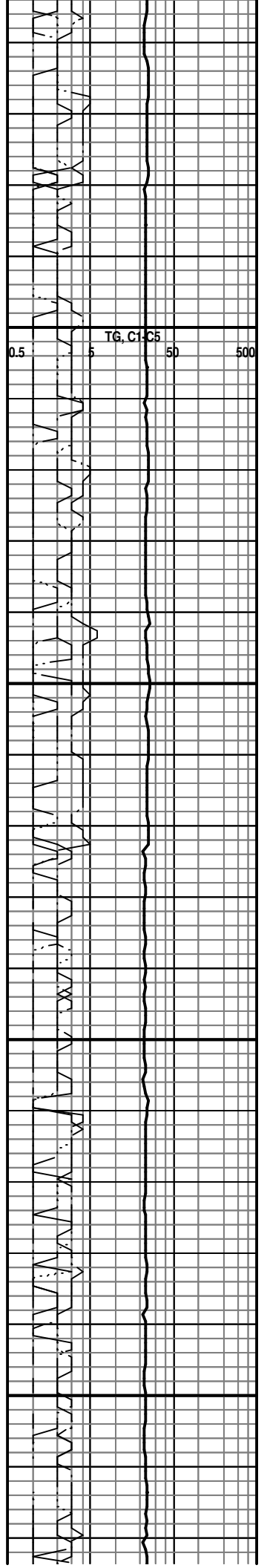
12 Unit Incr.
SHOW

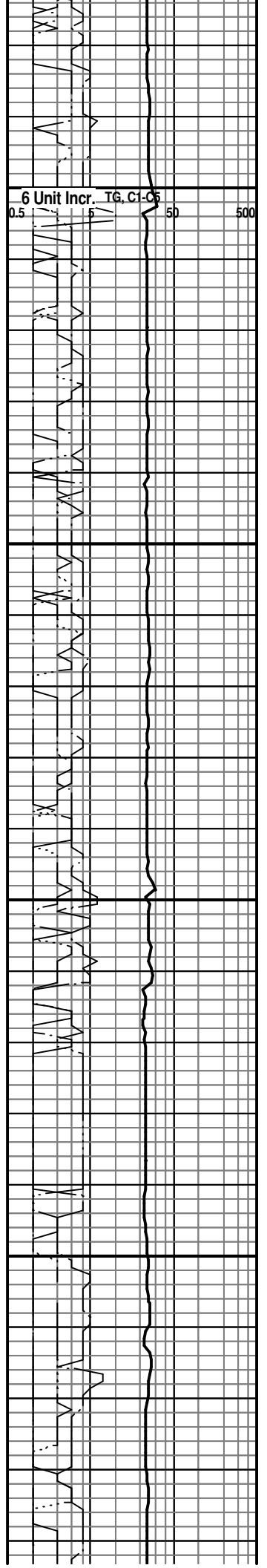
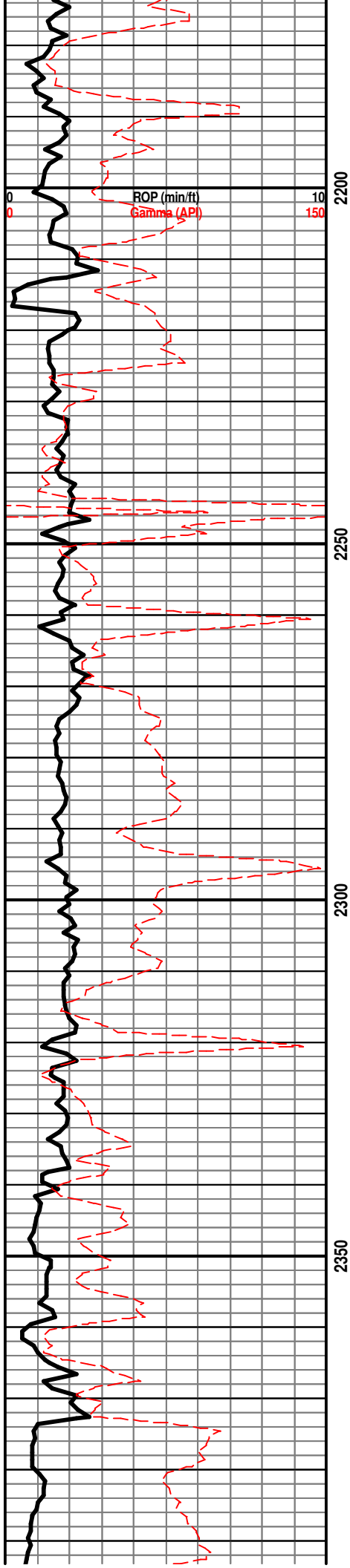
25 Unit Incr.
SHOW

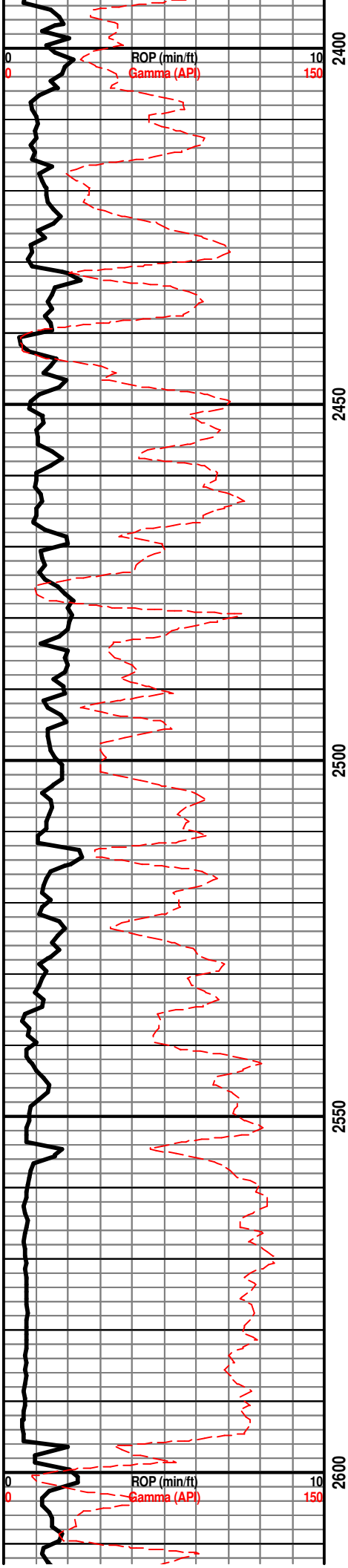




COUNCIL GROVE 2054(-160)



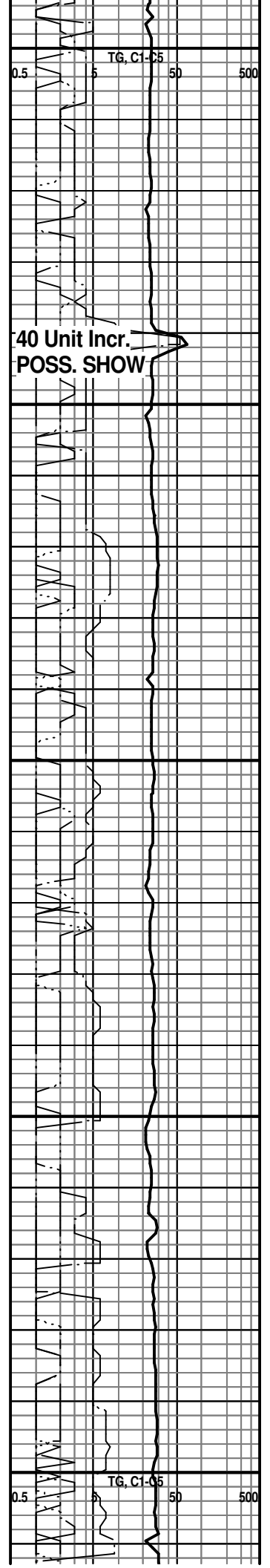


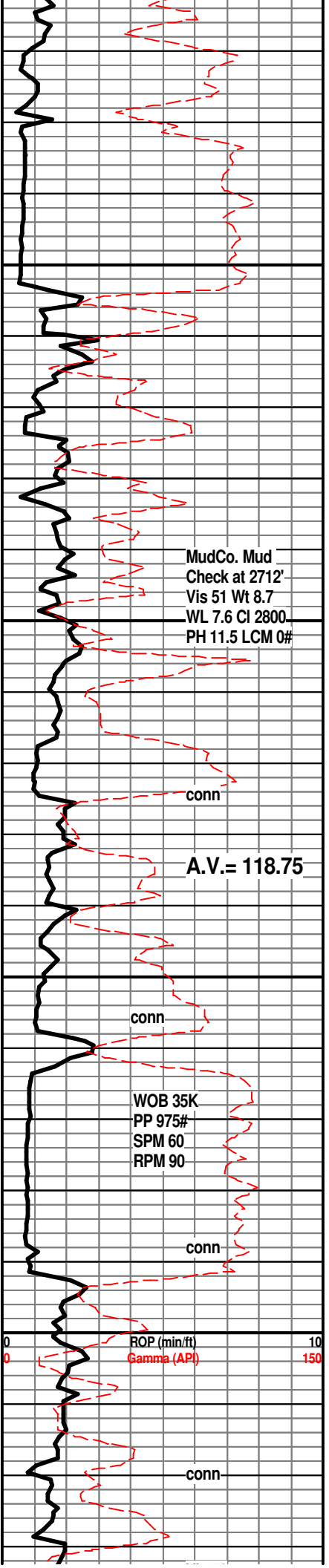


FALLS CITY LMST. 2438(-544)

Displace Mud System at 2566'

STOTLER/TARKIO LMST. 2596(-702)





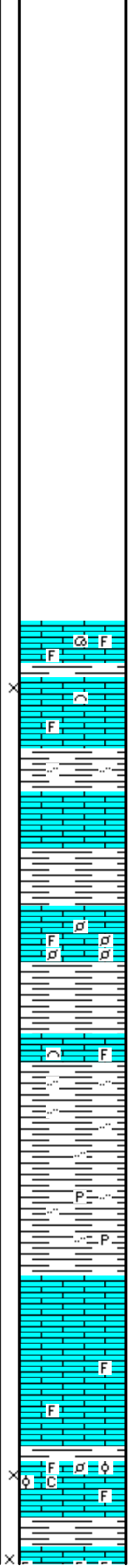
MudCo. Mud
 Check at 2712'
 Vis 51 Wt 8.7
 WL 7.6 CI 2800
 PH 11.5 LCM 0#

A.V. = 118.75

WOB 35K
 PP 975#
 SPM 60
 RPM 90

ROP (min/ft)
 Gamma (API)

2650
2700
2750
2800



TARKIO SAND 2626(-732)

TRC. of SS, fg qtz, SFO, good intergran por, live gassy oil, faint odor, brite yel fluor (this sand was found in a lower sample)

10' Wet and Dry Samples start at 2700'

LM; off wh, tan, cream, foss ip, scat fair interpart por, med yel min fluor, no stn or odor, no gas kick, ns.

SH; grn, gy grn, soft, silty ip.

LM; lt to med brn, hd, most blocky, micritic, tite

SH; med gy, occ dk gy, firm

LM; med brn, occ gy brn, foss ip, scat small foss pellets, most well cem, med yel min fluor, no stn or odor, ns.

LM; med gy, hd, foss ip, tite

SH; med gy, fiss, smooth, occ silty

SH; med to dk gy, fiss, scat dissem pyr, occ foss

HOWARD 2792(-898)

LM; med gy, gy brn, tan, most dense, blocky, hd, no vis por, interbdd dh brn dense micrite, no fluor, ns.

LM; med gy brn, med brn, dense, occ well cem foss mat, blocky, no vis por, ns.

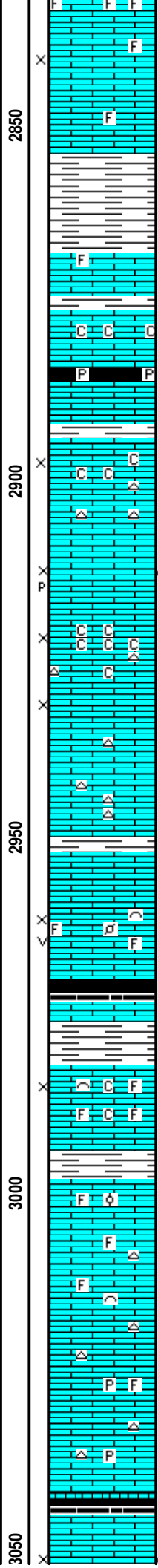
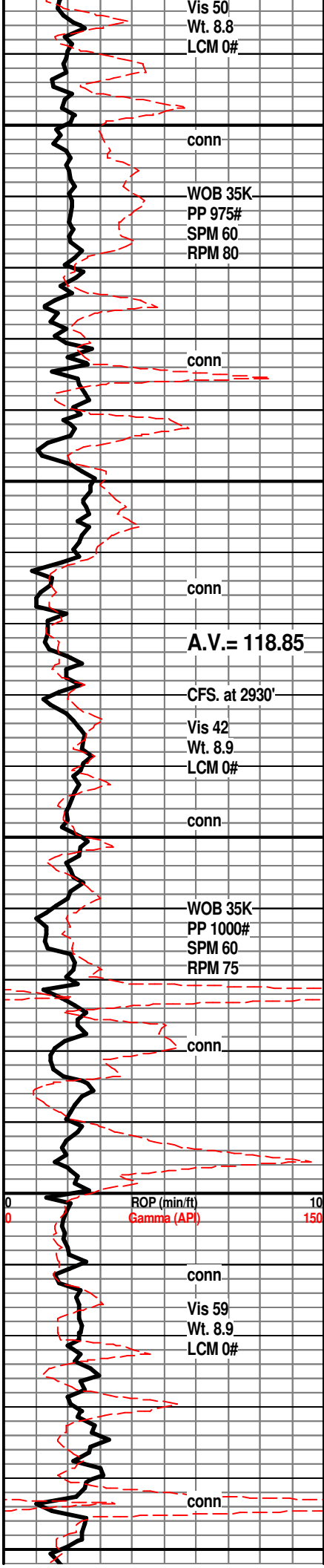
LM; tan to buff, cream, foss - pelletal ip, fair interpart por, some partly chalky mtx, lt yel min fluor only, no stn or odor, ns.

58 Unit Incr. SHOW

Recycle

Recycle?

TG, C1-C5
0.5 5 50 500



LM; tan to lt brn, fxln w/scat foss mat, poor interpart por, dull yel min fluor only, no stn or odor, ns.

SH; med gy, grn, lmy, firm

TOPEKA 2868(-974)
LM; lt to med brn, hd, most dense, scat well cem foss mat, no vis por, no stn odor, ns.
LM; off wh, wh, buff, fxln, interbdd partly chalky lmst, spotted lt yel min fluor, no stn or odor, no gas kick, ns.
SH; dk gy/blk, carb ip, occ pyr, thinly bdd

LM; tan to off wh, buff, fxln, fair interxln por, minor soft chalky mtx, interbdd hd dense occ cherty micrite, no stn or odor, ns.

LM; off wh, med to occ cse xln, fair interxln w/occ p-p por, scat med brn spotted oil stn, occ med yel fluor, v. faint odor, poor cut - poor show
LM; off wh, wh, cream, med xln, v. chalky - soft mtx, poor to fair intersxln por, trc dk brn oil stn, most barren, scat lt gy cht

LM; tan to lt brn, foss ip, scat poor interpart por, interbdd gy foss cht, no fluor, no stn or odor, ns.

LM; tan to lt brn, hd, most micritic, scat gy/off wh cht, ns.

LM; tan to cream, off wh, foss, scat fair interpart w/occ vug por, much soft chalky mtx, scat lt yel fluor, no vis stn, no odor, ns.

KING HILL SHALE 2971(-1077)
SH; dk gy, blk, fiss

LM; tan to off wh, lt brn, foss, interbdd med xln lmst, scat fair interxln por, occ soft chalky mtx, lt yel min fluor only, no stn or odor, ns.

SH; dk gy, trc blk, platy

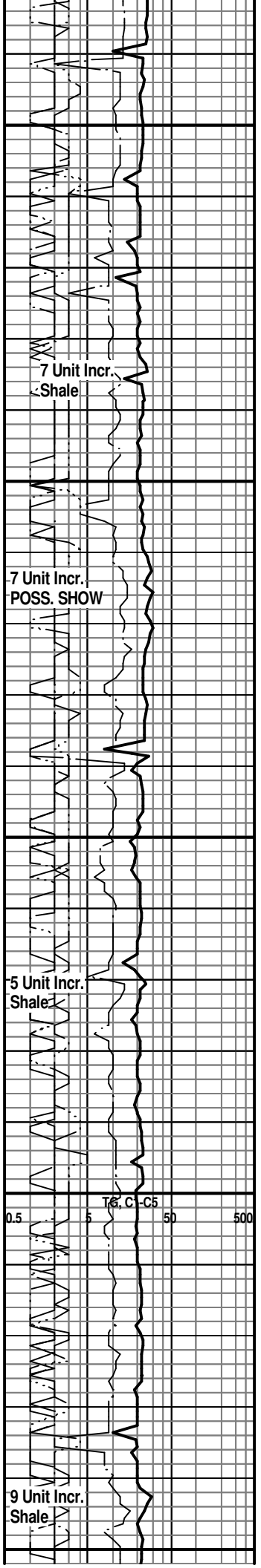
LM; tan to buff, lt brn, fxln, much dense, occ well cem foss, no fluor, ns.

LM; tan to lt brn, buff, scat foss mat, most well cem, occ cherty w/gy to off wh cht, no vis por, no fluor, ns.

LM; tan to off wh, buff, fxln to micritic, scat pyr, hd, no vis por, scat lt yel min fluor only, ns.

QUEEN HILL SHALE 3043(-1149)
SH; blk, carb ip, platy

LM; off wh, tan, foss to finely pelletal, interbdd med xln partly chally, best fair interpart/interxln por, fair por



partly chalky mst, fair interpart/interxin por, few pcs. w/dk brn hvy oil stn, no odor, lt yel fluor, no gas kick

LM; tan to lt brn, most dense, blocky, scat gy to tan cht, no vis por, no fluor, ns.

LM; tan to off wh, foss - finely pelletal, fair to gd interpart por, minor soft chalky mtx, dull to lt yel min fluor only, no stn or odor, ns.

LM; tan to lt brn, buff, most dense, micritic, scat gy to off wh cht, no vis por, ns.

HEEBNER SHALE 3138(-1244)

SH; blk, carb ip, platy

LM; med brn, hd, micritic, tite

SH; lt gy grn, silty, firm to soft, some sticky

TORONTO 3156(-1262)

LM; off wh, tan, foss ip, occ oolitic/pelletal, scat fair p-p and vug por, scat dk brn oil stn, dull to lt yel fluor only, faint odor, fair/gd cut, some bleeding oil, SSFO, por. looks discontinuous, poor/fair show

DOUGLAS SHALE 3173(-1279)

SH; lt gy to grn, silty, interbdd vf gr qtz ss and shaly ss

SLTST; lt gy, firm, platy, occ mica

SS; lt gy, vf to fgr qtz, mica, dirty - argil, poor intergran por, no stn, ns.

SH; lt gy, silty, soft, some sticky, platy, interbdd vf gr qtz occ mica tite ss, ns.

SH; med to occ dk gy, platy to flakey, most smooth, rarely silty

BROWN LMST. 3252(-1358)

LM; med brn, dense, blocky, tite

LANSING 'A' 3262(-1268)

LM; off wh, f to med xln, rarely finely oolitic, fair p-p/small vug por, med yel fluor, gd odor, SFO, some bleeding oil, spotted/even stn, instant cut

22 Unit Incr. Shale

Recycle Shale

10 Unit Incr. SHOW

0.5 TG, C1-C5 5 50 500

95 Unit Incr. SHOW

Vis 52
Wt. 9.1
LCM 0#
conn

WOB 35K
PP 1015#
SPM 60
RPM 75

conn

A.V.= 118.90

conn

Vis 60
Wt. 9.1
LCM 0#

conn

ROP (min/ft)
Gamma (A Conn)

WOB 35K
PP 1025#
SPM 60
RPM 75

conn

Vis 60
Wt. 9.1
LCM 0#

conn

DST #1
Lansing A

3100

3150

3200

3250

3266' - 3281'
Corrected
CFS. at 3281'
MudCo. Mud
Check at 3283'
Vis 49 Wt. 9.2
WL 8.0 Cl 4800
PH 10.5 LCM 0#

DST #2
Lans 'B - E'
3282' - 3338'
Corrected
Vis 56
Wt. 9.2
LCM 0#
conn

CFS. at 3338'
MudCo. Mud
Check at 3340'
Vis 56 Wt. 9.05
WL 8.0 Cl 5000
PH 10.5 LCM 0#

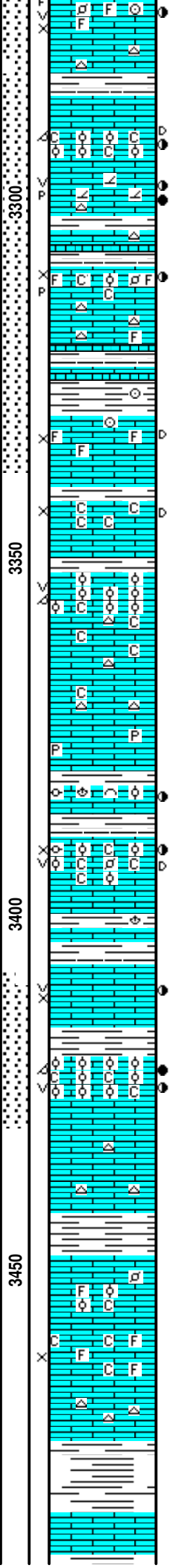
A.V.= 118.60
conn
WOB 38K
PP 1000#
SPM 60
RPM 75

Vis 48
Wt. 9.2
conn
CFS. at 3398'

DST #4
K.C. 'I' & 'J'
3409' - 3430'
Corrected
CFS. at 3430'
Vis 48
Wt. 9.2
LCM 0#

conn
WOB 38K
PP 975#
SPM 60
RPM 75

R=Rough Drilling



LM; off wh, foss ip, fair interpart w/scat vug por, trc frags w/stn on frac face, med yel fluor, v. gd odor, gd cut, SFO, trc gas bubbles

DST #1: Lansing 'A' 3266' - 3281'
LANSING 'B' 3285(-1391)
LM; tan, off wh, foss - finely pelletal to oolitic, much blk tar/gils, chalky soft ip, med yel fluor, faint odor, very little live shows, no FO
LM; off wh, fxln, fair p-p/ vug por, brite yel fluor, fair/gd odor, dolo ip, spotted/even lt brn stn, SFO

LANSING 'C/D' 3309(-1415)
LM; tan to off wh, cse xln/foss ip, fair interxln w/occ p-p por, med brn spotted stn, SSFO, med/brite yel fluor, fair odor, partly chalky mtx, some dk hvy residual oil
SH; med to dk gy, platy, foss ip.

LANSING 'E' 3330(-1436)
LM; tan to lt brn, foss ip, well cem, poor to no vis interpart por, trc dk brn residual oil stn, no odor, trc dull yel fluor, tite
DST #2: Lansing 'B'-'E' 3282' - 3338'
LM; off wh, buff, fxln, v. chalky, soft, poor to fair interxln por, dull/lt yel fluor, scat dk brn residual stn, no odor, poor cut

LANSING 'G' 3352(-1458)
LM; off wh, tan, lt gy, oolitic, med to occ lrg moldic por, rare vug por, no fluor, no stn or odor, barren, rare oolitic cht, occ chalky, ns.
LM; tan to lt gy, lt brn, most dense, blocky, scat tan cht, minor chalky mtx, no fluor, ns.

LM; med to dk gy brn, hd, pyr ip, dense
LM; med/dk brn, foss, hd, scat dk brn stn, tite
LANSING/K.C. 'H' 3389(-1495)
LM; off wh, lt brn, oolitic - highly foss ip, poor/fair interpart por, vug por ip, spotted dk brn stn, med/brite yel fluor, fair cut, no FO, faint odor, chalky ip, some barren por, poor show
SH; lt gy, grn, platy, foss ip.

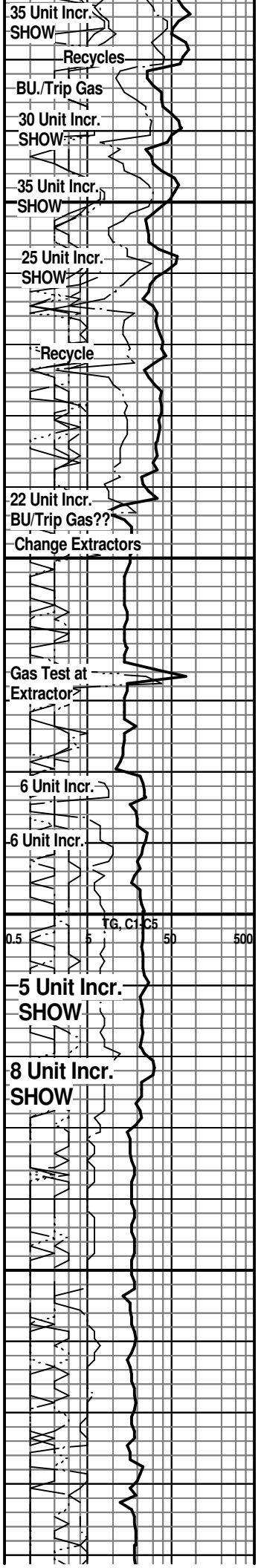
K.C. 'I' 3407(-1513)
LM; off wh, tan, oolitic, foss, most well cem, poor interpart/scat vug por, v. spotted med brn stn, rare med yel fluor, no FO., faint odor, tite

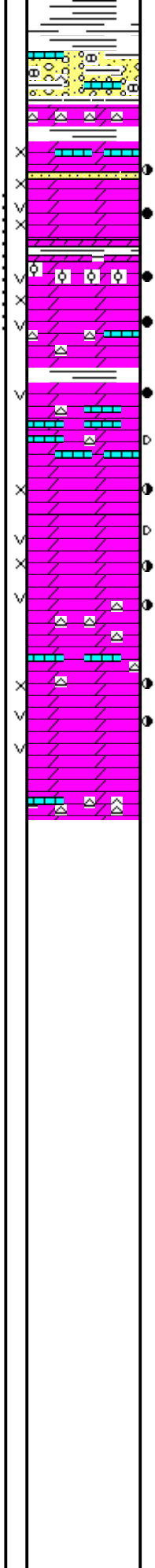
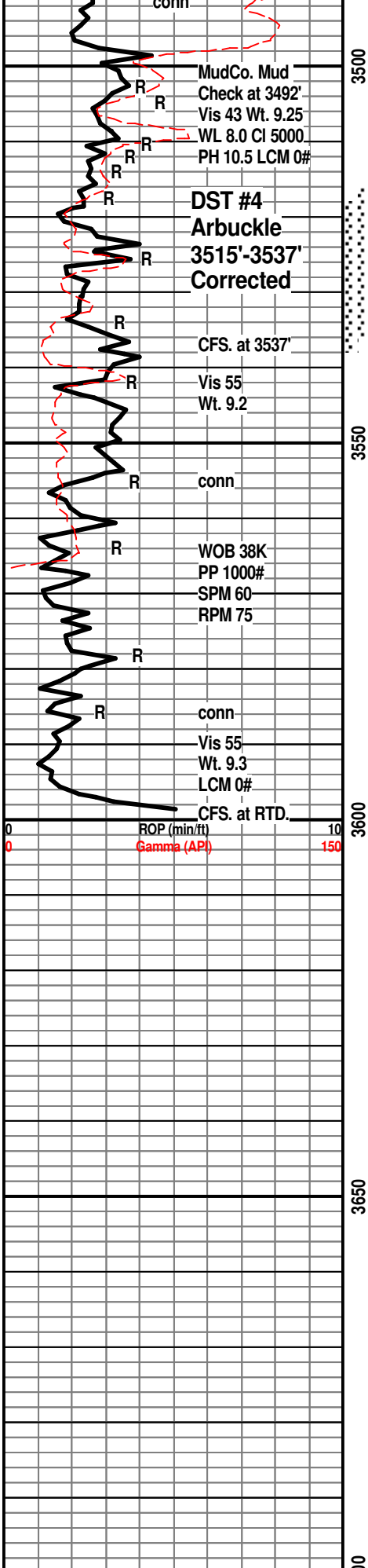
K.C. 'J' 3420(-1526)
LM; off wh, tan, oolitic, well dev. oomoldic por, occ vug por, much med to dk brn live oil stn, SFO, fair odor, med/brite yel fluor, gd cut, some barren por w/occ chalky mtx
DST #3: K.C. 'I' + 'J' 3409' - 3430'
LM; tan to off wh, buff, most dense, blocky, scat gy to off wh cht, no vis por, ns.

K.C. 'K' 3448(-1554)
LM; off wh, tan, foss - finely oolitic ip, scat chalky mtx, dull yel fluor, no stn or odor, no gas kick, ns.
LM; lt gy, off wh, foss, fair interpart por, minor grn clay incl, no fluor, no stn or odor, occ soft chalky mtx, ns.

LM; off wh, lt gy, foss ip, occ fxln, most well cem, scat off wh cht, no vis por, no fluor, ns.
SH; varic: rust red, yel, gy, grn, platy

LM; rose red, red brn, weath appearance, blocky
BASE KANSAS CITY 3490(-1596)





SH; varic: grn, red - rust red, maroon, brn, gy

CONGL; weath varic lmst, some nodular, varic shales, trc cht, some weathered cherty dolo

ARBUCKLE 3510(-1616)
 DOL; off wh, lt brn, sucrosic/fine rhombic, lmy ip, fair interpart por, spotted stn, fair odor, med yel fluor, Trc. FO, trc ss w/oil stn and fluor
 DOL; lt golden brn, sucrosic to med rhombic, spotted/even lt brn stn, SFO, gd odor, most w/gd interxln/vug por, golden fluor, gd cut, gd odor
 DOL; tan - lt brn, hd, lmy, turquoise sh interbdd
 DOL; med brn, oil saturated, oolitic ip, fine to med rhombic, GSFO, gd odor, golden fluor, even stn, gd cut, some pcs. bleeding oil, lmy ip.

DST #4: Arbuckle 3515' - 3537'
 DOL; med brn, med rhombic, some cherty, some well dev. vug por, med yel fluor, scat pcs. w/blk tar/gils, sev. pcs. w/live oil saturation and SFO, gd odor, gd cut, interbdd hd lmy dolo w/blk tarry dead oil, scat wh fresh cht, trc grn to turquoise shale

DOL; tan to med brn, sucrosic to med xln, gd interxln w/occc vug por, mostly blk tar/dead oil, med yel fluor, fair odor, decreasing odor

DOL; off wh, lt/med brn, gd vug por, spotted live stn w/SSFO, cherty w/wh fresh cht, med yel fluor, fair/gd odor, interbdd hd lmy dol

DOL; off wh, lt brn, sucrosic to med/rarely cse rhombic, scat well dev. interxln and vug por, some oil saturation, v. gd odor, med yel fluor

DOL; off wh, v. cherty, lmy, hd, blocky

RTD. 3600' at 4:10 AM. 2/18/12

LTD. 3600'

Superior Well Services DIL, NEU/DEN w/PE, Microlog

NOTE: This log was shifted upward by 1' - 2' for correlation purposes with the Superior Well Service LOGS.

