MUD LOG
WellSight Systems
Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: S Rolfs #5
Well Id:
Location:
License Number: **Region:**
Spud Date: **Drilling Completed:**
Surface Coordinates:

Bottom Hole Coordinates:
Ground Elevation (ft): 1757   **K.B. Elevation (ft):** 1770
Logged Interval (ft): 2550   **To:** 3433   **Total Depth (ft):** 3463
Formation:
Type of Drilling Fluid: Chem Mud

OPERATOR

Company: Pauley Oil
Address:

GEOLOGIST

Name: Steven Petermann
Company: Consulting Petroleum Geologist
Address: 3206 NorthWestern Avenue
Hutchinson, Ks 67502

Cores

DSTs

DST depths shown are correlated to RIG DEPTH and were NOT adjusted to log depth. In general Rig Depths are 3-5' LOW to logged Depth.

DST#1 2841'-2862' 5-30-45-60/IF BOB 15 sec 11-11#/FF BOB immed 12-13#/ISIP 346#/FSIP 429# (poor perm-bldg)/Recover 678'GIP 15'Mud
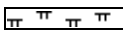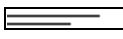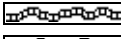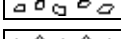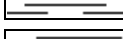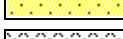
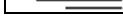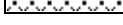DST#2 3173'-3254' 15-45-45-90/IF .25''-1.5'' 11-17#/FF WSB-4'' 19-27#/ISIP 919#/FSIP 895#/Recover 10'Oil 20'OCM (11%Oil 89%Mud)

DST#3 3173'-3269' 10-30-45-60/IF .25''-5'' 14-32#/FF .25-11'' 35-75#/ISIP 862#/FSIP 823#/Recover 3'CO 64'SOCM (3%Oil 97%Mud) 63'SOWCM (3%Oil 20%Wtr 77%Mud) 13,000ppm Cl
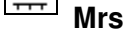
Comments

It was discovered toward the end of the drilling of this well that the Rolfs #4 reference well had used a significantly erroneous GL and KB (used estimate instead of survey). This changed referenced comparative tops by approx 10'

ROCK TYPES

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

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
Gastro
Oolite

Ostra
Pelec
Pellet
Pisolite
Plant
Strom

STRINGER
Anhy
Arg
Bent
Coal
Dol
Gyp
Ls
Mrst

Sltstrg
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

OIL SHOW
Even

Spotted
Ques
Dead
Ssg
Ssfo&g
Sg
Sg ssfo
O&g

INTERVAL
Core
Dst

EVENT
Rft
Sidewall

Curve Track 1		Depth	Lithology	Oil Shows	Geological Descriptions	TG, C1-C5			
ROP (min/ft) ———						TG (Units) ———			
Gas (units) - - - - - - -						C1 (units) · ———			
Gamma (API) — · — · —						C2 (units) — · · ———			
						C3 (units) — · · · ———			
						C4 (units) — · · · · ———			
						C5 (units) · · · · · ———			

Curve Track 1 scale: ROP (min/ft) 0 – 5; Gas (units) 0 – 500; Gamma (API) 0 – 150

TG, C1-C5 scale: 1 – 10 – 100 – 1000

Depth markers: 25, 2550, 2600, 2650

Geological Descriptions:
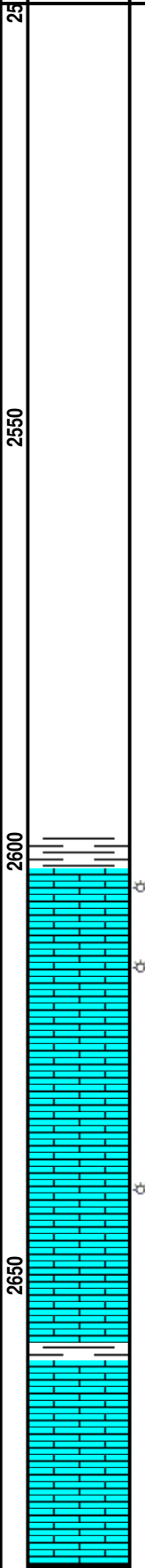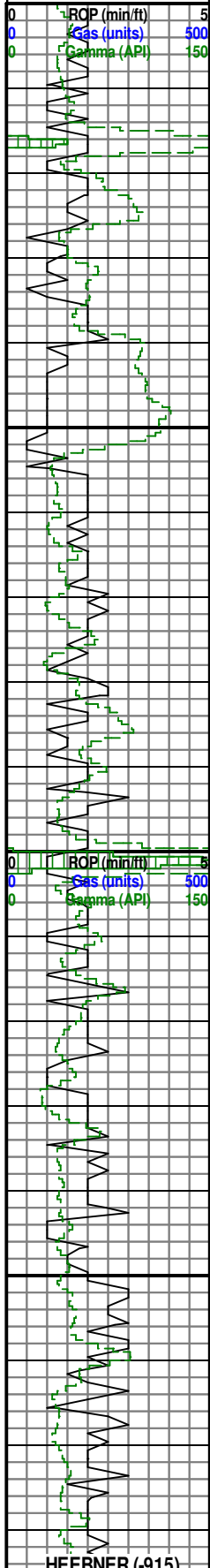
Shaley/silty-gry + LST tan-gry, cryptoxln-vfxln, soft pvp few foss NS

Shale rd/gry/grn, rd clasts, + LST AA+ LST tan vfgr sl sdy most pvp, friable SSG w rainbow

LST crm-tan few gry vfxln few f-mxln silty pvp soft SSG NSFO NO NF

LST crm-gry silty/sdy dse pvp NS NO NF + gry-dk gry shale

LST tan vfxln soft p-fr intxln por, SSG tr-scatt lt brn stn NSFO NO NF

LST gry-dk tan fossiliferous wkstone pvp-dse NSFO NO NF + shale gry-maroon, fissile

shale gry-dk gry, LST crm-tan vf-fxln few mxln, foss cherty in pt, pvp-dse NS NO NF

LST gry vfxln dse+LST tan/brn fxln fr por scatt brn stn NSFO NO NF

HEEBNER (-915)

Shale dk brn/blk carb GSG + LST crm fxln foss chlky in pt SSG
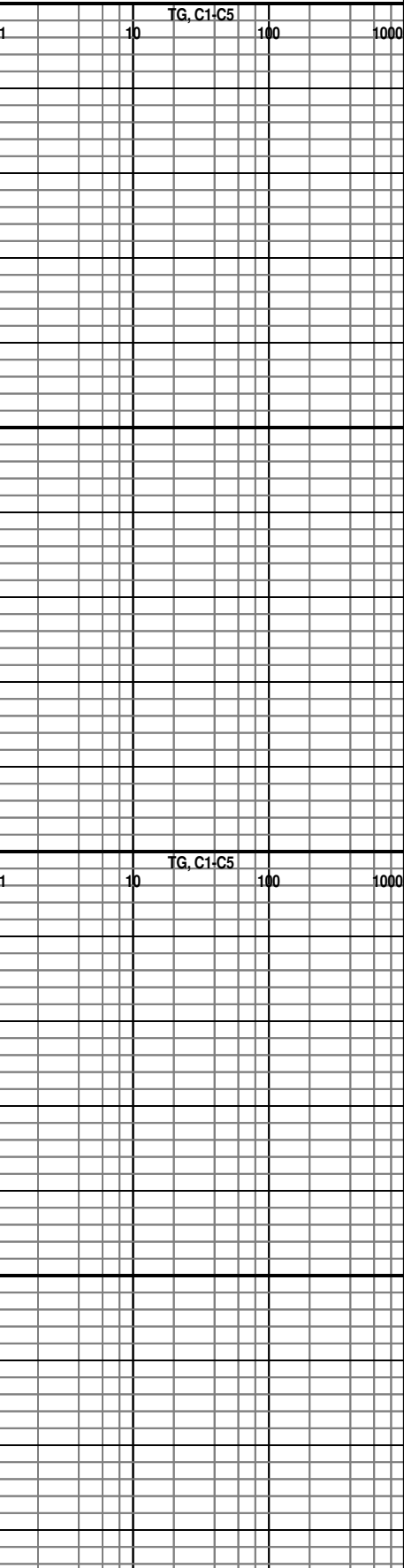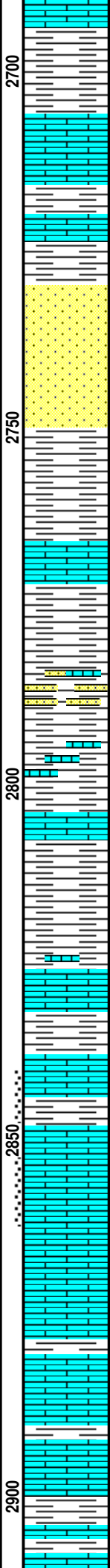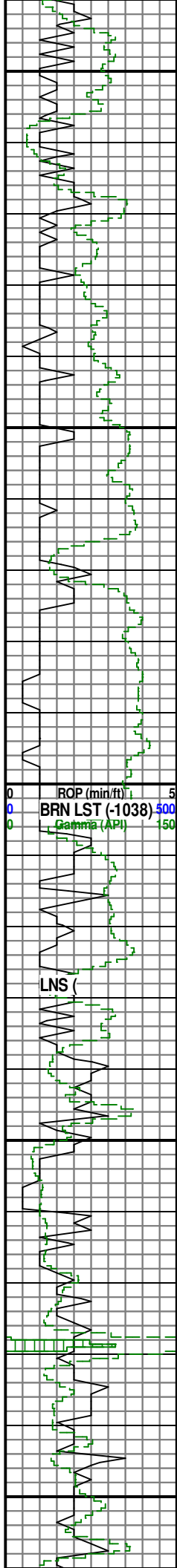
very shaley VC/gry grn brn + LST crm vf-fxln soft subchlky SG

very shaley lt gry + LST tan/brn mottled fxln dse

AA

AA + LST crm vfxln chlky SG

AA + SSt grn/gry vfgr ws rd friable SSG w rainbow ? lt brn stn NSFO NO NF

AA incr SSt (30-40%) SG stn AA NSFO NO NF

AA shalier fewer SSt SG

Shale gry +SSt & Shaley SSt AA

Shaley AA + LST crm/tan fxln dse

Incr Shale gry/dk gry + SSt & Shaley SSt AA SG

Mostly gry shale + few LST crm-tan vf-fxln soft-dse pvp NS NO NF

very shaley gry + LST tan fxln cherty dse

very shaley gry soft + few LST crm (wht w/golden surface stn) vfxln pr-fr intxln por tr sub mooldic por SSG

very shaley gry + LST crm-tan vf-fxln pvp-dse NS NO NF

Flood LST crm vfxln soft some sub chlky FSG few w rainbow

LST crm vfxln good oom por (rechrystallized) lt golden stn SFO (v lt - lt red) SSG Ft Odor

LST AA less mooldic por, similar show, foss, many pvp ft-fr odor

LST tan-gry vf-cryptoxln dse few foss NBS NF (ssfo mooldic cavings?) ft odor

LST crm/tan vfxln chlky in pt few mooldic AA (cavings?) but w darker oil show & stronger odor onb break, Fair Odor

Shaley-dk gry plty +lt gry soft, + LST dk gry-gry, tan, vfxln pvp-dse NS NO NF

Shaley dirty smple, LST crm some mottled dk scattered brn stn, fr show high grav clr oil NO NF

2700
2750
2800
2850
2900

0 ROP (min/ft) 5
0   500
BRN LST (-1038)
0 Gamma (API) 150

LNS (

TG, C1-C5
1   10   100   1000
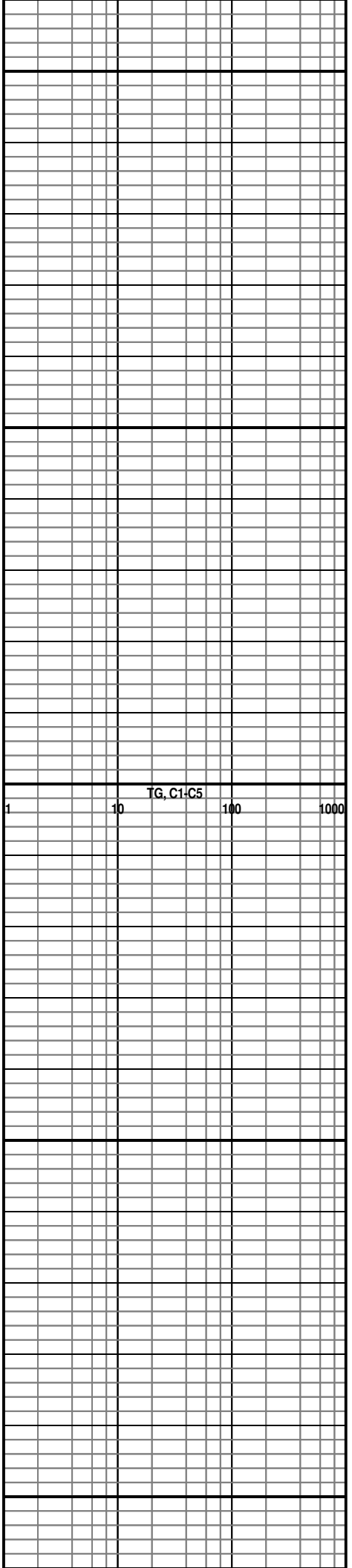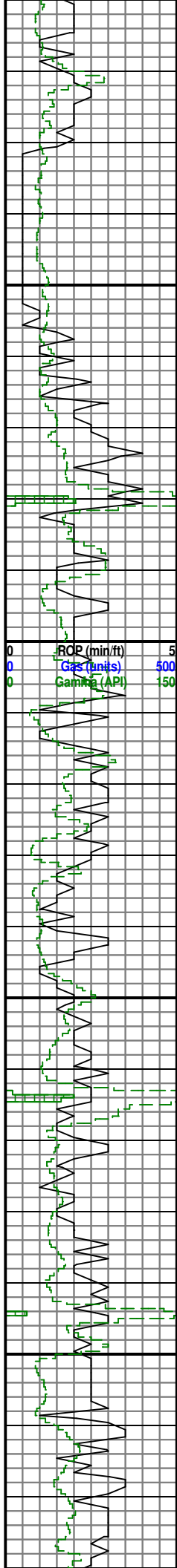
LST mostly crm vf-fxln, soft - subchlky pvp dull fluor few gry fxln foss pkstone pvp NS

very chlky shaley dirty, LST crm vfxln even lt golden stn pvp soft-dse few chlky GSG

LST crm vfxln even lt golden stn foss/oom w good oom por bleeding red gsy oil

LST crm w lt golden stn good oom por AA mostly barren SSG

2950

AA denser + LST cherty dk tan-brn dse + LST crm fxln suboom fr intxln por lt stn SSG NSFO NO

LST oom/sub oom AA well cmt + LST cherty AA dse

Shale grey/blk SG + LST gry fxln foss in pt pvp SSG

LST gry vf-fxln soft shaley? pvp SG + LST crm vfxln chlky in pt lt gold surf stn, some dk blk (dead?) oil stn NSFO NO NF

3000

Shale gry/blk + LST crm vf-fxln, fr intxln por soft lt stn NSFO NF NO+LST brn/gry mottled foss pvp-soft SSG

Shale ghry+ LST tan vf-cryptoxln sl chrty dse NS

Mosatly AA some LST crm vfxln soft-sub chlky lt golden stn SSG

Shale dk brn/blk SG silty

LST gry/tan mottled fxln foss wkstone mostly pvp SG w rainbow + LST crm f-mxln foss ool (pkstone) fair intxln por SSG

LST crm/gry brn & mottled fxln soft shaley in pt? FSG some brn stn in fracs NSFO NO NF + LST crm vfxl;n subchlky-chlky w SG/rainbow

3050

LST crn/tan vfxln chrty in pt pvp-dse NS NF NO + shale dk gry

Shale dk gry/blk SG + LST tan/gry fxln foss dse SSG + LST crm vfxln pr-fr intxln por SSG NSFO NO NF

Shale dk gry + LST tan vfxln dse NS foss chrty

LST AA + Shale gry/dk gry-blk

3100

LST crm-gry-tan vfxln chrty in pt foss in pt mostly pvp few with sl intxln por SSG NSFO NO NF

Shale gry-few grn gry + LST crm vfxln pr-fr intxln por lt gold stn SSG + LST tan cryptoxln dse

Abdt gry shale + LST AA

ROP (min/ft) 0 — 5
Gas (units) 0 — 500
Gamma (API) 0 — 150

TG, C1-C5   1   10   100   1000

TG, C1-C5

1   10   100   1000

Depth markers (left track): 3150, 3200, 3250, 3300, 50

Shale gry AA + LST crm vfxln pr-fr por lt golden stn F-GSG SSFO (red) NF ft odor few pcs ppt por w brn stn SFO

LST AA ppt por brn stn SFO on break Fr Odor on break + Dolo?LST gry vfxln pr-fr intxln por SG SSFO + gry shale & silty shale

Shale grn/gry/dk gry/red/grn gry + VC LST soft-dse FSG in soft Ft-Fr Odor abdt clr rainbow sfo

VC Shale grn/gry/red chert white/tan fresh shrp+ LST crm fxln pvp FSG + LST gry vfxln dse

VC chert mar/wht/amber + mar shly LST vfxln SG+LST wht-yellow stnd mxln angular GSG

LST crm/yellow f-mxln mostly pvp SSG +VC shale few fgr rd qtz grns embedded

VC shale w qtz grns green waxy shale tr SSt vf-fgr f-gd srt well rd friable calcite occluded por NS

Abdt SSt clr/frosted fgr well rd & sorted v friable-well cmt much cleaner then above pr-fr por, SFO-Sat (lt tan) gassy in part good odor dull yellow fluor

Grn shale w qtz grns embedded + SSt AA w SFO

Grn shale + SSt AA mostly w SFO&G few barren
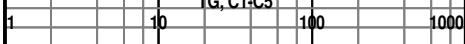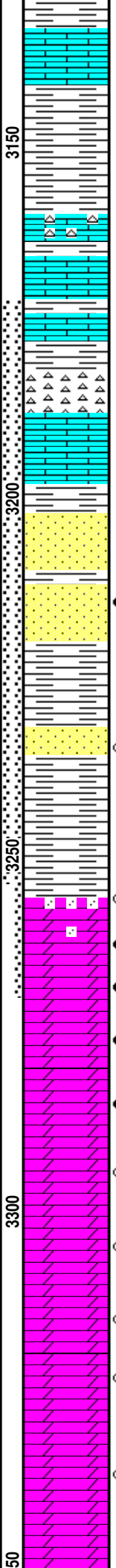
AA

3254-3260 Grn shale +SSt AA w SFO + LimeyDolo fxln wht w lt stn SSFO mostly pvp SG

3260-3264 AA incr limeydolo fxln wht w gold stn chrty in pt FSFO&G +doloSSt w fgr qtz clear SSFO

3264-3269 dolo tan sucrosic fxln fr-gd por many friable SGO good odor

dolo crm w lt golden stn vfxln mostly pvp-dse SFO&G good odor (tite)

predominantly dolo crm-tan fxln sucr well cmt-friable fr ppt por w stn SFO + shale grn/gry

dolo tan fxln sucr SFO&GsyO + chrty dolo dse chrt wht fresh sharp semi opaque + dolo crm-tan vf-fxln many dse few fr por sucr in pt weaker SFO

incr shale apple grn/gry + dolo crm/tan vf-fxln dse-fr por sucr in pt sl chrty FSFO fr-gd odor

dolo AA- if sucr w por has FSFO & gsyO + brn limey dolo vfxln, v dse

tan/brn chrt, sl dolomitic, v dse dolo crm AA ft-fr odor w SFO on break

dolo tan vf-fxln foss/ool dse + chrt wht/boney fresh + dolo fxln sucr in pt SFO few w dead oil stn (dk red) mostly live

dolo crm-tan vfxln softer very friable sucr good show v hi grav clr oil F-GSG + tan dolo AA SFO

AA some oil appears dead

AA some oil appears dead
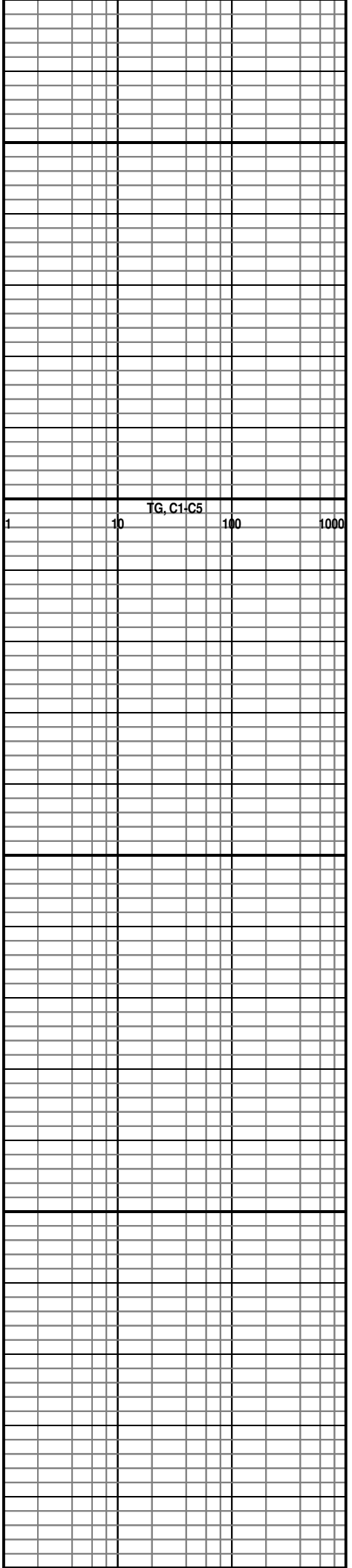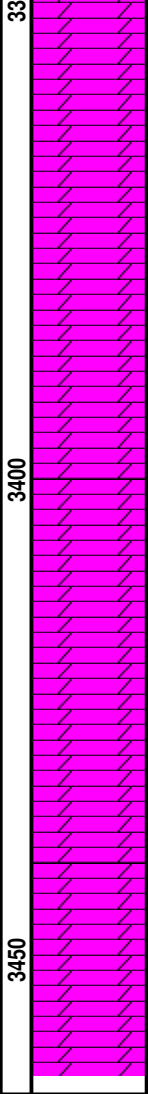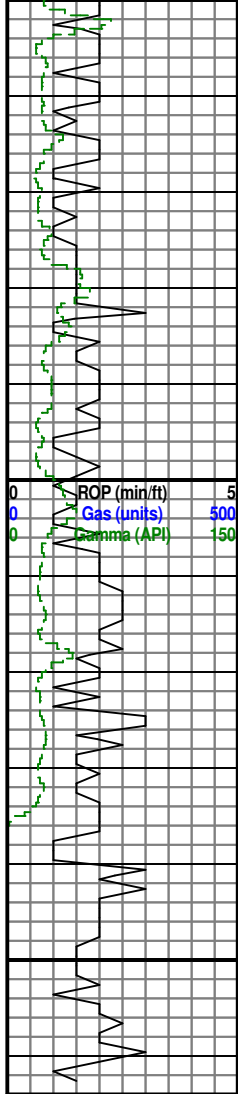
dolo crm fxln ly stn good por dead oil (dk red) some live

AA good por friable both live SFO and dead oil stn

AA + boney/tan chrt & dolo chrt

dolo crm/tan vfxln many dse pvp show high grav clr SSG poor oil show

dolo crm vfxln soft fr por NS sulfur odor

0	ROP (min/ft)	5
0	Gas (units)	500
0	Gamma (API)	150

TG, C1-C5

1	10	100	1000

AA + chrty

dolo crm/tan vf-fxln mostly pvp-dse SSFO mostly barren

AA some w better por poorly cmt barren

dolo wht/crm fxln few mxln sucr w good intxln por NS

33

3400

3450