

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Yost 'C' #2-25
Location: 2286' FSL & 750' FEL, Sec. 25-T29S-R19W, Kiowa Co., KS.
Licence Number: 15-097-21824-00-00 Region: Nichols Field
Spud Date: 9/15/2016 Drilling Completed: 9/25/2016
Surface Coordinates: 2286' FSL & 750' FEL, Sec. 25-T29S-R19W

Bottom Hole Same as Above
Coordinates:
Ground Elevation (ft): 2301' K.B. Elevation (ft): 2312'
Logged Interval (ft): 3500' To: 5350' Total Depth (ft): 5350'
Formation: Viola at Total Depth
Type of Drilling Fluid: Freshwater/Gel to 3307'; Chemical Gel 3307' to 5350'

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OPERATOR

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GEOLOGIST

Name: Jon D. Christensen
Company: Consulting Petroleum Geologist
Address: 277 S. Maple Dunes Court
Wichita, KS. 67235-7500

Cores

None Taken

DSTs

DST #1(Lansing 'B' zone) 4390' - 4423'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Strong Blow/Gas to Surface in 3 Min., Gauged 528.9 MCFG/15", FFP Gas to Surface Gauged 121.2 MCFG/45 Min., Blow would not bleed off during FSI; REC: 400' G&WCMO(21%G, 42%O, 12%M, 15%W), 630' SW(CI 130,000 - MudCo.); IFP 263-271#, ISIP 1426#, FFP 252-547#, FSIP 1398#, IHP 2175#, FHP 2107#, BHT 116 Deg. F.

DST #2(Kansas City 'H' zone) 4538' - 4562'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Strong Blow BOB/45 Sec. Gas to Surface in 15", 4" Blowback on ISI; FFP Gas to Surface Gauged Max. 12.0 MCFG, BOB Blowback on FSI; REC: 275' CGO(39.9 Deg. API), 140' GMCO(20%G, 40%O, 40%M), 50' HGCMWO(51%G, 39%O, 5%W, 5%M) Not enough water for CI measurement; IFP 60-73#, ISIP 1215#, FFP 80-185#, FSIP 1079# and Building; IHP 2247#, FHP 2174#, BHT 117 Deg. F.

DST #3(Miss. Chert) 4988' - 5019'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Strong Blow BOB/8 Min., FFP Strong Blow throughout, no Gas to Surface, 6" Blowback and Gas to Surface during FSIP(burns bright orange flame); REC: 20' SI. Oil Specked mud, no water; IFP 23-28#, ISIP 290#, FFP 18-34#, FSIP 289#, IHP 2491#, FHP 2410#, BHT 120 Deg. F.

Comments

9/15/16 MIRU Sterling Drilling Co. Rig #4, Spud at 6:45 PM.; 9/16/16 TD. 650' - Trip out to run Surface Casing; 9/17/16 TD. 650' - WOC; 9/18/16 Drilling at 2225'; 9/19/16 Drilling at 3560'; 9/20/16 Drilling at 4170'; 9/21/16 TD. 4425' - TOH with DST #1; 9/22/16 TD. 4564' - TOH with DST #2; 9/23/16 Drilling at 4838'; 9/24/16 TD. 5021' - DST #3; 9/25/16 TD. 5204' - Bit Trip - reached Total Depth of 5350' at 11:45 PM.; 9/26/16 RTD. 5350', LTD. 5349' - Logging well; 9/27/16 Production Casing Set.

Set new 8 5/8"(23#) Surface Casing at 646' KB. with 350 sacks cement(Basic Energy Services). Cement Did Not Circulate. PD. at 10:00 AM. on 9/16/16. Used 205 sacks of cement through 1" to fill to bottom of cellar.

Set new 5 1/2"(15.5#) Production Casing at 5132' KB. with 330 sacks of "Loeb Blend" Cement(Basic Energy Services). PD. at 3:30 AM. on 9/27/16. Supervised by George Payne, Petroleum Engineer.

Surveys: 0.75 Deg. at 650'(Surface Casing); 0.75 Deg. at 4103'(Bit Trip); 0.50 Deg. at 4425'(DST #1); 0.75 Deg. at 5021'(DST #3); 1.25 Deg. at 5350' RTD.


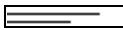
Pipe Strap at 4103'(Bit Trip): Strap 0.43' Long to the Board, no correction made to the Board.

After review of the Halliburton Logs, DST data and good Structural position, the operator elected to set new 5 1/2" Production Casing for completion in the Kansas City 'H' zone, Lansing 'B' zone and Mississippian at a later date. The Stotler Lmst. should be evaluated prior to P & A of the Yost 'C' #2-25. A 74 Unit gas kick was logged while drilling with the PDC bit.




















































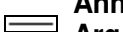



















LOG TOPS: Stotler Lmst. 3535(-1223), Heebner Shale 4186(-1874), Toronto 4201(-1889), Brown Lmst. 4362(-2050), Lansing 'A' 4378(-2066), Lansing 'B' 4398(-2086), Kansas City 'H' Drum 4547(-2235), Stark Shale 4694(-2382), Base Kansas City 4783(-2471), Marmaton 4832(-2520), Cherokee Shale 4917(-2655), Miss. Chert 4967(-2655), Miss. Lmst. 5016(-2704), Kinderhook Shale 5178(-2866), Viola 5191(-2879).

NOTE: This log was shifted upward by 2' to 4' for correlation purposes with the Halliburton Logs.

ROCK TYPES

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

- POROSITY**
- E Earthy
 - F Fenest
 - F Fracture
 - X Inter
 - M Moldic
 - O Organic
 - P Pinpoint

V Vuggy

- SORTING**
- W Well
 - M Moderate
 - P Poor

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

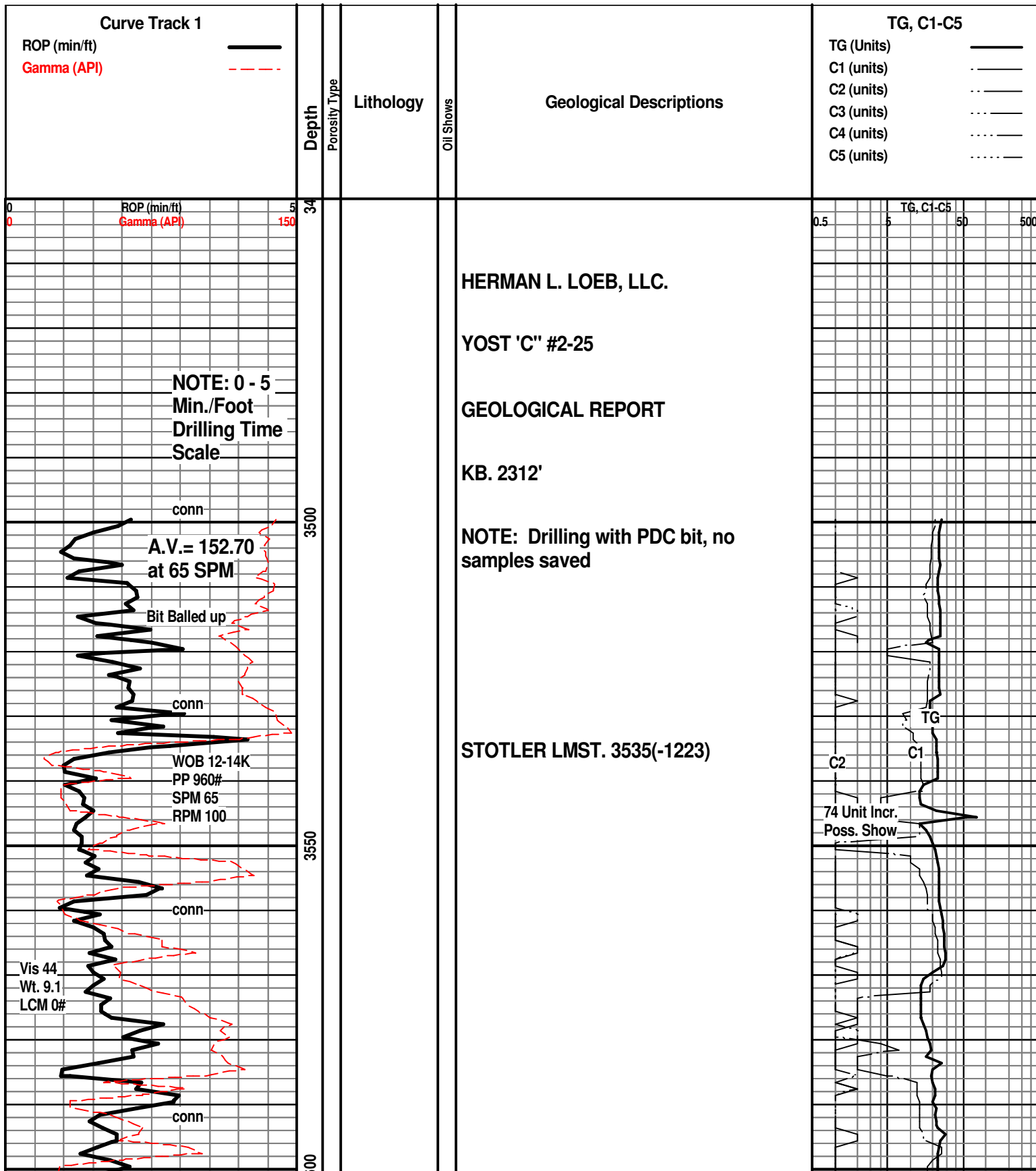
- Spotted
- Ques
- Dead

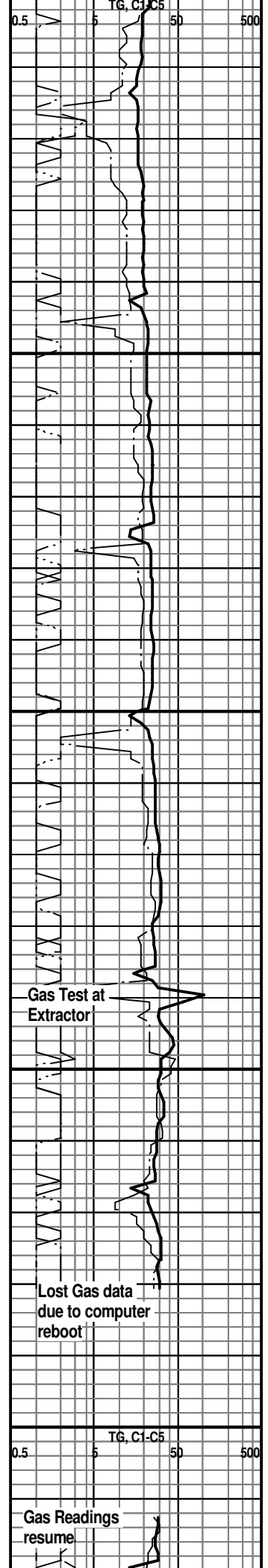
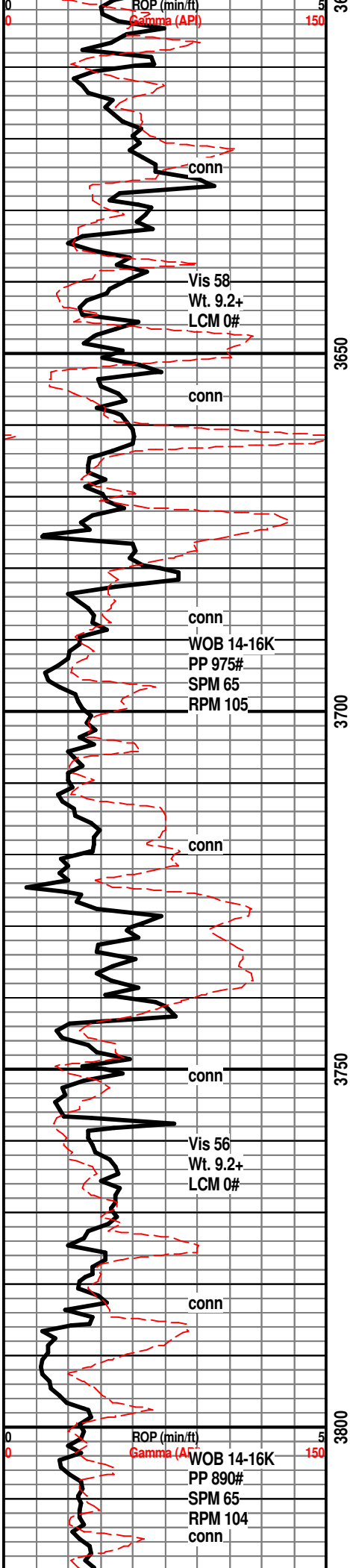
- EVENT**
- Rft
 - Sidewall

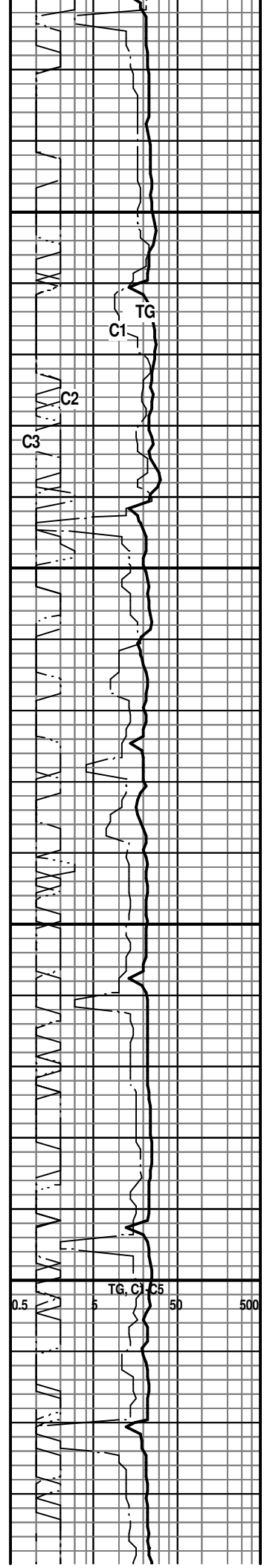
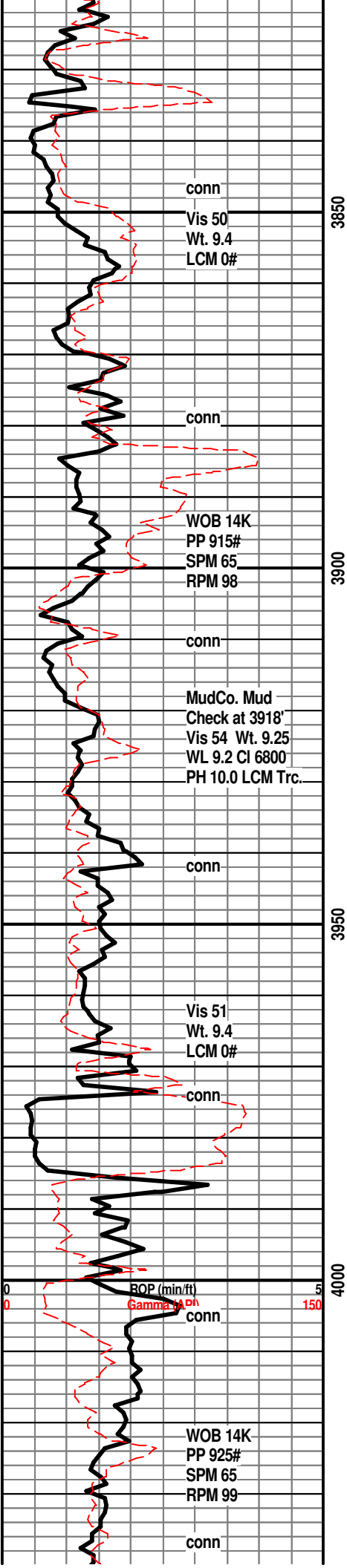
- INTERVAL**
- Core
 - Dst

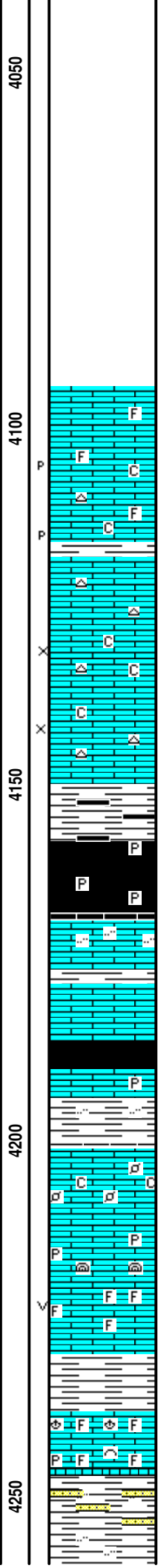
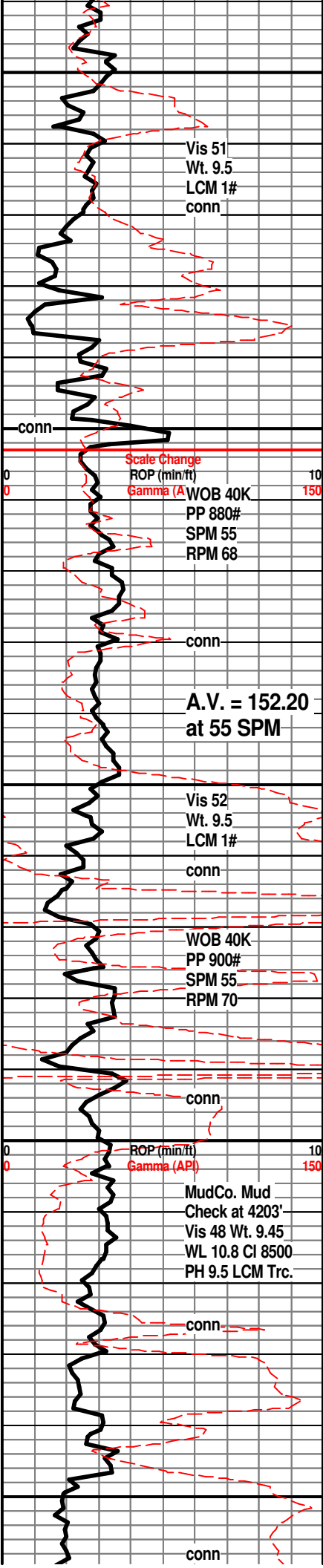
OIL SHOW

- Even









BIT TRIP AT 4103'
DRILLING WITH BUTTON BIT
Start 10' Wet and Dry Samples

LM; lt gy to lt brn, off wh, scat foss mat, most well cem, dull to lt yel fluor, rare p-p por, minor chalky mtx, ns.

LM; tan to lt brn, f to med xln, scat poor interxln por, rare wh cht, lt yel min fluor, no stn or odor, ns.

LM; tan to med brn, some blocky - micritic, interbdd med xln lmst w/partly chalky mtx, dull to lt yel min fluor, no stn or odor, scat gy fresh cht, ns.

SH; dk gy, some blk, platy

SH; blk, carb, gassy ip w/faint gas odor, occ dissem. pyr

LM; tan to lt brn, gritty text - silty ip, well cem, no vis por, no fluor, ns.

LM; lt to med brn, gy brn, blocky, tite

HEEBNER SHALE 4186(-1874)

SH; blk, carb ip, trc gas w/faint gas odor

LM; med brn, blocky, trc pyr, tite

SH; med grn, silty ip, firm

TORONTO 4201(-1889)

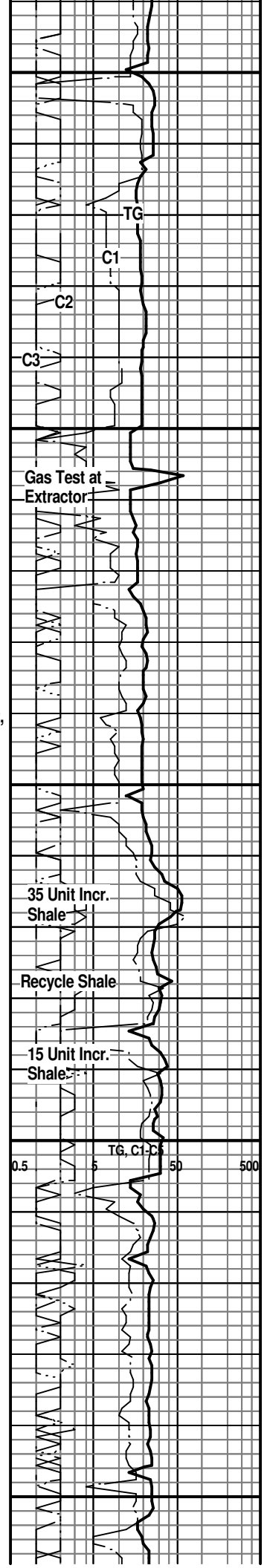
LM; off wh, tan, fxln w/rare small foss pellets, partly chalky - soft, lt yel fluor, no stn, ns.

LM; wh, off wh, tan, foss w/scat well cem algal mat, some pyr, dull yel min fluor, no vis por, no stn or odor, interbdd fxln lmst w/scat vug por, ns.

SH; lt to med gy, platy

LM; med to dk gy, gy brn, v. foss, well cem, no vis por, lt yel min fluor, rare pyr, ns.

SH; lt to med gy, some rust red, platy, occ silty, interbdd hd well cem vf gr qtz ss



WOB 40K
PP 880#
SPM 55
RPM 66

conn
Vis 51
Wt. 9.4+
LCM 1#

conn
WOB 40K
PP 920#
SPM 55
RPM 68

conn A.V.= 152.05
at 55 SPM

conn
Vis 56
Wt. 9.3
LCM 3#

ROP (min/ft) 0 10
Gamma (A) 0 150
DST #1
Lansing 'B'
Zone
4390' - 4423'

conn
CFS. at 4423'

MudCo. Mud
Check at 4425'
Vis 54 Wt. 9.45
WL 7.6 CI 7800
PH 9.5 LCM 2#

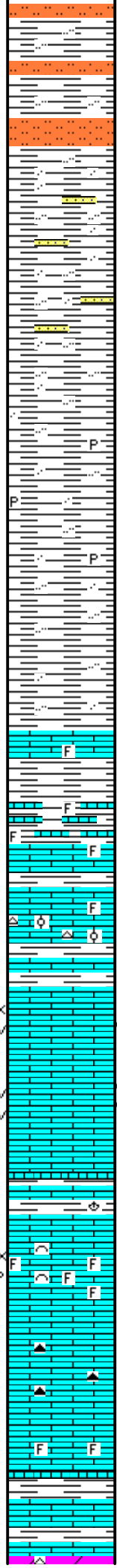
conn
WOB 40K
PP 800#
SPM 55
RPM 69

4300

4350

4400

4450



SH; lt gy, rare med gy, v. silty to sandy, interbdd sltst, platy

SH; lt gy, silty to sandy, occ vf gr mica qtz ss interbdd

SH; lt to med gy, platy, silty to sandy, scat pyr

SH; lt to med gy, silty, platy

BROWN LMST. 4362(-20502)
LM; med brn, foss ip, blocky, tite

SH; med to dk gy, some brn, lmy ip, firm, occ foss

LANSING 'A' 4378(-2066)
LM; med brn, tan, blocky, rare foss, most tite

LM; tan to lt brn, buff, fxl n w/rare foss mat, scat gy oolitic cht, most tite, dull yel fluor, no vis stn, no odor, no gas kick

LANSING 'B' 4398(-2086)
LM; tan to off wh, f to med xln, fair interxln w/scat lrg vug por, few gas bubbles, faint gas odor, lt yel to occ brite yel fluor, trc lt brn oil stn

LM; lt gy, lt brn, med xln w/fairly well dev. vug por, much brite yel fluor, spotted to even lt brn oil stn, SSFO, gd odor, most with gd cut, some barren por, sl. sulfur odor in 60 min. sample

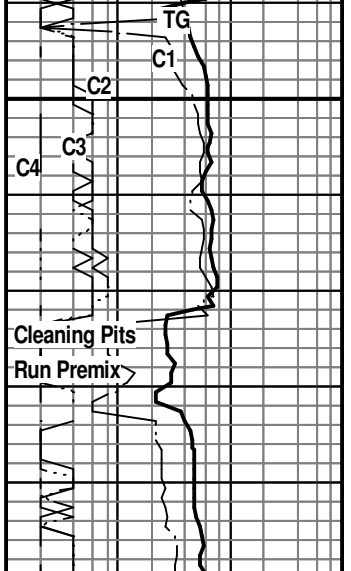
DST #1: Lansing 'B' 4390' - 4423'
Corrected Depths to Log
SH; lt to med gy, smooth, foss ip.

LM; tan to buff, lt brn, highly foss, scat opaque spar calc, fair to gd interpart w/p-p por, v. dull yel min fluor, no stn or odor, ns.

LM; lt to med brn, blocky, most micritic, scat dk gy cht, no vis por, ns.

LM; lt to med brn, foss ip, hd, well cem, tite

SH; grn, gy grn, platy

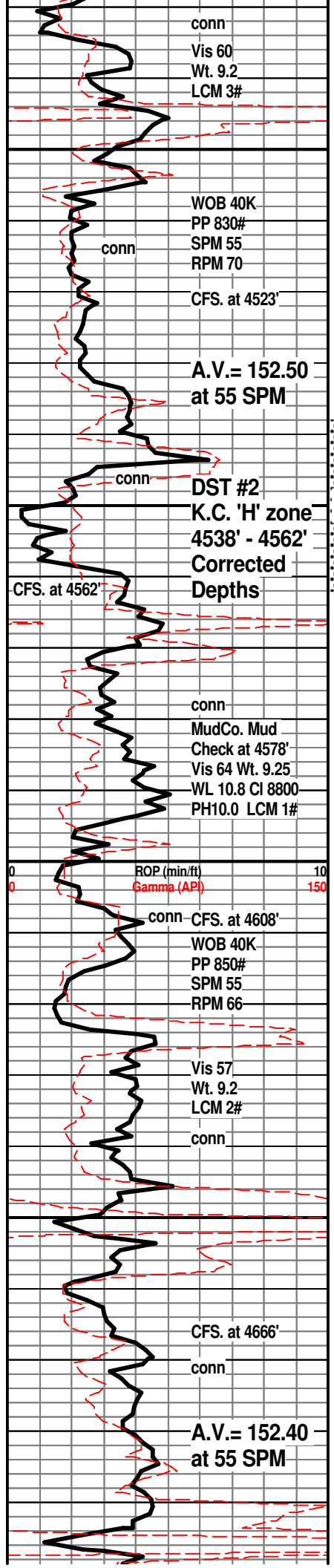


48 Unit Incr. SHOW

52 Unit Incr. SHOW

Mud is Hvy Gas cut after DST #1

Mud still very gassy



conn
Vis 60
Wt. 9.2
LCM 3#

WOB 40K
PP 830#
SPM 55
RPM 70

CFS. at 4523'

A.V.= 152.50
at 55 SPM

DST #2
K.C. 'H' zone
4538' - 4562'
Corrected
Depths

MudCo. Mud
Check at 4578'
Vis 64 Wt. 9.25
WL 10.8 Cl 8800
PH10.0 LCM 1#

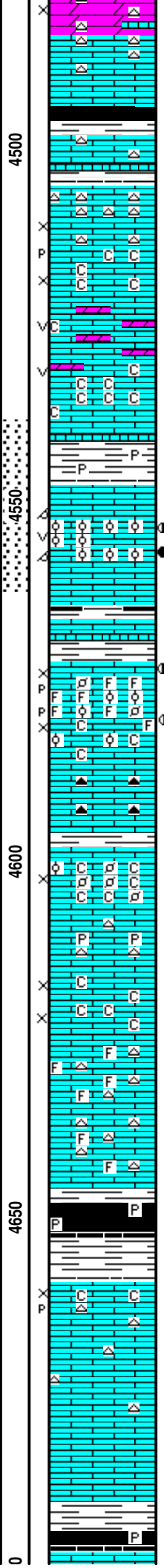
ROP (min/ft) 10
Gamma (API) 150

WOB 40K
PP 850#
SPM 55
RPM 66

Vis 57
Wt. 9.2
LCM 2#

CFS. at 4666'

A.V.= 152.40
at 55 SPM



DOL; tan to lt brn, sacrosic, lmy ip w/lmy dolo, soft, gd interxn por, scat off wh to lt gy cht, no fluor, no stn or odor, ns.

SH; dk gy, trc blk, platy

LM; tan to buff, cream, fxln, scat off wh to tan cht, no vis por, no fluor, ns.

LANSING 'G' POROSITY 4505(-2196)

LM; off wh, wh, buff, f to med xln, very cherty w/abnt tan/gy/brn fresh cht, poor interxn w/occ p-p por, interbdd soft chalky lmst, dull yel fluor, no vis stn, poss. slight sulfur odor, quest. gas kick, no gas bubbles or sample shows

LM; tan to cream, lt brn, fxln w/sucrosic text, partly dolomitic, scat fair vug por, chalky ip, no fluor, no stn or odor, ns.

LM; tan to cream, wh, v. chalky, ns.

SH; med to dk gy, platy, pyr ip.

KANSAS CITY 'H' 4547(-2235)

LM; tan to off wh, lt brn, oolitic, well dev. oomoldic por, most med size molds, scat vug por, brittle ip, dull to occ med yel fluor, few gas bubbles, fair gas odor, sev. pcs in 60 Min. sample with lt brn spotted to even oil stn.

DST #2: K.C. 'H' zone 4538' - 4562'

LM; tan to buff, foss, fair interpart w/scat p-p por, some calc overgrowths, spotted lt brn oil stn, faint/fair odor, med yel fluor, fair cut

LM; off wh, wh, tan, highly foss, oolitic ip, most well cem, poor to fair interpart and p-p por, spotted lt brn oil stn in few pcs, some barren por, minor chalky mtx, no odor, fair cut

LM; tan to cream, blocky, scat dk brn cht, tite

LM; tan to off wh, foss w/abnt small oolites and pellets, some fxln, abnt soft chalky mtx, fair interpart por, no fluor, no stn/odor, no gas kick

LM; med gy, gy brn, dense, scat gy to brn cht, rare pyr, tite

LM; tan to cream, off wh, fxln, fair to gd interxn por, chalky mtx, soft ip, no flour, no stn or odor, ns.

LM; lt brn, micritic, hd, interbdd gy and brn occ foss cht, no vis por, ns.

SH; blk, carb, blocky, scat pyr, trc gas

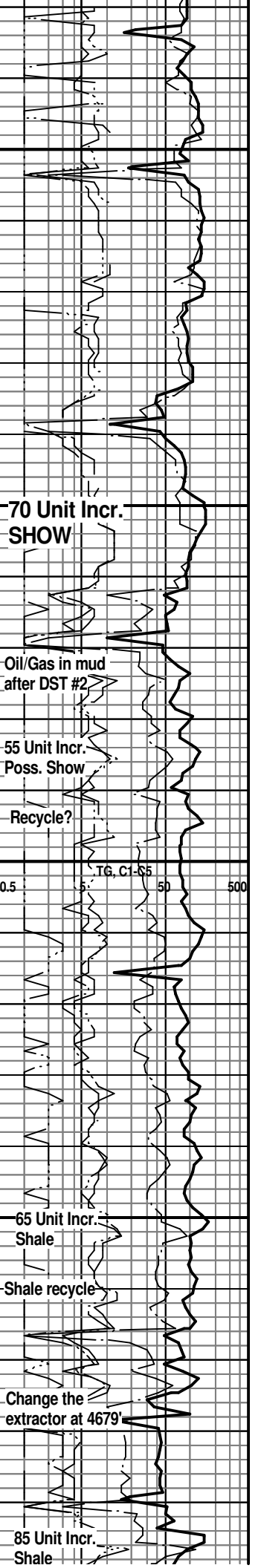
KANSAS CITY DENNIS 'J' 4659(-2347)

LM; tan to cream, buff, fxln w/scat poor to fair interxn and p-p por, minor chalky mtx, no vis stn, no odor, no sample shows

LM; tan to buff, fxln to dense, cherty ip, no vis por, no fluor, no stn or odor, ns.

STARK SHALE 4694(-2382)

SH; blk, carb, gassy, trc pyr



70 Unit Incr. SHOW

Oil/Gas in mud after DST #2

55 Unit Incr. Poss. Show

Recycle?

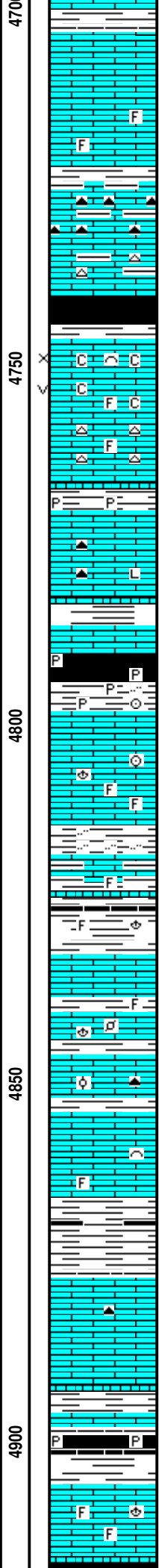
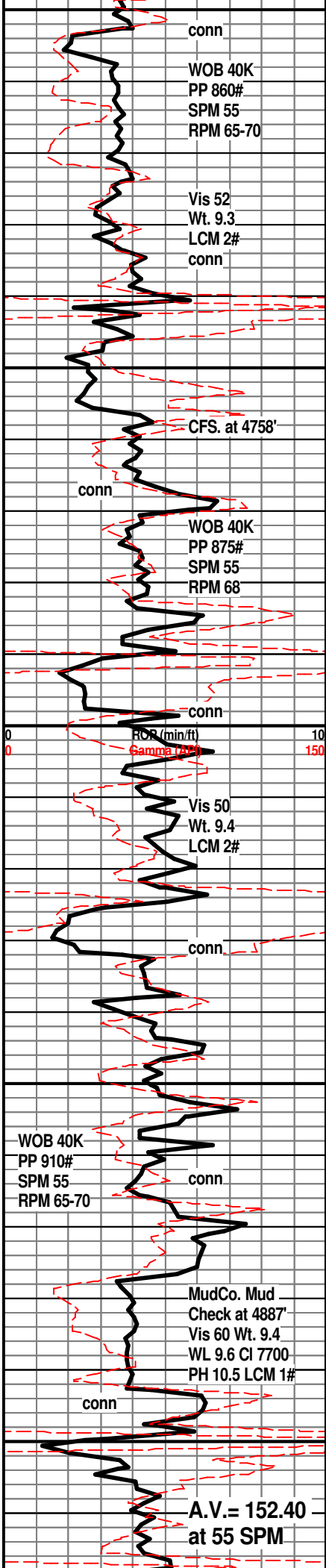
TG, C1-C5

65 Unit Incr. Shale

Shale recycle

Change the extractor at 4679'

85 Unit Incr. Shale



SWOPE 4703(-2391)

LM; tan to lt brn, fxln, some sucrosic text, lt yel min fluor, no vis por, no stn or odor, ns.

LM; lt gy to lt brn, foss ip, well cem, lt yel min flour, no stn or odor, ns.

LM; med brn, micritic, scat blk/dk gy cht, some tan foss cht, tite, interbdd argil lmst

SH; blk, v. dk gy, soft to blocky, carb ip.

HERTHA 4746(-2434)

LM; tan to off wh, lt brn, fxln, scat foss mat, fair to occ gd interxln w/small vug por, occ soft chalky mtx, interbdd sucrosic text dolomitic lmst, lt yel min fluor, no vis stn, no odor, no gas kick

LM; lt to med brn, foss ip, hd, cherty, tite

SH; med gy, platy, smooth, occ pyr

LM; med to dk brn, some gy brn, hd, micritic, occ litho, rare smoky cht, ns.

BASE KANSAS CITY 4783(-2471)

SH; grn, rust red/maroon, blk, platy, occ pyr, scat foss mat.

LM; wh, off wh, buff, foss w/occ med-cse xln, well cem, lt yel min fluor, no vis por, no stn or odor, ns.

LM; lt to med brn, dense, blocky, rare foss, some argil, tite

SH; med gy grn, rare dk gy - blk, trc yel, foss ip

MARMATON 4832(-2520)

LM; tan to lt brn, hd, micritic, blocky, tite

ALTAMONT 4840(-2528)

LM; lt brn, foss ip, scat well cem pellets/rare oolites, hd, scat amber cht, no fluor, ns.

LM; lt brn, tan, fxln to micritic, rare foss mat, no vis por, no fluor, ns.

SH; med gy, gy grn, some rust red, trc blk, flakey

PAWNEE 4877(-2565)

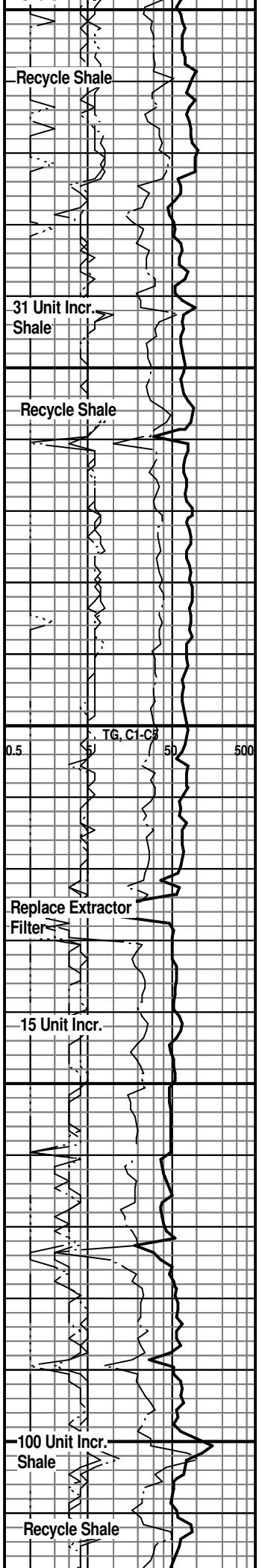
LM; tan to lt brn, buff, fxln to dense, blocky, no vis por, dull to lt yel min fluor, no stn or odor, rare amber cht, ns.

SH; grn, gy grn, smooth

SH; blk, carb, gassy, occ pyr

LM; med brn, foss ip, scat cse spar calc xtals, lt yel min fluor, no vis por, ns.

CHEROKEE SHALE 4917(-2605)



SHALE SLT 4917(-2005)

SH; blk, platy, occ carb

LM; lt to med brn, micritic, rare foss, tite

SH; varic, grn, gy, rust red, brn, platy, interbdd brn argil lmst.

SH; blk, v. pyr, platy

LM; off wh, buff, fxln, few pcs w/fair interxln and occ vug por, poss. gas bubbles, no fluor, no odor, no vis oil stn, poor show

SH; blk, carb ip, platy

LM; off wh, wh, tan, fxln, some chalky mttx, spotted med to dk brn oil stn, trc gils, lt yel fluor, no live shows, poss fracs, some grn weath. lmst

MISSISSIPPI CHERT 4967(-2655)

CHT; wh, opaque to transl, most fresh, poss fracs, few pcs of wh weath. cht w/lt brn oil stn, lt yel fluor, no odor

CHT; wh, off wh, most trip wht w/spotted lt brn stn, fair p-p por, some fracs, med to occ brite yel fluor, no odor, no vis gas bubbles

CHT; wh, opaque, org, fresh and trip, est. 40% trip cht, fracs evident, weathered edges w/lt brn live oil stn, bands of trip cht w/even lt brn oil stn, scat med to occ brite yel fluor, faint odor, few gas bubbles

CHT; wh, opaque, most fresh, fracs w/scat vug por, SSFO, much brite yel fluor, faint odor, few gas bubbles, some barren por

MISSISSIPPI LMST. 5016(-2704)

DST #3: Miss. Chert 4988' - 5019'
Corrected Depths to Log

LM; tan to lt gy/pale grn, sucrosic text - partly dolomitic, interbdd cse xln chalky lmst, rare cht, dull to lt yel fluor, no stn or odor, ns.

LM; off wh, med xln w/interbdd pale grn/gy grn dolomite and dolomitic lmst, minor chalky mttx, scat gy fresh cht, no fluor, no vis por, ns.

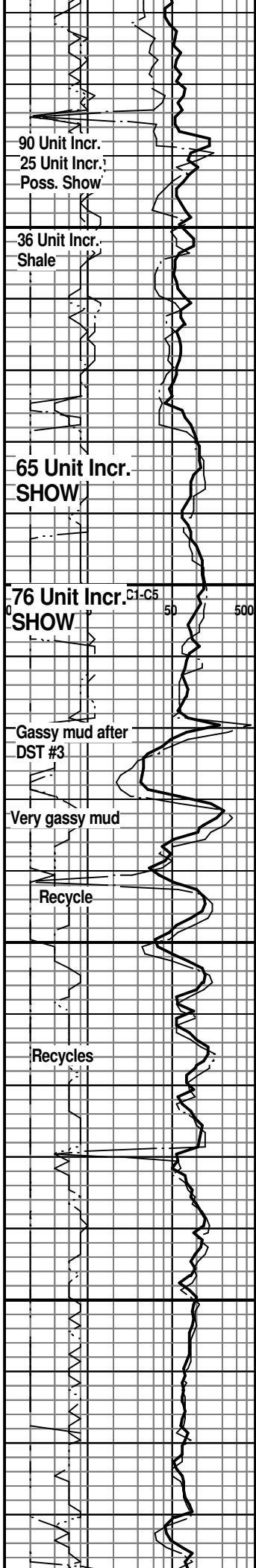
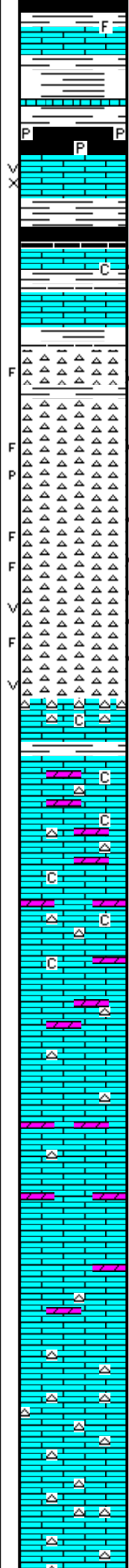
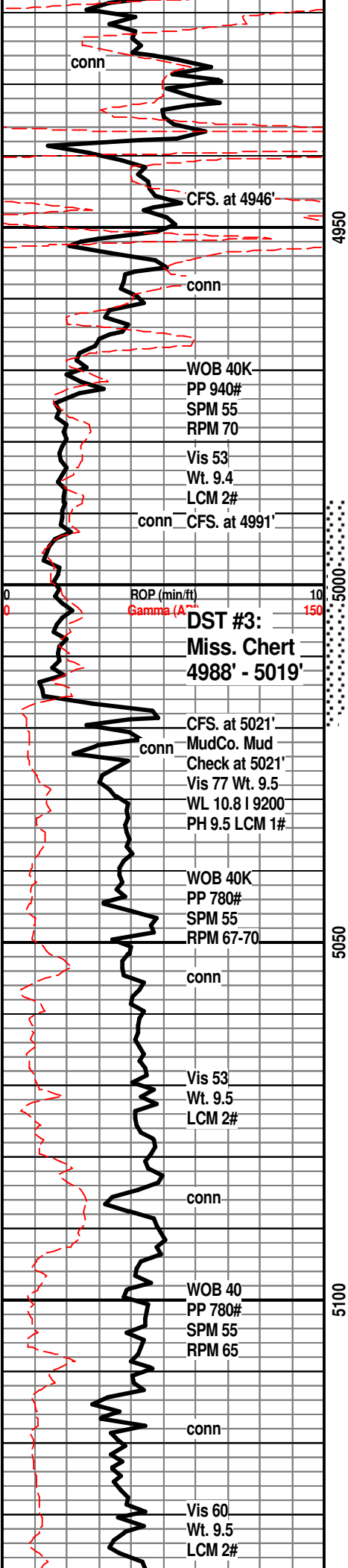
LM; off wh, wh, buff, med xln w/scat wh to off wh cht, rarely dolomitic, no vis por, no fluor, ns.

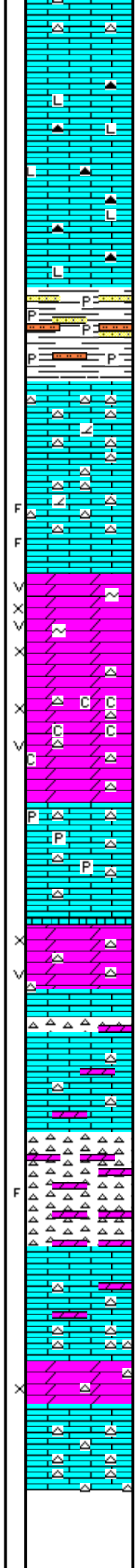
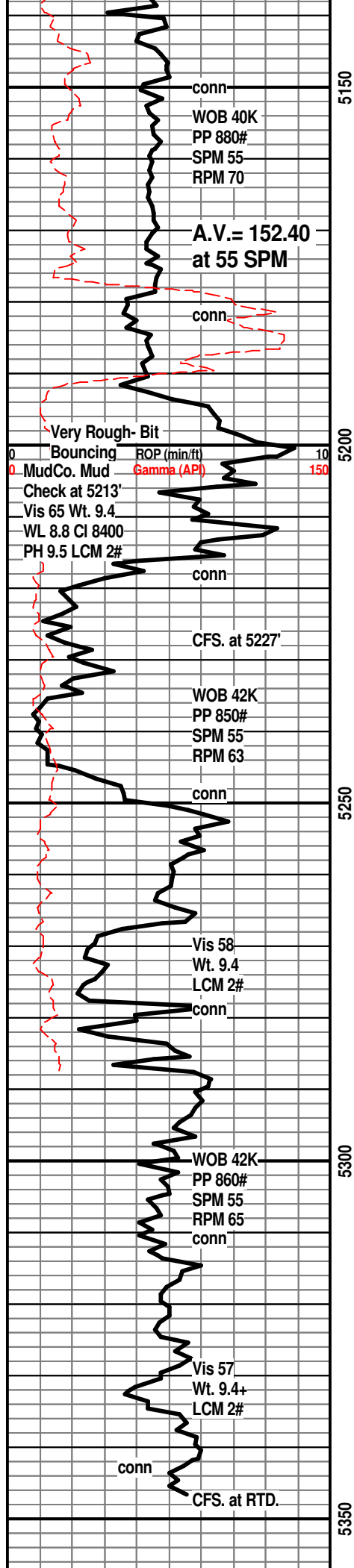
SHALE AND ANHYDRITE SLOUGHING BADLY - NEED TO RAISE VISCOSITY OF MUD!!

LM; tan to off wh, med xln, occ sucrosic text, interbdd dolo. and dolomitic lmst, no fluor, ns.

LM; tan to cream, lt brn, f to med xln, cherty w/trans. to lt gy cht, lt yel min fluor, no vis por, ns.

LM; tan to lt brn, v. cherty w/lt to med gy occ speckled cht, dull vel min fluor, no stn or odor, ns.





LM; med brn, rare gy brn, dense, micritic to litho, blocky, occ med gy spicular and brn cht, no fluor, tite

KINDERHOOK SHALE 5178(-2866)
SH; med gy, gy grn, platy, interbdd lt gy/off wh silty sh and vf gr hd ss, abnt pyr

VIOLA 5191(-2879)
LM; off wh, tan, fxln w/rare sucrosic text, very cherty w/dove gy to transl. cht, trc lt yel fluor, no vis por, no stn or odor, ns.

BIT TRIP AT 5204' - run junk basket - many buttons on bottom
LM; off wh, lt gy, fxln, abnt off wh to gy fresh cht, frags evident, dense, no fluor, ns.

DOL; med gy, sucrosic, trc vug por, no fluor, ns.

DOL; tan, lt gy, sucrosic, gd interxln w/rare small vug por, quest. gas bubbles, rare glau, no fluor, no oil stn, no odor, no cut

DOL; tan to lt brn, sucrosic to fine rhombic, gd interxln w/some vug por, soft w/partly chalky mtx, cherty ip, no fluor, no stn or odor, no gas kick

LM; tan to cream, med to cse xln, most dense, scat dove gy to wh occ pyr cht, no vis por, no fluor, ns.

DOL; lt to med brn, sucrosic to finely rhombic, fair interxln w/fair to gd vug por, cherty ip, no fluor, no stn or odor, ns.

CHT; wh, off wh, dolomitic ip, blocky, tite

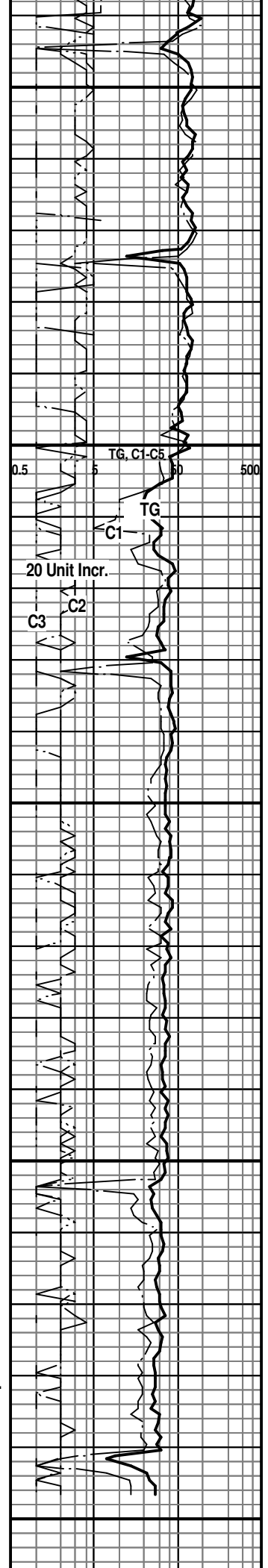
LM; tan to cream, med xln, partly dolomitic, lt yel min fluor, occ cherty, tite

CHT; wh, off wh, lt gy, some speckled, blocky, poss frags, interbdd cherty dolomite, no fluor, no stn or odor, ns.

LM; lt brn, tan, dolomitic, scat wh to occ pink fresh cht, lt yel min fluor, no vis por, ns,

DOL; lt brn, fine rhombic, fair interxln por, cherty ip, ns.

LM; med brn, dolomitic, abnt brn and gy cht, tite, no fluor, ns.



RTD. 5350 at 11:45 PM. 9/25/16

LTD. 5349'

Halliburton "Quad Stack": ACRT(DIL),
NEU/DEN w/PE, Microlog, Sonic

**NOTE: This log was shifted upward by
2' to 4' for correlation purposes with the
Halliburton Logs.**

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