



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

Well Name: LANG # 1-12
Location: Sec 12 20s 35w, Wichita County, Kansas
License Number: 15-203-20316
Spud Date: April 27th 2017
Surface Coordinates: 1980' FNL & 2190' FWL
Region: Wildcat
Drilling Completed: May 13th 2017

Bottom Hole Coordinates:

Ground Elevation (ft): 3133' K.B. Elevation (ft): 3144'
Logged Interval (ft): 3500' To: 5100' Total Depth (ft): 5100'
Formation: Lansing, Marm, St. Louis
Type of Drilling Fluid: Natural chemical

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Lario Oil & Gas co.
Address: 301 S. Market
Wichita, Kansas 67202
Co. Geo: John Hastings

GEOLOGIST

Name: Tim Hedrick
Company: Earth Tech OGI, Inc
Address: PO Box 683
Hooker, Okla. 73945
888-543-8378 cell: 580-754-0062



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Lario Oil And Gas Company

301S. Market St.
Wichita KS
67202
ATTN: Tim Hedrick

12-20-35w Wichita Co KS

Lang 1-12

Job Ticket: 63724

DST#: 1

Test Start: 2017.05.09 @ 03:20:15

GENERAL INFORMATION:

Formation: I

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:54:15

Time Test Ended: 11:22:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mke Roberts

Unit No: 81

Interval: 4270.00 ft (KB) To 4310.00 ft (KB) (TVD)

Total Depth: 4310.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3132.00 ft (KB)

3122.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6749

Outside

Press@RunDepth: 128.61 psig @ 4271.00 ft (KB)

Start Date: 2017.05.09

End Date:

2017.05.09

Capacity: 8000.00 psig

Last Calib.: 2017.05.09

Start Time: 03:20:15

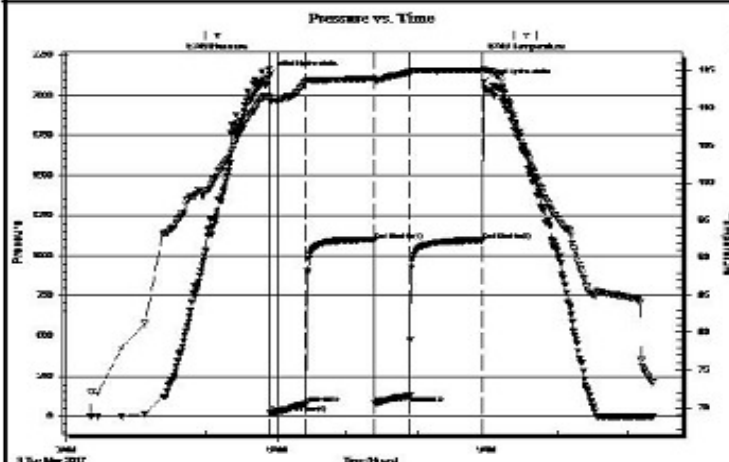
End Time:

11:22:45

Time On Btm: 2017.05.09 @ 05:54:00

Time Off Btm: 2017.05.09 @ 08:57:15

TEST COMMENT: IF:Built to 1" blow
IS:No return blow
FF:Built to 1" blow
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2129.34	111.63	Initial Hydro-static
1	17.53	110.99	Open To Flow (1)
32	78.72	113.57	Shut-In(1)
90	1096.22	113.97	End Shut-In(1)
90	80.71	113.58	Open To Flow (2)
120	128.61	114.79	Shut-In(2)
183	1095.36	115.07	End Shut-In(2)
184	2081.27	115.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mud 100%m	0.61
120.00	mcw 50%m 50%w	0.68

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Lario Oil And Gas Company

301S. Market St.
Wichita KS
67202
ATTN: Tim Hedrick

12-20-35w Wichita Co KS

Lang 1-12

Job Ticket: 63725

DST#: 2

Test Start: 2017.05.10 @ 14:27:15

GENERAL INFORMATION:

Formation: **Marmaton B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:32:15

Time Test Ended: 22:16:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Mke Roberts

Unit No: 81

Interval: 4540.00 ft (KB) To 4572.00 ft (KB) (TVD)

Total Depth: 4572.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3132.00 ft (KB)

3122.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6749

Outside

Press@RunDepth: 278.33 psig @ 4541.00 ft (KB)

Start Date: 2017.05.10

End Date:

2017.05.10

Capacity: 8000.00 psig

Last Calib.: 2017.05.10

Start Time: 14:27:15

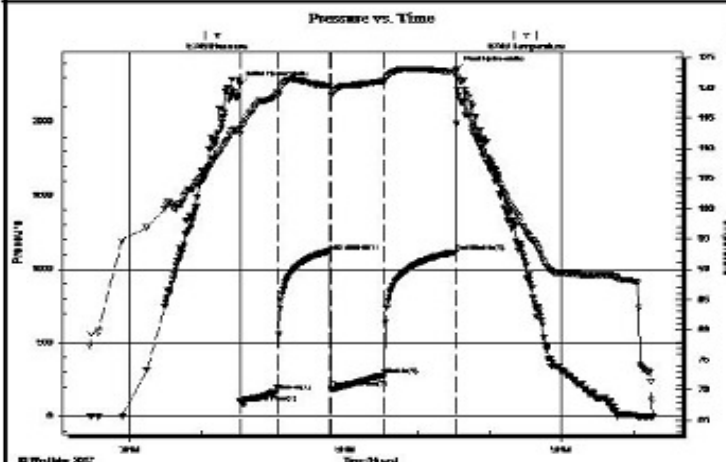
End Time:

22:16:45

Time On Btm: 2017.05.10 @ 16:32:00

Time Off Btm: 2017.05.10 @ 19:32:30

TEST COMMENT: IF:BOB in 4 min.
IS:Built to 8" blow and died to 6" blow
FF:BOB in 7 min.
FS:BOB in 12 min. died back to 6" blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2256.76	113.08	Initial Hydro-static
1	95.34	112.35	Open To Flow (1)
31	167.04	119.10	Shut-In(1)
75	1123.36	120.30	End Shut-In(1)
76	191.28	119.47	Open To Flow (2)
120	278.33	121.10	Shut-In(2)
180	1116.27	122.65	End Shut-In(2)
181	2358.33	122.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP= 1054	0.00
402.00	gco 40%g 60%o	3.51
234.00	gcmo 5%g 5%m 90%o	3.28

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Trilobite Testing, Inc

Ref. No: 63725

Printed: 2017.05.14 @ 23:56:11



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Lario Oil And Gas Company

301S. Market St.
Wichita KS
67202
ATTN: Tim Hedrick

12-20-35w Wichita Co KS

Lang 1-12

Job Ticket: 63726

DST#: 3

Test Start: 2017.05.11 @ 10:02:15

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:24:00

Time Test Ended: 17:48:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4594.00 ft (KB) To 4628.00 ft (KB) (TVD)

Total Depth: 4628.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3132.00 ft (KB)

3122.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6749

Outside

Press@RunDepth: 124.50 psig @ 4595.00 ft (KB)

Start Date: 2017.05.11

End Date:

2017.05.11

Capacity: 8000.00 psig

Last Calib.: 2017.05.11

Start Time: 10:02:15

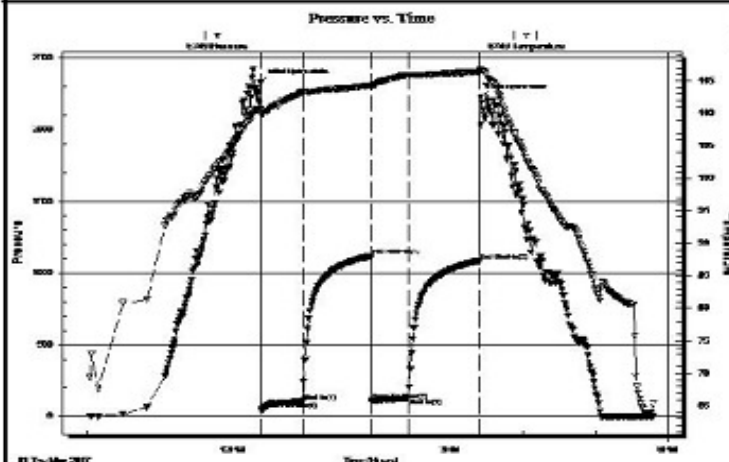
End Time:

17:48:15

Time On Btm: 2017.05.11 @ 12:23:45

Time Off Btm: 2017.05.11 @ 15:25:30

TEST COMMENT: IF: Built to 3" blow
IS: No return blow
FF: Built to weak surface blow
FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2335.10	110.59	Initial Hydro-static
1	43.64	109.94	Open To Flow (1)
35	100.32	113.27	Shut-In(1)
91	1117.99	114.28	End Shut-In(1)
92	107.20	114.02	Open To Flow (2)
122	124.50	115.92	Shut-In(2)
181	1084.94	116.43	End Shut-In(2)
182	2227.57	116.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	mud with oil spots 100% m	0.89

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TriLOBITE Testing, Inc

Ref. No: 63726

Printed: 2017.05.14 @ 23:57:06

ROCK TYPES

	Anhy
	Bent
	Brec
	Cht
	Clyst
	Coal
	Congl
	Dol

	Gyp
	Igne
	Lmst
	Meta
	Mrlst
	Salt
	Shale
	Shcol

	Shgy
	Sltst
	Ss
	Till
	Carb sh
	Dol
	Dtd
	Gry sh

	Sandylms
	Shale
	Sltstn
	Shlyslts
	Sltys
	Lms

ACCESSORIES

MINERAL

	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtl
	Dol
	Feldspar
	Ferrpel
	Ferr
	Glau
	Gyp
	Hvymin
	Kaol
	Marl
	Minxl
	Nodule
	Phos
	Pyr

	Salt
	Sandy
	Silt
	Sil
	Sulphur
	Tuff
	Chlorite
	Dol
	Sand
	Sltys

FOSSIL

	Algae
	Amph
	Belm
	Bioclst
	Brach
	Bryozoa
	Cephal
	Coral
	Crin
	Echin
	Fish
	Foram

	Fossil
	Gastro
	Oolite
	Ostra
	Pelec
	Pellet
	Pisolate
	Plant
	Strom
	Fuss
	Oomold

STRINGER

	Anhy
	Arg
	Bent
	Coal
	Dol
	Gyp
	Ls
	Mrst
	Sltstrg
	Ssstrg
	Carbsh

	Clystn
	Dol
	Grysh
	Gryslt
	Lms
	Sandylms
	Sh
	Sltstn

TEXTURE

	Boundst
	Chalky
	Cryxln
	Earthy
	Finexln
	Grainst
	Lithogr
	Microxln
	Mudst
	Packst
	Wackest

OTHER SYMBOLS

POROSITY TYPE

	Earthy
	Fenest
	Fracture
	Inter
	Moldic
	Organic
	Pinpoint
	Vuggy

SORTING

	Well
	Moderate
	Poor

ROUNDING

	Rounded
	Subrnd
	Subang

	Angular
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OIL SHOWS

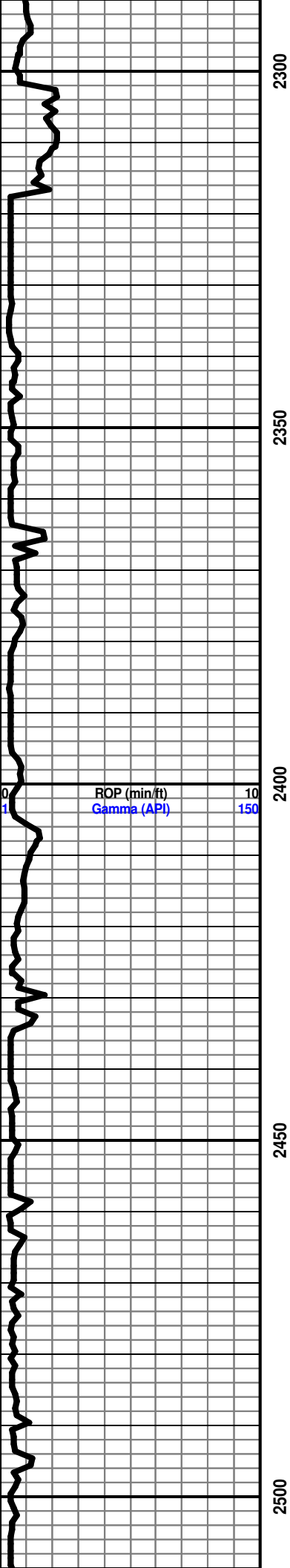
	Even
	Spotted
	Ques
	Dead
	Gas show

INTERVALS

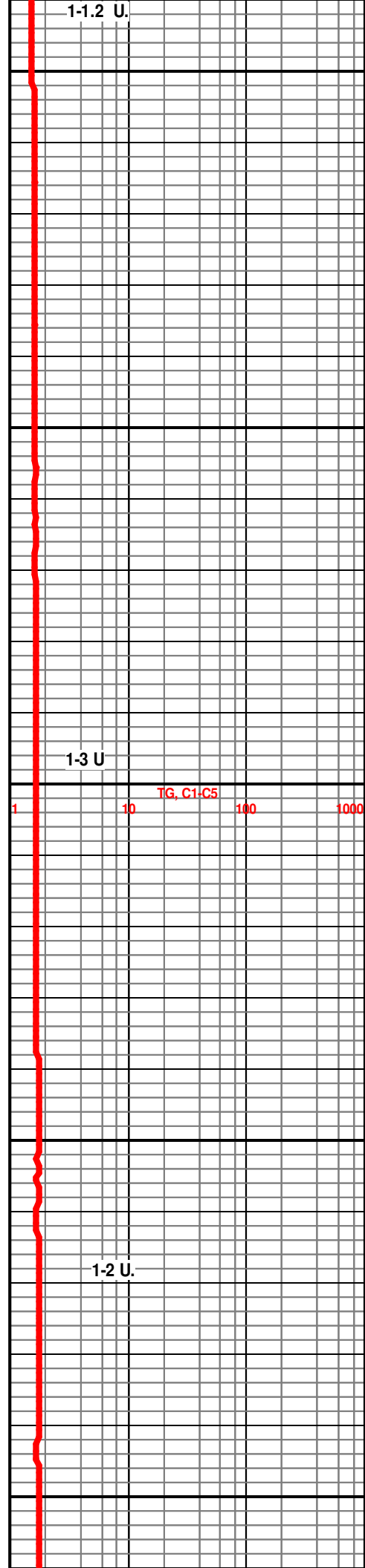
	Core
	Dst
	Dst

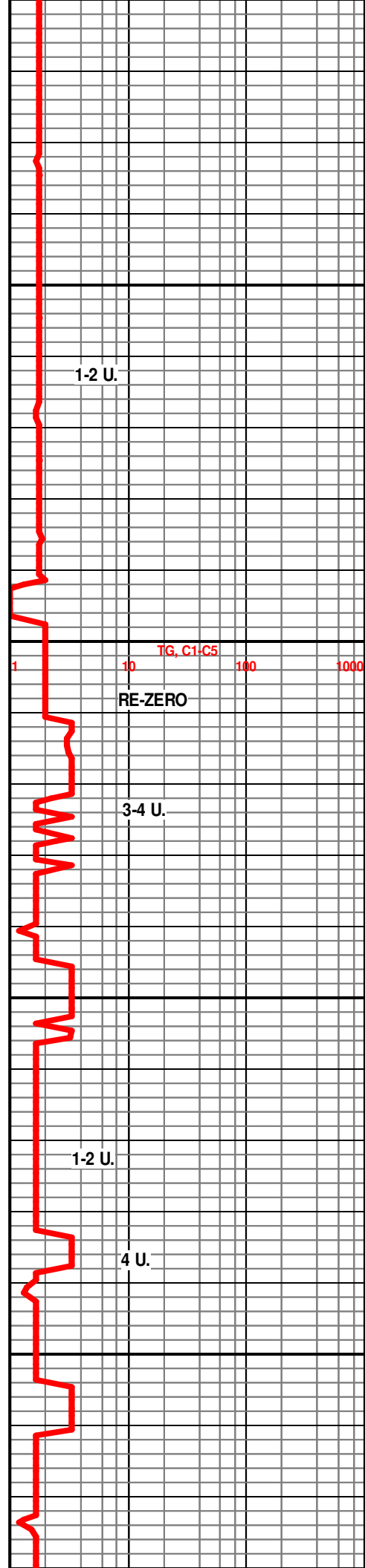
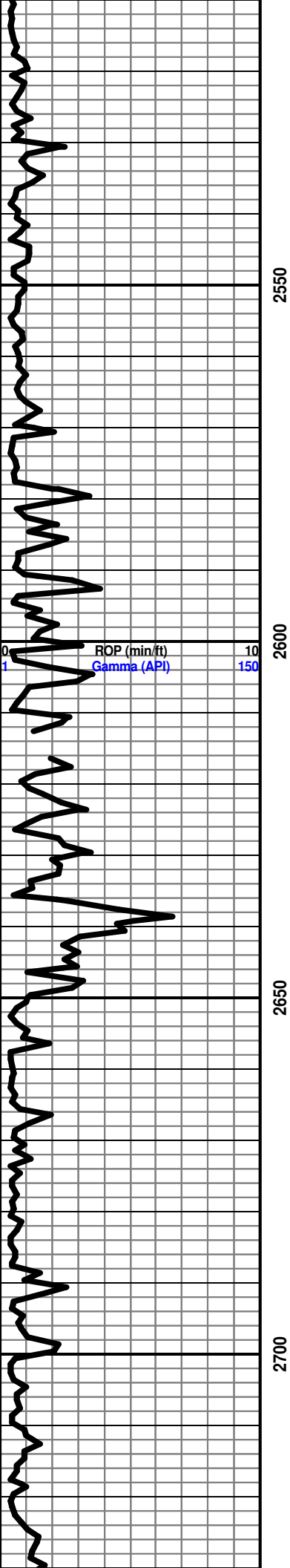
EVENTS

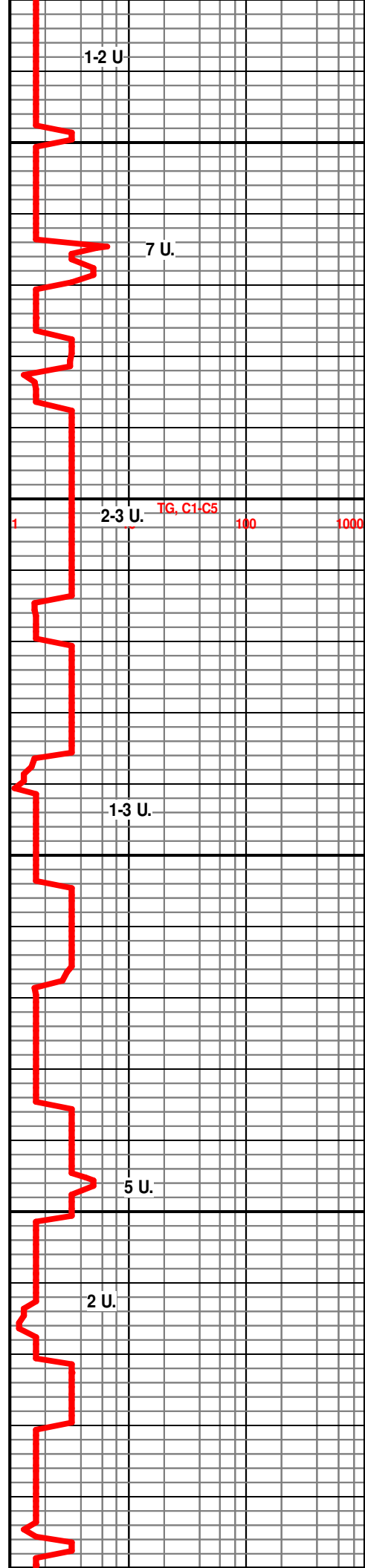
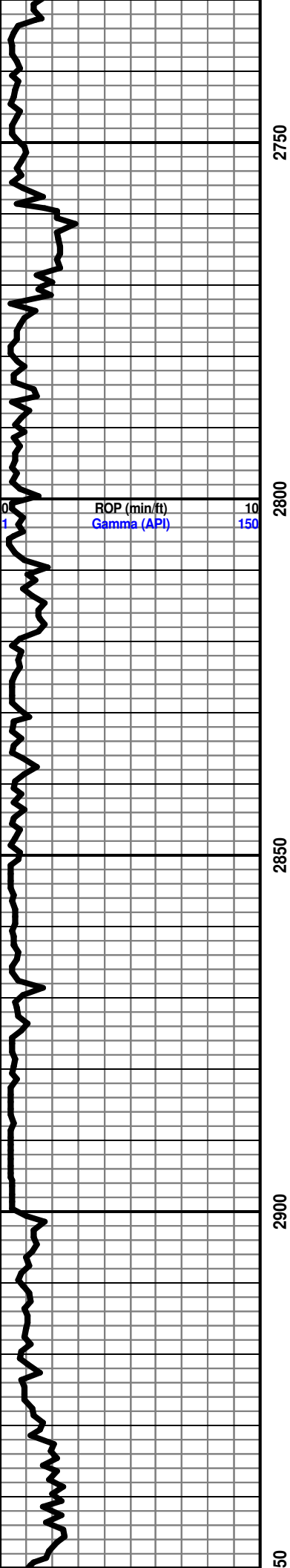
	Rft
	Sidewall

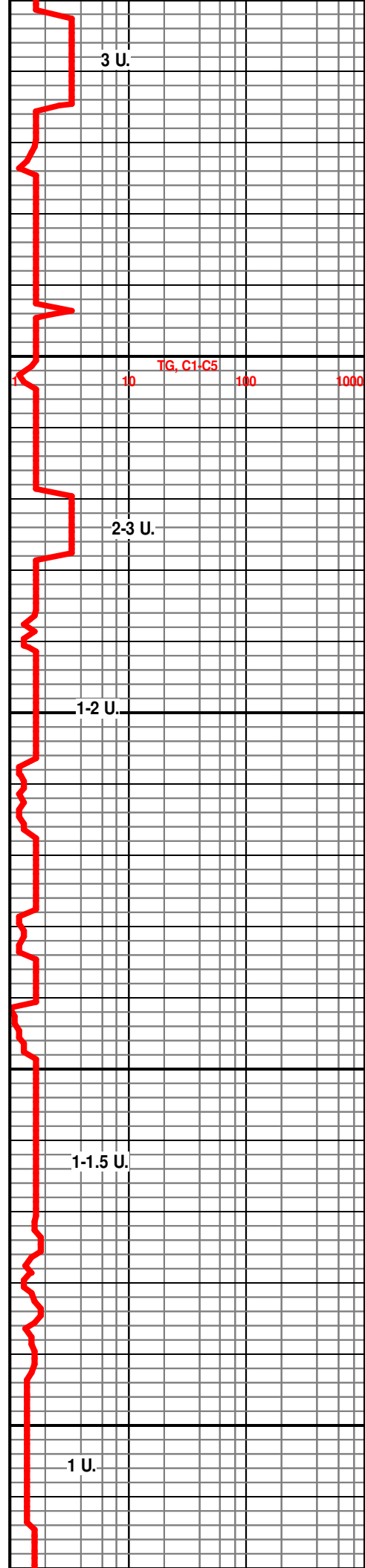
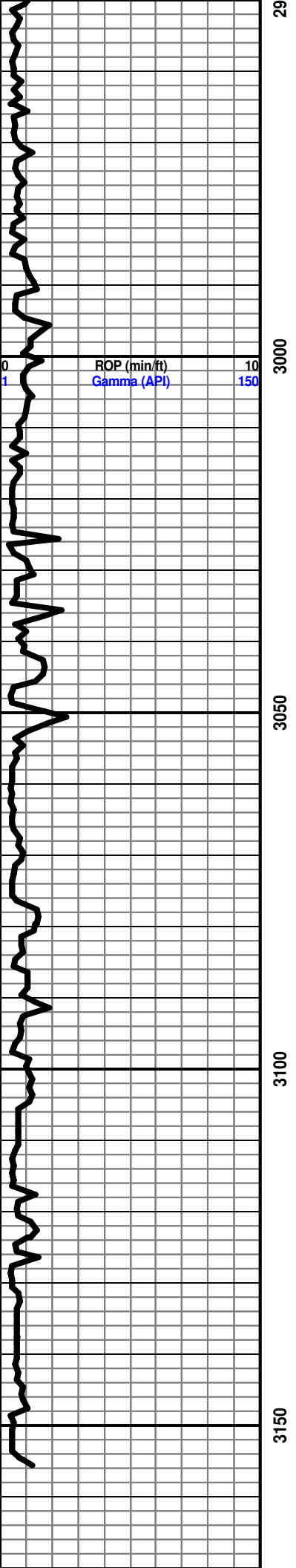


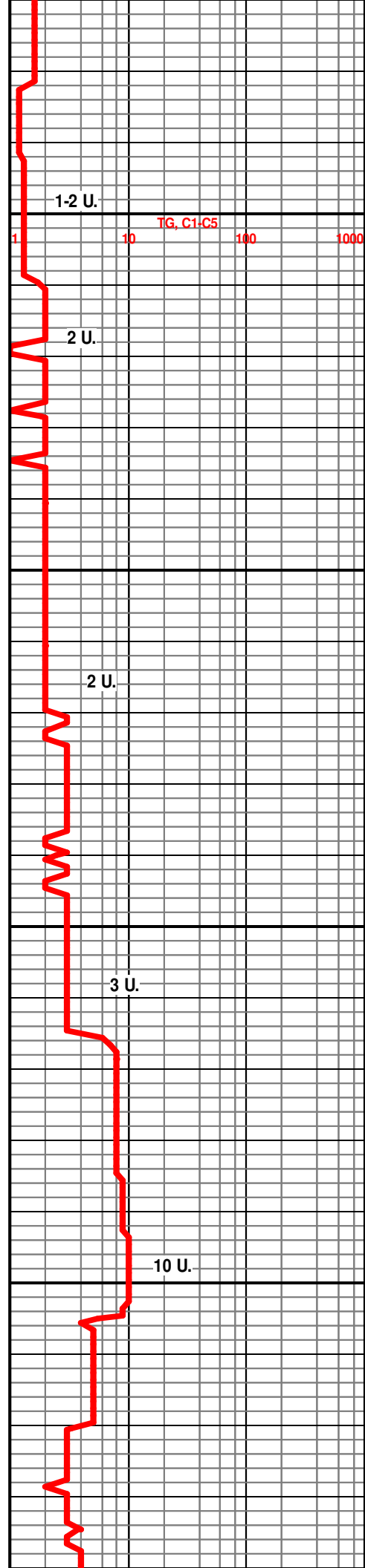
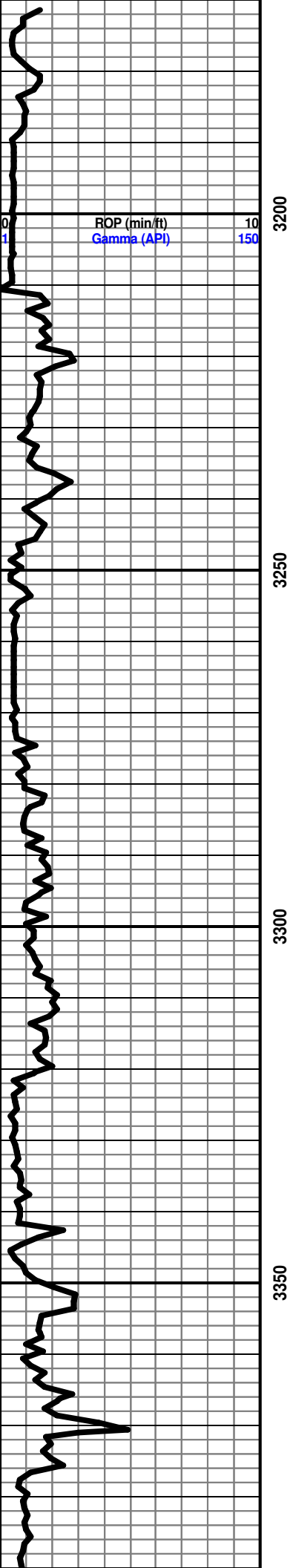
BASE ANHYDRITE 2317' (+827')

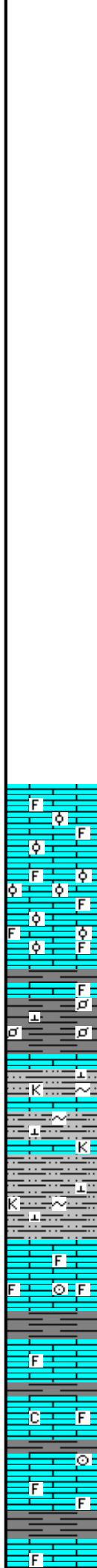
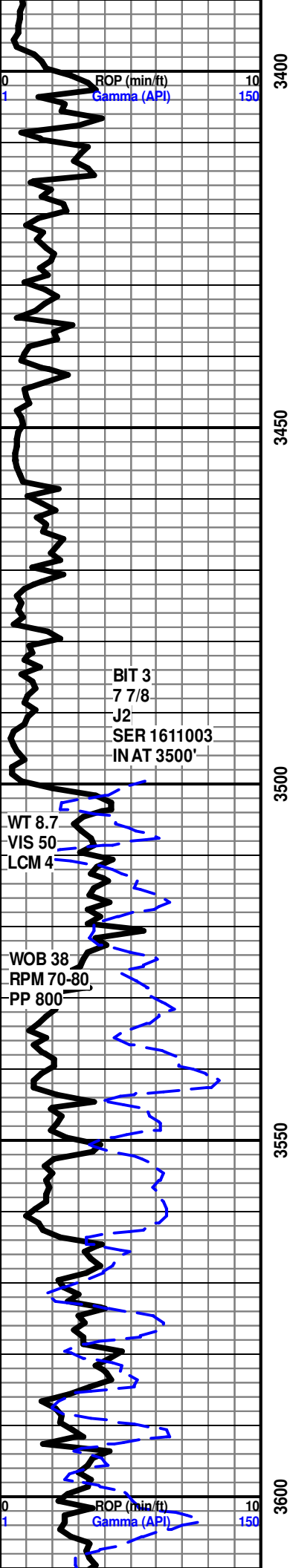












BIT TRIP FOR TRI CONE FROM PDC @ 5:20 PM. MAY 06,
2017 AT 3500'

LS- CRM LT TN TN- HD DNS- MD-F-XLN, V/ RE-XLN MTRX,
ABDT IMBD FOSS FRGS THRU, SCAT IMBD MD V/TT OOL,
TR SMLL CALC XLS IP, V/V/ DLL YEL MIN FLO THRU, NO
VIS POR, NO VIS SHOW OR CUT

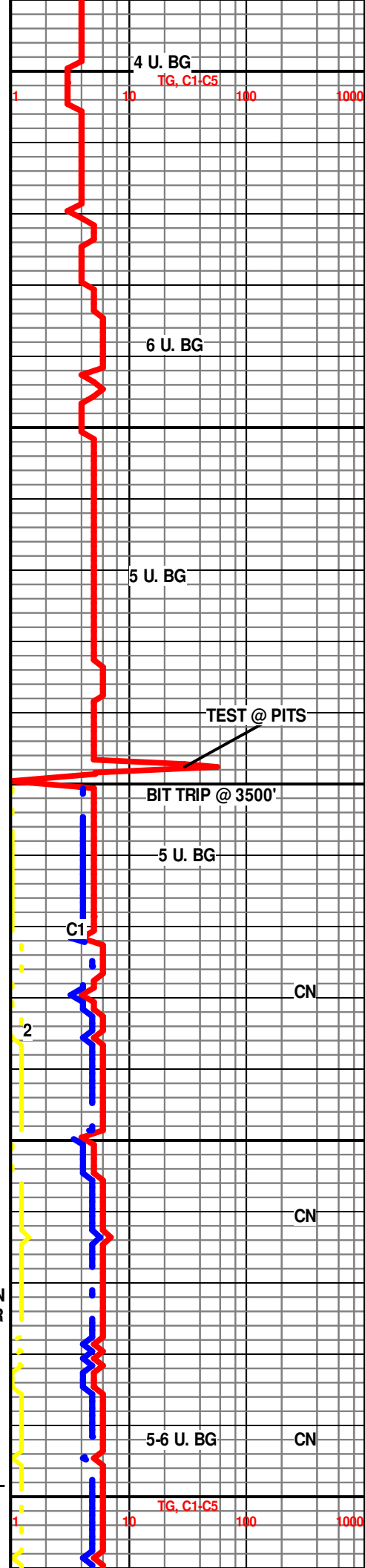
SH- LT TO MED GRY- FRM BLKY SMTH TO SLI GRNY TXT
IP, SLI CALC IP, TR PELT

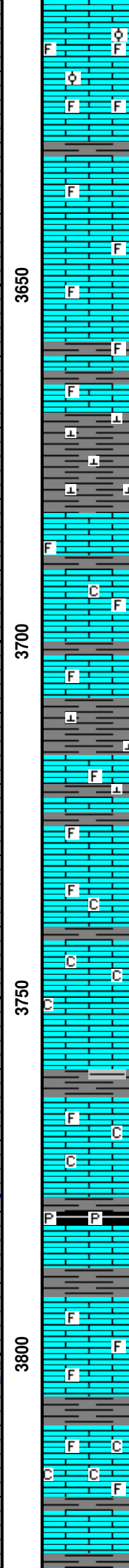
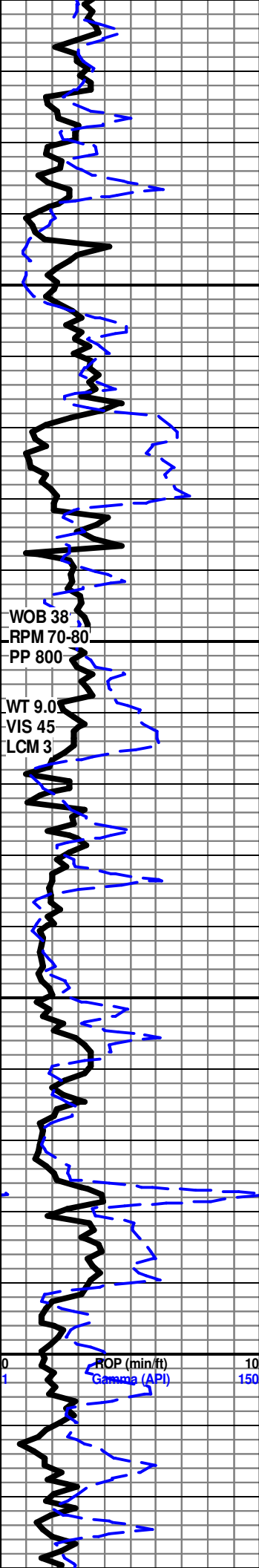
SILTST- LT GY LT GREEN TAN IP, HD TT TO V/ FRI IP,
V/V/FN-GRN QURTZ GRNS ANG S-ANG, ABDT LMNTD
AND DISS SH THRU, SLI CALC IP, ABDT SCAT IMBD
GLAUC & OR KAOL, MICRO MICA IP, NO FLO, SLI TR V/
PR INTER-GRN POR IP, NO VIS CUT OR SHOW

STOTLER 3562' (-418")

LS-CRM BFF- HD DNS TO SLI BRITT IP, MD-F-XLN , RE-XLN
MTRX, ABDT IMBD REWORKED FOSS FRGS THRU, SLI TR
CRIN STEMS, SLI TR IMBD LRG CALC XLS IP, V/V/DLL
YELMIN FLO IP TO NO FLO, NO VIS POR, NO VIS SHOW
OR CUT

LS- OFF WHT CRM BFF- HD DNS TO BRITT IP, SLI TR SFT
IP, MD-XLN RE-XLN MTRX IMBD FOSS FRGS SCAT THRU,
TR CRIN STEMS, HVY TR IMBD SFT WHT CHLK IP, V/V/DLL
YEL FLO IP, NO VIS POR, NO VIS SHOW OR CUT





LS- CRM LT TN TN- HD DNS TO BRITT IP, MD-XLN V/
RE-XLN MTRX, ABDT IMBD FOSS FRGS THRU, SCAT
SMALL TO MD CALC XLS IMBD THRU, SLI TR MICRO OOL
IP, NO FLO TO SLI TR V/V/DLL YEL MIN FLO IP, NO VIS
POR, NO VIS SHOW OR CUT

LS- CRM BFF- HD DNS TO SLI TR BRITT, F-XLN TR MD-XLN
IP, RE-XLN MTRX IMBD FOSS FRGS SCAT IP, LT BRIT YEL
MIN FLO THRU, NO VIS POR, NO VIS SHOW OR CUT

LS- CRM GY DK GY- HD DNS MOTT, F TO MED XLN IP,
ABDT IMBD V/ DK GY SH THRU, TR FOSS FRGS SCAT IP,
NO FLO, NO VIS POR, NO VIS SHOW OR CUT

SH- GY DK GY- FRM BLKY V/ GRNY TXT V/ CALC SCAT
THRU

LS- OFF WHT CRM LT GY IP HD DNS IP TO SFT IP, F-XLN
TO SUCRO SLI TR S-CHLKY IP, TR SCAT IMBD FOSS
FRGS, SLI TR IMBD LT GY SH IP, V/ DLL YEL MIN FLO IP,
NO VIS POR, NO VIS SHOW OR CUT

SH- GY DK GY-FRM BLKY GRNY TXT , V/ CALC TO LMY IP,
TR FOSS FRGS IP

LS- OFF WHT CRM BFF- HD DNS IP TO V/ SFT, V/ TT
SUCRO MTRX GRDNG TO SUCRO S-CHLKY TO CHLKY IP,
SLI TR FOSS FRGS IP, V/ DLL YEL MIN FLO IP, NO
VISPOR, NO VIS SHOW OR CUT

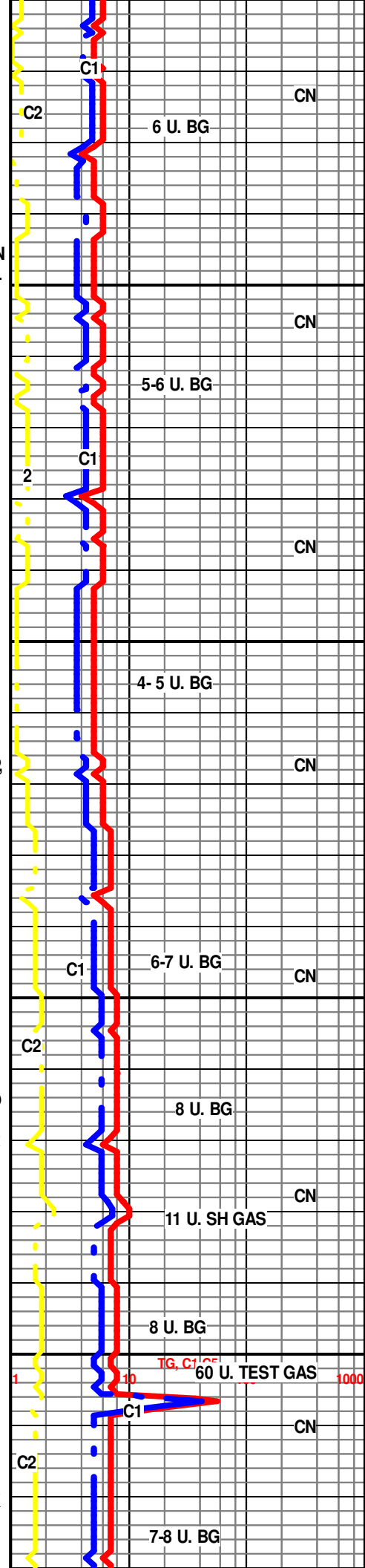
LS- CRM LT TN - HD BRITT IP TO SFT, V/ SUCRO MTRX TO
SUCRO S-CHLKY, TR IMBD FOSS FRGS IP, HVY TR IMBD
LRG PBBLE SIZED CALC XLS IP, DLL YEL MIN FLO IP, PR
VIS MICRO PP POR IP, NO VIS SHOW OR CUT

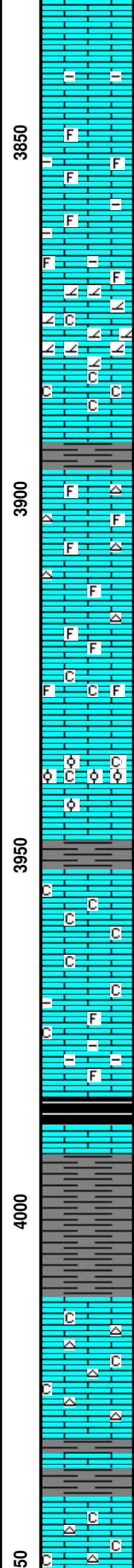
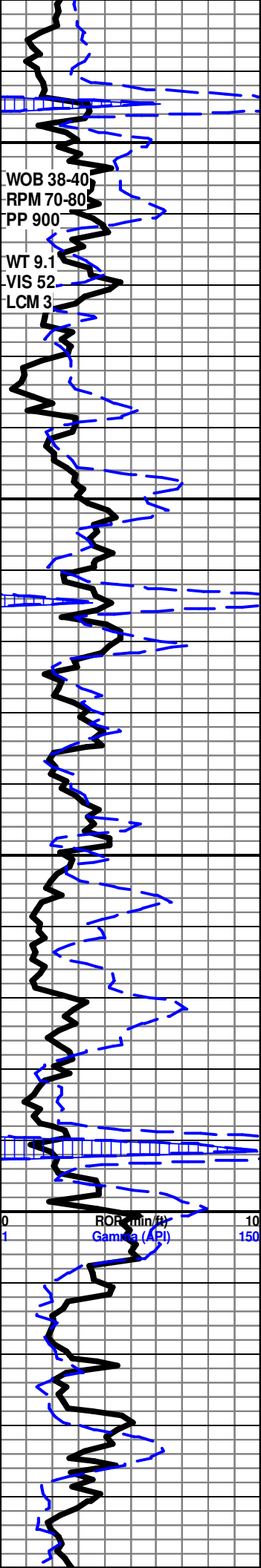
SH- BLK SFT CARB W/ ABDT IMBD DISS PYR THRU

TOPEKA 3792' (-648')

LS- CRM LT TN TN- HD DNS TO BRITT, MD-XLN RE-XLN
MTRX, ABDT IMBD FOSS & FOSS FRGS SCAT THRU, SLI
TR SMALL CALC XLS IP, V/DLL YEL MIN FLO IP, NO VIS
POR, NO VIS SHOW OR CUT

LS- WHT OFF WHT CRM- HD BRITT TO SFT IP, V/ SUCRO
MTRX TO SUCRO S-CHLKY, HVY TR FREE SFT WHT CHLK
IP, TR IMBD FOSS FRGS IP, V/ LT YEL MIN FLO IP, NO VIS
POR, NO VIS SHOW OR CUT





LS- OFF WHT LT GY IP- HD BRITT IP TO V/ SFT, SUCRO S-CHLKY TO CHLKY MTRX, SLI TR IMBD SH IP, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

LS- CRM LT TN - HD V/ BRITT , MD-XLN IP TO V/ TT SUCRO MTRX, SCAT IMBD FOSS FRGS IP, SLI TR IMBD LT GY SH IP, LT YEL MIN FLO IP, PR VIS MICRO PP POR IP. NO VIS SHOW OR CUT

LS- CRM BFF- HD DNS TO SLI TR BRITT IP, V/V/TT SUCRO MTRX, V/ DOLO IP, GRDNG TO ABDT SFT WHT CHLK AND FREE SFT CHLK, LT YEL MIN FLO IP, V/ PR MICRO PP POR IP, NO VIS SHOW OR CUT

SH- LT TO MED GY- FRM BLKY GRNY TXT, CALC IP

LS- LT TN TN - HD DNS V/ SLI TR BRITT, V/ TT SUCRO MTRX TO F-XLN IP ,RE-XLN IMBF FOSS FRGS SCAT IP, WHT TN RE-WORKED CHRT, NO FLO NO VIS POR, NO VIS SHOW OR CUT

LS- LT TN TN TO OFF WHT IP, HD V/ BRITT MD-XLN TO SUCRO IP RE-XLN, IMBD FOSS FRGS SCAT THRU, GRDNG TO ABDT SFT WHT CHLK IP, LT BRIT YEL MIN FLO IP, PR SCAT MICRO PP TO TR MICRO VUG POR IP, NO VIS SHOW OR CUT

LS- CRM LT TN TN - HD DNS IP TO BRITT, MD-XLN RE-XLN MTRX, V/ MICRO OOL, SCAT FOSS FRGS IP, S-CHLKY IP, SLI TR CALC XLS IMBD IP, NO FLO, TR V/ PR INTER-XLN POR IP, NO VIS SHOW OR CUT

LS- CRM LT TN TN- HD IP TO V/ SFT, V/ SUCRO S-CHLKY MTRX , GRDNG TO ABDT SFT LT BRN CHLK THRU. NO FLO, NO VIS POR, NO VIS SHOW OR CUT

LS- TN BRN GY IP, HD DNS MOTT, V/ TT SUCRO MTRX TO MD XLN IP, SCAT IMBD FOSS FRGS IP, TR V/ FRM WHT CHLK, TR IMBD DK GY SH IP, SLI TR CALC XLS IP, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

HEEBNER 3984' (-840')

SH-BLK SFT CARB

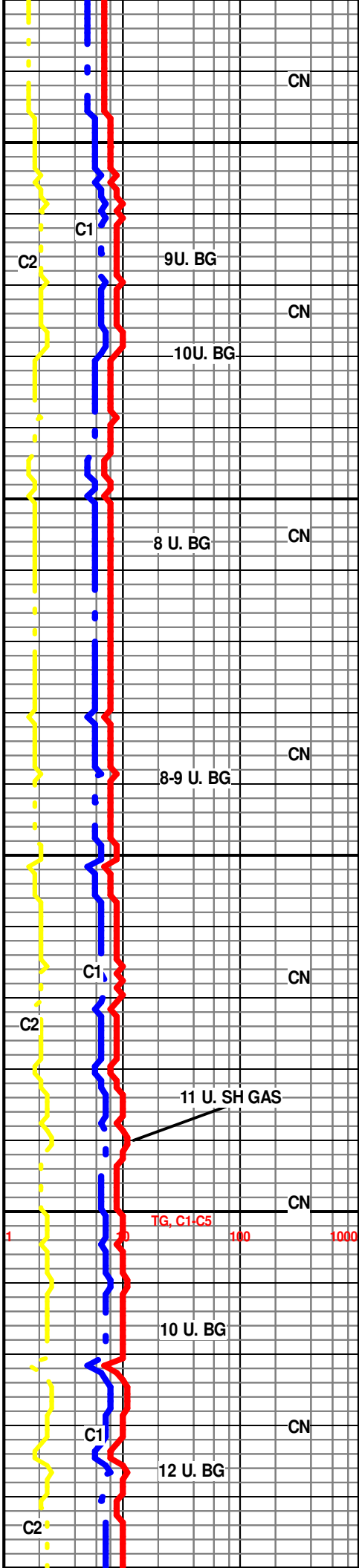
SH-LT GRAY TO LT GREEN- FRM BLK SMTH TXT

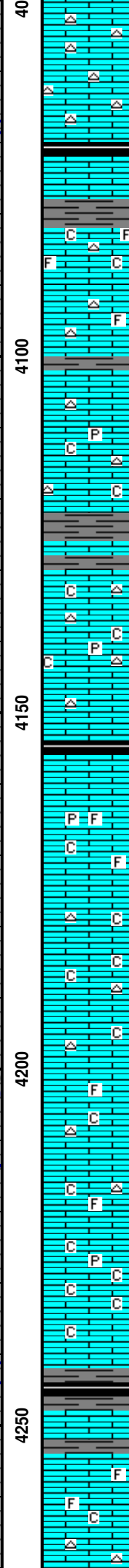
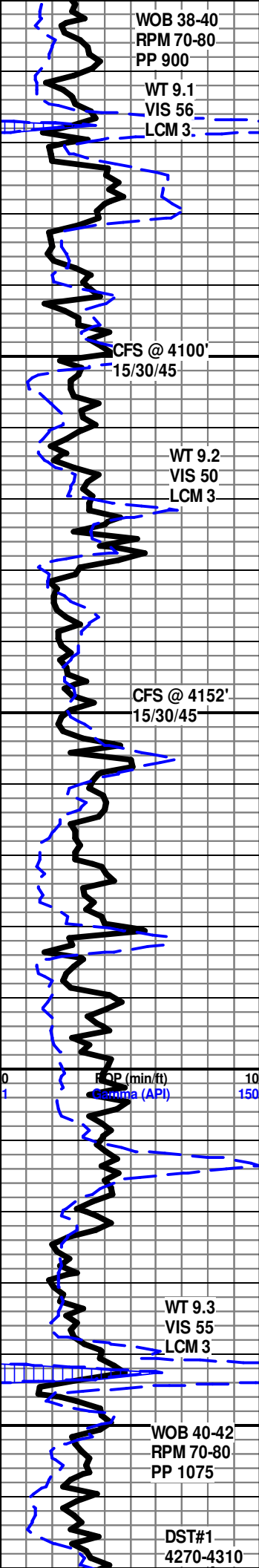
TORONTO 4012' (-868')

LS- OFF WHT CRM BFF- HD DNS IP TO BRIT, V/SUCRO TO SUCRO S-CHLKY W/ ABDT IMBD OFF WHT LT TN CHRT THRU, TR FREE SFT WHT CHLK, V/ LT YEL MIN FLO, PR VIS MICRO PP POR IP, NO VIS SHOW OR CUT

LANSING 4040 (-896')

LS- CRM BFF- HD V/ BRITT, V/ SUCRO S-CHLKY MTRX, SLI TR MD XLN IP ABDT WHT CHRT,SLI TR SMLL CALC XLS IP, LT BRIT YEL MIN FLO SCAT THRU, NO VIS POR, NO





IP, LT BRIT YEL MIN FLO SCAT THRU, NO VOS POR, NO VIS SHOW OR CUT

LS- CRM LT TN- HS SNA SLI TR BRITT, F-VF-XLN , TR FOSS FRGS IMBD IP, V/ S-CHLKY IP, ABDT WHT TO DK GY CHRT, LT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

SH- DK GY - FRM BLKY TO BLK SFT CARB

LANSING "B" 4081' (-937')

LS- OFF WHT CRM LT TN IP- HD BRITT , MD-XLN TO SUCRO IP, TR IMBD SFT WHT CHLK IP, SCAT IMBD FOSS FRGS IP, MED CALC XLS IMBD IP, DLL YEL MIN FLO SCAT IP, PR TO TR FR INTER-XLN POR IP, NOVIS SHOW OR CUT

LS- CRM LT TN OFF WHT- HD DNS TO BRITT IP, F-XLN TO MD-XLN IP, SLI TR S-CHLKY IP, TR FREE SFT WHT CHLK, WHT LT N CHRT IMBD IP, SMLL CALC XLS IMBD IP,SLI TR DISS PYR IP, LT YEL MIN FLO, NO VIS POR, NO VIS SHOW OR CUT

LANSING "D" 4131' (-987')

LS- WHT OFF WHT CRM- HD DNS IP TO BRITT, F-XLN GRDNG TO SFT WHT CHLKY MTRX, ABDT IMBD WHT CHRT W/ TR IMBD DISS PYR IP, LT BRIT YELMIN FLO SCAT THRU, TR PR INTER-XLN POR IP TO NO POR, NO VIS SHOW OR CUT

SH- BLK SFT CARB V/ CALC IP

LS- OFF WHT CRM BFF- HD DNS V/F-CRYPTO-XLN TO V/ TT SUCRO IP, RE-XLN, HVY TR SMLL TO MD CALC XLS IMBD IP, TR FOSS FRGS IP,SLI TR DISS PYR IP, LT BRIT YEL MIN FLO IP, TRPR SCAT MICRO VUG POR IN ONE ROCK, NO VIS CUT OR SHOW

LS- OFF WHT CR M BFF- F-XLN TO SUCRO IP TO FRM CRM TO WHT CHLK IP TO ABDT SFT WHT CHLK IP, HVY TR SCAT WHT TN CHRT, LT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

LS- OFF WHT CRM LT TN- HD DNS TO TR BRITT IP, V/F-CRYPTO-XLN, SUCRO IP TO FRM WHT CRM CHLK IP, TR SMLL CALC XLS IP, SLI TR FOSS FRGS IP, TR WHT CHRT, LT BRIT YEL MIN FLO IN 60%, NO VIS POR, NO VIS SHOW OR CUT

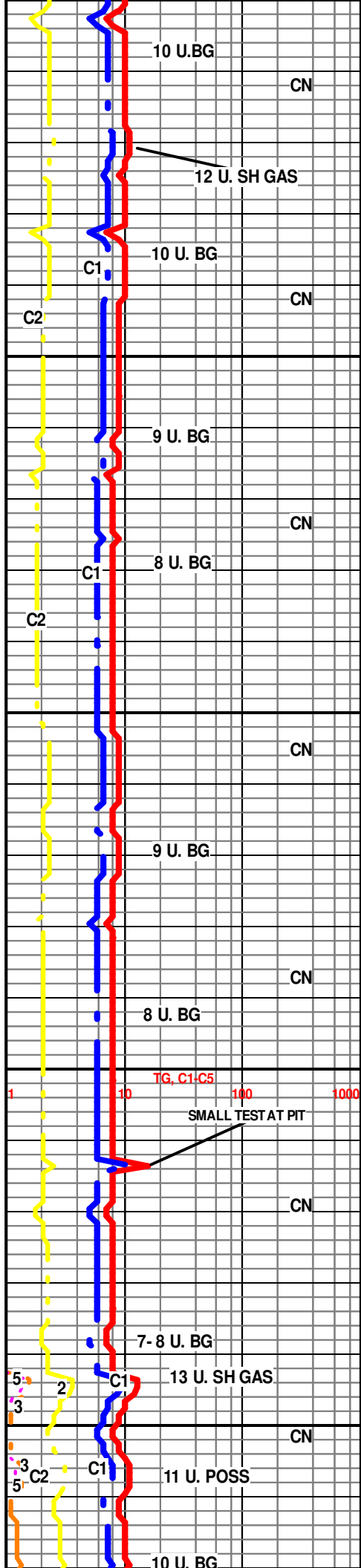
LS- OFF WHT CRM - HD TO FRM IP, V/ SUCRO TO SUCRO S-CHLKY MTRX W/ ABDT CRM V/ FRM CHLK THRU, TR DISS PYR IP, LT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS CUT OR SHOW

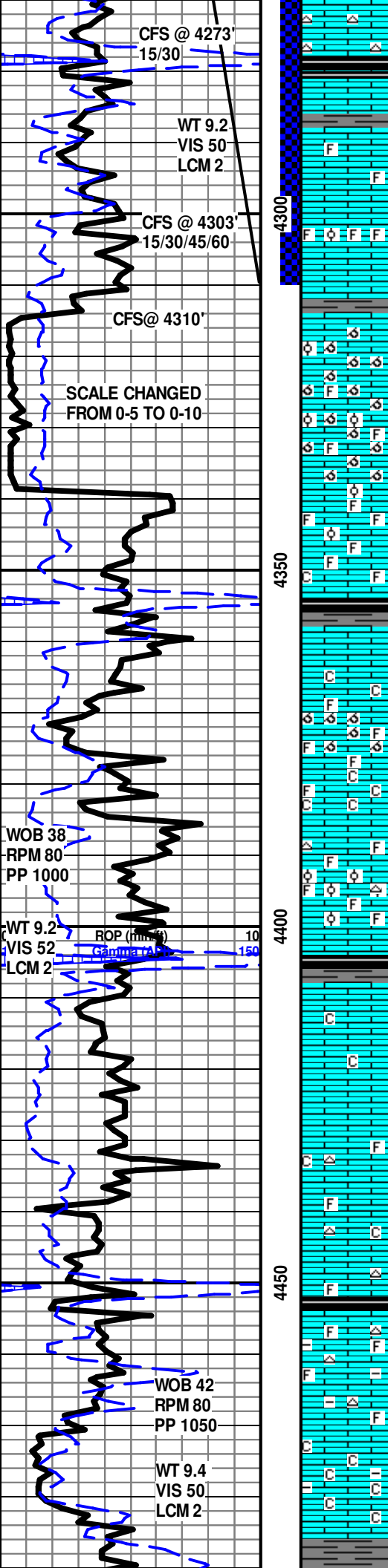
MUNCIE CRK 4243' (-1099')

SH- BLK SFT CARB W/ V/ FN DIS PYR THRU

LANSING "H" 4254' (-1110')

LS- OFF WHT CRM LT TN- HD DNS TO BRITT, MD-F-XLN, RE-XLN MTRX, IMBD FOSS FRGS IP, IMBD SMLL ANG LM GRNS IP, SLI TR CHLKY FOSS FRGS IP, TR SMLL CALC XLS IMBD IP, LT BRIT YEL GLD FLO IN 2%, BRIT YEL FLO IN 40%, V/ PR VIS INTER-XLN POR IN 2-3%, NO VIS CUT OR SHOW





WT	9.2
VIS 50	
LCM 2	

CFS @ 4303
15/30/45/60

CFS@ 4310'

SCALE CHANGED
FROM 0-5 TO 0-10

WOB 38
RPM 80
PP 1000

Western blot analysis showing ROP (min) and gamma-TuRC (TAP) levels in WT, VIS, and LCM strains. The blot shows bands for ROP (min) and gamma-TuRC (TAP) in WT, VIS, and LCM strains. The ROP (min) band is present in all strains, while the gamma-TuRC (TAP) band is absent in the LCM strain.

ROP (min/ft)

WOB 42
RPM 80
PP 1050

WT	9.4
VIS	50
LCM	2

LANSING "I" 4288' (-1144')

4291-4298' LS- OFF WHT CRM TN DK TN (DUE TO LV OIL STN IN 30%) HD
DNS TO BRITT, MD-XLN TO CRSSUCRO MTRX IP, IMBD ANG LTM GRNS
SCAT THRU, ABTD IMBBD SMLL TO MD CALC XLS W/ LV OIL STN, SCAT
FOSS FRGS IP, SLI S-CHLKY IPBRIT YEL GLD FLO IN 10-20%, DLL YEL FLO
IN 30%, PR TR FR VIS INTER-XLN POR IN 20% W/ CALC XLS, PR TR FR
MICRO VUG POR IN 10%, TR PR INTER-FOSS POR IN 2%, EXCEL INST
FLSH CUT THRU, EXCEL SLO STRM CUT IN 80%, FR TO GD OIL ODOR, LT
TN LCH ON DISH, LT OIL SHEEN ON ROCKS IN TRAY

LANSING "J" 4314' (-1170')

4301-4303- LS- CRM LT TN LT BRN DUE TO VRGTD TN OIL STN SCAT
THRU, HD DNS , V/ SLI TR BRITT, MD-XLN, V/ RE-XLN MTRX, ABDT IMBD
FOSS FRGS THRU. SCAT SMALL OOL IP, SCAT V/ SMALL CALC XLS IMBD IP
W/ OIL STN, SCAT BRIT YEL GLD FLO IN 10%, DLL LT YEL FLO IN 20%, V/
PR VIS INTER-XLN POR IN 10%, V/ GD INST FLSH CUT IN 10%, FR SLO
STRM CUT IN 30%, GD OIL ODOR, BRN LCH ON DISH

4314-4339' LS- CRM BFF , HD BRITT, MD-XLN, V/ RE-XLN MTRX, V/ MD OOLCAST W/ ABDT SCAT SMLL TO MD OOL, SCAT IMBD FOSS FRGS THRU, SMLL CALC XLSIMBD THRU, BRIT YEL FLO THRU, EXCEL OOLCST TO MICRO VUG POR THRU, NO VIS SHOW OR CUT, STRNG SLPHR ODOR,

4340- 4354- LS CRM LT TN LT GY- HD DNS MD-F-XLN, RE-XLN MTRX
ABDT IMBD FOSS FRGS SCAT THRU, TR IMBD LT GY SH IP, TR SFT CHLK
IP, SCAT LT YEL MIN FLO, NO VIS POR, NO SHOW

STARK 4355' (-1211')

LANSING "K" 4359' (-1215')

LS- OFF WHT CRM BFF- HD V/BRITT, MD-F-XLN , V/
RE-XLN MTRX, V/ OOLCAST TO MICRO VUG, ABDT IMBD
FOSS FRGS , SLI TI V/ S-CHLKY IP GRDNG TO ABDT FRM
WHT CHLK, LT BRI T SCAT YEL FLO THRU, V/ GD MICRO
VUG TO MD OOLCAST POR THRU, NO VIS SHOW OR
CUT

LS- CRM LT TN TN - HD DNS , MD-F-XLN , V/ RE-XLN
MTRX, ABDT IMBD MICRO OOL, ABDT IMBD FOSS FRGS,
TR LRG IMBD CRIN STEMS, TR WHT TN CHRT, TR SMLL
VRGD CALS XLX IMBD IP, LT BRIT YEL FLO THRU, SLI
TR PR INTER-XLN POR, NO VIS CUT OR SHOW

HUSHPUCKNEY 4404' (-1260

LANSING "L" 4408' (-1264')

LS- OFF WHT CRM- HD DNS SLI TR BRITT, F-V/F-XLN TO
SUCRO S-CHLKY IP, TR CALC XLS CLSTRS IP, LT BRIT
YEL MIN FLO SCAT THRU, NO VIS POR, NO VIS SHOW OF
CUT

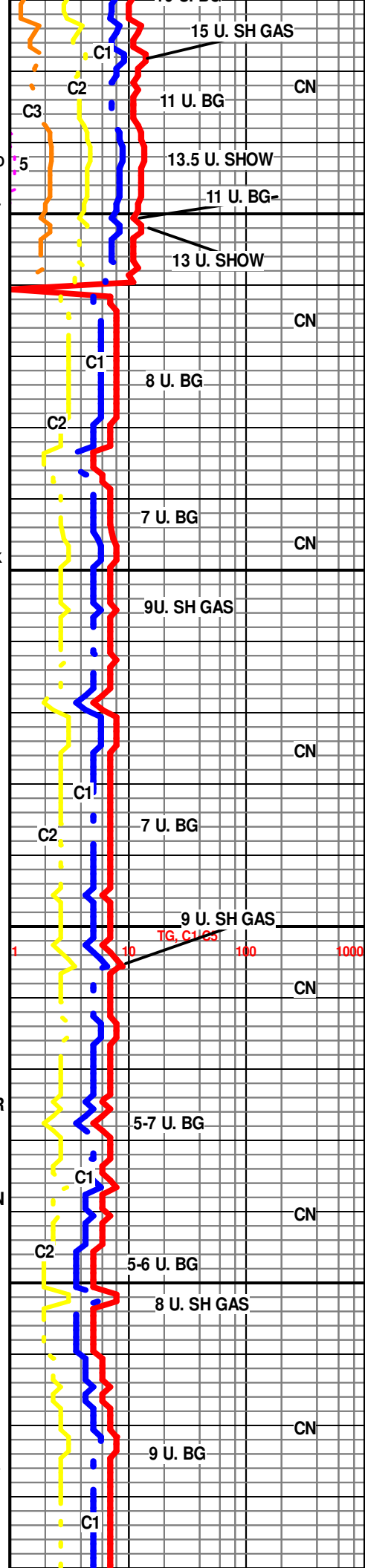
LS- OFF WHT CRM LT TN IP, HD DNS F-V/F-XLN TR RE-XLN
IP, V/ TT SUCRO S-CHLKY IP, HVY TR TN WHT CHRT, SLI
TR FOSS FRGS IP, LT BRIT YEL MIN FLO THRU, NO VIS
POR, NO VIS SHOW OR CUT

SH- BLK SFT CARB

LS- CRM TN LT GY- HD DNS V/F-CRYPTO-XLN , SLI MOTT,
ABDT IMBD FOSS FRGS, IMBD TN WHT CHRT, TR IMBD
DISS DK GY SH IP, SCAT LT BRIT YEL MIN FLO IP, NO VIS
POR, NO VIS SHOW

LS- OFF WHT CRM - FRM , ABDT FRM WHT CHLK TO FREE
SFT WHT CHLK, SLI TR IMBD DISS GY SH, LT YEL MIN
FLO IP, NO VIS POR, NO VIS HOW

BKC 4486' (- 1342')



1 U. BG-

13.5 U. SHOW

11 U. BG-

13 U. SHOW

8 U. BG

7 U. BG

9U. SH GAS

7 U. BG

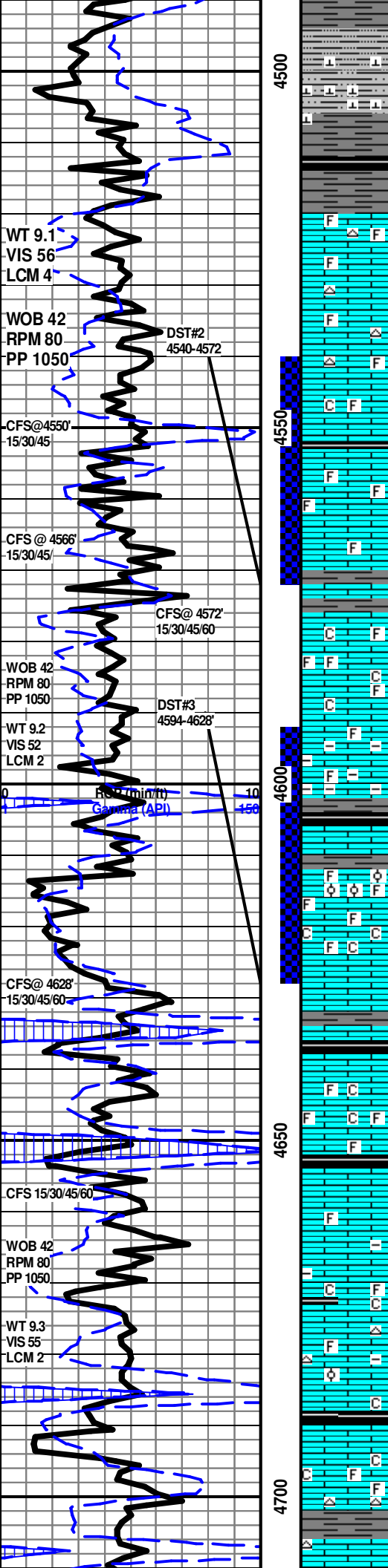
9 U. SH GAS

5-7 U. BG

5-6 U. BG

8 U. SH GAS

9 U. BG



SH- GREEN RED GY- FRM BLKY SMTH TXT MOTT

SH- LT GREEN LT BRN - FRM BLKY , V/ GRAINY TXT, MIBD V/V/FN GRN QURTZ & IMBD V/F LM GRNS IP

MARMATON 4521' (-1377')

LS- LT TN DK TN - HD DNS TO BRITT, MD-F-XLN V/ RE-XLN MTRX, SCAT IMBD FOSS FRGS IP, SMLL MD CALC XLS IMBD THRU & ON ONE FACES OF ROCK, TR FREE MD CALC XLS, TR WHT TN CHRT , DLL LT YEL FLO SCAT THRU, TR PR INTER-CLN POR IP, NO VIS SHOW OR CUT

LS- CRM BFF- LT TN- HD DNS IP TOBRITT, MD-F-XLN TO SLI SUCRO S-CHLKY IP , SLI TR IMBD SFT WHT CHLK IP, SCAT TR SMLL FOSS FRGS IP, LT YEL MIN FLO, NO VIS POR, NO VIS SHOW

MARMATON 'B' 4553' (-1409')

SH- BLK SFT CARB

4555'-4562' LS- CRM LT TN TN TN (DUR TO LT OIL STN IN 40%) HD DNS IP TO V/ BRITT, F-MD-XLN RE-XLN MTRX, IMBD ANG LM GRNS IP SCAT FOSS FRGS IP, ABDT SCAT IMBD MD TO TR FREE LRG CALC XLS W/ OIL STN, BRIT YEL GLD FLO IN 80%, LT BRIT YEL FLO IN 2%, PR FR TO TR GD INTER-XLN POR & TR PR TO FR INTER-FOSS POR IP, EXCEL INST FLSH CUT THRU, EXCEL SLO STRM CUT THRU, GD OIL ODOR, LT TN LCH ON DISH

4567-4570' LS- CRM LT TN - HD DNS F-V/F-XLN SLI RE-XLN IP, SLI TR FOSS FRGS IMBD IP, SLI TR SMLL IMBD CALX XLS IP, LT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

4576-4589' LS- CRM BFF OFF WHT IP- HD DNS MD-XLN RE-XLN MTRX, SUCRO S-CHLKY IP, IMBD FOSS FRGS SCAT THRU, SLI TR SFT WHT CHLK IP, DLL TO LT YEL MIN FLO SCAT IP TO NO FLO, NO VIS POR, NO VIS CUT OR SHOW

4590- 4600' LS- CRM LT T GY GY- HD DNS TO SLI BRITT, V/SUCRO MTRX, V/ ARG TO SHLYTHRU, SLI TR FOSS FRGS IP, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

PAWNEE 4613' (-1469')

4613-4622' LS- TN DK TN TN IN 90% W. LT TN OIL STN IN 90%, HD V/ BRITT, MD-XLN RE-XLN MTRX THRU, ABDT IMBD SMLL TO MD ANG LM GRNS THRU, SCAT IMBD FOSS FRGS THRU, ABDT SMLL OOL IP, HWY TR ABDT FRM FREE WHT CHLK IP NOT IMBD, BRIT YEL GLD FLO IN 90%, PR TO FR VIS INTER-XLN TO INTER-FOSS POR SCAT THRU, TR FR MICRO VUG POR IP, FR MICRO OOL POR IN 2%, ECEL INST FLSH CUT IN 80-90%, V/ GD SLO STRM CUT IN 80%, V. GD STRNG OIL ODOR , TN STN ON DISH

FT SCOTT 4638' (-1434')

4644-4648' LS- LT TN TN TN BRN(LT BRN OIL STN IN 20%) - HD DNS TO SLI BRITT, V/ TT SUCRO MTRX, ABDT IMBD V/ FNANG LM GRNS IP, SCAT IMBD FOSS & FOSS FRGS, IMBD SMLL VRGTD CALC XLS IP, SLI TR S-CHLKY IPS LI TR DISS PYR IP, V/ DLL YEL GLD FLO IN 20%, LT BRIT YEL FLO IN 20%, V/ PR VIS INTER-XLN & PR MICRO PP POR IN 5%, SLI TR SCAT PR MICRO VUG POR IP, V/GD FLSH CUT IN 20%-30%, GD SL STRM CUT IN 20%, FR TO TR GD OIL ODOR,

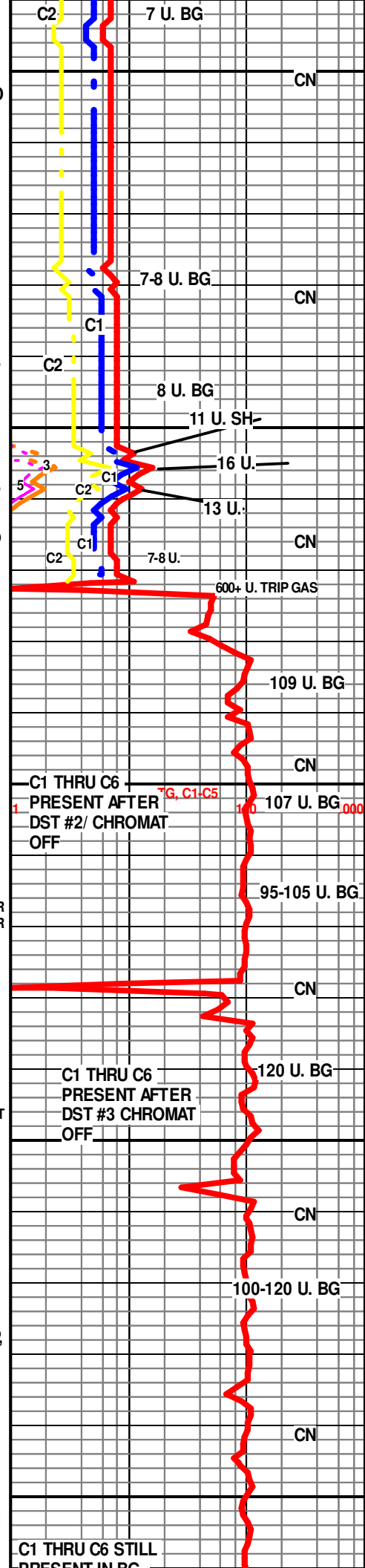
CHEROKEE 4651' (-1507')

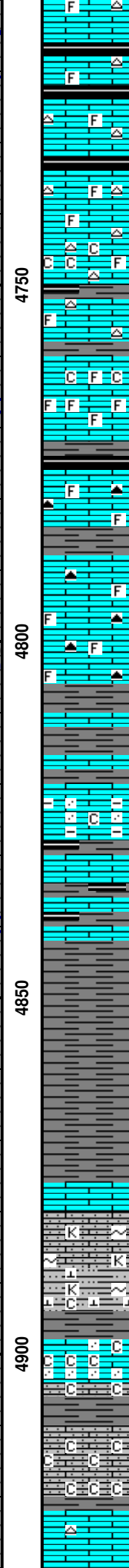
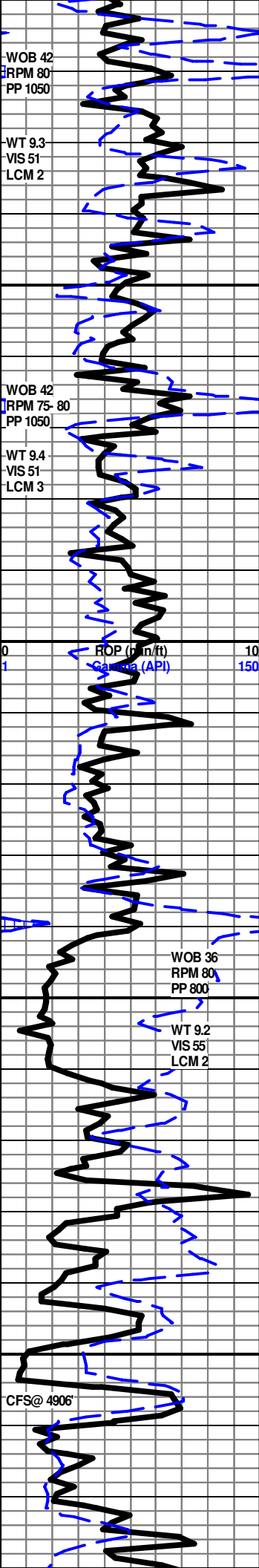
LS- OFF WHT CRM BFF- HD DNS , V/ TT SUCRO MTRX, V/ S-CHLKY IP IP W/ TR BLK CARB SH IMBD IP, SLI TR PHNTM FOSS FRGS IP, LTGY SH IP, V/ DLL YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

LS- CRM LT TN TN TN - HD DNS V/F-CRYPTO-XLN , RE-XLN IP, SCAT IMBD FOSS FRGS IP, SLI TR IMBD MICRO OOL , TR IMBD CHRT IP, V/ DLL YEL MIN FLO, NO VIS POR, NO VIS SHOW OR CUT

LWR CHEROKEE 4686' (-1542')

LS- OFF WHT CRM- HD IP TO SFT, MD-XLN RE-XLN MTRX TO SUCRO V. S-CHLKY, SLI TR FOSS FRGS IP, SLI TR RE-WORKED TN WHT CHRT IP, NO FLO TO TR LT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT





LS- TN DK TN- HD DNS V/F-CRYPT TO-XLN, FRLY NON DESCRIPT W/ HVY TR IMBD RE-WORKED TN WHT CRT W/ TR IMBD FOSS FRGS, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

LS- CRM LT TN LT BRN - HD DNS F-V/F-XLN, SLI RE-XLN IP, IMBD RE-WORKD LT TN CHRT , SCAT IMBD FOSS FRGS IP, DLL YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

LS- CRM LT TN OFF WHT IP, HD DNS IPTO BRITT, F-MED XLN , SLI RE-XLN IP, W/ TR RE-WRKED IMBD CHRT, TR FOSS FRGS IMBD IP, TR SBDT FRM TO WHT SFT CHLK IP. LT YEL MIN FLO, NO VIS POR, NO VIS SHOW OR CUT

JOHNSON ZN 4760 (-1616')

LS- WHT OFF WHT LT TN - HD DNS IP TO V/ SFT, V/ SFT SUCRO S-CHLKY MTRX TO F-XLN IP, IMBD FOSS & FOSS FRGS SCAT THRU, TR SMLL IMBD CALC XLS IP, LT YEL MIN FLO IP, SLI TR PR INTER-XLN POR IP, NO VIS SHOW OR CUT

LS- CRM TN DK TN -HD DNS F-CRYPTO-XLN, SLI RE-XLN IP, IMBD TN BRN RE-WORKED CHRT W/ IMBD FOSS FRGS IP, TR IMBD LT GY SH IP, LT YEL MIN FLO, NO VIS POR, NO VIS SHOW

LS- CRM TN LT BRN GY IP, HD DNS MOTT, F-V/F-XLN TO CRYPT TO-XLN IP, HVY TR FOSS FRGS IMBD IP, TN BRN RE-WORKED CHRT W/ FOS FRGS IMBD IP, LT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW

SH- GY DK GY- FRM BLKY , SMTH TO GRNY TXTM SLI CALC IP

LS- CRM TN BRN LT GY - HD DNS MOTT, F-XLN TO MD-XLN IP, TR TT S-SUCRO IP SLI TR S-CHLKY IPSLI TR IMBD V/FN-GRN QURTZ, TR IMBD DISS LT GY SH IP, TR LT BRIT YEL MIN FLO IN 10% TO NO FLO, NO VIS POR, NO VIS SHOW

SH- GY DK GY TO BLK- FRM BLKY V/ CALC TO LMY TR BLK SFT CARB IP, TR IMBD FOSS FRGS IP

MORROW 4841'(-1697')

SH- V/ LT GREEN DK GREEN, BRN YELLOW, MOTT, FRM BLKY SMTH TXT

SH- PRED A/AB V/ LT GREEN DK GREEN, BRN YELLOW, MOTT, FRM BLKY SMTH TXT

LS-BRN DK GY- HD DNS MOTT, CRYPTO-XLN TO S-LITHO, FRLY NON DESCRIPT, NO FLO, NO VIS POR

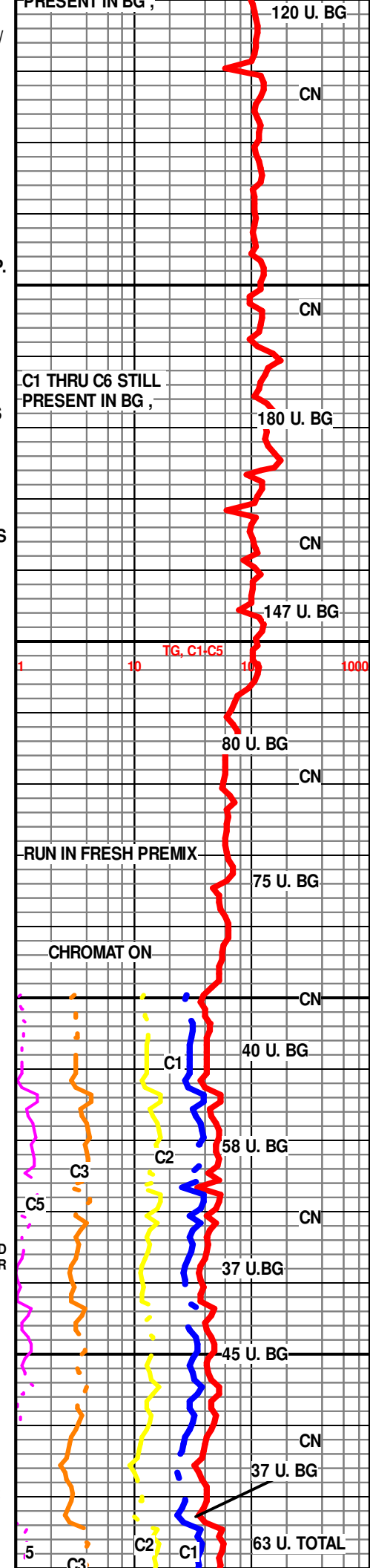
LS- LT TN TN - HD DNS V/ TT SUCRO MTRX, ABDT IMBD SMLL ANG LM GRNS THRU, SCAT IMBD V/F-GRN CLR QURTZ GRNS THRU, ABDT IMBD GLAUC & OR KAOL. GRDNG TO V/AREN SILTY SH IP, V/ CALC TO HVY TR CHLKY IP, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

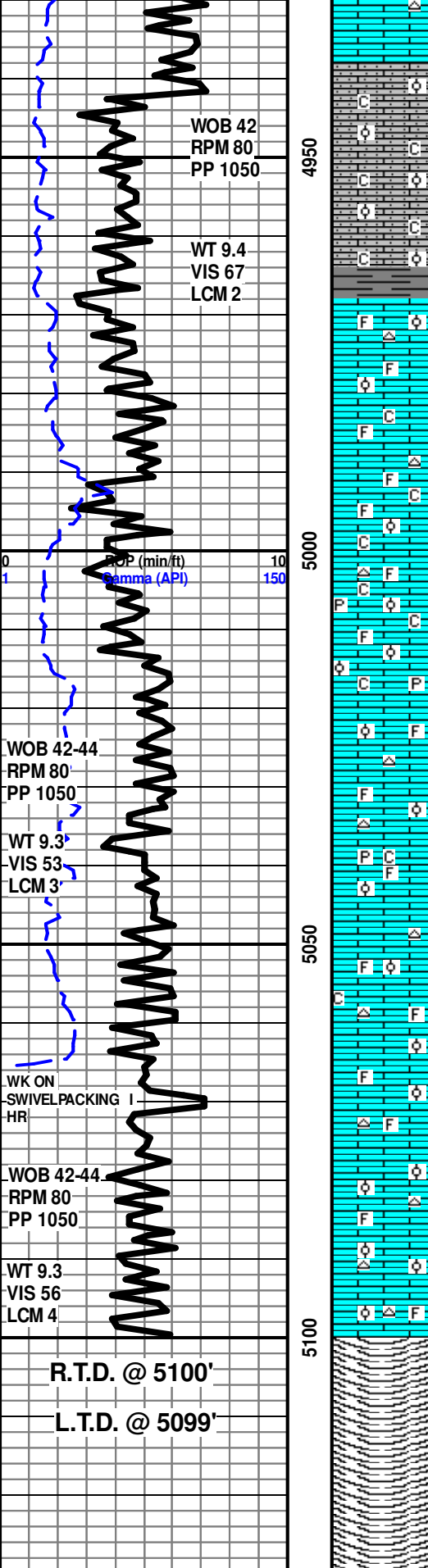
LS- OFF WHT WHT LT GREEN- V/ SFT FREE CHLK W/ ABDT IMBD V/V/FN-GRN QURTZ IMBD THRU, NO FLO, NO VIS POR, NO VIS SHOW

SH- RED BRN GY GREEN-MOTT, FRM BLKY SMTH TXT

LS- WHT OFF WHT - MD HD TO SFT, V/ SUCRO S-CHLKY TO CHLKY MTRX, ABDT IMBD V/V/FN-GRN CLR TO FRSTY QURTZ GRAINS THRU, HVY TR ABDT SFT WHT CHLK IP, NO FLO, NO VIS POR, NO VIS SHOW OR CUT

MISSISSIPPI 4921' (-1777')





LS- CRM TN LT GY- HD DNS, CRYPTO-V/F XLN, SLI TR IMBD WHT CHRT IP, LT BRIT YEL MIN FLO SCAT THRU, NO VIS POR, NO VIS CUT OR SHOW

LS- OFF WHT CRM- HD V/ BRITT V/ SUCRO MTRX V/ S-CHLKY ABDT IMBD V/F-GRN QURTZ THRU, AREN TO SNDY SCAT SMLL MICRO OOL, LT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

ST. LOUIS 4967' (-1823')

SH- GREEN V/ DK GREEN- FRM BLKY SMTH TXT

LS- CRM BFF LT TN - HD DNS IP TO BRITT, MD-XLN RE-XLN MTRX, SLI TR S-CHLKY IP, SCAT IMBD SMLL FOSS FRGS SCAT THRU, V/ SMLL MICRO OOL SPARSLEY SCAT THRU, TN CHRT, LT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

LS- CRM BFF LT TN - HD DNS IP TO SLI BRITT, MD-XLN RE-XLN MTRX, HVY TR V/ S-CHLKY IP, IMBD SMLL FOSS FRGS SCAT THRU, V/ SMLL MICRO OOL SCAT THRU, TN CHRT, LT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

LS- OFF WHT CRM BFF - HD DNS IP TO BRITT, MD-XLN RE-XLN MTRX, V/ S-CHLKY IP, IMBD SMLL FOSS FRGS SCAT THRU, TR IMBD PYR IP, TR PYR CLSTERS, V/ SMLL MICRO OOL SCAT THRU, TN CHRT, LT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

LS- WHT OFF WHT CRM BFF - HD DNS TO BRITT, MD-XLN RE-XLN MTRX, SLI S-CHLKY IP, IMBD SMLL FOSS FRGS SCAT THRU, TR IMBD DISS PYR IP, V/ SMLL MICRO OOL SCAT THRU, TR TN CHRT, LT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

LS- WHT OFF WHT CRM BFF - HD DNS TO SLI BRITT, MD-XLN RE-XLN MTRX, IMBD SMLL FOSS FRGS SCAT THRU, V/ SMLL MICRO OOL SCAT THRU, TR TN WHT CHRT, LT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

LS- WHT OFF WHT CRM BFF - HD DNS TO BRITT IP, MD-XLN RE-XLN MTRX, IMBD SMLL FOSS FRGS SCAT THRU, V/ SMLL MICRO OOL SCAT THRU, TR WHT CHRT, LT BRIT YEL MIN FLO IP, NO VIS POR, NO VIS SHOW OR CUT

R.T.D @ 2:35 PM MAY 13TH, 2017

CIRC 1 HOUR/ SHORT TRIP 15 STANDS

CTCH 1.5 HOURS/ TOFL

START OUT @ 8:50 PM FOR LOGS

START LOGGING 12:00 AM MAY 14TH-ELI HAYS

LOGS FINISHED @ 5:39 AM, MAY 14TH, 2017

