

Form	ACO1 - Well Completion
Operator	Pantera Energy Company
Well Name	MCHARGUE 'A' 6
Doc ID	1710996

All Electric Logs Run

DIL-GR
D-N PE
MICRO
SONIC

Form	ACO1 - Well Completion
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Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Conductor	17.5	13.625	54	81	A	100	1% 5MG 3%CC 1/4# CCU CM FLAKE
Surface	12.25	8.625	32	1750	A	560	2% GYP 2%SMS 2%CC 1/4# FLAKE
Production	7.875	5.5	17	6278	H	390	5% GYP 10%CC .4%C-17 2#/SK TB



QUASAR ENERGY SERVICES, INC.

3288 FM 51
Gainesville, Texas 76240
Office: 940-612-3336
Fax: 940-612-3336 | qesi@qeserve.com

Form 185-2J

12/28/22
CEMENTING JOB LOG

CEMENTING JOB LOG

Company: Pantera Energy Compnay				Well Name: Mchargue A#6			
Type Job: SURFACE				AFE #:			
CASING DATA							
Size: 8 5/8		Grade:		Weight: 32			
Casing Depths		Top:		Bottom: 1748			
Drill Pipe:		Size:		Weight:		Packer:	
Open Hole:		Size: 12 1/4		T.D. (ft): 1755		Hole:	
CEMENT DATA							
Spacer Type:							
Amt.		Sks Yield	0	ft³/sk		Density (PPG)	
LEAD:	Class A: 2% Gyp., 2%SMS., 2% CC., 1/4# Celloflake					Excess	
Amt. 410	Sks Yield	1197.2	ft³/sk	2.92	Density (PPG)	11.43	
TAIL:	Class A: 2% Gyp., 2% SMS., 2% CC., 1/4# Celloflake					Excess	
Amt. 150	Sks Yield	273	ft³/sk	1.82	Density (PPG)	13.3	
WATER:							
Lead: 410	gals/sk:	18	Tail: 150	gals/sk:	9.75	Total (bbls):	210.5
Pump Trucks Used:		04, DP03					
Bulk Equipment:		230, 660-24 / 189, 660-21					
Disp. Fluid Type: Water (Supplied)		Amt. (Bbls.)		103.8	Weight (PPG):		8.3
COMPANY REPRESENTATIVE: Terry				CEMENTER: Daniel Beck			
TIME	PRESSURES PSI			FLUID PUMPED DATA		REMARKS	
AM/PM	Casing	Tubing	ANNULUS	TOTAL	RATE		
17:45						ON LOCATION & SAFETY MEETING	
17:50						RIG UP	
18:50						RIG TO CIRCULATE	
19:17						RIG TO PT	
19:18						PRESSURE TEST TO 1500PSI	
19:21	400			213.2slurry	6.1	PUMP 410SX LEAD @ 11.4#	
19:53	340			48.6slurry	5.5	PUMP 150SX TAIL @ 13.8#	
20:03						SHUTDOWN / DROP PLUG	
20:05	140			10	5.0	DISPLACE	
	280			20	5.9		
	280			30	5.8		
	260			40	5.4		
	310			50	6.0		
	400			60	5.4		
	450			70	4.7	75BBL IN CEMENT TO SURFACE	
	550			80	4.1		
	650			90	5.2		
	650			93	5.1	SLOW RATE TO 2.1BPM @ 550PSI	
20:26	580			103.8	2.0	LAND PLUG / PRESSURE UP TO 1100PSI	
20:28						RELEASE BACK --- FLOAT HELD	
						JOB COMPLETE	
Company: Pantera Energy Compnay				Well Name: Mchargue A#6			
Type Job: SURFACE				AFE #:			
Date: 12/28/2022		CEMENTING JOB LOG		QUASAR ENERGY SERVICES, INC. 185-2			



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Form 185-2J

1/2/23

CEMENTING JOB LOG

CEMENTING JOB LOG

Company: PANTERA ENERGY COMPANY				Well Name: MCHARGUE A#6			
Type Job: LONG STRING				AFE #: 0			
CASING DATA							
Size: 5 1/2		Grade: 0		Weight: 17			
Casing Depths		Top: 0		Bottom: 35.2			
Drill Pipe:		Size: 0		Weight: 0			
Tubing:		Size: 0		Weight: 0		Grade: 0 TD (ft): 6300	
Open Hole:		Size: 7 7/8		T.D. (ft): 6300			
Perforations		From (ft): 0		To: 0		Packer Depth(ft): 0	
CEMENT DATA							
Spacer Type:							
Amt.		Sks Yield		ft ³ /sk		Density (PPG)	
LEAD: CLASS A 50/50/8 .3%C-19							
Amt.	150	Sks Yield	2.53	ft ³ /sk	379.5	Density (PPG)	11.41
TAIL: CLASS H 50/50/2 5%GY 10%SALT .4%C-17 2#/SK TACTICAL BLITZ							
Amt.	240	Sks Yield	1.56	ft ³ /sk	374.4	Density (PPG)	13.77
WATER:							
Lead:		gals/sk:	15	Tail:		gals/sk:	7.5
Total (bbls):							
Pump Trucks Used:							
Bulk Equipment:							
Disp. Fluid Type:		4% KCL		Amt. (Bbls.): 144.85		Weight (PPG):	
Mud Type:						Weight (PPG):	
COMPANY REPRESENTATIVE:				CEMENTER: ANGEL ECHEVARRIA			
TIME		PRESSURES PSI			FLUID PUMPED DATA		REMARKS
AM/PM	Casing	Tubing	ANNULUS	TOTAL	RATE		
1130							ON LOCATION-RIG UP-SAFETY MEETING
0005							PRESSURE TEST LINES TO 2500PSI
0015							PLUG RAT AND MOUSE 30SX AND 20SX
0030	150			45.05	3.3		PUMP LEAD 100SX @ 11.4#
0045	300			66.68	5.6		PUMP TAIL 240SX @ 13.77#
0105							SHUT DOWN WASH TO PIT - DROP PLUG -
0115	350			40	6.5		DISPLACE W/ 4%KCL
	500			80	5.2		
	1000			110	5		
	1100			120	4.6		
	1400			130	5		
	1600			144.8	5		
0143							LAND L.D. PLUG TO 2100PSI
0148							RELEASE BACK
							PLUG HELD
							RIG DOWN
							JOB COMPLETED
							THANK YOU

Geo Log Header
WellSight Systems

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

Well Name: MCHARGUE A-6
Well Id:
Location: Section 2 - 33S - 34W Seward Co, Kansas
License Number: API # 15-175-22287
Spud Date: Dec.27th, 2022
Surface Coordinates: 2299' FNL & 2600' FEL
Region: Shuk
Drilling Completed: Jan. 1st, 2023

Bottom Hole
Coordinates:
Ground Elevation (ft): 2854
Logged Interval (ft): 3000' **To:** 6300' **K.B. Elevation (ft):** 2868'
Formation: Lansing Kansas City
Type of Drilling Fluid: Chemical Gel/Polymer Fresh Water -Based
Total Depth (ft): 6300'

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

OPERATOR

Company: Pantera Energy Company
Address: 817 S. Polk, Suite 201
Amarillo, Texas 79101
Co. Geo: Mr. Phil Moore

GEOLOGIST

Name: TIM HEDRICK
Company: EARTH TECH OGL,INC
Address: Po BOX 683
Hooker, okla. 73945
580-754-0062 Cell

ROCK TYPES

LITHOLOGY

	Anhy
	Bent
	Brec
	Cht
	Clyst
	Coal
	Congl
	Dol
	Gyp
	Igne
	Lmst
	Meta
	Mrlst
	Salt
	Shale
	Shcol
	Shgy
	Sltst
	Ss
	Till
	Sltstn
	Shale
	Sandylms
	Lms
	Gry sh
	Dtd
	Dol
	Carb sh
	pipesymbol
	unknown lith
	Red shale

FOSSIL

	Oomoldic
	Fuss
	Algae

MINERAL

	Sltly
	Sand
	Dol
	Chlorite
	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtlt
	Dol

	Amph
	Belm
	Bioclst
	Brach
	Bryozoa
	Cephal
	Coral
	Crin
	Echin
	Fish
	Foram
	Fossil
	Gastro
	Oolite
	Ostra
	Pelec
	Pellet
	Pisolite
	Plant
	Strom

STRINGER

	Sh
	Sandylms
	Lms
	Gryslt
	Grysh
	Dol
	Clystn
	Carbsh
	Anhy
	Arg
	Bent
	Coal
	Dol
	Gyp
	Ls
	Mrst
	Sltstrg

	Feldspar
	Ferrpel
	Ferr
	Glau
	Gyp
	Hvymin
	Kaol
	Marl
	Minxl
	Nodule
	Phos
	Pyr
	Salt
	Sandy
	Silt
	Sil
	Sulphur
	Tuff



Ssstrg

TEXTURE

	Boundst
	Chalky
	Cryxln
	Earthy
	Finexln
	Grainst
	Lithogr
	Microxln
	Mudst
	Packst
	Wackest

OIL SHOW

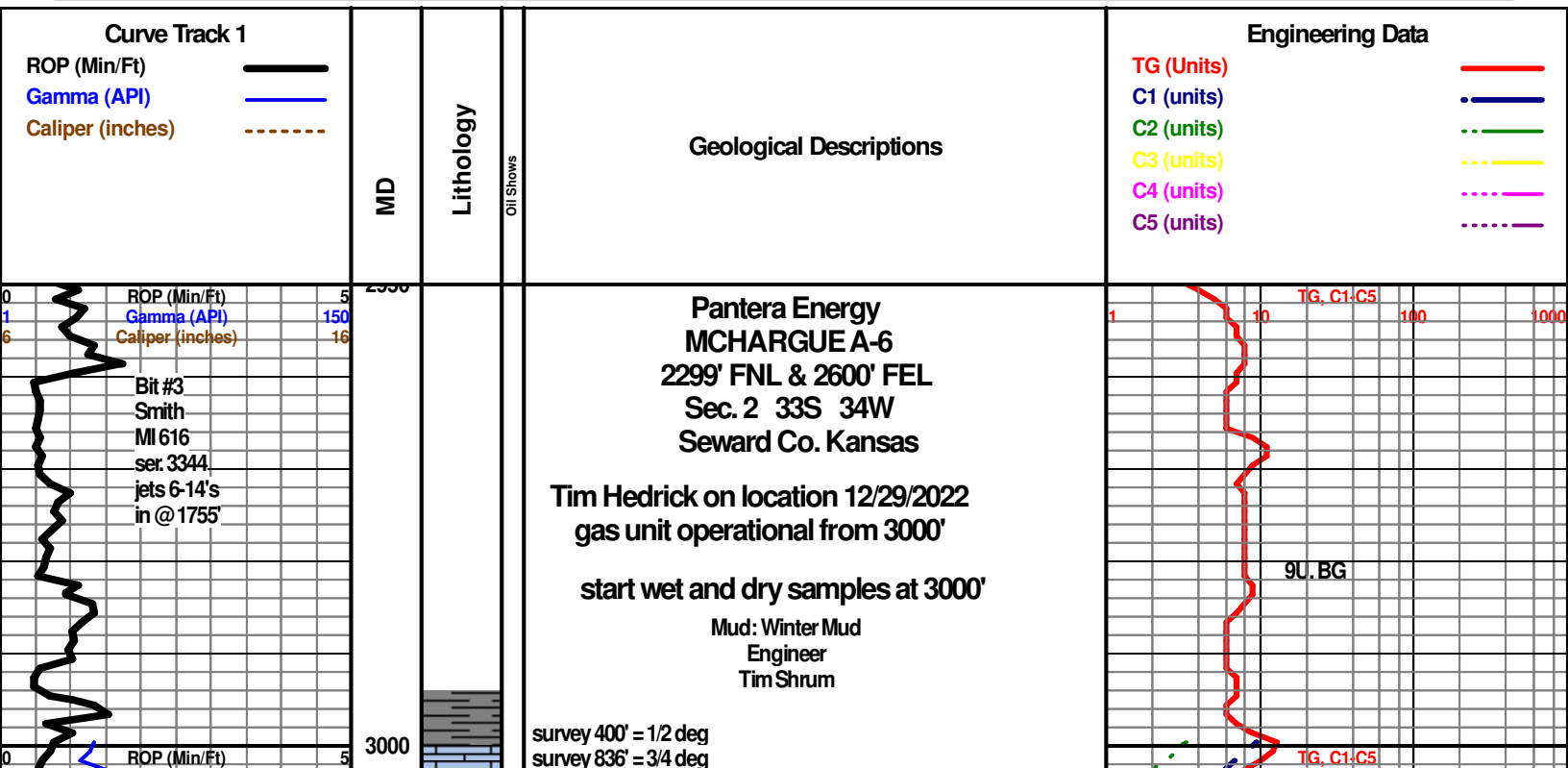
	Gas show
	Even
	Spotted
	Ques
	Dead

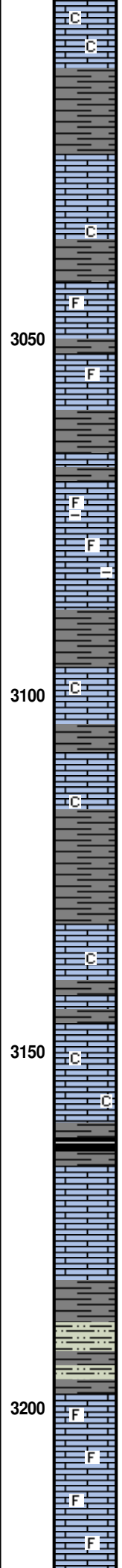
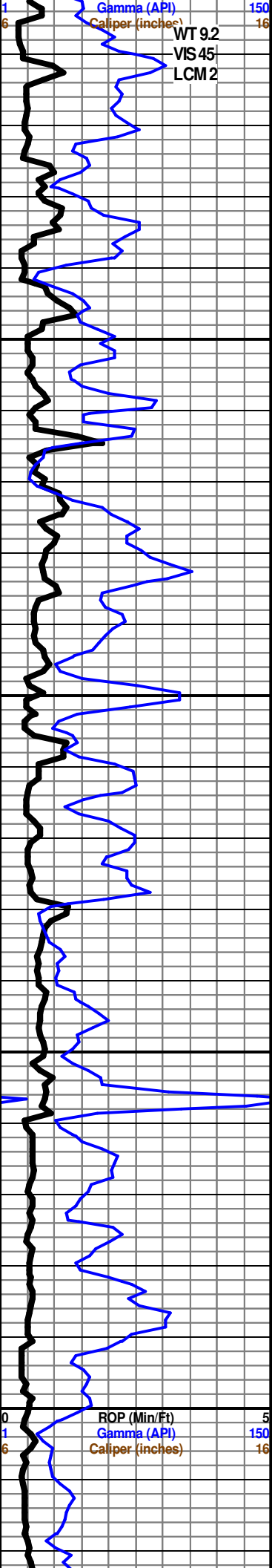
INTERVAL

	Dst
	Core
	Dst
	Straddle test tail pip

EVENT

	Rft
	Sidewall
	Dst
	Open hole
	Perforations





survey 1212' = 3/4 deg
survey 1755' = 1 deg
survey 2219' = 1/2 deg

LS- CRM OFF WHT- HARD BRITTLE FINE TO MEDIUM CRYSTALLINE TRACE SOFT CHALKY IN PART, NO FLO, PR VISIBLE INTER-XLN POROSITY, NO VISIBLE SHOW OR CUT

LS- OFF WHT WHT VERY SUCROSIC SUB CHALKY IN PART, SMALL EMBED FOSSIL FRAGS IN PART, TRACES EMBED SHALE IN PART, LIGHT YELLOW MINERAL FLUOR, MICRO PIN POINT POROSITY IN PART, NO VISIBLE SHOW OR CUT

LS- OFF WHT CRM TAN- VERY SUCROSIC TO FINE CRYSTALLINE IN PART, EMBED FOSSIL FRAGS TRACES EMBED SHALE IN PART, LIGHT YELLOW MINERAL FLUORESCENCE, NO VISIBLE POROSITY, NO VISIBLE SHOW

LS- CRM OFF WHT- HARD BRITTLE FINE TO MEDIUM CRYSTALLINE TO SOFT CHALKY IN PART, LIGHT YELLOW FLUOR, POOR VISIBLE INTER-XLN POROSITY, NO VISIBLE SHOW OR CUT

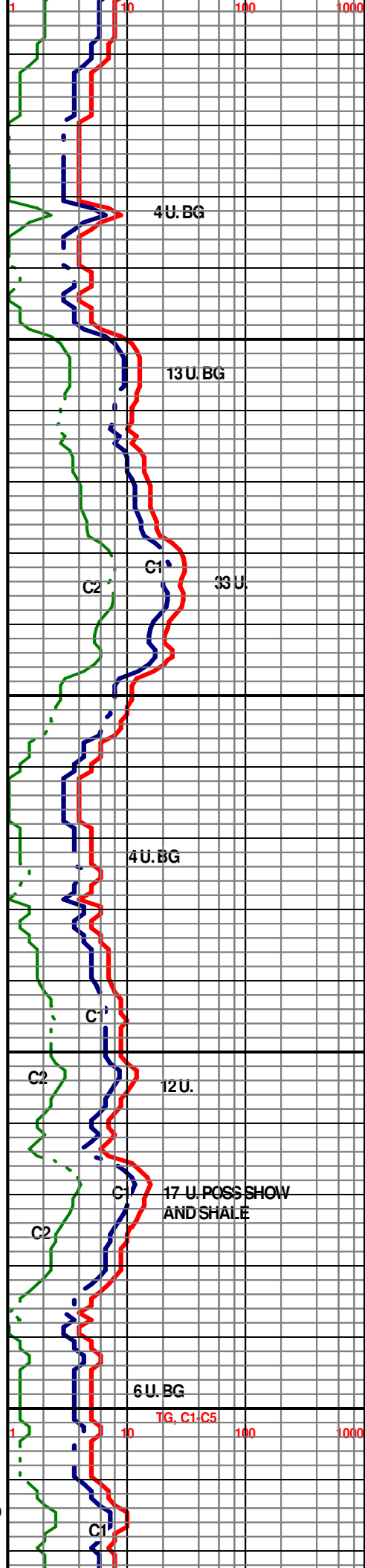
LS- WHT OFF WHT - SUCROSIC SUB CHALKY TO CHALKY, ABUNDANT FREE SOFT WHITE CHALK, LIGHT YELLOW FLUOR, NO VISIBLE POROSITY, NO VISIBLE SHOW OR CUT

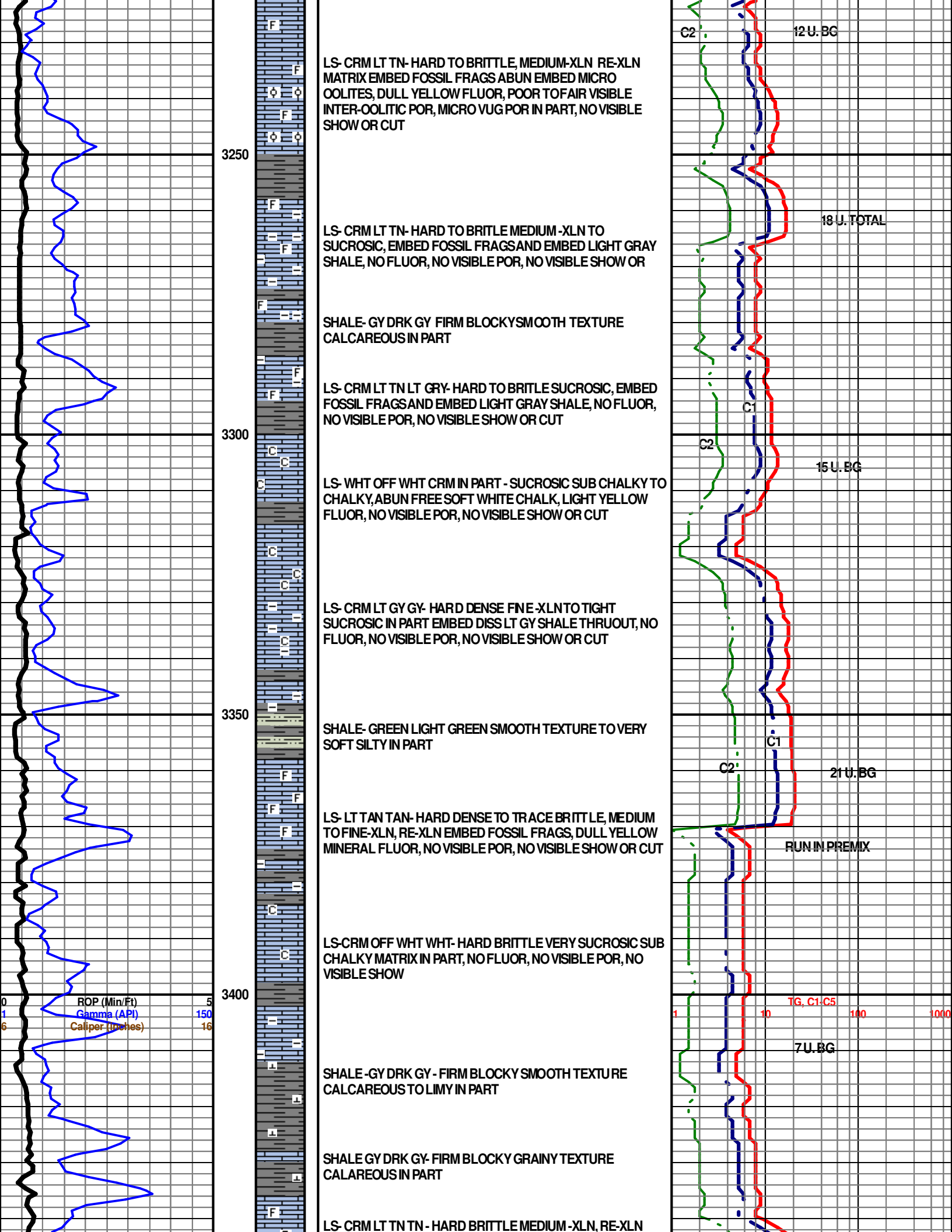
SHALE- LIGHT GRAY TO GREENISH GRAY FIRM BLOCKY TO TRACE BLACK SOFT CARB

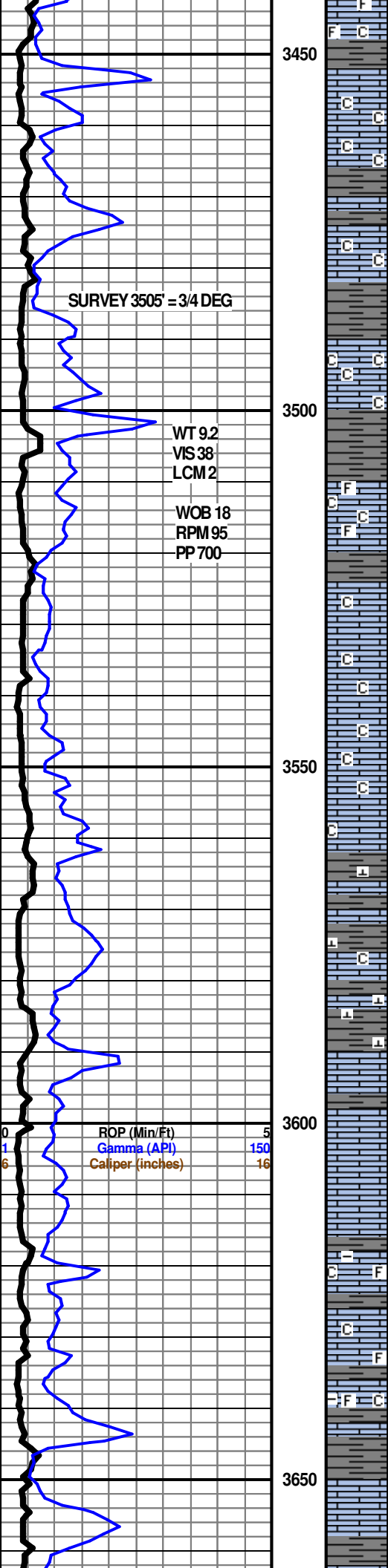
LIMESTONE - OFF WHT TAN LT GY- HARD TO BRITTLE FINE CRYSTALLINE TO SUCROSIC IN PART, MICRO PIN POINT POROSITY IN PART, LIGHT YELLOW FLUOR, NO VISIBLE SHOW OR CUT

SHALE - LIGHT GRAY TO REDDISH GRAY VERY SOFT SILTY TO TRACE FIRM BLOCKY IN PART

LS- CRM TN HARD DENSE TO BRITTLE MED TO FINE CRYSTALLINE, RE-XLN WITH EMBED FOSSIL FRAGS IN PART, EMBED DISS GRAY SHALE IN PART, DULL YELLOW FLUOR, NO VISIBLE POR, NO VISIBLE SHOW OR CUT







COARSE SUCROSIC IN PART , LIGHT YELLOW FLUOR, POOR INTER-XLN POR, NO VISIBLE SHOW

LS-OFF WHT CRM LT TN TN - HARD BRITTLE MEDIUM -XLN, RE-XLN COARSE SUCROSIC IN PART TO SUCROSIC SUB CHALKY IN PART, LIGHT YELLOW FLUOR, POOR INTER-XLN POR, NO VISIBLE SHOW

LS-OFF WHT CRM LT TN TN - HARD BRITTLE MEDIUM XLN, RE-XLN COARSE SUCROSIC IN PART TO SUCROSIC SUB CHALKY IN PART, LIGHT YELLOW FLUOR, POOR INTER-XLN POR, NO VISIBLE SHOW

LS- OFF WHT WHT CRM- SUCROSIC SUB CHALKY TO CHALKY MATRIX, EMBED FOSSIL FRAGS IN PART, DULL YELLOW FLUOR, NO VISIBLE POR, NO VISIBLE SHOW OR CUT

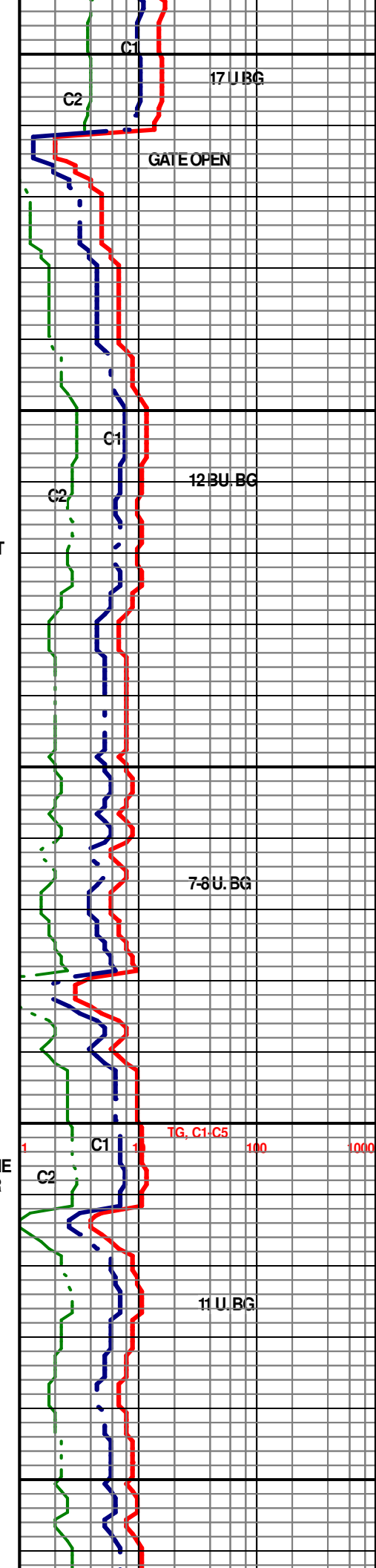
LS- WHT OFF WHT - SUCROSIC SUB CHALKY TO CHALKY, ABUND FREE SOFT WHITE CHALK, LIGHT YELLOW FLUOR, NO VISIBLE POR, NO VISIBLE SHOW OR CUT

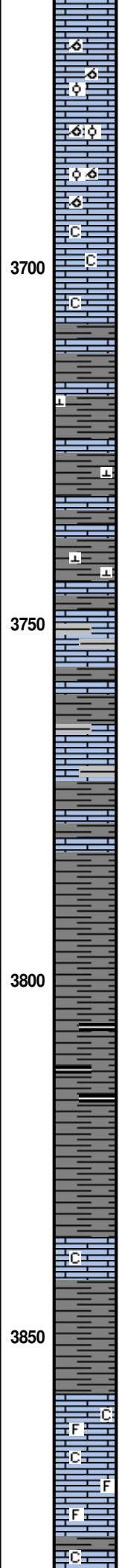
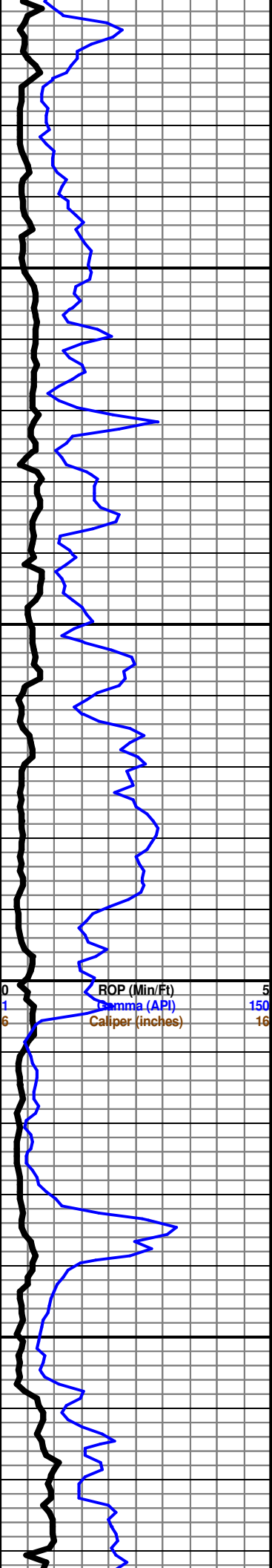
LS- WHT OFF WHT- ABUND FREE SOFT WHITE CHALK TO SUCROSIC IN PART, LIGHT YELLOW MINERAL FLUOR, NO VISIBLE POR, NO VISIBLE SHOW OR CUT

SHALE- LIGHT TO MEDIUM GRAY FIRM BLOCKY SMOOTH TEXTURE TO CALCAREOUS IN PART

LS- CRM TAN OFF WHT- HARD BRITTLE MEDIUM CRYSTALLINE RE-XLN TO SUCROSIC IN PART, DULL YELLOW FLUOR, POOR TO FAIR INTER-XLN TO POOR MICRO VUG POR, NO VISIBLE SHOW

LS- CRM LT GY GY DK GY - HARD DENSE TO BRITTLE, SUCROSIC TO FINE CRYSTALLINE ABUNDANT EMBED DISS AND LAMINATED SHALE, TRACES FOSSIL FRAGS, WHT CHALK IN PART, NO FLUOR , NO VISIBLE POR, NO SHOW





LS- CRM BFF OFF WHT - HARD VERY BRITTLE, SUCROSIC IN PART RE-XLN, VERY OOLMOLDIC, FOSSIL FRAGS IN PART, SOME SCAT MICRO OOLITES, LIGHT YELLOW FLUOR, GOOD OOLMOLDIC POR TO SOME MICRO VUG POROSITY, NO VISIBLE SHOW OR CUT

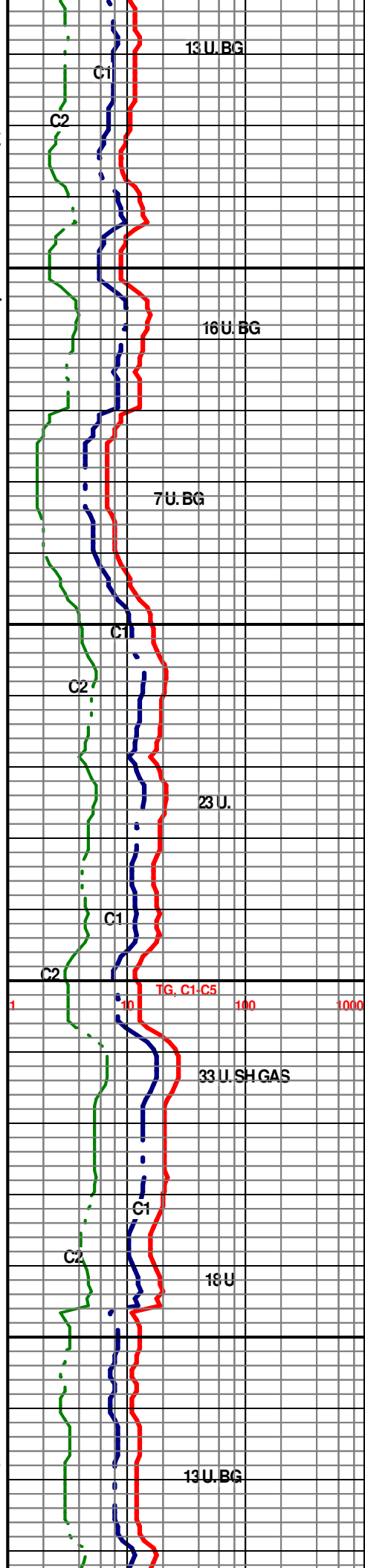
LS- WHT OFF WHT WHT TO LT GY-VERY BRITTLE TO SOFT SUCROSIC SUB CHALKY TO CHALKY MATRIX, EMBED FOSSIL FRAGS IN PART, TRACES OF EMBED DISS GRAY SHALE IN PART, NO VISIBLE POR NO VISIBLE SHOW

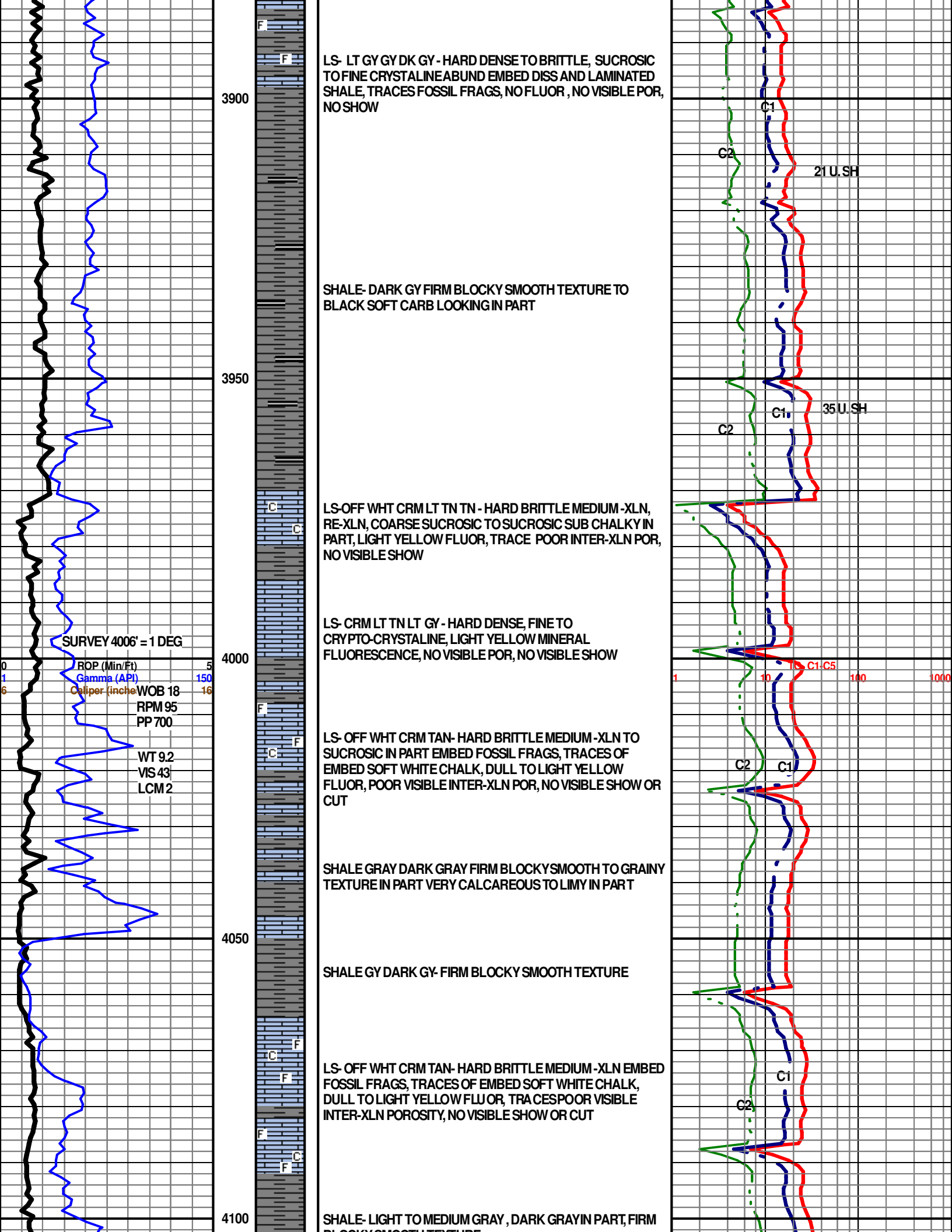
SHALE- LT GY DK GY - FIRM BLOCKY SMOOTH TEXTURE, SLIGHTLY CALCAREOUS IN PART

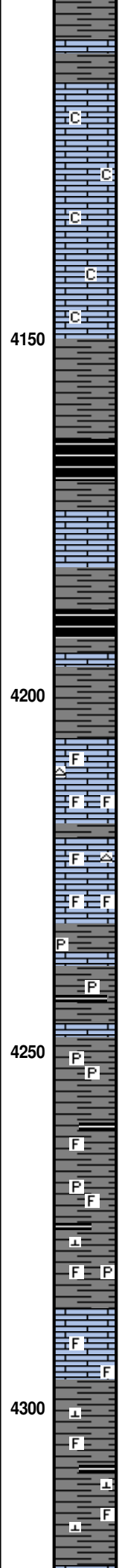
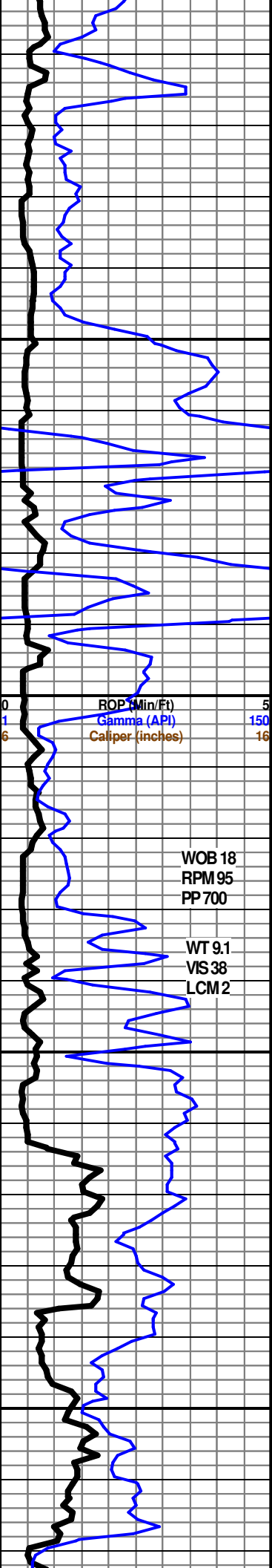
LS- CRM LT GY GY DK GY - HARD DENSE TO BRITTLE, SUCROSIC TO FINE CRYSTALLINE ABUN EMBED DISS AND LAMINATED SHALE, TRACES FOSSIL FRAGS, NO FLUOR, NO VISIBLE POR, NO SHOW

SHALE- GRAY DARK GRAY FIRM BLOCKY TO BLACK SOFT CARBONACEOUS LOOKING IN PART

LS- CRM LT TN - HARD BRITTLE MEDIUM -XLN, RE-XLN, EMBED FOSSIL FRAGS, TRACES SOFT CHALK IN PART, LIGHT YELLOW FLUOR, POOR VISIBLE INTER-XLN POR, NO VISIBLE SHOW







BLOCKY SMOOTH TEXTURE

LS- OFF WHT CRM LT TN- BRITTLE VERY SUCROSIC MATRIX TO SUCROSIC SUB CHALKY, LIGHT YELLOW OW FLUOR, NO VISIBLE POROSITY, NO VISIBLE SHOW OR CUT

SHALE BLACK SOFT CARB LOOKING TO VERY DARK GY SMOOTH TEXTURE

BASE HEEBNER SH. 4193' -1325'

TORONTO 4205' -1337'

LS- CRM LT TN T - HARD BRITTLE MEDIUM-XLN RE-XLN EMBED FOSSIL FRAGS THRUOUT, TAN CHERT, DULL YELLOW FLUOR, POOR TO FAIR INTER-FOSSIL POR, MICRO VUG POR IN PART, NO VISIBLE SHOW OR CUT

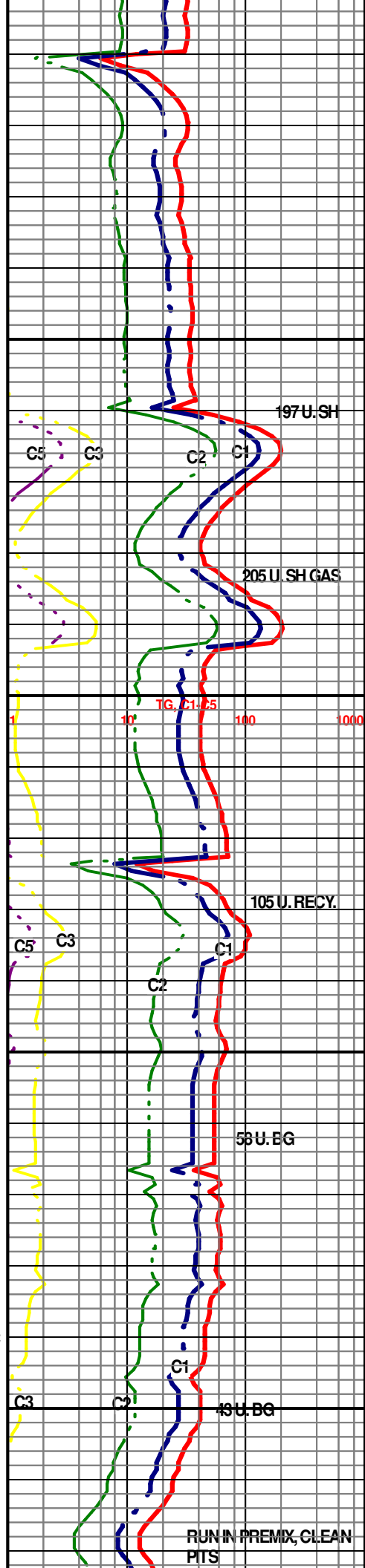
SHALE - GY DARK GY WITH EMBED DISEMINATED PYRITE THRUOUT, TRACES BLACK CARB IN PART

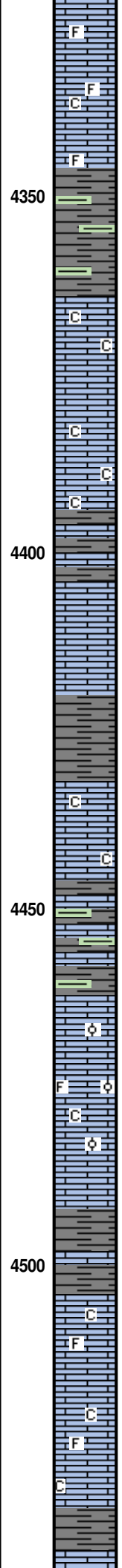
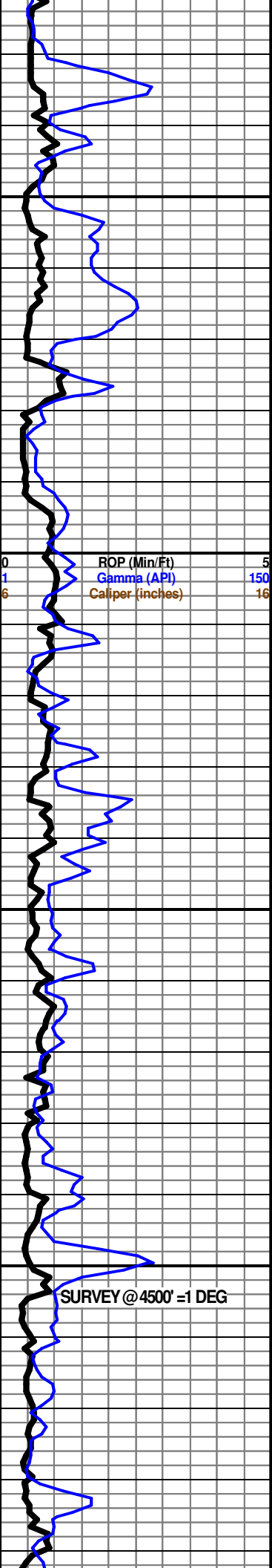
SHALE GY DK GY FIRM BLOCKY SMOOTH TEXTURE VERY CALCAREOUS WITH EMBED FOSSIL FRAGS IN PART, BLACK SOFT CARB LOOKING IN PART

LS- CRM TN GY DK GY- HARD DENSE VERY FINE TO SUCROSIC IN PART, RE-XLN IN PART, TRACES OF EMBED FOSSIL FRAGS IN PART, DULL YELLOW MINERAL FLUOR, NO VISIBLE SHOW OR CUT

SHALE- LT TO MED GRAY FIRM BLOCKY SMOOTH TEXTURE CALCAREOUS IN PART, TRACE FOSSIL FRAGS IN PART, TRACES BLACK CARB

LANSING 4324' - 1456'





LS- OFF WHT CRM TN HARD DENSE TO BRITTLE IN PART FINE-XLN , SUB SUCROSIC IN PART, TRACES OF FOSSIL FRAGS , TRACES SOFT CHALK IN PART, DULL YELLOW FLUOR, NO VISIBLE POR, NO VISIBLE SHOW OR CUT

SHALE - LIGHT GY TO LIGHT GREEN FIRM BLOCKYWITH GRAINY TEXTURE IN PART

LS- OFF WHT CRM BFF- HARD TO BRITTLE SUCROSIC SUB CHALKY TO MEDIUM-XLN WITH EMBED SMALL CALCITE CRYSTALS, LIGHT YELLOW FLUOR, NO VISIBLE POR, NO VISIBLE SHOW

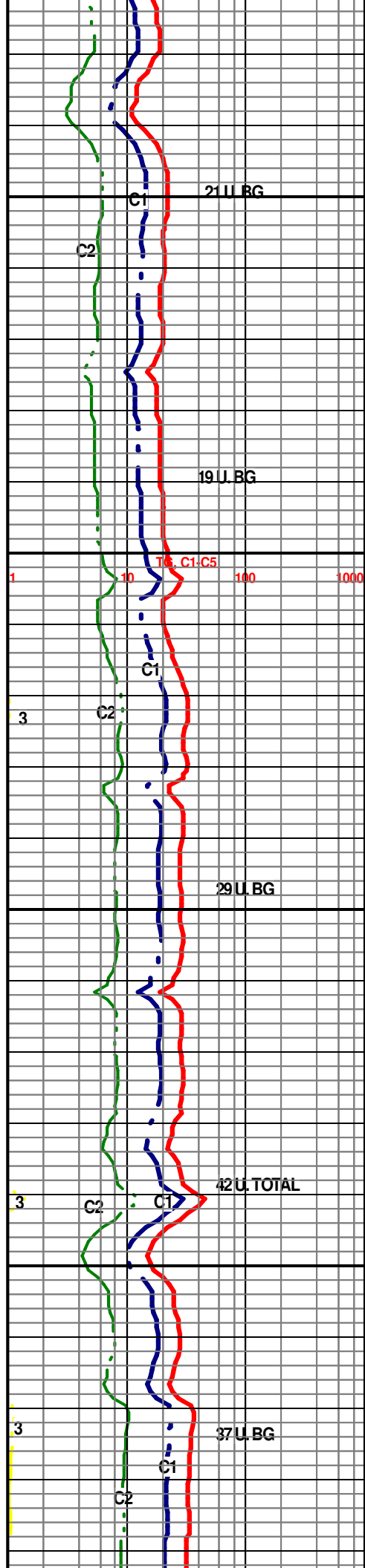
LS- CRM TN - HARD DENSE FINE-XLN TO VERY FINE IN PART WITH LAMINATED CALCITE CRYSTALS IN PART LIGHT YELLOW FLUOR, POSSIBLE FRACTURED POROSITY, NO VISIBLE SHOW

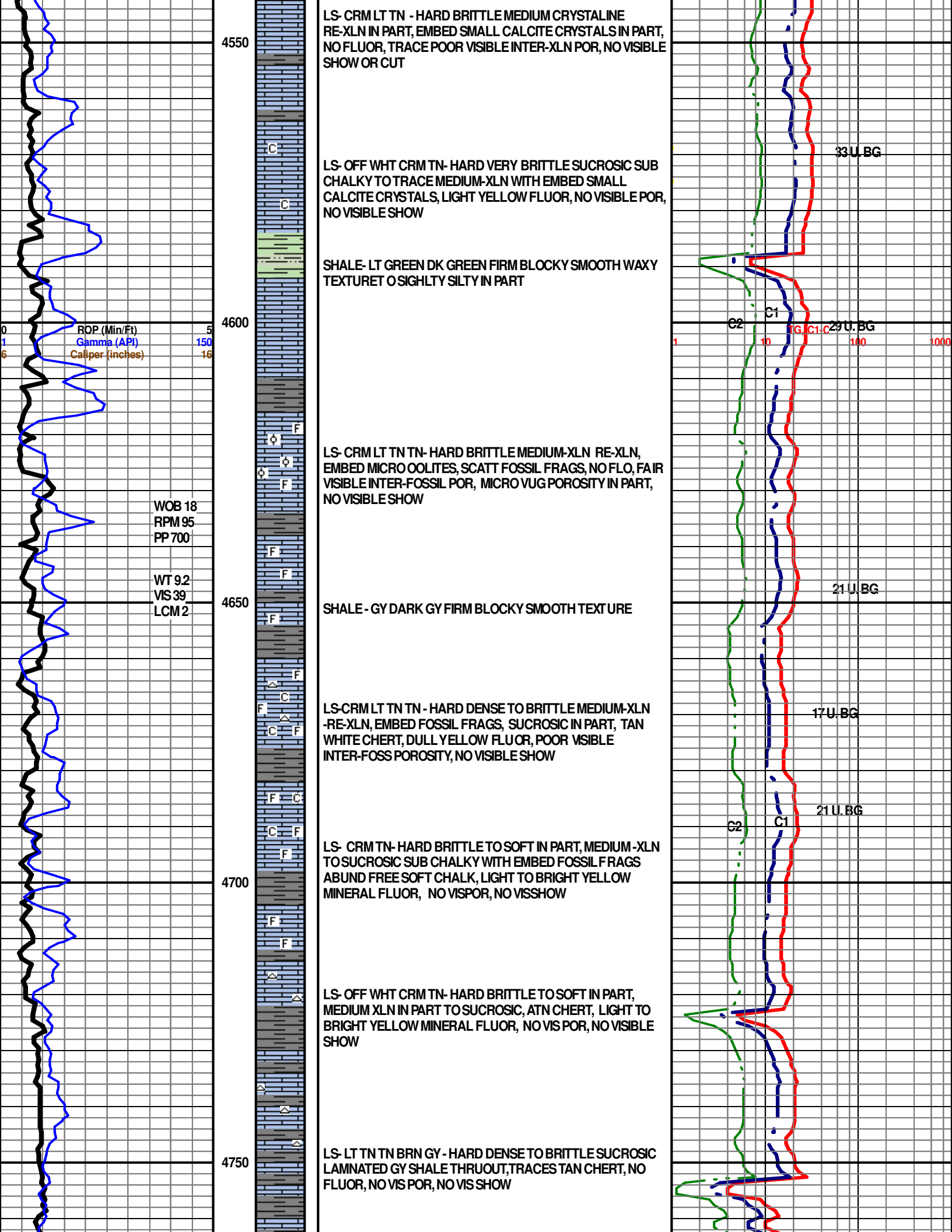
LS- OFF WHT CRM TN -HARD DENSE MEDIUM TO FINE -XLN, TRACES FREE SOFT WHITE CHALK, LIGHT YELLOW MINERAL FLUOR, NO VISIBLE POROSITY, NO VISIBLE SHOW

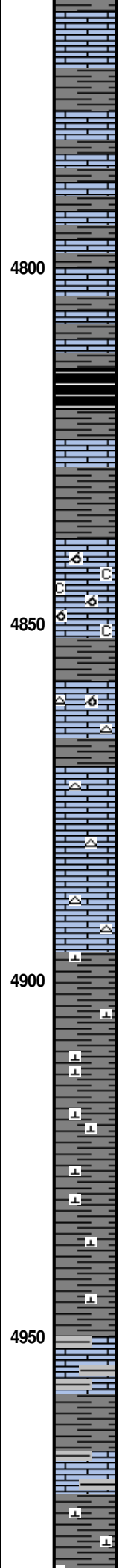
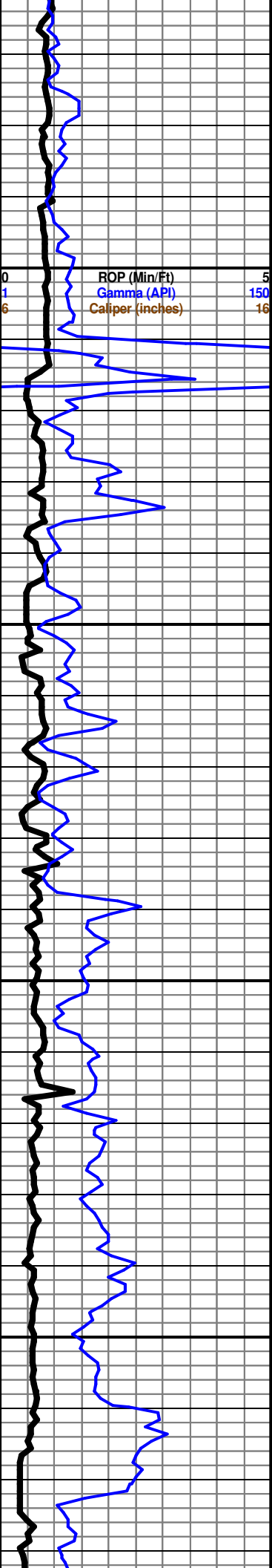
SHALE- LIGHT GY LIGHT GRN FIRM BLOCKY SMOOTH TEXTURE CALCAREOUS IN PART

LS- CRM LT TN TN- HARD BRITTLE MEDIUM CRYSTALLINE RE-XLN, WITH EMBED FOSSIL FRAGS , TRACE OF SCATT MEDIUM OOLITES, SUCROSIC SUB CHALKY IN PART, POOR INTER-XLN POR, NO VISIBLE SHOW OR CUT

LS- OFF WHT WHT CRM HARD IN PART TO SUCROSIC SUB CHALKY MATRIX, TRACE OF SCATTERED FOSSIL FRAGS IN PART, TRACES FREE SOFT WHITE CHALK, LIGHT YELLOW FLUOR TO NO FLUOR, NO VISIBLE POROSITY, NO VISIBLE SHOW







LS- LT TN TN BRN GYISH HARD DENSE TO BRITTLE
V/F-CRYPTO-CRYSTALINE TO SUCROSIC WITH LAMINATED GY
SHALE IN PART, LIGHT YELLOW MINERAL FLUOR, NO VISIBLE
POROSITY, NO VISIBLE SHOW

LS- LT TN TN BRN GY IN PART- HARD DENSE V/F-XLN TO
SUCROSIC SLIGHTLY SUB CHALKY IN PART, LAMINATED
SHALE IN PART LIGHT YELLOW MINERAL FLUOR, NO VISIBLE
POROSITY, NO VISIBLE SHOW

SHALE- BLACK SOFT CARBONACEOUS

SHALE- GRYDK GRY- FIRM BLOCKY SMOOTH TEXTURE

LS- WHT OFF WHT- HARD TO SOFT, MEDIUM CRYSTALINE
RE-XLN VERY OOLMOLDIC WITH FOSSIL FRAGS IN PART WITH
FREE SOFT WHITE CHALK IN PART, BRIGHT YELLOW
MINERAL FLUOR, GOOD VIS OOLMOLDIC POR, NO VIS SHOW

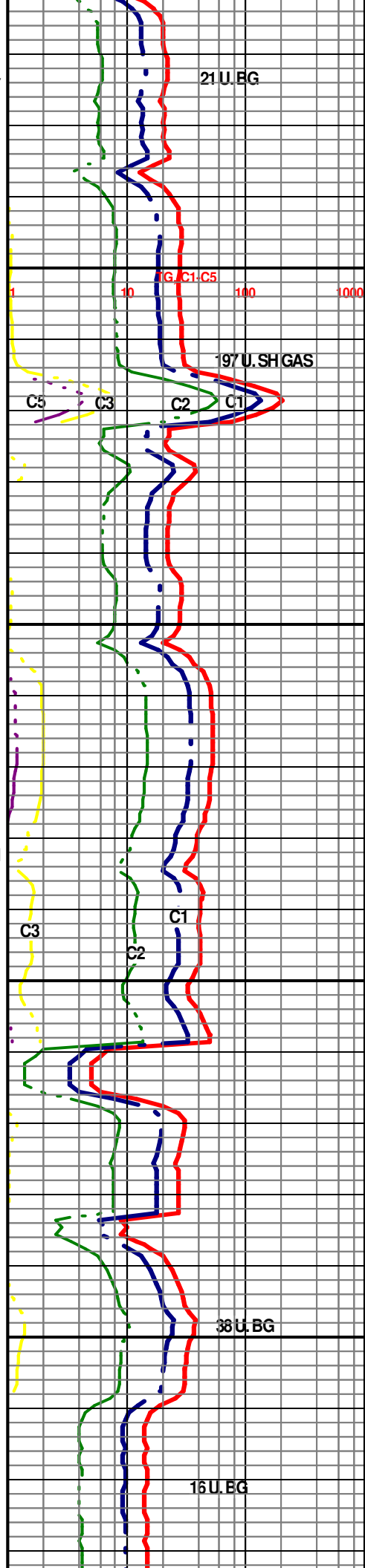
LS-CRM LT TN TN - HARD DENSE CRYPTO-CRYSTALINE, TAN
CHERT, NO FLUOR, NO VIS POR, NO VISIBLE SHOW

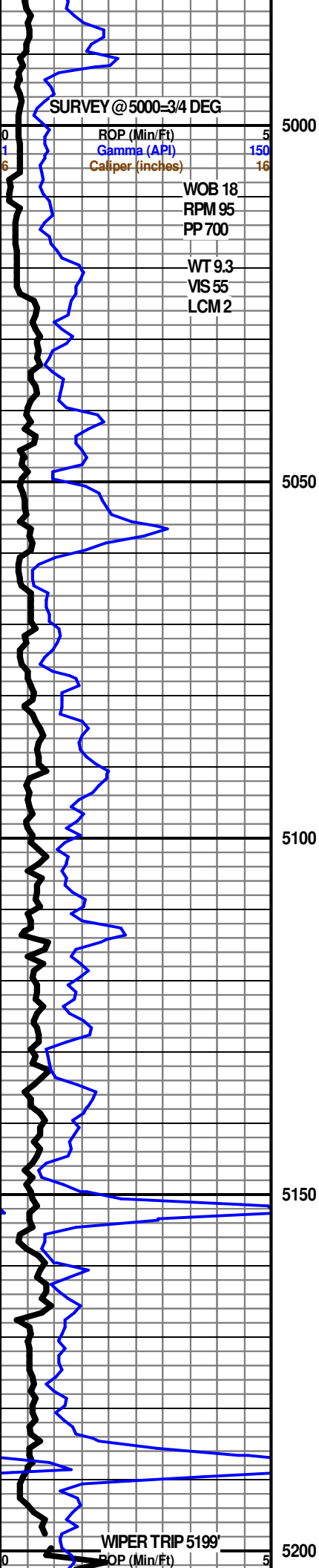
LS- OFF WHT WHT CRM TN- HARD BRITTLE TO SOFT, MEDIUM
CRYSTALINE WITH TAN WHITE CHERT, LIGHT YELLOW
MINERAL FLUOR, NO VIS POR, NO VISIBLE SHOW

SHALE - GRYDK GRY - FIRM BLOCKY SMOOTH TO GRAINY
TEXTURE CALCAREOUS TO LIMEY IN PART

LS- CRM TN GRY- HARD DENSE TO BRITTLE VERY SUCROSIC
IN PART, ABUND DISS AND LAMINATED SHALE THRUOUT, NO
FLUOR, NO VIS POR, NO VISIBLE SHOW

SHALE- GRAY DARK GRAY FIRM BLOCKY SMOOTH TO





MARMATON 4994' - 2126'

LS- CRM LT TN TN OFF WHT- HARD BRITTLE, SUCROSIC IN PART TO RE-XLN . V/OOLMOLDIC TO SLIGHTLY OOLITIC IN PART WITH SMALL EMBED OOLITES AND SOME CHALKY OOLITES, VERY BRIGHT YELLOW MINERAL FLUOR. GOOD TO VERY GOOD OOLMOLDIC AND VUG POROSITY, NO VIS SHOW OR CUT

LS- CRM LT TN TN-HARD DENSE FINE -XLN RE-XLN WITH SCATT EMBED FOSSIL FRAGS, NO FLUOR, NO VIS POR, NO VIS SHOW OR CUT

SHALE- DK GRY FIRM BLOCKY SMOOTH TEXTURE TO BLACK SOFT CARB LOOKING IN PART

LS- CRM TN- HARD DENSE TO BRITTLE FINE-XLN RE-XLN MTRX IN PART, SCATT EMBED FOSSIL FRAGS, TRACES CLEAR TAN CHERT, DULL YELLOW MINERAL FLUOR. NO VIS POR, NO VISIBLE SHOW OR CUT

SHALE- GRAY DARK GRAY GREEN FIRM BLOCKY SMOOTH TEXTURE CALCAREOUS IN PART, TRACES BLACK SOFT CARB LOOKING IN PART

PAWNEE 5118' - 2250'

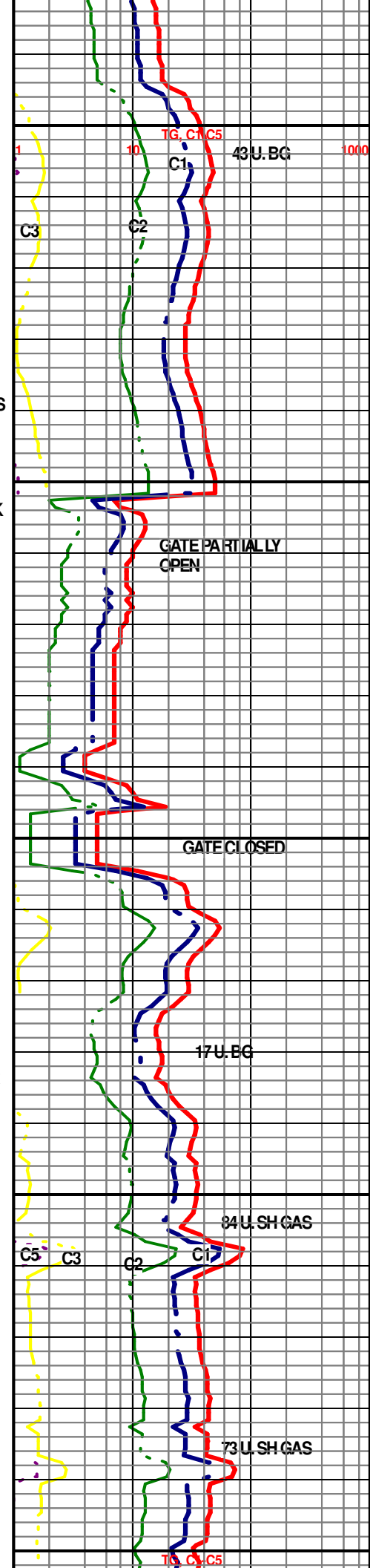
LS- WHT OFF WHT CRM TN- HARD VERY BRITTLE MEDIUM - XLN, RE-XLN WITH EMBED FOSSIL FRAGS SCATT THRUOUT, SUB CHALKY IN PART, TRACES DISS PYRITE , DULL YEL LOW FLUOR. TRACE POOR INTER-XLN POR , NO VISIBLE SHOW OR CUT

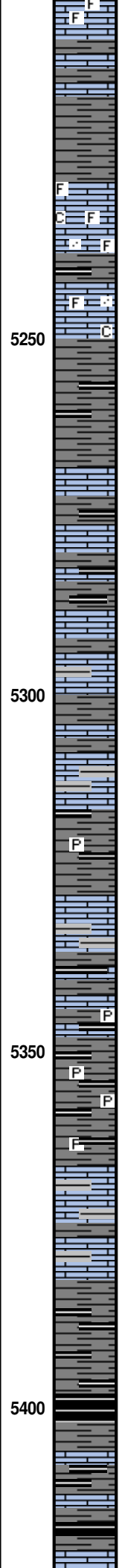
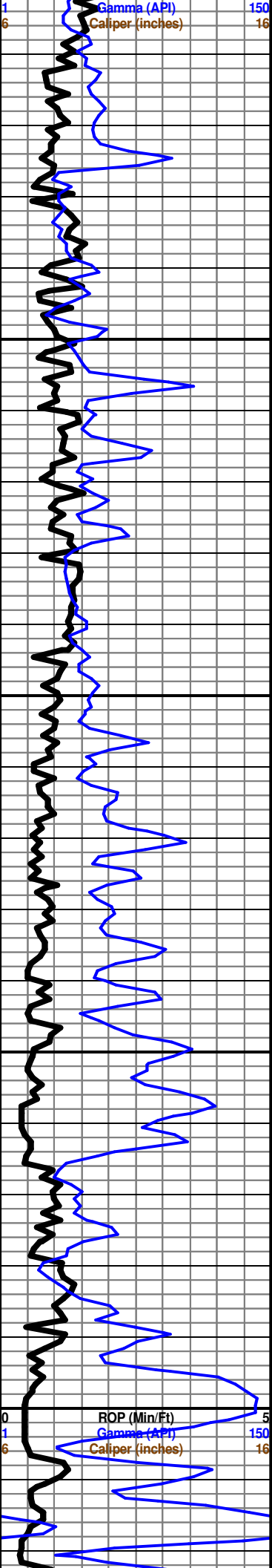
FT. SCOTT 5157' - 2289'

LS- OFF WHT CRM TN - HARD TO BRITTLE SUCROSIC TO SUCROSIC SUB CHALKY , TRACES FOSSIL FRAGS IN PART TRACE PYRITE CLUSTERS, DULL YELLOW FLUOR, TRACE INTER-XLN POR, NO VISIBLE SHOW OR CUT

SHALE AND LS INTERBEDS- SHALE DARK GRAY FIRM BLOCKY SMOOTH TO GRAINY TEXTURE

CHEROKEE 5193' - 2325'





LS- CRM LT TN TN LT GY IP- HARD VERY BRITTLE VERY SUCROSIC MATRIX, EMBED DISS SHALE, EMBED FOSSIL FRAGS SCATT THROUT, VERY DULL YELLOW MINERAL FLUOR. NO VIS POROSITY, NO VISIBLE SHOW OR CUT

LS- CRM OFF WHT LT GY- HARD DENSE TRACE BRITTLE, TIGHT SUCROSIC MATRIX, EMBED SHALE, FOSSIL FRAGS, EMBED VERY FINE GRAIN QUARTZ SCATT, SLIGHTLY SUB CHALKY IN PART, NO FLUOR, NO VISIBLE POR, NO VISIBLE SHOW OR CUT

SHALE - GY DK GY - FIRM BLOCKY SMOOTH TEXTURE TO BLACK SOFT CARB IN PART

LS- CRM TN LT GY TO DK GY BLK - HARD DENSE FINE-XLN TO TIGHT SUCROSIC IN PART WITH EMBED DARK GRAY TO BLACK SHALE IN PART, NO FLUOR, NO VIS POR, NO VIS SHOW OR CUT

LS- CRM TN LT GY TO DK GY - HARD DENSE FINE-XLN TO TIGHT SUCROSIC IN PART WITH EMBED DARK GRAY SHALE IN PART, NO FLUOR, NO VIS POR, NO VIS SHOW OR CUT

SHALE GY VERY DK GRY FIRM TO HARD SMOOTH TEXTURE VERY CALCAREOUS IN PART GRADING TO BLACK SOFT CARB LOOKING IN PART WITH EMBED DISSEMINATED PYRITE

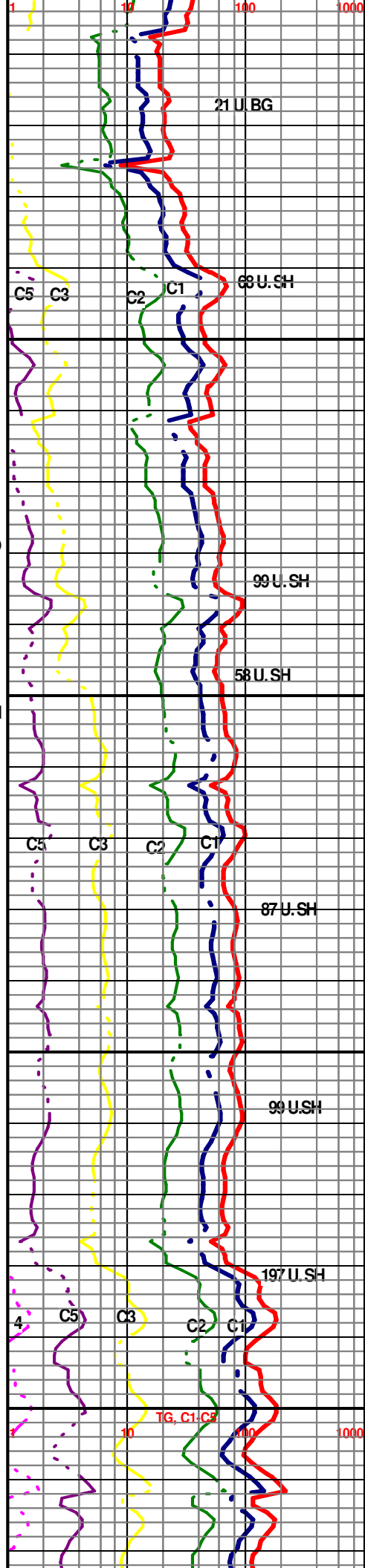
SHALE- DK GY FIRM BLOCKY SMOOTH TEXTURE, CALCAREOUS IN PART TO BLACK SOFT, VERY CARBONACEOUS LOOKING WITH EMBED DISSEMINATED PYRITE

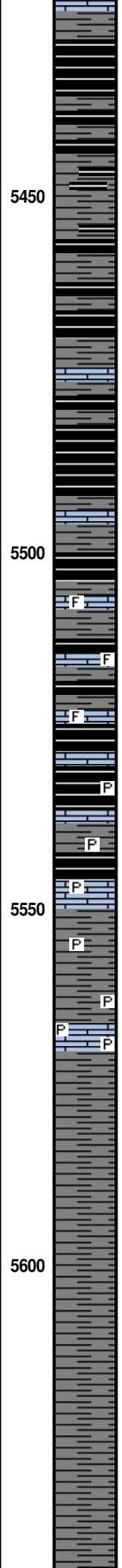
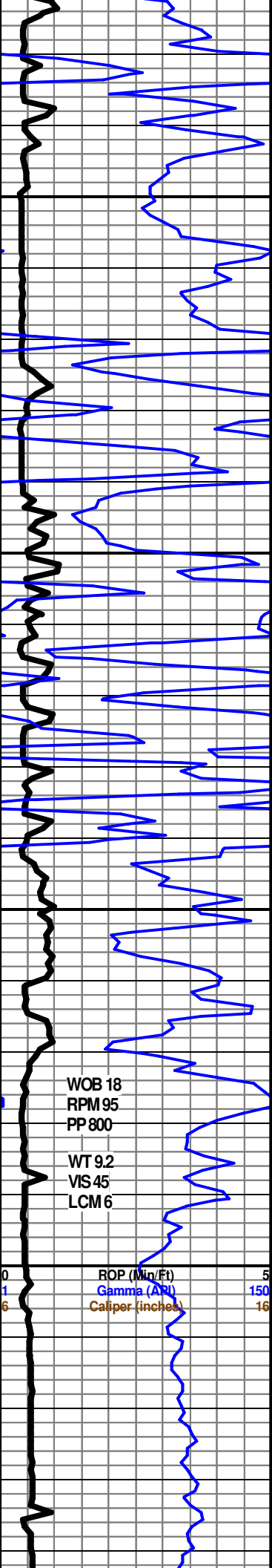
ATOKA 5366' - 2498'

LS- CRM LT TN GY DARK GY, HARD DENSE VERY TIGHT SUCROSIC MATRIX, EMBED DISS AND LAMINTED DARK GRAY SH THRUOUT, NO FLUOR. NO VISIBLE POROSITY, NO VISIBLE SHOW OR CUT

SHALE - BLACK SOFT CARBONACEOUS LOOKING TO DARK GRAY FIRM BLOCKY SMOOTH TEXTURE

LS- CRM LT GY DK GY - HARD DENSE VERY SUCROSIC MATRIX, VERY ARGIL TO SHALY THRUOUT, NO FLUOR NO VIS POR, NO VIS SHOW OR CUT





SHALE- VERYDK GY FIRM BLOCKY SMOOTH TO BLACK SOFT CARB

SHALE- DK GY - FIRM BLOCKY TO HARD SPLINTY IN PART, BLACK SOFT CARB LOOKING IN PART

SHALE- DK GY - FIRM BLOCKY TO HARD SPLINTY IN PART, TRACES OF BLACK SOFT CARB LOOKING IN PART

LS- LT TN LT GY MOTTLED, HARD DENSE FINE-XLN RE-XLN, EMBED FOSSIL FRAGS IN PART, DULL YELLOW MINERAL FLUOR, NO VIS POR, NO VISIBLE CUT OR SHOW

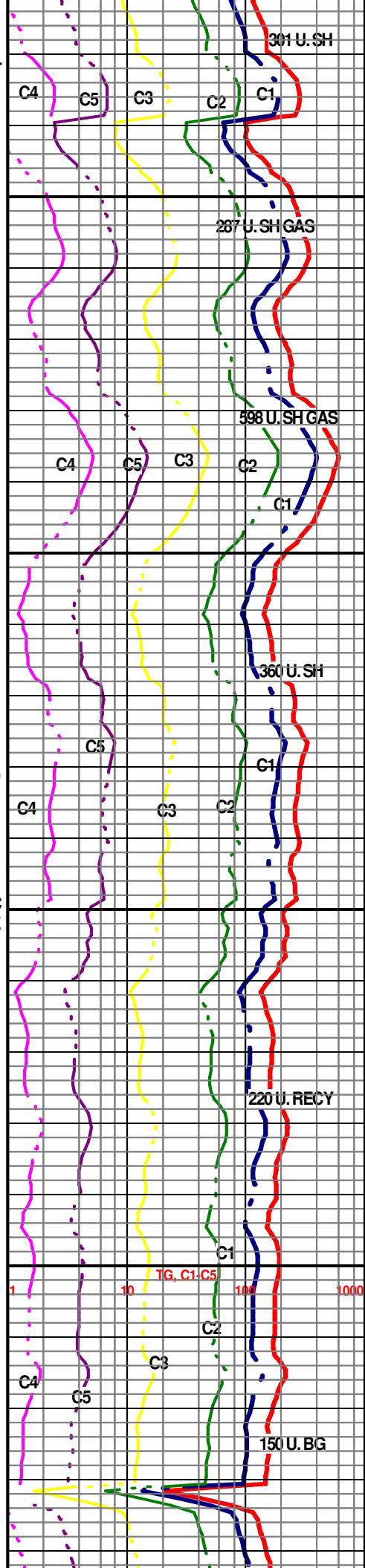
SHALE - BLACK SOFT CARBONACEOUS WITH DISSEMINATED PYRITE IN PART

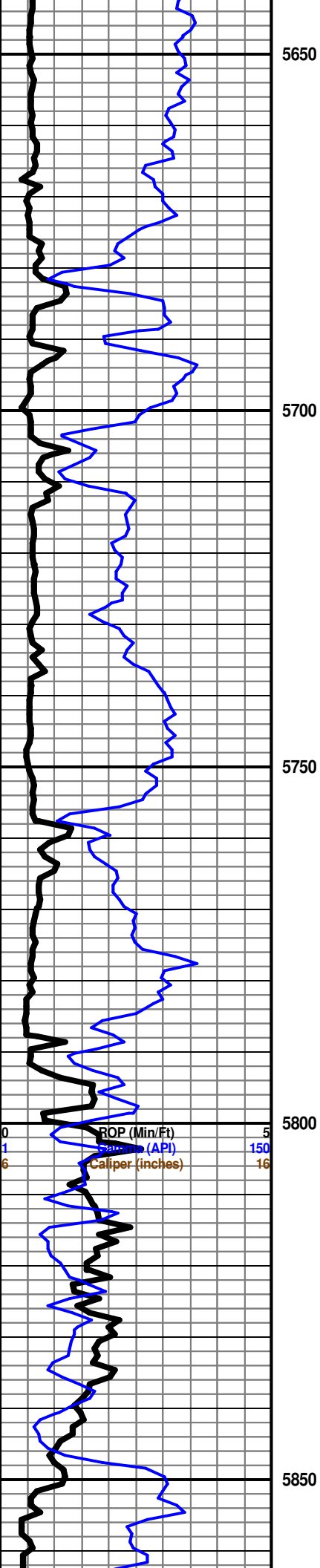
LS- OFF WHT LT GY GY- HARD DENSE, FINE-XLN TO SUCROSIC IN PART, LAMINATED AND DISS SHALE THRUOUT, DISS PYRITE SCATT THRU, NO FLUOR, NO VIS POR, NO VIS SHOW

MORROW 5572' -2704'

SHALE - GY DRK GY- FIRM BLOCKY SMOOTH TEXTURE TO HARD SPLINTY IN PART

SHALE - MEDIUM GY TO DRK GY- FIRM BLOCKY SMOOTH TEXTURE TO HARD SPLINTY





LS- CRM LT TN LT GY- HARD DENSE BRITTLE MED-XLN, RE-XLN EMBED FOSSILS AND FOSSIL FRAGMENTS, EMBED SHALE IN PART, TRACES FINE GRAIN QUARTZ, SCATTERED EMBED GLAUCONITE, TRACE PYRITE, NO FLUOR, NO VIS POR, NO VISIBLE SHOW OR CUT

SHALE- MEDIUM TO DARK GRAY - FIRM BLOCKY SMOOTH TEXTURE HARD SPLINTY IN PART

SHALE- MEDIUM TO DARK GRAY - FIRM BLOCKY SMOOTH TEXTURE TO HARD SPLINTY

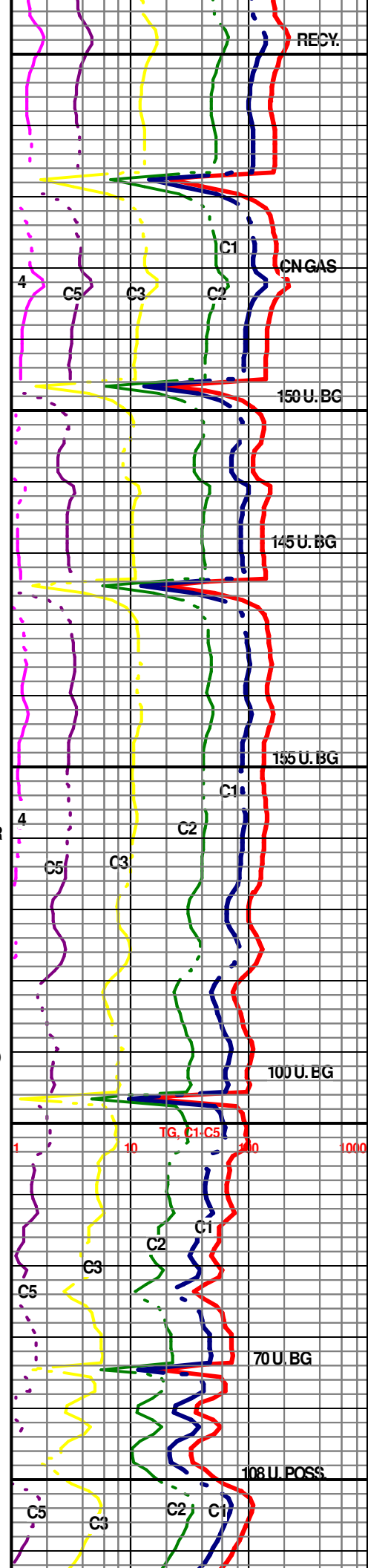
SS- FRSTY WHT LT GR YLT GREEN- HARD TIGHT TO FRIABLE, MED TO FINE CLEAR TO FROSTY QUARTZ GRAINS, ANGULAR SUB ANGULAR FAIR SORT, SILICEOUS, VERY GLAUCONITIC, DISS AND LAMINATED SHALE IN PART, DISS PYRITE, NO FLUOR, NO VIS POROSITY, NO ODOR, NO VIS CUT OR SHOW

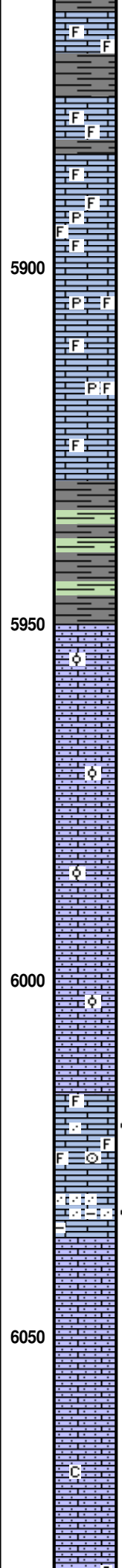
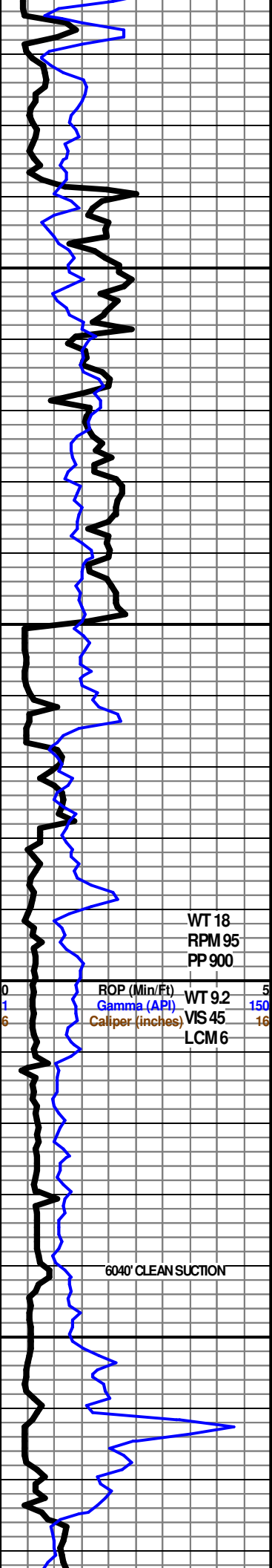
CHESTER 5782' - 2894'

LS- CRM TN LT GY- HARD BRITTLE MED-XLN RE-XLN EMBED FOSSIL FRAGS SCATT THRUOUT, SUCROSIC WITH EMBED MEDIUM LIME GRAINS, DISSEMINATED SHALE IN PART, NO FLO, NO VISIBLE POROSITY, NO CUT OR SHOW

LS- CRM LT TN TN- HARD DENSE TO BRITTLE, MED - XLN RE-XLN MTRX, EMBED FOSSIL FRAGS, EMBED MED LIME GRAINS IN PART, SLIGHTLY SUB CHALKY, DULL YELLOW MINERAL FLUOR, TRACES EMBED SHALE IN PART, NO VISIBLE POROSITY, NO CUT OR SHOW

LS- OFF WHT CRM TN LT GY- HARD TO BRITTLE MED-XLN RE-XLN MTRX, SCATTERED EMBED FOSSIL FRAGS THRU, TRACES SMALL CAL OTT CRYSTAL EMBED IN PART, LT





TRACES SMALL CALCITE CRYSTALS EMBED IN PART, LT YELLOW MINERAL FLUOR, NO VISIBLE POROSITY, NO SHOW

LS- CRM TN LT GY- HARD TO BRITTLE MED- XLN RE-XLN MTRX, EMBED FOSSIL FRAGS THRU, MED TO LARGE ANGULAR LIME GRAINS, DISS PYRITE SCATT THRUOUT, LT YELLOW MINERAL FLUOR, NO VISIBLE POROSITY, NO SHOW

LS- CRM TN LT GY- HARD TO BRITTLE MED- XLN RE-XLN MTRX, EMBED FOSSIL FRAGS THRU, MED TO LARGE ANGULAR LIME GRAINS, LT YELLOW MINERAL FLUOR, NO VISIBLE POROSITY, NO SHOW

SHALE FIRM BLOCKY SMOOTH TEXTURE VERY SOFT IN PART TO GREEN SMOOTH WAXY TEXTURE

ST GEN 5950' -3082'

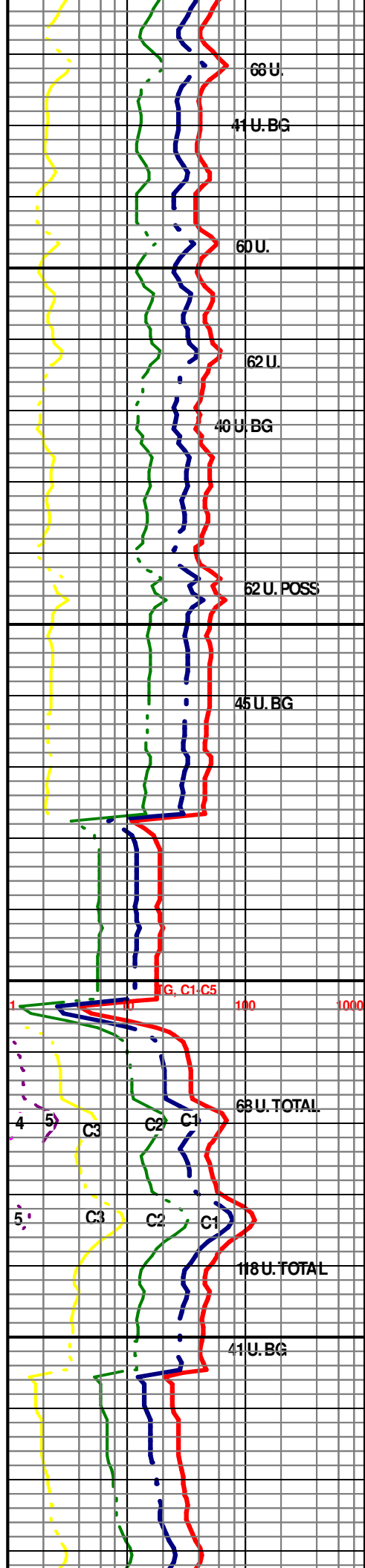
LS- WHT OFF WHT HARD TO VERY BRITTLE COARSE SUCROSIC MATRIX TO SUB CHALKY IN PART, VERY ARENACEOUS TO SANDY, NO FLUOR, OCCASIONAL SMALL MICRO OOLITES, NO VISIBLE POR, NO VIS SHOW

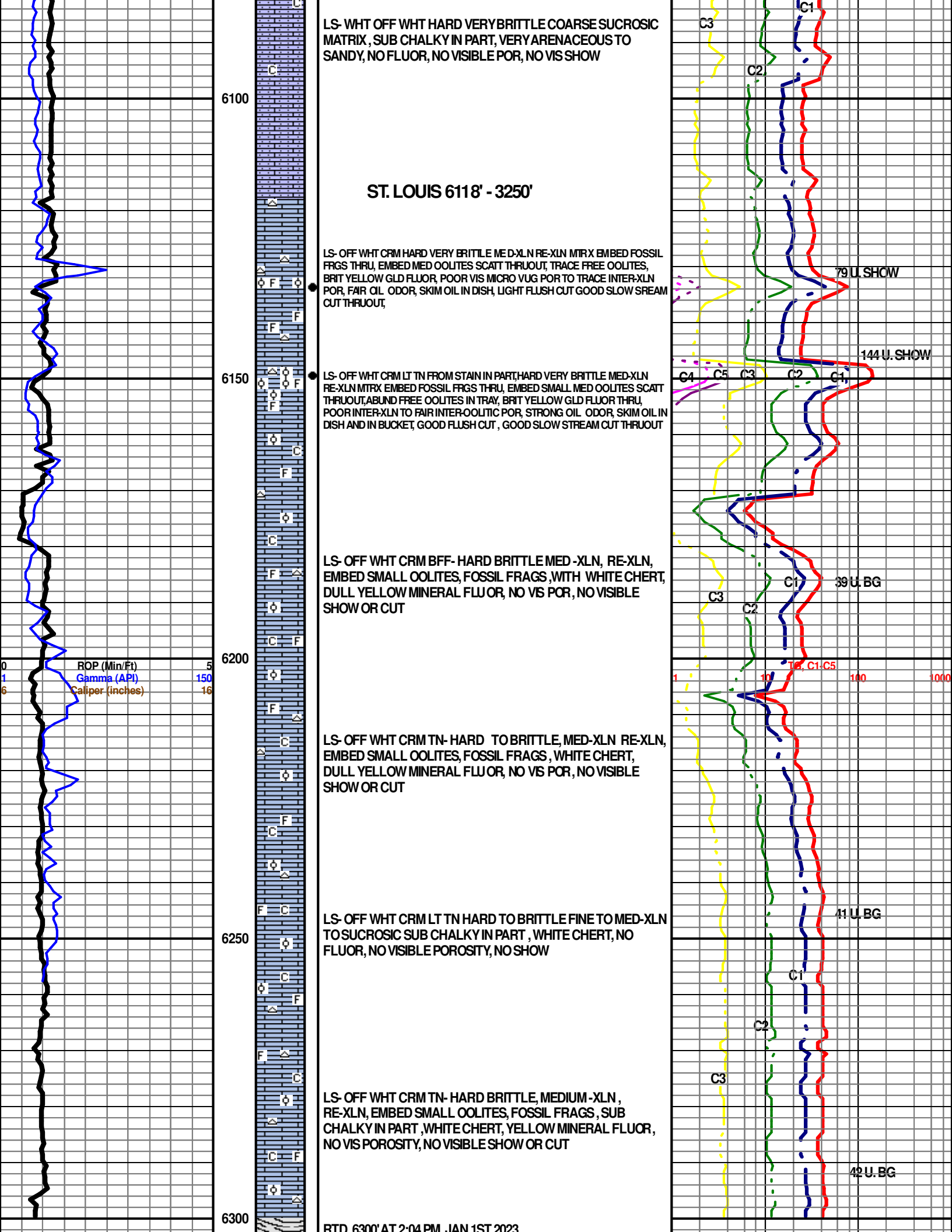
LS- WHT OFF WHT HARD VERY BRITTLE COARSE SUCROSIC MATRIX, VERY ARENACEOUS TO SANDY, NO FLUOR, OCCASIONAL SMALL MICRO OOLITES, NO VISIBLE POR, NO VIS SHOW

LS- LT TN TN HARD VERY BRITTLE MED-XLN RE-XLN. TRACES EMBED FOSSIL FRAGS, TRACE OF FREE CRIN STEMS, SLIGHT TRACES EMBED FINE GRAIN QUARTZ IN PART, DULL YELLOW GOLD FLUOR, POOR TO FAIR VIS MICRO PIN POINT TO MICRO VUG POR, NO FLUSH CUT TO FAIR SLOW STREAM CUT, GOOD ODOR, LIGHT OIL SKIM IN DISH

LS- OFF WHT CRM TN DK TN - HARD BRITTLE VERY SUCROSIC MATRIX, VERY ARENACEOUS TO SANDY, SMALL ANG TO SUB ANG QUARTZ & LIME GRAINS THRU, POSS EMBED DISS SHALE IN PART, VERY DULL YELLOW FLUOR, POOR VISIBLE INTR-GRAIN POR, NO FLUSH CUT TO FAIR SLO STREAM CUT THRUOUT, SKIM LIGHT OIL IN DISH

LS- WHT OFF WHT HARD VERY BRITTLE COARSE SUCROSIC MATRIX, VERY ARENACEOUS TO SANDY, NO FLUOR, NO VISIBLE POR, NO VIS SHOW





RTD 6300'		RTD 6300' AT 21011 W. SANITARY 2020	RTD 6300'
LTD 6294'		CFS 60 MINUTES	
		SHORT TRIP/CTCH	
		TOFL/	
		RIGGING DOWN LOGGERS 7 AM 1/02/2023	