

Confidentiality Requested:

Yes  No

**KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

**Form must be Typed**

**Form must be Signed**

**All blanks must be Filled**

**WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening  Re-perf.  Conv. to EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or \_\_\_\_\_ Date Reached TD \_\_\_\_\_ Completion Date or  
Recompletion Date \_\_\_\_\_ Recompletion Date \_\_\_\_\_

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Stelbar Oil Corporation, Inc.
Well Name	HOMESTEAD 1-3
Doc ID	1362054

All Electric Logs Run

Compact Photo Density Comp. Neutron Microresistivity Log
Array Induction Shallow Focused Elec. Log
Comp. Sonic w/Integrated Transit Times
Microresistivity Log
Caliper Log

Form	ACO1 - Well Completion
Operator	Stelbar Oil Corporation, Inc.
Well Name	HOMESTEAD 1-3
Doc ID	1362054

Tops

Name	Top	Datum
Anhydrite	2512	+823
Stotler Lst.	3511	-176
Heebner Sh.	3857	-522
Lansing	3904	-569
Muncie Creek Sh.	4080	-745
Stark Sh.	4166	-831
Base KC	4270	-935
Marmaton	4286	-951
Pawnee Lst.	4378	-1043
Cherokee Sh.	4430	-1095
Johnson Zone	4511	-1176
Morrow Sh.	4615	-1280
U. Mrw SS.	4642	-1307
Mississippian	4734	-1399





8557  
8449

TICKET NUMBER 53559  
LOCATION Oakley Ks  
FOREMAN Jerry Y

1200 S. 30th, Chanute, KS 66720  
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT  
CEMENT

Invoice # 810731 KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
7-11-17	7396	Honestead 1-3	3	14s	38w	Wallace
CUSTOMER Stelbar			Mecalista W to county line S to curve 3 E 25 E 25 into			
MAILING ADDRESS 1625 N. Waterfront Pkwy, Ste. 200			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY Wichita			731	Travis W		
STATE KS			460	Steve O		
ZIP CODE 67206-6602			639			

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 341 CASING SIZE & WEIGHT 8 7/8 230  
CASING DEPTH 315 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
SLURRY WEIGHT 15.2 SLURRY VOL 1.24 WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 20'  
DISPLACEMENT 1874661 DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting on rig upon Sterling break circulation with rig free  
mix 210 stks surface blend 1/4" closed wash up & displace with 1874661  
fresh water & shut in

cement did  
circulate

Thank you  
Jerry

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0471	1	PUMP CHARGE	1150.00	1150.00
CE0002	45	MILEAGE	7.15	321.75
CE0710	9.87	ton mileage delivery	1.75	777.25
CC5871	210 stks	class A com 3% CC 2% gel	23.00	4830.00
CC6075	53#	40 seed	3.00	159.00
			Subtotal	7238.00
			-30%	2171.40
			Subtotal	5066.60
			SALES TAX	227.00
			ESTIMATED TOTAL	5293.61

AVIN 3737  
AUTHORIZATION [Signature] TITLE Toolpusher DATE 7-11-17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



8000

8479

Invoice # 810744

TICKET NUMBER 53565

LOCATION Oakley Ks

FOREMAN Jerry F

Walt Dinkel

PU Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676

WELD TICKET & TREATMENT REPORT

CEMENT

KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
7-16-17	7396	Homestead 1-3	3	14s	380	Wallace
CUSTOMER <u>Stelbar</u>						
MAILING ADDRESS <u>1625 N. Westfront Pkwy, Ste. 200</u>						
CITY <u>Wichita</u>						
STATE <u>KS</u>						
ZIP CODE <u>67206-6602</u>						
			TRUCK #	DRIVER	TRUCK #	DRIVER
			<u>731</u>	<u>Walt D</u>		
			<u>460</u>	<u>Seth O</u>		
			<u>639</u>			

JOB TYPE <u>Plug</u>	HOLE SIZE <u>7 7/8</u>	HOLE DEPTH	CASING SIZE & WEIGHT
CASING DEPTH	DRILL PIPE <u>4 1/2</u>	TUBING	OTHER
SLURRY WEIGHT <u>13.8</u>	SLURRY VOL <u>1.42</u>	WATER gal/sk	CEMENT LEFT in CASING
DISPLACEMENT	DISPLACEMENT PSI	MIX PSI	RATE

REMARKS: Safety meeting arig up on Sterling #5 plugs as ordered with 255 sks  
1 lite bleed 1/4 # flo seal  
50 sks @ 2525'  
100 sks @ 1470'  
50 sks @ 360'  
10 sks @ 40'  
15 sks MH 30 # RH

Thank You  
Jerry

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0451	1	PUMP CHARGE	1900.00	1900.00
CE0002	45	MILEAGE	7.15	321.75
CE0010	10.97	for mileage delivery	1.75	863.89
CC5829	255 sks	lite bleed V	16.00	4080.00
CC6075	64 #	flo seal	3.00	192.00
CP 8228	1	8 5/8 wood plug	165.00	165.00
			Subtotal	7222.64
			-308	2256.79
			Subtotal	5265.95
			SALES TAX	201.86
			ESTIMATED TOTAL	5467.73

AVIN 3737

AUTHORIZATION Jerry F TITLE Toolpusher DATE 7-16-17

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

# GEOLOGIC REPORT

## DAVID J. GOLDAK

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

Well Name: Homestead #1-3  
Location: Section 3 - T14S - R38W  
License Number: API: 15-199-20442  
Spud Date: 07 / 10 / 2017  
Surface Coordinates: 1380' FNL and 2028' FWL  
Approx. C - E/2 - NW

Region: Wallace Co., KS  
Drilling Completed: 07 / 16 / 2017

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 3322'                      K.B. Elevation (ft): 3335'  
Logged Interval (ft): 3400'                      To: 4820'                      Total Depth (ft): 4820'  
Formation: Mississippian - St Louis  
Type of Drilling Fluid: Chemical - Mud-Co

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

### OPERATOR

Company: Stelbar Oil Corporation  
Address: 1625 N. Waterfront Pkwy., Suite 200  
Wichita, Kansas 67206-6602

### GEOLOGIST

Name: David J. Goldak  
Company: D. J. GOLDAK, INC.  
Address: 155 N. Market, Suite 710  
Wichita, Kansas 67202

### General Info

CONTRACTOR: Sterling Drilling, Rig #5

#### BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	JZ-HAOTC	4-16s	315	315	4.00
2	7-7/8	JZ-HAIPG	3-15s	458'	143'	1.75
3	7-7/8	JZ-PLT516	5-15s	4820'	4362'	64.50

SURVEYS: 315'-0.50; 4820'-1.25

#### GENERAL DRILLING & PUMP INFORMATION:

Collars: 18 joints of collars (6.25"x2.25"): 532.85'  
Drilling w/ PDC: 14,000-16,000 lbs on bit and 100-110 RPM.  
Pumping w/ PDC: 70 S/M; 10.8 B/M; 900-1000 psi at standpipe.



### Daily Status

07/10/17 - Spud at 8:45 PM; Set 8-5/8" csg @ 309'  
 07/11/17 - 315' Cementing surface csg; Bit trip @  
 07/12/17 - 1,150' Drilling  
 07/13/17 - 3,050' Drilling; Displace mud @ 3,509'  
 07/14/17 - 3,966' CFS  
 07/15/17 - 4,580' Drilling; Log well late PM  
 07/16/17 - 4,820' Preparing to plug





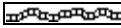



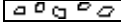



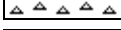

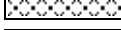

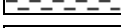
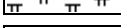
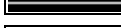
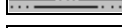



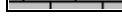

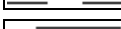




	Log Tops	Sample Tops
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Wabaunsee	3457 (-122)	3460 (-125)
Stotler	3506 (-171)	3511 (-176)
Topeka	3623 (-288)	3626 (-291)
Lecompton	3769 (-434)	3772 (-437)
Heebner	3854 (-519)	3857 (-522)
Lansing	3903 (-568)	3904 (-569)
Muncie Creek	4077 (-742)	4080 (-745)
Stark Sh	4163 (-828)	4166 (-831)
Hushpuckney Sh	4206 (-871)	4210 (-875)
Base of KC	4267 (-932)	4270 (-935)
Marmaton	4280 (-945)	4286 (-951)
Pawnee	4375 (-1040)	4378 (-1043)
Cherokee Sh	4429 (-1094)	4430 (-1095)
Lower Cher Sh	4466 (-1131)	4469 (-1134)
Johnson Zone	4508 (-1173)	4511 (-1176)
Morrow Sh	4612 (-1277)	4615 (-1280)
Mississippian	4732 (-1397)	4734 (-1399)
Total Depth	4817 (-1482)	4820 (-1485)

### DSTs

None

### ROCK TYPES

 Anhy	 Gyp	 Shgy	 Sandylms
 Bent	 Igne	 Sltst	 Shale
 Brec	 Lmst	 Ss	 Sltstn
 Cht	 Meta	 Till	 Shlyslts
 Clyst	 Mrlst	 Carb sh	 Sltyslts
 Coal	 Salt	 Dol	 Lms
 Congl	 Shale	 Dtd	
 Dol	 Shcol	 Gry sh	

### 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
- Chlorite
- Dol
- Sand
- Silty

#### FOSSIL

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



- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- 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

#### OIL SHOWS

- Even
- Spotted
- Ques
- Dead
- Gas show

#### INTERVALS

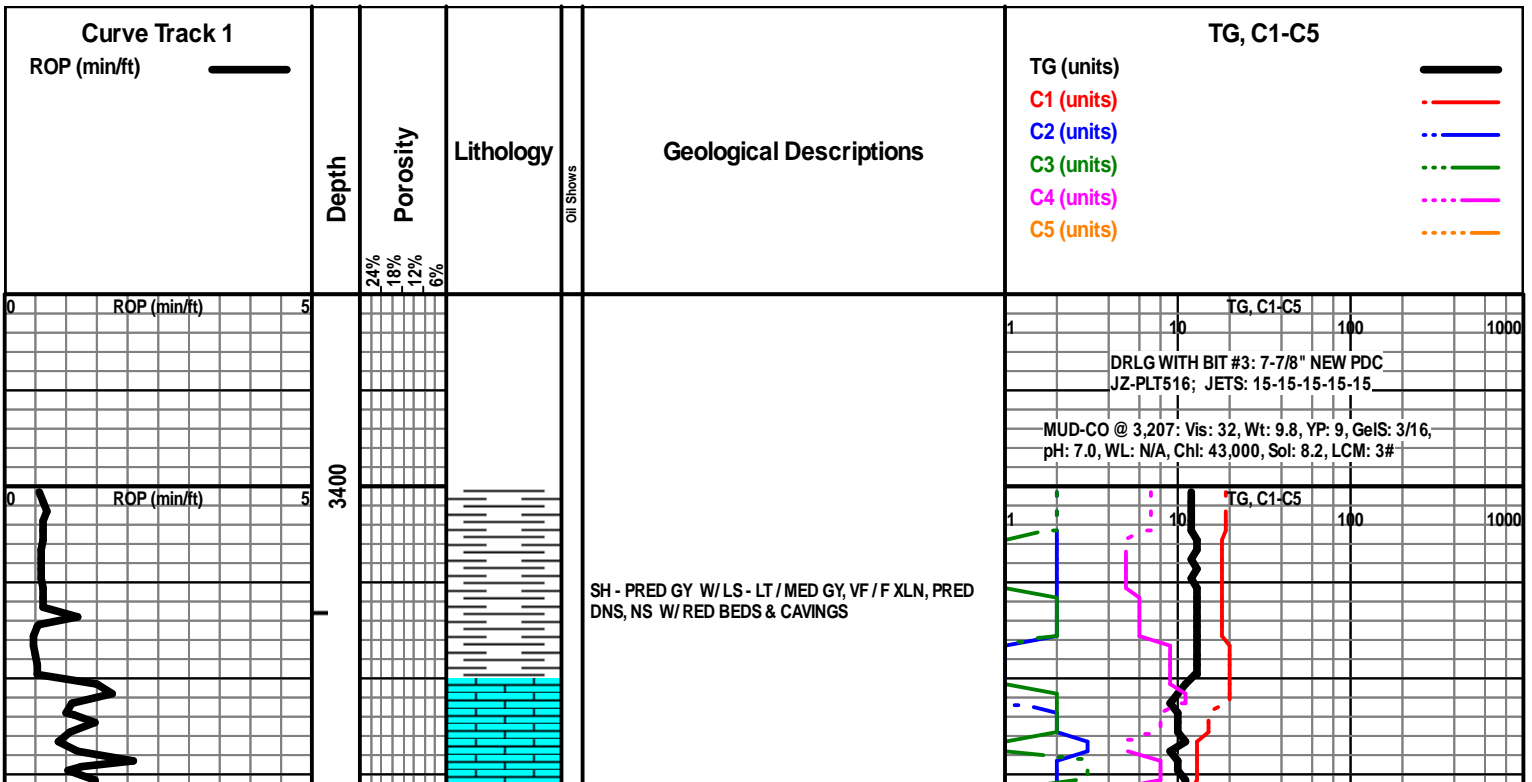
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- Dst

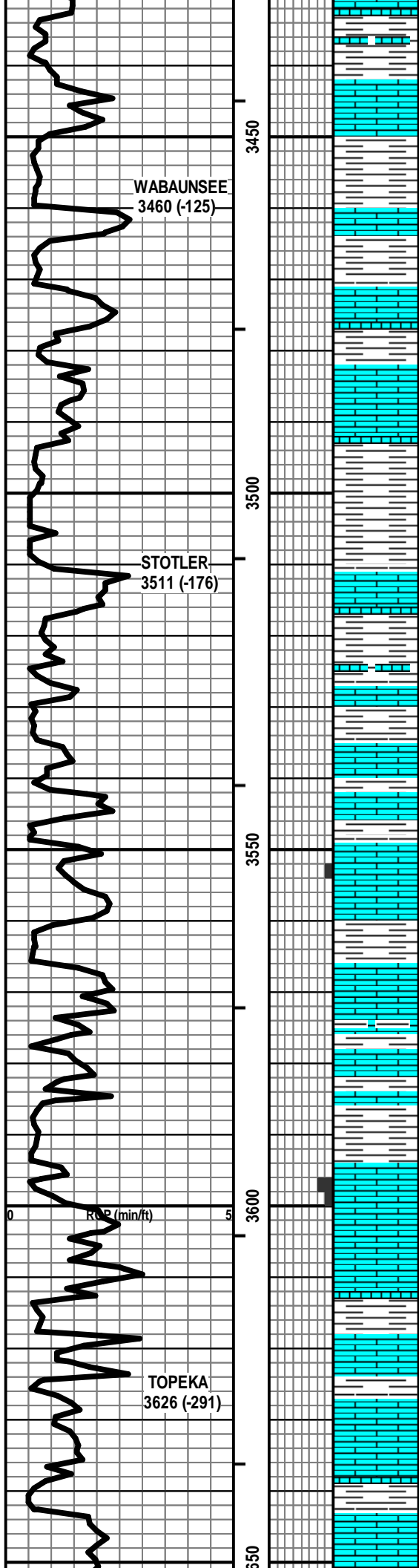


- Dst\_1\_t
- Dst\_1\_b
- Dst

#### EVENTS

- Rft
- Sidewall
- Conn





LS - LT GY / WHT, VF XLN, TR FOSS, PRED DNS, NS W/ SH - GY

SH - GY / GRN W/LS - CRM / WHT / GY, VF / F XLN, PRED DNS, NS W/ RED BEDS & CAVINGS

LS - CRM / TAN, MOT IN PT, VF / F XLN, TR FOSS, PRED DNS, NS W/SH - GY

SH - PRED GY, SLTY IN PT W/LS - TAN / BRN, VF / F XLN, PRED DNS, NS W/ RED BEDS & CAVINGS

LS - TAN / GY, MOT IN PT, F / VF XLN, SL FOSS, PRED DNS, NS W/SH - PRED GY W/ RED BEDS & CAVINGS

LS - TAN / CRM & TAN / GY, MOT IN PT, VF / F XLN, OOL IN PT, SL FOSS, PRED DNS, NS W/SH - PRED GY

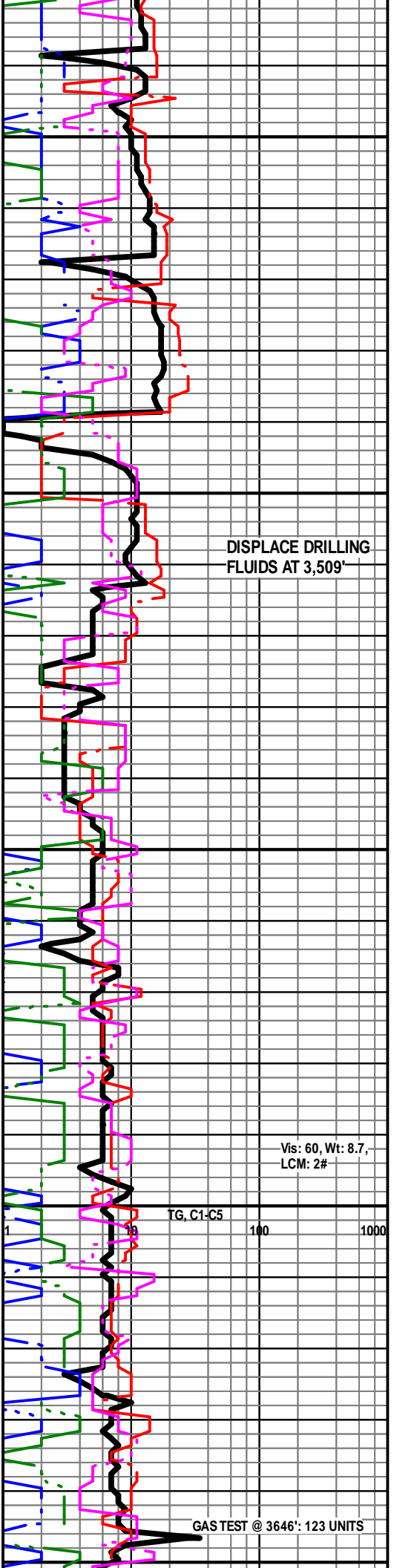
LS - CRM / TAN / SCAT BRN, F / VF XLN, SL OOL, SCAT PINTXLN POR, PRED DNS, NS W/SH - PRED GY

LS - TAN / SCAT CRM, VF XLN, SL OOL, PRED DNS, NS W/ SCAT SH - PRED GY

LS - CRM / TAN / SCAT GY, MOT IN PT, F XLN, SL FOSS, SCAT P / TR F VUG + INTXLN POR, PRED DNS, NS W/ SH - GY / RED / BRN

LS - AS ABOVE, PRED DNS, NS W/SH - PRED GY W/LS - TAN / BRN, VF / F XLN, PRED DNS, NS

LS - CRM / WHT / TAN, MOT IN PT, VF / F XLN, FOSS IN PT, SCAT CHKY, PRED DNS, NS W/SH - GY / SCAT GRN

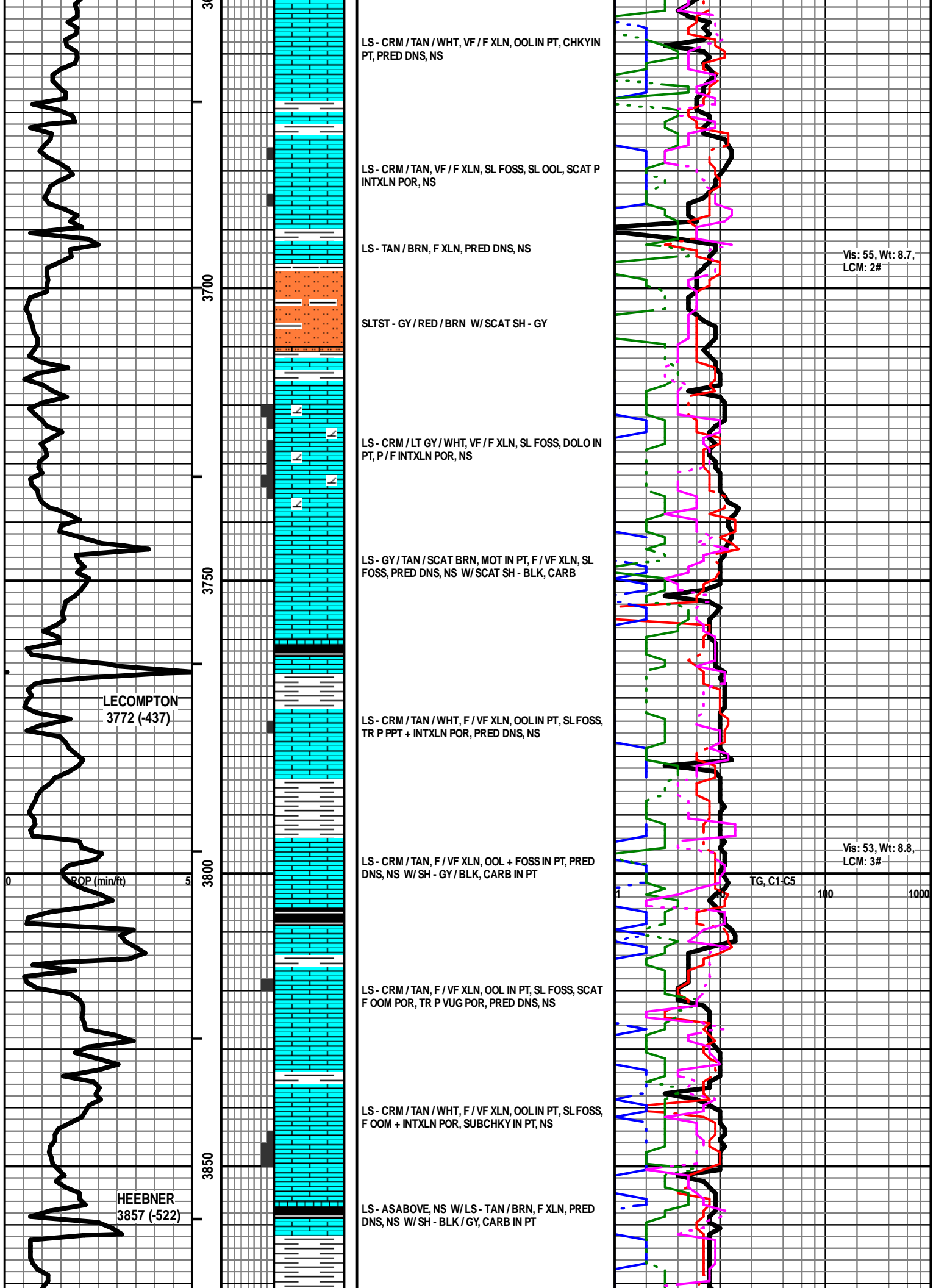


DISPLACE DRILLING FLUIDS AT 3,509'

Vis: 60, Wt: 8.7, LCM: 2#

TG, C1-C5

GAS TEST @ 3646': 123 UNITS



LS - CRM / TAN / WHT, VF / F XLN, OOL IN PT, CHKY IN PT, PRED DNS, NS

LS - CRM / TAN, VF / F XLN, SL FOSS, SL OOL, SCAT P INTXLN POR, NS

LS - TAN / BRN, F XLN, PRED DNS, NS

Vis: 55, Wt: 8.7,  
LCM: 2#

SLTST - GY / RED / BRN W/ SCAT SH - GY

LS - CRM / LT GY / WHT, VF / F XLN, SL FOSS, DOLO IN PT, P / F INTXLN POR, NS

LS - GY / TAN / SCAT BRN, MOT IN PT, F / VF XLN, SL FOSS, PRED DNS, NS W/ SCAT SH - BLK, CARB

LECOMPTON  
3772 (-437)

LS - CRM / TAN / WHT, F / VF XLN, OOL IN PT, SL FOSS, TR P PPT + INTXLN POR, PRED DNS, NS

Vis: 53, Wt: 8.8,  
LCM: 3#

LS - CRM / TAN, F / VF XLN, OOL + FOSS IN PT, PRED DNS, NS W/ SH - GY / BLK, CARB IN PT

TG, C1-C5

LS - CRM / TAN, F / VF XLN, OOL IN PT, SL FOSS, SCAT FOOM POR, TR P VUG POR, PRED DNS, NS

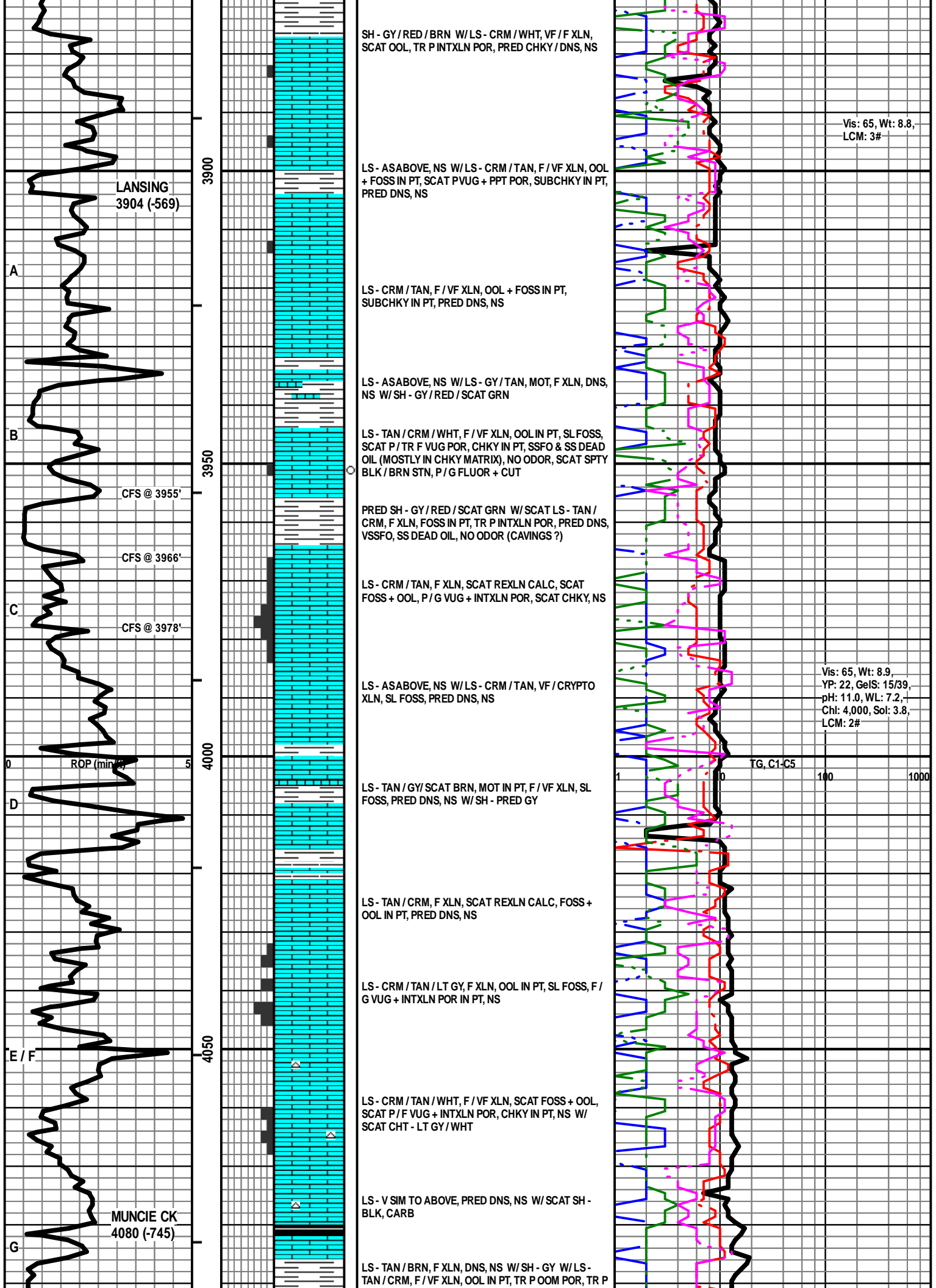
LS - CRM / TAN / WHT, F / VF XLN, OOL IN PT, SL FOSS, FOOM + INTXLN POR, SUBCHKY IN PT, NS

HEEBNER  
3857 (-522)

LS - ASABOVE, NS W/ LS - TAN / BRN, F XLN, PRED DNS, NS W/ SH - BLK / GY, CARB IN PT

ROP (min/ft)

1 100 1000



SH - GY / RED / BRN W/LS - CRM / WHT, VF / F XLN, SCAT OOL, TR P INTXLN POR, PRED CHKY / DNS, NS

Vis: 65, Wt: 8.8, LCM: 3#

LANSING 3904 (-569)

LS - ASABOVE, NS W/LS - CRM / TAN, F / VF XLN, OOL + FOSS IN PT, SCAT PVUG + PPT POR, SUBCHKY IN PT, PRED DNS, NS

LS - CRM / TAN, F / VF XLN, OOL + FOSS IN PT, SUBCHKY IN PT, PRED DNS, NS

LS - ASABOVE, NS W/LS - GY / TAN, MOT, F XLN, DNS, NS W/SH - GY / RED / SCAT GRN

LS - TAN / CRM / WHT, F / VF XLN, OOL IN PT, SL FOSS, SCAT P / TR F VUG POR, CHKY IN PT, SSFO & SS DEAD OIL (MOSTLY IN CHKY MATRIX), NO ODOR, SCAT SPTY BLK / BRN STN, P / G FLUOR + CUT

CFS @ 3955'

PRED SH - GY / RED / SCAT GRN W/SCAT LS - TAN / CRM, F XLN, FOSS IN PT, TR P INTXLN POR, PRED DNS, VSSFO, SS DEAD OIL, NO ODOR (CAVINGS ?)

CFS @ 3966'

LS - CRM / TAN, F XLN, SCAT REXLN CALC, SCAT FOSS + OOL, P / G VUG + INTXLN POR, SCAT CHKY, NS

CFS @ 3978'

LS - ASABOVE, NS W/LS - CRM / TAN, VF / CRYPTO XLN, SL FOSS, PRED DNS, NS

Vis: 65, Wt: 8.9, YP: 22, GeIS: 15/39, pH: 11.0, WL: 7.2, ChI: 4,000, Sol: 3.8, LCM: 2#

ROP (min)

LS - TAN / GY / SCAT BRN, MOT IN PT, F / VF XLN, SL FOSS, PRED DNS, NS W/SH - PRED GY

TG, C1-C5

LS - TAN / CRM, F XLN, SCAT REXLN CALC, FOSS + OOL IN PT, PRED DNS, NS

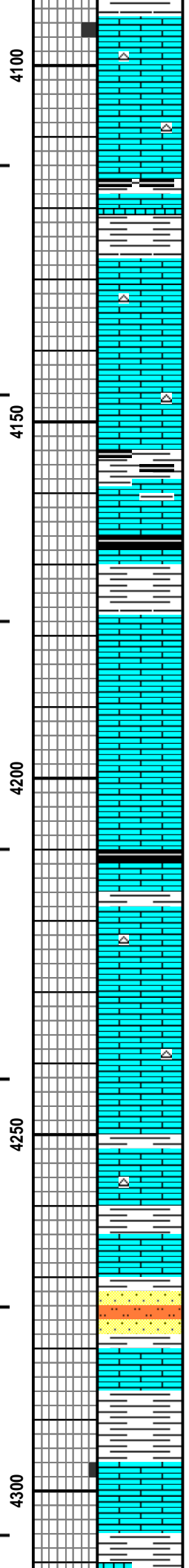
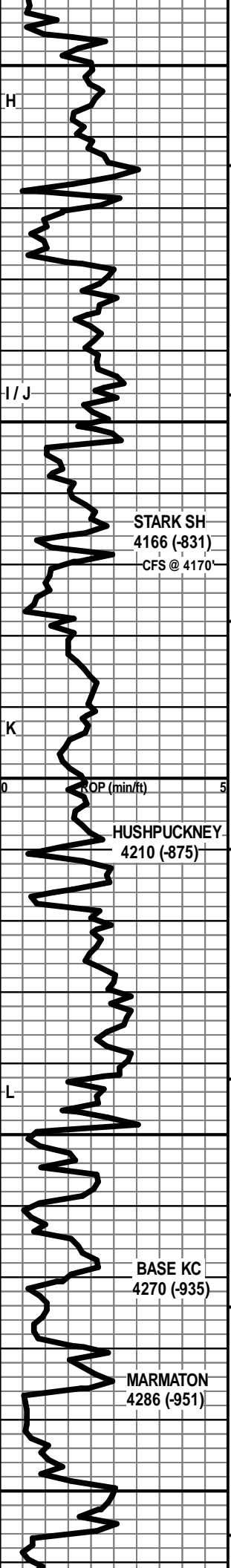
LS - CRM / TAN / LT GY, F XLN, OOL IN PT, SL FOSS, F / G VUG + INTXLN POR IN PT, NS

LS - CRM / TAN / WHT, F / VF XLN, SCAT FOSS + OOL, SCAT P / F VUG + INTXLN POR, CHKY IN PT, NS W/ SCAT CHT - LT GY / WHT

LS - V SIM TO ABOVE, PRED DNS, NS W/SCAT SH - BLK, CARB

MUNCIE CK 4080 (-745)

LS - TAN / BRN, F XLN, DNS, NS W/SH - GY W/LS - TAN / CRM, F / VF XLN, OOL IN PT, TR P OOM POR, TR P



/ F VUG POR, NS W/ SCAT CHT - WHT

LS - CRM / TAN / SCAT LT GY, VF / F XLN, SL FOSS + OOL, SUBCHKY IN PT, PRED DNS, NS W/ SCAT CHT - WHT

LS - V SIM TO ABOVE, NS W/ SH - BLK CARB / GY / SCAT GRN

LS - TAN / CRM / BRN, F / VF XLN, FOSS IN PT, PRED DNS, NS W/ CHT - WHT / GY

SH - PRED GY / SCAT BLK CARB W/ LS - GY / BRN / TAN, MOT IN PT, F XLN, ARGIL IN PT, NS

LS - TAN / GY / BRN, MOT IN PT, F / VF XLN, SL FOSS, DNS, NS W/ SH - BLK, CARB

SH - PRED GY W/ LS - CRM / TAN, VF / F XLN, OOL IN PT, SUBCHKY IN PT, PRED DNS, NS

LS - TAN / CRM, VF / F XLN, SCAT OOL + FOSS, SUBCHKY IN PT, PRED DNS, NS

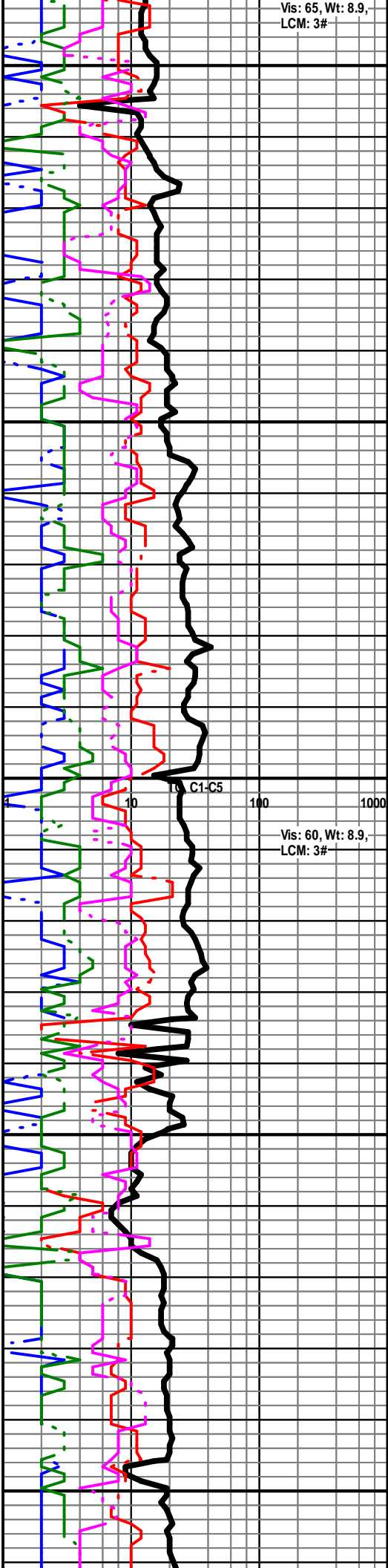
LS - TAN / GY / SCAT BRN, MOT IN PT, VF / F XLN, FOSS IN PT, PRED DNS, NS W/ SCAT CHT - LT GY / WHT W/ SH - BLK CARB / GY

LS - TAN / GY / SCAT BRN, MOT IN PT, VF / F XLN, FOSS IN PT, PRED DNS, NS W/ SCAT CHT - LT GY / WHT

LS - TAN / GY / SCAT BRN, MOT IN PT, VF / F XLN, SL FOSS, PRED DNS, NS W/ SCAT CHT - LT GY / WHT W/ ABNT SH - MED / DK GY

LS - ASABOVE, NS W/ SS & SLTST - GY / GRN / CRM W/ SCAT LS - TAN / BRN, F XLN, DNS, NS

SH - GY W/ LS - TAN / GY / CRM, MOT IN PT, F / VF XLN, OOL IN PT, SL FOSS, TR P VUG + INTXLN POR, PRED DNS, NS

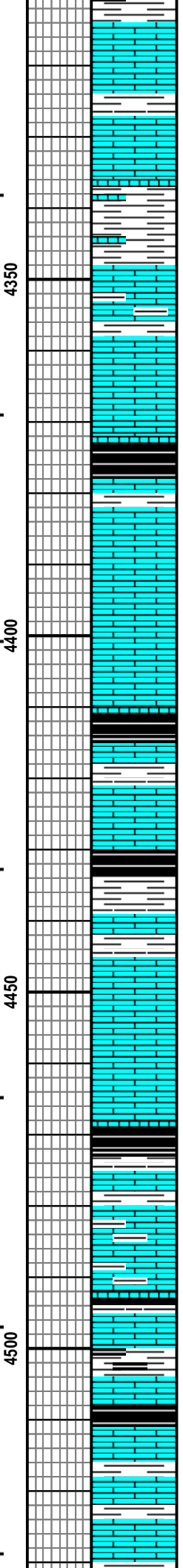
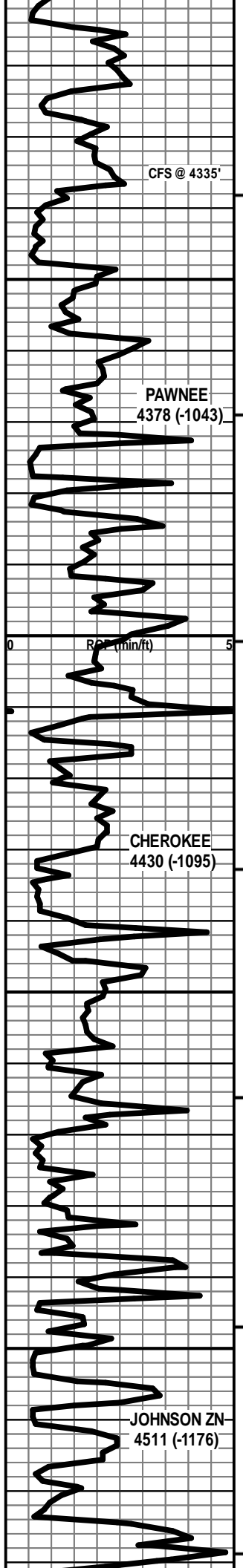


STARK SH  
4166 (-831)  
CFS @ 4170'

HUSHPUCKNEY  
4210 (-875)

BASE KC  
4270 (-935)

MARMATON  
4286 (-951)



LS - TAN / GY / SCAT CRM, MOT IN PT, F / VF XLN, SCAT  
REXLN CALC, OOL IN PT, SL FOSS, PRED DNS, NS W/  
ABNT SH - GY

LS - TAN / CRM / BRN, MOT IN PT, F / VF XLN, OOL +  
FOSS IN PT, PRED DNS, NS W/ SH - GY

PRED SH - GY / RED / SCAT GRN W/ SCAT LS - V SIM  
TO ABOVE, NS

LS - GY / TAN, VF / F XLN, SL FOSS, PRED DNS, NS W/  
SH - GY

SH - BLK CARB / GY W/ LS - GY / BRN / TAN, VF / F  
XLN, SCAT REXLN CALC, SL FOSS, PRED DNS, NS

LS - GY / BRN / TAN / SCAT CRM, F / VF XLN, FOSS IN  
PT, PRED DNS, NS W/ SCAT CHT - GY

LS - TAN / BRN / CRM, F / VF XLN, FOSS IN PT, SCAT  
OOL, PRED DNS, NS W/ SCAT CHT - GY W/ SH - BLK  
CARB / GY

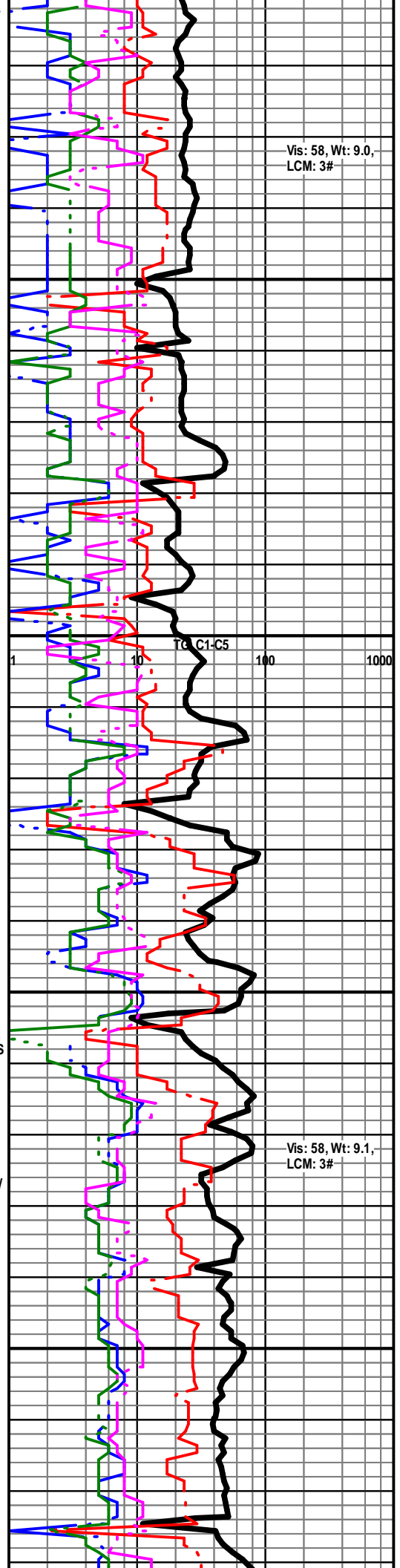
LS - V SIM TO ABOVE, NS W/ SH - GY / BLK

LS - CRM / TAN / BRN / SCAT GY, MOT IN PT, VF / F XLN,  
FOSS IN PT, SCAT OOL, SUBCHKY IN PT, PRED DNS, NS

LS - TAN / BRN, VF / F XLN, SL FOSS, PRED DNS, NS W/  
ABNT SH - BLK CARB / GY

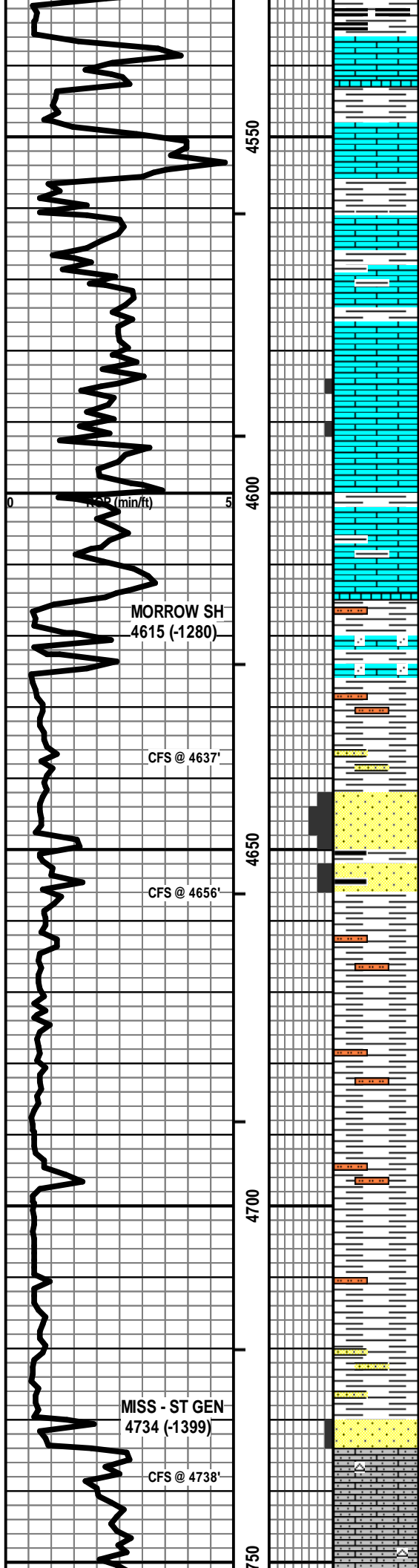
LS - GY / TAN / SCAT BRN, MOT IN PT, F / VF XLN, SL  
FOSS, PRED DNS, NS SH - GY / BLK, CARB IN PT

LS - TAN / BRN / GY, MOT IN PT, F / VF XLN, FOSS IN PT,  
PRED DNS, NS W/ SCAT CHT - GY W/ SH - GY / BLK,  
CARB IN PT



Vis: 58, Wt: 9.0,  
LCM: 3#

Vis: 58, Wt: 9.1,  
LCM: 3#



LS - TAN / BRN / SCAT GY, F / VF XLN, FOSS IN PT, SCAT OOL, PRED DNS, NS W/ SCAT CHT - GY W/ SH - GY / BLK

LS - TAN / BRN / SCAT CRM, F / VF XLN, FOSS IN PT, SCAT OOL, PRED DNS, NS W/ SCAT CHT - GY W/ SH - GY / BLK

LS - TAN / BRN / GY, MOT IN PT, F / VF XLN, FOSS IN PT, SCAT OOL, SCAT P INTXLN / INTPART POR, PRED DNS, NS W/ SCAT SH - GY / BLK

LS - TAN / GY / BRN, MOT IN PT, F / VF XLN, FOSS IN PT, ARGIL IN PT, PRED DNS, NS W/ SCAT SH - GY / BLK

LS - ASABOVE, NS W/ SH - GY W/ SLTST - GRN / SCAT GY

SH - GY / SCAT GRN + YEL W/ SLTST - GY / GRN W/ SCAT SS - LT GY, VF / SCAT F GR, W / FW SRTD, SA / SR, SIL CEM, SLTY IN PT, P / F INTGR POR IN PT, NS W/ TR AREN LS / MUDSTONE - GY / TAN, VF XLN, DNS, NS

SS - LT GY, VF / F GR, MOD W SRTD, SA / SR, SIL CEM, G INTGR POR, FRI, NS W/ SS - LT GY, F / C GR, PSRTD, SA / R, PRED SIL CEM, CALC IN PT, SCAT COAL FRAG, F / G INTGR POR, FRI IN PT, NS W/ SCAT UNCONS QTZ, M / VC GR, SR W/ SH - GY / SCAT BLK

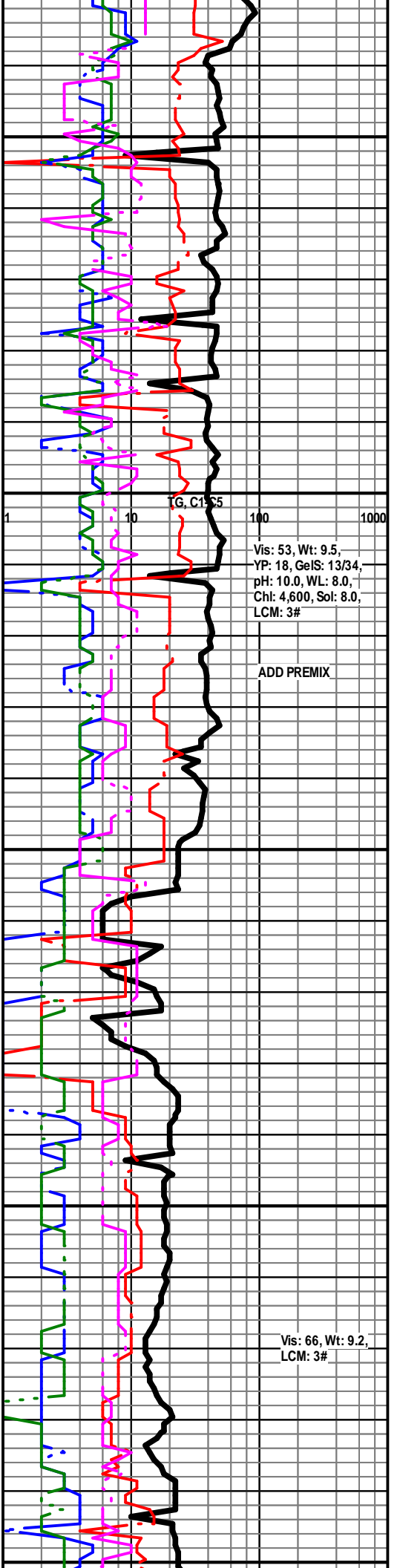
SH - LT / MED GY W/ MOD AMT SLTST - GY

SH - LT / MED GY W/ MOD AMT SLTST - GY

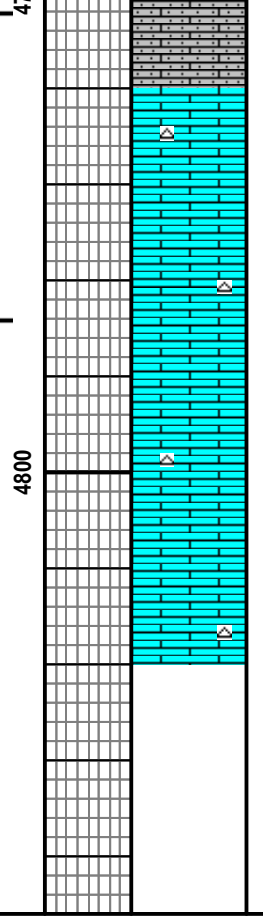
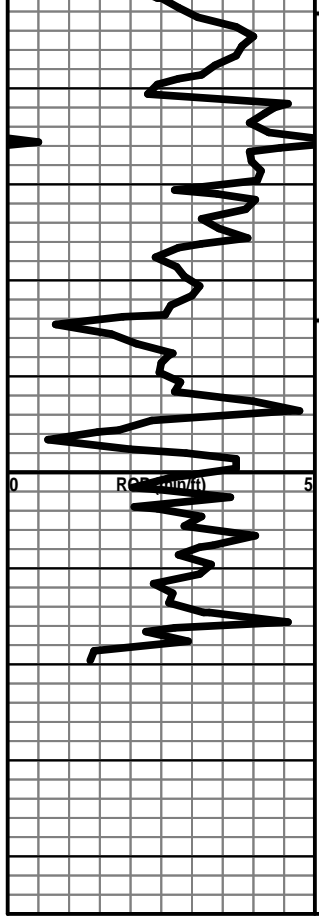
PRED SH - MED / DK GY W/ SCAT SLTST - GY W/ SCAT UNCONS QTZ, VC GR

SS - LT / MED GY, VF / F GR, W SRTD, SA / SR, SIL CEM, SLTY IN PT, ARGIL IN PT, NS W/ SCAT SS - LT GY, F / VC, P SRTD, SR / R, PRED SIL CEM, F / G INTGR POR, NS W/ SH - MED / DK GY W/ LS - WHT / CRM, VF XLN, AREN, SL OOL, SUBCHKY / DNS, NS W/ TR CHT - ORG

LS - WHT / CRM, VF XLN, AREN, VF QTZ GR, FNLY OOL, SUBCHKY / DNS, NS W/ SCAT CHT - ORG







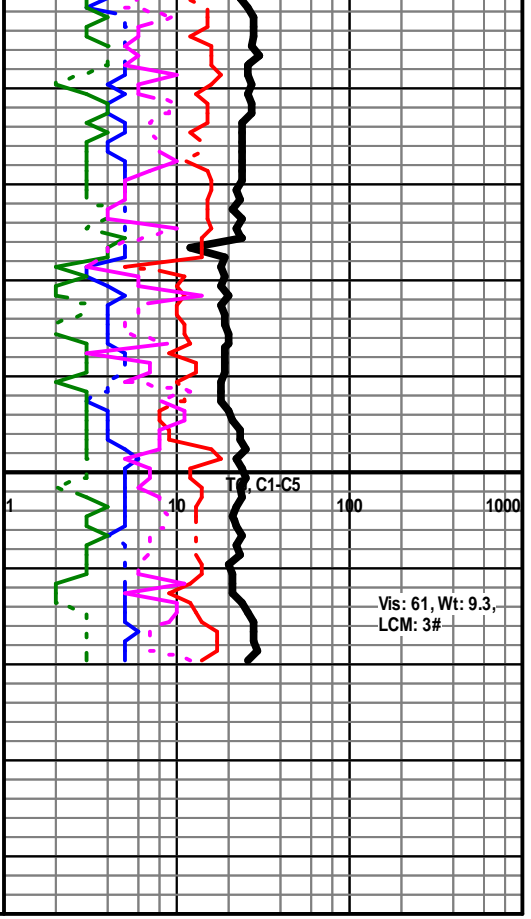
LS - ASABOVE, NS W/LS - TAN / CRM, F / VF XLN, OOL IN PT, SCAT OOL, SCAT AREN, PRED DNS, NS W/ SCAT CHT - ORG

LS - TAN / CRM, MOT IN PT, F / VF XLN, OOL IN PT, CHKY IN PT, PRED DNS, NS W/ SCAT CHT - TAN

LS - TAN / CRM, MOT IN PT, PRED F / VF XLN, SCAT CRYPTO XLN, OOL IN PT, CHKY IN PT, PRED DNS, NS W/ SCAT CHT - TAN

LS - TAN / CRM, MOT IN PT, VF / CRYPTO XLN, SCAT F XLN, OOL IN PT, CHKY IN PT, PRED DNS, NS

TOTAL DEPTH 4820 (-1485)



Vis: 61, Wt: 9.3, LCM: 3#