KOLAR Document ID: 1487856

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 # 33989
Name: Bengalia Land and Cattle Company
Address 1: PO BOX 521008
Address 2:
City: TULSA State: OK Zip: 74152 + 1008
Contact Person: CALVIN R. HULLUM JR.
Phone: (918) 587-8022
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: MARK CRAWFORD
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 #:

8/21/2019	8/26/2019	8/26/2019
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-055-22522-00-00
Spot Description:
SE - NE - NW - SE Sec. 35 Twp. 26 S. R. 31 ☐ East ☑ West
2245 Feet from ☐ North / ☑ South Line of Section
1525 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Finney
Lease Name: FARIS Well #: 2
Field Name:
Producing Formation: P&A
Elevation: Ground: 2810 Kelly Bushing: 2816
Total Vertical Depth: 6200 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1824 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: 16000 ppm Fluid volume: 1500 bbls
Dewatering method used: Evaporated
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: 01/13/2020
☐ **Confidential Release Date:**
☑ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 01/14/2020

Operator Name: Bengalia Land and Cattle Company Lease Name: FARIS Well #: 2

Sec. 35 Twp. 26 S. R. 31 ☐ East ☑ West County: Finney

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 *(Attach Additional Sheets)*	☐ Yes	☑ No
Samples Sent to Geological Survey	☑ Yes	☐ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☑ Yes	☐ No
Geologist Report / Mud Logs	☑ Yes	☐ No

List All E. Logs Run:

NEUTRON DENSITY
INDUCTION

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
COUNCIL GROVE	3021	-205
LANSING	4172	-1356
MORROW SH	4992	-2176
SPERGEN	5278	-2462
VIOLA	5896	-3080
ARBUCKLE	6078	-3262

CASING RECORD ☑ New ☐ 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
Surface	12.25	8.625	24	1824	CLASS A	600	6% GEL 3%CC
Surface	12.25	8.625	24	1824	CLASS C	200	3% CC

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	Top / Bottom

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Bengalia Land and Cattle Company
Well Name	FARIS 2
Doc ID	1487856

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	1824	CLASS A	600	6% GEL 3%CC
Surface	12.25	8.625	24	1824	CLASS C	200	3% CC

BASIC ENERGY SERVICES

PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1001414	1718	08/13/2019

INVOICE NUMBER
93028398

Pratt (620) 672-1201

BILL TO
BENGALIA LAND AND CATTLE CO
PO Box: 521008
TULSA
OK US 74152
ATTN: CALVIN HULLUIM FR

JOB SITE
LEASE NAME: FARIS #1
LOCATION:
COUNTY: FINNEY
STATE: KS
JOB DESCRIPTION: Cement-New Well Casing/Pi
JOB CONTACT:

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41186709			Net - 30 days	09/12/2019

For Service Dates: 08/12/2019 to 08/12/2019

0041186709

171819500L Cement-New Well Casing/Pi 08/12/2019
CEMENT SURFACE CASING

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
A-Serv Lite	600.00	SK	10.66	6,396.00 T
Class C Cement	200.00	SK	11.89	2,378.00 T
Celloflake	201.00	LB	1.64	329.64 T
Calcium Chloride	1,942.00	LB	0.41	796.22 T
Depth Charge, 1001'-2000'	1.00	HR	615.00	615.00
Light Vehicle Mileage	65.00	MI	2.05	133.25
Heavy Equipment Mileage	195.00	MI	3.28	639.60
Ton Mileage	2,308.00	MI	1.23	2,838.84
800 SK-Blending & Mixing Service Charge	1.00	SK	456.00	456.00
Plug Container Utilization Charge	1.00	EA	102.50	102.50
Cement Densiometer, with chart recorder	1.00	EA	143.50	143.50
Guide Shoe - Regular, 8 5/8" (Blue)	1.00	EA	380.00	380.00
Top Rubber Cement Plug, 8 5/8"	1.00	EA	225.00	225.00
Centralizer, 8 5/8" (Blue)	4.00	EA	90.00	360.00
Service Supervisor Charge	1.00	EA	75.00	75.00
Driver Charge	3.00	EA	35.00	105.00
Standby Cement Pump Unit	2.00	HR	500.00	1,000.00
Flapper Type Insert Float Valves. 8 5/8"	1.00	EA	280.00	280.00

PLEASE REMIT TO:
BASIC ENERGY SERVICES,LP
PO BOX 841903
DALLAS,TX 75284-1903

SEND OTHER CORRESPONDENCE TO:
BASIC ENERGY SERVICES,LP
801 CHERRY ST, STE 2100
FORT WORTH, TX 76102

SUB TOTAL	17,253.55
TAX	787.04
INVOICE TOTAL	18,040.59

11:60

Date: 8/12/2019

Well Name: Faris # 1
Location: 35-25S-31W
County - State: Finny, Kansas
RRC #: 19842-G
Type Of Service: Z-42 Cement Surface Casing
Customer's Order #: 1001414
Customer: Bengalia Land and Cattle Company

Address: PO Box 521008
Tulsa Ok., 74152 + 1008

As a consideration, the above named Customer agrees to pay Basic Energy Services in accord with the rates and terms stated in Basic Energy Services current price lists. Invoices are payable NET 30 (SEE 10.2) after date of invoice. Upon Customer's default in payment of Customers account by such date, Customer agrees to pay interest thereon after default at 18% per annum. In the event it becomes necessary to employ an attorney to enforce collection of said account, Customer agrees to pay all the collection costs and attorney fees. These terms and conditions shall be governed by the laws of the state where services are performed or equipment or materials are furnished.

Basic Energy Services., warrants only title to the products, supplies and materials and that the same are free from defects in workmanship. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, MERCHANTABILITY,FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Basic Energy Services., liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, product liability, breach of warranty or otherwise) arising out of the sale or use of any products, supplies, or materials upon their return to Basic Energy Services. is expressly limited to the replacement of such products, supplies or materials or, at Basic Energy Services. option, to the allowance to the Customer of credit for the cost of such items. In no event shall Basic Energy Services be liable for special, indirect, punitive or consequential damages.

CODE	QTY	UOM	DESCRIPTION	PRICE	TOTAL
BC119	600	SK	A-Serv Lite	26.00	15600.00
BC101	200	SK	Class C Cement	29.00	5800.00
CC102	201	LB	Celloflake		

BASIC ENERGY SERVICES

PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1001414	1718	08/13/2019

INVOICE NUMBER

93028398

Pratt (620) 672-1201

BILL TO
BENGALIA LAND AND CATTLE CO
PO Box: 521008
TULSA
OK US 74152

ATTN: CALVIN HULLUIM FR

JOB SITE

LEASE NAME	FARIS #1
LOCATION	
COUNTY	FINNEY
STATE	KS
JOB DESCRIPTION	Cement-New Well Casing/Pi
JOB CONTACT	

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41186709			Net - 30 days	09/12/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 08/12/2019 to 08/12/2019				
0041186709				
171819500L Cement-New Well Casing/Pi 08/12/2019				
CEMENT SURFACE CASING				
A-Serv Lite	600.00	SK	10.66	6,396.00 T
Class C Cement	200.00	SK	11.89	2,378.00 T
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Calcium Chloride	1,942.00	LB	0.41	796.22 T
Depth Charge, 1001'-2000'	1.00	HR	615.00	615.00
Light Vehicle Mileage	65.00	MI	2.05	133.25
Heavy Equipment Mileage	195.00	MI	3.28	639.60
Ton Mileage	2,308.00	MI	1.23	2,838.84
800 SK-Blending & Mixing Service Charge	1.00	SK	456.00	456.00
Plug Container Utilization Charge	1.00	EA	102.50	102.50
Cement Densiometer, with chart recorder	1.00	EA	143.50	143.50
Guide Shoe - Regular, 8 5/8" (Blue)	1.00	EA	380.00	380.00
Top Rubber Cement Plug, 8 5/8"	1.00	EA	225.00	225.00
Centralizer, 8 5/8" (Blue)	4.00	EA	90.00	360.00
Service Supervisor Charge	1.00	EA	75.00	75.00
Driver Charge	3.00	EA	35.00	105.00
Standby Cement Pump Unit	2.00	HR	500.00	1,000.00
Flapper Type Insert Float Valves, 8 5/8"	1.00	EA	280.00	280.00

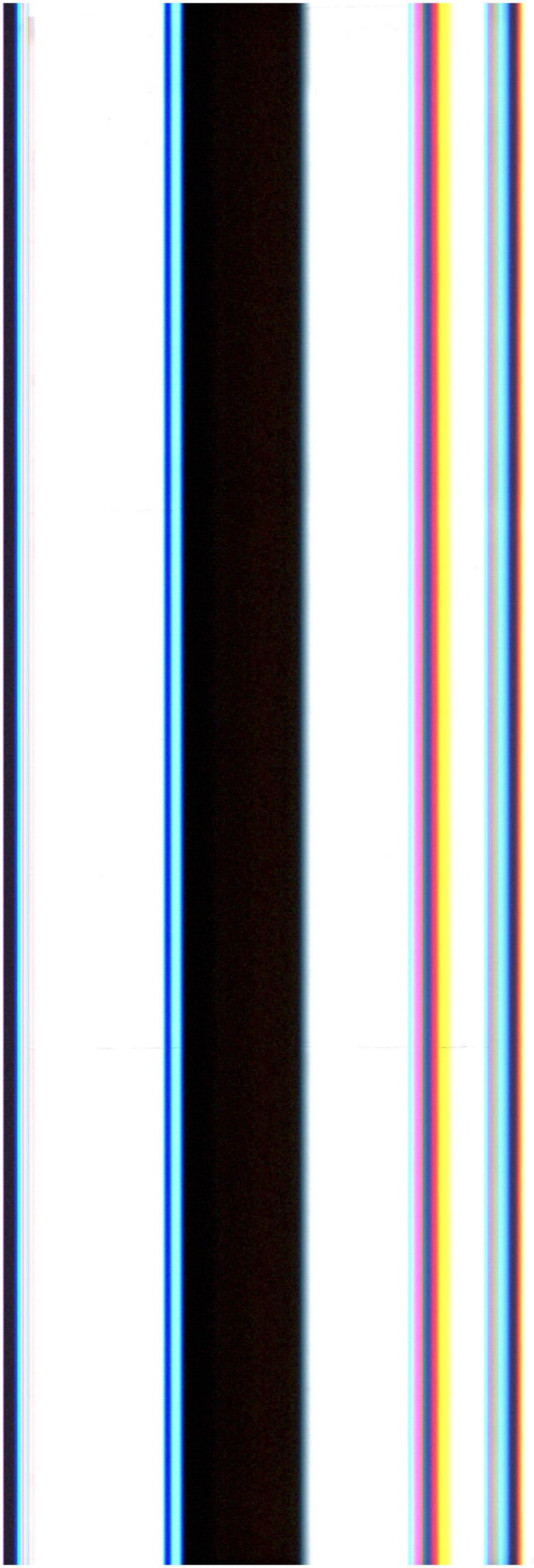
PLEASE REMIT TO:

BASIC ENERGY SERVICES,LP
PO BOX 841903
DALLAS,TX 75284-1903

SEND OTHER CORRESPONDENCE TO:

BASIC ENERGY SERVICES,LP
801 CHERRY ST, STE 2100
FORT WORTH, TX 76102

SUB TOTAL	17,253.55
TAX	787.04
INVOICE TOTAL	18,040.59



BASIC ENERGY SERVICES

1700 S. Country Estates Raod
Liberal, KS 67901
PH (620)-624-2277FAX (620) 624-2280

TT: 60

SERVICE ORDER - 1718 19500 L

Date: 8/12/2019

Well Name: Faris # 1

Location: 35-25S-31W

County - State: Finny, Kansas

RRC #: 19842-6

Type Of Service: Z-42 Cement Surface Casing

Customer's Order #: 1001414

Customer: Bengalla Land and Cattle Company

Address: PO Box 521008
Tulsa Ok., 74152 + 1008

As a consideration, the above named Customer agrees to pay Basic Energy Services in accord with the rates and terms stated in Basic Energy Services current price lists. Invoices are payable NET 30 (SEE 10.2) after date of invoice. Upon Customer's default in payment of Customers account by such date, Customer agrees to pay interest thereon after default at 18% per annum. In the event it becomes necessary to employ an attorney to enforce collection of said account, Customer agrees to pay all the collection costs and attorney fees. These terms and conditions shall be governed by the laws of the state where services are performed or equipment or materials are furnished.

Basic Energy Services., warrants only title to the products, supplies and materials and that the same are free from defects in workmanship. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, MERCHANTABILITY,FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Basic Energy Services., liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, product liability, breach of warranty or otherwise) arising out of the sale or use of any products, supplies, or materials upon their return to Basic Energy Services. is expressly limited to the replacement of such products, supplies or materials or , at Basic Energy Services. option, to the allowance to the Customer of credit for the cost of such items. In no event shall Basic Energy Services be liable for special, indirect, punitive or consequential damages.

CODE	QTY	UOM	DESCRIPTION	PRICE	TOTAL
BC119	600	SK	A-Serv Lite	26.00	15600.00
BC101	200	SK	Class C Cement	29.00	5800.00
CC102	201	LB	Celloflake	4.00	804.00
CC109	1942	LB	Calcium Chloride	1.00	1942.00
CC2	1	HR	Depth Charge, 1001'-2000'	1500.00	1500.00
ME101	65	MI	Light Vehicle Mileage	5.00	325.00
ME102	195	MI	Heavy Equipment Mileage	8.00	1560.00
TM	2308	MI	Ton Mileage	3.00	6924.00
CE240	800	SK	Blending & Mixing Service Charge	1.40	1120.00
CE504	1	EA	Plug Container Utilization Charge	250.00	250.00
CE505	1	EA	Cement Densiometer, with chart recorder	350.00	350.00
CF253	1	Ea	Guide Shoe - Regular, 8 5/8" (Blue)	380.00	380.00
CF1453	1	Ea	Flapper Type Insert Float Valves. 8 5/8" (Blue)	280.00	280.00
CF105	1	Ea	Top Rubber Cement Plug, 8 5/8"	225.00	225.00
CF1753	4	Ea	Centralizer, 8 5/8" (Blue)	90.00	360.00
BE143	1	Ea	Supervisor	75.00	75.00
Be144	3	EA	Driver	35.00	~~140.00~~ 105.00
CE402	2	HR	Standby Cement Pump Unit	500.00	1000.00
				Book Total:	~~$38,635.00~~ 38600.00
				Taxes:	
				Disc. Price:	~~$17,288.55~~ 17,253.55

PUMP TRUCK NUMBER: 38119, 19842

DRIVER: Jesse Paxton

BASIC ENERGY SERVICES

	YES	NO
THIS JOB WAS SATISFACTORILY COMPLETED	☐	☐
OPERATION OF EQUIPMENT WAS SATISFACTORY	☐	☐
PERFORMANCE OF PERSONEL WAS SATISFACTORY	☐	☐

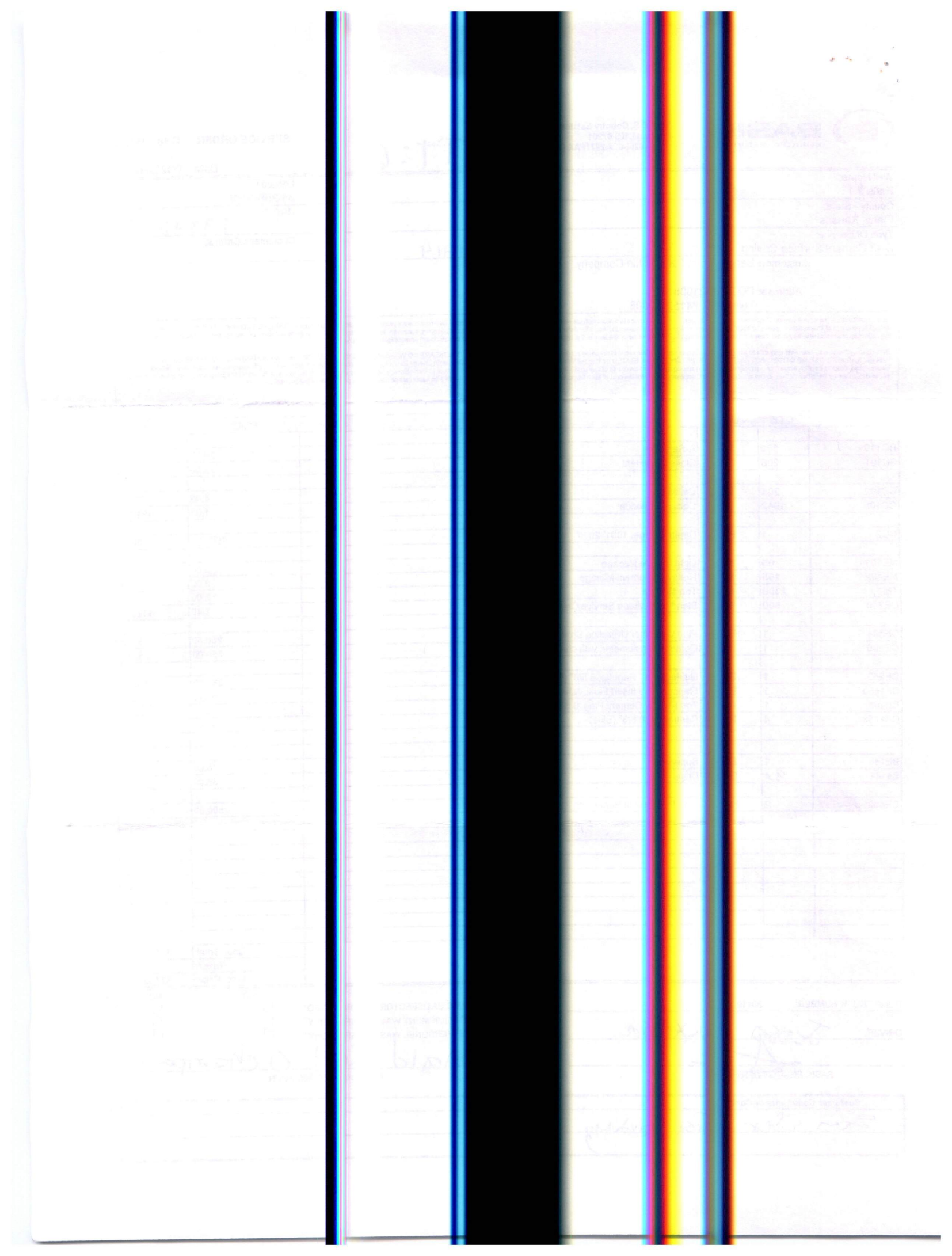
Donald Earl Ochampaugh

CUSTOMER OR HIS AGENT

DLS

Customer Comments or Concerns:

Sam Ester / Jose Martinez



BASIC ENERGY SERVICES

PRESSURE PUMPING

Job Log

Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

Customer:	Bengalla Land and Cattle Company	Cement Pump No.:	38119, 19842 6Hrs	Operator TRK No.:	86531 Angel		
Address:	PO Box 521008	Ticket #:	1718 19500 L	Bulk TRK No.:	19827 Sam	60464 Sam	
City, State, Zip:	Tulsa Ok., 74152 + 1008	Job Type:	Z-42 Cement Surface Casing				
Service District:	1718 - Liberal, ks	Well Type:					
Well Name and No.:	Faris # 1	Well Location:	35-25S-31W	County:	Finny	State:	Kansas

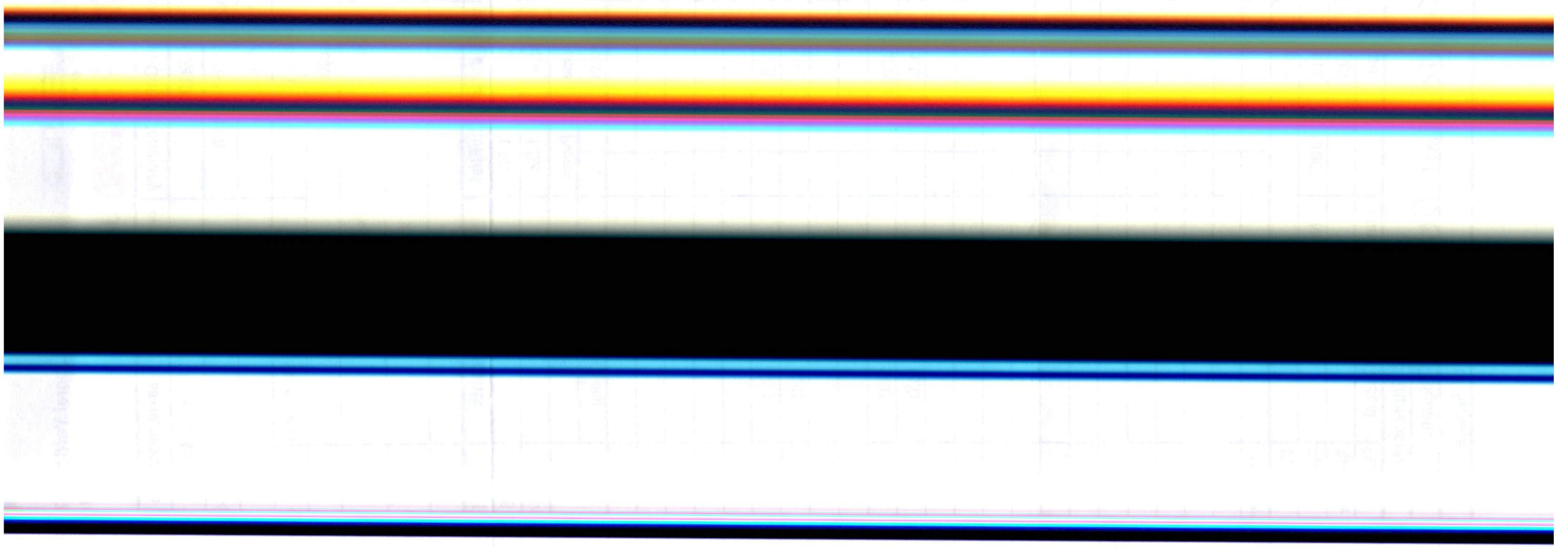
Type of Cmt	Sacks	Additives	Truck Loaded On		
A - Serv Lite	600	3%cc, 1/4# polyflake	19827 Sam	Front	Back
Premuim Plus	200	2%cc, 1/4# Poly	60464 Sam	Front	Back
				Front	Back

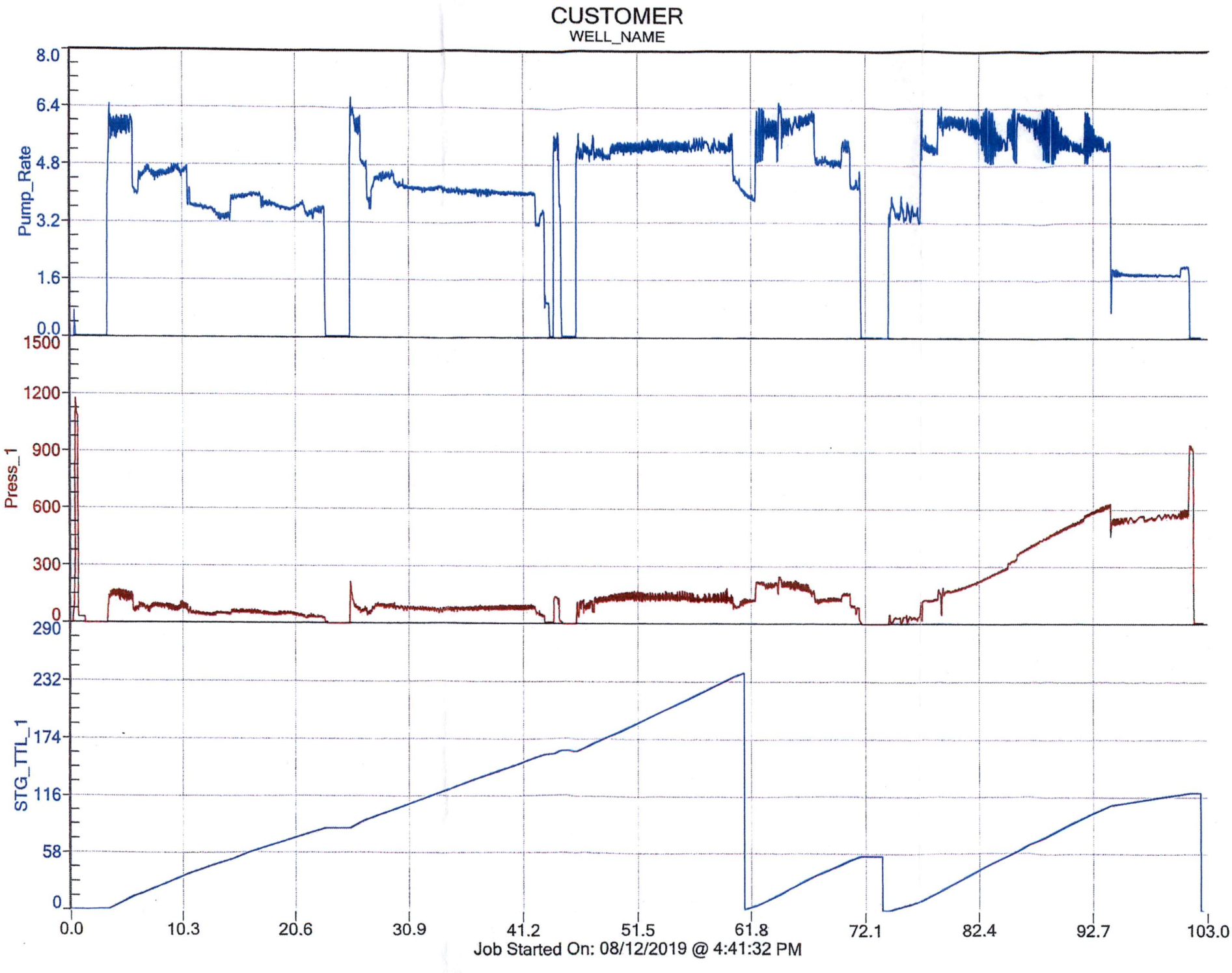
Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	12.5	1.98	10.77	1188	Man Hours:	60
Tail:	14.9	1.32	6.18	264	# of Men on Job:	3

Time (am/pm)	(BPM)	Volume (BBLS)	Pumps T	Pumps C	Pressure(PSI) Tubing	Pressure(PSI) Casing	Description of Operation and Materials
7:00							On Location Ready @ 8am
7:15							Safety Meeting
12:30 PM							Ran Casing In Hole
1:00 PM							Rig Up
4:45 PM							Pressure Test to 1500psi
16:46	5	211.5				150	Pump Lead 600sx
17:43	5	47.01				120	Pump Tail 200sx
5:54 PM							Shut Down -- Drop Plug
17:59							Displacement
	6	10thur100				500	
	2	111.9				620	Land Plug To 940psi
6:29							Release Back ----- Float Held
							Job Completed
							Thank You
							No Charge For 6 Hrs On Location
							Charged only 2 Hrs Additional Hrs
							********** 120 BBL Cement To Pit **********

Size Hole	12.25"	Depth				TYPE	Plug Container	
Csg.	8 5/8" 243	Depth	1800'	New / Used		Packer	Depth	
Shoe jt	42'	Depth				Retainer	Depth	
Top Plugs		Type		Landing PSI	447.3psi	Perfs	CIBP	

Customer Signature:	Donald Earl Ochampaugh	Basic Representative:	Angel Echevarria
		Basic Signature:	
		Date of Service:	8/12/2019




CUSTOMER
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Pump_Rate
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6.4
4.8
3.2
1.6
0.0
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1200
900
600
300
0
STG_TTL_1
290
232
174
116
58
0
0.0
10.3
20.6
30.9
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51.5
61.8
72.1
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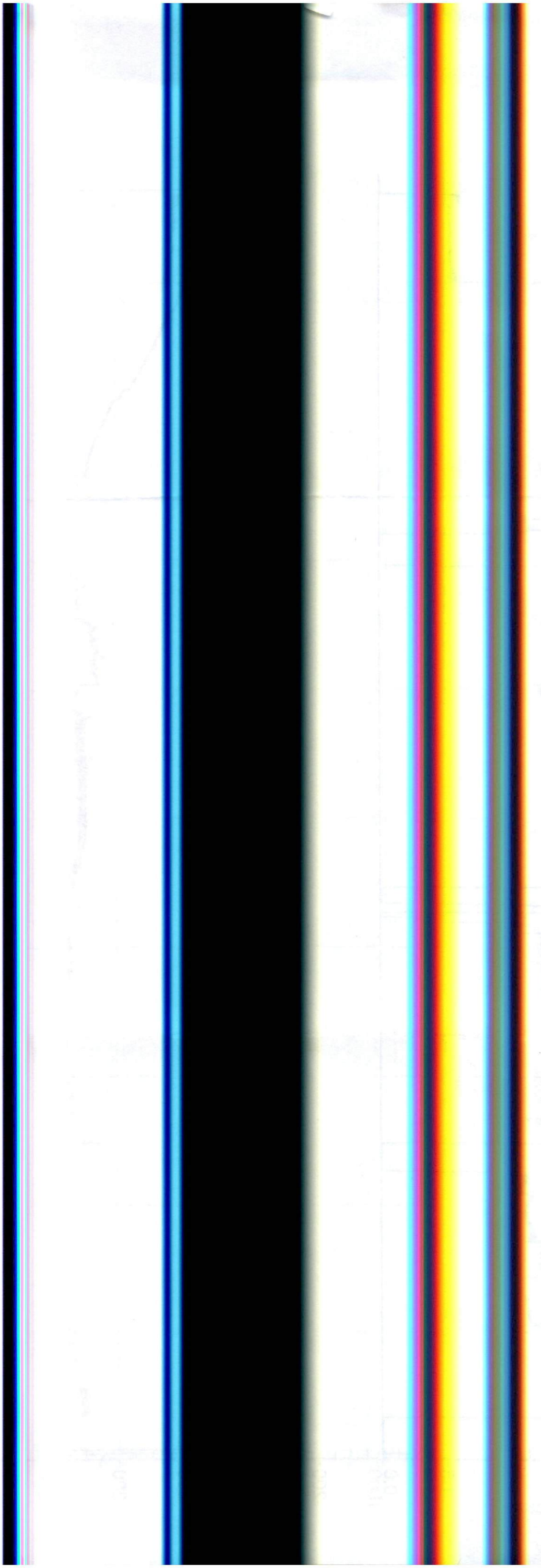


WIRELINE LOGGING SOLUTIONS

Composite Log

Company Bengalia Land & Cattle Company
Well Faris # 2-35
Field WC
County Finney
State Kansas

Company	Bengalia Land & Cattle Company
Well	Faris # 2-35
Field	WC
County	Finney
State	Kansas

Location: API # : 15-055-22522
2,245' FSL & 1,525' FEL
(NAD83) Lat: 37.742536811; Long: -100.675762827
SEC 35 TWP 26S RGE 31W

Permanent Datum GL Elevation 2,810' ft.
Log Measured From KB , 16 ft. above perm. datum
Drilling Measured From KB

Other Services
LDL-CNL
MEL-MAS
BHP - IAT

Elevation
K.B. 2,816 ft.
D.F. 2,815 ft.
G.L. 2,810 ft.

Date	8/26/2019		
Run Number	One		
Depth Driller	6,200'		
Depth Logger	6,180'		
Bottom Logged Interval	6,178'		
Top Log Interval	1,822'		
Casing Driller	8 5/8" @ 1822'	@	
Casing Logger	1822'		
Bit Size	7 7/8"	@	
Type Fluid in Hole	WBM		
Density / Viscosity	9.5 PPG / 63S		
pH / Fluid Loss	N/A / 7.2Cl		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.85 @ 75°F	@	
Rmf @ Meas. Temp	0.638 @ 75°F	@	
Rmc @ Meas. Temp	1.063 @ 75°F	@	
Source of Rmf / Rmc	Calculated		
Rm @ BHT	0.497 @ 133°F	@	
Time Circulation Stopped	12:00		
Time Logger on Bottom	18:00		
Maximum Recorded Temperature	133°F		
Equipment Number	10002		
Location	OKC		
Recorded By	M. Avitia		
Witnessed By	Curtis Covey	Calvin Hullum	

<<< Fold Here >>>

Equipment and Log Data

Service Order:

Gamma		Density		Neutron		Sonic		IAT/DLL	
Run No.	One	Run No.	One	Run No.	One	Run No.	One	Run No.	One
Serial No.	15939	Serial No.	129B	Serial No.	10071	Serial No.	10037	Serial No.	10106
O.D.	3.375 in.	Source No.	50129B	Source No.	87624G	Centralizers	2	Standoffs	1 @ 0.5
		O.D.	4.5 in.	O.D.	3.375 in.	O.D.	3.375 in.	O.D	3.875 in.

Logging Pass Data

General			Gamma		Density			Neutron			Sonic			IAT/DLL	
			Scales		Scales			Scales			Scales			Scales	
Run	Depths		Left	Right	Left	Right	Matrix	Left	Right	Matrix	Left	Right	Matrix	Left	Right
One	TD	CSG	0	150	0.3	-0.1	2.71	0.3	-0.1	Lime	0.3	-0.1	Lime	0.2	2000

Comments

Tools ran as per diagram
Density is presented on a 2.71 g/cc Matrix, Neutron is presented on a Limestone Matrix
Additional Pass in Sandstone and Dolomite Matrix is presented
Chlorides reported at 4000 ppm
Annular volume computed using 5.5" Casing

Washouts, tight pulls, and borehole rugosity affect data quality and repeatability
Tight spots while running in hole from 2400' to 2600'
Possible separated casing around casing depth.
Log considered first run in well, corrected +1ft stretch

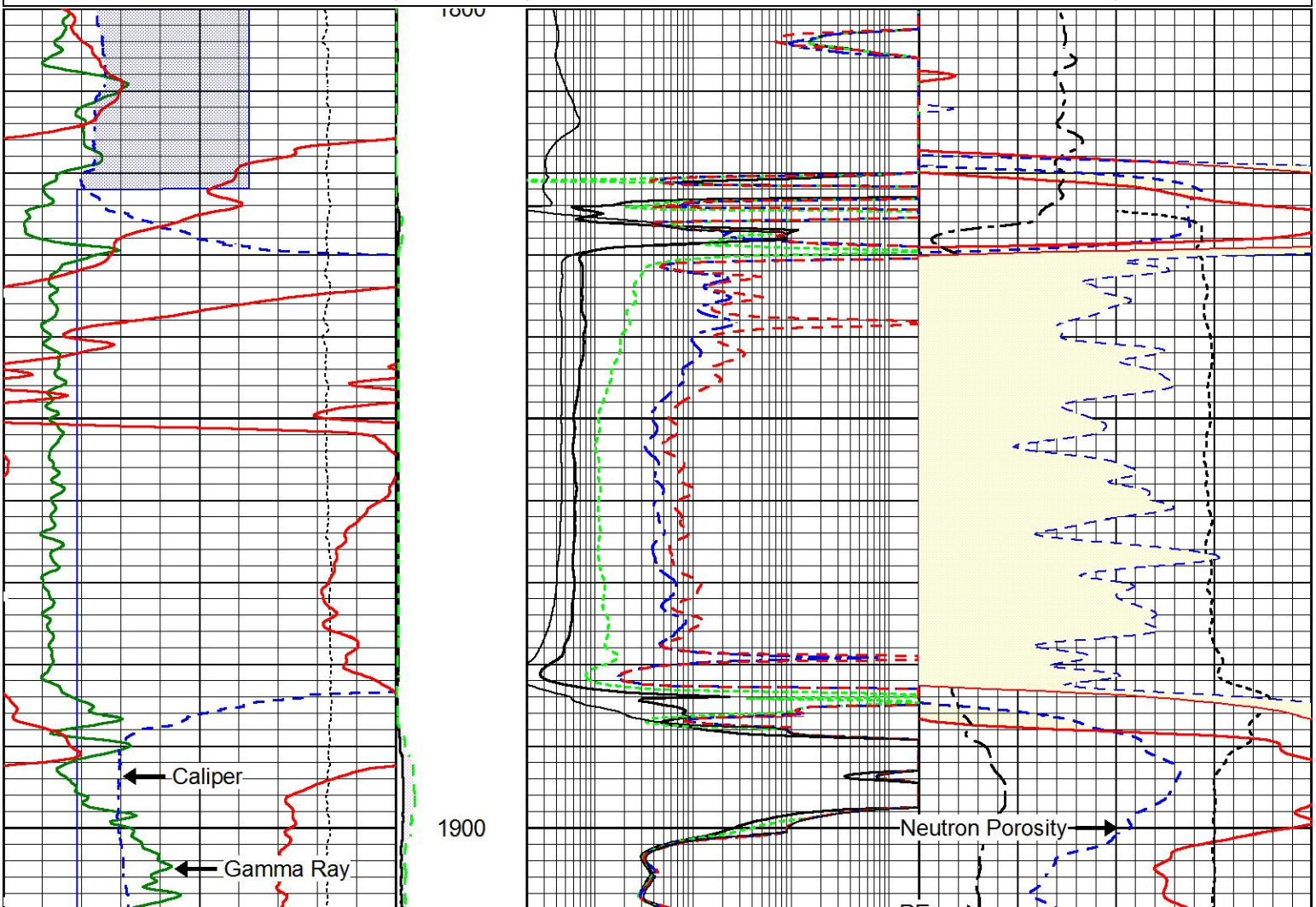
YOUR CREW TODAY:
THANK YOU FOR CHOOSING ALLIED HORIZONTAL WIRELINE. OKLAHOMA CITY. (405) 445-7135.

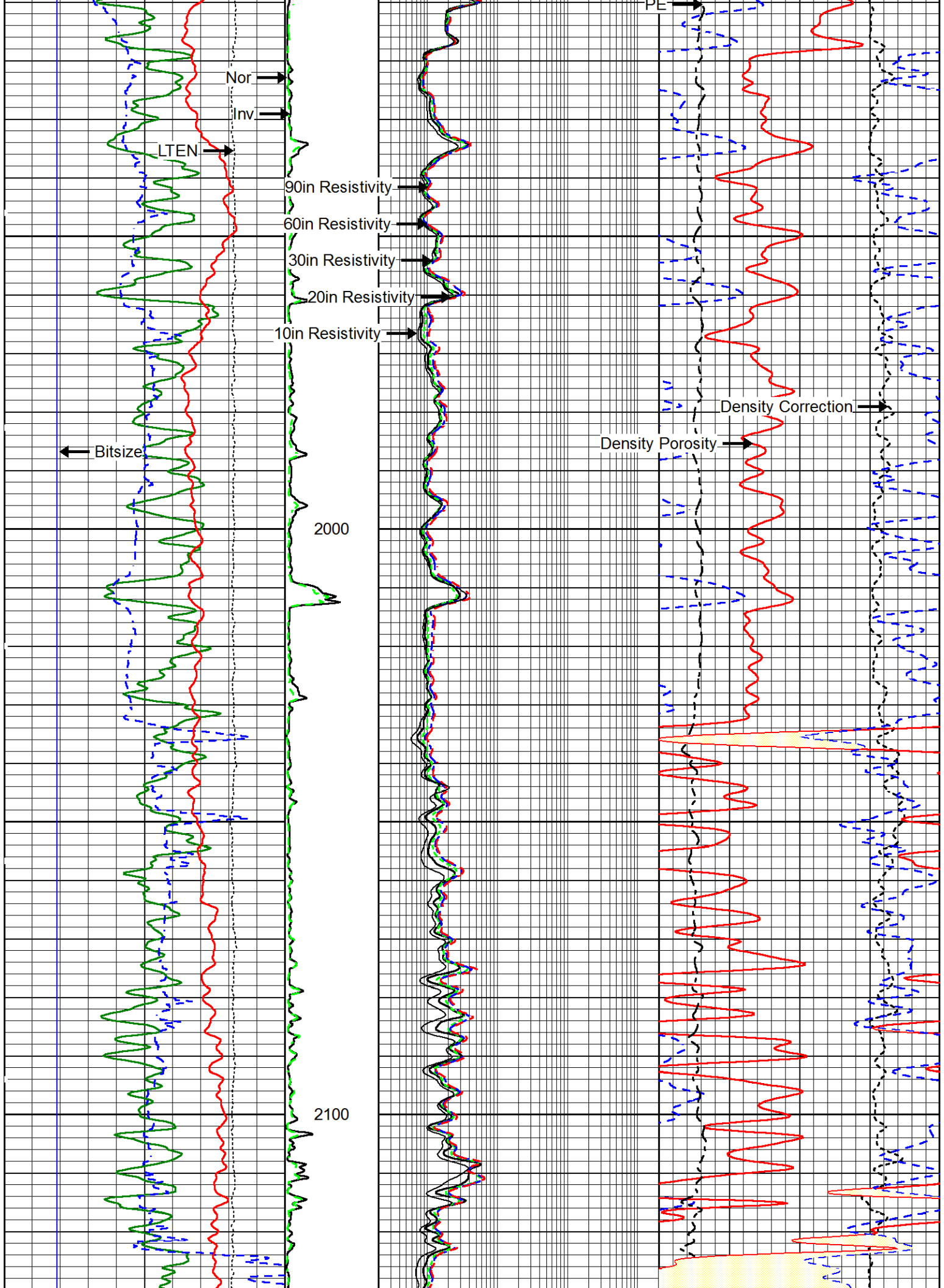
WIRELINE LOGGING SOLUTIONS

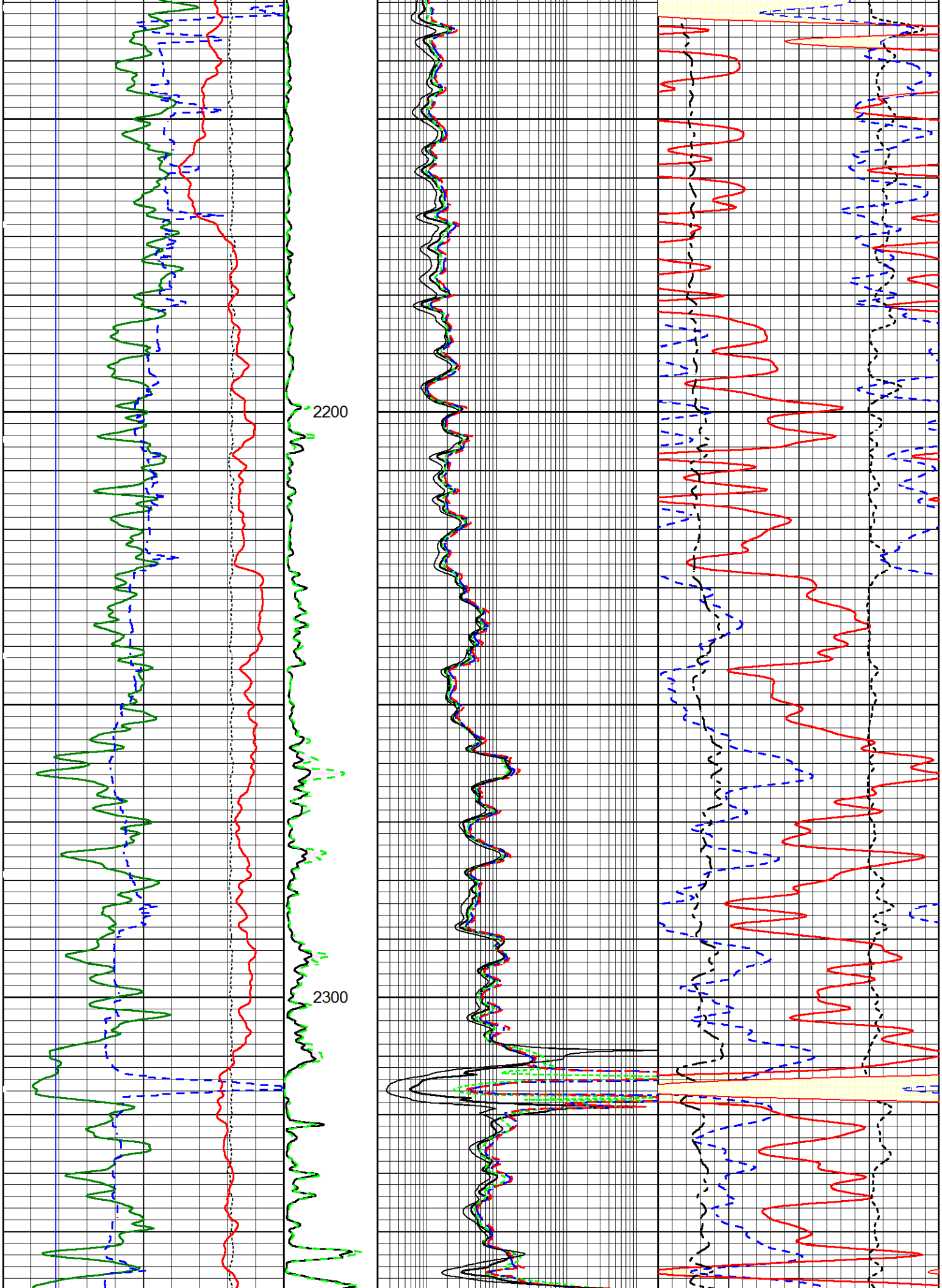
Main Pass

Database File	f:\bengalia-faris#2-35\bengalia-faris2-35.db
Dataset Pathname	Main-Cut
Presentation Format	OKC-3C~1
Dataset Creation	Mon Aug 26 21:56:22 2019
Charted by	Depth in Feet scaled 1:240

6	Bitsize (in)	16	Inv	0.2	20in Resistivity (Ohm-m)	2000		Neutron Porosity	
0	Gamma Ray (GAPI)	150	(Ohm-m)	0.2	30in Resistivity (Ohm-m)	2000	0.3	(Porosity Decimal Fraction)	-0.1
6	Caliper (in)	16	0 20	0.2	60in Resistivity (Ohm-m)	2000		Density Porosity	
	SP <-20+ mV>		Nor	0.2	90in Resistivity (Ohm-m)	2000	0.3	(Porosity Decimal Fraction)	-0.1
	500CLTEN (lb)	0	(Ohm-m)	0.2	10in Resistivity (Ohm-m)	2000	0 PE 10		Density Correction
			0 20					-0.25 (g/cc)	0.25




PE
Nor
Inv
LTEN
90in Resistivity
60in Resistivity
30in Resistivity
20in Resistivity
10in Resistivity
Density Correction
Density Porosity
Bitsize
2000
2100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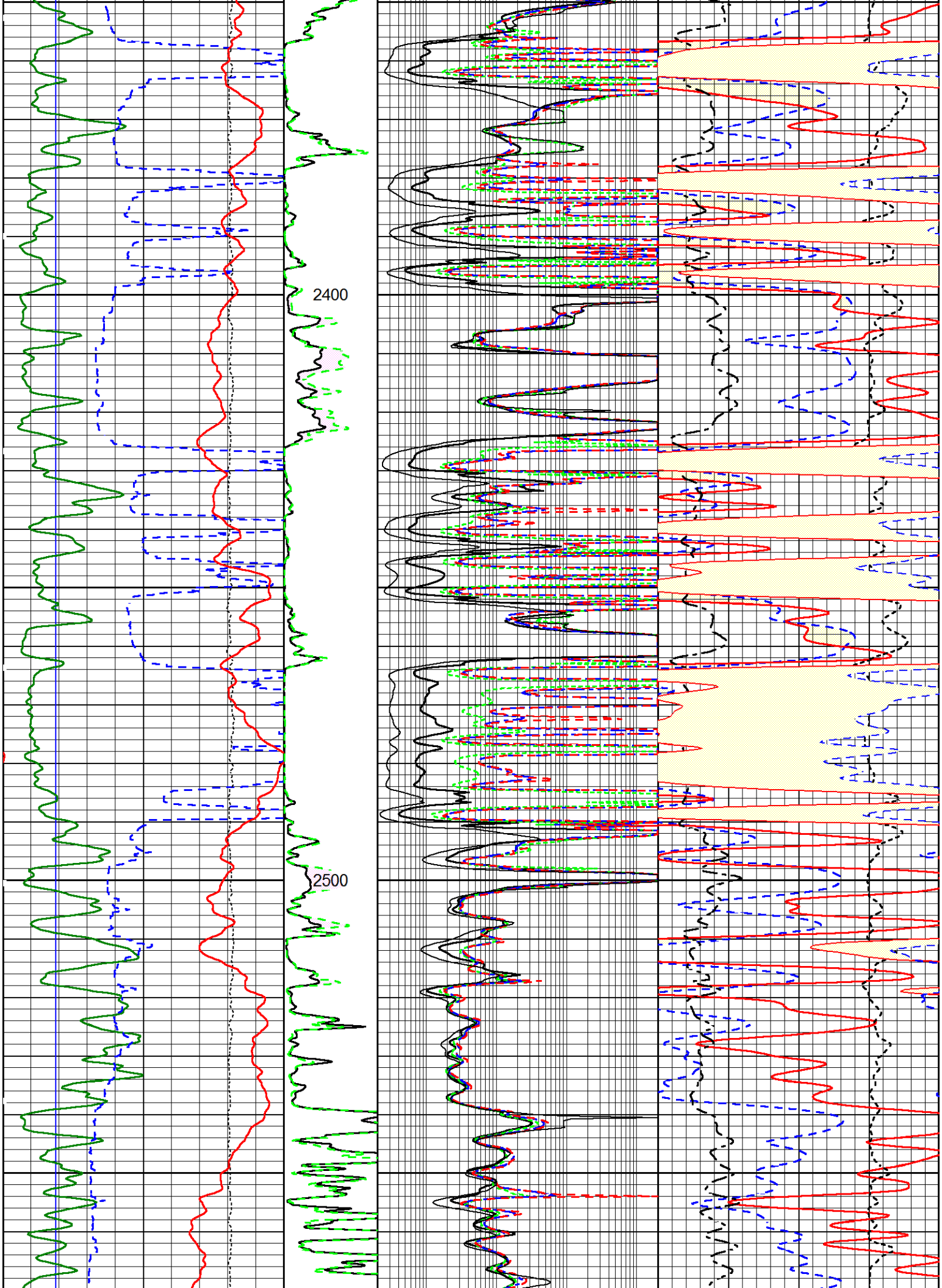
2300


2400
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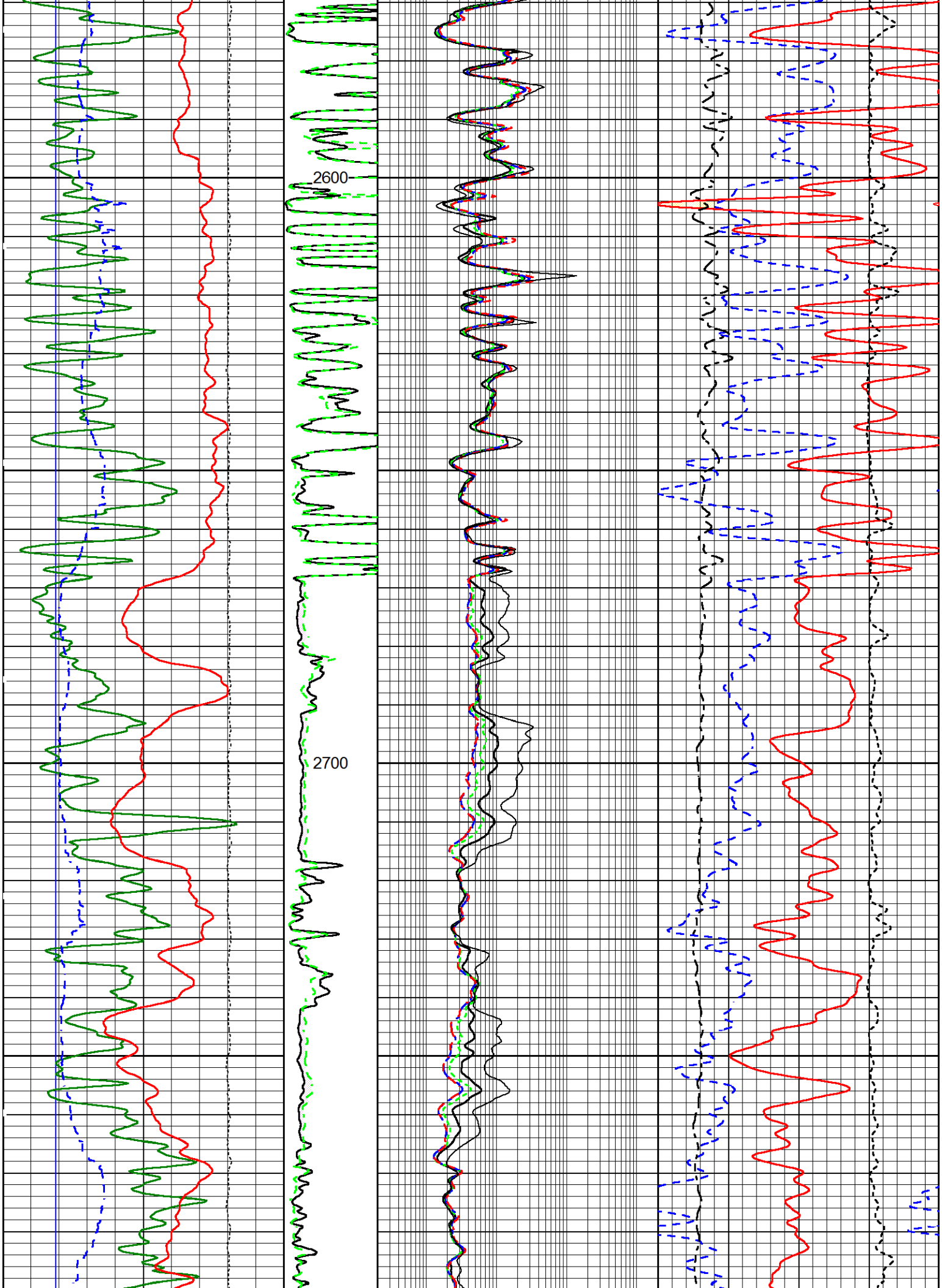
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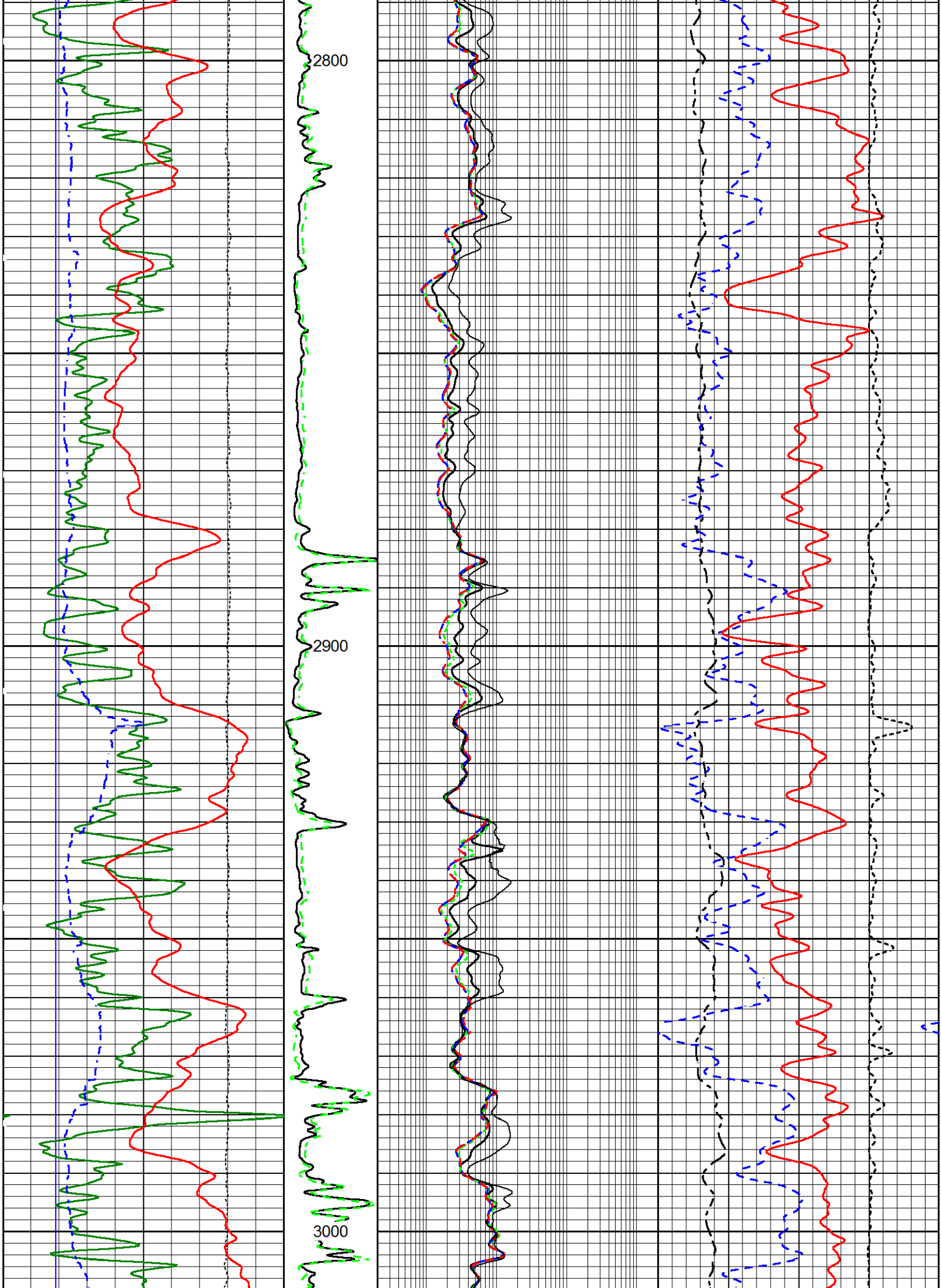
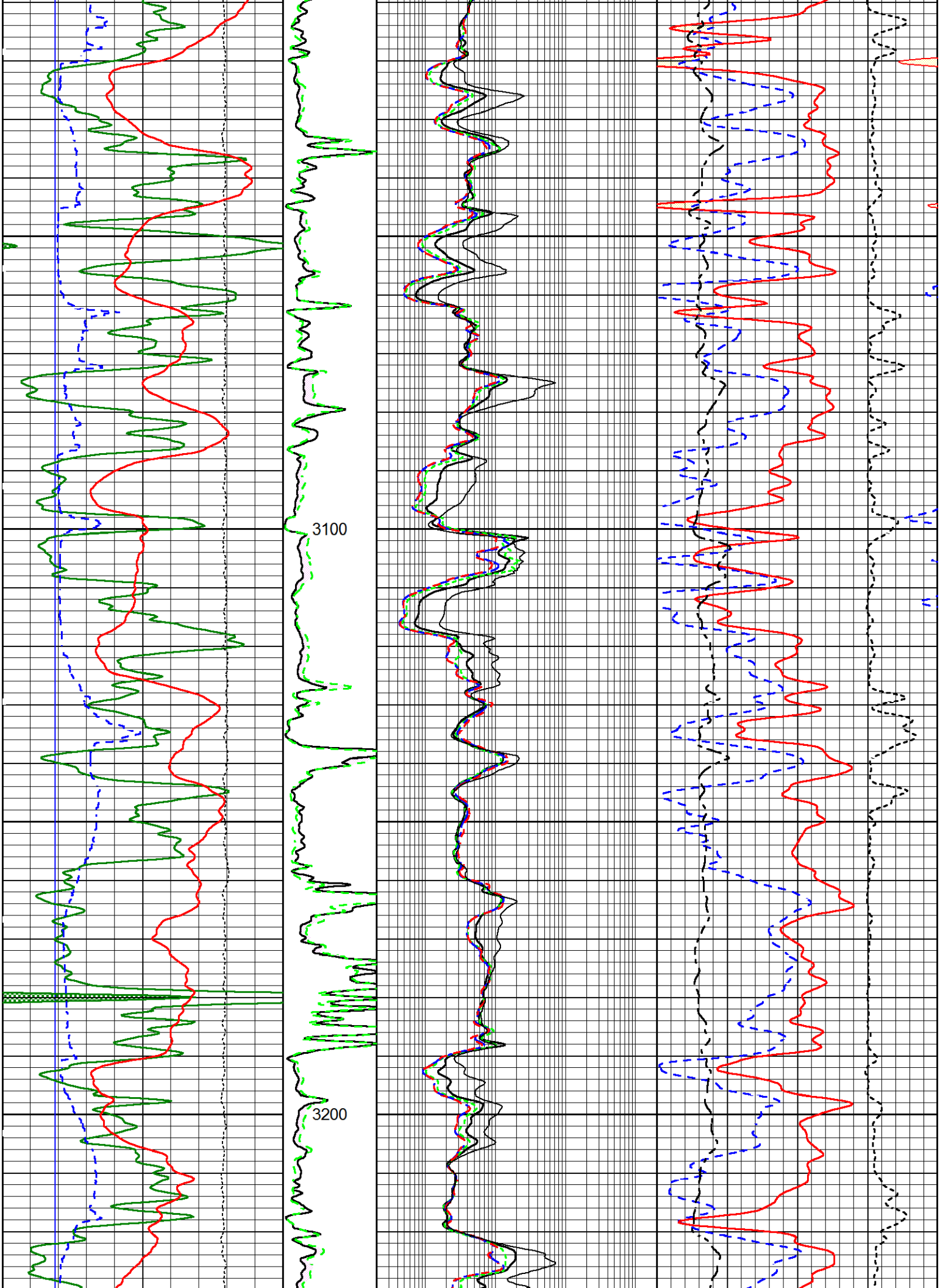
2700


2800
2900
3000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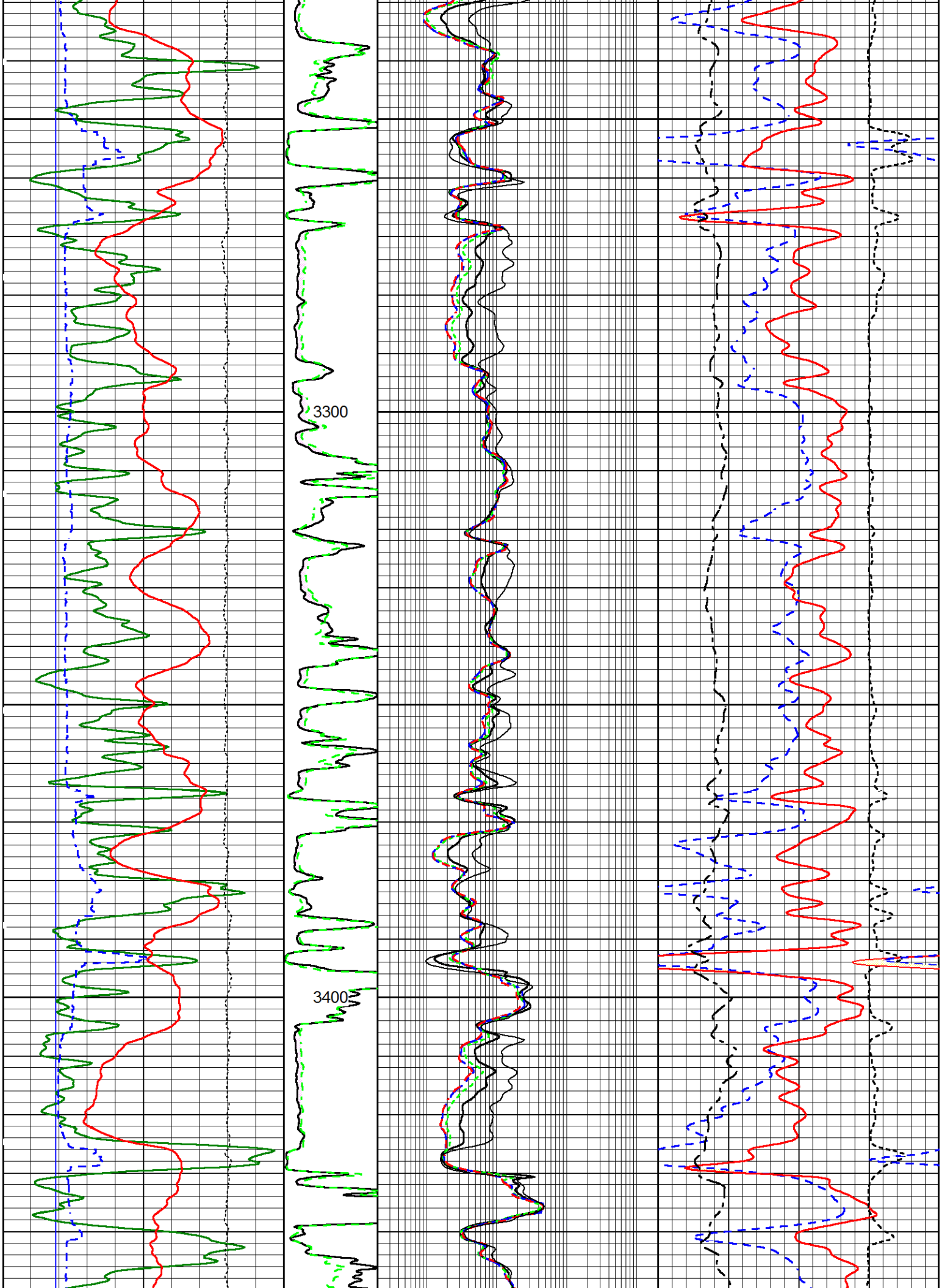
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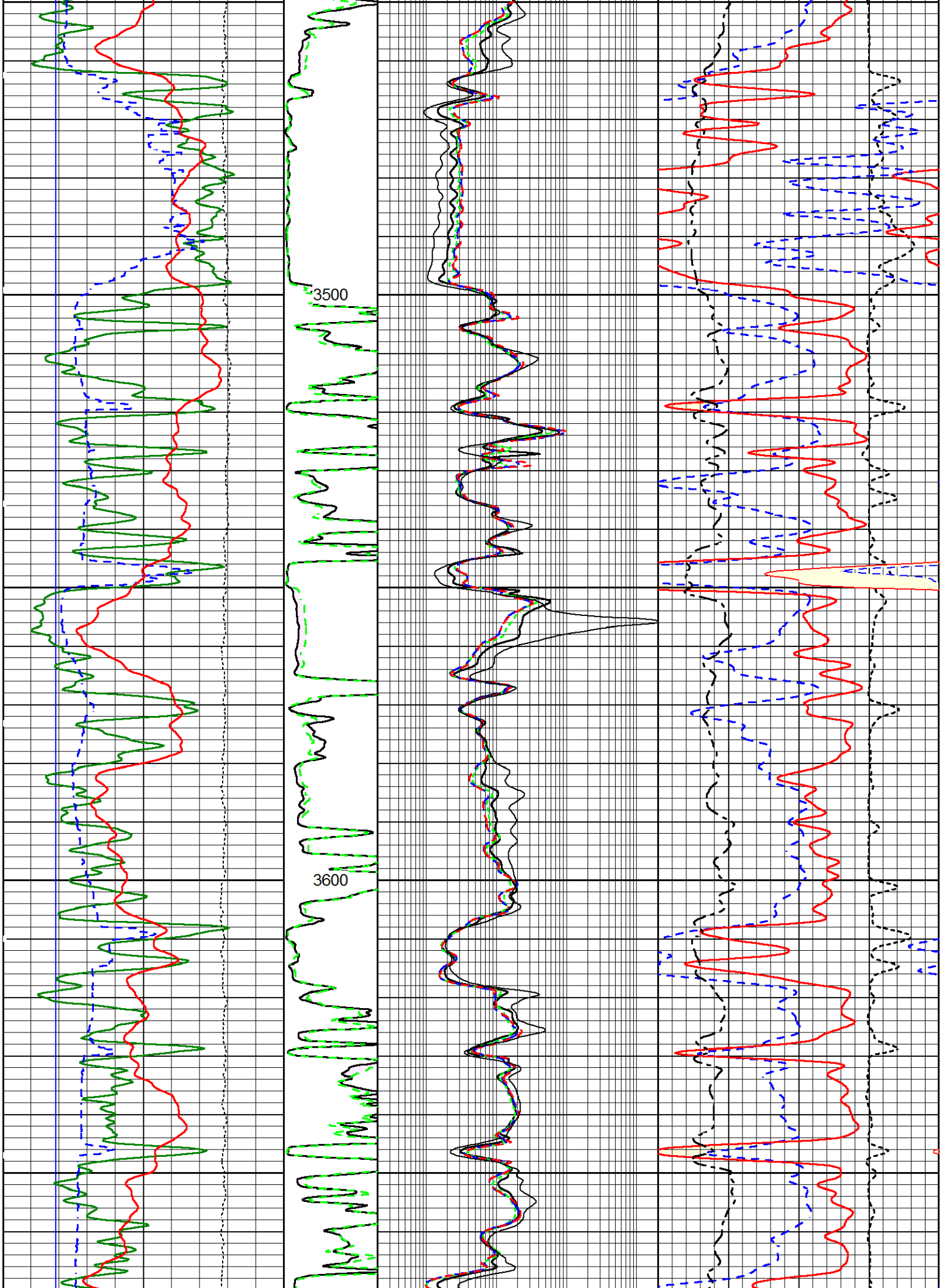
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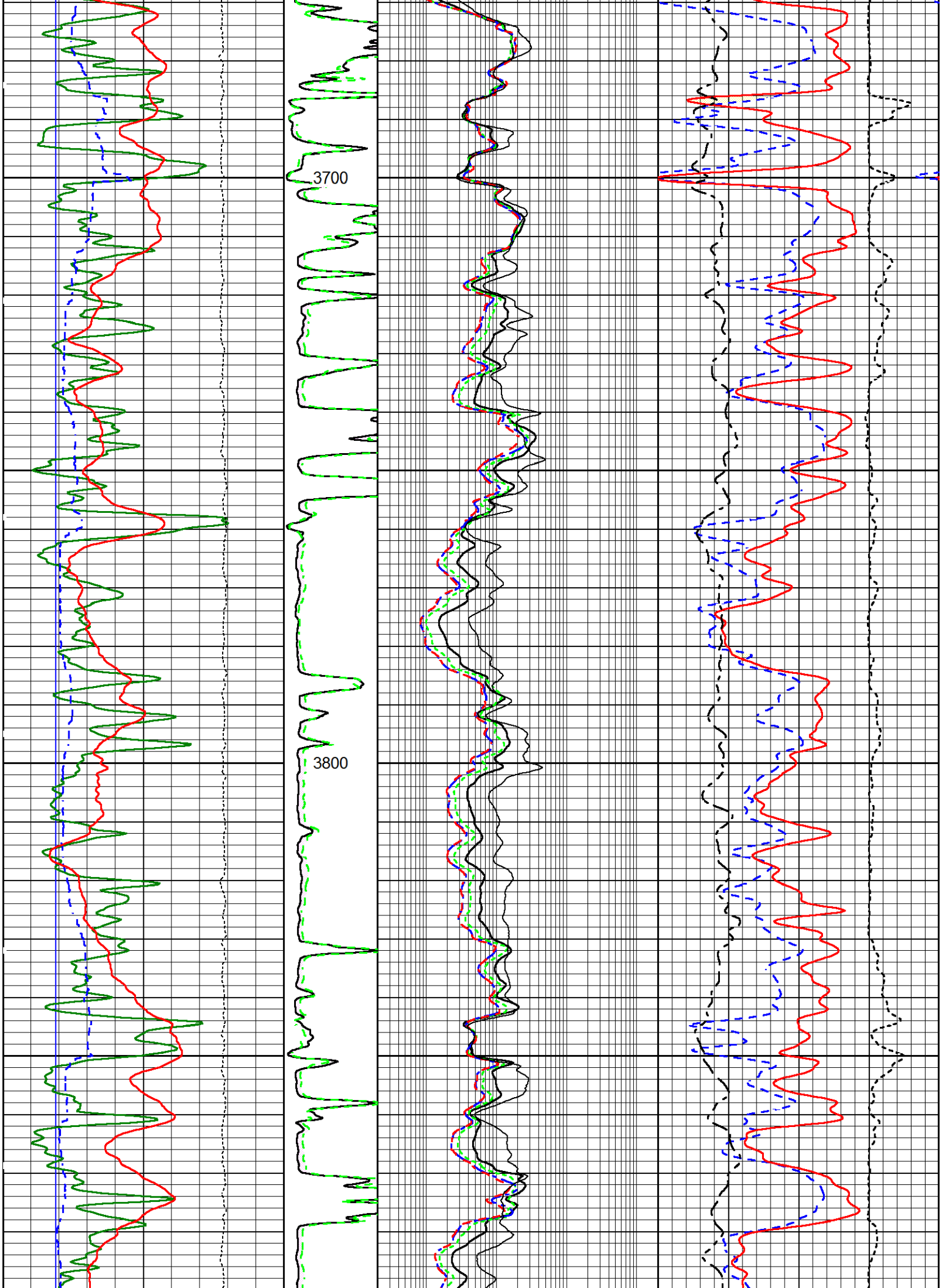
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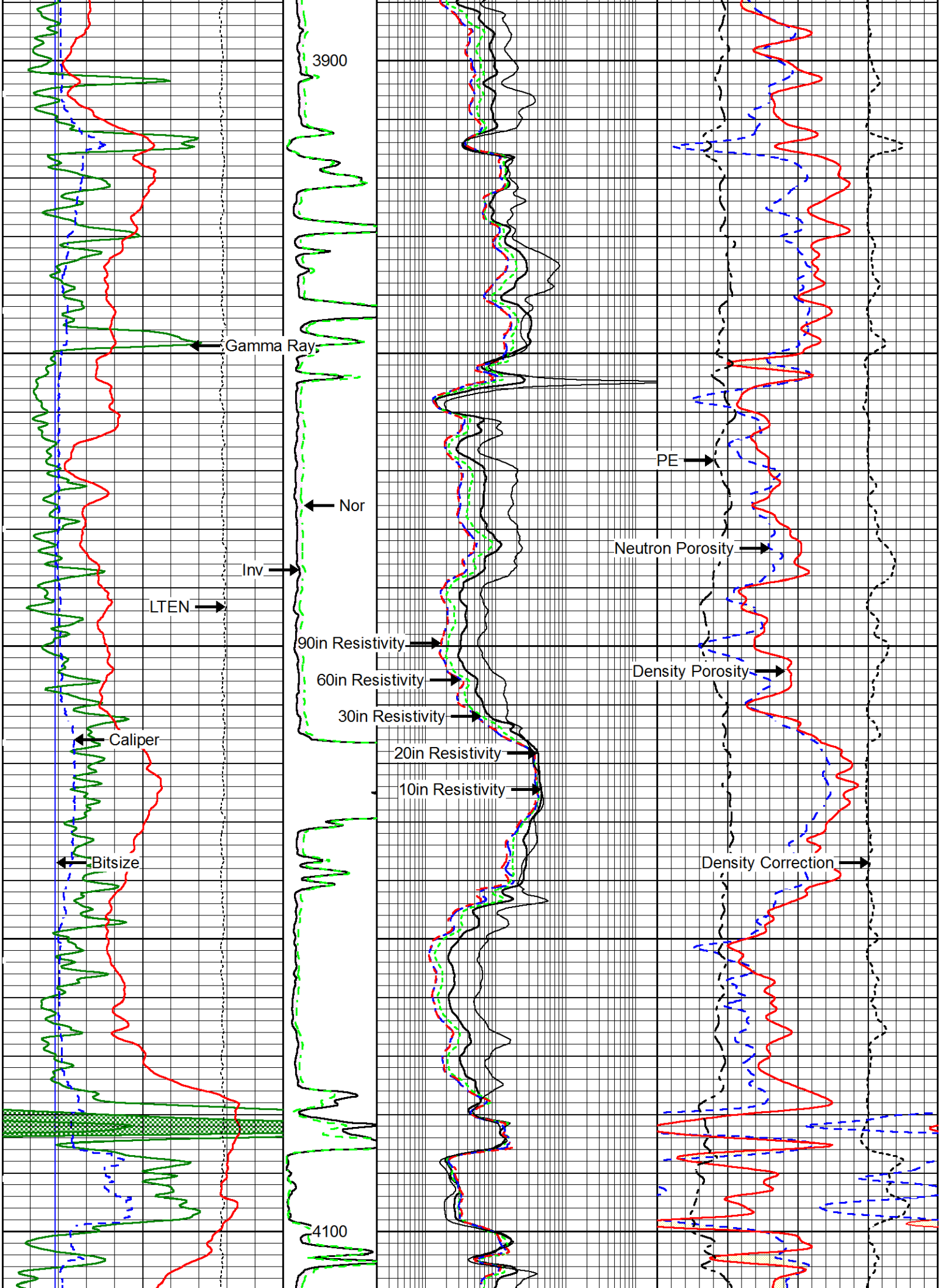
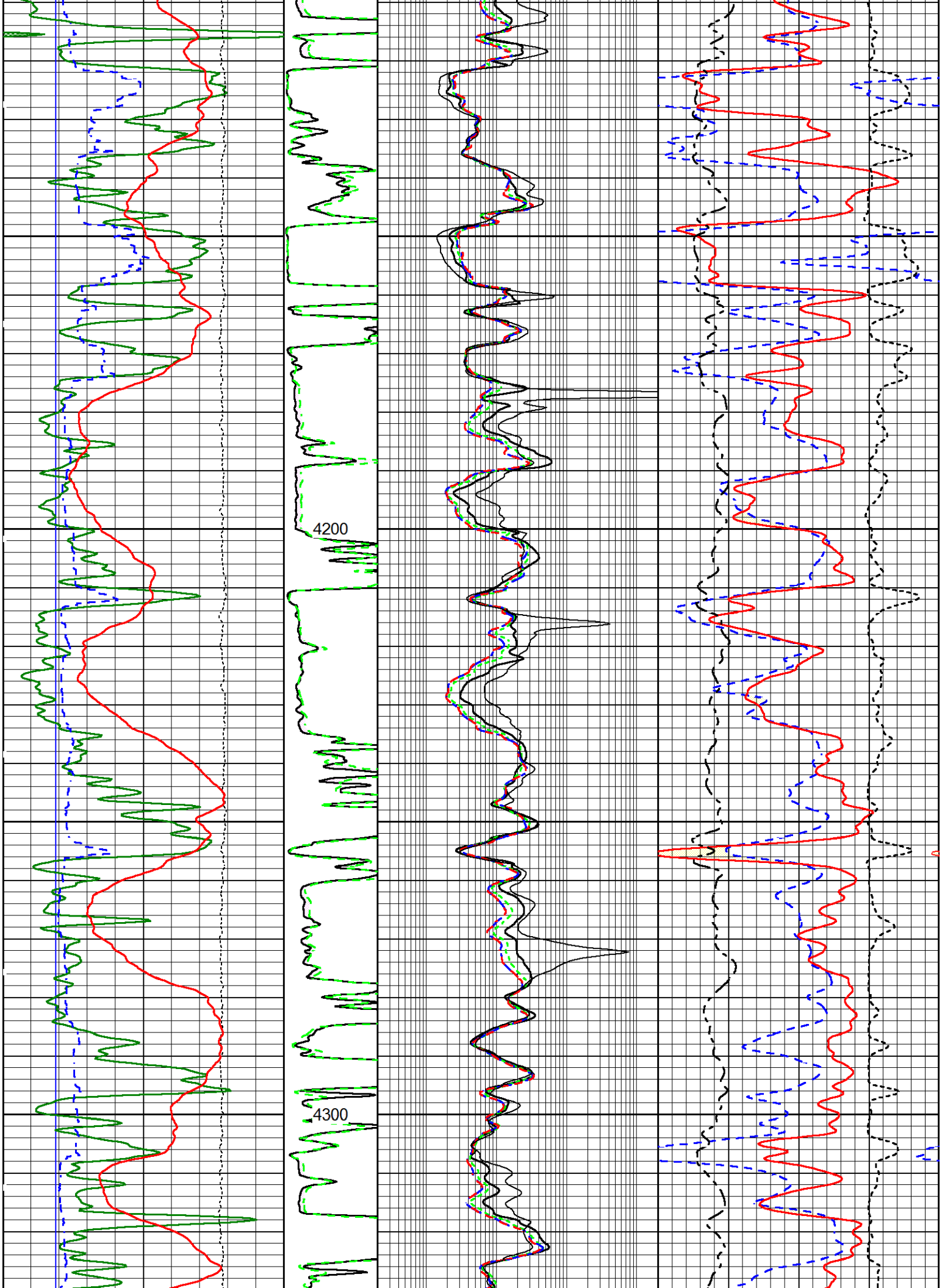

3900
Gamma Ray
Nor
Inv
LTEN
90in Resistivity
60in Resistivity
30in Resistivity
20in Resistivity
10in Resistivity
Caliper
Bitsize
PE
Neutron Porosity
Density Porosity
Density Correction
4100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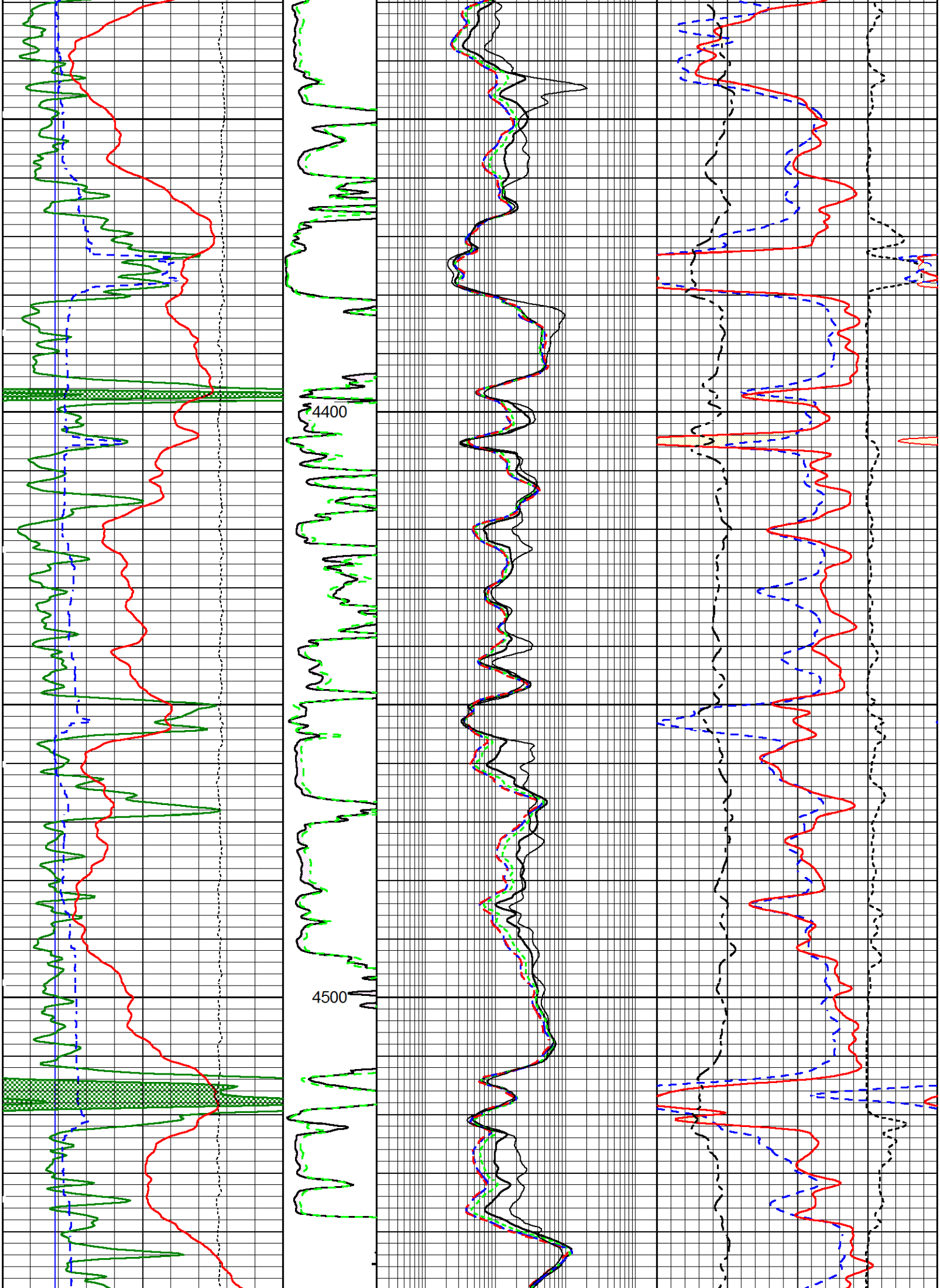
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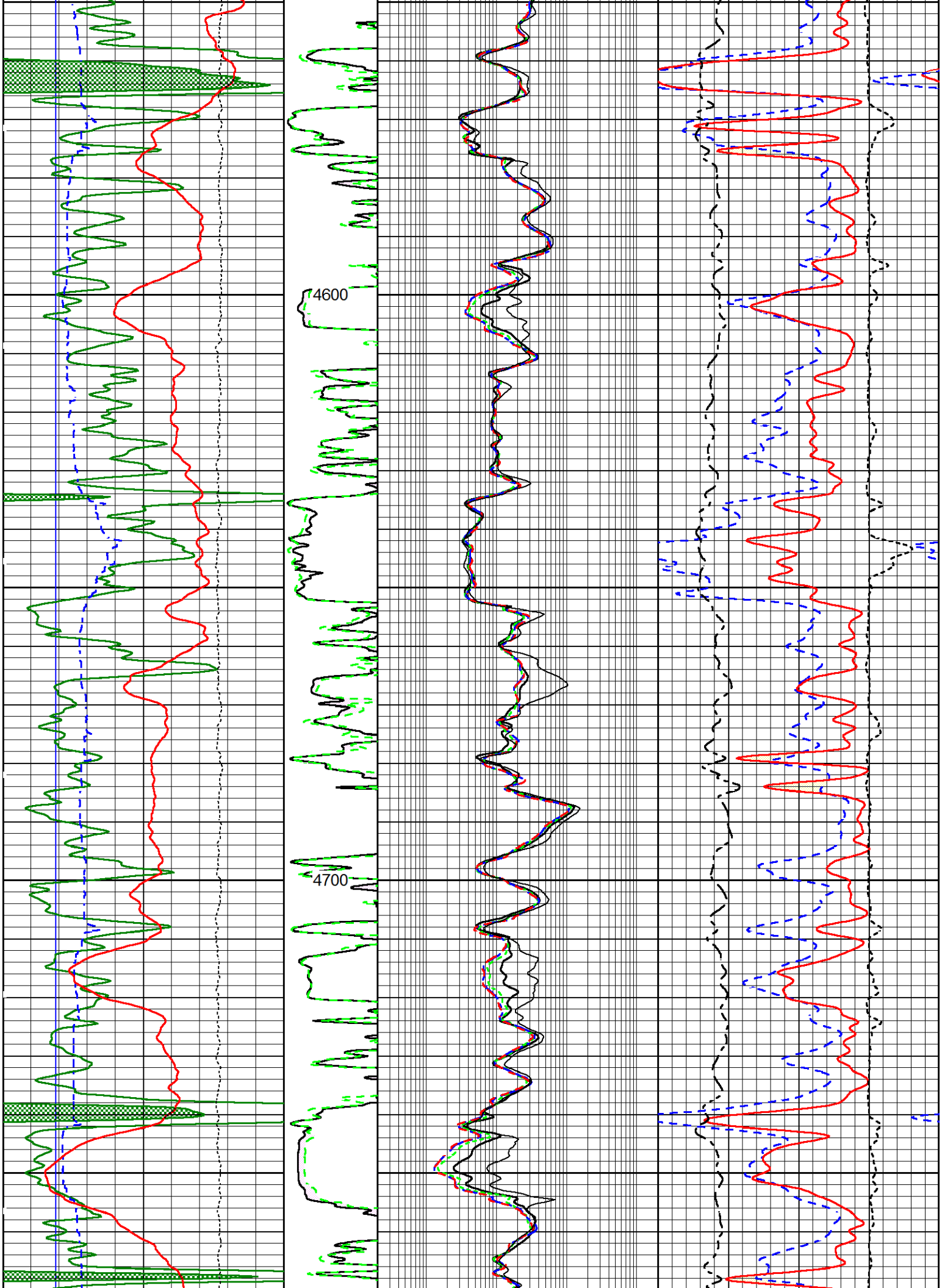
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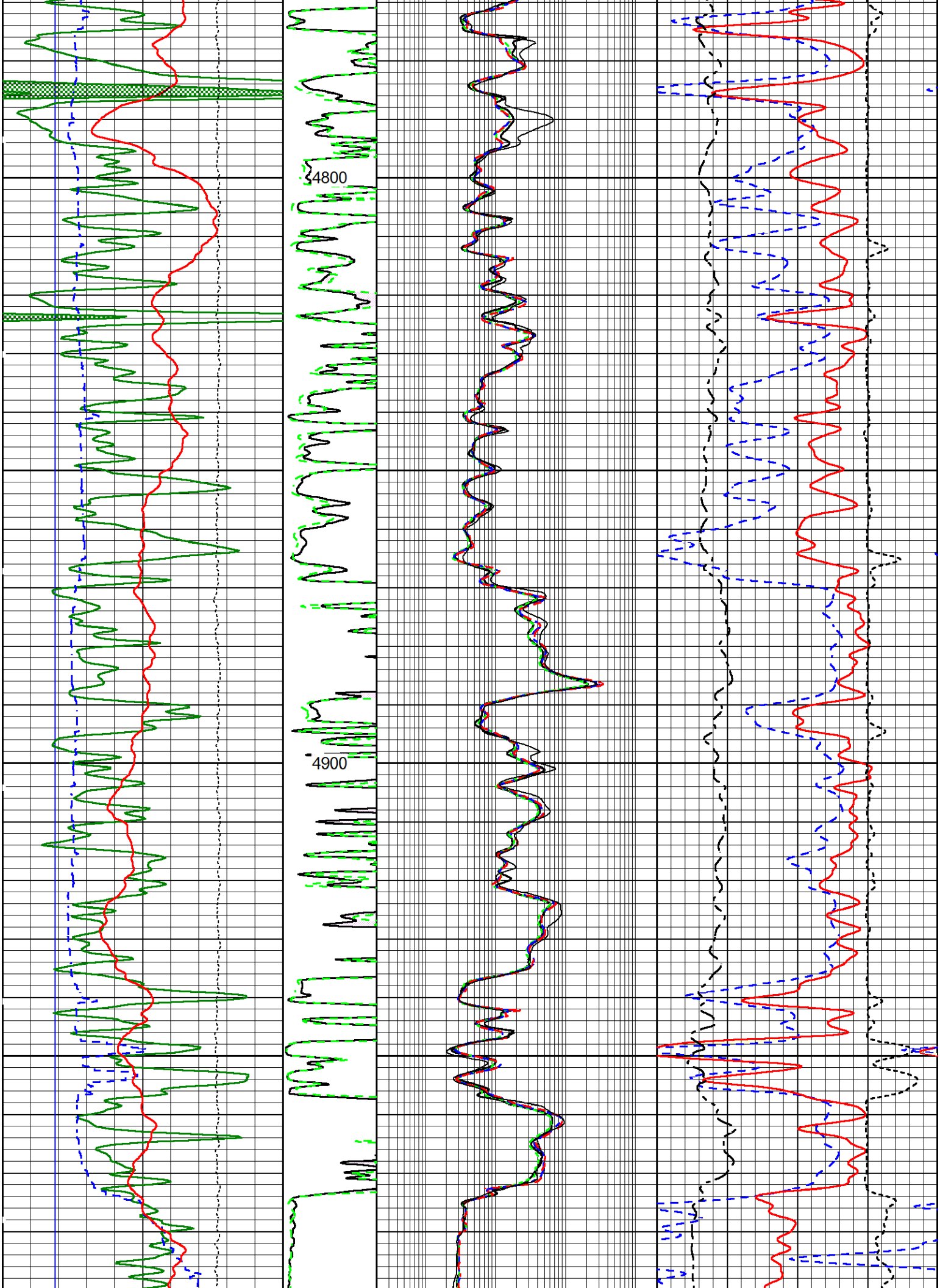
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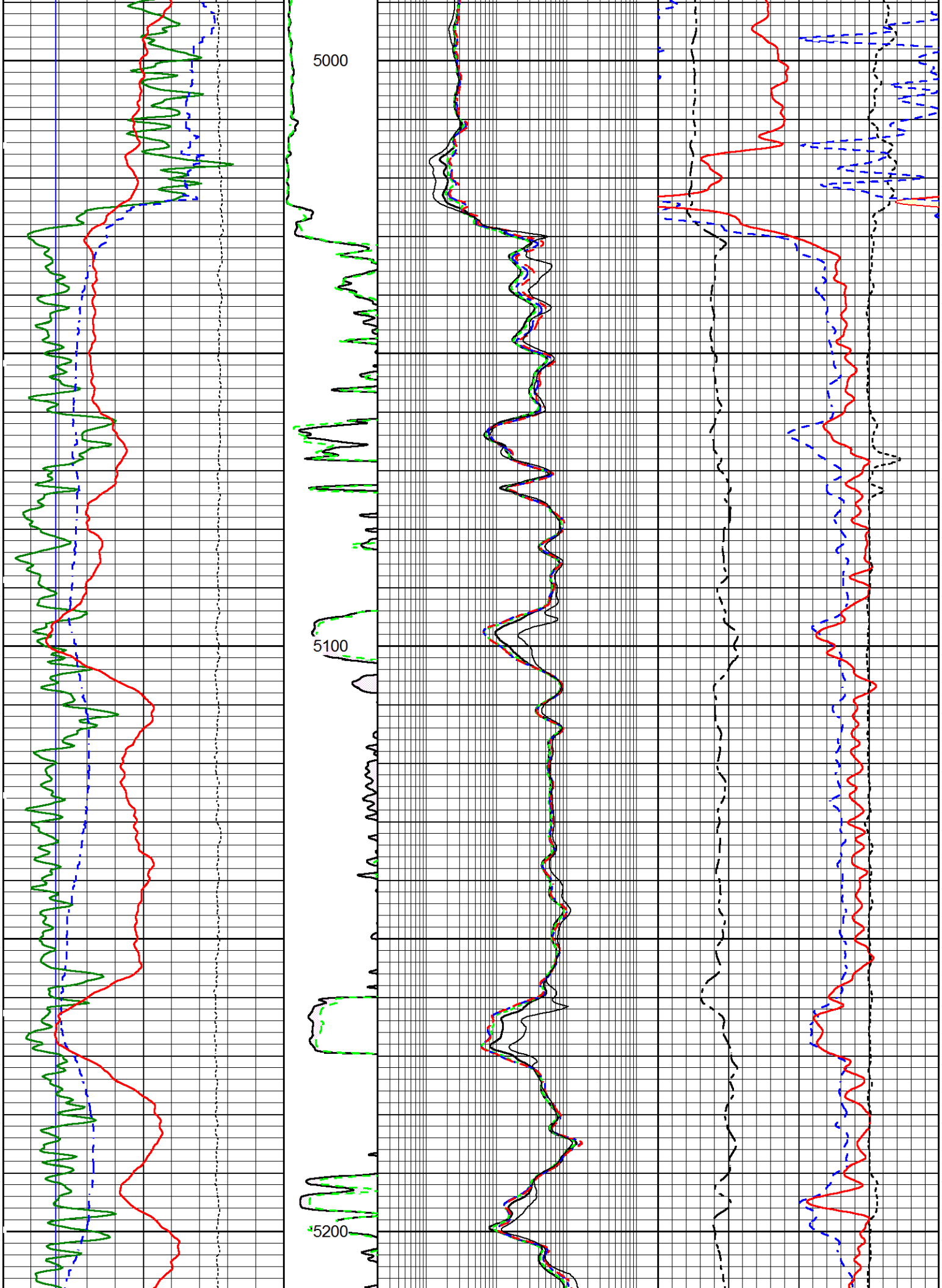
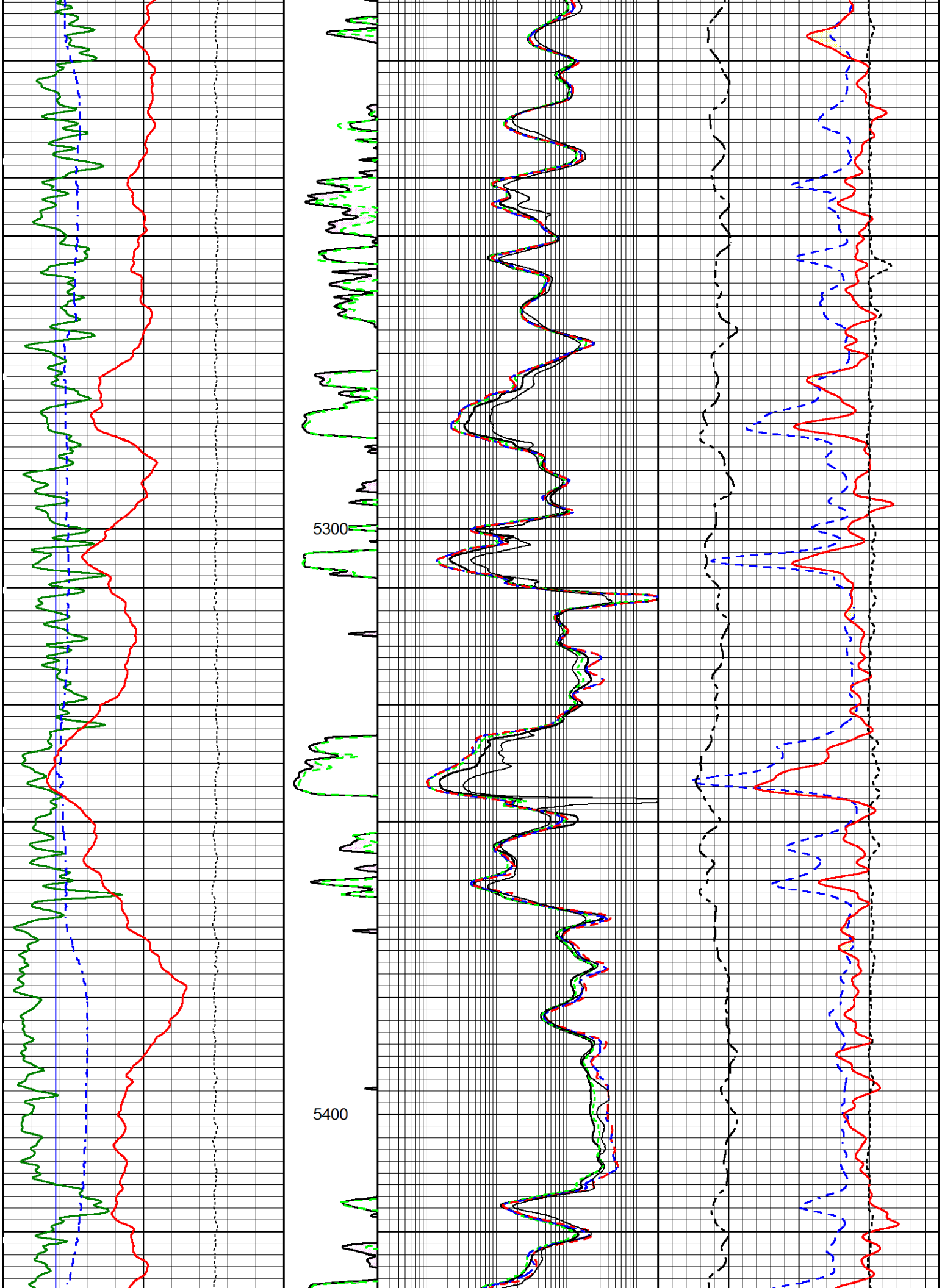
4900


5000
5100
5200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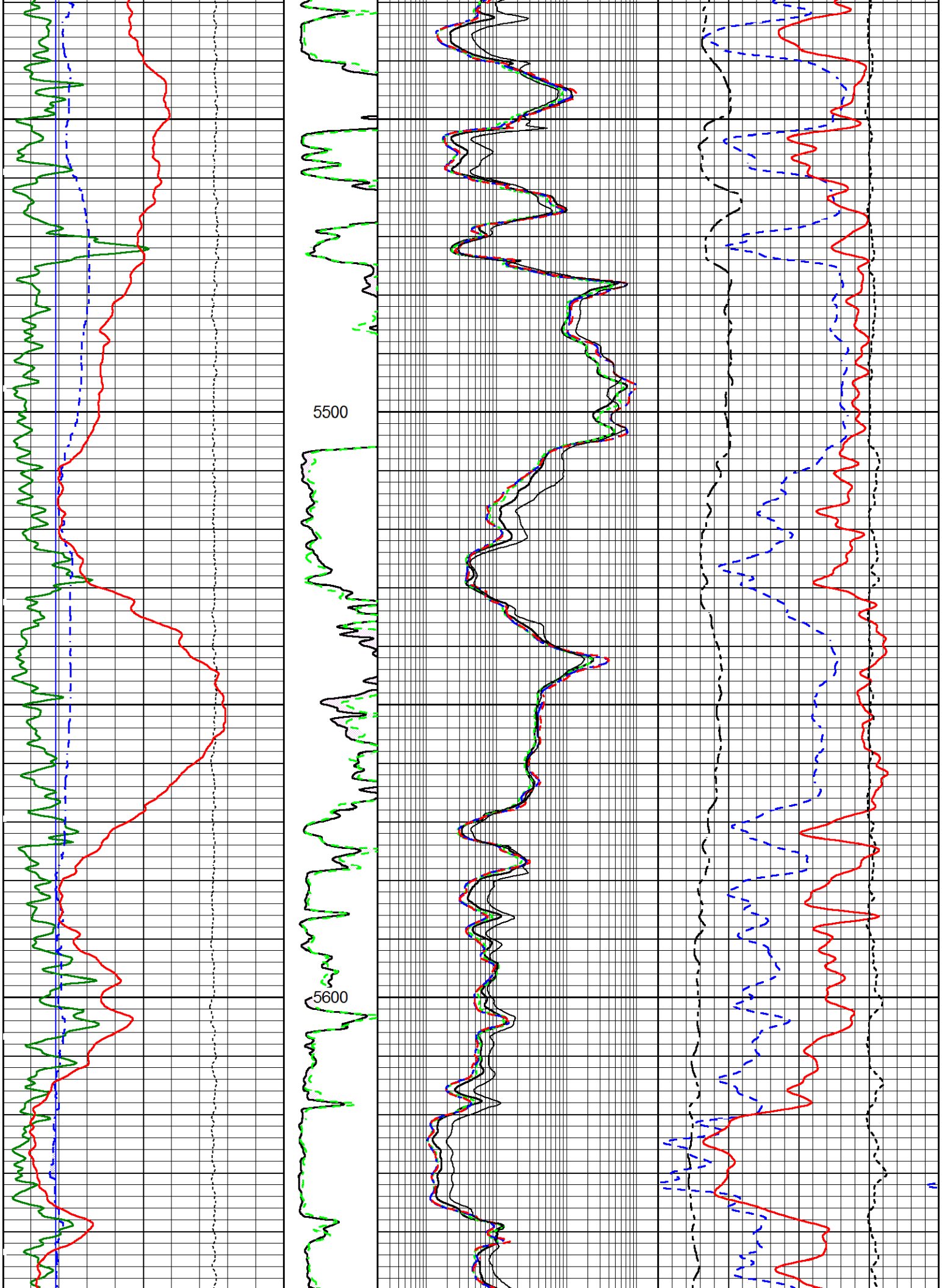
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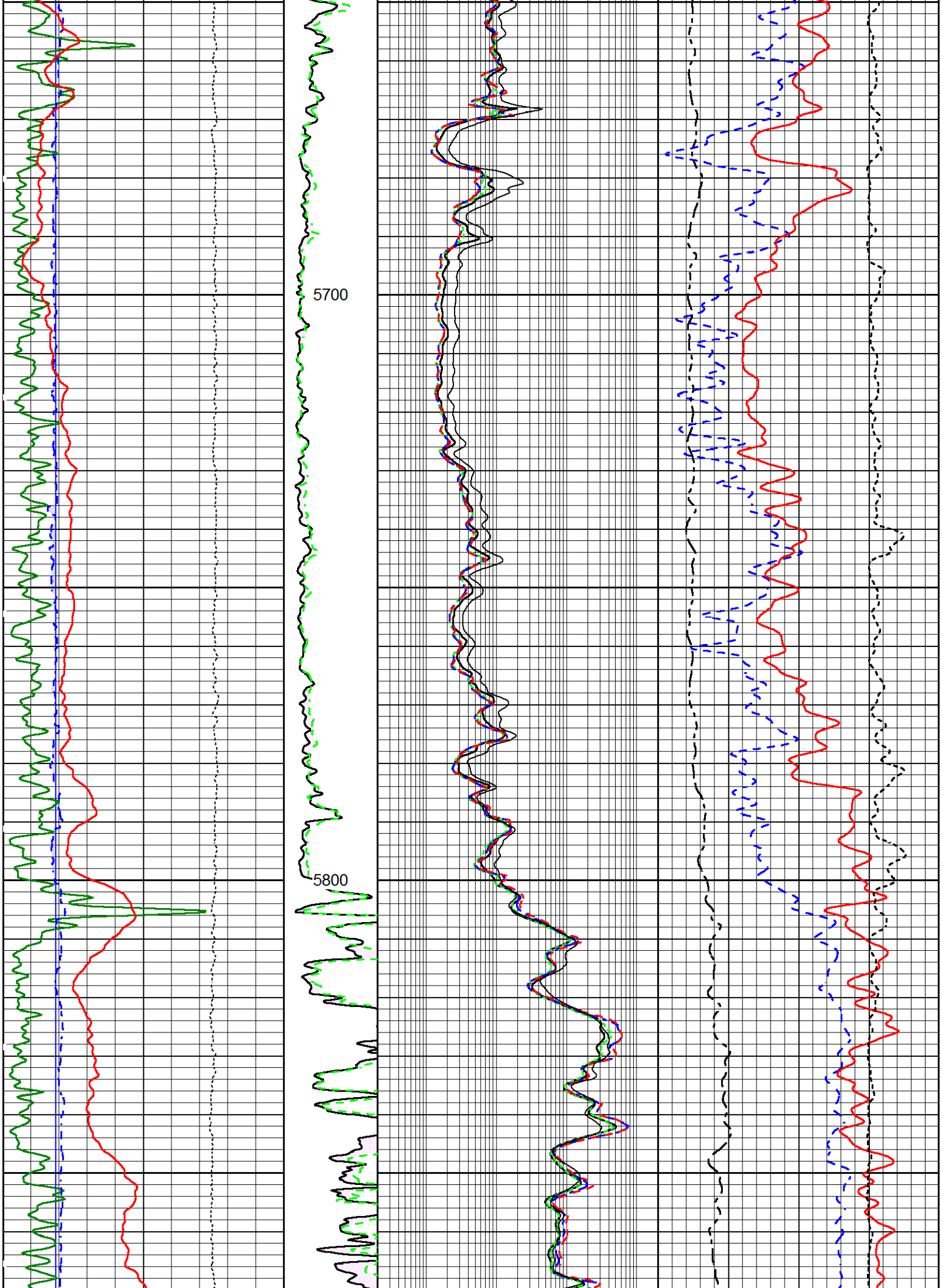
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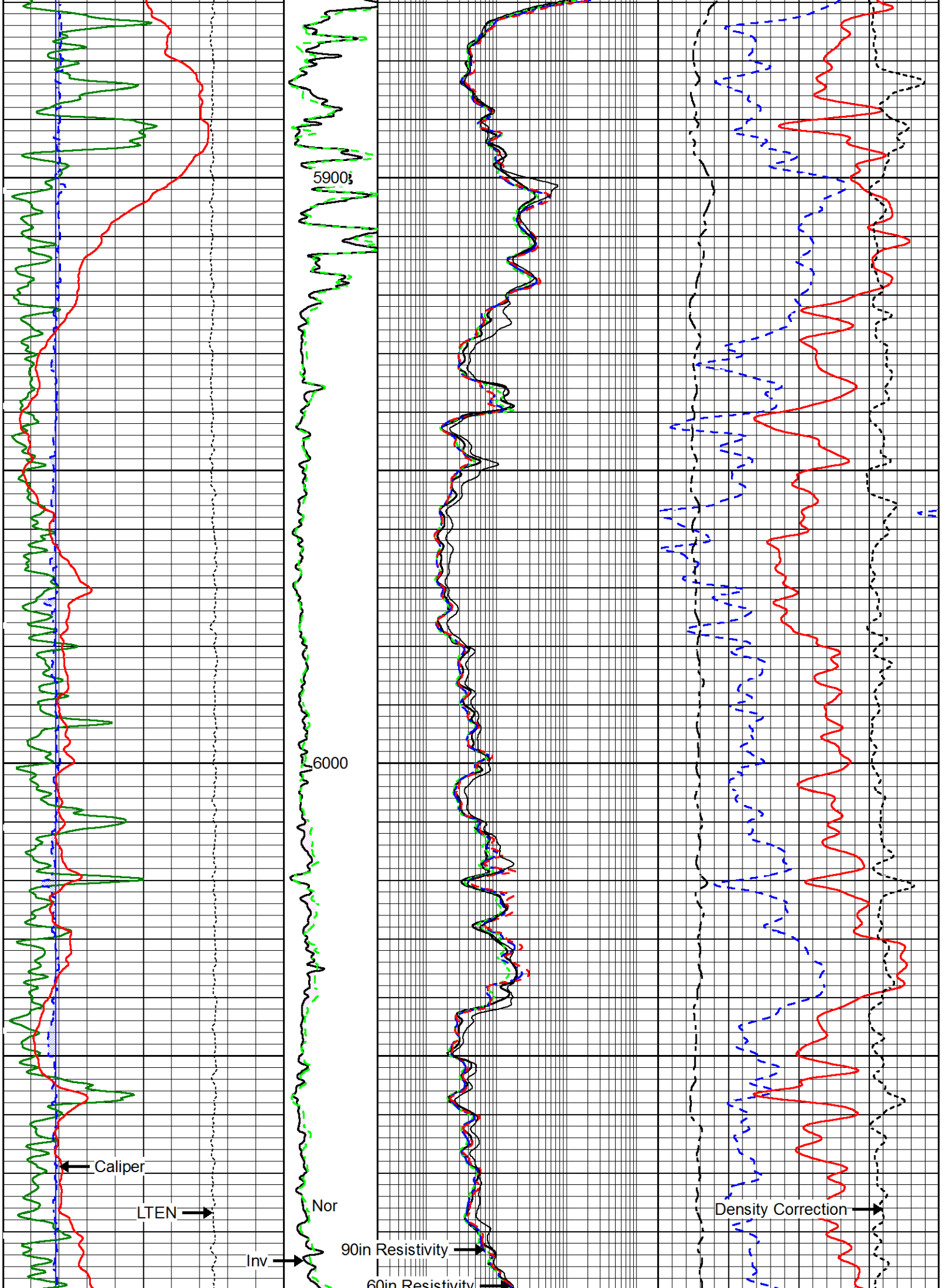
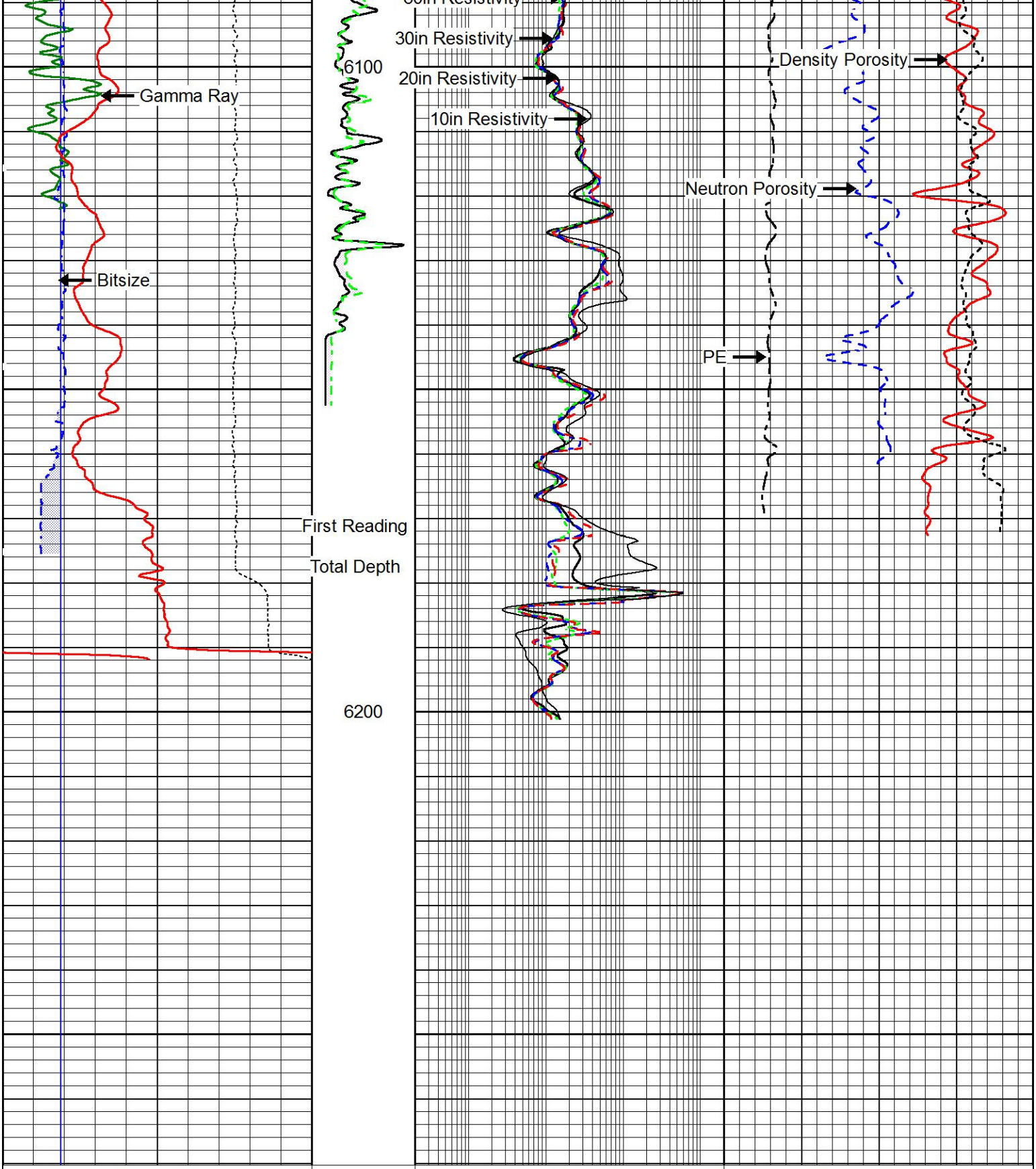

5900
6000
Caliper
LTEN
Nor
Inv
90in Resistivity
60in Resistivity
Density Correction



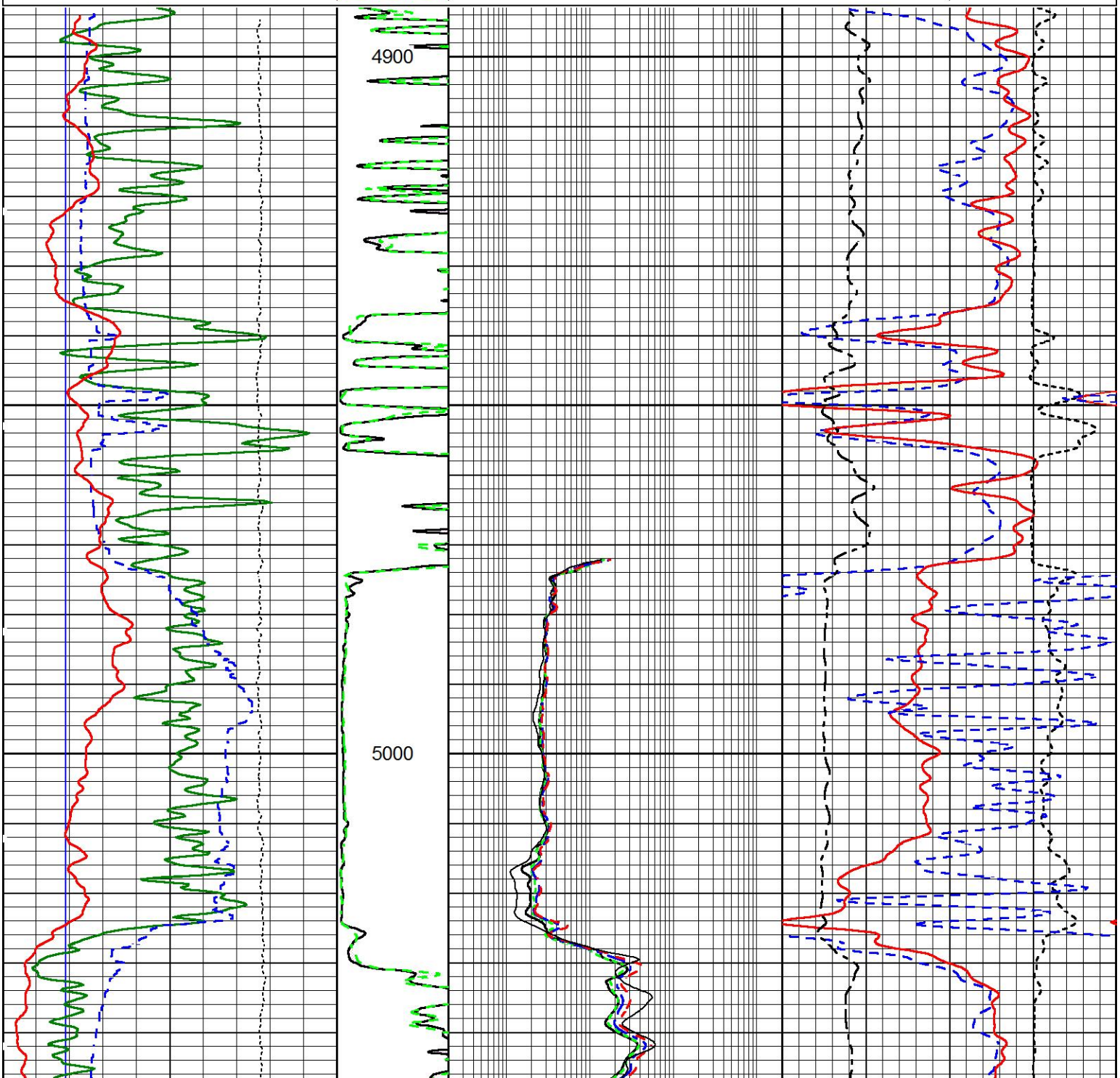
6	Bitsize (in)	16	Inv (Ohm-m) 0 20	0.2	20in Resistivity (Ohm-m)	2000	Neutron Porosity
0	Gamma Ray (GAPI)	150		0.2	30in Resistivity (Ohm-m)	2000	0.3 (Porosity Decimal Fraction) -0.1
6	Caliper (in)	16		0.2	60in Resistivity (Ohm-m)	2000	Density Porosity
	SP <-20+ mV>		Nor (Ohm-m) 0 20	0.2	90in Resistivity (Ohm-m)	2000	0.3 (Porosity Decimal Fraction) -0.1
	500CLTEN (lb)	0		0.2	10in Resistivity (Ohm-m)	2000	0 PE 10 Density Correction -0.25 (g/cc) 0.25

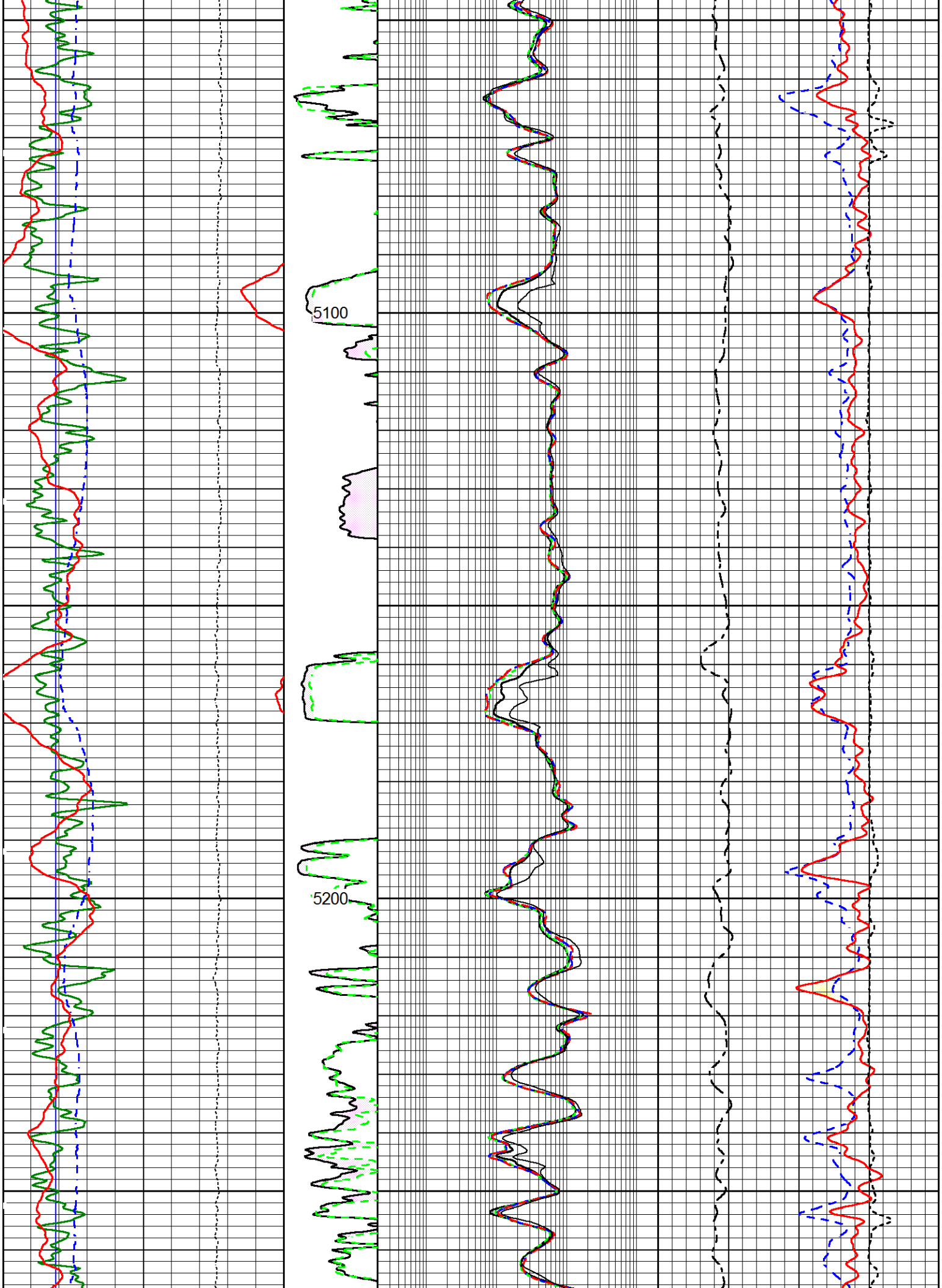
WIRELINE LOGGING SOLUTIONS

Repeat Pass

Database File	f:\bengalia-faris#2-35\bengalia-faris2-35.db
Dataset Pathname	pass5
Presentation Format	OKC-3C~1
Dataset Creation	Mon Aug 26 17:37:57 2019 by Log Sondex
Charted by	Depth in Feet scaled 1:240

6	Bitsize (in)	16	Inv (Ohm-m) 0 20	0.2	20in Resistivity (Ohm-m)	2000	Neutron Porosity	
0	Gamma Ray (GAPI)	150		0.2	30in Resistivity (Ohm-m)	2000	0.3 (Porosity Decimal Fraction)	-0.1
6	Caliper (in)	16		0.2	60in Resistivity (Ohm-m)	2000	Density Porosity	
SP <-20+ mV>			Nor (Ohm-m) 0 20	0.2	90in Resistivity (Ohm-m)	2000	0.3 (Porosity Decimal Fraction)	-0.1
	500CLTEN (lb)	0		0.2	10in Resistivity (Ohm-m)	2000	0 PE 10	Density Correction -0.25 (g/cc) 0.25

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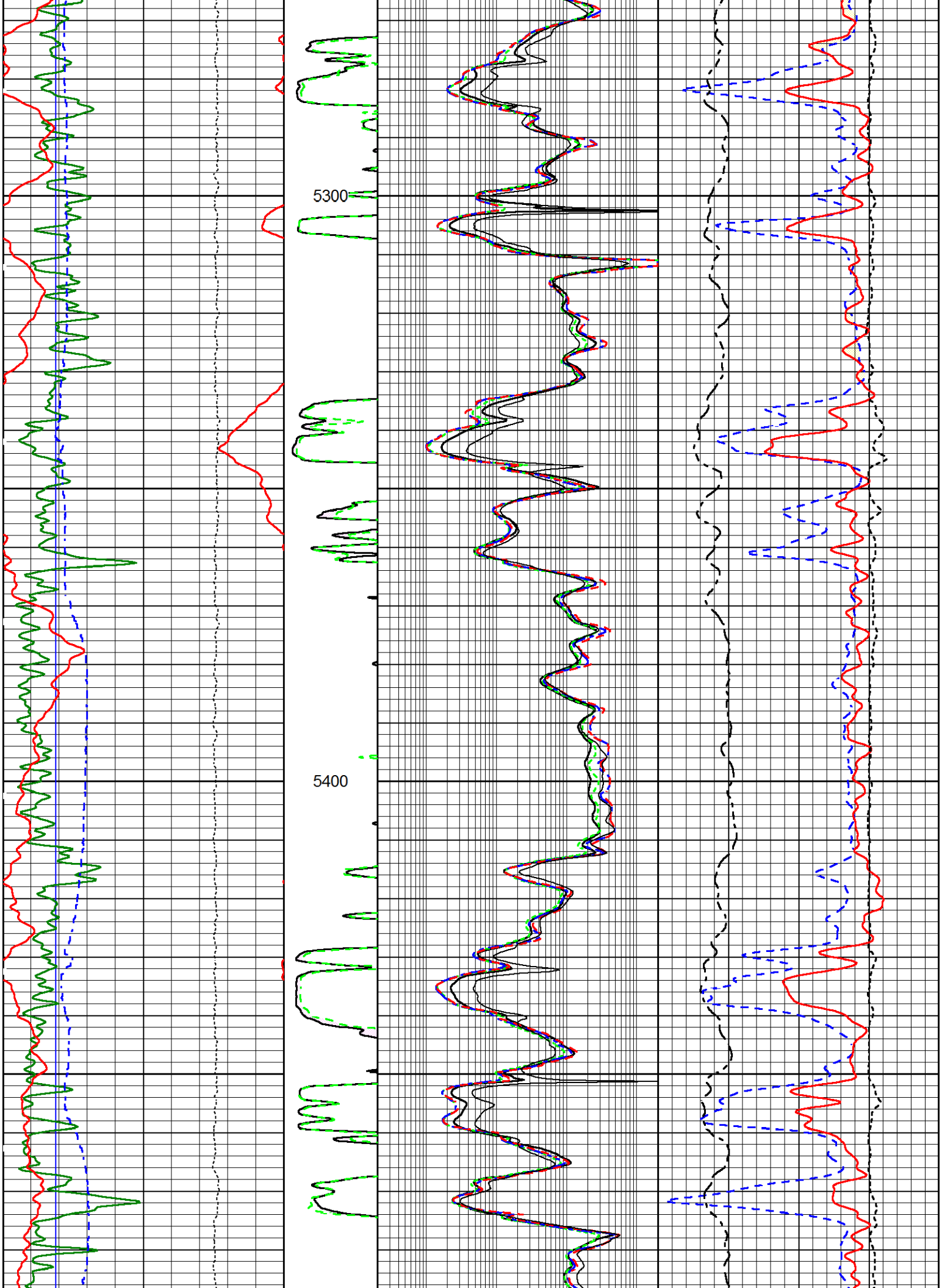
5200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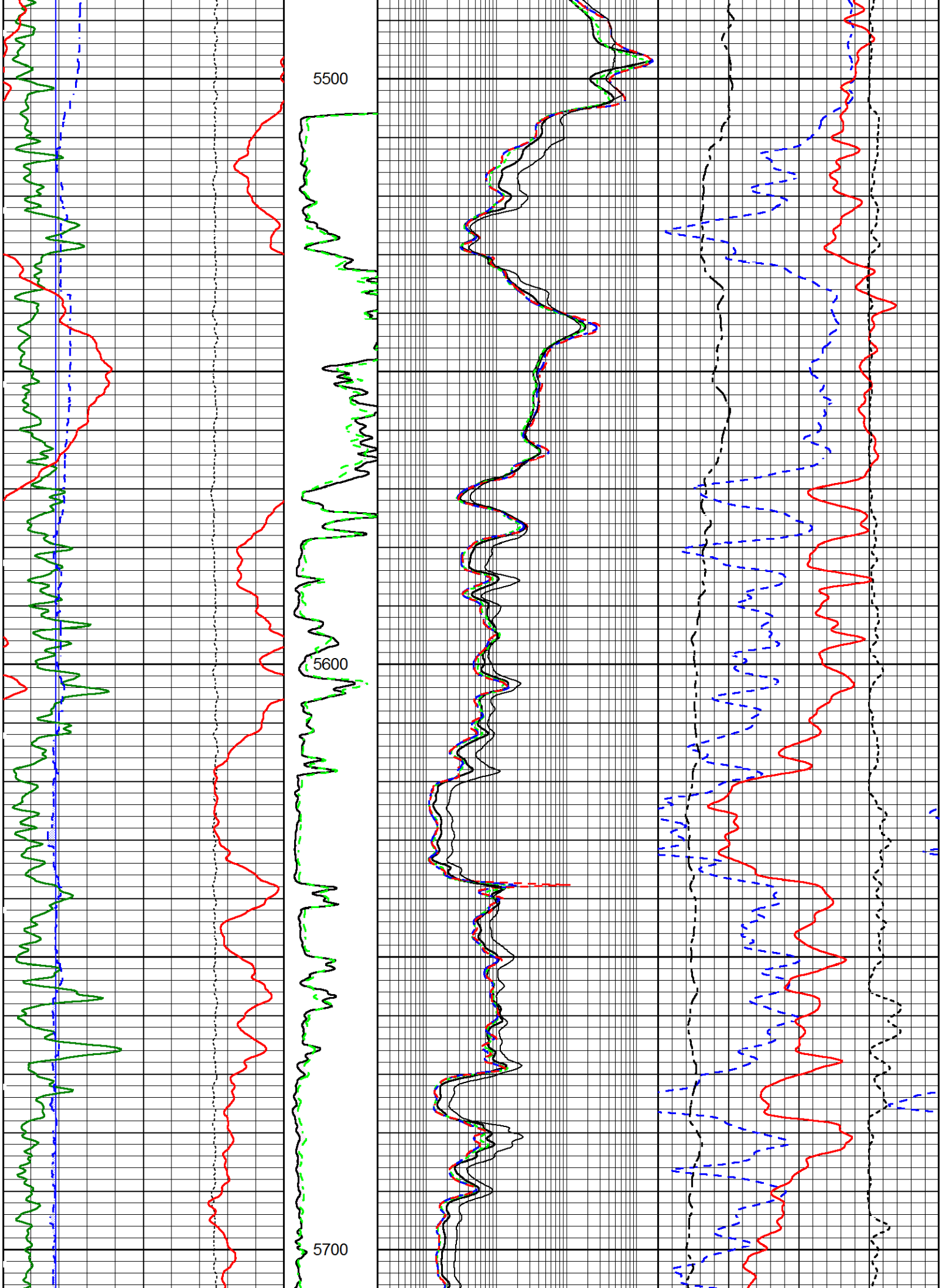
5400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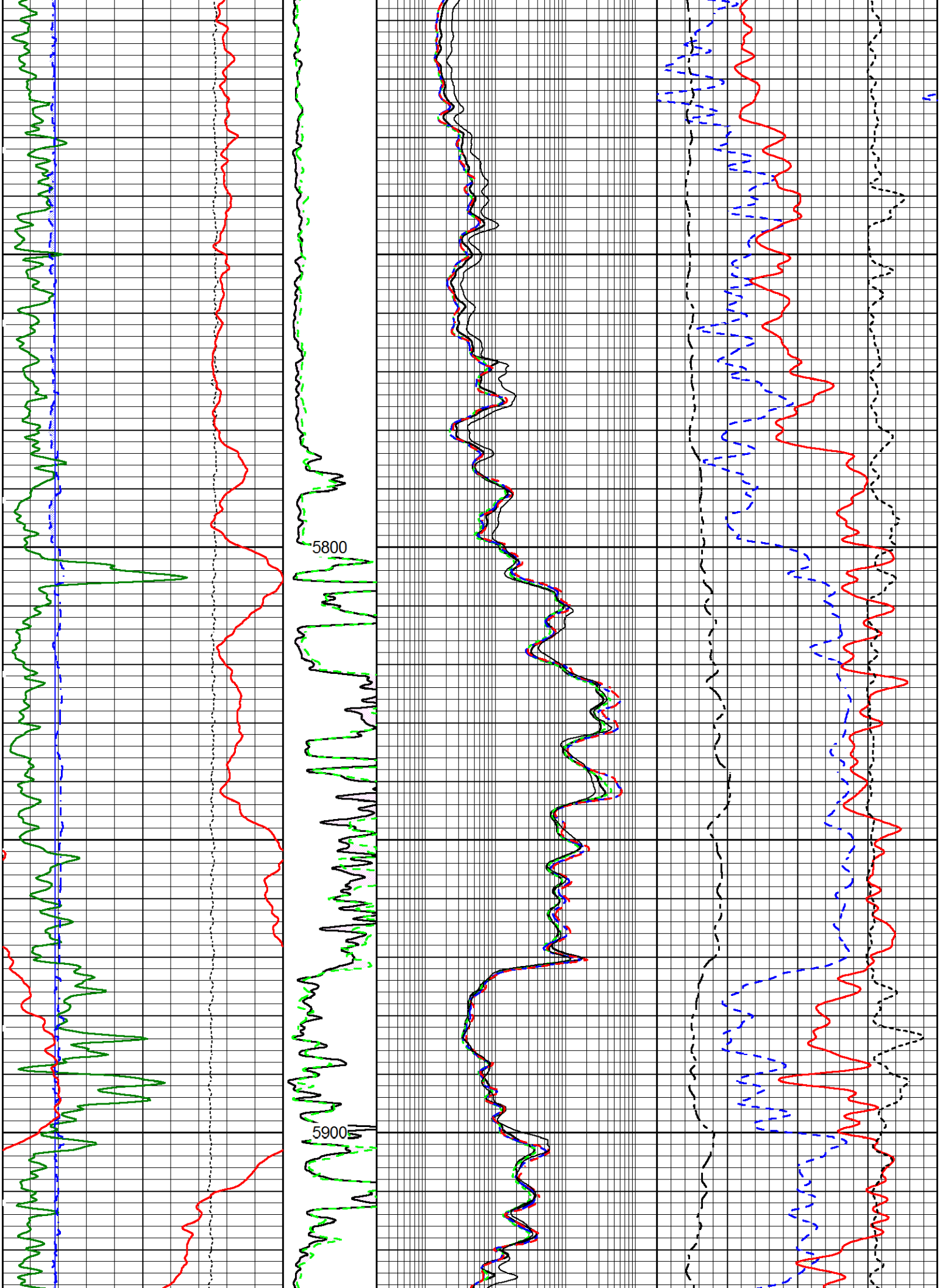
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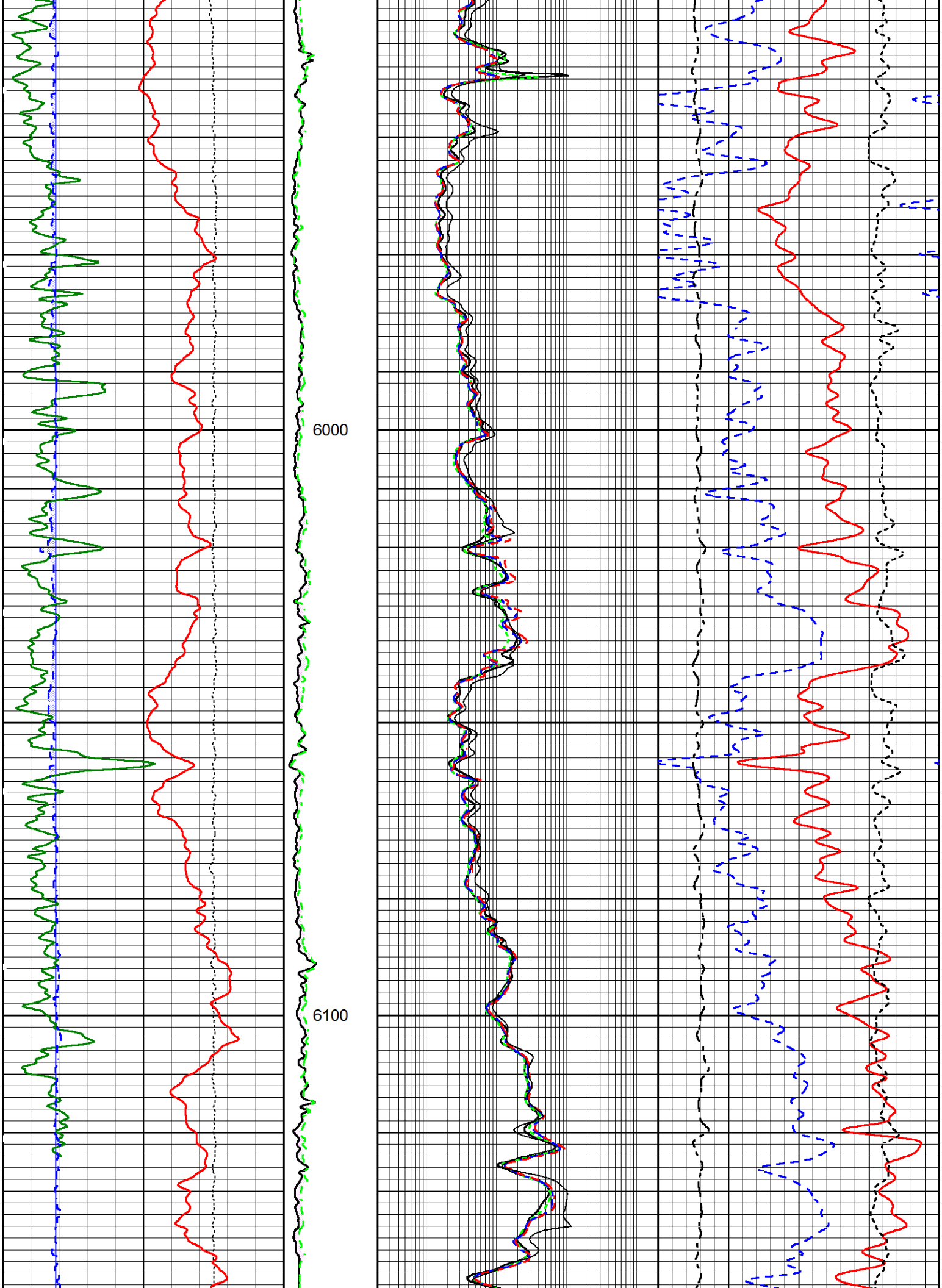
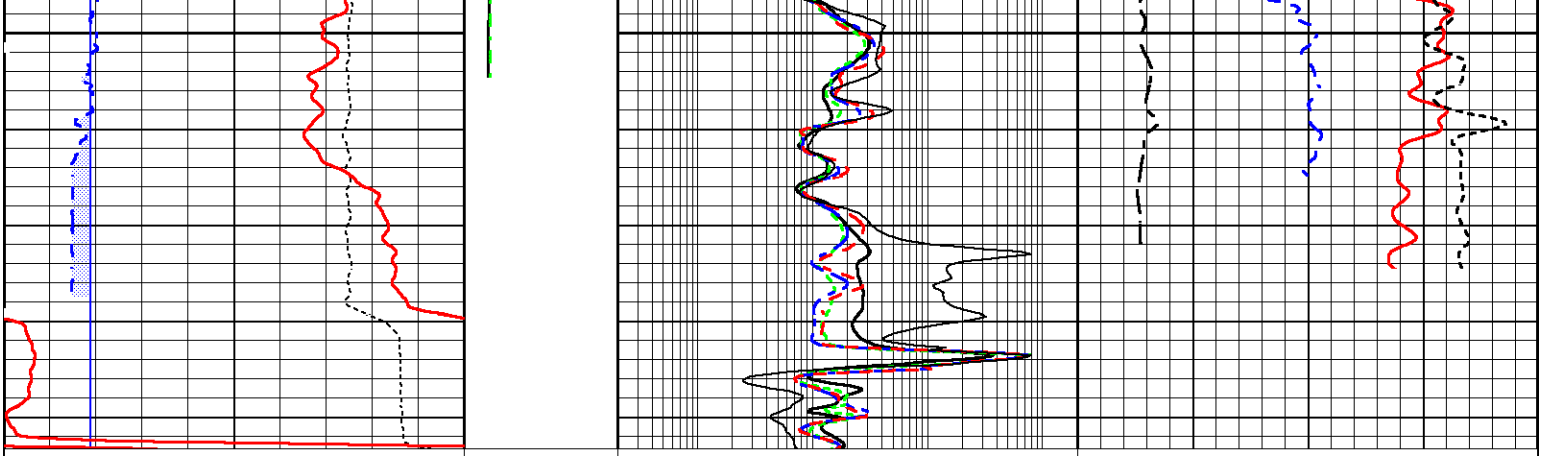
5900


6000
6100



Log Variables

DatabaseF:\Bengalia-Faris#2-35\bengalia-faris2-35.db
Dataset field/well/run1/pass7/_vars_

Top - 1822.00 ft

MAXAMPL mV	MINAMPL mV	MINATTN db/ft	COMPACT	SVFLUID usec/ft	SVMATRIX usec/ft	FRMSALIN kppm	MUDSALIN kppm
0	1	0.8	1	189	47.6	0	0
DEVI deg	**SRFTEMP degF**	**SO in**	**DE-CENT**	**CASED?**	**CASEWGHT lb/ft**	**NPORSEL**	**AIR_HOLE?**
0	90	0.25	Yes	Yes	11.5	Limestone	No
MudWgt lb/gal	**FLUIDDEN g/cc**	**MATRXDEN g/cc**	**SPSHIFT mV**	**CASETHCK in**	**CASEOD in**	**PERFS**	**TDEPTH ft**
9.5	1	2.71	0	0	8.625	0	0
BOTTEMP degF	**BOREID in**						
133	12.25						

1822.00 ft - Bottom

MAXAMPL mV	MINAMPL mV	MINATTN db/ft	COMPACT	SVFLUID usec/ft	SVMATRIX usec/ft	FRMSALIN kppm	MUDSALIN kppm
0	1	0.8	1	189	47.6	0	0
DEVI deg	**SRFTEMP degF**	**SO in**	**DE-CENT**	**CASED?**	**CASEWGHT lb/ft**	**NPORSEL**	**AIR_HOLE?**
0	90	**0**	Yes	**No**	11.5	Limestone	No
MudWgt lb/gal	**FLUIDDEN g/cc**	**MATRXDEN g/cc**	**SPSHIFT mV**	**CASETHCK in**	**CASEOD in**	**PERFS**	**TDEPTH ft**
9.5	1	2.71	0	0	**5.5**	0	0
BOTTEMP degF	**BOREID in**						
133	**7.875**						

Calibration Report

Database File	F:\Bengalia-Faris#2-35\bengalia-faris2-35.db
Dataset Pathname	pass7
Dataset Creation	Mon Aug 26 18:38:58 2019 by Log Sondex

Induction Array Tool Calibration Report

Serial Number:	B10106
Tool Model:	002

Master Calibration Performed:	Tue Nov 28 10:59:51 2017
Temperature:	68.7 degF

Sonde Error:

Array	1	2	3	4	5	6	7	
Real	192.8	-11.9	-39.2	-13.2	-1.7	1.8	6.3	mmho/m
Imaginary	-65.1	-116.4	-28.7	-0.7	-6.9	-21.0	-0.3	mmho/m

Loop Gain:

Array	1	2	3	4	5	6	7	
Loop (real)	537.7	678.5	1295.3	1394.1	1144.8	712.8	404.8	mmho/m
Loop (imaginary)	73.3	92.5	389.8	419.5	344.5	214.5	121.8	mmho/m
Real	751.4	713.1	1269.0	1383.2	1170.0	744.4	431.8	mmho/m
Imaginary	7.4	-22.6	351.2	413.7	341.5	200.9	128.1	mmho/m
Gain (real)	0.963	0.936	0.990	0.998	0.977	0.960	0.951	
Gain (imaginary)	1.012	0.986	1.026	1.012	0.989	0.967	0.948	

Before Survey Verification Performed:	Tue Aug 04 09:42:06 2015
Sonde 1 Temperature:	83.1 degF
Sonde 2 Temperature:	79.2 degF
Array 1 Temperature:	81.6 degF

Array	1	2	3	4	5	6	7
TxIR	-0.0	-0.0	0.1	0.1	0.1	0.1	0.1
TxIX	-0.0	-0.0	-0.2	-0.2	-0.2	-0.2	-0.2
Tx Magnitude	0.0	0.0	0.2	0.2	0.2	0.2	0.2
Gain	50.5	64.5	54.5	66.5	80.2	108.5	158.9
RxCR	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
RxCX	0.1	0.1	0.1	0.1	0.2	0.1	0.1
RxC Magnitude	0.1	0.1	0.1	0.1	0.2	0.1	0.1

Tool Module Parameters

Software Version:	8.0.0.4
Borehole Size Source:	BOREID
Mud Resistivity Source:	MUDRES
Mud Resistivity At Surface:	N/A
Mud Resistivity Surface Temperature:	N/A
Borehole Corrections:	Automatic
Minimum Standoff:	0.4 in

Litho Density Tool Calibration Report

Serial Number:	B113S50129B
Tool Model:	002

Caliper Calibration Performed:	Wed May 08 11:18:07 2019

	Diameter		Reading	
Small Ring:	9.000	in	1625.400	cps
Large Ring:	13.000	in	1968.300	cps

Gain:	0.0117
Offset:	-9.9606

Master Calibration Performed: Tue Aug 06 09:27:49 2019

Source Number: 50129B
Medium: Air
Al Block Density: 2.6002 g/cc

	Background	Al Block	Al Block + Fe	
SS1	701.8	4330.7	4100.6	cps
SS2	1970.9	29367.3	27598.8	cps
SSTOTAL	4623.7	46788.7	43546.8	cps
LITH	85.1	504.8	331.2	cps
LL	167.8	803.4	785.4	cps
LU	474.2	1007.7	1000.1	cps
LS	642.0	1811.1	1785.5	cps
LSTOTAL	1207.0	4499.4	3989.5	cps
SSHV	1559.4	1558.9	1559.0	V
LSHV	1483.1	1485.3	1486.3	V
SSFF	0.006	0.009	-0.004	
LSFF	0.002	-0.008	-0.008	

Before Survey Verification Performed:
After Survey Verification Performed:

	Master Background	Before Survey Background	After Survey Background	
SS1	701.8			cps
SS2	1970.9			cps
SSTOTAL	4623.7			cps
LITH	85.1			cps
LL	167.8			cps
LU	474.2			cps
LS	642.0			cps
LSTOTAL	1207.0			cps
SSHV	1559.4			V
LSHV	1483.1			V
SSFF	0.006			
LSFF	0.002			

Tool Module Parameters

Software Version: 8.0.0.6
Borehole Size Source: CALI
Pad Type: 2

Compensated Neutron Tool Calibration Report

Serial Number: C10071
Tool Model: 009

Master Calibration Performed: Tue Aug 06 10:29:05 2019

Source Number: 87624G

Short Spacing Counts:	5837.76	cps
Long Spacing Counts:	212.24	cps
High Voltage:	1363.91	V
Target Ratio:	27.2000	
Ratio:	27.5051	
K-Factor:	0.9889	

Before Survey Verification Performed: Tue Aug 06 10:35:35 2019

Before Survey Verification Performed: Tue Aug 06 10:35:55 2019
After Survey Verification Performed: Tue Aug 06 10:36:58 2019

Verifier Number: 6489

Verifier Values	Master Cal	Before Survey	After Survey	
Short Spacing Counts:	269.00	267.48	267.12	cps
Long Spacing Counts:	233.21	234.27	231.91	cps
High Voltage:	1363.86	1363.85	1363.85	V
Ratio:	1.1535	1.1417	1.1518	

Tool Module Parameters

Software Version: 8.0.0.5
Borehole Size Source: CALI
Clip Crossplot Porosity: YES
Lithology Identification Parameters:

	Calcite	Quartz	Dolomite	
Uma:	13.77	4.79	9.03	barns/cc
RHOma:	2.71	2.65	2.88	g/cc

Micro Electric Log Calibration Report

Serial Number: 10022649
Tool Model: 003

Caliper Calibration Performed: Mon Nov 13 12:40:50 2017

	Pad Arm			Backup Arm		
	Radius		Reading	Radius		Reading
Small Jig:	9.000	in	1847.200	9.000	in	1677.000
Large Jig:	13.000	in	2371.600	13.000	in	2315.300
Gain:			0.0076			0.0063
Offset:			-5.0900			-1.5092

Pad Calibration

	Inverse	Normal
Gain:	0.3000	0.3500
Offset:	0.0000	0.0000

Tool Module Parameters

Software Version: 8.0.0.4

Multi Array Sonic Calibration Report

Serial Number: C10037LS
Tool Model: 001LS

Tool Module Parameters

Software Version: 8.0.0.2
Integrated Transit Time Source: DT100120
Porosity Source: DT100120
Porosity Method: Wyllie
Raymer Hunt Constant: N/A

Gamma Ray Calibration Report

Serial Number: 10015939
Tool Model: 001

Performed: Mon Nov 13 12:01:40 2017

Calibrator Value: 156.0 GAPI

Background Reading:	117.4	cps
Calibrator Reading:	567.2	cps
Sensitivity:	0.3468	GAPI/cps

Borehole Fluid Resistivity Calibration Report

Serial Number:	P004
Tool Model:	002

Master Calibration Performed: Wed May 25 15:17:37 2016

Resistivity Polynomial Equation:

0.1429x^3 - 0.4495x^2 + 1.2097x - 0.2854

Temperature Calibration:

Reference		Reading	
71.60	degF	559.80	bits
167.00	degF	659.50	bits

Head Tension Unit Calibration Report

Serial Number:	00001
Tool Model:	011

Performed: Tue Nov 29 12:33:39 2016

Point #	Reference		Reading	
1	-19894.000	lb	8957.860	cps
2	-15010.000	lb	13965.100	cps
3	-9998.000	lb	19076.100	cps
4	-5007.000	lb	24133.000	cps
5	-1009.000	lb	28232.100	cps
6	1017.000	lb	30185.400	cps
7	5040.000	lb	34439.700	cps
8	9970.000	lb	39346.900	cps
9	14955.000	lb	44466.000	cps
10	19770.000	lb	49397.800	cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			CHD-001 (000004) Cable Head	2.19	3.38	35.00
HTEN	73.78		XTU-008 (1399 High Power) Crossover Ultrawire Toolbus to Ultralink	2.08	3.38	47.00
			HTU-011 (00001) Head Tension Unit	2.18	3.38	55.00
BFR	70.14		BFR-002 (P004) Borehole Fluid Resistivity	4.39	3.38	94.00
GR	67.38		GRT-001 (10015939) Gamma Ray Tool	3.22	3.38	69.00
			Centralizer-Overbody Overbody Centralizer	2.00	6.88	5.00
WVFATR8	55.26		MAS-001LS (C10037LS) Multi Array Sonic Tool (LS)	19.83	3.38	340.00
WVFATR7	55.01					
WVFATR6	54.76					
WVFATR5	54.51					
WVFATR4	54.26					
WVFATR3	54.01					

WVFATR2	53.76				
WVFATR1	53.51				
WVF5FT	53.01				
WVF3FT	52.01	MEL-003 (10022649) Micro Electric Log	9.17	3.38	190.00
MEL	37.55				
		CEN-001 (C10025) Inline OH Springbow Centraliser	4.27	3.38	66.00
		KJT-001 (000001) Knuckle Joint	2.86	3.38	72.00
CNLSC	25.59	CNL-009 (C10071) Compensated Neutron Logging Tool	5.28	3.38	100.00
CNSSC	25.09				
		LDT-002 (B113S50129B) Litho Density Tool	9.75	4.50	310.00
LDT	15.44				
		Standoff-Rubber Rubber Fin Standoff	1.08	4.88	3.00
IAT	8.44				
		IAT-002 (B10106) Induction Array Tool	13.22	3.88	196.00
SP	0.43	Short-1 Short Hole Finder	0.38	3.88	6.00

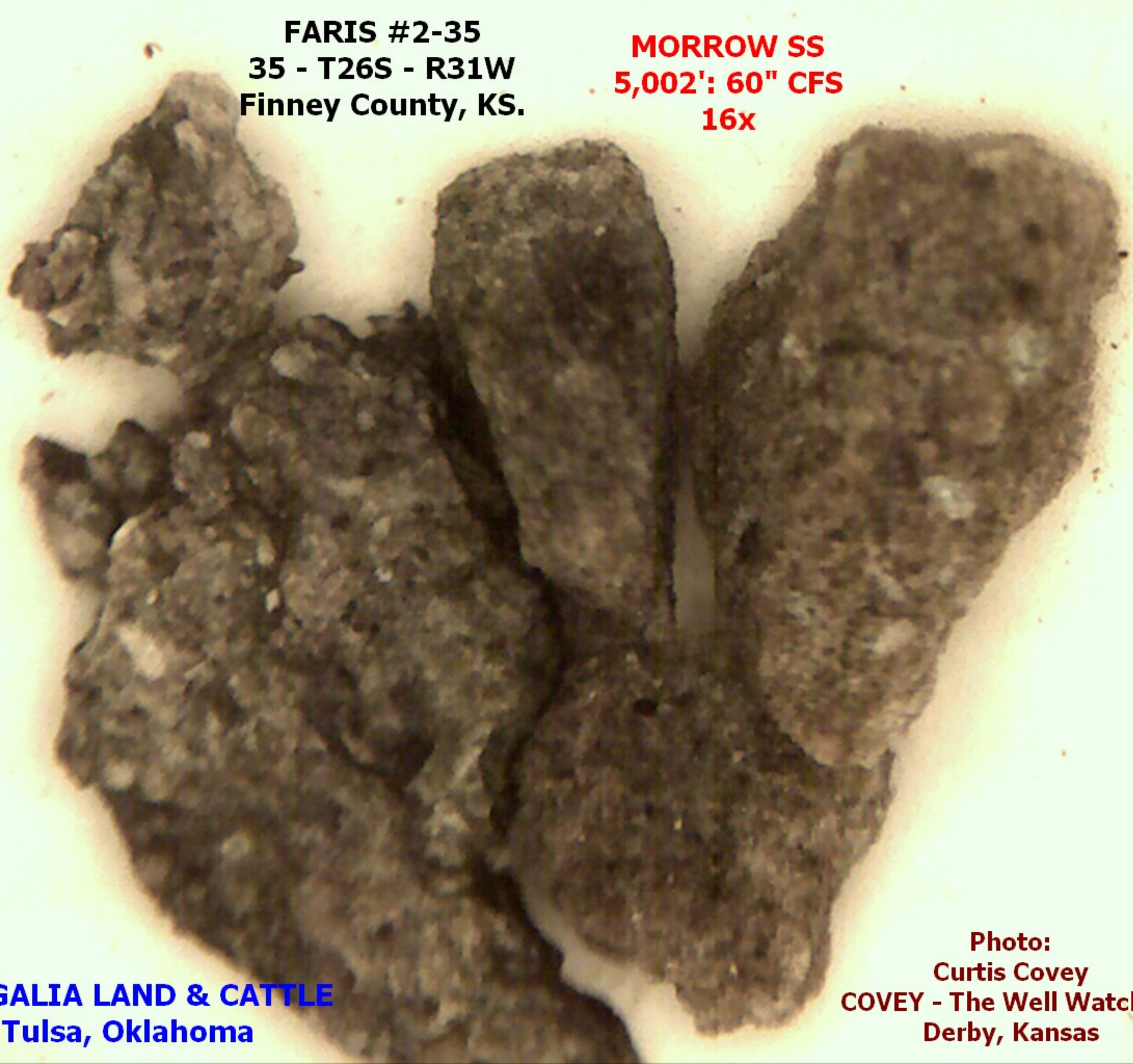
Dataset: bengalia-faris2-35.db: field/well/run1/pass7
Total length: 78.81 ft
Total weight: 1588.00 lb
O.D.: 6.88 in

WIRELINE LOGGING SOLUTIONS

Company: Bengalia Land & Cattle Company
Well: Faris # 2-35
Field: WC
State: Kansas

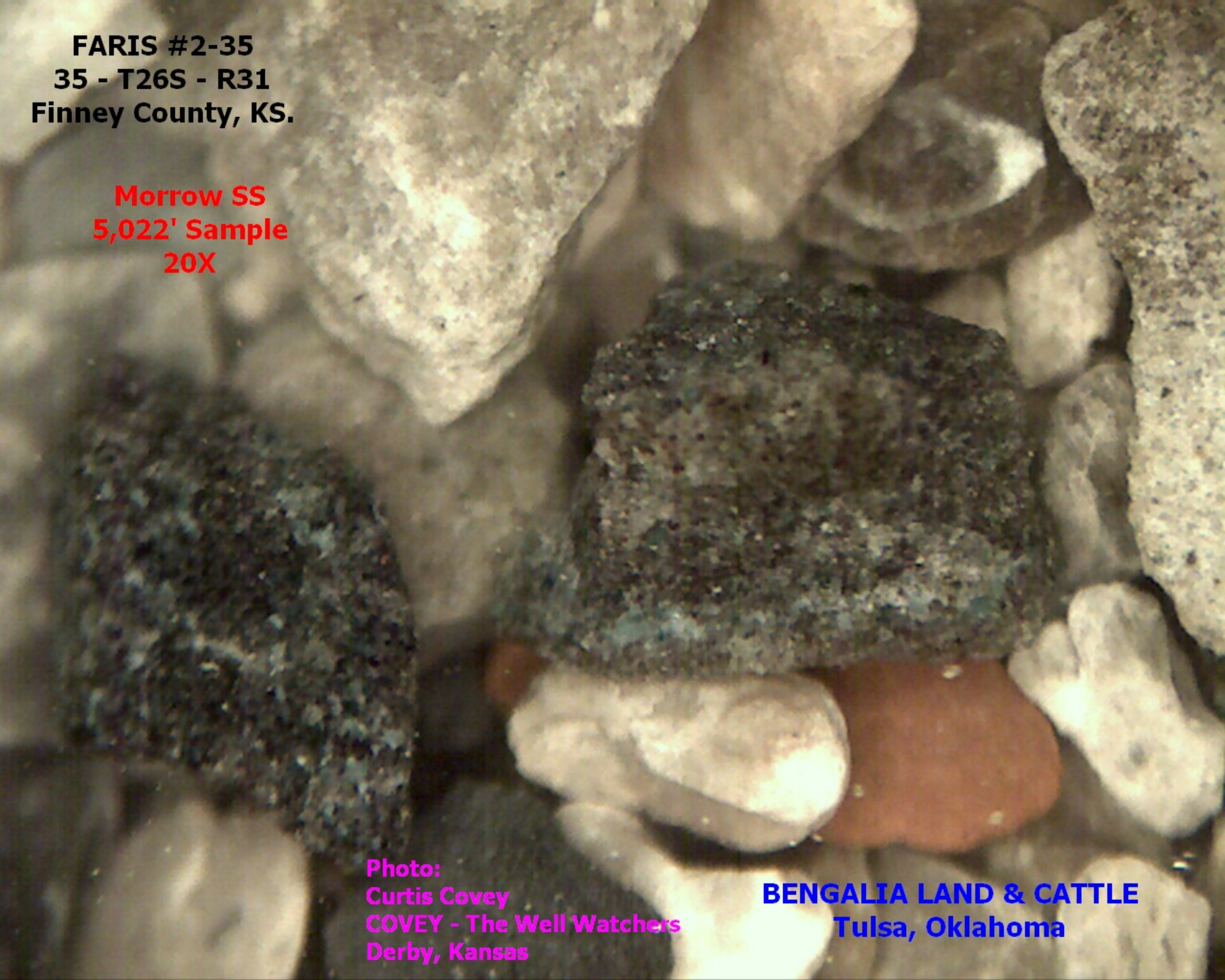
FARIS #2-35
35 - T26S - R31W
Finney County, KS.

MORROW SS
5,002': 60" CFS
16x



BENGALIA LAND & CATTLE
Tulsa, Oklahoma

Photo:
Curtis Covey
COVEY - The Well Watchers
Derby, Kansas


FARIS #2-35
35 - T26S - R31
Finney County, KS.
Morrow SS
5,022' Sample
20X
Photo:
Curtis Covey
COVEY - The Well Watchers
Derby, Kansas
BENGALIA LAND & CATTLE
Tulsa, Oklahoma

FARIS #2-35
35 - T26S - R31W
Finney County, KS.

MORROW SS
5,032' Sample
16X

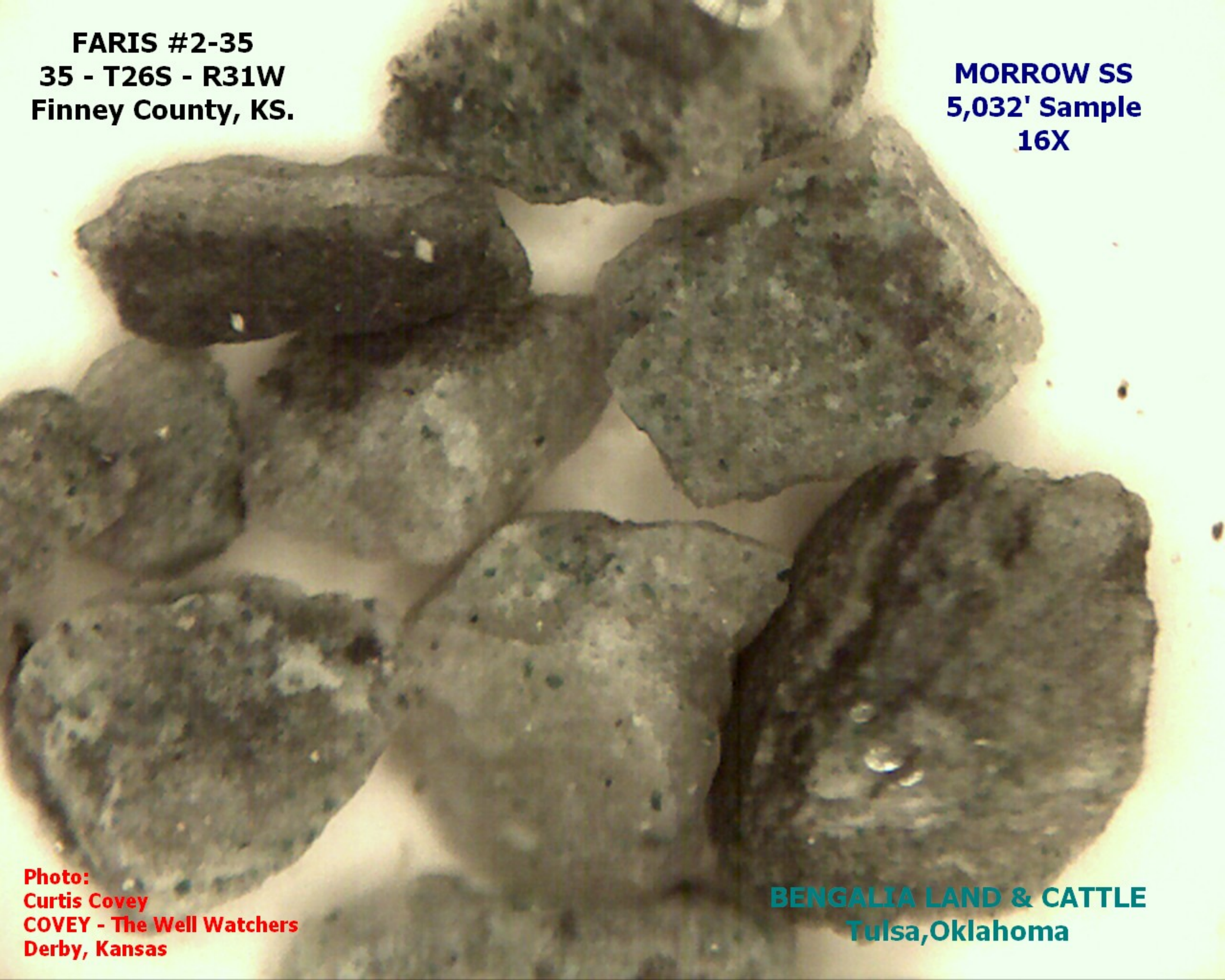


Photo:
Curtis Covey
COVEY - The Well Watchers
Derby, Kansas

BENGALIA LAND & CATTLE
Tulsa,Oklahoma

FARIS #2-35
35 - T26S - R31W
Finney County, KS.

St. Louis LS
5,052': 60" Sample
20X

OIL Blebs ----->

Gas Bubbles

Photo:
Curtis Covey
COVEY - The Well Watchers
Derby, Kansas

BENGALIA LAND & CATTLE
Tulsa, Oklahoma

Covey

The Well Watchers

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

Well Name:	FARIS #2-35
Well Id:	
Location:	Section 35 - Township 26S - Range 31 West
License Number:	15-0550-22522-00-00
Region:	Finney County, KS.
Spud Date:	10 August 2019
Drilling Completed:	26 August 2019
Surface Coordinates:	2,245' FSL & 1,525' FEL (NAD 83 LAT: 37.742536811 NAT 83 LONG: 100.675762827)
Bottom Hole Coordinates:	
Ground Elevation (ft):	2,810'
K.B. Elevation (ft):	2,816'
Logged Interval (ft):	2,500' To: 6,200'
Total Depth (ft):	6,200'
Formation:	Chase ------> Arbuckle
Type of Drilling Fluid:	Displace @ 2,500' - Hydrogel/Starch & Displace @ 3,100' - Chemical, Low Solids.

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

OPERATOR

Company: BENGALIA LAND AND CATTLE COMPANY
Address: P. O. Box 5210008
Tulsa, Oklahoma 741052
(918) 526-5523
POC: Calvin Hullum
David Hullum

GEOLOGIST

Company: COVEY - The Well Watchers
Address: 6548 Bedford Circle
Derby,Kansas 67037
Office: (316) 776-0367 Cell: (316) 217-4679

KB: 2,816' GL: 2,810'

FORMATION TOPS

Formation	Rotary Sample Depth (Datum)	E-log Depth (Datum)
Chase Group	2,681' (+135')	2,668' (+148')
Council Grove	3,021' (-205')	3,006' (-190')
Foraker	3,285' (-469')	3,268' (-452')
Wabaunsee	3,396' (-580')	3,386' (-540')
Stotler	3,514' (-698')	3,500' (-684')
Topeka	3,779' (-963')	3,762' (-946')
Heebner Shale	4,096' (-1,280')	4,080' (-1,264')
Lansing	4,172' (-1,356')	4,158' (-1,342')
Stark Shale	4,533' (-1,717')	4,516' -1,700')
B / KC	4,650' (-1,834')	4,634' (-1,818')
Marmaton	4,669' (-1,853')	4,652' (-1,836')
Cherokee Shale	4,803' (-1,987')	4,784' (-1,968')
Morrow Shale	4,992' (-2,176')	4,974' (-2,158')
Miss	NC	5,028' (-2,212')
Viola	5,896' (-3,080')	5,872' (-3,056')
Simpson	NC	6,056' (-3,240')
Arbuckle	6,086' (-3,262')	6,058' (-3,242')

RTD: 6,200' LTD: 6,180' ATD: 6,204'

Float:
Rotary Sample Depth is 2' high - 17' low to E-log Depth.

E-Loggers:
Allied Horizontal Wireline Services ....
Oklahoma City, Oklahoma

2019 **DAILY DRILLING - AUGUST** 2019

12/1/4" Hole (Surface) 7-7/8" Hole (Vertical) 7-7/8" Hole (Vertical)

11 — 7am@900'.
12 — 7am@1,771'.
Drilled to 1,822' @8:57pm.
Ran 8-5/8" (23#) casing.
Set @1,822'.
600 sx A-Serv Lite
(3% CC, 1/4# Polyflakes) +
200 sx Class C
(2% CC, 1/4# Polyflakes)
[Basic Energy Services]
Plug down @6pm.
WOC.

Drill to 1,896' @8:15pm.
Work on Mud Pump.
Resume Drilling @10:35pm.

14 — 7am@2,320'. Drill to 2,562' @4:51pm. Displace @2,494' (Starch/Gel). Add Steel Pits. Saved mud. Transfer saved mud to steel pits. Add Pre-Mix to system.
15 — Resumed drilling @12:26am.
7am@2,713'.
Work on Pump @2,841'. Aired up Mud. Resumed Drilling @4:10pm.
Drill to 2,912'. Electrical power problem effecting Pick-up Pump.
Resumed Drilling @9:24pm.
16 — Displace @3,092' (Chemical).
7am@3,092'.
17 — 7am@3,624'.
18 — 7am@4,124'.

Resumed Drilling @8:11am.
20 — 7am@4,365'.
21 — 7am@4,885'.
22 — Drill to 5,068' @5:11am.
BIT TRIP @5,068'.
7am@5,068'. Bit Damaged - Center gone on all 3 cones.
T/I with magnetic. Recoverd 1/3+.
Repeatedly break Circ on T/I.
Circ & 'Tickle' bottom.
Resumed drilling @9:48pm.
23 — 7am@5,200'.
24 — 7am@5,531'.
25 — 7am@5,885'.
26 — 7am@6,175'.
RTD (6,200') @8:28am.
E-Log on Bottom (6pm) ...
Allied Horizontal Wireline

HOLE DEVIATION (455' - 6,200' MD)

12-1/4" Surface Hole

DEPTH / TVD	—	INCLINATION	AZIMUTH	NORTH	SOUTH	EAST	WEST	DOGLEG deg/100'
455' /	—	0.75						
954' /	—	0.75						
1,822' /	—	0.75 (Surface Casing)						

Board: NA
Strap: NA
Diff: NA

7-7/8" Vetical Hole

2,305' /	—	0.75						
2,840' /	—	0.50						
4,186' /	—	Bull's eye (Lansing)						
5,068' /	—	0.75 (Bit Trip)						

Inclination surveys provided by Duke Drilling - Rig #4 - Wichita, Kansas

CONTRACTOR

Duke Drilling Co, Inc. — Rig # 4

100 South Main, Suite 410
Wichita, Kansas 67202
Office: (316) 237-1331

Duke #4 - (620) 793-0833
Toolpusher: Hector Torres (620) 793-0834

Pump: IDECO 550
6" x 15" @ 57 SPM.
875 - 900+ PSI @ Standpipe.

Drill Pipe: 4" XH. (14# / ft - new)

Drill Collars: 6-1/8" x 2-1/4" — 538'. (87#/ft)
Dry Collar Weight: 46,806#
(@ 8.7 ppg / Buoyancy Factor 0.8675)
Bouyancy Collar Weight: 40,604#
Design Factor: 15% held back to keep drill string straight, therefore:
available WOB is 34,514#

Depth: 1,750' - 4,230' = 28M - 30M WOB (uncorrected) @ 65 - 75 RPM
= 33.2M - 35.6M (corrected)
4,230' - 4,261' = 38W WOB (uncorrected) @ 65 - 75 RPM, per toolpusher.
= 44.2M WOB (corrected).
This exceeds available bouyancy weight of drill collars.

4,261' - 4,612' = 30M WOB (uncorrected) @ 65 - 75 RPM = 35.6M WOB (corrected)
This just exceeds calculated WOB of drill collars but not bouyancy weight.
4,612' - 4,970' = 34M WOB (uncorrected) @ 65 - 75 RPM = 39.6M WOB (corrected)
This almost exceeds available bouyancy weight of drill collars.

4,970' - RTD' = 30M - 32M WOB (uncorrected) @ 65 - 75 RPM = 35.6M WOB (corrected)
This just exceeds calculated WOB of drill collars but not bouyancy weight.

Bouyancy weight of Drill Collars is all the weight available to pull down on Drill Pipe (to keep it straight and not bang on well bore) and push down (available Weight on Bit).

When bouyancy weight is exceeded: the top of the collars are 'in orbit' and not directly over the bit, as well as, several stands of Drill Pipe are in compression (i.e. nothing is keeping the string straight) and is bad for rock sample quality.

Check Weight Indicator @ 3,155'.
Calculated String Weight (85,901#) -vs- Observed Wt (70,000#).

Wt weighing 18.5% light -vs- Calculated String Weight.
WOB of 20M# on Wt = 23.7M# Actual WOB.
WOB of 28M# on Wt = 33.2M# Actual WOB.

Check Weight Indicator @4,217'.
Calculated String Weight (97,871#) -vs- Observed Wt (82,000#).
Wt is weighing 16.4% light, therefore 1# showing = 1.164# actual on bit.

Wt weighing 16.4% light -vs- Calculated String Weight.
WOB of 38M# on Wt = 44.2M# Actual WOB.
This uses all collar weight and 6+ stands of DP.
Therefore collars 'in orbit' and DP is beating wellbore.

BIT RECORD

DATE	SIZE	TYPE	JET SIZE	DEPTH IN / OUT	CUM. FT.	HOURS	ROP
SURFACE —		(IADC)					(ft/hr)
10 Aug 2019	12-1/4"	SMITH TDS-CPS	15's	0' / 1,822'	1,822'	26.25	69.4
VERTICAL —							
13 Aug 2019	7-7/8"	SMITH F27IR (572)	14's	1,822' / 4,261'	2,439'	82.00	29.7
19 Aug 2019	7-7/8"	SMITH F27IR (572) Used SMITH	14's	4,261' / 5,068'	807'	59.50	13.6
22 Aug 2019	7-7/8"	FH24Y (571)	14's	5,068' / 6,200'	1,132'	71.75	15.8

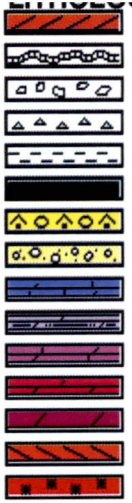
ROCK TYPES

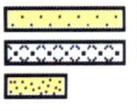
POROSITY
- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

- Lmst 2
- Lmst
- Meta
- Mrlst
- Salt
- Shale 3
- Shale 3
- Shale
- Shcol
- Shgy

- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl

STRINGER
- Dol ls
- Silty dol
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls

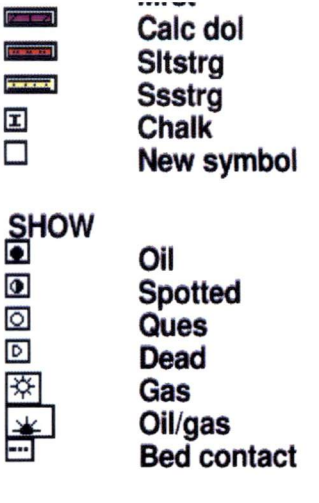

Anhy
Bent
Brec
Cht
Clyst
Coal
Granite wash
Congl
Dol lmst
Silty dol
Calc dol
Dol 2
Dol
Gyp
Igne


Ss
Till
Ss 2

MINERAL


Mica
Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk


Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff
Copper
Ooliticastic
Ooloid
Oolite
Sucrosic
Dark specks


Calc dol
Sltstrg
Ssstrg
Chalk
New symbol

SHOW

Oil
Spotted
Ques
Dead
Gas
Oil/gas
Bed contact

ACCESSORIES

FOSSIL


Algae
Amph
Belm
Biocist
Brach
Bryozoa
Cephal
Coral
Spore
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite


Pisolite
Plant
Strom

MINERAL


Mica
Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chtlt
Dol


Glau
Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff
Copper
Ooliticastic


Dark specks

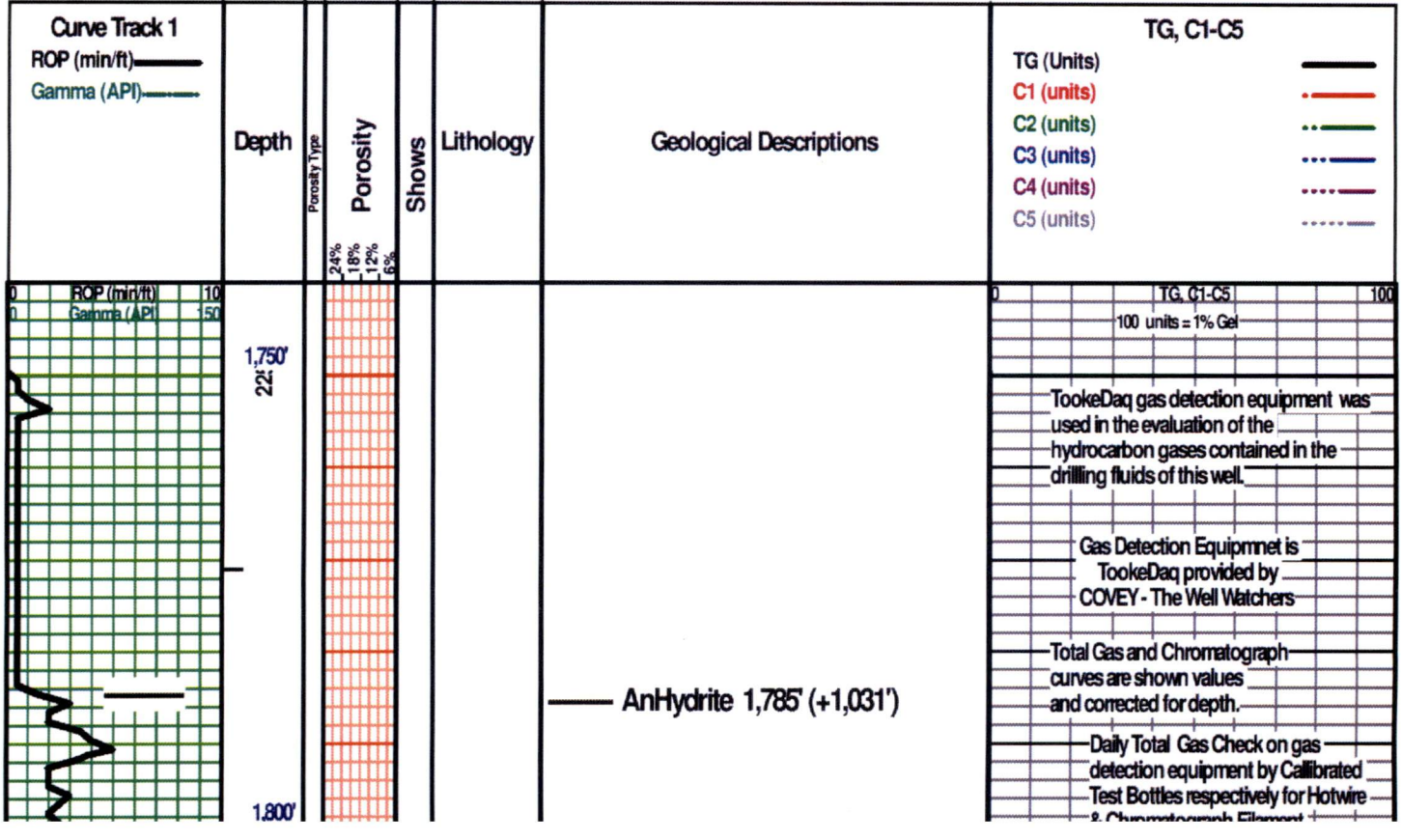
STRINGER

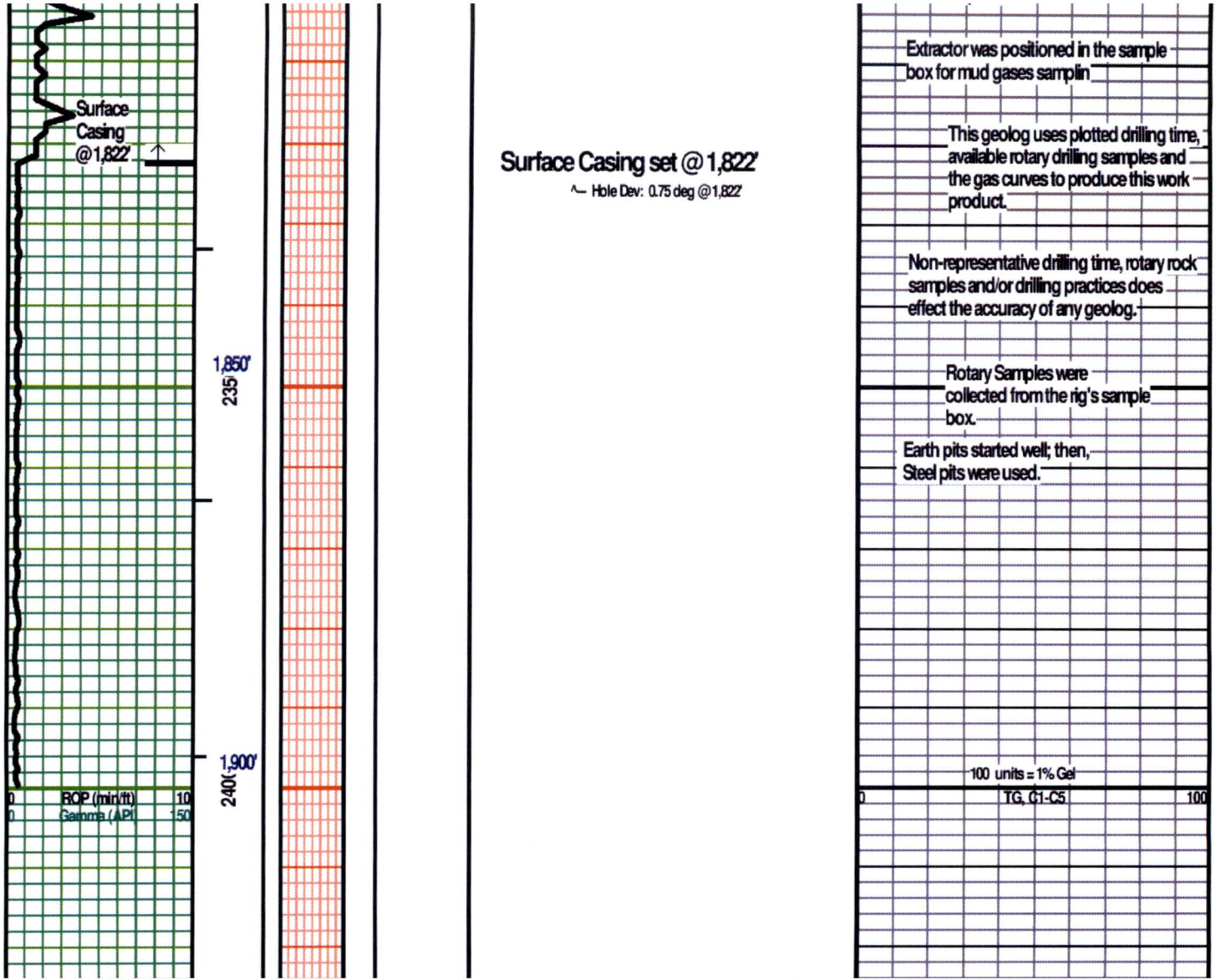
Dol ls
Silty dol
Anhy
Arg
Bent
Coal
Dol
Gyp
Ls
Mrst
Calc dol
Sltstrg
Ssstrg
Chalk

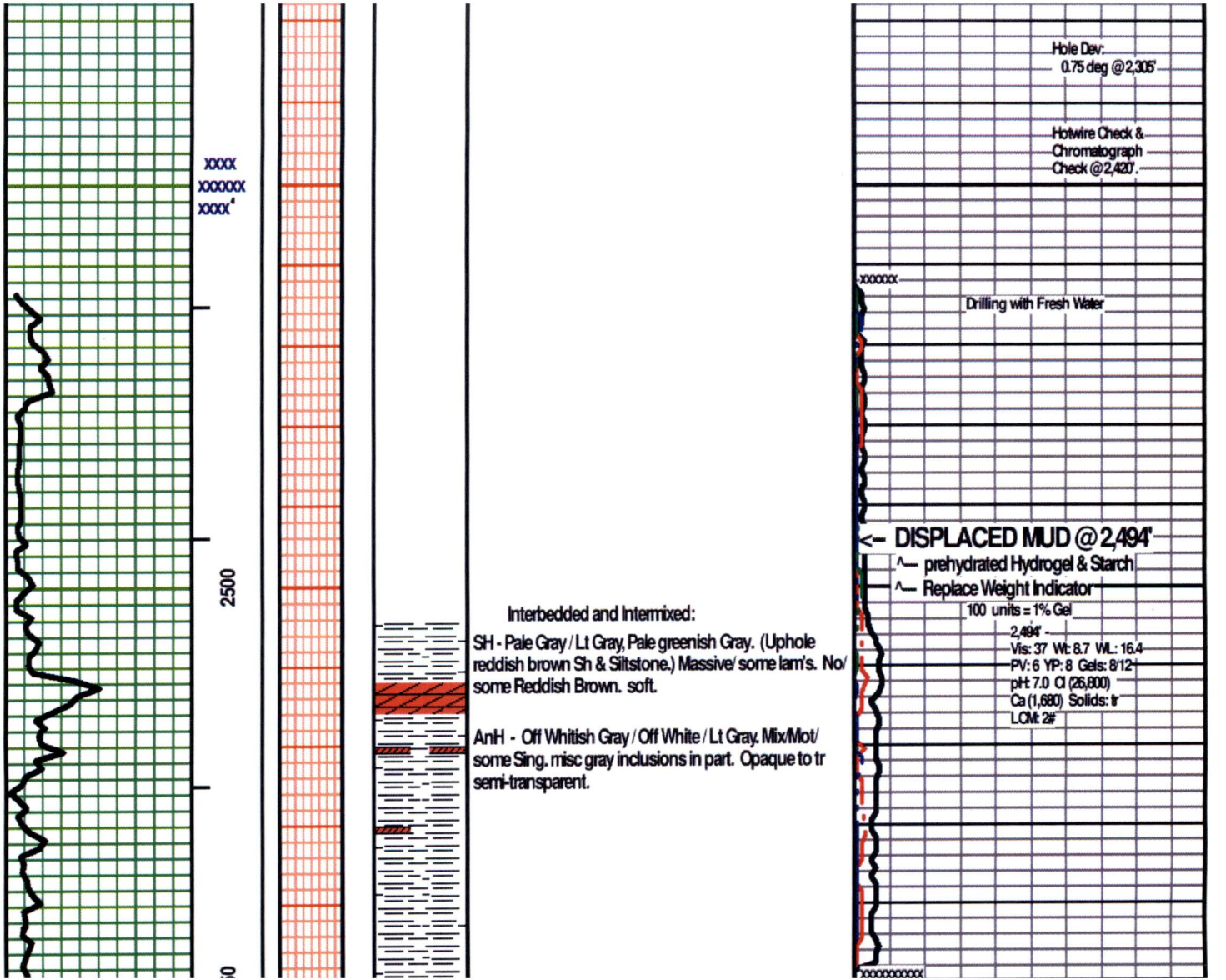
Pelec
Pellet
Ferrpel
Ferr
Oolite
Sucrosic

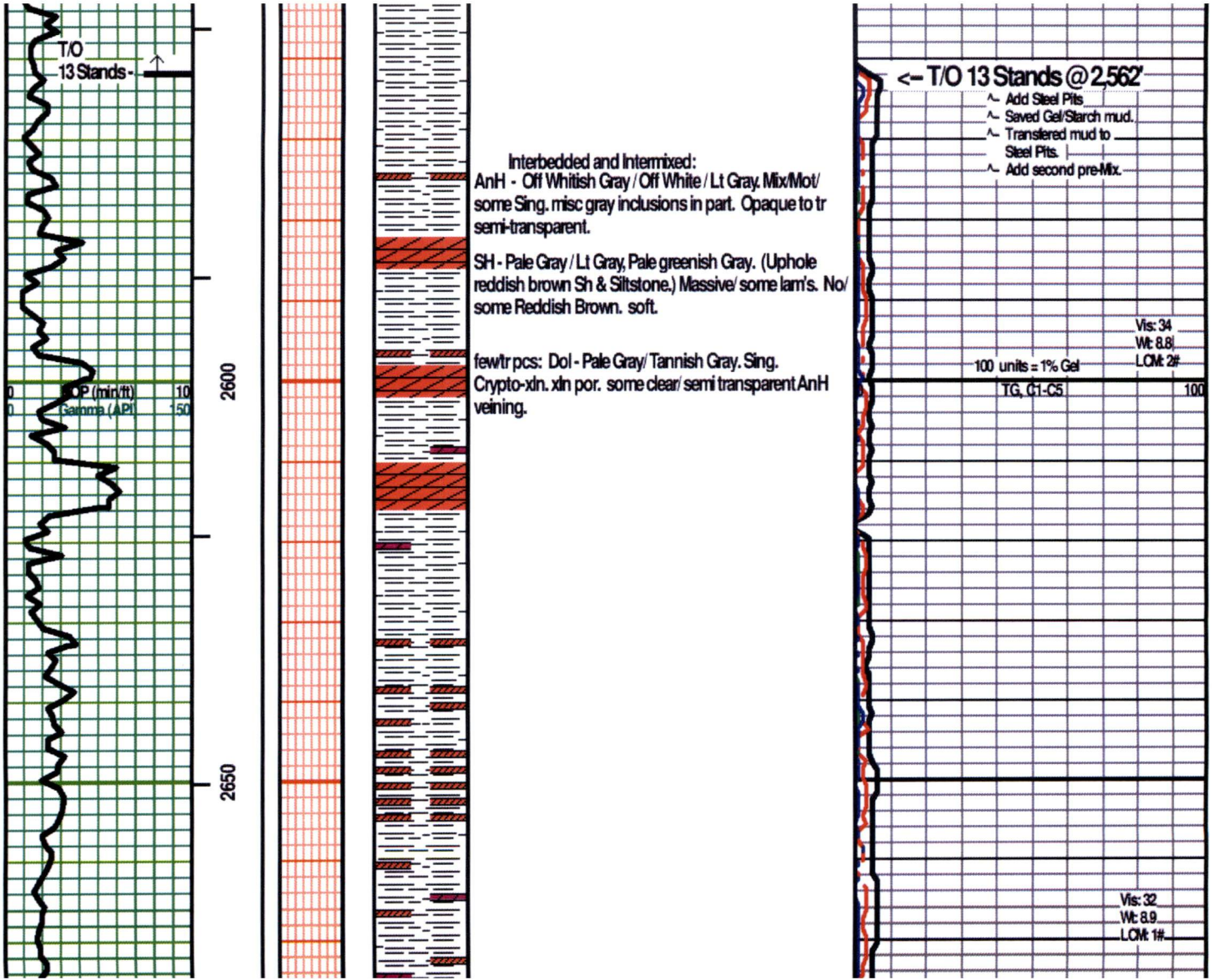
OTHER SYMBOLS

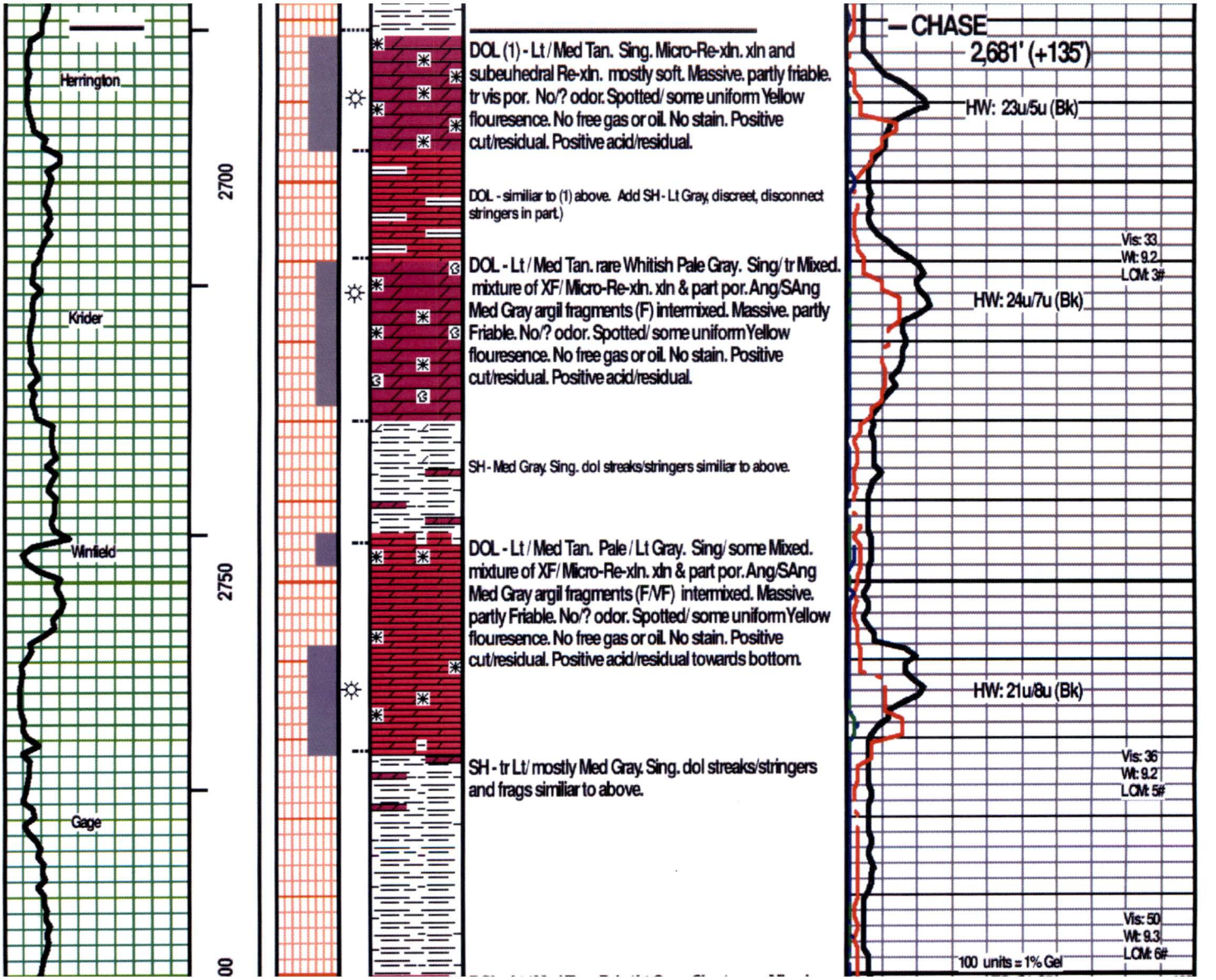
ACTIVITY
Lost circluation
Circulate for sample 2
Circulate for samples
Rtd
Trip
EVENT
Connection
Rft
Sidewall

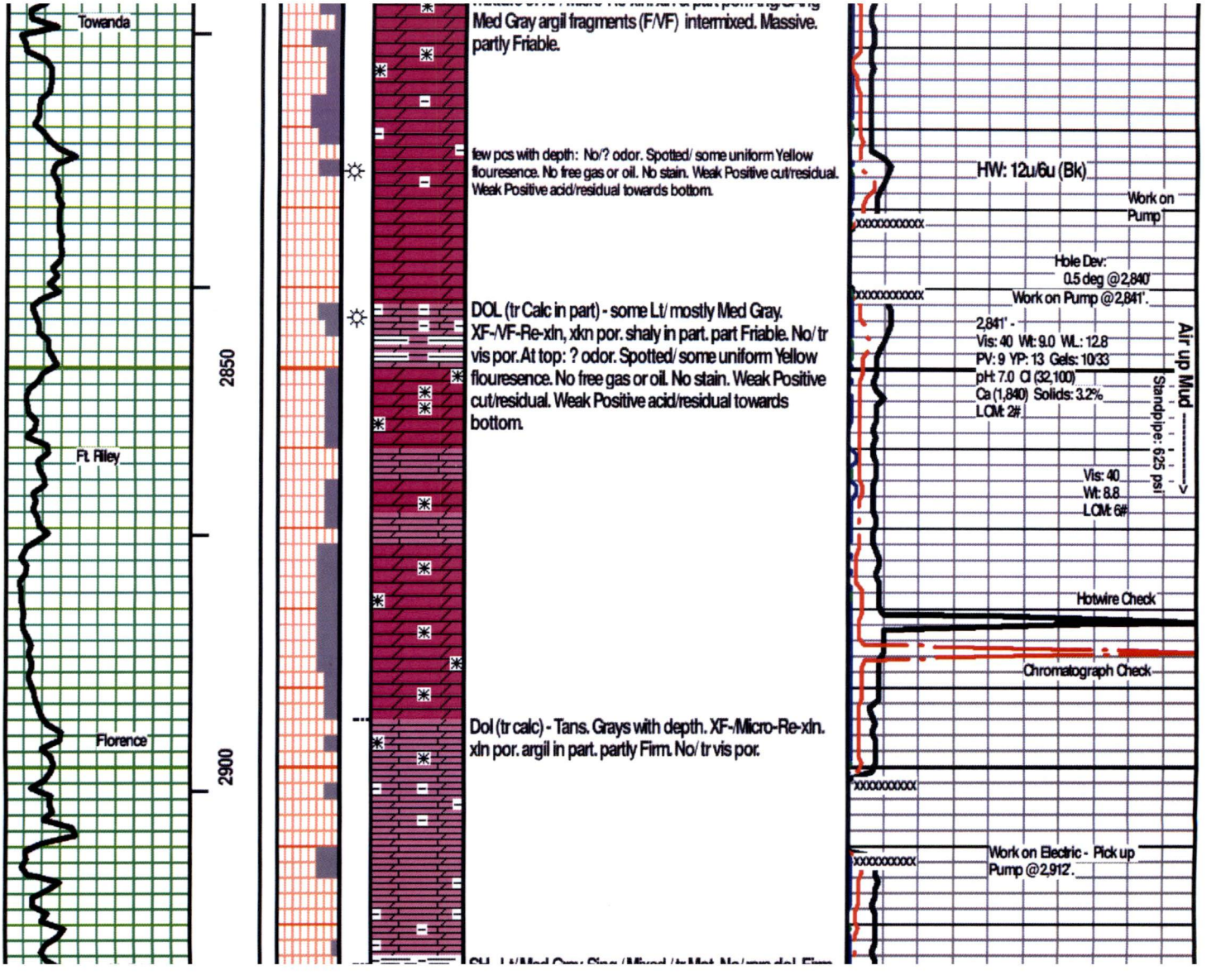


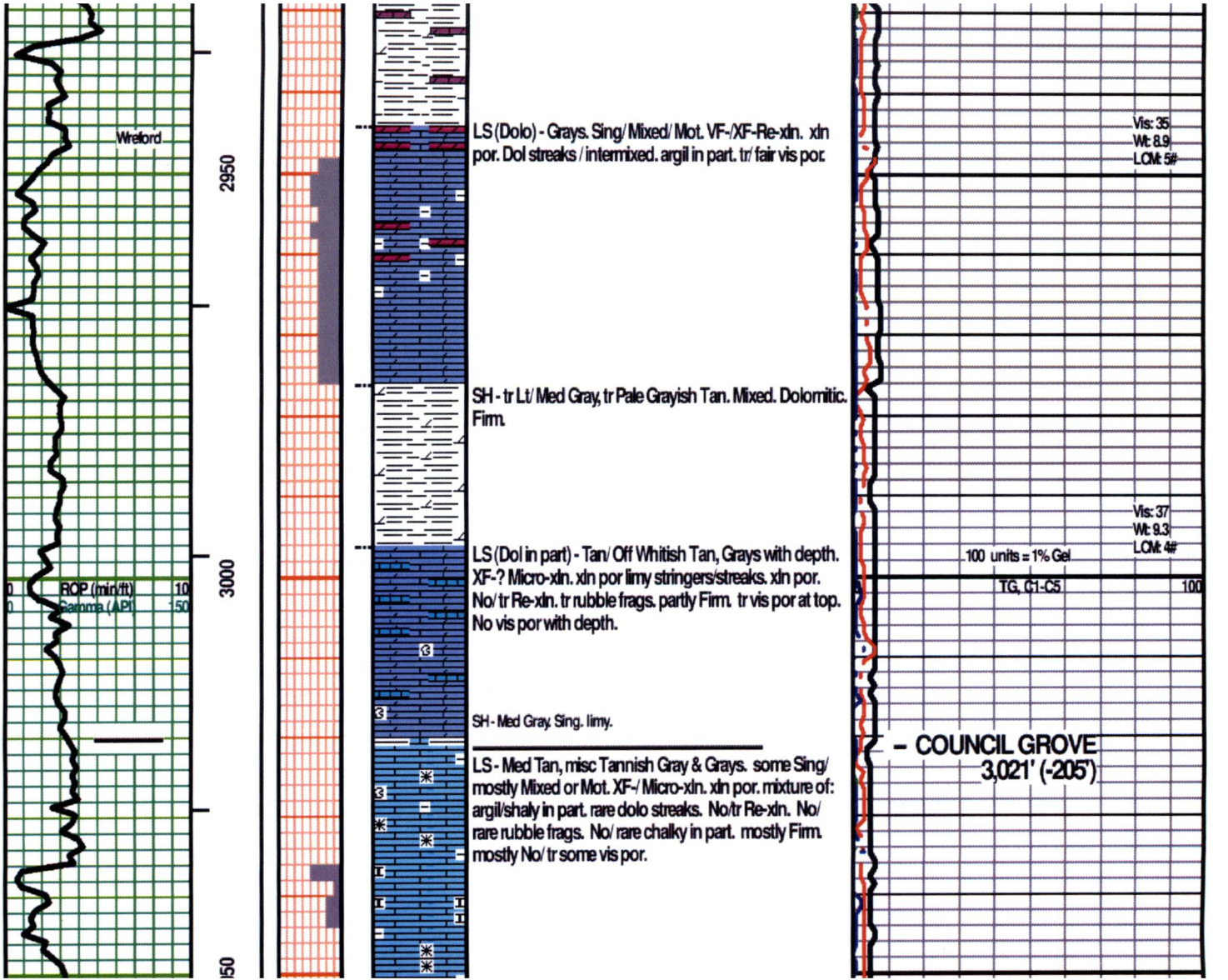

Surface Casing @1,822'
1,850'
235'
1,900'
240'
0
ROP (min/ft)
10
0
Gamma (API
150
Surface Casing set @ 1,822'
Hole Dev: 0.75 deg @1,822'
Extractor was positioned in the sample box for mud gases samplin
This geolog uses plotted drilling time, available rotary drilling samples and the gas curves to produce this work product.
Non-representative drilling time, rotary rock samples and/or drilling practices does effect the accuracy of any geolog.
Rotary Samples were collected from the rig's sample box.
Earth pits started well; then, Steel pits were used.
100 units = 1% Gel
0
TG, C1-C5
100

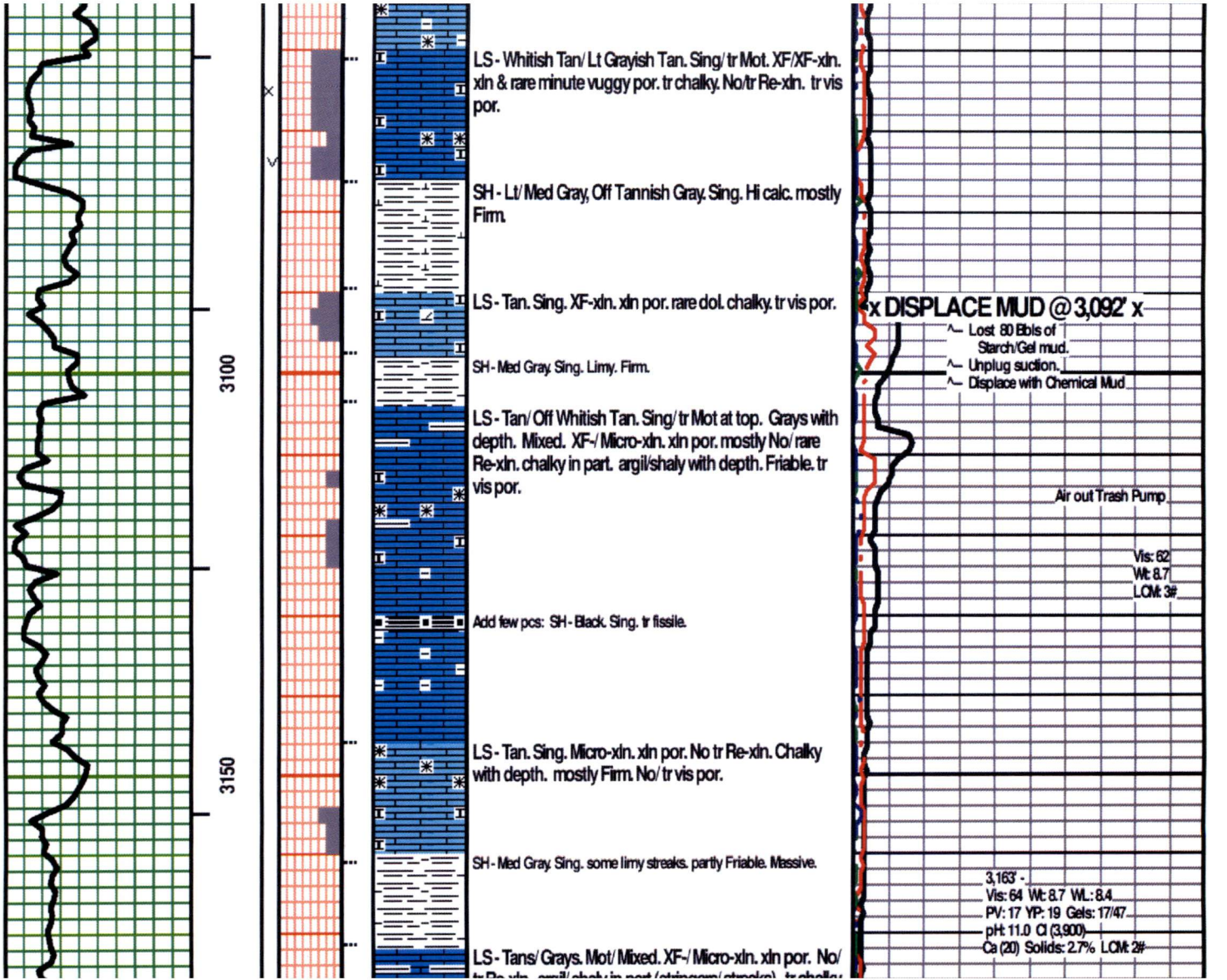

xxxx
xxxxxx
xxxx'
2500
Interbedded and Intermixed:
SH - Pale Gray / Lt Gray, Pale greenish Gray. (Uphole reddish brown Sh & Siltstone.) Massive/ some lam's. No/ some Reddish Brown. soft.
AnH - Off Whitish Gray / Off White / Lt Gray. Mix/Mot/ some Sing. misc gray inclusions in part. Opaque to tr semi-transparent.
Hole Dev:
0.75 deg @2,305'
Hotwire Check &
Chromatograph
Check @2,420'.
xxxxxx
Drilling with Fresh Water
<-- DISPLACED MUD @2,494'
^— prehydrated Hydrogel & Starch
^— Replace Weight Indicator
100 units = 1% Gel
2,494' -
Vis: 37 Wt: 8.7 WL: 16.4
PV: 6 YP: 8 Gels: 8/12
pH: 7.0 Cl (26,800)
Ca (1,680) Solids: tr
LCM: 2#
xxxxxxxxxx

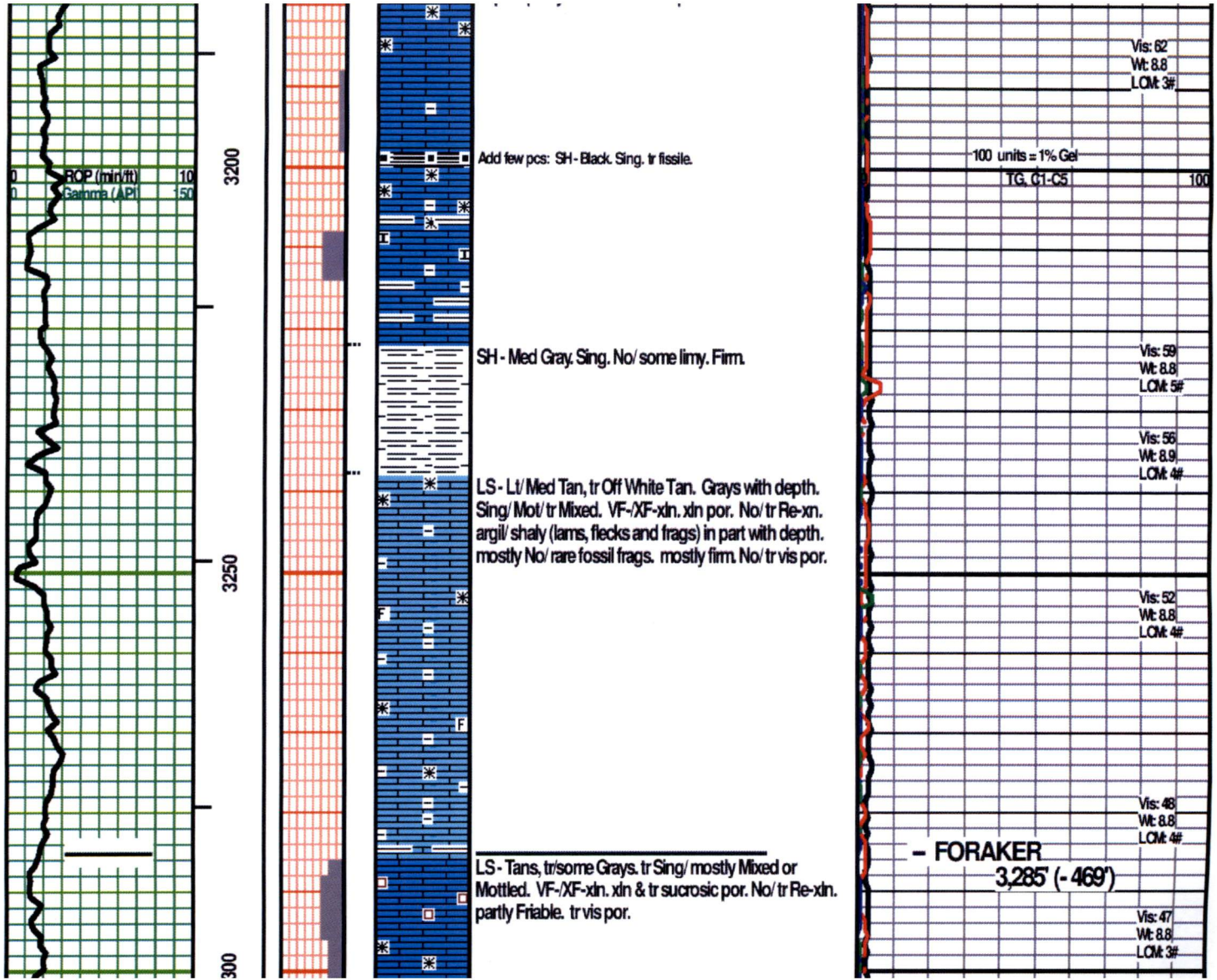

T/O
13 Stands
ROP (min/ft)
Gamma (API
2600
2650
Interbedded and Intermixed:
AnH - Off Whitish Gray / Off White / Lt Gray. Mix/Mot/ some Sing. misc gray inclusions in part. Opaque to tr semi-transparent.
SH - Pale Gray / Lt Gray, Pale greenish Gray. (Uphole reddish brown Sh & Siltstone.) Massive/ some lam's. No/ some Reddish Brown. soft.
few/tr pcs: Dol - Pale Gray/ Tannish Gray. Sing. Crypto-xln. xln por. some clear/ semi transparent AnH veining.
<-- T/O 13 Stands @ 2,562'
Add Steel Pits
Saved Gel/Starch mud.
Transfered mud to Steel Pits.
Add second pre-Mix.
Vis: 34
Wt: 8.8
LCM: 2#
100 units = 1% Gel
TG, C1-C5
100
Vis: 32
Wt: 8.9
LCM: 1#

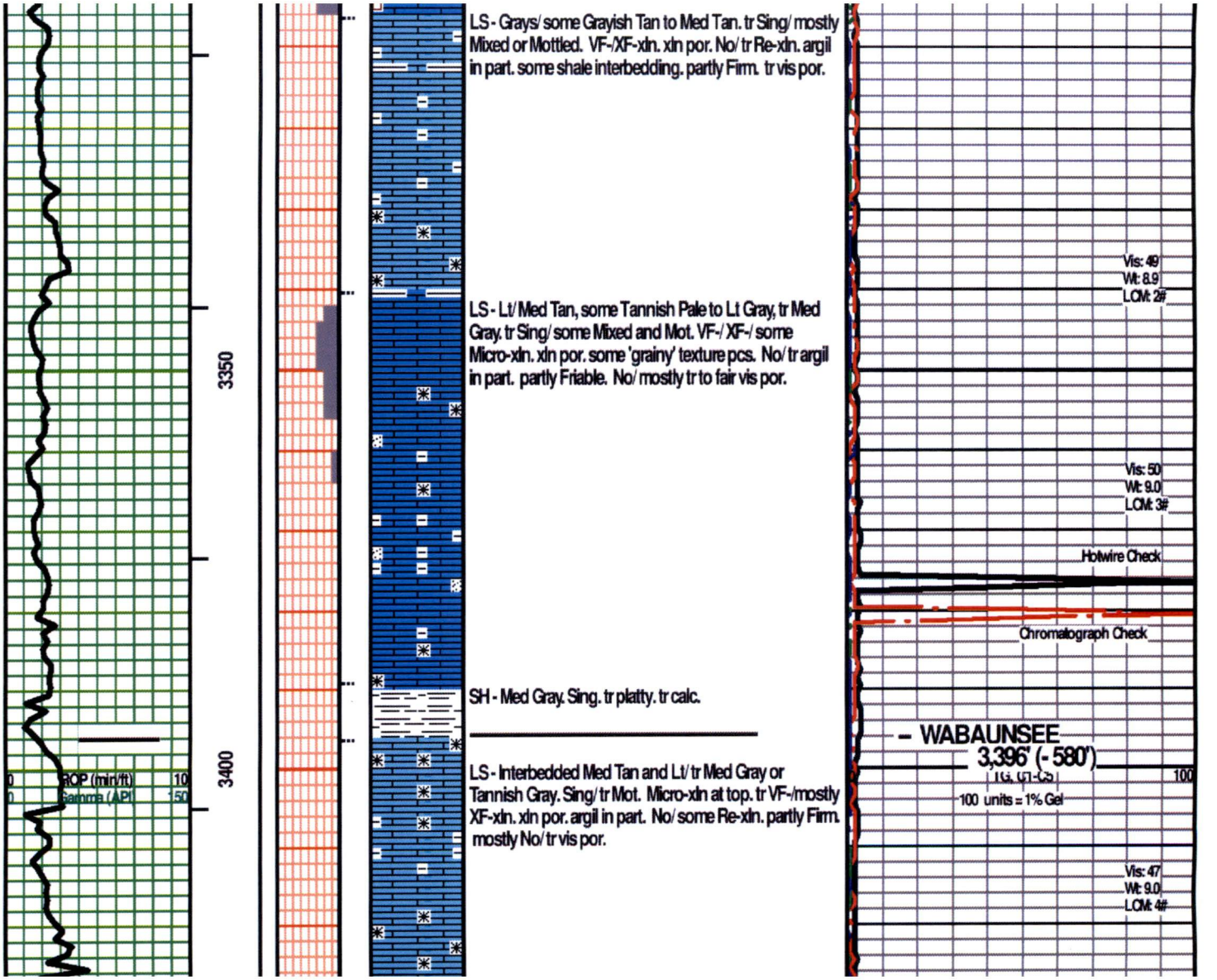

Herrington
Krider
Winfield
Gage
2700
2750
CHASE
2,681' (+135')
HW: 23u/5u (Bk)
Vis: 33
Wt: 9.2
LCM: 3#
HW: 24u/7u (Bk)
HW: 21u/8u (Bk)
Vis: 36
Wt: 9.2
LCM: 5#
Vis: 50
Wt: 9.3
LCM: 6#
100 units = 1% Gel
DOL (1) - Lt / Med Tan. Sing. Micro-Re-xln. xln and subeuhedral Re-xln. mostly soft. Massive. partly friable. tr vis por. No/? odor. Spotted/ some uniform Yellow flouresence. No free gas or oil. No stain. Positive cut/residual. Positive acid/residual.
DOL - similiar to (1) above. Add SH - Lt Gray, discreet, disconnect stringers in part.)
DOL - Lt / Med Tan. rare Whitish Pale Gray. Sing/ tr Mixed. mixture of XF/ Micro-Re-xln. xln & part por. Ang/SAng Med Gray argil fragments (F) intermixed. Massive. partly Friable. No/? odor. Spotted/ some uniform Yellow flouresence. No free gas or oil. No stain. Positive cut/residual. Positive acid/residual.
SH - Med Gray. Sing. dol streaks/stringers similiar to above.
DOL - Lt / Med Tan. Pale / Lt Gray. Sing/ some Mixed. mixture of XF/ Micro-Re-xln. xln & part por. Ang/SAng Med Gray argil fragments (F/VF) intermixed. Massive. partly Friable. No/? odor. Spotted/ some uniform Yellow flouresence. No free gas or oil. No stain. Positive cut/residual. Positive acid/residual towards bottom.
SH - tr Lt/ mostly Med Gray. Sing. dol streaks/stringers and frags similiar to above.

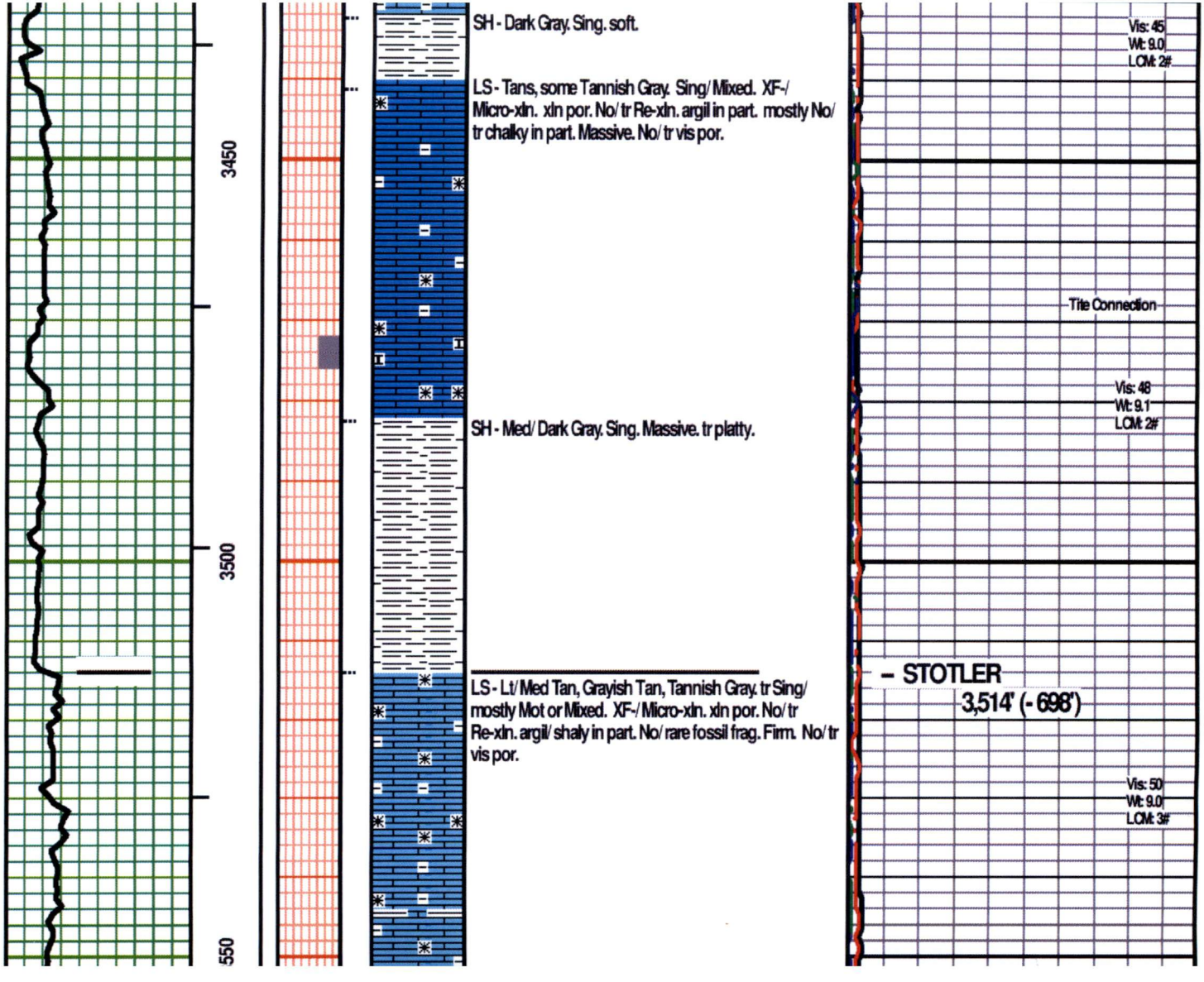

Towanda
2850
Ft. Riley
2900
Florence
Med Gray argil fragments (F/VF) intermixed. Massive. partly Friable.
few pcs with depth: No/? odor. Spotted/ some uniform Yellow flouresence. No free gas or oil. No stain. Weak Positive cut/residual. Weak Positive acid/residual towards bottom.
DOL (tr Calc in part) - some Lt/ mostly Med Gray. XF-/VF-Re-xln, xkn por. shaly in part. part Friable. No/ tr vis por. At top: ? odor. Spotted/ some uniform Yellow flouresence. No free gas or oil. No stain. Weak Positive cut/residual. Weak Positive acid/residual towards bottom.
Dol (tr calc) - Tans. Grays with depth. XF-/Micro-Re-xln. xln por. argil in part. partly Firm. No/ tr vis por.
HW: 12u/6u (Bk)
Work on Pump
Hole Dev: 0.5 deg @2,840'
Work on Pump @2,841'.
2,841' - Vis: 40 Wt: 9.0 WL: 12.8 PV: 9 YP: 13 Gels: 10/33 pH: 7.0 Cl (32,100) Ca (1,840) Solids: 3.2% LCM: 2#
Air up Mud
Standpipe: 625 psi
Vis: 40 Wt: 8.8 LCM: 6#
Hotwire Check
Chromatograph Check
Work on Electric - Pick up Pump @2,912'.

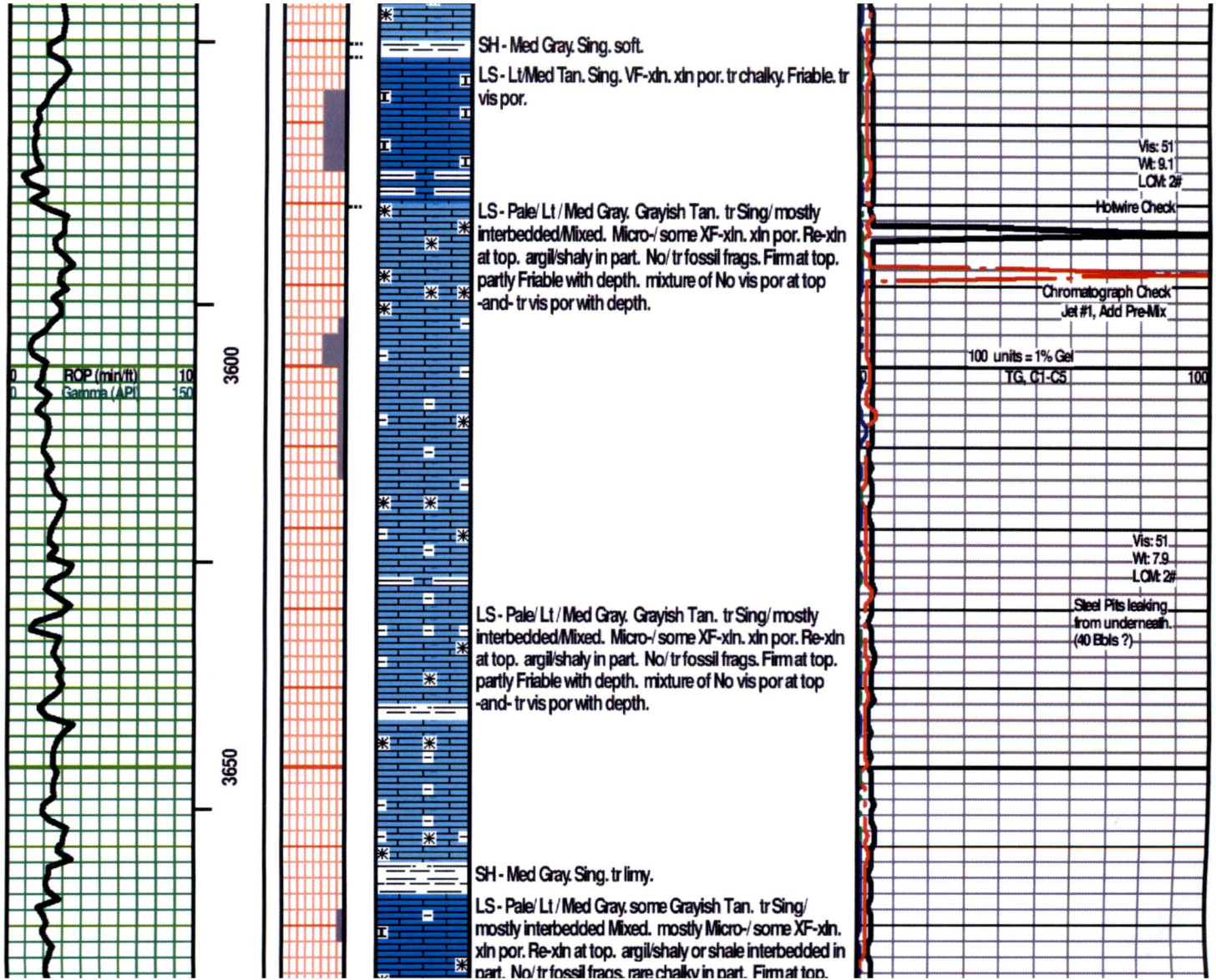

Wreford
2950
3000
ROP (min/ft) 10
Gamma (API 150
LS (Dolo) - Grays. Sing/ Mixed/ Mot. VF-/XF-Re-xln. xln por. Dol streaks / intermixed. argil in part. tr/ fair vis por.
SH - tr Lt/ Med Gray, tr Pale Grayish Tan. Mixed. Dolomitic. Firm.
LS (Dol in part) - Tan/ Off Whitish Tan, Grays with depth. XF-? Micro-xln. xln por limy stringers/streaks. xln por. No/ tr Re-xln. tr rubble frags. partly Firm. tr vis por at top. No vis por with depth.
SH - Med Gray. Sing. limy.
LS - Med Tan, misc Tannish Gray & Grays. some Sing/ mostly Mixed or Mot. XF-/ Micro-xln. xln por. mixture of: argil/shaly in part. rare dolo streaks. No/tr Re-xln. No/ rare rubble frags. No/ rare chalky in part. mostly Firm. mostly No/ tr some vis por.
Vis: 35
Wt: 8.9
LCM: 5#
Vis: 37
Wt: 9.3
LCM: 4#
100 units = 1% Gel
TG, C1-C5
100
– COUNCIL GROVE
3,021' (-205')

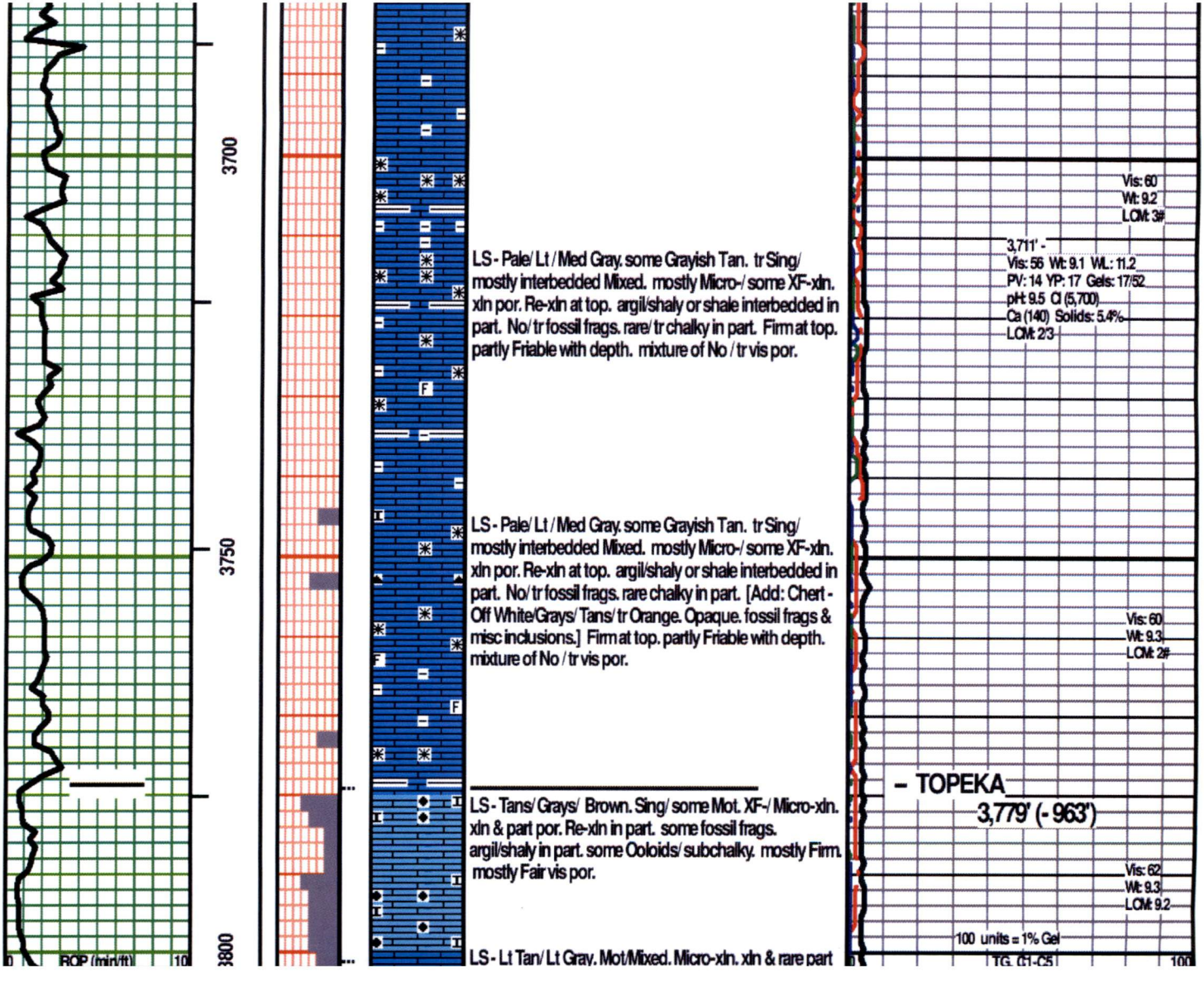

3100
3150
LS - Whitish Tan/ Lt Grayish Tan. Sing/ tr Mot. XF/XF-xln. xln & rare minute vuggy por. tr chalky. No/tr Re-xln. tr vis por.
SH - Lt/ Med Gray, Off Tannish Gray. Sing. Hi calc. mostly Firm.
LS - Tan. Sing. XF-xln. xln por. rare dol. chalky. tr vis por.
SH - Med Gray. Sing. Limy. Firm.
LS - Tan/ Off Whitish Tan. Sing/ tr Mot at top. Grays with depth. Mixed. XF-/ Micro-xln. xln por. mostly No/ rare Re-xln. chalky in part. argil/shaly with depth. Friable. tr vis por.
Add few pcs: SH - Black. Sing. tr fissile.
LS - Tan. Sing. Micro-xln. xln por. No tr Re-xln. Chalky with depth. mostly Firm. No/ tr vis por.
SH - Med Gray. Sing. some limy streaks. partly Friable. Massive.
LS - Tans/ Grays. Mot/ Mixed. XF-/ Micro-xln. xln por. No/
x DISPLACE MUD @ 3,092' x
Lost 80 Bbls of Starch/Gel mud.
Unplug suction.
Displace with Chemical Mud
Air out Trash Pump
Vis: 62
Wt: 8.7
LCM: 3#
3,163' -
Vis: 64 Wt: 8.7 WL: 8.4
PV: 17 YP: 19 Gels: 17/47
pH: 11.0 Cl (3,900)
Ca (20) Solids: 2.7% LCM: 2#

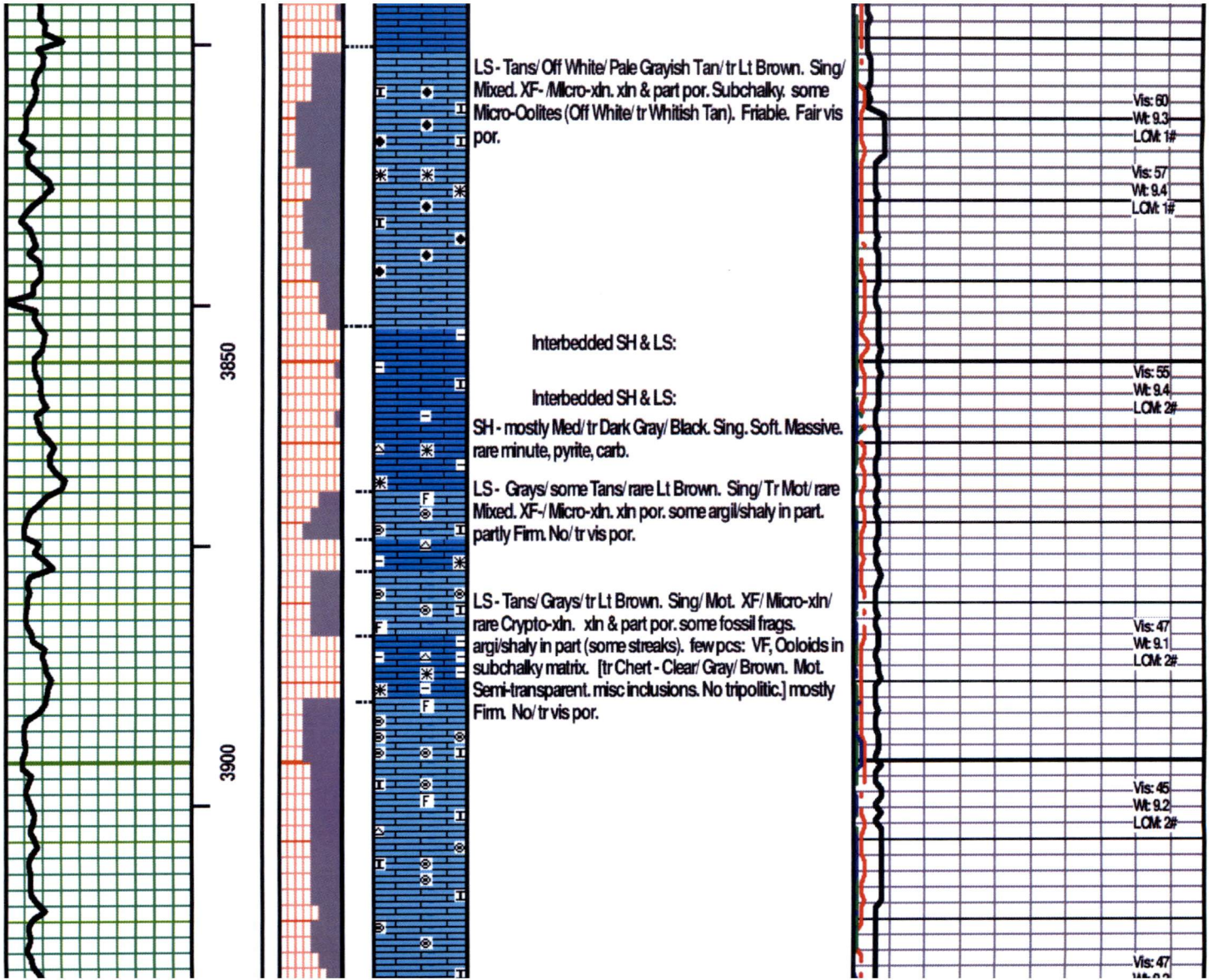

ROP (min/ft)
Gamma (API
3200
3250
Add few pcs: SH - Black. Sing. tr fissile.
SH - Med Gray. Sing. No/ some limy. Firm.
LS - Lt/ Med Tan, tr Off White Tan. Grays with depth. Sing/ Mot/ tr Mixed. VF-/XF-xln. xln por. No/ tr Re-xn. argil/ shaly (lams, flecks and frags) in part with depth. mostly No/ rare fossil frags. mostly firm. No/ tr vis por.
F
LS - Tans, tr/some Grays. tr Sing/ mostly Mixed or Mottled. VF-/XF-xln. xln & tr sucrosic por. No/ tr Re-xn. partly Friable. tr vis por.
Vis: 62
Wt: 8.8
LCM: 3#
100 units = 1% Gel
TG, C1-C5
100
Vis: 59
Wt: 8.8
LCM: 5#
Vis: 56
Wt: 8.9
LCM: 4#
Vis: 52
Wt: 8.8
LCM: 4#
Vis: 48
Wt: 8.8
LCM: 4#
- FORAKER
3,285' (- 469')
Vis: 47
Wt: 8.8
LCM: 3#

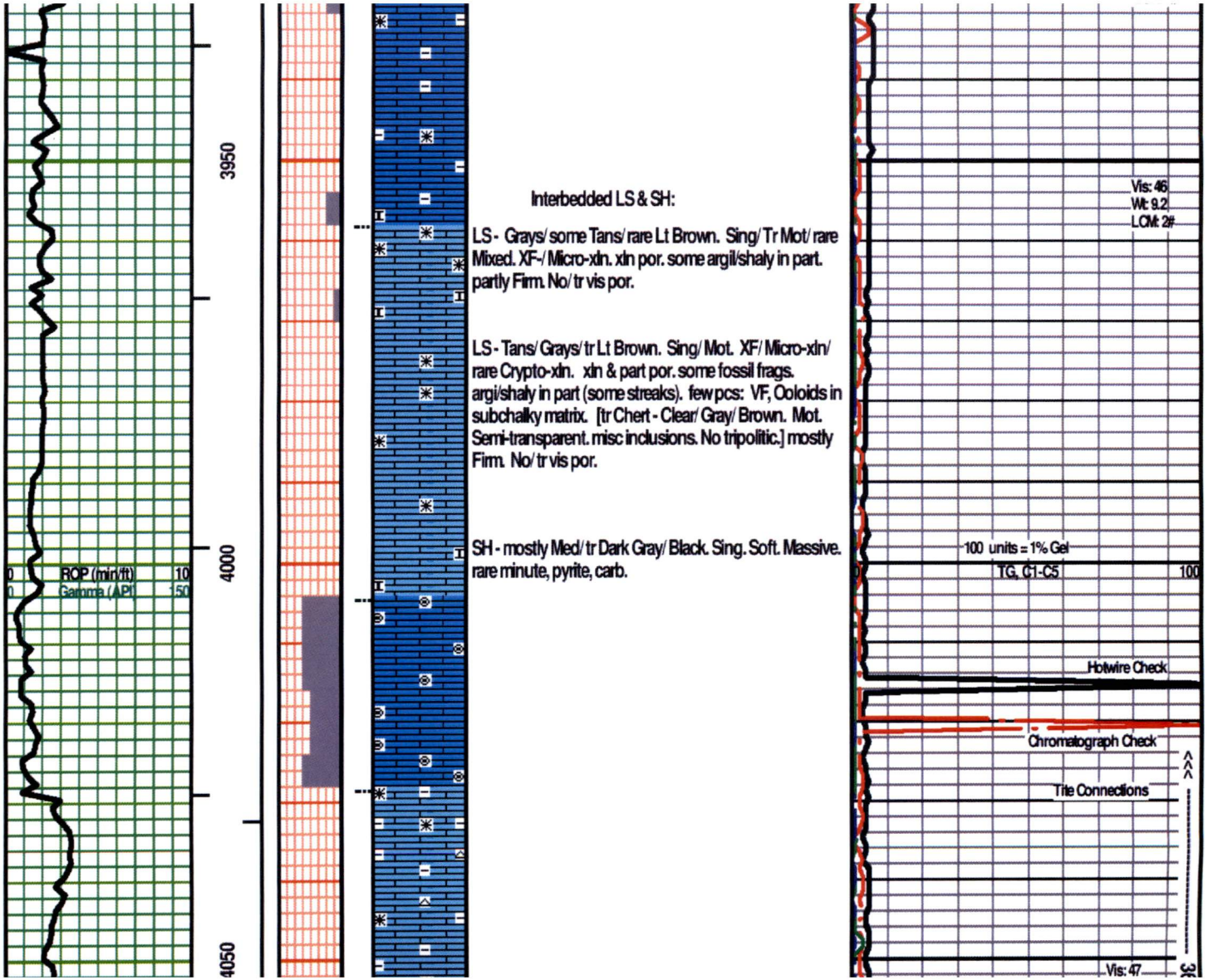

3350
3400
ROP (min/ft) 10
Gamma (API) 150
LS - Grays/ some Grayish Tan to Med Tan. tr Sing/ mostly Mixed or Mottled. VF-/XF-xln. xln por. No/ tr Re-xln. argil in part. some shale interbedding. partly Firm. tr vis por.
LS - Lt/ Med Tan, some Tannish Pale to Lt Gray, tr Med Gray. tr Sing/ some Mixed and Mot. VF-/ XF-/ some Micro-xln. xln por. some 'grainy' texture pcs. No/ tr argil in part. partly Friable. No/ mostly tr to fair vis por.
SH - Med Gray. Sing. tr platty. tr calc.
LS - Interbedded Med Tan and Lt/ tr Med Gray or Tannish Gray. Sing/ tr Mot. Micro-xln at top. tr VF-/mostly XF-xln. xln por. argil in part. No/ some Re-xln. partly Firm. mostly No/ tr vis por.
Vis: 49
Wt: 8.9
LCM: 2#
Vis: 50
Wt: 9.0
LCM: 3#
Hotwire Check
Chromatograph Check
WABAUNSEE
3,396' (-580')
100 units = 1% Gel
Vis: 47
Wt: 9.0
LCM: 4#

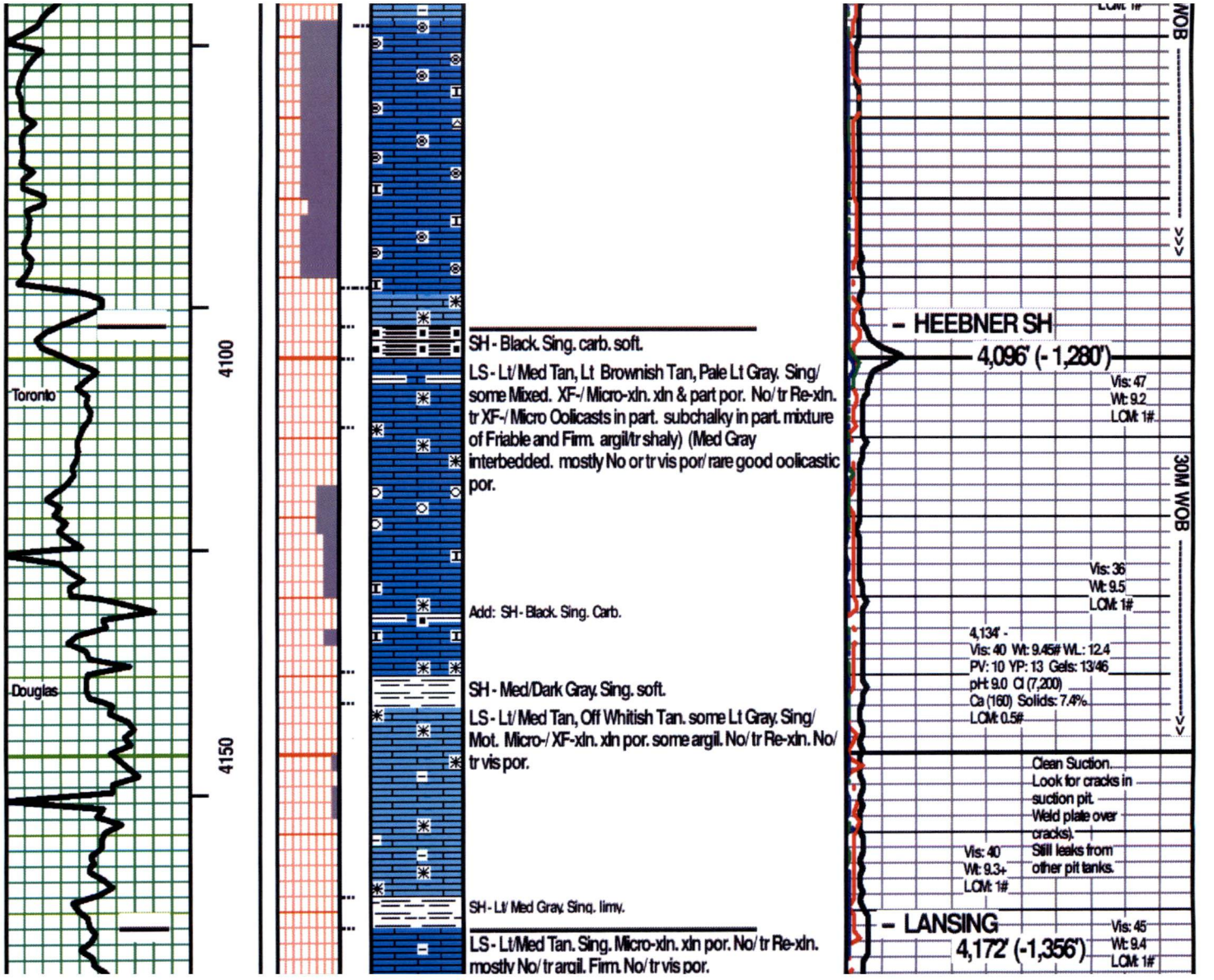

3450
3500
3550
SH - Dark Gray. Sing. soft.
LS - Tans, some Tannish Gray. Sing/ Mixed. XF-/ Micro-xln. xln por. No/ tr Re-xln. argil in part. mostly No/ tr chalky in part. Massive. No/ tr vis por.
SH - Med/ Dark Gray. Sing. Massive. tr platty.
LS - Lt/ Med Tan, Grayish Tan, Tannish Gray. tr Sing/ mostly Mot or Mixed. XF-/ Micro-xln. xln por. No/ tr Re-xln. argil/ shaly in part. No/ rare fossil frag. Firm. No/ tr vis por.
Vis: 45
Wt: 9.0
LCM: 2#
Tite Connection
Vis: 48
Wt: 9.1
LCM: 2#
– STOTLER
3,514' (- 698')
Vis: 50
Wt: 9.0
LCM: 3#

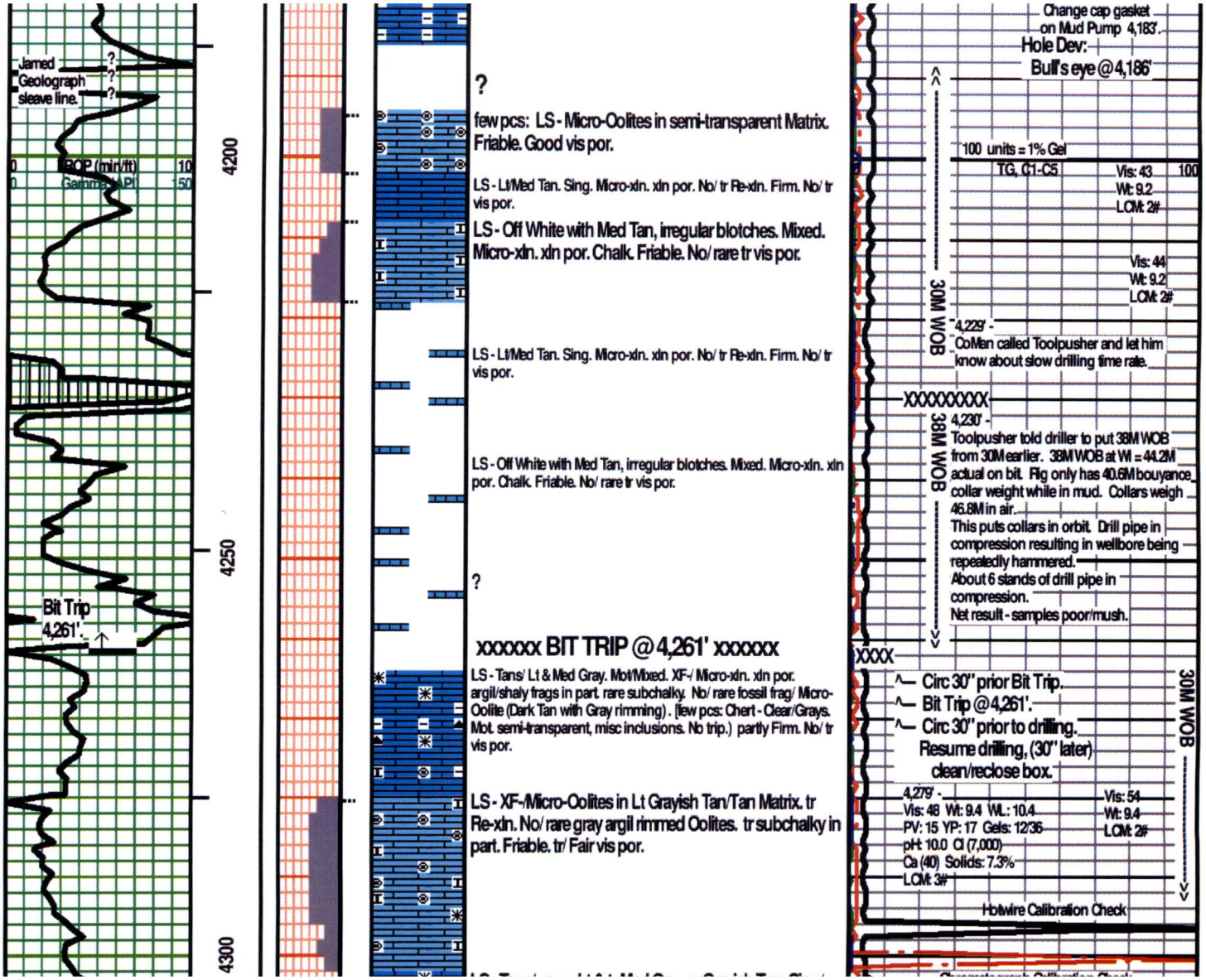

ROP (min/ft)
Gamma (API)
3600
3650
SH - Med Gray. Sing. soft.
LS - Lt/Med Tan. Sing. VF-xln. xln por. tr chalky. Friable. tr vis por.
LS - Pale/ Lt / Med Gray. Grayish Tan. tr Sing/ mostly interbedded/Mixed. Micro-/ some XF-xln. xln por. Re-xln at top. argil/shaly in part. No/ tr fossil frags. Firm at top. partly Friable with depth. mixture of No vis por at top -and- tr vis por with depth.
LS - Pale/ Lt / Med Gray. Grayish Tan. tr Sing/ mostly interbedded/Mixed. Micro-/ some XF-xln. xln por. Re-xln at top. argil/shaly in part. No/ tr fossil frags. Firm at top. partly Friable with depth. mixture of No vis por at top -and- tr vis por with depth.
SH - Med Gray. Sing. tr limy.
LS - Pale/ Lt / Med Gray. some Grayish Tan. tr Sing/ mostly interbedded Mixed. mostly Micro-/ some XF-xln. xln por. Re-xln at top. argil/shaly or shale interbedded in
Vis: 51
Wt: 9.1
LCM: 2#
Hotwire Check
Chromatograph Check
Jet #1, Add Pre-Mix
100 units = 1% Gel
TG, C1-C5
100
Vis: 51
Wt: 7.9
LCM: 2#
Steel Pits leaking from underneath. (40 Bbls ?)

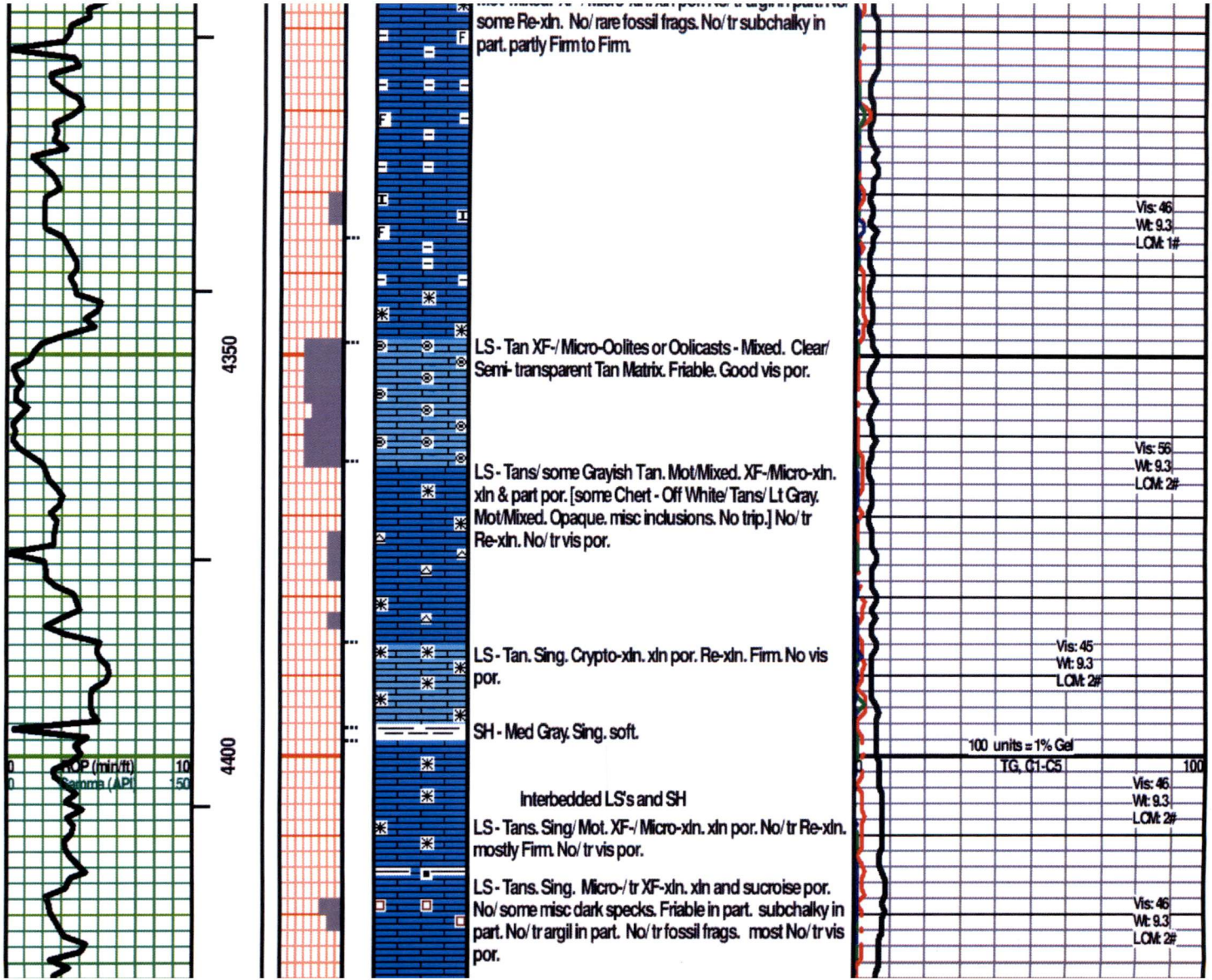

3700
3750
3800
ROP (min/ft)
10
LS - Pale/ Lt / Med Gray. some Grayish Tan. tr Sing/ mostly interbedded Mixed. mostly Micro-/ some XF-xln. xln por. Re-xln at top. argil/shaly or shale interbedded in part. No/ tr fossil frags. rare/ tr chalky in part. Firm at top. partly Friable with depth. mixture of No / tr vis por.
LS - Pale/ Lt / Med Gray. some Grayish Tan. tr Sing/ mostly interbedded Mixed. mostly Micro-/ some XF-xln. xln por. Re-xln at top. argil/shaly or shale interbedded in part. No/ tr fossil frags. rare chalky in part. [Add: Chert - Off White/Grays/ Tans/ tr Orange. Opaque. fossil frags & misc inclusions.] Firm at top. partly Friable with depth. mixture of No / tr vis por.
LS - Tans/ Grays/ Brown. Sing/ some Mot. XF-/ Micro-xln. xln & part por. Re-xln in part. some fossil frags. argil/shaly in part. some Ooloids/ subchalky. mostly Firm. mostly Fair vis por.
LS - Lt Tan/ Lt Gray. Mot/Mixed. Micro-xln. xln & rare part
Vis: 60
Wt: 9.2
LCM: 3#
3,711' -
Vis: 56 Wt: 9.1 WL: 11.2
PV: 14 YP: 17 Gels: 17/52
pH: 9.5 Cl (5,700)
Ca (140) Solids: 5.4%
LCM: 2/3
Vis: 60
Wt: 9.3
LCM: 2#
- TOPEKA
3,779' (-963')
Vis: 62
Wt: 9.3
LCM: 9.2
100 units = 1% Gel
TG, C1-C5
100

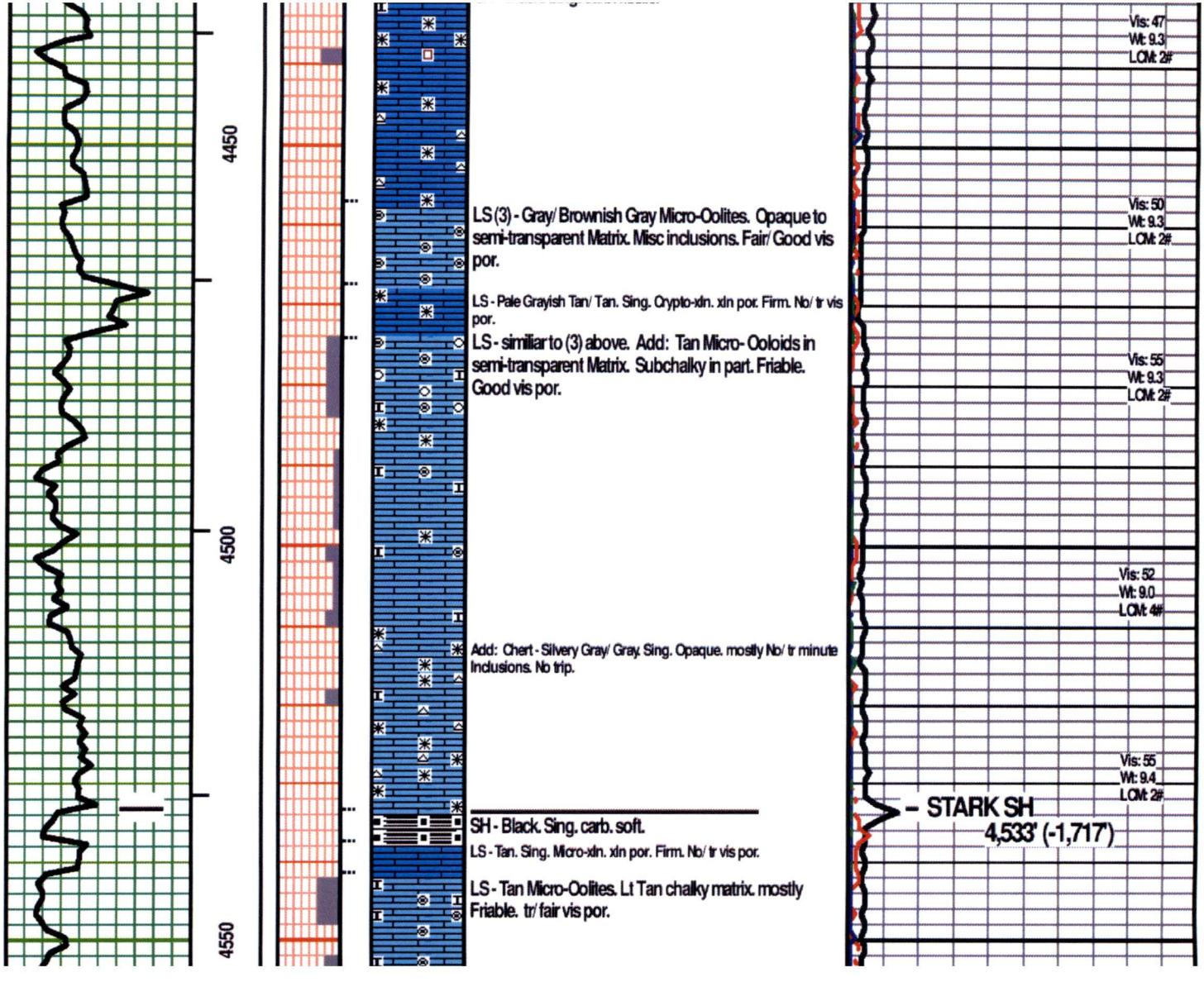

3850
3900
LS - Tans/ Off White/ Pale Grayish Tan/ tr Lt Brown. Sing/ Mixed. XF- /Micro-xln. xln & part por. Subchalky. some Micro-Oolites (Off White/ tr Whitish Tan). Friable. Fair vis por.
Interbedded SH & LS:
Interbedded SH & LS:
SH - mostly Med/ tr Dark Gray/ Black. Sing. Soft. Massive. rare minute, pyrite, carb.
LS - Grays/ some Tans/ rare Lt Brown. Sing/ Tr Mot/ rare Mixed. XF-/ Micro-xln. xln por. some argil/shaly in part. partly Firm. No/ tr vis por.
LS - Tans/ Grays/ tr Lt Brown. Sing/ Mot. XF/ Micro-xln/ rare Crypto-xln. xln & part por. some fossil frags. argi/shaly in part (some streaks). few pcs: VF, Ooloids in subchalky matrix. [tr Chert - Clear/ Gray/ Brown. Mot. Semi-transparent. misc inclusions. No tripolitic.] mostly Firm. No/ tr vis por.
Vis: 60
Wt: 9.3
LCM: 1#
Vis: 57
Wt: 9.4
LCM: 1#
Vis: 55
Wt: 9.4
LCM: 2#
Vis: 47
Wt: 9.1
LCM: 2#
Vis: 45
Wt: 9.2
LCM: 2#
Vis: 47

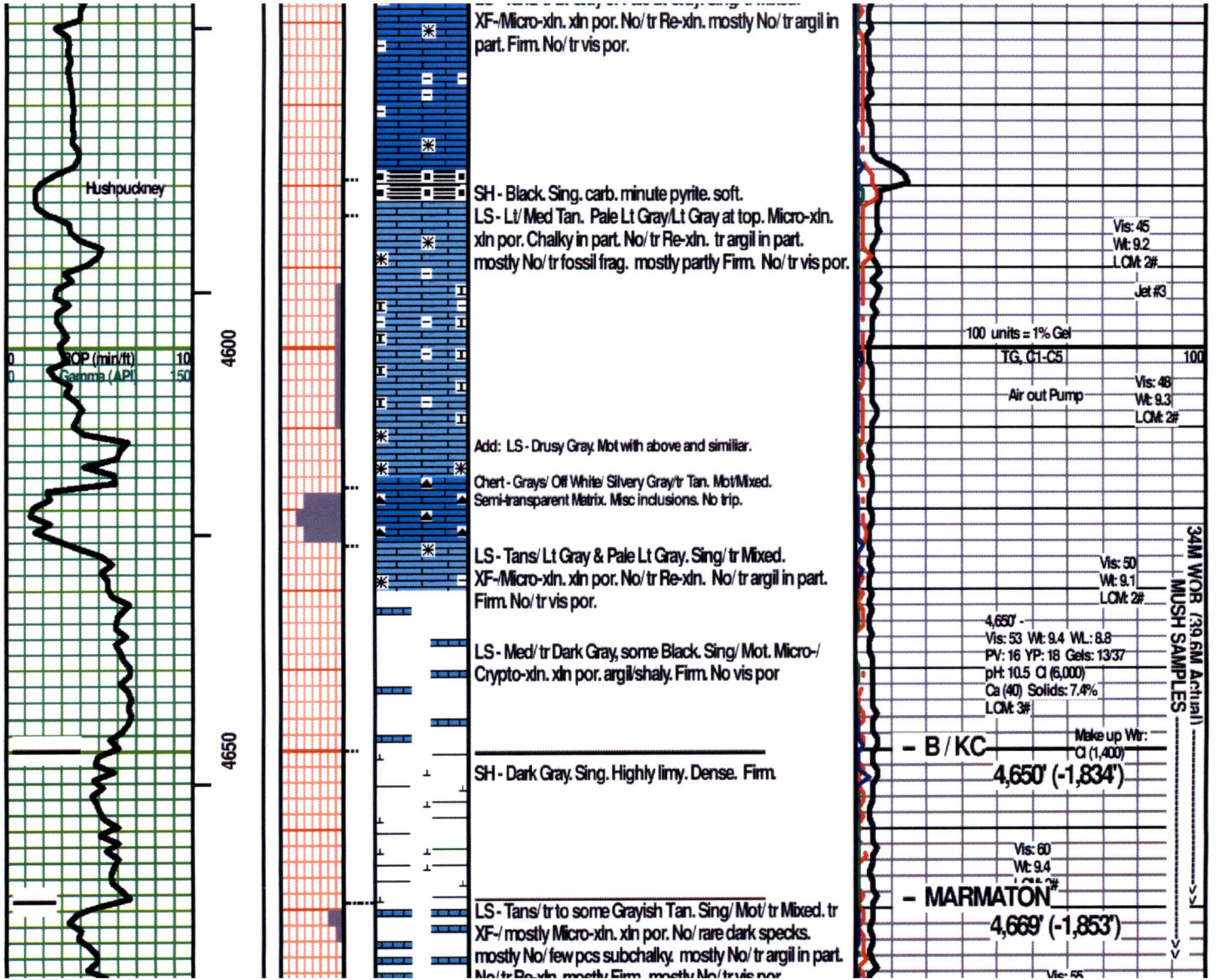

3950
4000
4050
ROP (min/ft)
Gamma (API)
Interbedded LS & SH:
LS - Grays/ some Tans/ rare Lt Brown. Sing/ Tr Mot/ rare Mixed. XF-/ Micro-xln. xln por. some argil/shaly in part. partly Firm. No/ tr vis por.
LS - Tans/ Grays/ tr Lt Brown. Sing/ Mot. XF/ Micro-xln/ rare Crypto-xln. xln & part por. some fossil frags. argi/shaly in part (some streaks). few pcs: VF, Ooloids in subchalky matrix. [tr Chert - Clear/ Gray/ Brown. Mot. Semi-transparent. misc inclusions. No tripolitic.] mostly Firm. No/ tr vis por.
SH - mostly Med/ tr Dark Gray/ Black. Sing. Soft. Massive. rare minute, pyrite, carb.
Vis: 46
Wt: 9.2
LCM: 2#
100 units = 1% Gel
TG, C1-C5
100
Hotwire Check
Chromatograph Check
Tite Connections
Vis: 47

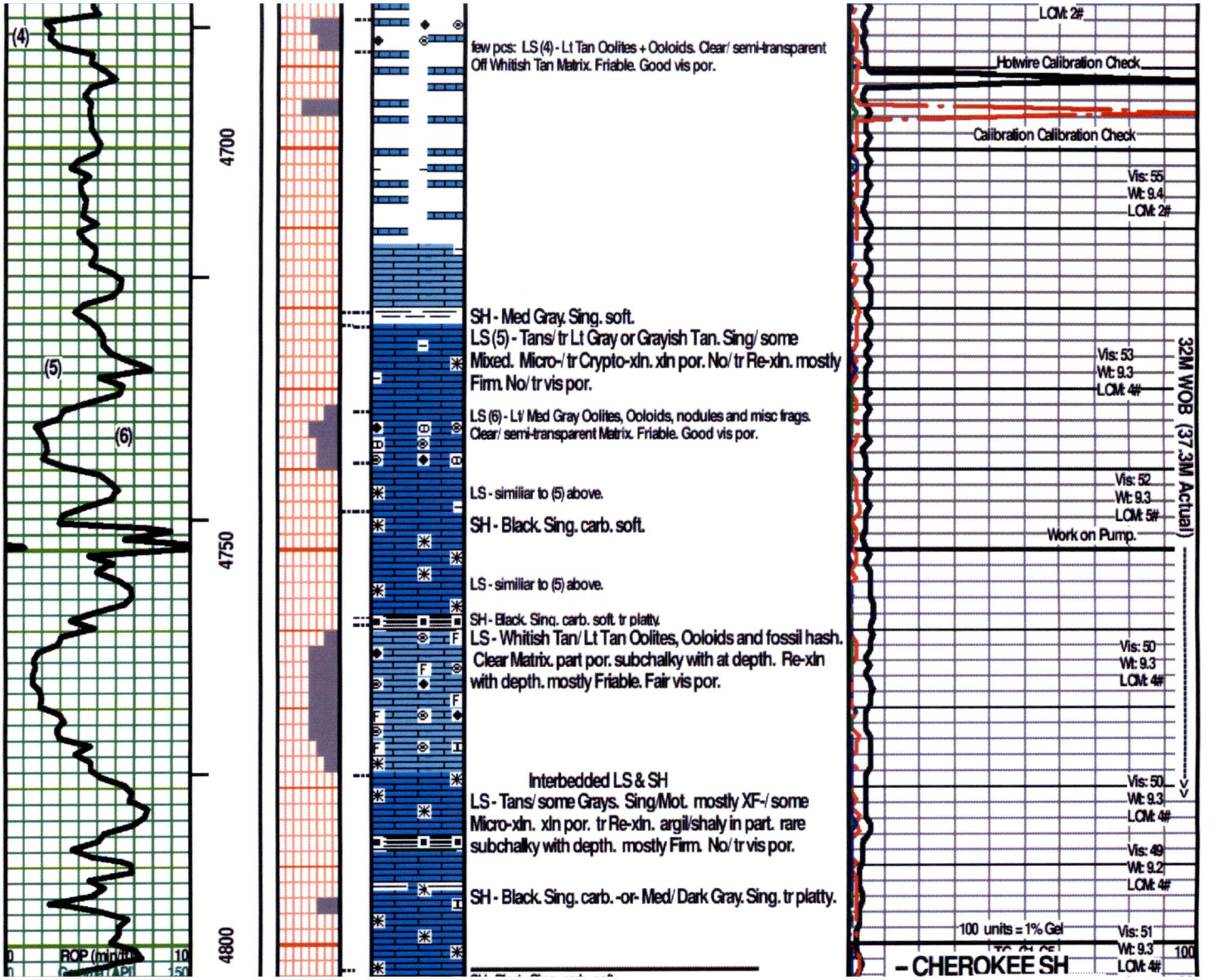

4100
4150
Toronto
Douglas
SH - Black. Sing. carb. soft.
LS - Lt/ Med Tan, Lt Brownish Tan, Pale Lt Gray. Sing/ some Mixed. XF-/ Micro-xln. xln & part por. No/ tr Re-xln. tr XF-/ Micro Oolicasts in part. subchalky in part. mixture of Friable and Firm. argil/tr shaly) (Med Gray interbedded. mostly No or tr vis por/ rare good oolicastic por.
Add: SH - Black. Sing. Carb.
SH - Med/Dark Gray. Sing. soft.
LS - Lt/ Med Tan, Off Whitish Tan. some Lt Gray. Sing/ Mot. Micro-/ XF-xln. xln por. some argil. No/ tr Re-xln. No/ tr vis por.
SH - Lt/ Med Gray. Sing. limy.
LS - Lt/Med Tan. Sing. Micro-xln. xln por. No/ tr Re-xln. mostly No/ tr argil. Firm. No/ tr vis por.
WOB
- HEEBNER SH
4,096' (- 1,280')
Vis: 47
Wt: 9.2
LCM: 1#
30M WOB
Vis: 36
Wt: 9.5
LCM: 1#
4,134' -
Vis: 40 Wt: 9.45# WL: 12.4
PV: 10 YP: 13 Gels: 13/46
pH: 9.0 Cl (7,200)
Ca (160) Solids: 7.4%
LCM: 0.5#
Clean Suction.
Look for cracks in suction pit.
Weld plate over cracks).
Still leaks from other pit tanks.
Vis: 40
Wt: 9.3+
LCM: 1#
- LANSING
4,172' (-1,356')
Vis: 45
Wt: 9.4
LCM: 1#

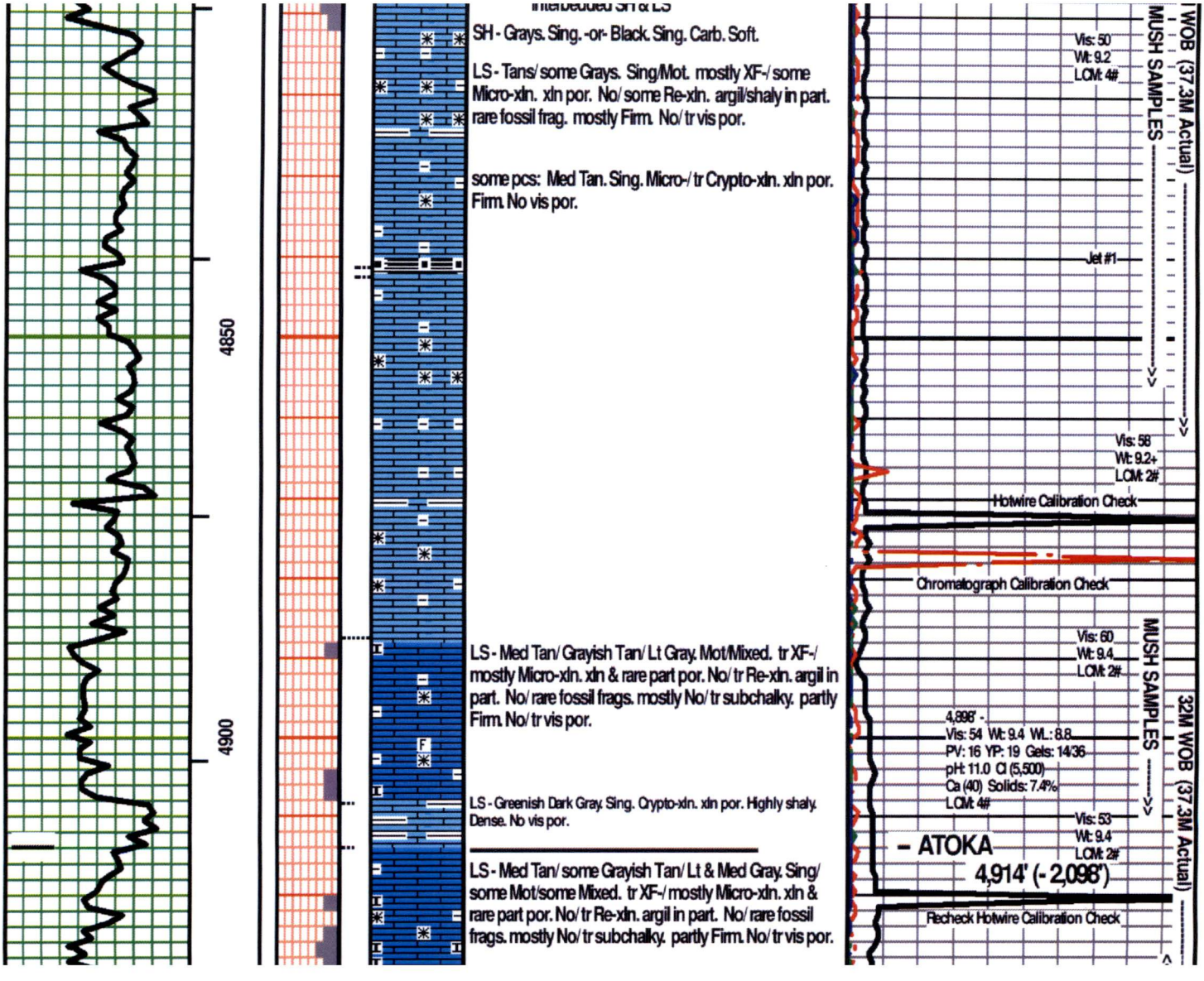

Jamed
Geolograph
sleave line.
?
?
?
0
ROP (min/ft)
10
0
Gamma API
150
4200
4250
4300
Bit Trip
4,261'.
?
few pcs: LS - Micro-Oolites in semi-transparent Matrix. Friable. Good vis por.
LS - Lt/Med Tan. Sing. Micro-xln. xln por. No/ tr Re-xln. Firm. No/ tr vis por.
LS - Off White with Med Tan, irregular blotches. Mixed. Micro-xln. xln por. Chalk. Friable. No/ rare tr vis por.
LS - Lt/Med Tan. Sing. Micro-xln. xln por. No/ tr Re-xln. Firm. No/ tr vis por.
LS - Off White with Med Tan, irregular blotches. Mixed. Micro-xln. xln por. Chalk. Friable. No/ rare tr vis por.
?
xxxxx BIT TRIP @ 4,261' xxxxx
LS - Tans/ Lt & Med Gray. Mot/Mixed. XF-/ Micro-xln. xln por. argil/shaly frags in part. rare subchalky. No/ rare fossil frag/ Micro-Oolite (Dark Tan with Gray rimming). [few pcs: Chert - Clear/Grays. Mot. semi-transparent, misc inclusions. No trip.) partly Firm. No/ tr vis por.
LS - XF-/Micro-Oolites in Lt Grayish Tan/Tan Matrix. tr Re-xln. No/ rare gray argil rimmed Oolites. tr subchalky in part. Friable. tr/ Fair vis por.
Change cap gasket on Mud Pump 4,183'.
Hole Dev:
Bull's eye @ 4,186'
100 units = 1% Gel
TG, C1-C5
Vis: 43
Wt: 9.2
LCM: 2#
100
Vis: 44
Wt: 9.2
LCM: 2#
30M WOB
4,229' -
CoMan called Toolpusher and let him know about slow drilling time rate.
XXXXXXXX
38M WOB
4,230' -
Toolpusher told driller to put 38M WOB from 30M earlier. 38M WOB at Wt = 44.2M actual on bit. Rig only has 40.6M bouyance collar weight while in mud. Collars weigh 46.8M in air.
This puts collars in orbit. Drill pipe in compression resulting in wellbore being repeatedly hammered.
About 6 stands of drill pipe in compression.
Net result - samples poor/mush.
XXXX
Circ 30" prior Bit Trip.
Bit Trip @ 4,261'.
Circ 30" prior to drilling.
Resume drilling, (30" later) clean/reclose box.
30M WOB
4,279' -
Vis: 48 Wt: 9.4 WL: 10.4
PV: 15 YP: 17 Gels: 12/36
pH: 10.0 Cl (7,000)
Ca (40) Solids: 7.3%
LCM: 3#
Vis: 54
Wt: 9.4
LCM: 2#
Hotwire Calibration Check

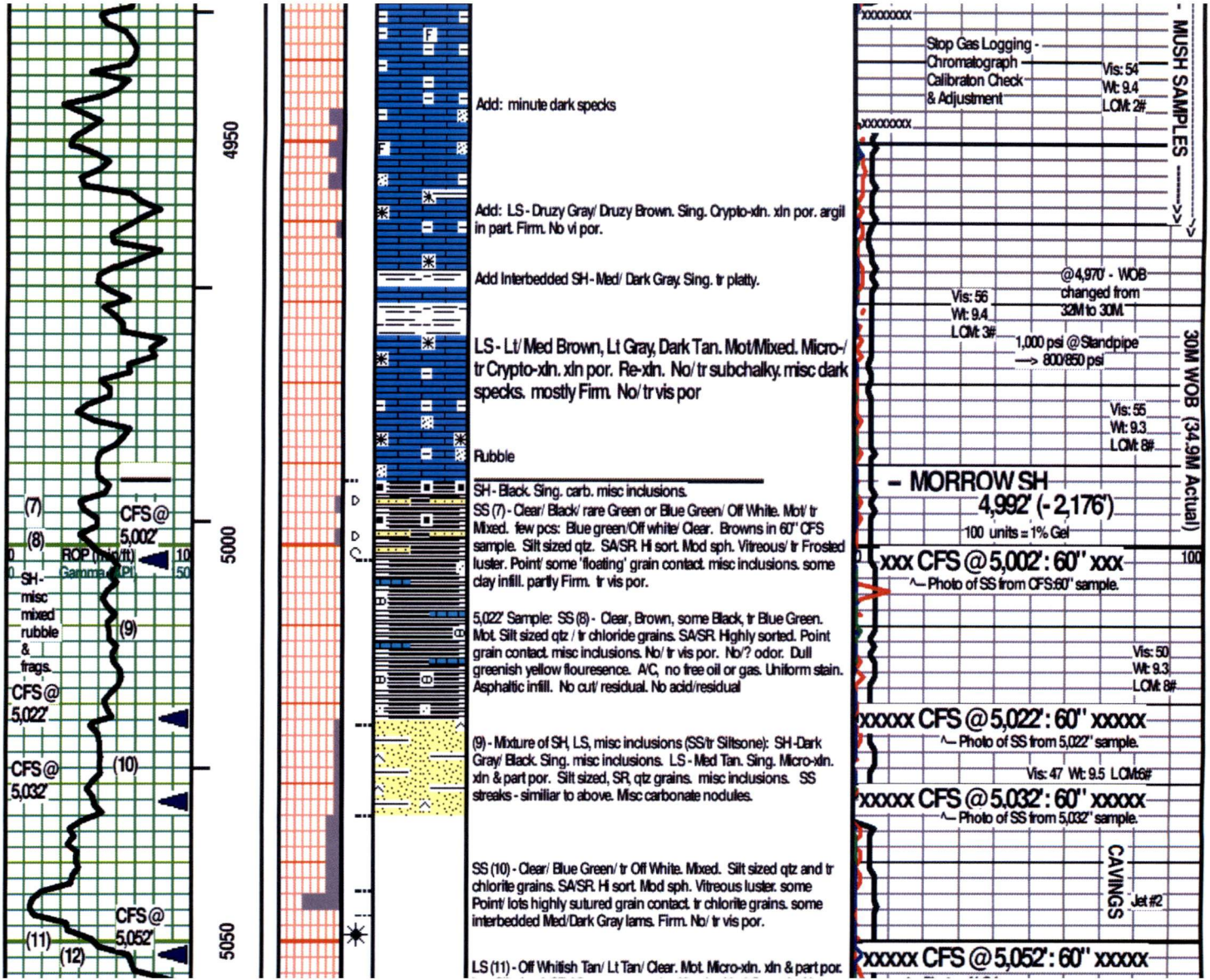

some Re-xln. No/ rare fossil frags. No/ tr subchalky in part. partly Firm to Firm.
LS - Tan XF-/ Micro-Oolites or Oolicasts - Mixed. Clear/ Semi- transparent Tan Matrix. Friable. Good vis por.
LS - Tans/ some Grayish Tan. Mot/Mixed. XF-/Micro-xln. xln & part por. [some Chert - Off White/ Tans/ Lt Gray. Mot/Mixed. Opaque. misc inclusions. No trip.] No/ tr Re-xln. No/ tr vis por.
LS - Tan. Sing. Crypto-xln. xln por. Re-xln. Firm. No vis por.
SH - Med Gray. Sing. soft.
Interbedded LS's and SH
LS - Tans. Sing/ Mot. XF-/ Micro-xln. xln por. No/ tr Re-xln. mostly Firm. No/ tr vis por.
LS - Tans. Sing. Micro-/ tr XF-xln. xln and sucroise por. No/ some misc dark specks. Friable in part. subchalky in part. No/ tr argil in part. No/ tr fossil frags. most No/ tr vis por.
4350
4400
ROP (min/ft)
Gamma (API)
Vis: 46
Wt: 9.3
LCM: 1#
Vis: 56
Wt: 9.3
LCM: 2#
Vis: 45
Wt: 9.3
LCM: 2#
100 units = 1% Gel
TG, C1-C5
Vis: 46
Wt: 9.3
LCM: 2#
Vis: 46
Wt: 9.3
LCM: 2#

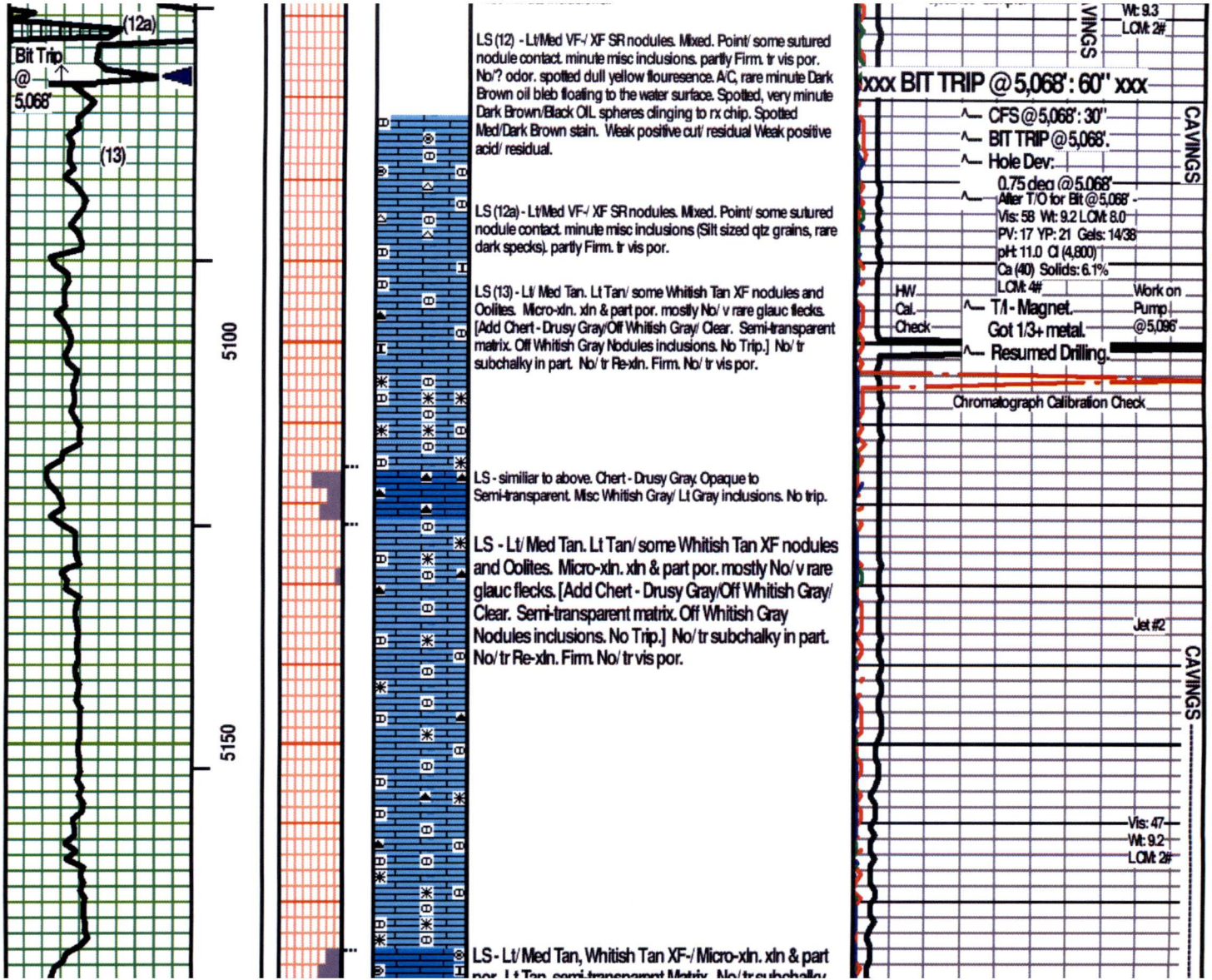

4450
4500
4550
LS (3) - Gray/ Brownish Gray Micro-Oolites. Opaque to semi-transparent Matrix. Misc inclusions. Fair/ Good vis por.
LS - Pale Grayish Tan/ Tan. Sing. Crypto-xln. xln por. Firm. No/ tr vis por.
LS - similiar to (3) above. Add: Tan Micro- Ooloids in semi-transparent Matrix. Subchalky in part. Friable. Good vis por.
Add: Chert - Silvery Gray/ Gray. Sing. Opaque. mostly No/ tr minute inclusions. No trip.
SH - Black. Sing. carb. soft.
LS - Tan. Sing. Micro-xln. xln por. Firm. No/ tr vis por.
LS - Tan Micro-Oolites. Lt Tan chalky matrix. mostly Friable. tr/ fair vis por.
Vis: 47
Wt: 9.3
LCM: 2#
Vis: 50
Wt: 9.3
LCM: 2#
Vis: 55
Wt: 9.3
LCM: 2#
Vis: 52
Wt: 9.0
LCM: 4#
Vis: 55
Wt: 9.4
LCM: 2#
STARK SH
4,533' (-1,717')

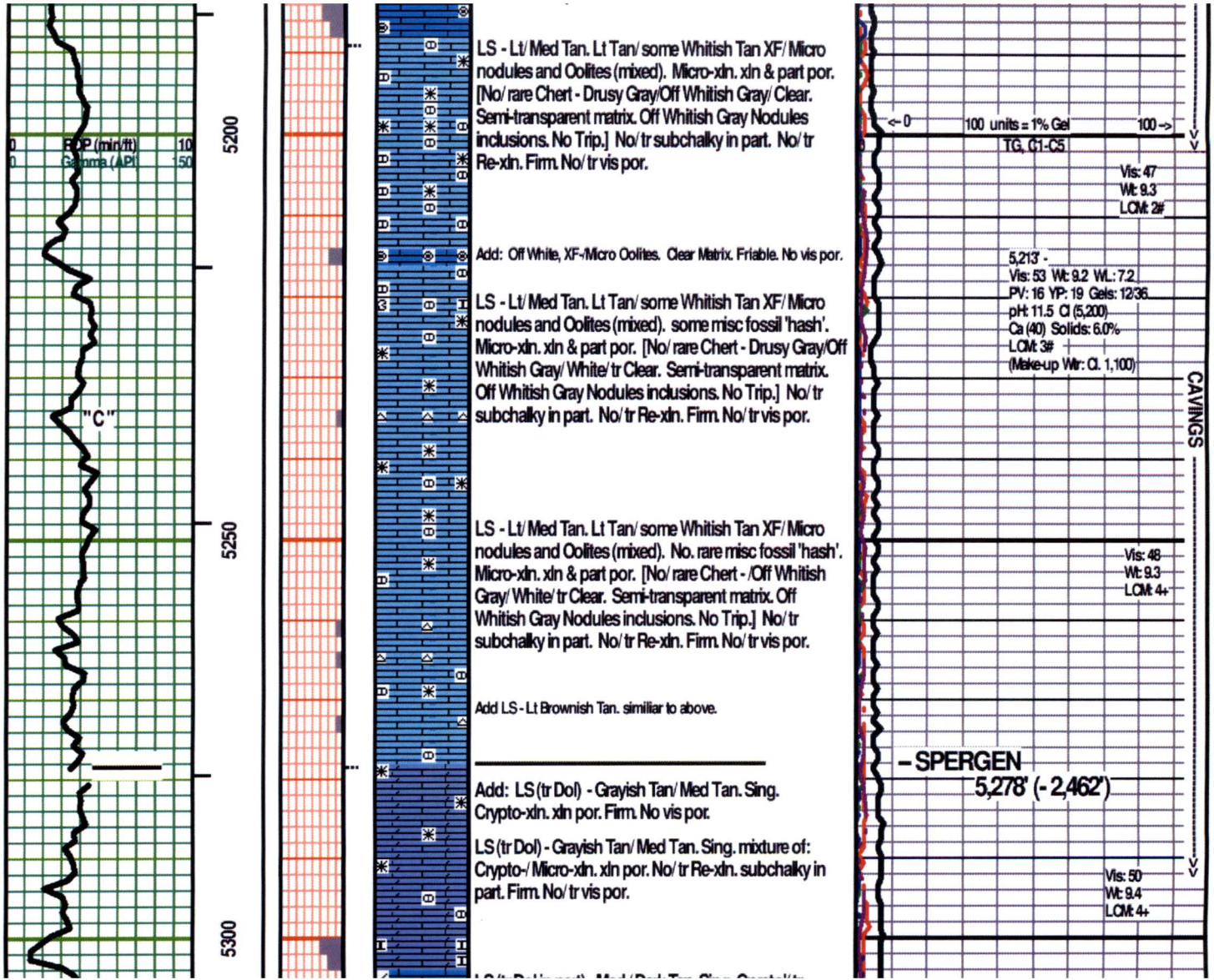

Hushpuckney
ROP (min/ft)
Gamma (API)
4600
4650
XF-/Micro-xln. xln por. No/ tr Re-xln. mostly No/ tr argil in part. Firm. No/ tr vis por.
SH - Black. Sing. carb. minute pyrite. soft.
LS - Lt/ Med Tan. Pale Lt Gray/Lt Gray at top. Micro-xln. xln por. Chalky in part. No/ tr Re-xln. tr argil in part. mostly No/ tr fossil frag. mostly partly Firm. No/ tr vis por.
Add: LS - Drusy Gray. Mot with above and similiar.
Chert - Grays/ Off White/ Silvery Gray/tr Tan. Mot/Mixed. Semi-transparent Matrix. Misc inclusions. No trip.
LS - Tans/ Lt Gray & Pale Lt Gray. Sing/ tr Mixed. XF-/Micro-xln. xln por. No/ tr Re-xln. No/ tr argil in part. Firm. No/ tr vis por.
LS - Med/ tr Dark Gray, some Black. Sing/ Mot. Micro-/ Crypto-xln. xln por. argil/shaly. Firm. No vis por
SH - Dark Gray. Sing. Highly limy. Dense. Firm.
LS - Tans/ tr to some Grayish Tan. Sing/ Mot/ tr Mixed. tr XF-/ mostly Micro-xln. xln por. No/ rare dark specks. mostly No/ few pcs subchalky. mostly No/ tr argil in part.
Vis: 45
Wt: 9.2
LCM: 2#
Jet #3
100 units = 1% Gel
TG, C1-C5
100
Air out Pump
Vis: 48
Wt: 9.3
LCM: 2#
Vis: 50
Wt: 9.1
LCM: 2#
4,650' -
Vis: 53 Wt: 9.4 WL: 8.8
PV: 16 YP: 18 Gels: 13/37
pH: 10.5 Cl (6,000)
Ca (40) Solids: 7.4%
LCM: 3#
Make up Wtr:
Cl (1,400)
- B / KC
4,650' (-1,834')
Vis: 60
Wt: 9.4
- MARMATON
4,669' (-1,853')
34M WOR (39.6M Actual)
MUSH SAMPLES

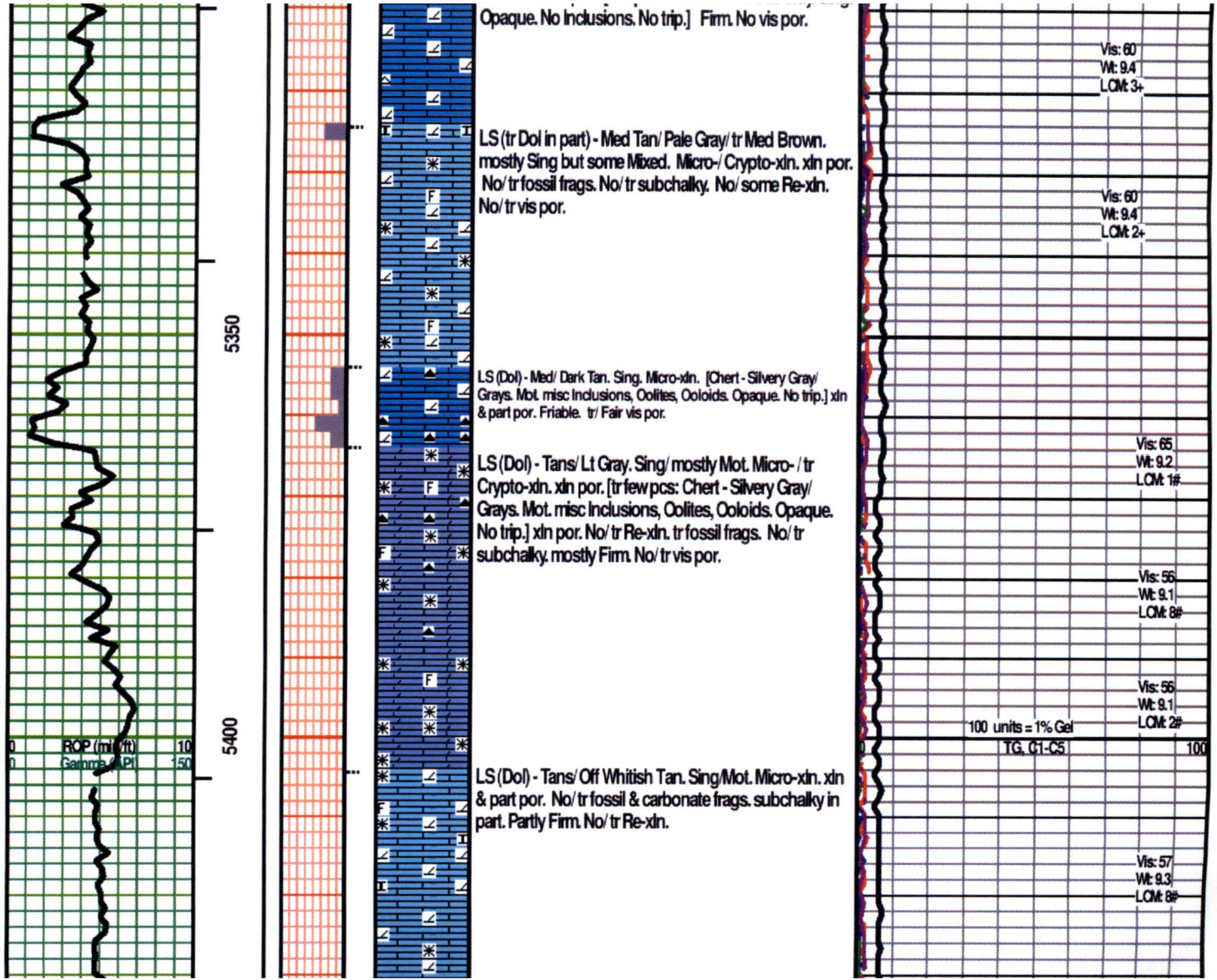

(4)
(5)
(6)
4700
4750
4800
ROP (min/ft)
0
10
150
few pcs: LS (4) - Lt Tan Oolites + Ooloids. Clear/ semi-transparent Off Whitish Tan Matrix. Friable. Good vis por.
SH - Med Gray. Sing. soft.
LS (5) - Tans/ tr Lt Gray or Grayish Tan. Sing/ some Mixed. Micro-/ tr Crypto-xln. xln por. No/ tr Re-xln. mostly Firm. No/ tr vis por.
LS (6) - Lt/ Med Gray Oolites, Ooloids, nodules and misc frags. Clear/ semi-transparent Matrix. Friable. Good vis por.
LS - similiar to (5) above.
SH - Black. Sing. carb. soft.
LS - similiar to (5) above.
SH - Black. Sing. carb. soft. tr platty.
LS - Whitish Tan/ Lt Tan Oolites, Ooloids and fossil hash. Clear Matrix. part por. subchalky with at depth. Re-xln with depth. mostly Friable. Fair vis por.
Interbedded LS & SH
LS - Tans/ some Grays. Sing/Mot. mostly XF-/ some Micro-xln. xln por. tr Re-xln. argil/shaly in part. rare subchalky with depth. mostly Firm. No/ tr vis por.
SH - Black. Sing. carb. -or- Med/ Dark Gray. Sing. tr platty.
LCM: 2#
Hotwire Calibration Check
Calibration Calibration Check
Vis: 55
Wt: 9.4
LCM: 2#
Vis: 53
Wt: 9.3
LCM: 4#
32M WOB (37.3M Actual)
Vis: 52
Wt: 9.3
LCM: 5#
Work on Pump.
Vis: 50
Wt: 9.3
LCM: 4#
Vis: 50
Wt: 9.3
LCM: 4#
Vis: 49
Wt: 9.2
LCM: 4#
100 units = 1% Gel
Vis: 51
Wt: 9.3
LCM: 4#
100
– CHEROKEE SH

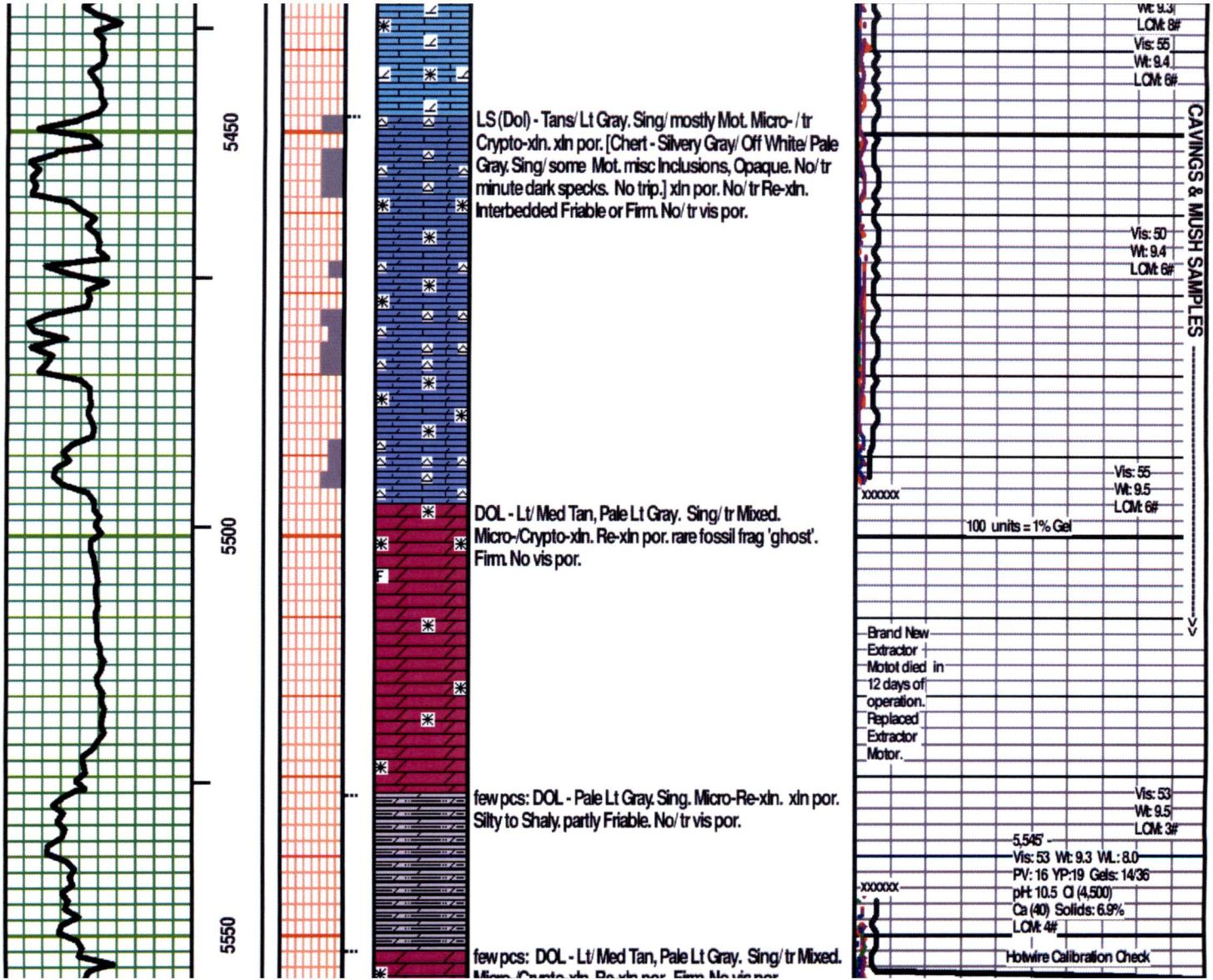

Interbedded SH & LS
SH - Grays. Sing. -or- Black. Sing. Carb. Soft.
LS - Tans/ some Grays. Sing/Mot. mostly XF-/ some Micro-xln. xln por. No/ some Re-xln. argil/shaly in part. rare fossil frag. mostly Firm. No/ tr vis por.
some pcs: Med Tan. Sing. Micro-/ tr Crypto-xln. xln por. Firm. No vis por.
4850
4900
LS - Med Tan/ Grayish Tan/ Lt Gray. Mot/Mixed. tr XF-/ mostly Micro-xln. xln & rare part por. No/ tr Re-xln. argil in part. No/ rare fossil frags. mostly No/ tr subchalky. partly Firm. No/ tr vis por.
LS - Greenish Dark Gray. Sing. Crypto-xln. xln por. Highly shaly. Dense. No vis por.
LS - Med Tan/ some Grayish Tan/ Lt & Med Gray. Sing/ some Mot/some Mixed. tr XF-/ mostly Micro-xln. xln & rare part por. No/ tr Re-xln. argil in part. No/ rare fossil frags. mostly No/ tr subchalky. partly Firm. No/ tr vis por.
WOB (37.3M Actual)
MUSH SAMPLES
Vis: 50
Wt: 9.2
LCM: 4#
Jet #1
Vis: 58
Wt: 9.2+
LCM: 2#
Hotwire Calibration Check
Chromatograph Calibration Check
Vis: 60
Wt: 9.4
LCM: 2#
4,898' -
Vis: 54 Wt: 9.4 WL: 8.8
PV: 16 YP: 19 Gels: 14/36
pH: 11.0 Cl (5,500)
Ca (40) Solids: 7.4%
LCM: 4#
Vis: 53
Wt: 9.4
LCM: 2#
- ATOKA
4,914' (- 2,098')
Recheck Hotwire Calibration Check
32M WOB (37.3M Actual)

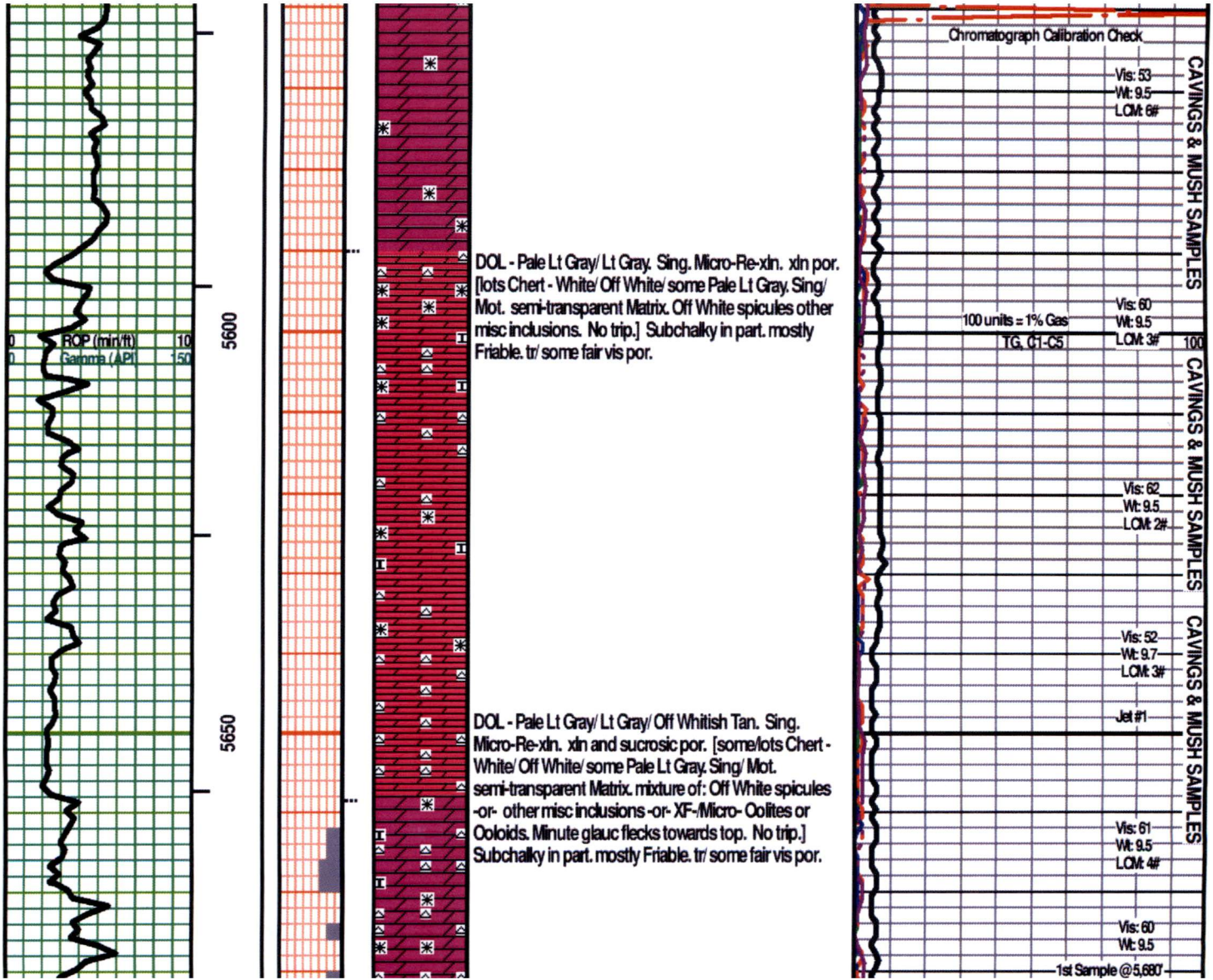

4950
5000
5050
(7)
(8)
CFS @ 5,002'
ROP (min/ft)
Gamma (API)
0
100
50
SH - misc mixed rubble & frags.
(9)
CFS @ 5,022'
CFS @ 5,032'
(10)
CFS @ 5,052'
(11)
(12)
Add: minute dark specks
Add: LS - Druzy Gray/ Druzy Brown. Sing. Crypto-xln. xln por. argil in part. Firm. No vi por.
Add Interbedded SH - Med/ Dark Gray. Sing. tr platty.
LS - Lt/ Med Brown, Lt Gray, Dark Tan. Mot/Mixed. Micro-/ tr Crypto-xln. xln por. Re-xln. No/ tr subchalky. misc dark specks. mostly Firm. No/ tr vis por
Rubble
SH - Black. Sing. carb. misc inclusions.
SS (7) - Clear/ Black/ rare Green or Blue Green/ Off White. Mot/ tr Mixed. few pcs: Blue green/Off white/ Clear. Browns in 60" CFS sample. Silt sized qtz. SA/SR. Hi sort. Mod sph. Vitreous/ tr Frosted luster. Point/ some 'floating' grain contact. misc inclusions. some clay infill. partly Firm. tr vis por.
5,022' Sample: SS (8) - Clear, Brown, some Black, tr Blue Green. Mot. Silt sized qtz / tr chloride grains. SA/SR. Highly sorted. Point grain contact. misc inclusions. No/ tr vis por. No/? odor. Dull greenish yellow flouresence. A/C, no free oil or gas. Uniform stain. Asphaltic infill. No cut/ residual. No acid/residual
(9) - Mixture of SH, LS, misc inclusions (SS/tr Siltsone): SH-Dark Gray/ Black. Sing. misc inclusions. LS - Med Tan. Sing. Micro-xln. xln & part por. Silt sized, SR, qtz grains. misc inclusions. SS streaks - similiar to above. Misc carbonate nodules.
SS (10) - Clear/ Blue Green/ tr Off White. Mixed. Silt sized qtz and tr chlorite grains. SA/SR. Hi sort. Mod sph. Vitreous luster. some Point/ lots highly sutured grain contact. tr chlorite grains. some interbedded Med/Dark Gray lams. Firm. No/ tr vis por.
LS (11) - Off Whitish Tan/ Lt Tan/ Clear. Mot. Micro-xln. xln & part por.
Stop Gas Logging - Chromatograph Calibraton Check & Adjustment
Vis: 54
Wt: 9.4
LCM: 2#
- MUSH SAMPLES
Vis: 56
Wt: 9.4
LCM: 3#
@4,970' - WOB changed from 32M to 30M.
1,000 psi @Standpipe
—> 800/850 psi
30M WOB (34.9M Actual)
Vis: 55
Wt: 9.3
LCM: 8#
- MORROW SH
4,992' (-2,176')
100 units = 1% Gel
xxx CFS @ 5,002': 60" xxx
^— Photo of SS from CFS:60' sample.
Vis: 50
Wt: 9.3
LCM: 8#
xxxxx CFS @ 5,022': 60" xxxxx
^— Photo of SS from 5,022' sample.
Vis: 47 Wt: 9.5 LCM:6#
xxxxx CFS @ 5,032': 60" xxxxx
^— Photo of SS from 5,032' sample.
CAVINGS
Jet #2
xxxxx CFS @ 5,052': 60" xxxxx

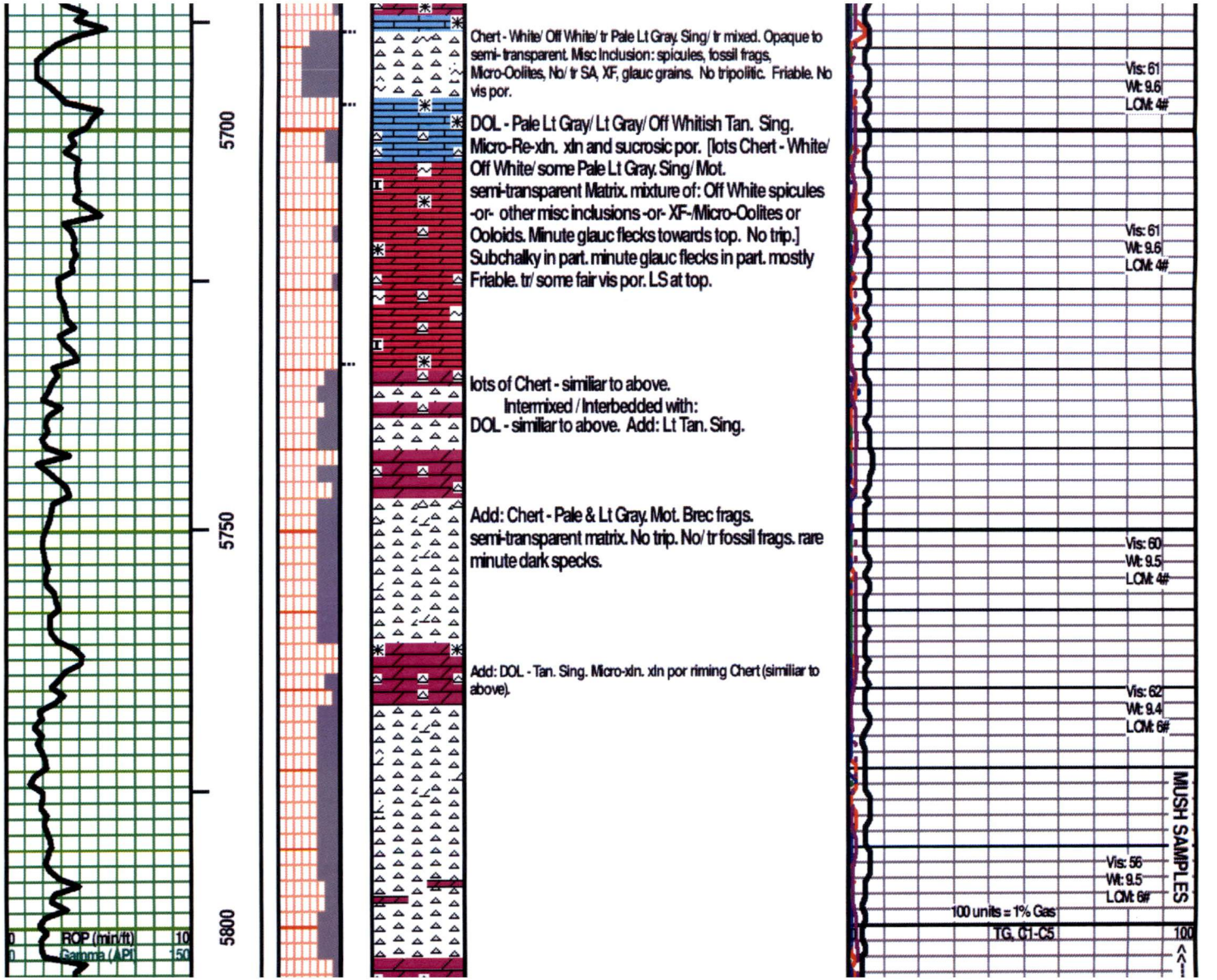

(12a)
Bit Trip @ 5,068'
(13)
5100
5150
LS (12) - Lt/Med VF-/ XF SR nodules. Mixed. Point/ some sutured nodule contact. minute misc inclusions. partly Firm. tr vis por. No/? odor. spotted dull yellow flouresence. A/C, rare minute Dark Brown oil bleb floating to the water surface. Spotted, very minute Dark Brown/Black OIL spheres clinging to rx chip. Spotted Med/Dark Brown stain. Weak positive cut/ residual Weak positive acid/ residual.
LS (12a) - Lt/Med VF-/ XF SR nodules. Mixed. Point/ some sutured nodule contact. minute misc inclusions (Silt sized qtz grains, rare dark specks). partly Firm. tr vis por.
LS (13) - Lt/ Med Tan. Lt Tan/ some Whitish Tan XF nodules and Oolites. Micro-xln. xln & part por. mostly No/ v rare glauc flecks. [Add Chert - Drusy Gray/Off Whitish Gray/ Clear. Semi-transparent matrix. Off Whitish Gray Nodules inclusions. No Trip.] No/ tr subchalky in part. No/ tr Re-xln. Firm. No/ tr vis por.
LS - similiar to above. Chert - Drusy Gray. Opaque to Semi-transparent. Misc Whitish Gray/ Lt Gray inclusions. No trip.
LS - Lt/ Med Tan. Lt Tan/ some Whitish Tan XF nodules and Oolites. Micro-xln. xln & part por. mostly No/ v rare glauc flecks. [Add Chert - Drusy Gray/Off Whitish Gray/ Clear. Semi-transparent matrix. Off Whitish Gray Nodules inclusions. No Trip.] No/ tr subchalky in part. No/ tr Re-xln. Firm. No/ tr vis por.
LS - Lt/ Med Tan, Whitish Tan XF-/ Micro-xln. xln & part
CAVINGS
Wt: 9.3
LOM: 2#
xxx BIT TRIP @ 5,068': 60" xxx
CFS @ 5,068': 30"
BIT TRIP @ 5,068'.
Hole Dev:
0.75 deg @ 5,068'
After T/O for Bit @ 5,068' -
Vis: 58 Wt: 9.2 LOM: 8.0
PV: 17 YP: 21 Gels: 14/38
pH: 11.0 Cl (4,800)
Ca (40) Solids: 6.1%
LOM: 4#
HW Cal. Check
T/I - Magnet.
Got 1/3+ metal.
Work on Pump @ 5,096'
Resumed Drilling.
Chromatograph Calibration Check
Jet #2
CAVINGS
Vis: 47
Wt: 9.2
LOM: 2#

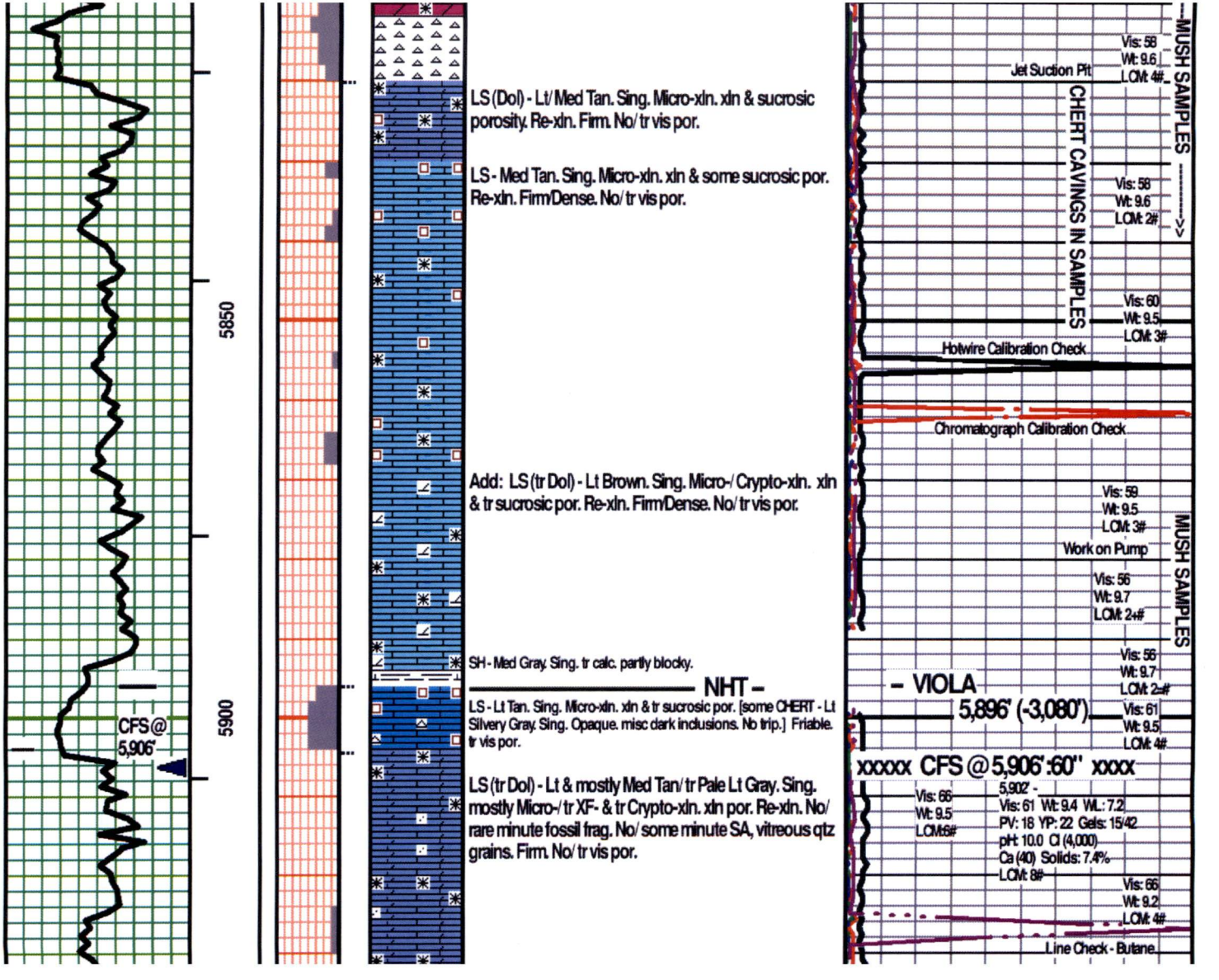

ROP (min/ft)
Gamma (API)
"C"
5200
5250
5300
LS - Lt/ Med Tan. Lt Tan/ some Whitish Tan XF/ Micro nodules and Oolites (mixed). Micro-xln. xln & part por. [No/ rare Chert - Drusy Gray/Off Whitish Gray/ Clear. Semi-transparent matrix. Off Whitish Gray Nodules inclusions. No Trip.] No/ tr subchalky in part. No/ tr Re-xln. Firm. No/ tr vis por.
Add: Off White, XF-/Micro Oolites. Clear Matrix. Friable. No vis por.
LS - Lt/ Med Tan. Lt Tan/ some Whitish Tan XF/ Micro nodules and Oolites (mixed). some misc fossil 'hash'. Micro-xln. xln & part por. [No/ rare Chert - Drusy Gray/Off Whitish Gray/ White/ tr Clear. Semi-transparent matrix. Off Whitish Gray Nodules inclusions. No Trip.] No/ tr subchalky in part. No/ tr Re-xln. Firm. No/ tr vis por.
LS - Lt/ Med Tan. Lt Tan/ some Whitish Tan XF/ Micro nodules and Oolites (mixed). No. rare misc fossil 'hash'. Micro-xln. xln & part por. [No/ rare Chert - /Off Whitish Gray/ White/ tr Clear. Semi-transparent matrix. Off Whitish Gray Nodules inclusions. No Trip.] No/ tr subchalky in part. No/ tr Re-xln. Firm. No/ tr vis por.
Add LS - Lt Brownish Tan. similiar to above.
Add: LS (tr Dol) - Grayish Tan/ Med Tan. Sing. Crypto-xln. xln por. Firm. No vis por.
LS (tr Dol) - Grayish Tan/ Med Tan. Sing. mixture of: Crypto-/ Micro-xln. xln por. No/ tr Re-xln. subchalky in part. Firm. No/ tr vis por.
<-- 0
100 units = 1% Gel
100 -->
TG, C1-C5
Vis: 47
Wt: 9.3
LCM: 2#
5,213' -
Vis: 53 Wt: 9.2 WL: 7.2
PV: 16 YP: 19 Gels: 12/36
pH: 11.5 Cl (5,200)
Ca (40) Solids: 6.0%
LCM: 3#
(Make-up Wtr: Cl. 1,100)
CAVINGS
Vis: 48
Wt: 9.3
LCM: 4+
– SPERGEN
5,278' (- 2,462')
Vis: 50
Wt: 9.4
LCM: 4+

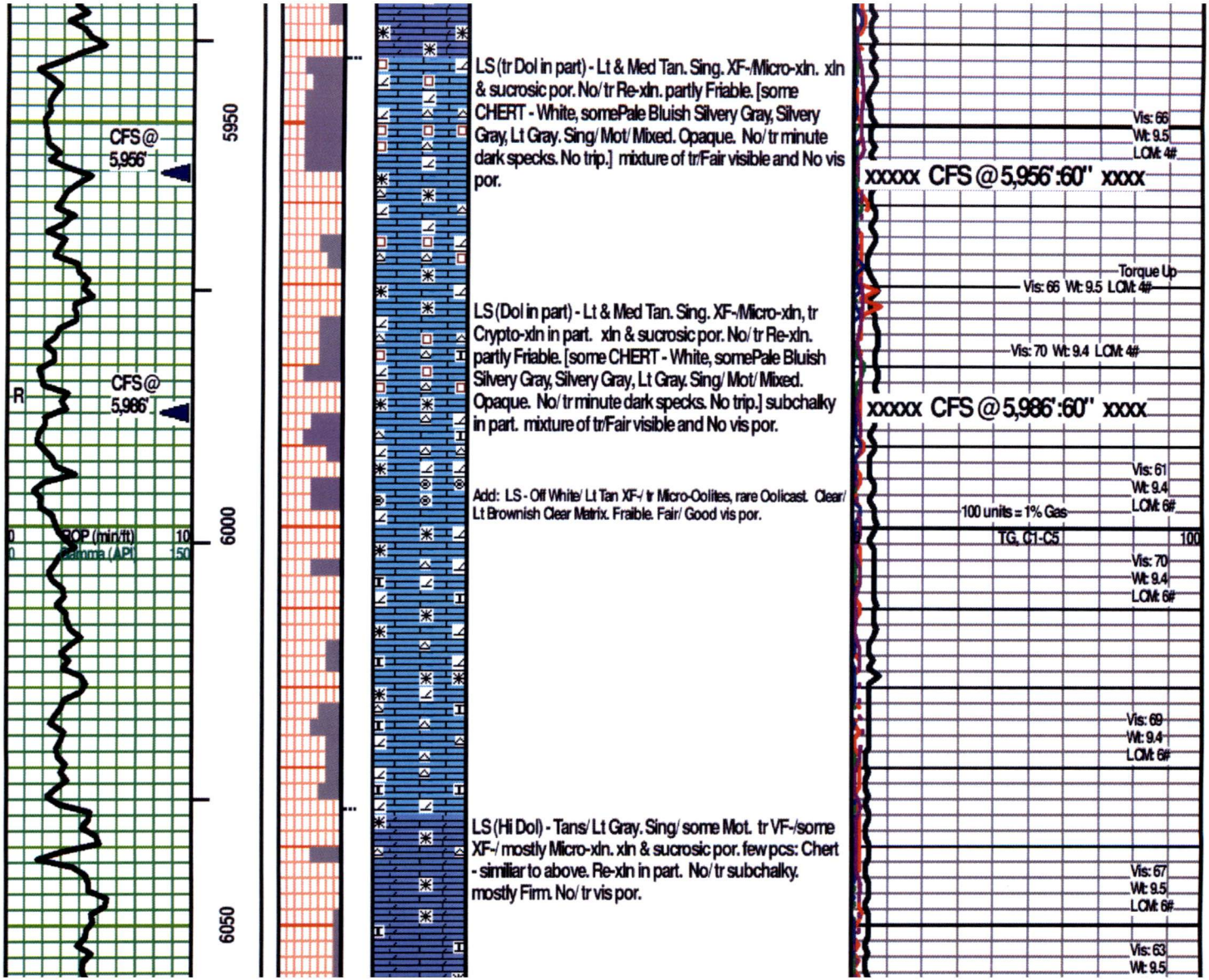

Opaque. No Inclusions. No trip.] Firm. No vis por.
LS (tr Dol in part) - Med Tan/ Pale Gray/ tr Med Brown. mostly Sing but some Mixed. Micro-/ Crypto-xln. xln por. No/ tr fossil frags. No/ tr subchalky. No/ some Re-xln. No/ tr vis por.
LS (Dol) - Med/ Dark Tan. Sing. Micro-xln. [Chert - Silvery Gray/ Grays. Mot. misc Inclusions, Oolites, Ooloids. Opaque. No trip.] xln & part por. Friable. tr/ Fair vis por.
LS (Dol) - Tans/ Lt Gray. Sing/ mostly Mot. Micro- / tr Crypto-xln. xln por. [tr few pcs: Chert - Silvery Gray/ Grays. Mot. misc Inclusions, Oolites, Ooloids. Opaque. No trip.] xln por. No/ tr Re-xln. tr fossil frags. No/ tr subchalky. mostly Firm. No/ tr vis por.
LS (Dol) - Tans/ Off Whitish Tan. Sing/Mot. Micro-xln. xln & part por. No/ tr fossil & carbonate frags. subchalky in part. Partly Firm. No/ tr Re-xln.
5350
5400
ROP (min/ft)
Gamma (API)
Vis: 60
Wt: 9.4
LCM: 3+
Vis: 60
Wt: 9.4
LCM: 2+
Vis: 65
Wt: 9.2
LCM: 1#
Vis: 56
Wt: 9.1
LCM: 8#
Vis: 56
Wt: 9.1
LCM: 2#
100 units = 1% Gel
TG, C1-C5
Vis: 57
Wt: 9.3
LCM: 8#

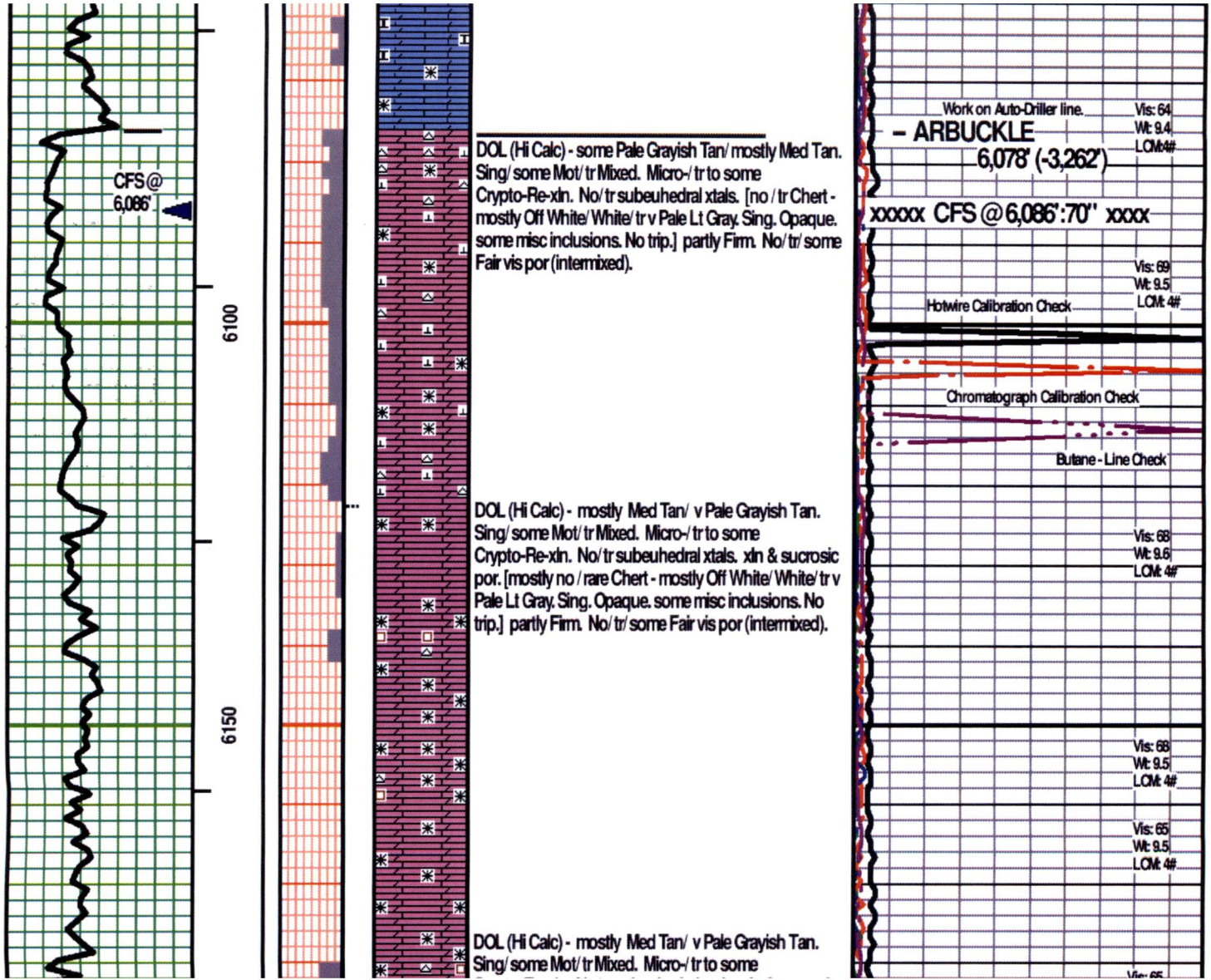

5450
5500
5550
LS (Dol) - Tans/ Lt Gray. Sing/ mostly Mot. Micro- / tr Crypto-xln. xln por. [Chert - Silvery Gray/ Off White/ Pale Gray. Sing/ some Mot. misc Inclusions, Opaque. No/ tr minute dark specks. No trip.] xln por. No/ tr Re-xln. Interbedded Friable or Firm. No/ tr vis por.
DOL - Lt/ Med Tan, Pale Lt Gray. Sing/ tr Mixed. Micro-/Crypto-xln. Re-xln por. rare fossil frag 'ghost'. Firm. No vis por.
few pcs: DOL - Pale Lt Gray. Sing. Micro-Re-xln. xln por. Silty to Shaly. partly Friable. No/ tr vis por.
few pcs: DOL - Lt/ Med Tan, Pale Lt Gray. Sing/ tr Mixed.
Wt: 9.3
LCM: 8#
Vis: 55
Wt: 9.4
LCM: 6#
CAVINGS & MUSH SAMPLES
Vis: 50
Wt: 9.4
LCM: 6#
Vis: 55
Wt: 9.5
LCM: 6#
xxxxxx
100 units = 1% Gel
Brand New Extractor Motot died in 12 days of operation. Replaced Extractor Motor.
Vis: 53
Wt: 9.5
LCM: 3#
5,545'
Vis: 53 Wt: 9.3 WL: 8.0
PV: 16 YP:19 Gels: 14/36
pH: 10.5 Cl (4,500)
Ca (40) Solids: 6.9%
LCM: 4#
xxxxxx
Hotwire Calibration Check

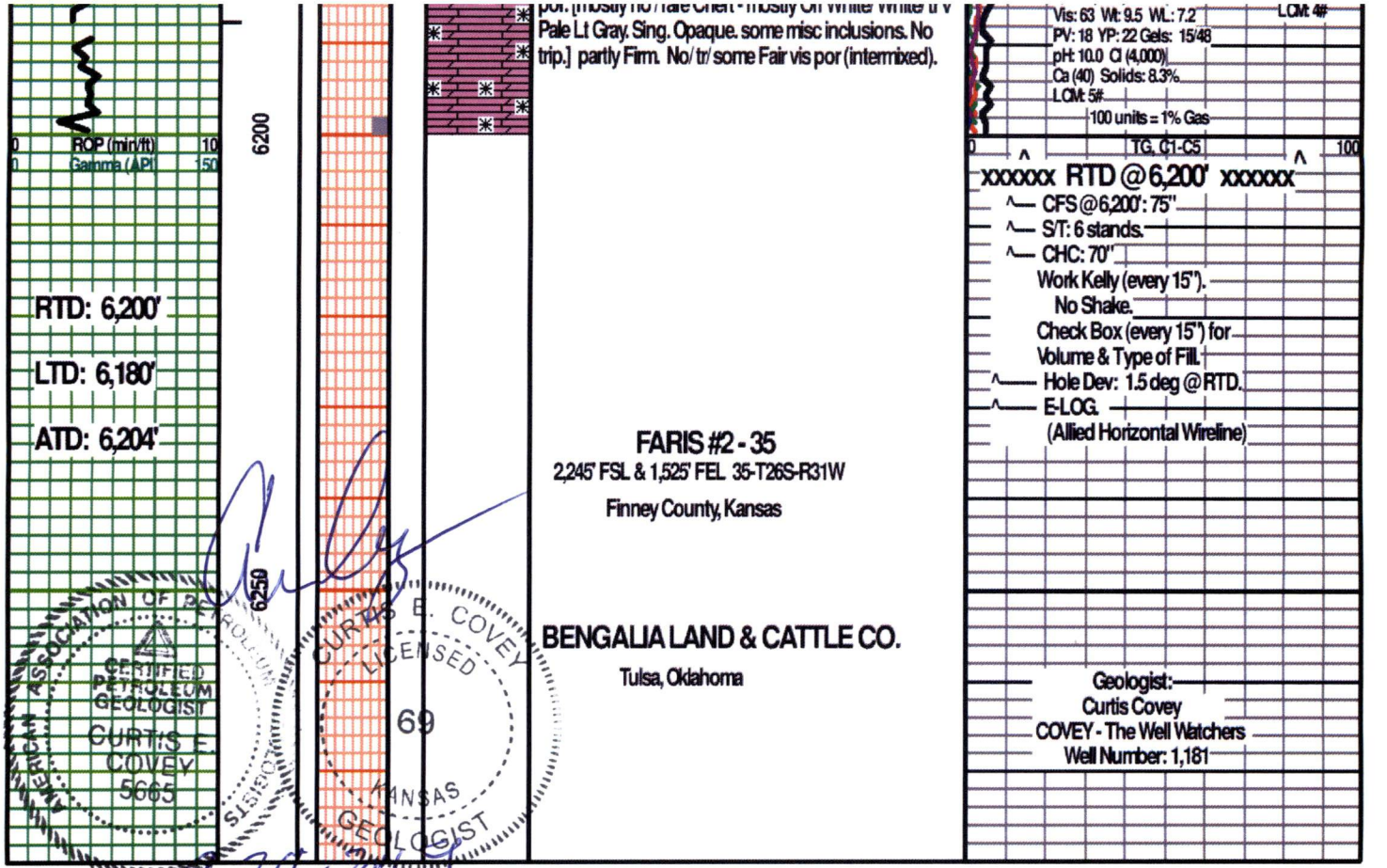

0 ROP (min/ft) 10
0 Gamma (API) 150
5600
5650
DOL - Pale Lt Gray/ Lt Gray. Sing. Micro-Re-xln. xln por. [lots Chert - White/ Off White/ some Pale Lt Gray. Sing/ Mot. semi-transparent Matrix. Off White spicules other misc inclusions. No trip.] Subchalky in part. mostly Friable. tr/ some fair vis por.
DOL - Pale Lt Gray/ Lt Gray/ Off Whitish Tan. Sing. Micro-Re-xln. xln and sucrosic por. [some/lots Chert - White/ Off White/ some Pale Lt Gray. Sing/ Mot. semi-transparent Matrix. mixture of: Off White spicules -or- other misc inclusions -or- XF-/Micro- Colites or Ooloids. Minute glauc flecks towards top. No trip.] Subchalky in part. mostly Friable. tr/ some fair vis por.
Chromatograph Calibration Check
CAVINGS & MUSH SAMPLES
Vis: 53
Wt: 9.5
LCM: 6#
100 units = 1% Gas
TG, C1-C5
Vis: 60
Wt: 9.5
LCM: 3#
100
CAVINGS & MUSH SAMPLES
Vis: 62
Wt: 9.5
LCM: 2#
CAVINGS & MUSH SAMPLES
Vis: 52
Wt: 9.7
LCM: 3#
Jet #1
Vis: 61
Wt: 9.5
LCM: 4#
Vis: 60
Wt: 9.5
1st Sample @5,680'


5700
5750
5800
ROP (min/ft)
Gamma (API)
Chert - White/ Off White/ tr Pale Lt Gray. Sing/ tr mixed. Opaque to semi- transparent. Misc Inclusion: spicules, fossil frags, Micro-Oolites, No/ tr SA, XF, glauc grains. No tripolitic. Friable. No vis por.
DOL - Pale Lt Gray/ Lt Gray/ Off Whitish Tan. Sing. Micro-Re-xln. xln and sucrosic por. [lots Chert - White/ Off White/ some Pale Lt Gray. Sing/ Mot. semi-transparent Matrix. mixture of: Off White spicules -or- other misc inclusions -or- XF-/Micro-Oolites or Ooloids. Minute glauc flecks towards top. No trip.] Subchalky in part. minute glauc flecks in part. mostly Friable. tr/ some fair vis por. LS at top.
lots of Chert - similiar to above.
Intermixed / Interbedded with:
DOL - similiar to above. Add: Lt Tan. Sing.
Add: Chert - Pale & Lt Gray. Mot. Brec frags. semi-transparent matrix. No trip. No/ tr fossil frags. rare minute dark specks.
Add: DOL - Tan. Sing. Micro-xln. xln por riming Chert (similiar to above).
Vis: 61
Wt: 9.6
LCM: 4#
Vis: 61
Wt: 9.6
LCM: 4#
Vis: 60
Wt: 9.5
LCM: 4#
Vis: 62
Wt: 9.4
LCM: 6#
MUSH SAMPLES
Vis: 56
Wt: 9.5
LCM: 6#
100 units = 1% Gas
TG, C1-C5
100


5850
5900
CFS @ 5,906'
LS (Dol) - Lt/ Med Tan. Sing. Micro-xln. xln & sucrosic porosity. Re-xln. Firm. No/ tr vis por.
LS - Med Tan. Sing. Micro-xln. xln & some sucrosic por. Re-xln. Firm/Dense. No/ tr vis por.
Add: LS (tr Dol) - Lt Brown. Sing. Micro-/ Crypto-xln. xln & tr sucrosic por. Re-xln. Firm/Dense. No/ tr vis por.
SH - Med Gray. Sing. tr calc. partly blocky.
NHT
LS - Lt Tan. Sing. Micro-xln. xln & tr sucrosic por. [some CHERT - Lt Silvery Gray. Sing. Opaque. misc dark inclusions. No trip.] Friable. tr vis por.
LS (tr Dol) - Lt & mostly Med Tan/ tr Pale Lt Gray. Sing. mostly Micro-/ tr XF- & tr Crypto-xln. xln por. Re-xln. No/ rare minute fossil frag. No/ some minute SA, vitreous qtz grains. Firm. No/ tr vis por.
MUSH SAMPLES
Vis: 58
Wt: 9.6
LCM: 4#
Jet Suction Pit
CHERT CAVINGS IN SAMPLES
Vis: 58
Wt: 9.6
LCM: 2#
Vis: 60
Wt: 9.5
LCM: 3#
Hotwire Calibration Check
Chromatograph Calibration Check
Vis: 59
Wt: 9.5
LCM: 3#
Work on Pump
MUSH SAMPLES
Vis: 56
Wt: 9.7
LCM: 2#
Vis: 56
Wt: 9.7
LCM: 2#
- VIOLA
5,896' (-3,080')
Vis: 61
Wt: 9.5
LCM: 4#
xxxxx CFS @ 5,906':60" xxxx
Vis: 66
Wt: 9.5
LCM:6#
5,902' -
Vis: 61 Wt: 9.4 WL: 7.2
PV: 18 YP: 22 Gels: 15/42
pH: 10.0 Cl (4,000)
Ca (40) Solids: 7.4%
LCM: 8#
Vis: 66
Wt: 9.2
LCM: 4#
Line Check - Butane


CFS @ 5,956'
CFS @ 5,986'
R
ROP (min/ft)
Gamma (API)
5950
6000
6050
LS (tr Dol in part) - Lt & Med Tan. Sing. XF-/Micro-xln. xln & sucrosic por. No/ tr Re-xln. partly Friable. [some CHERT - White, somePale Bluish Silvery Gray, Silvery Gray, Lt Gray. Sing/ Mot/ Mixed. Opaque. No/ tr minute dark specks. No trip.] mixture of tr/Fair visible and No vis por.
LS (Dol in part) - Lt & Med Tan. Sing. XF-/Micro-xln, tr Crypto-xln in part. xln & sucrosic por. No/ tr Re-xln. partly Friable. [some CHERT - White, somePale Bluish Silvery Gray, Silvery Gray, Lt Gray. Sing/ Mot/ Mixed. Opaque. No/ tr minute dark specks. No trip.] subchalky in part. mixture of tr/Fair visible and No vis por.
Add: LS - Off White/ Lt Tan XF-/ tr Micro-Oolites, rare Oolicast. Clear/ Lt Brownish Clear Matrix. Friable. Fair/ Good vis por.
LS (Hi Dol) - Tans/ Lt Gray. Sing/ some Mot. tr VF-/some XF-/ mostly Micro-xln. xln & sucrosic por. few pcs: Chert - similiar to above. Re-xln in part. No/ tr subchalky. mostly Firm. No/ tr vis por.
Vis: 66
Wt: 9.5
LCM: 4#
xxxxx CFS @ 5,956':60" xxxx
Torque Up
Vis: 66 Wt: 9.5 LCM: 4#
Vis: 70 Wt: 9.4 LCM: 4#
xxxxx CFS @ 5,986':60" xxxx
Vis: 61
Wt: 9.4
LCM: 6#
100 units = 1% Gas
TG, C1-C5
100
Vis: 70
Wt: 9.4
LCM: 6#
Vis: 69
Wt: 9.4
LCM: 6#
Vis: 67
Wt: 9.5
LCM: 6#
Vis: 63
Wt: 9.5


CFS @
6,086'
6100
6150
DOL (Hi Calc) - some Pale Grayish Tan/ mostly Med Tan. Sing/ some Mot/ tr Mixed. Micro-/ tr to some Crypto-Re-xln. No/ tr subeuhedral xtals. [no / tr Chert - mostly Off White/ White/ tr v Pale Lt Gray. Sing. Opaque. some misc inclusions. No trip.] partly Firm. No/ tr/ some Fair vis por (intermixed).
DOL (Hi Calc) - mostly Med Tan/ v Pale Grayish Tan. Sing/ some Mot/ tr Mixed. Micro-/ tr to some Crypto-Re-xln. No/ tr subeuhedral xtals. xln & sucrosic por. [mostly no / rare Chert - mostly Off White/ White/ tr v Pale Lt Gray. Sing. Opaque. some misc inclusions. No trip.] partly Firm. No/ tr/ some Fair vis por (intermixed).
DOL (Hi Calc) - mostly Med Tan/ v Pale Grayish Tan. Sing/ some Mot/ tr Mixed. Micro-/ tr to some
Work on Auto-Driller line.
Vis: 64
Wt: 9.4
LCM:4#
- ARBUCKLE
6,078' (-3,262')
xxxxx CFS @ 6,086':70'' xxxx
Vis: 69
Wt: 9.5
LCM: 4#
Hotwire Calibration Check
Chromatograph Calibration Check
Butane - Line Check
Vis: 68
Wt: 9.6
LCM: 4#
Vis: 68
Wt: 9.5
LCM: 4#
Vis: 65
Wt: 9.5
LCM: 4#



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Conservation Division
266 N. Main St., Ste. 220
Wichita, KS 67202-1513

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 346-337-6211
http://kcc.ks.gov/

January 13, 2020

CALVIN R. HULLUM JR.
Bengalia Land and Cattle Company
PO BOX 521008
TULSA, OK 74152-1008

Re: ACO-1
API 15-055-22522-00-00
FARIS 2
SE/4 Sec.35-26S-31W
Finney County, Kansas

Dear CALVIN R. HULLUM JR.:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 8/21/2019 and the ACO-1 was received on January 13, 2020 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department