KOLAR Document ID: 1421688

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 # 32705
Name: Raney Oil Company, LLC
Address 1: 4665 BAUER BROOK CT.
Address 2:
City: LAWRENCE State: KS Zip: 66049 + 9013
Contact Person: thomas Raney
Phone: (785) 749-0672
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Daniel Johnson
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 #:

04/03/2018 Spud Date or Recompletion Date
04/09/2018 Date Reached TD
04/30/2018 Completion Date or Recompletion Date

API No.: 15-191-22802-00-00
Spot Description:
NE - SE - SW - SW Sec. 20 Twp. 34 S. R. 2 ☑ East ☐ West
400 Feet from ☐ North / ☑ South Line of Section
1251 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: Sumner
Lease Name: CULLY Well #: 1-A
Field Name:
Producing Formation: Mississippi
Elevation: Ground: 1200 Kelly Bushing: 1204
Total Vertical Depth: 3900 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 265 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: 2000 ppm Fluid volume: 500 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: 09/11/2018
☐ **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:** 09/13/2018

Operator Name: Raney Oil Company, LLC Lease Name: CULLY Well #: 1-A

Sec. 20 Twp. 34 S. R. 2 ☑ East ☐ West County: Sumner

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:

Dual Induction
Microlog

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

Name	Top	Datum
layton	2852	-1644
LKC	3039	-1831
Mississippi	3538	-2330
TD	3900	-2692

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	23	265	common	175	3%cal.2% gel
Production	7.875	5.5	15.5	3899	common	230	4%gel3%cal

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: 05/15/2018

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	2		70		

DISPOSITION OF GAS: ☐ Vented ☐ Sold ☑ Used on Lease *(If vented, Submit ACO-18.)*

METHOD OF COMPLETION: ☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

PRODUCTION INTERVAL:

Top	Bottom
3534	3538

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)*
4	3534	3538			shot

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	Raney Oil Company, LLC
Well Name	CULLY 1-A
Doc ID	1421688

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	23	265	common	175	3%cal.2% gel
Production	7.875	5.5	15.5	3899	common	230	4%gel3%cal

810 E 7TH
PO Box 92
EUREKA, KS 67045
(620) 583-5561

ELITE
CEMENTING & ACID SERVICE, LLC

Cement or Acid Field Report
Ticket No. **3826**
Foreman Kevin McCoy
Camp Eureka

API # 15-191-22902

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State
4-10-18	1258	Cully 1-A	20	34S	2E	Sumner	Ks

Customer: Raney Oil Company LLC
Mailing Address: 4665 Bauer Brook Ct.
City: Lawrence | State: Ks | Zip Code: 68049

Safety Meeting: KM DG RL JH

Unit #	Driver	Unit #	Driver
105	Dave G.		
110	Rick L.		
112	Jason H.		

Job Type: Longstring
Casing Depth: 3899' K.B.
Casing Size & Wt.: 5½
Displacement: 93.5
Hole Depth: 3900' K.B.
Hole Size: 7⅞"
Cement Left in Casing: 0'
Displacement PSI: 1900
Slurry Vol.: 30 Bbl / 48 Bbl
Slurry Wt.: 14# - 13.8#
Water Gal/SK:
Bump Plug to: 2400 PSI
Tubing:
Drill Pipe:
Other:
BPM:

Remarks: Safety Meeting: Rig up to 5½ Casing Set @ 3899' = 2' above K.B. Break Circulation w/ 15 Bbl Fresh water. Mixed 80 sks 60/40 Pozmix Cement w/ 4% Gel, 2# PhenoSeal /sk @ 14#/gal, yield 1.34 = 19 Bbl Slurry. Tail in w/ 150 sks Thick Set Cement w/ 5# Kol-Seal /sk, 2# PhenoSeal /sk @ 13.8#/gal, yield 1.80 = 48 Bbl slurry. Wash out Pump & Lines. Shut down. Release Latch down Plug. Displaced Plug to Seat w/ 93.5 Bbl Fresh water. (First 40 Bbl w/ Kcl) Final Pumping Pressure 1900 psi. Bump Plug to 2400 psi. Wait 2 mins. Release Pressure. Float & Plug Held. Good Circulation @ all times while Cementing. Job Complete. Rig down.

Plug Rat Hole w/ 25 sks 60/40, 20 sks in Mouse Hole

Centralizers #1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39 Baskets on Top of #1,9,17,33

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 102	1	Pump Charge	1050.00	1050.00
C 107	75	Mileage	3.95	296.25
C 203	125 sks	60/40 Pozmix Cement } Lead Cement = 80 sks	12.75	1593.75
C 206	430#	Gel 4% } 25 sks Plug Rat Hole, 20 sks MH	.20#	86.00
C 208	250#	PhenoSeal 2#/sk }	1.25#	312.50
C 201	150 sks	Thick Set Cement } Tail Cement	19.50	2925.00
C 207	750 sks	Kol-Seal 5#/sk }	.45#	337.50
C 208	300#	PhenoSeal 2#/sk }	1.25#	375.00
C 211	18#	CFL-115 ⅛%	10.50	189.00
C 108 B	13.63 Tons	Ton Mileage 75 miles	1.35	1380.04
C 222	5 gals	Kcl	34.00	170.00
C 421	1	5½ Latch down Plug	230.00	230.00
C 661	1	5½ AFU Float Shoe w/ Latch down	294.00	294.00
C 604	4	5½ Cement Baskets	225.00	900.00
C 504	20	5½ x 7⅞ Centralizers	48.00	960.00
			Sub Total	11,099.04
		THANK YOU		
		7.5%	Sales Tax	627.96
			Total	11,727.00

Authorization _____ Title _____

I agree to the payment terms and conditions of services provided on the back of this job ticket. Any amendments to payment terms must be in writing on the front of this job ticket or in the Customer's records at ELITE's office.

810 E 7TH
PO Box 92
EUREKA, KS 67045
(620) 583-5561

ELITE
CEMENTING & ACID SERVICE, LLC

Cement or Acid Field Report
Ticket No. **3820**
Foreman Kevin McCoy
Camp Eureka

API # 15-191-22802

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State
4-4-18	1258	Cully 1-A	20	34S	2E	Sumner	KS

Customer: Raney Oil Company LLC
Mailing Address: 4665 Bauer Brook Ct.
City: Lawrence | State: Ks | Zip Code: 66049

Safety Meeting: KM DO JH

Unit #	Driver	Unit #	Driver
105	Dave G.		
110	Jason H.		

Job Type: Surface
Casing Depth: 254' G.L.
Casing Size & Wt.: 8 5/8" 23#
Displacement: 16 Bbl
Hole Depth: 265' KB
Hole Size: 12 1/4"
Cement Left in Casing: 15' +/-
Displacement PSI:
Slurry Vol.: 42 Bbl
Slurry Wt.: 15#
Water Gal/SK:
Bump Plug to:
Tubing:
Drill Pipe:
Other:
BPM:

Remarks: Safety Meeting: Rig up to 8 5/8" Casing. Break Circulation w/ 10 Bbl Fresh water. Mixed 175 sks Class "A" Cement w/ 3% CaCl2 2% Gel, 1/4# Floseal/sk @ 15#/gal, yield 1.35 = 42 Bbl Slurry. Displace w/ 16 Bbl Fresh water. Shut Casing in. Jet Cellar, Cement in Cellar. Job Complete. Rig down.

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 101	1	Pump Charge	840.00	840.00
C 107	75	Mileage	3.95	296.25
C 200	175 sks	Class "A" Cement	15.00	2625.00
C 205	495#	CaCl2 3%	.60#	297.00
C 206	330#	Gel 2%	.20#	66.00
C 209	45#	Floseal 1/4#/sk	2.25#	101.25
C 108 B	8.22 Tons	Ton Mileage 75 miles	1.35	832.28
		THANK YOU	Sub Total	5057.78
		7.5%	Sales Tax	231.69
			Total	5289.47

Authorization Witnessed By Dion Vasquez Title Duke Drlg Toolpusher

STATE OF KANSAS

CORPORATION COMMISSION
CONSERVATION DIVISION
266 N. MAIN ST., STE. 220
WICHITA, KS 67202-1513

PHONE: 316-337-6200
FAX: 316-337-6211
http://kcc.ks.gov/

GOVERNOR JEFF COLYER, M.D.
SHARI FEIST ALBRECHT, CHAIR | JAY SCOTT EMLER, COMMISSIONER | DWIGHT D. KEEN, COMMISSIONER

September 12, 2018

thomas Raney
Raney Oil Company, LLC
4665 BAUER BROOK CT.
LAWRENCE, KS 66049-9013

Re: ACO-1
API 15-191-22802-00-00
CULLY 1-A
SW/4 Sec.20-34S-02E
Sumner County, Kansas

Dear thomas Raney:

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 04/03/2018 and the ACO-1 was received on September 11, 2018 (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

DANIEL T. JOHNSON
CONSULTING GEOLOGIST
19749 121ST ROAD, WINFIELD, KANSAS 67156
620-229-3258 DANIEL.JOHNSON3258@GMAIL.COM

Geologic Report

Raney Oil Company,LLC
Cully #1-A
NE SE SW SW 400' FSL & 1251' FWL
Sec 20-T34S-R2E Sumner County, Kansas

Formation Tops: KB 1208

Iatan Ls	2390(-1182)
Stalnaker Ss	2480(-1272)
Layton Ss	2852(-1644)
Layton "B"	2922(-1714)
Kansas City Ls	3039(-1831)
Upper Porosity	3050(-1842)
Hertha (Lower) Porosity	3092(-1884)
Base Kansas City	3146(-1937)
Cleveland Ss	3182(-1974)
Marmaton	3234(-2026)
Oswego Porosity	3254(-2046)
Pawnee Porosity	3286(-2078)
Bartlesville Ss	3520(-2312)
Mississippian Chert	3538(-2330)
Kinderhouk Sh	3738(-2530)
Chattanooga Sh	3770(-2593)
Simpson Group	3801(-2593)
Simpson Ss	3824(-2616)
Total Depth	3900(-2692)

Sample Hydrocarbon shows:

Layton Ss 2852(-1644)

Sandstone,Light gray-lt brown stain, fine grained, well sorted, fair – good itergranular porosity, shaly in part,faint odor, bright fluorescence in 40% sample,fair show free oil, good streaming cut

Layton "B" 2922(-1714)

Sandstone, brown, fine grained, good porosity, glauconitic, mica, good odor, bright fluorescence, fair show free oil, decreasing to slight show

Upper KC Ls Porosity 3092(-1884)

Limestone, brown, medium- coarse crystalline, pinpoint and vugular porosity, good odor,bright fluorescence on edges of samples with oil show, free oil bleeding from a few vugs, instant streaming cut, GOOD SHOW FREE GASSY OIL

Hertha (Lower) Ls Porosity 3092(-1884)

Limestone, light brown, medium crystalline, abundant fossil fragments, good intercrystalline porosity, good vugular porosity good odor, bright spotty and edge fluorescence 40 % of sample, Fossil fragment framework, good show of free oil

Cleveland Ss 3182(-1974)

Sanstone, very fine grained, slight odor, fair show free oil

3196(-1988)

Sandstone, light gray-light tan stain, fine grained, fair- good porosity, fair- good odor, bright fluorescence, fair cut, show of free oil

3210(-2002)

Sandstone, light brown- light gray, fine grained, moderately sorted, good odor, bright fluorescence in 40% sample, GOOD SHOW FREE GASSY OIL

Oswego Ls 3254(-2046)

Limestone, light brown, fine- medium crystalline, fair – good intercrystalline porosity, trace of pinpoint porosity, fair odor, scattered bright fluorescence on edges, SLIGHT SHOW FREE OIL

Pawnee Porosity 3286(-2078)

Sandstone, light green, fine grained, well sorted, glaucinitic, tite in part spotted bright fluorescence, good odor, SHOW FREE OIL

Bartlesville Ss 3520(-2312) – 3528(-2320)

Sandstone, light gray- light brown stained, fine grained, well sorted, Quartzic, good porosity, no odor, a few pieces with very bright fluorescence, instant streaming cut, SHOW FREE GASSY OIL

Mississippian Chert 3536(-2328) – 3548(-2340)

Chert, white- spotted light brown stain, 70% fresh, sharp, fractured, 30% weathered, poor-fair porosity, very faint odor, Bright fluorescence 30% sample, SLIGHT SHOW FREE OIL

3548-3564

Chert, as above with an increase in weathered portion with porosity and possible increase in fluorescence and free oil

3567-3580

Chert, as above, 50% fresh, sharp, fractured porosity, poor odor, scattered bright fluorescence

3590-3620

Chert, white – light brown stained, 80 % weathered with good porosity, slow bleeding oil from broken pieces, fair odor, weathering on fractured edges, scattered bright fluorescence

Simpson Ss 3801(-2593) – 3808(-2600)

Sandstone, white – light gray, fine grained, well sorted, some silica cemented, fair – good intergranular porosity, faint odor, possible staining, traces of bright fluorescing spots in tray

Recommendation:

5 ½" production casing was set to further test the captioned well. Based on sample observations, both the Cleveland Ss and the Lower KC Ls appear to be the most promising to be commercially productive. Other shows may make significant contributions to production if completed in an efficient manner.

Consideration should be given to a slightly unconventional completion of the Mississippian Chert. The thicker than normal Chert section contained evidence of oil presence through more of the section than normally observed. The percentage of Chert that was weathered with visible porosity versus Chert that was fresh, sharp with poor visible porosity changed from mostly fresh to mostly weathered with depth. This is reversed from what I have normally observed in the area. Additionally, there appeared to be weathering along fractures seen in sample.

Fluorescence and show varied slightly with depth. There are several gas kicks recorded that appeared to correlate with the observed shows. The possibility exists for production from an extended interval with limited entry. More discussion is recommended.

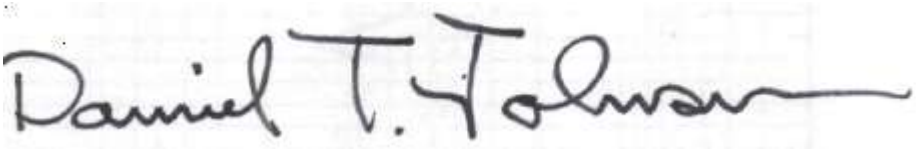
The Cleveland Ss recommended interval is 3196-3216. Local experience indicates Stimulation will be required.

The Lower KC ls recommended to be perforated from 3092-3098. Most likely, the zone will require an acid clean up treatment.

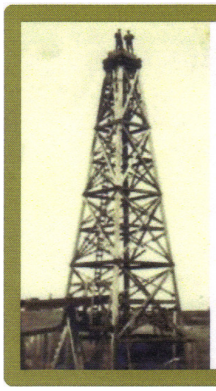
Additional zones and their recommended intervals are as follows:

Bartlesville Ss	3550-58
Pawnee	3286-93
Oswego	3255-58, 3261-65
Upper KC Ls	3052-58
Layton Ss	2850-54

Respectfully submitted,



Daniel T. Johnson
Consulting Geologist



Geologic Report

Daniel T. Johnson

Consulting Geologist

19749 121st Rd, Winfield, Kansas 67156

620-229-3258

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

Well Name:	Cully #1-A		
Location:	NW SE SE SW 23-T34S-R2E Sumner County, Kansas		
License Number:	32705	Region:	Midcon
Spud Date:	4/3/2018	Drilling Completed:	4/9/2018
Surface Coordinates:			
Bottom Hole Coordinates:			
Ground Elevation (ft):	1200'	K.B. Elevation (ft):	1208'
Logged Interval (ft):	2700' To: 3900'	Total Depth (ft):	3900'
Formation:	Simpson		
Type of Drilling Fluid:	Simpson		

OPERATOR

Company: Raney Oil Company,LLC
Address: 4556 Bauer Brook Ct
Lawrence, Kansas

GEOLOGIST

Name: Daniel T. Johnson
Company: Consulting Geologist
Address: 19749 121st Rd
Winfield, Kansas 67156
620-229-3258

Progress:

4/3: Move in,Rig up,Drill surface
4/4: WOC,Drilled out beneath SC
4/5: 1247' Drilling
4/6: 2150' Drilling
4/7: 2935' Drilling
4/8: 3363' Drilling
4/9: 3838' Drilling, RTD 3900', Ran elogs,set 5 1/2" production casing
4/10 3900' Cementing, plug down 9:30 am

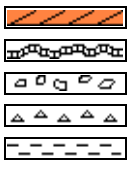
Straight hole surveys:

265' 0*
764' 1/4*
1327' 1/2*
1995' 1/2*
2299' 3/4*
3153' 3/4*
3812' 1 1/4*
3900' 1 1/4*

Bit record:

0-265' 12 1/4" PDC
265'-3812': 7 7/8" J2
3812'-3900': 7 7/8" J2

ROCK TYPES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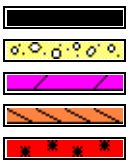
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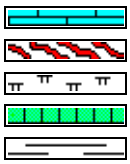

Lmst
Meta
Mrlst
Salt
Shale


Shcol
Shgy
Sltst
Ss
Till

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL

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

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY

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

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

OIL SHOW

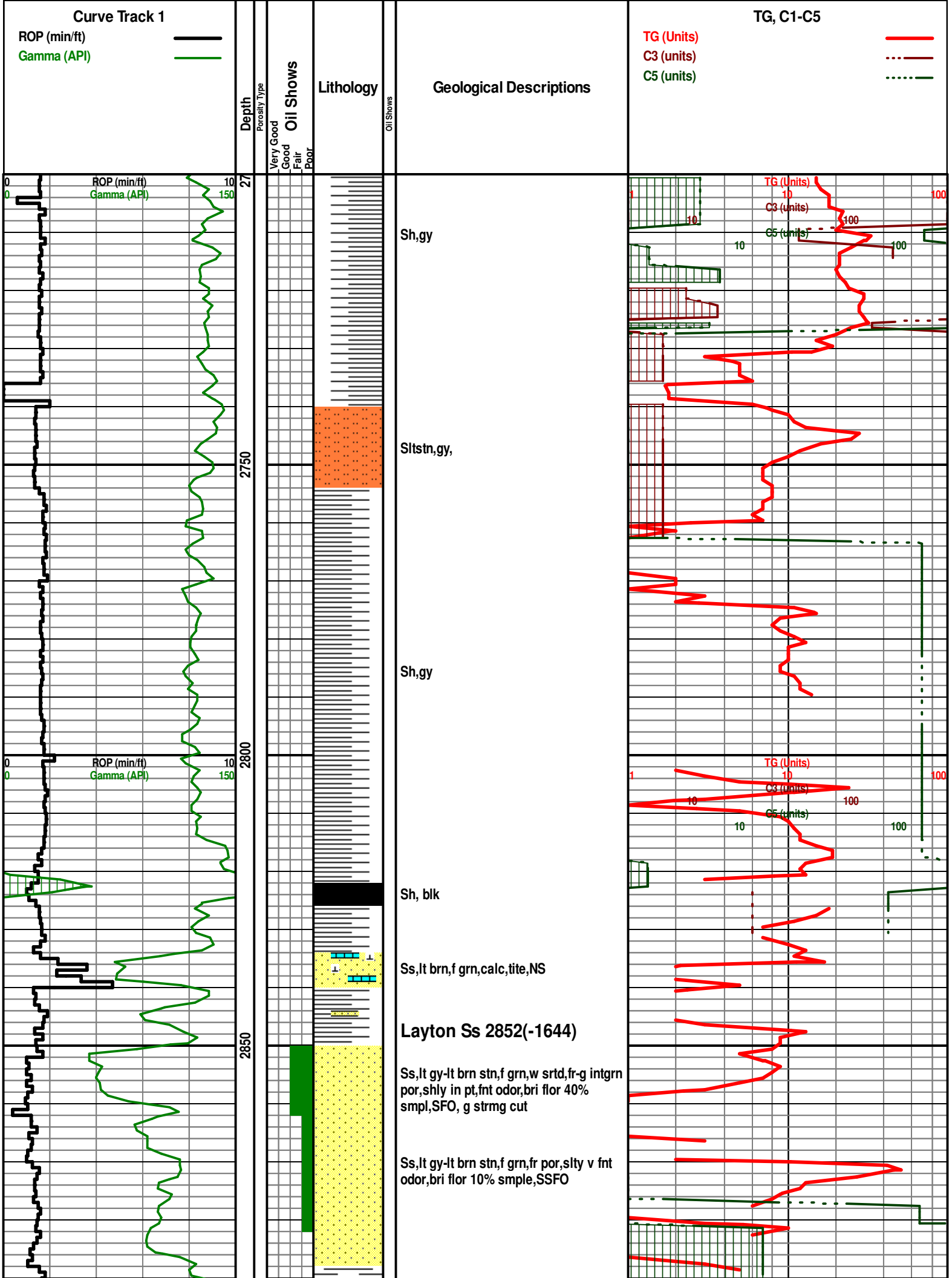
- Even
- Spotted
- Ques
- Dead

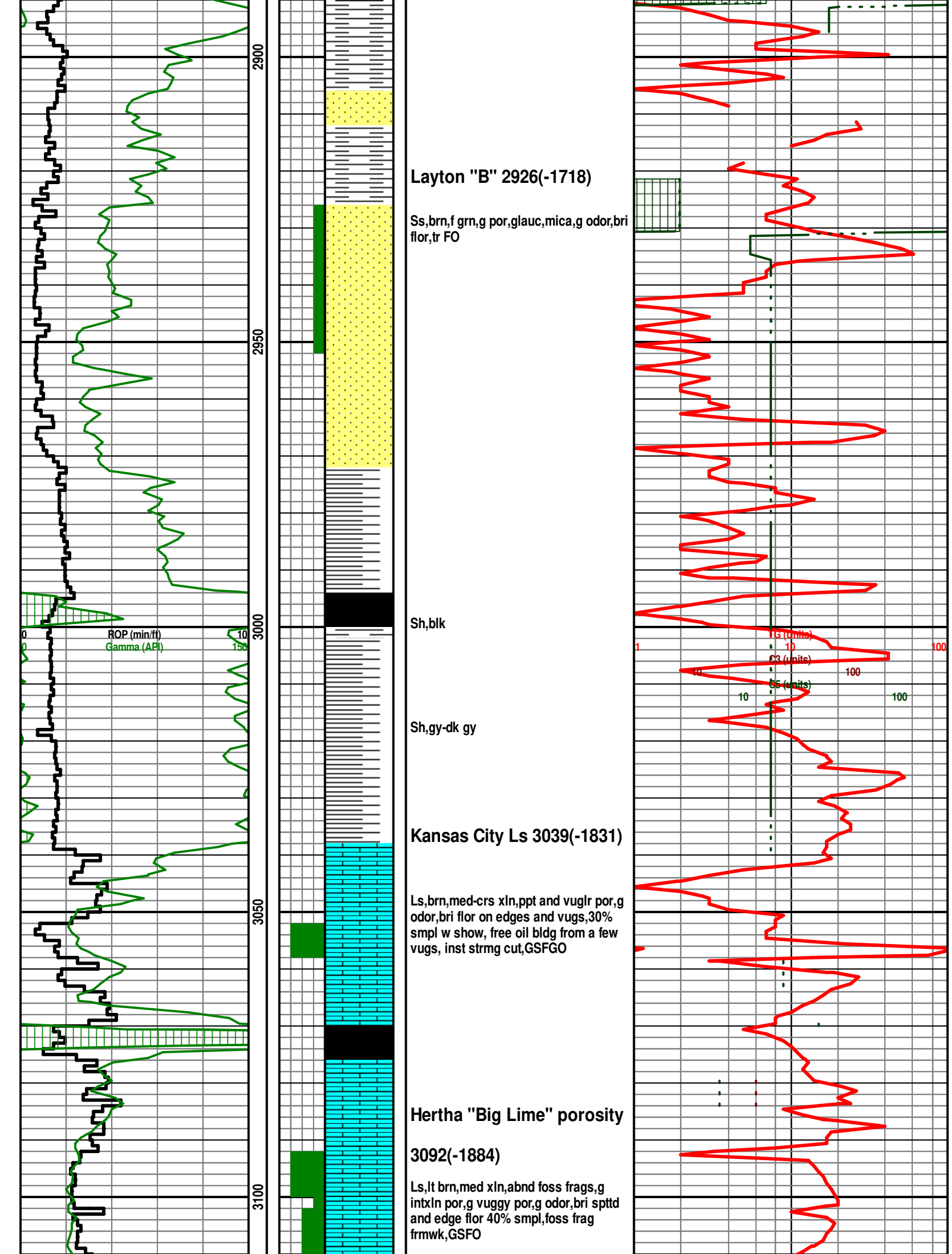
INTERVAL

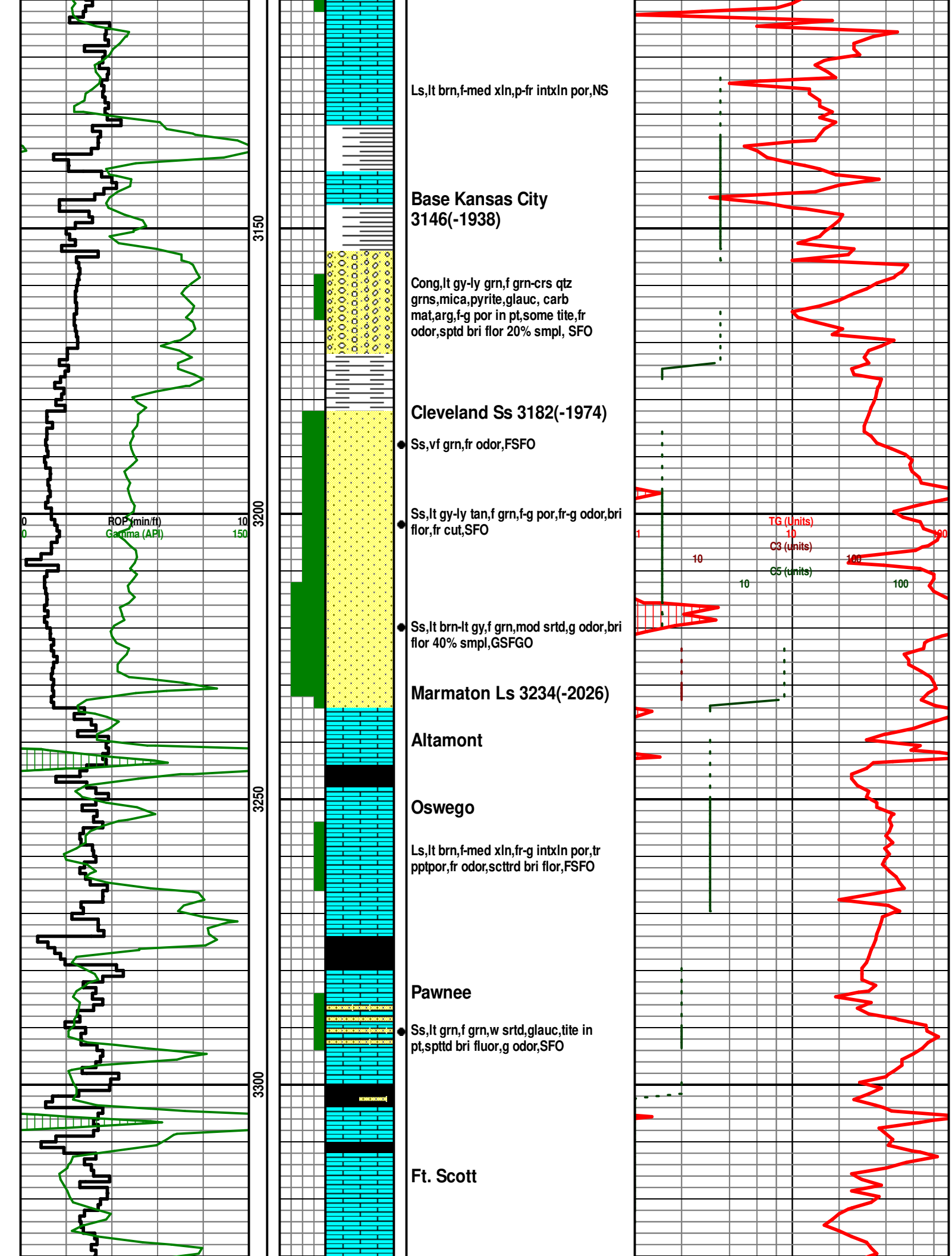
- Core
- Dst

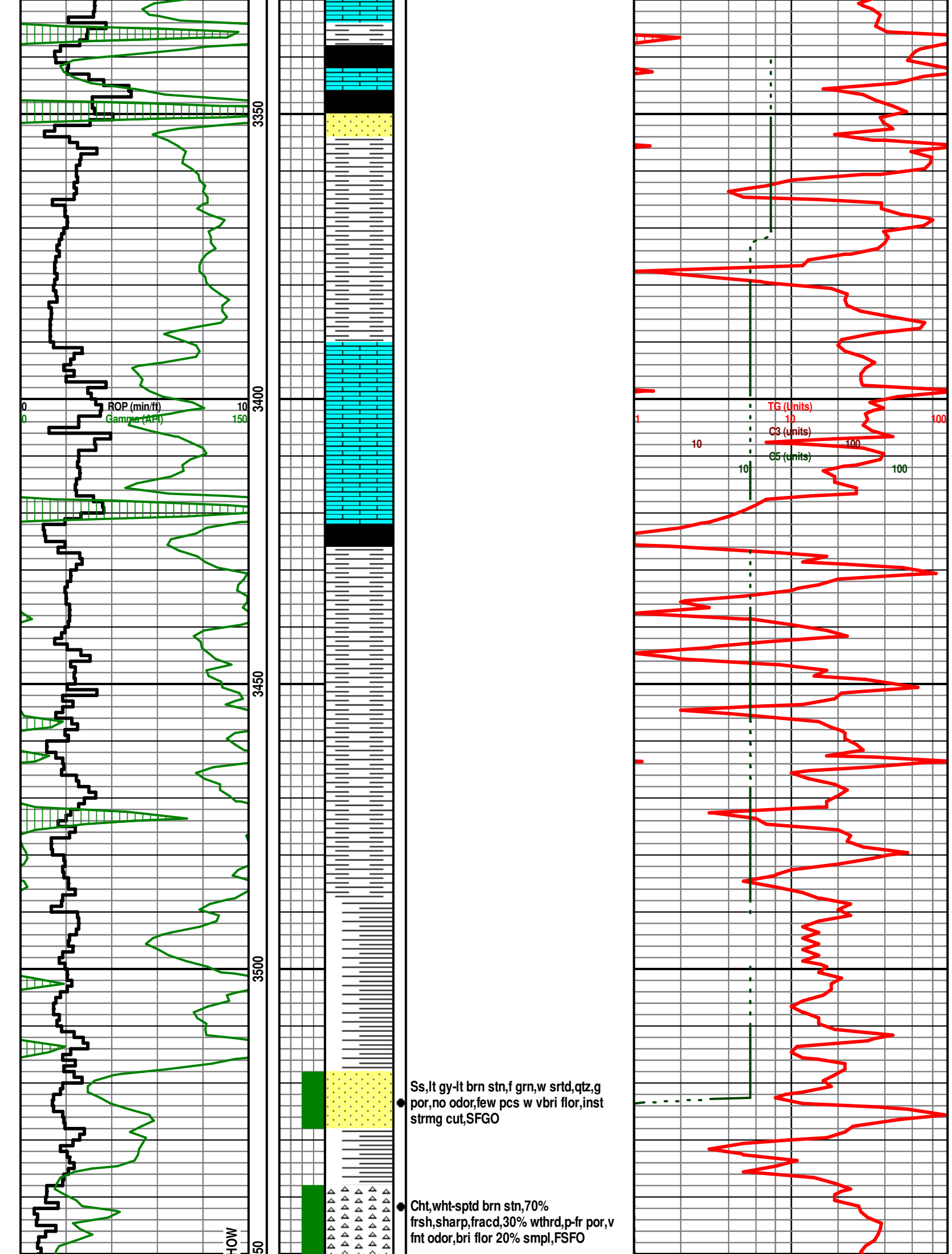
EVENT

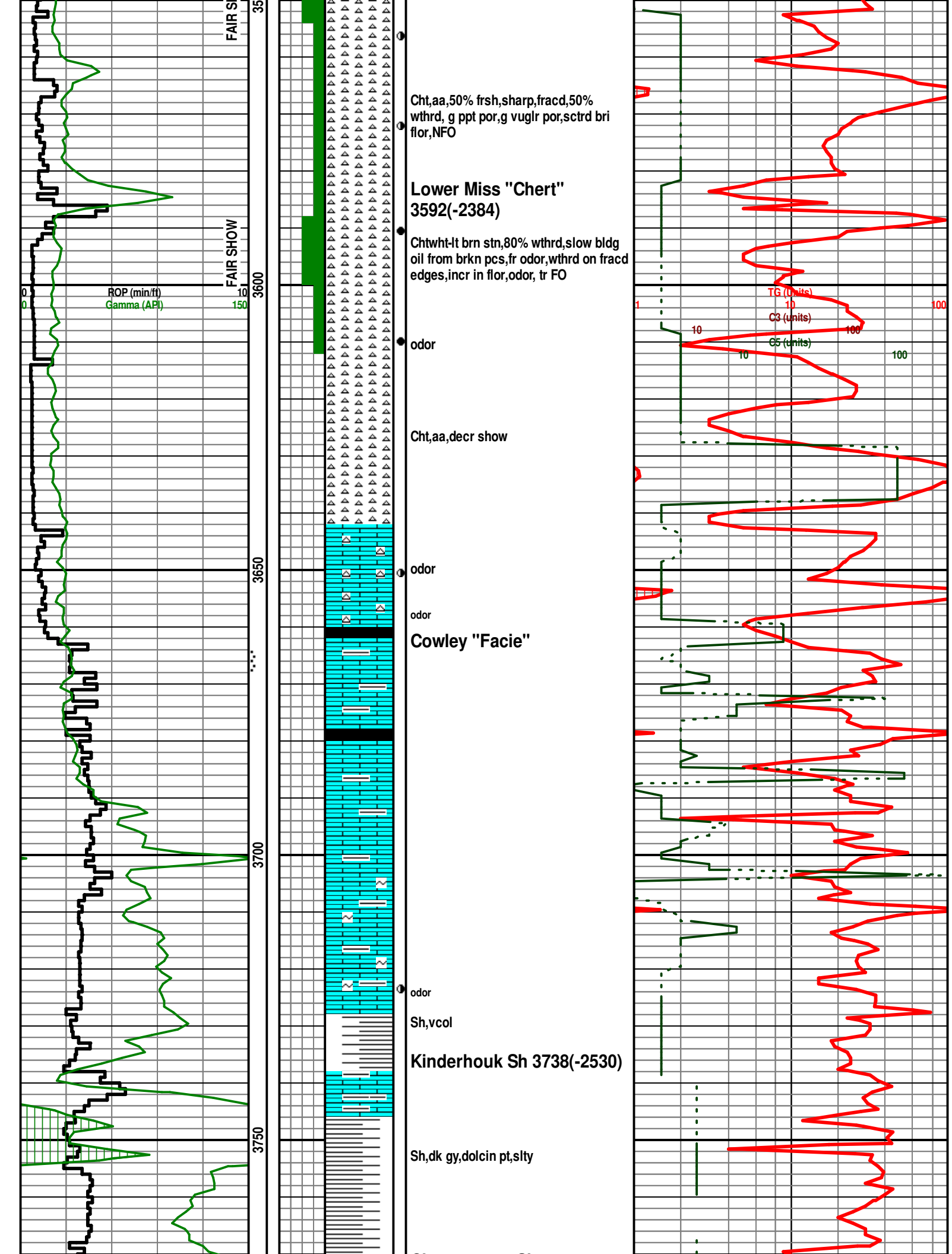
- Rft
- Sidewall

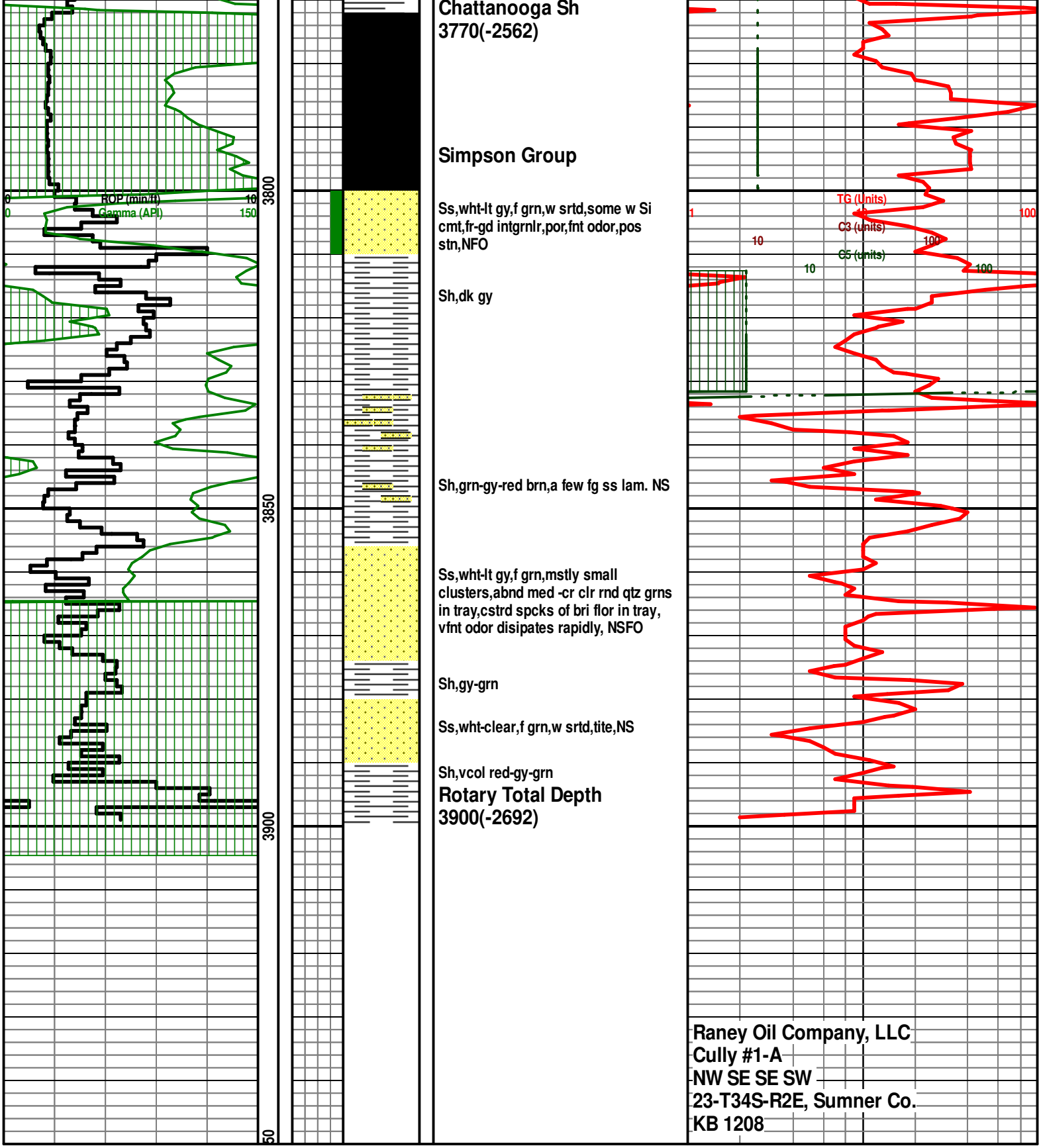

Curve Track 1
ROP (min/ft)
Gamma (API)
Depth
Porosity Type
Oil Shows
Very Good
Good
Fair
Poor
Lithology
Oil Shows
Geological Descriptions
TG, C1-C5
TG (Units)
C3 (units)
C5 (units)
0
0
ROP (min/ft)
10
Gamma (API)
150
2700
2750
2800
2850
1
10
100
Sh,gy
Sltstn,gy,
Sh,gy
Sh, blk
Ss,lt brn,f grn,calc,tite,NS
Layton Ss 2852(-1644)
Ss,lt gy-lt brn stn,f grn,w srtd,fr-g intgrn por,shly in pt,fnt odor,bri flor 40% smpl,SFO, g strmg cut
Ss,lt gy-lt brn stn,f grn,fr por,slty v fnt odor,bri flor 10% smple,SSFO


2900
2950
3000
3050
3100
ROP (min/ft)
Gamma (API)
0
10
150
Layton "B" 2926(-1718)
Ss,brn,f grn,g por,glauc,mica,g odor,bri flor,tr FO
Sh,blk
Sh,gy-dk gy
Kansas City Ls 3039(-1831)
Ls,brn,med-crs xln,ppt and vuglr por,g odor,bri flor on edges and vugs,30% smpl w show, free oil bldg from a few vugs, inst strmg cut,GSFGO
Hertha "Big Lime" porosity
3092(-1884)
Ls,lt brn,med xln,abnd foss frags,g intxln por,g vuggy por,g odor,bri sptd and edge flor 40% smpl,foss frag frmwk,GSFO
TG (Units)
C3 (Units)
C5 (Units)
1
10
100
10
100
10
100


ROP (min/ft)
0
10
Gamma (API)
0
150
3150
3200
3250
3300
Ls,lt brn,f-med xln,p-fr intxln por,NS
Base Kansas City
3146(-1938)
Cong,lt gy-ly grn,f grn-crs qtz grns,mica,pyrite,glauc, carb mat,arg,f-g por in pt,some tite,fr odor,sptd bri flor 20% smpl, SFO
Cleveland Ss 3182(-1974)
Ss,vf grn,fr odor,FSFO
Ss,lt gy-ly tan,f grn,f-g por,fr-g odor,bri flor,fr cut,SFO
Ss,lt brn-lt gy,f grn,mod srtd,g odor,bri flor 40% smpl,GSFGO
Marmaton Ls 3234(-2026)
Altamont
Oswego
Ls,lt brn,f-med xln,fr-g intxln por,tr pptpor,fr odor,scttrd bri flor,FSFO
Pawnee
Ss,lt grn,f grn,w srtd,glauc,tite in pt,sptd bri fluor,g odor,SFO
Ft. Scott
TG (Units)
1
10
100
C3 (units)
10
100
C5 (units)
10
100


0
ROP (min/ft)
10
0
Gamma (API)
150
3350
3400
3450
3500
TG (Units)
1
10
100
C3 (units)
10
100
C5 (units)
10
100
Ss,lt gy-lt brn stn,f grn,w srtd,qtz,g por,no odor,few pcs w vbri flor,inst strmg cut,SFGO
Cht,wht-sptd brn stn,70% frsh,sharp,fracd,30% wthrd,p-fr por,v fnt odor,bri flor 20% smpl,FSFO


FAIR SHOW
FAIR SHOW
ROP (min/ft)
Gamma (API)
0
0
10
150
3550
3600
3650
3700
3750
Cht,aa,50% frsh,sharp,fracd,50% wthrd, g ppt por,g vuglr por,sctrd bri flor,NFO
Lower Miss "Chert"
3592(-2384)
Chtwht-lt brn stn,80% wthrd,slow bldg oil from brkn pcs,fr odor,wthrd on fracd edges,incr in flor,odor, tr FO
odor
Cht,aa,decr show
odor
odor
Cowley "Facie"
odor
Sh,vcol
Kinderhouk Sh 3738(-2530)
Sh,dk gy,dolcin pt,slty
TG (Units)
1
10
100
C3 (units)
10
100
C5 (units)
10
100


ROP (min/ft)
0
10
Gamma (API)
0
150
3800
3850
3900
50
Chattanooga Sh
3770(-2562)
Simpson Group
Ss,wht-lt gy,f grn,w srtd,some w Si cmt,fr-gd intgrnlr,por,fnt odor,pos stn,NFO
Sh,dk gy
Sh,grn-gy-red brn,a few fg ss lam. NS
Ss,wht-lt gy,f grn,mstly small clusters,abnd med -cr clr rnd qtz grns in tray,cstrd spcks of bri flor in tray, vfnt odor disipates rapidly, NSFO
Sh,gy-grn
Ss,wht-clear,f grn,w srtd,tite,NS
Sh,vcol red-gy-grn
Rotary Total Depth
3900(-2692)
TG (Units)
1
10
100
C3 (units)
10
100
C5 (units)
10
100
Raney Oil Company, LLC
Cully #1-A
NW SE SE SW
23-T34S-R2E, Sumner Co.
KB 1208

PIONEER
Pioneer Energy Services

DUAL COMP POROSITY LOG

Company RANEY OIL COMPANY, LLC
Well CULLY #1-A
Field ASHTON SE
County SUMNER State KANSAS

Location: API # : 15-191-22802-00-00
NE SE SW SW
400' FSL & 1251' FWL
SEC 20 TWP 34S RGE 2E

Other Services
DIL/MEL

Permanent Datum GROUND LEVEL Elevation 1200'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1208'
D.F. N/A
G.L. 1200'

Date	4/9/2018
Run Number	ONE
Type Log	CNL/CDL
Depth Driller	3900'
Depth Logger	3899'
Bottom Logged Interval	3870'
Top Logged Interval	2300'
Type Fluid In Hole	CHEMICAL
Salinity, PPM CL	1800
Density	9.3
Level	FULL
Max. Rec. Temp. F	116
Operating Rig Time	3 HOURS
Equipment -- Location	91 HAYS
Recorded By	D. SCHMIDT
Witnessed By	DAN JOHNSON

Borehole Record

Run No.	Bit	From	To
ONE	12.25"	0'	254'
TWO	7.875"	254'	TD

Casing Record

Size	Wgt.	From	To
8.625"	23#	0	254'

<<< Fold Here >>>

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

I -135 & SOUTH HAVEN EXIT,
EAST TO ASHTON RD, 1 NORTH, 1/4 EAST,
NORTH INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneeres.com 785-625-3858

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: D. SCHMIDT	Primary Witness: DAN JOHNSON
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

Database C:\ProgramData\Warrior\Data\raney_cully 1-a.db
Dataset field/well/stkml/pass3.3/_vars_

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	-80	0

SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	50	0	5.5	0	3899	116	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC	37.48		CNT-M&W (207-MW)	5.50	3.50	100.00
CNSSC	36.73					
			CDL-M&W (182-152)	8.50	4.00	250.00
LSD	28.43					
DCAL	28.42					
SSD	27.93					
			ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
MCAL	19.83					
MI	19.83					
MN	19.83					
RLL3F	15.80					
RLL3	15.80					

			DIL-PSI HIGH TEMP (933 (HT))	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					

Dataset:	raney_cully 1-a.db: field/well/stkml/pass3.3
Total length:	43.08 ft
Total weight:	685.00 lb
O.D.:	4.00 in

PIONEER
Pioneer Energy Services

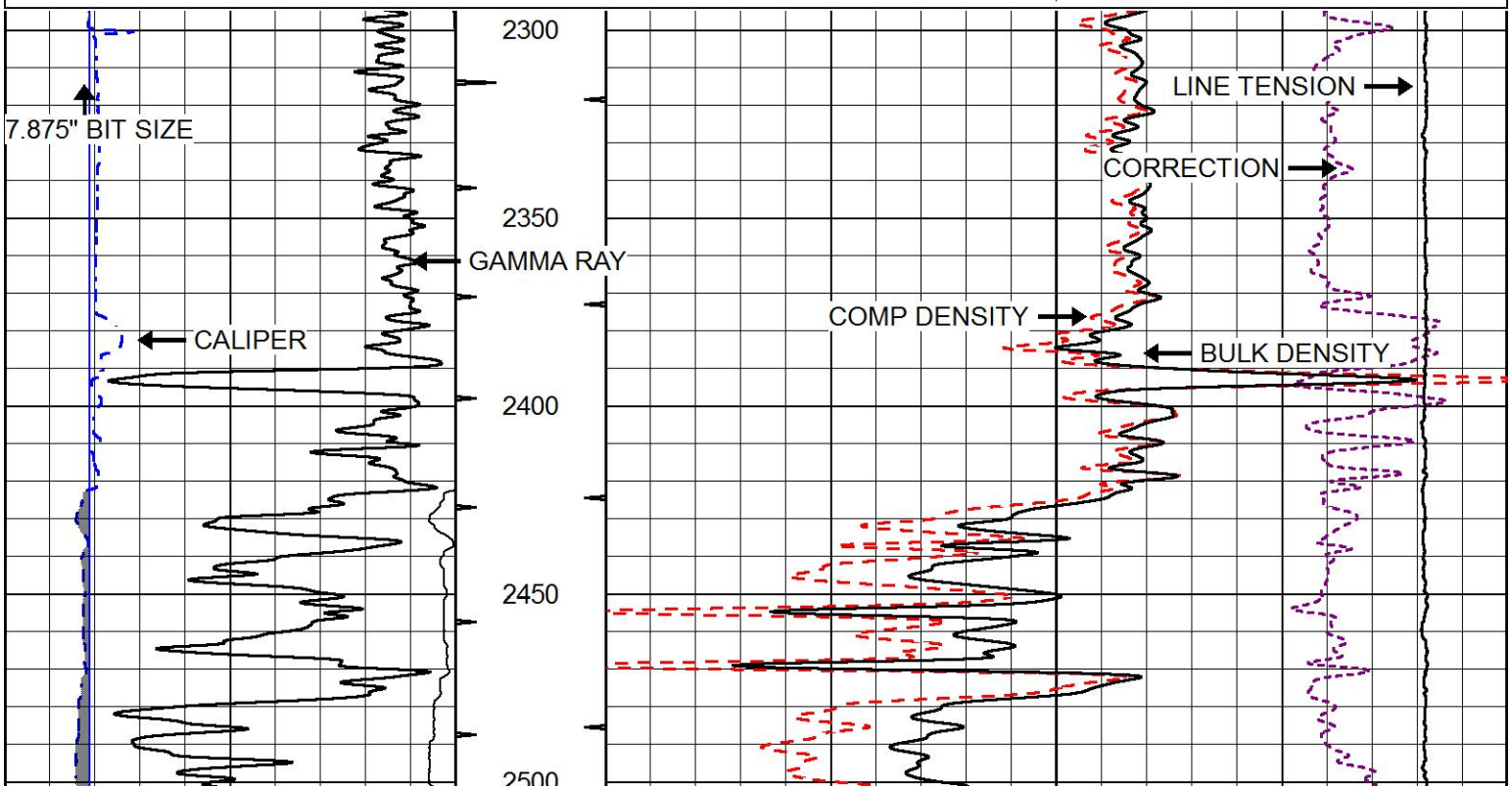
MAIN PASS

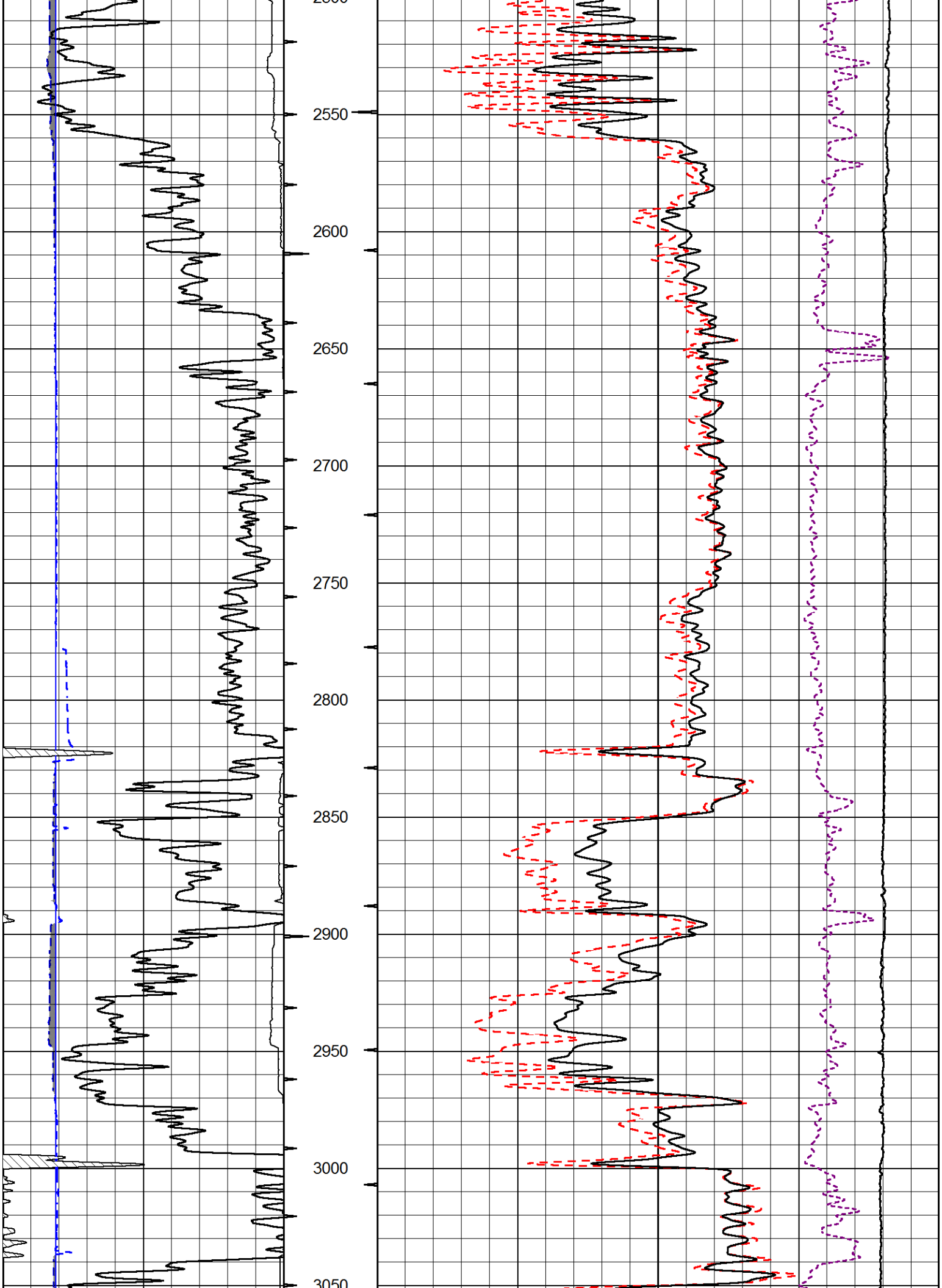
Database File	raney_cully 1-a.db
Dataset Pathname	stkml/pass3.1
Presentation Format	cdl
Dataset Creation	Mon Apr 09 21:38:26 2018
Charted by	Depth in Feet scaled 1:600

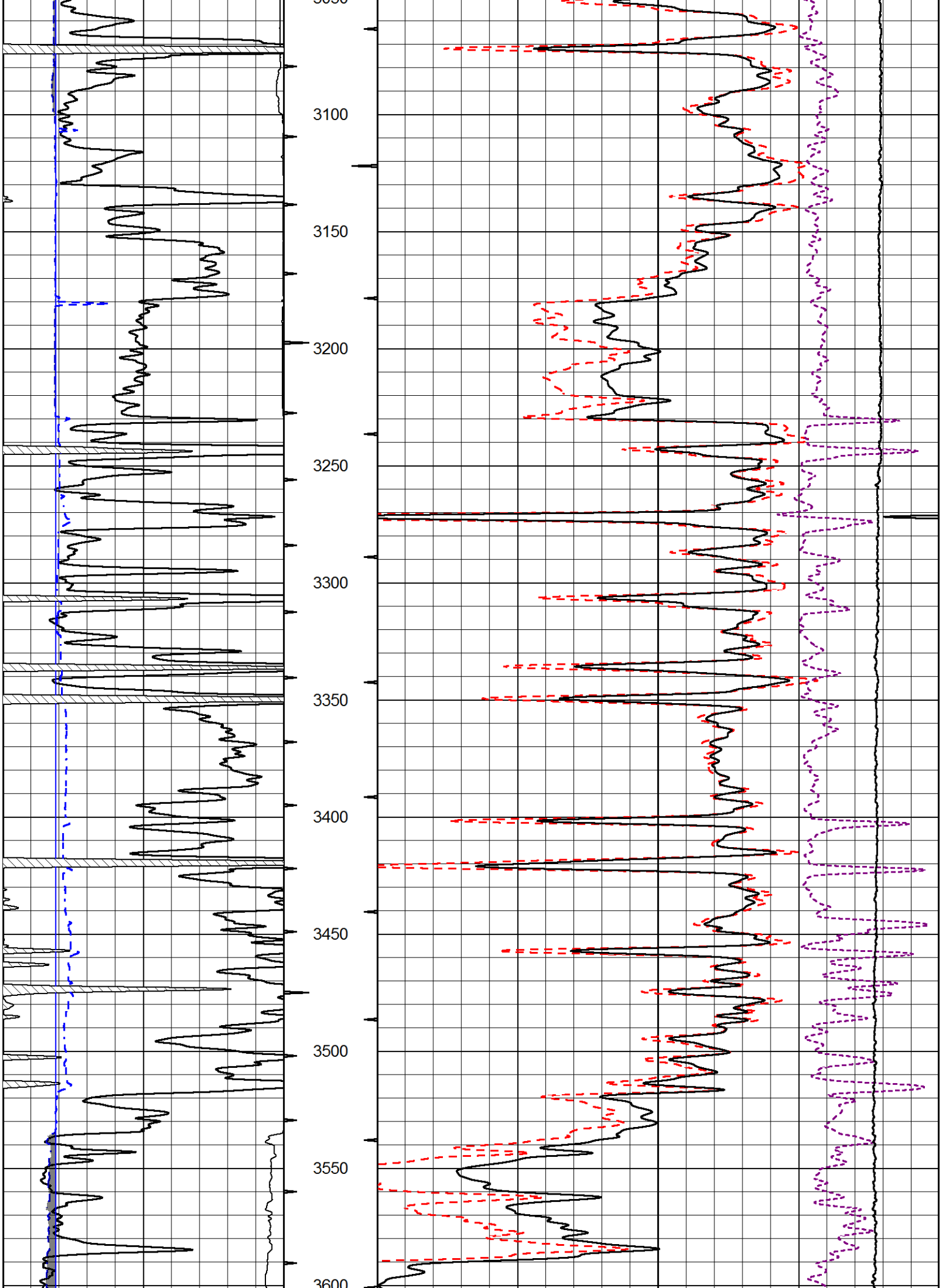
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16

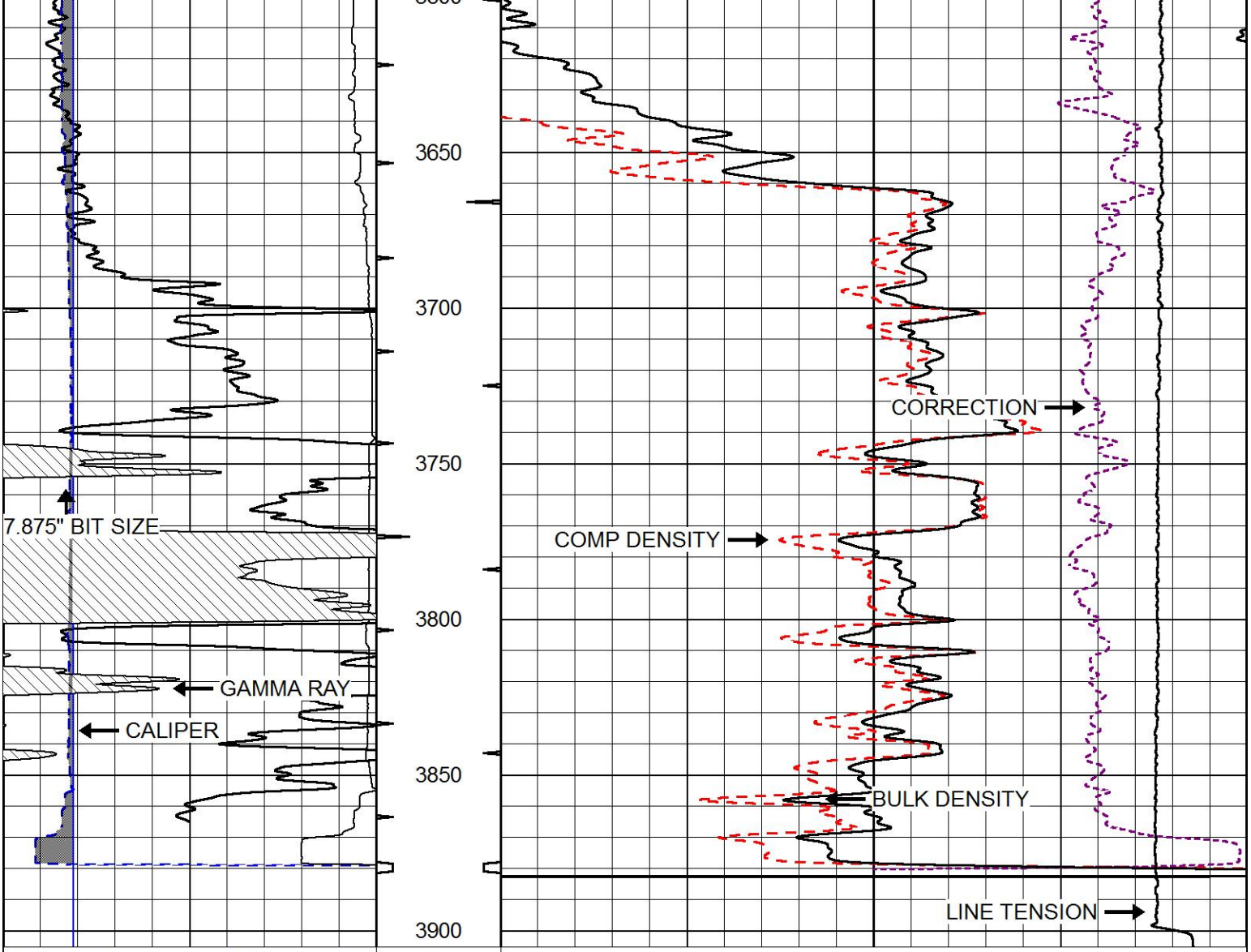
Compensated Density
(2.71 MA)

30	(pu)	-10
2	Bulk Density (g/cc)	3
15000	Line Tension (lb)	0
-0.25	Correction (g/cc)	0.25




2550
2600
2650
2700
2750
2800
2850
2900
2950
3000
3050


3100
3150
3200
3250
3300
3350
3400
3450
3500
3550
3600



0	Gamma Ray (GAPI)	150
6	Caliper (in)	16

	Compensated Density (2.71 MA)	
30	(pu)	-10
2	Bulk Density (g/cc)	3
15000	Line Tension (lb)	0
-0.25	Correction (g/cc)	0.25

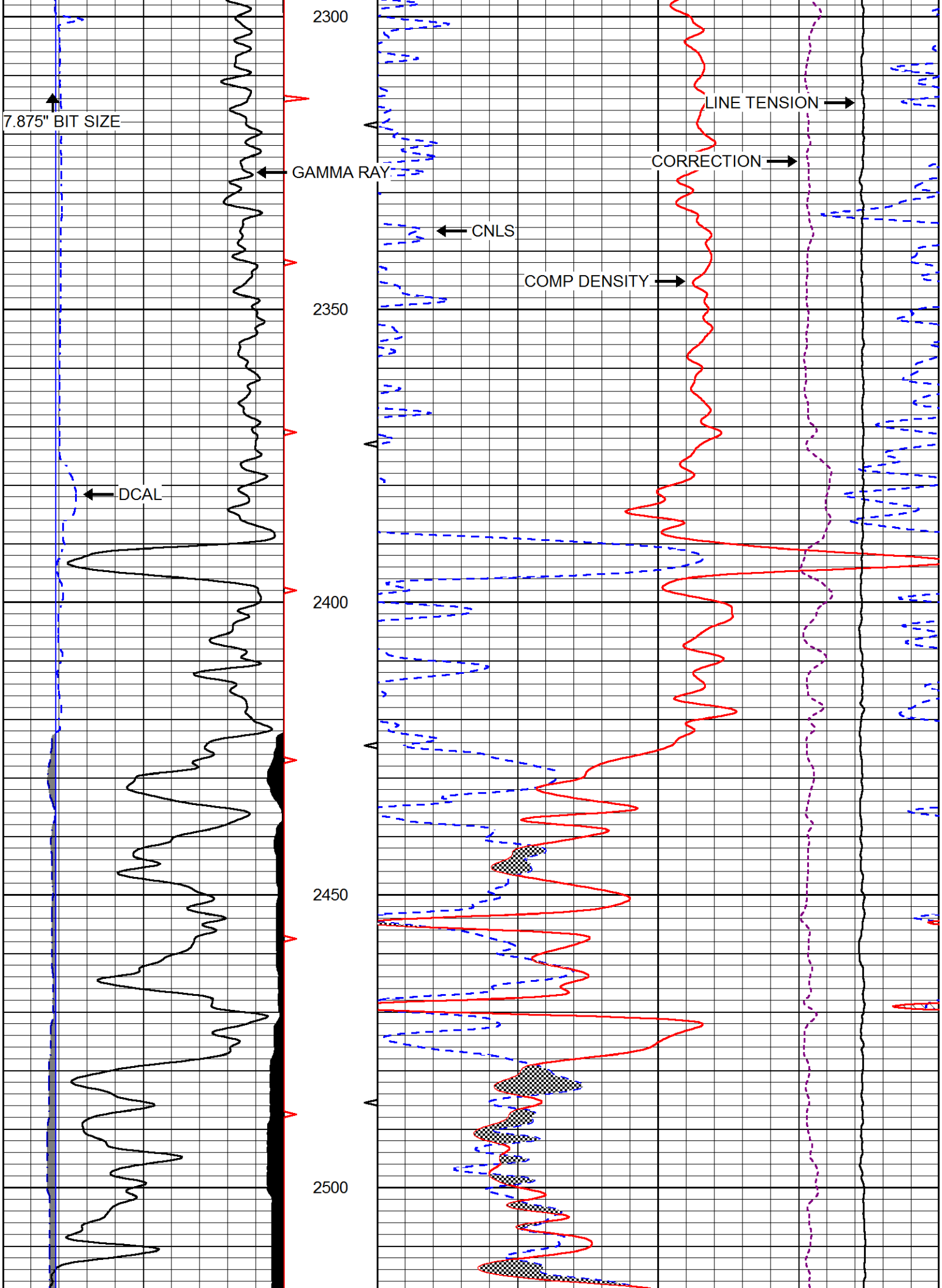
PIONEER
Pioneer Energy Services

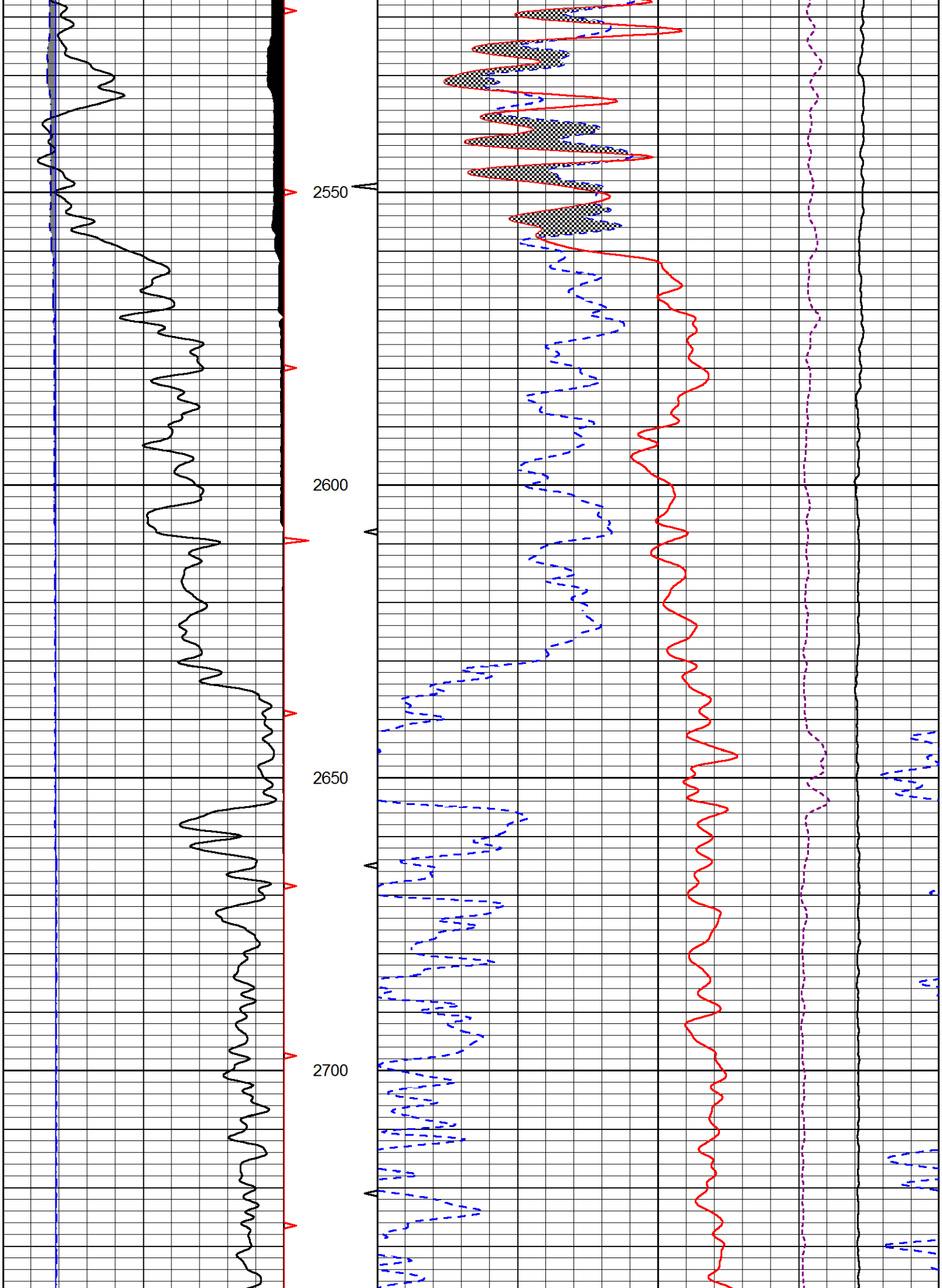
MAIN PASS

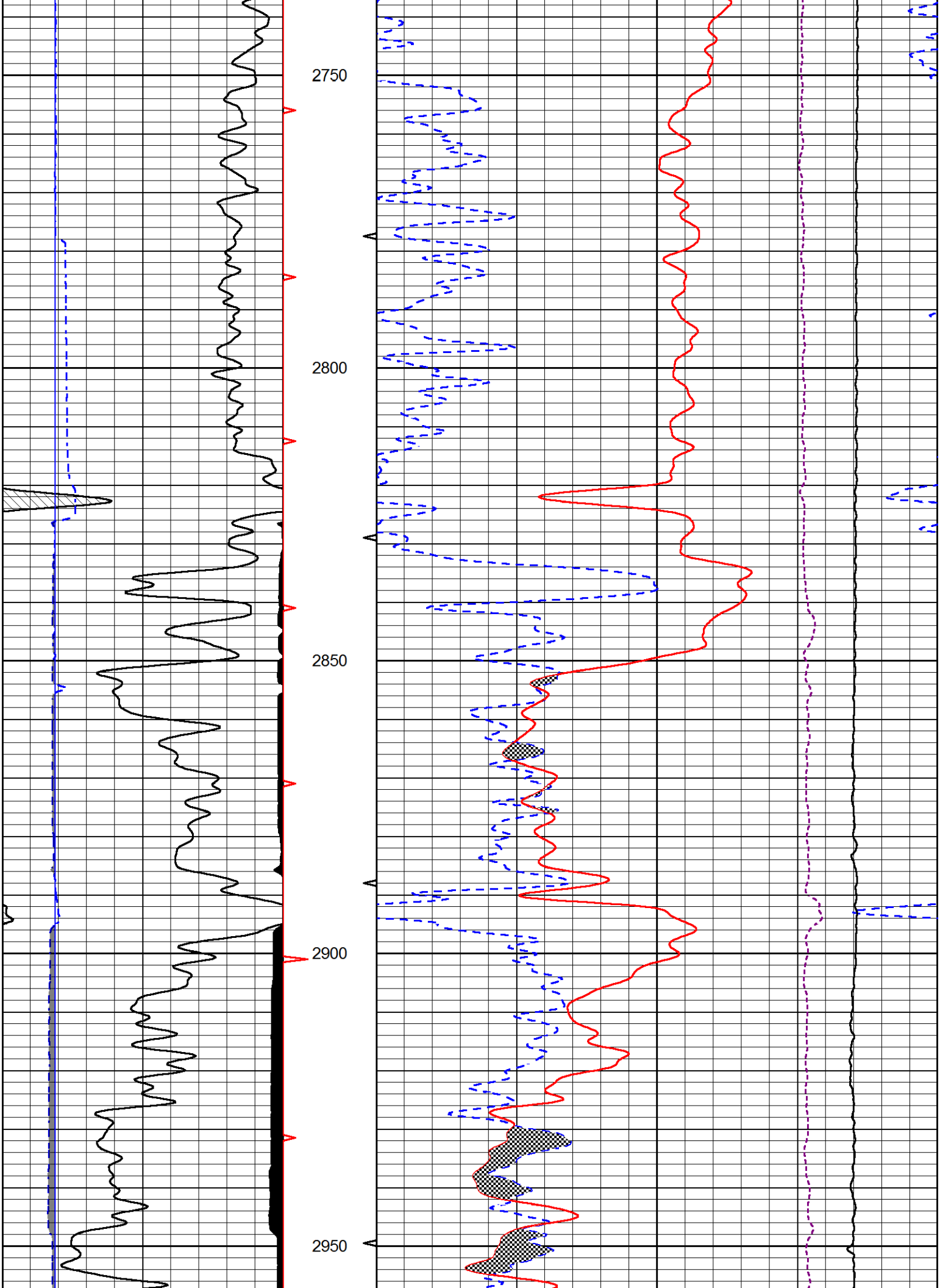
Database File	raney_cully 1-a.db
Dataset Pathname	stkml/pass3.1
Presentation Format	cndlspec
Dataset Creation	Mon Apr 09 21:38:26 2018
Charted by	Depth in Feet scaled 1:240

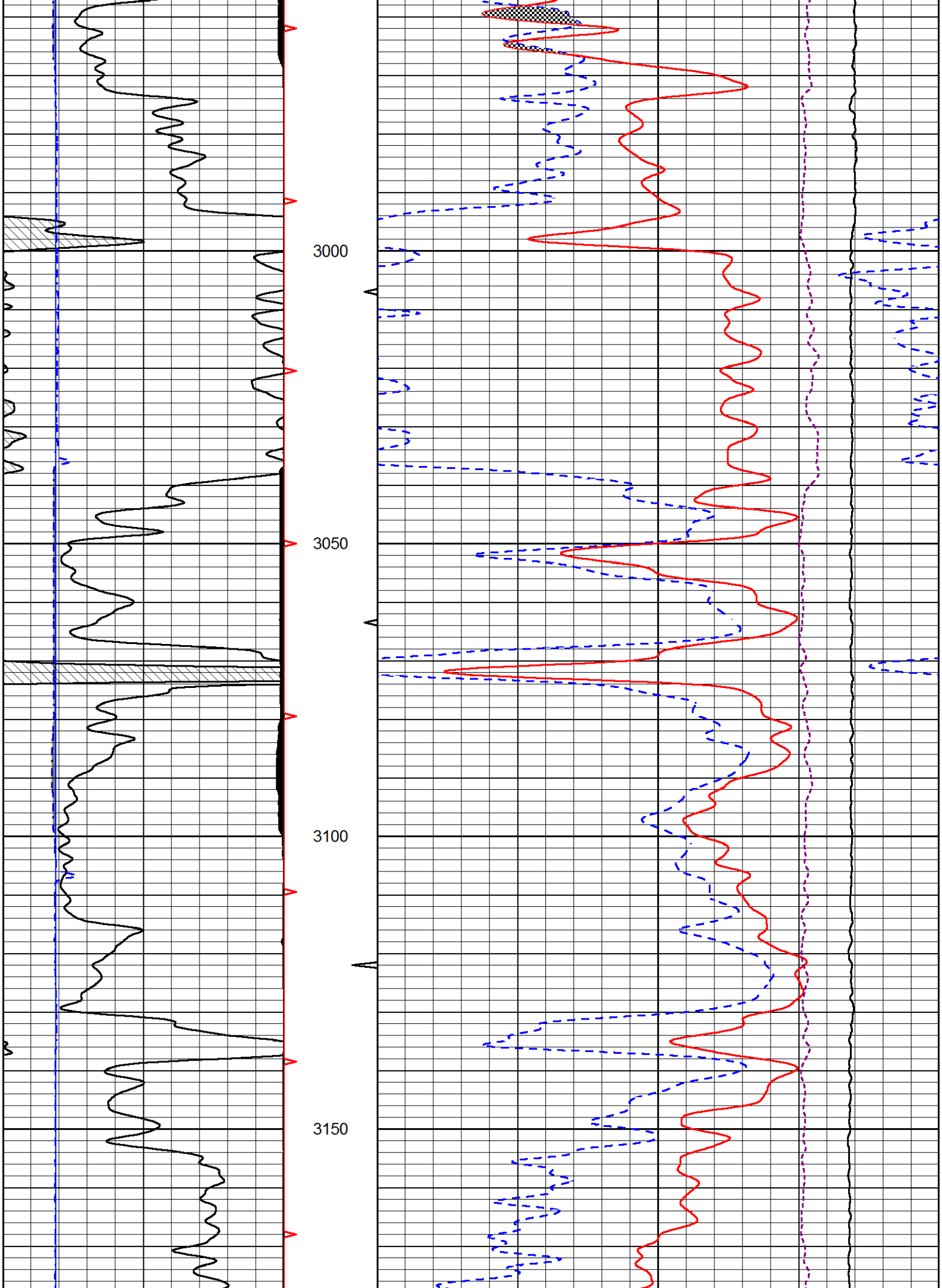
0	Gamma Ray (GAPI)	150
6	DCAL (in)	16

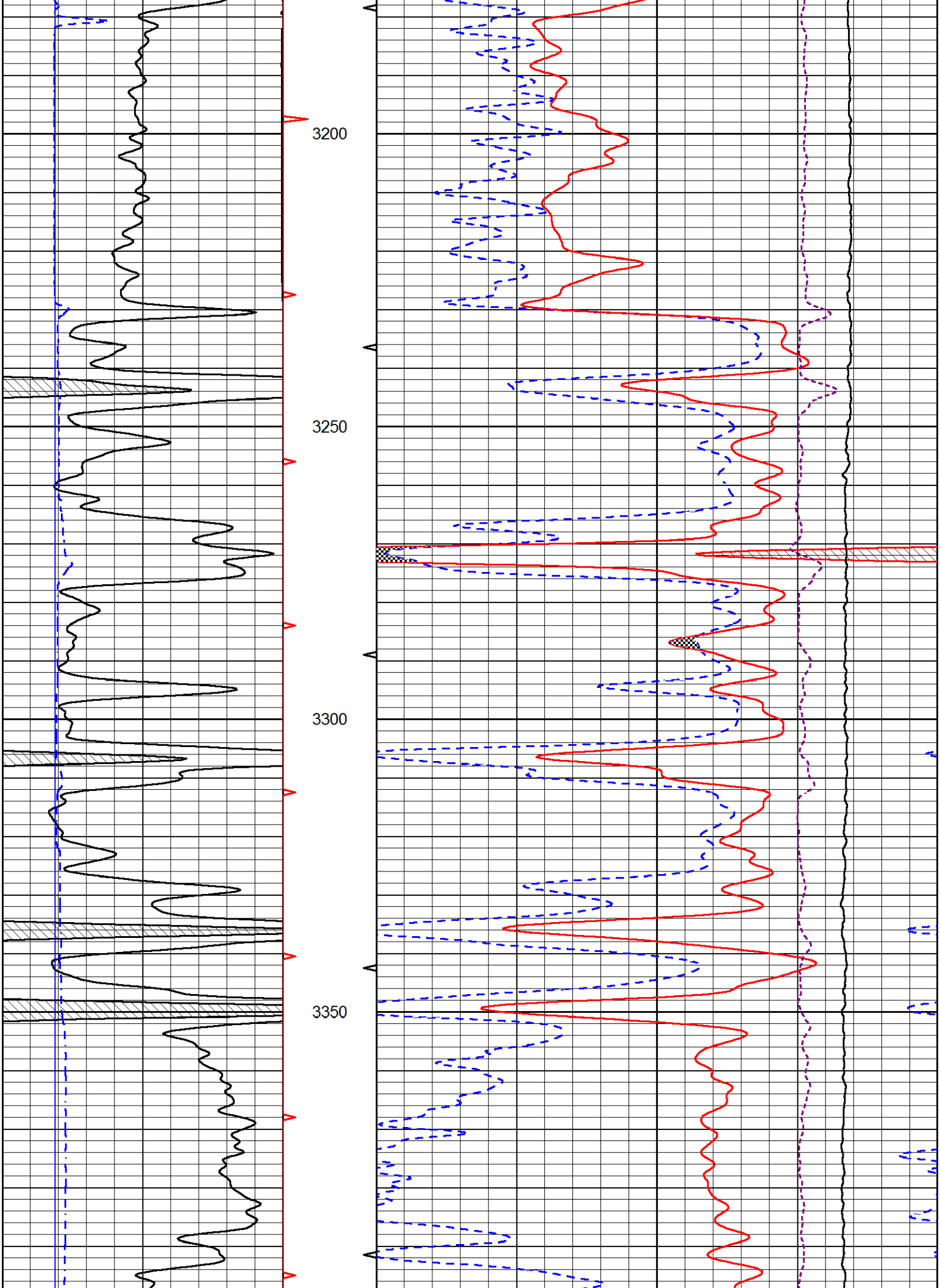
30	CNLS (pu)	-10
30	Compensated Density 2.71g/cc (pu)	-10
10000	Line Tension (lb)	0
-0.75	Correction (g/cc)	0.75

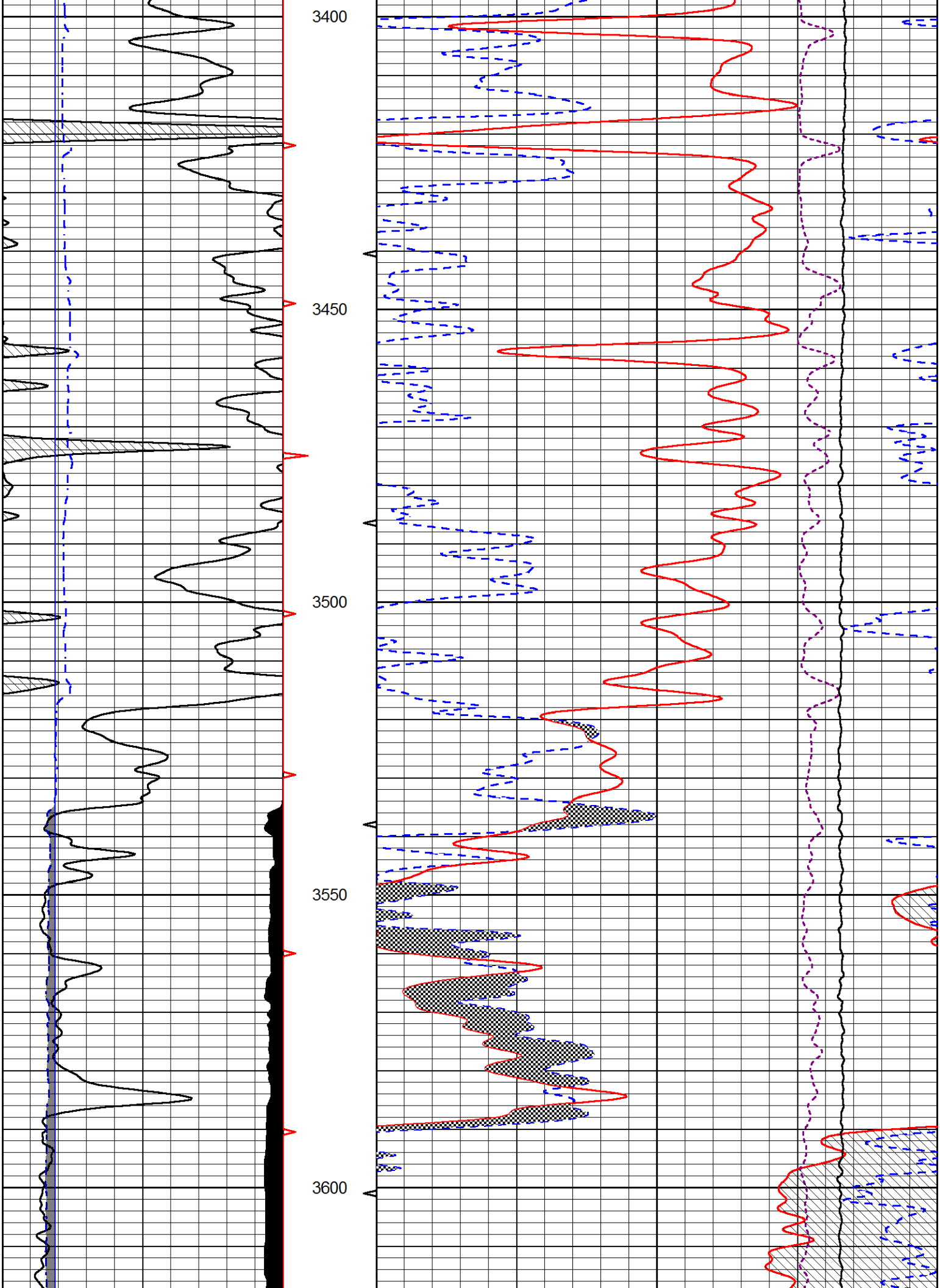

2300
2350
2400
2450
2500
7.875" BIT SIZE
GAMMA RAY
DCAL
CNLS
LINE TENSION
CORRECTION
COMP DENSITY

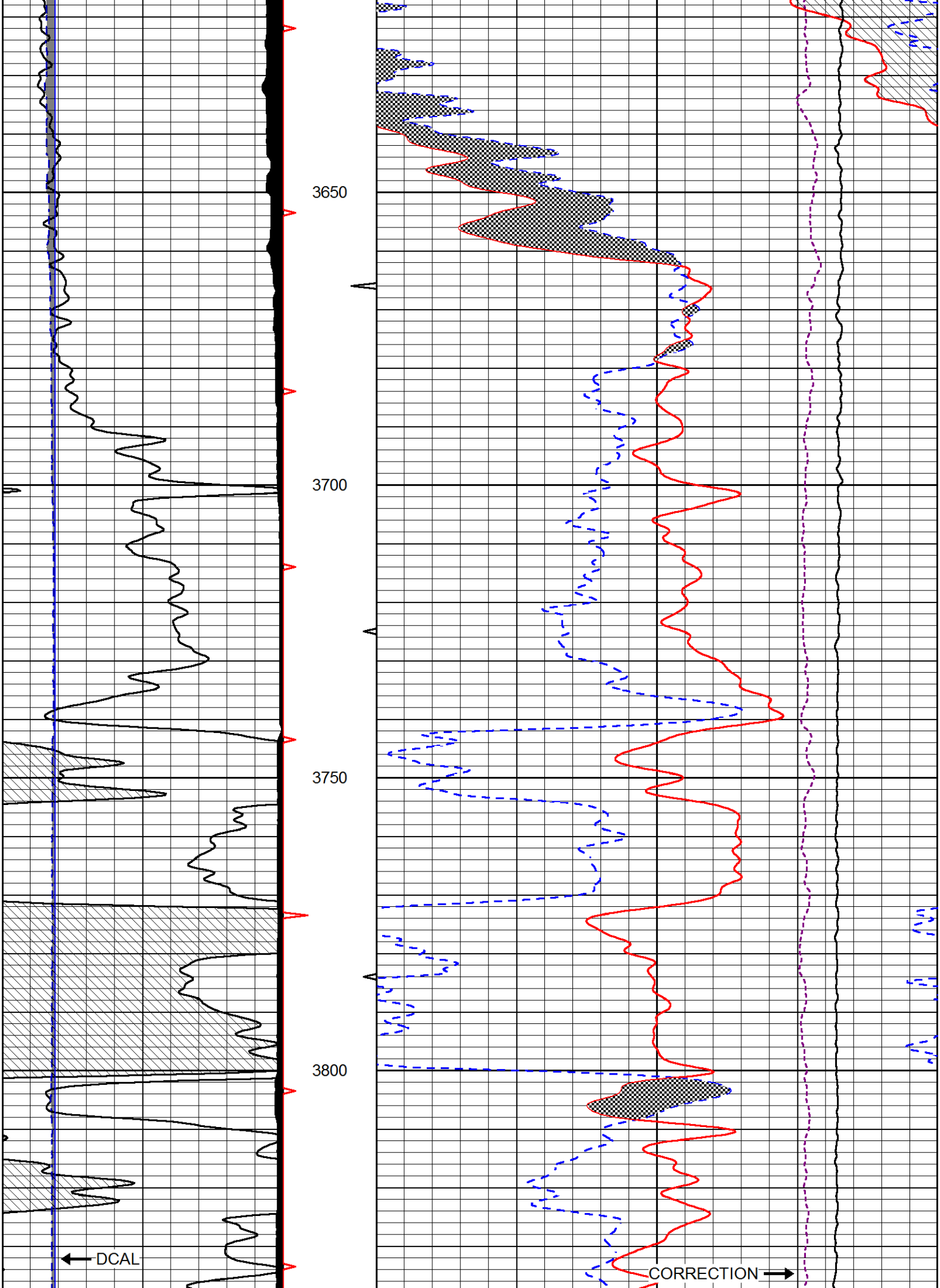

2550
2600
2650
2700

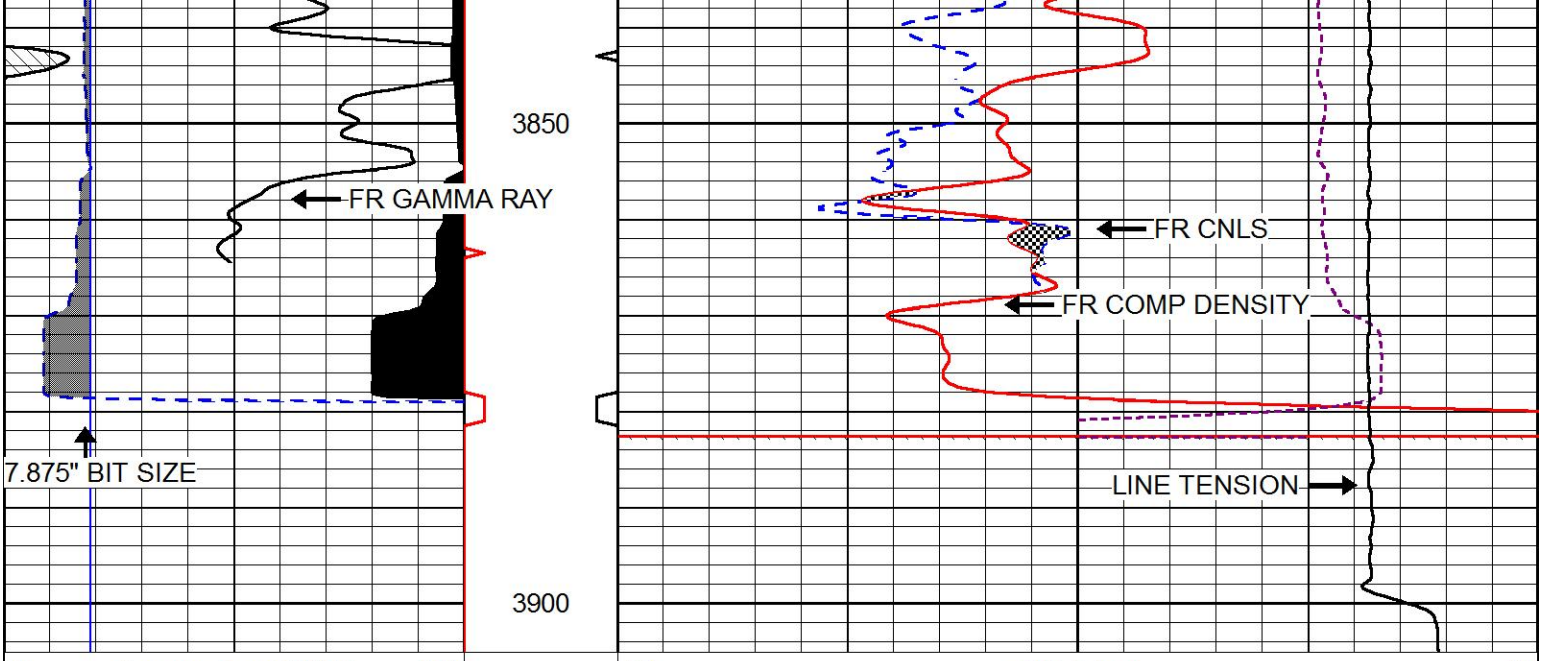

2750
2800
2850
2900
2950


3000
3050
3100
3150


3200
3250
3300
3350


3400
3450
3500
3550
3600


3650
3700
3750
3800
DCAL
CORRECTION



0	Gamma Ray (GAPI)	150
6	DCAL (in)	16

30	CNLS (pu)	-10
30	Compensated Density 2.71g/cc (pu)	-10
10000	Line Tension (lb)	0
-0.75	Correction (g/cc)	0.75

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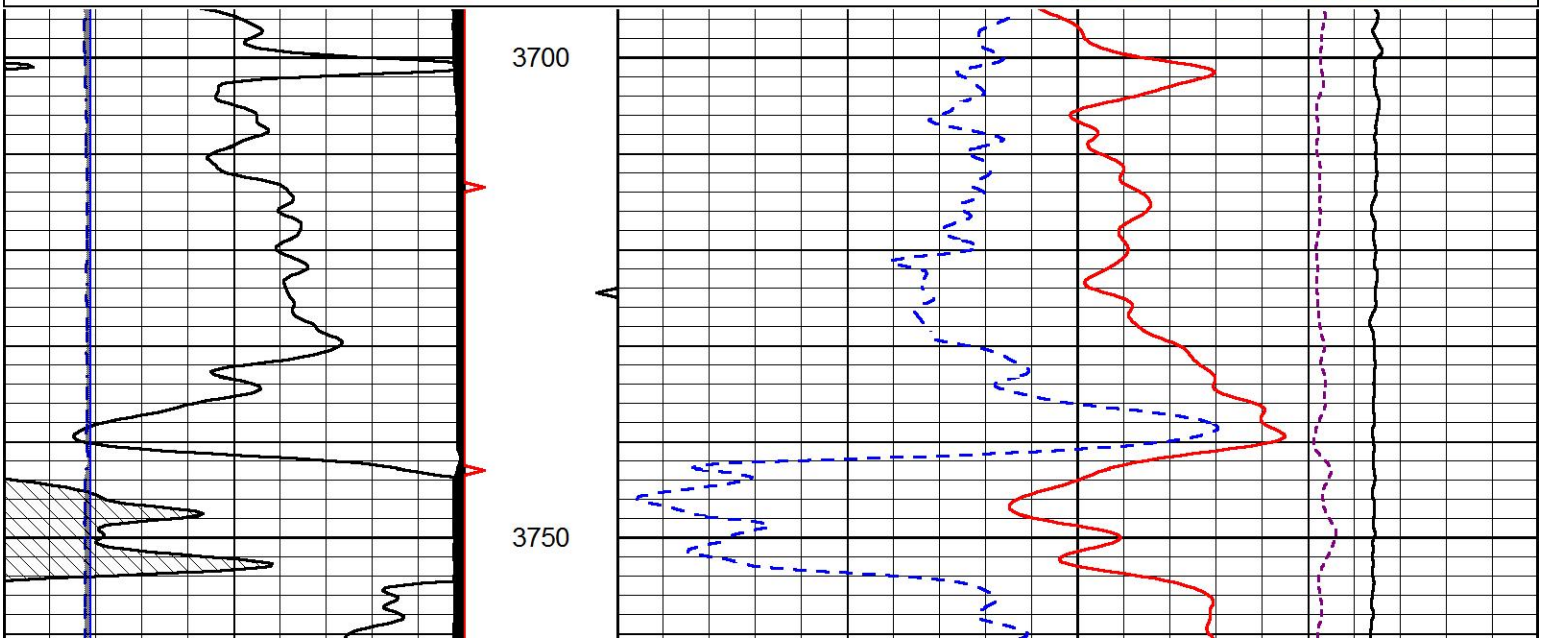
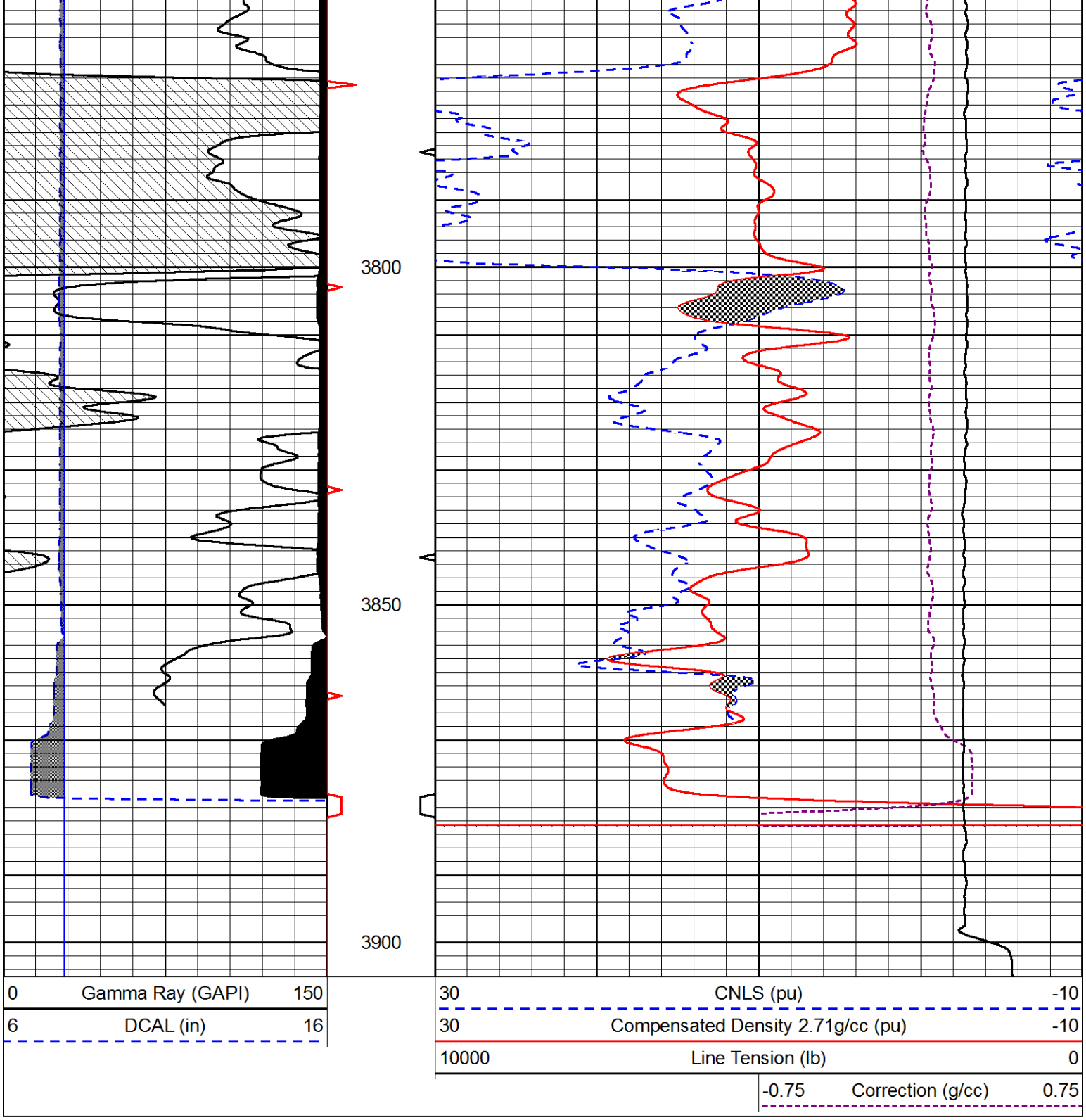
REPEAT SECTION

Database File	raney_cully 1-a.db
Dataset Pathname	stkml/pass2.1
Presentation Format	cndlspec
Dataset Creation	Mon Apr 09 21:11:09 2018
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	DCAL (in)	16

30	CNLS (pu)	-10
30	Compensated Density 2.71g/cc (pu)	-10
10000	Line Tension (lb)	0
-0.75	Correction (g/cc)	0.75





Calibration Report

Database File	raney_cully 1-a.db
Dataset Pathname	stkml/pass3.3
Dataset Creation	Mon Apr 09 21:12:16 2018

Dual Induction Calibration Report

Serial-Model:	933 (HT)-PSI HIGH TEMP
Calibration Performed:	Sun Feb 18 17:32:17 2018

	Readings		References		Results	
Loop:	Air	Loop	Air	Loop	Gain	Offset

Deep	167.000	835.000	0.000	255.000	mmho/m	0.700	-18.350
Medium	142.000	1349.000	0.000	255.000	mmho/m	0.565	-63.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
Performed: Sun Mar 18 23:48:42 2018

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	20000.0000	-0.9000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	23000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.9200

Compensated Density Calibration Report

Serial-Model: 182-152-M&W
Source / Verifier: 16955B / 2ci
Master Calibration Performed: Wed Mar 28 03:05:33 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4992.81	6098.44	cps
Aluminum	2.670	g/cc	945.67	3945.60	cps

Spine Angle = 75.33 Density/Spine Ratio = 0.532

	Size		Reading
Small Ring	4.50	in	1.09
Large Ring	15.00	in	1.03

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W
Calibration Performed: FRI MAR 9 10:30:30 2018

Detector	Readings		Target		Normalization
Short Space	6240.00	cps	1000.00	cps	1.6025
Long Space	460.00	cps	1000.00	cps	1.9500

Gamma Ray Calibration Report

Serial Number: 89
Tool Model: M&W
Calibration Performed: Mon Jan 15 11:20:44 2018

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps

PIONEER

Pioneer Energy Services

Company	RANEY OIL COMPANY, LLC
Well	CULLY #1-A
Field	ASHTON SE
County	SUMNER
State	KANSAS

PIONEER
Pioneer Energy Services

MICRORESISTIVITY LOG

Company RANEY OIL COMPANY, LLC
Well CULLY #1-A
Field ASHTON SE
County SUMNER State KANSAS

Location: API # : 15-191-22802-00-00
NE SE SW SW
400' FSL & 1251' FWL
SEC 20 TWP 34S RGE 2E

Other Services
CNL/CDL
DIL

Permanent Datum GROUND LEVEL Elevation 1200'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1208'
D.F. N/A
G.L. 1200'

Date	4/9/2018		
Run Number	ONE		
Depth Driller	3900'		
Depth Logger	3899'		
Bottom Logged Interval	3898'		
Top Log Interval	2300'		
Casing Driller	8.625" @ 254'		
Casing Logger	252'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity,ppm CL	1800		
Density / Viscosity	9.3 48		
pH / Fluid Loss	11.0 7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	50 @ 0.60		
Rmf @ Meas. Temp	50 @ 1.08		
Rmc @ Meas. Temp	50 @ 0.35		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	116 @ 116		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	116		
Equipment Number	91		
Location	HAYS		
Recorded By	D. SCHMIDT		
Witnessed By	DAN JOHNSON		

<<< Fold Here >>>

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

I -135 & SOUTH HAVEN EXIT,
EAST TO ASHTON RD, 1 NORTH, 1/4 EAST,
NORTH INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneeres.com 785-625-3858

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: D. SCHMIDT	Primary Witness: DAN JOHNSON
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

Database C:\ProgramData\Warrior\Data\raney_cully 1-a.db
Dataset field/well/stkml/pass3.3/_vars_

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	-80	0

SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	50	0	5.5	0	3899	116	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC	37.48		CNT-M&W (207-MW)	5.50	3.50	100.00
CNSSC	36.73					
			CDL-M&W (182-152)	8.50	4.00	250.00
LSD	28.43					
DCAL	28.42					
SSD	27.93					
			ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
MCAL	19.83					
MI	19.83					
MN	19.83					
RLL3F	15.80					
RLL3	15.80					

			DIL-PSI HIGH TEMP (933 (HT))	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					

Dataset:	raney_cully 1-a.db: field/well/stkml/pass3.3
Total length:	43.08 ft
Total weight:	685.00 lb
O.D.:	4.00 in

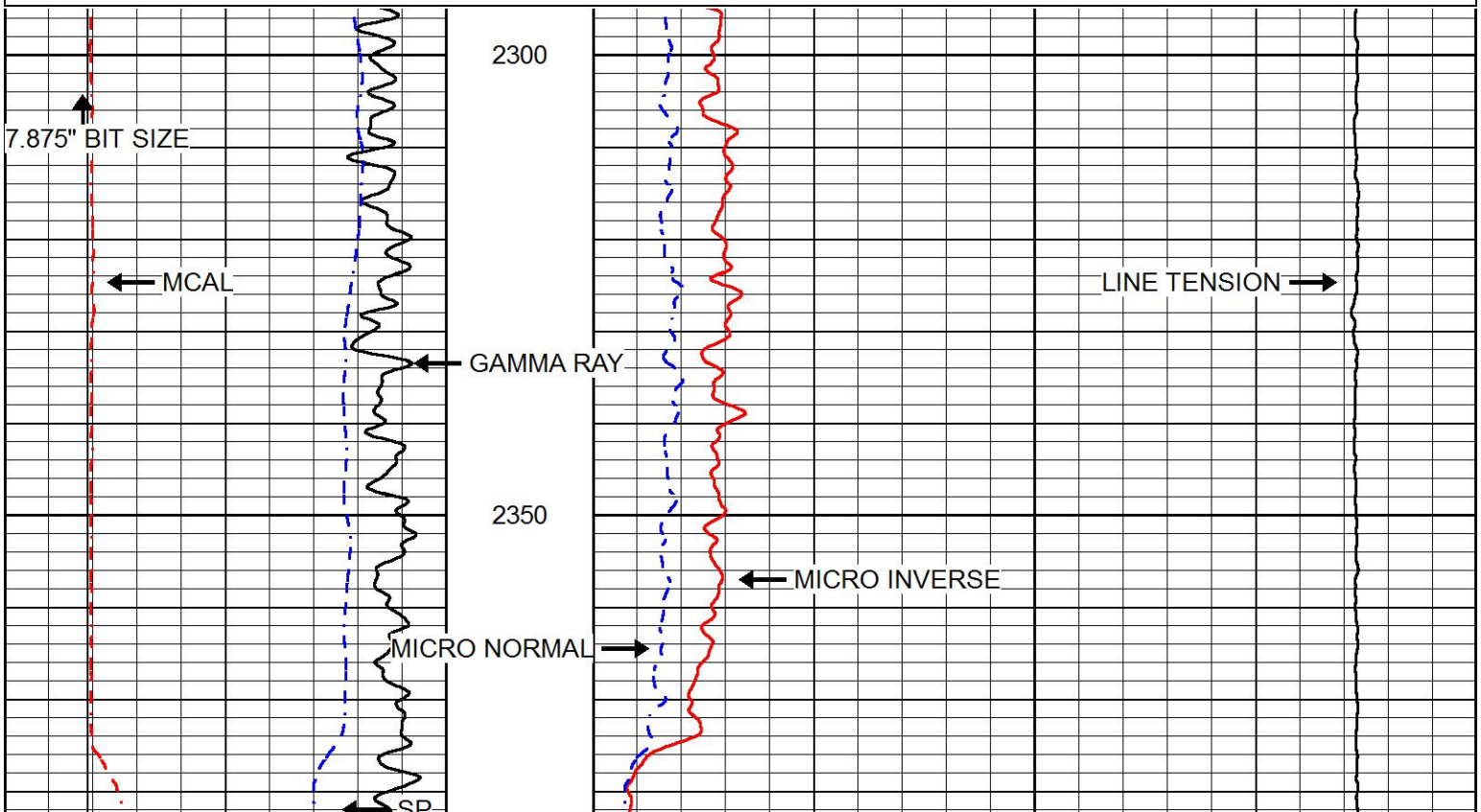
PIONEER
Pioneer Energy Services

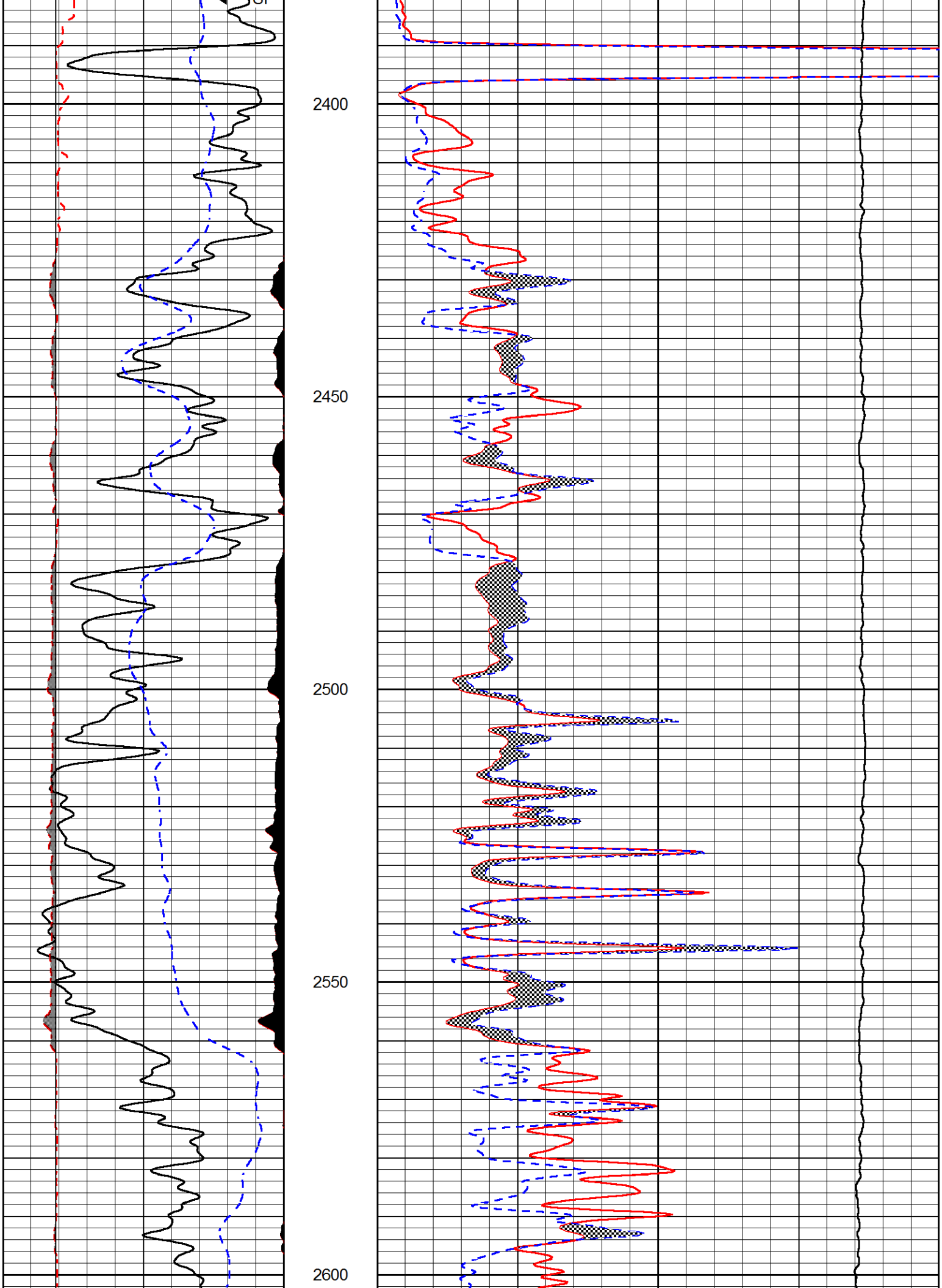
MAIN PASS

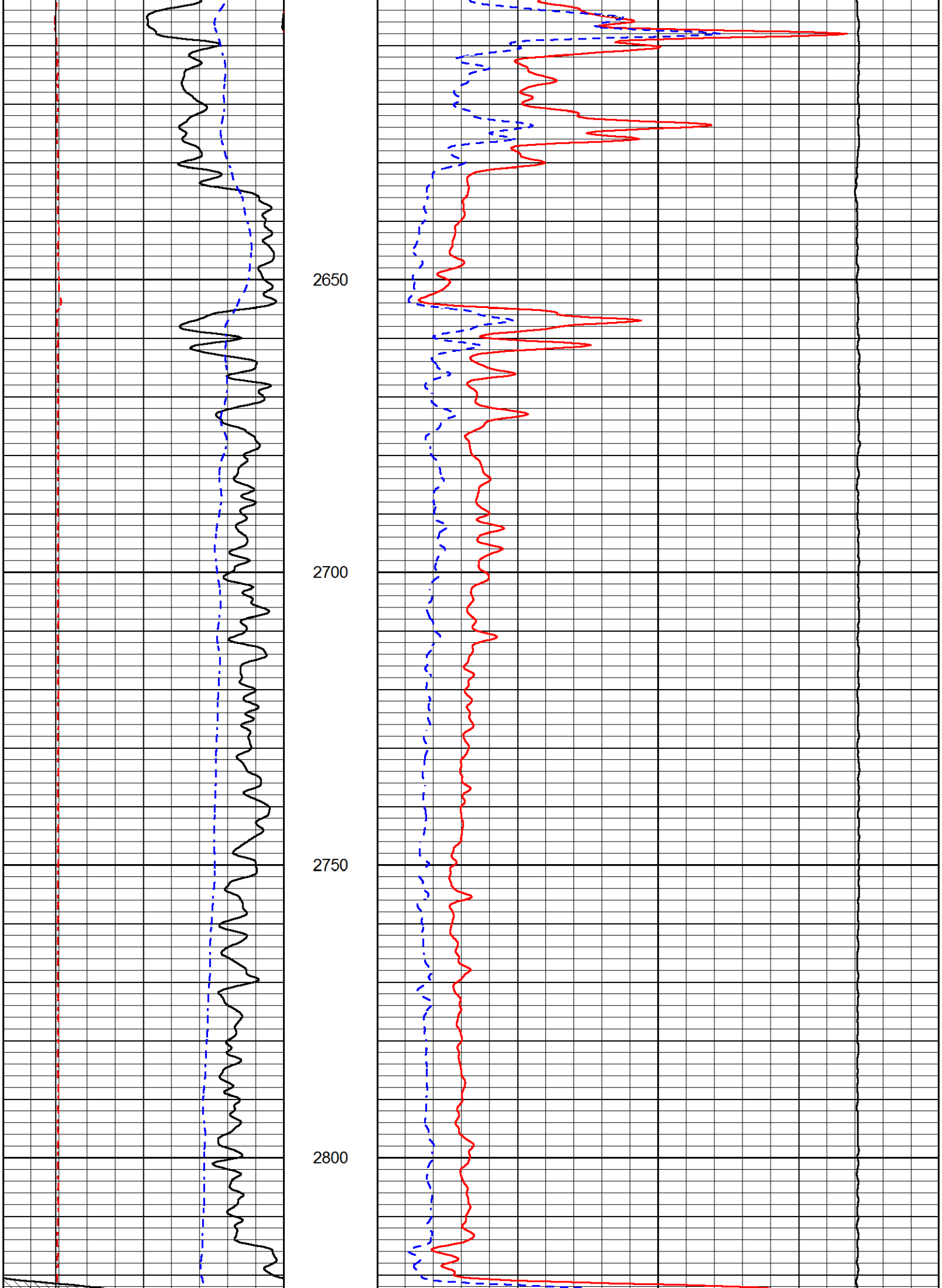
Database File	raney_cully 1-a.db
Dataset Pathname	stkml/pass3.1
Presentation Format	micro
Dataset Creation	Mon Apr 09 21:38:26 2018
Charted by	Depth in Feet scaled 1:240

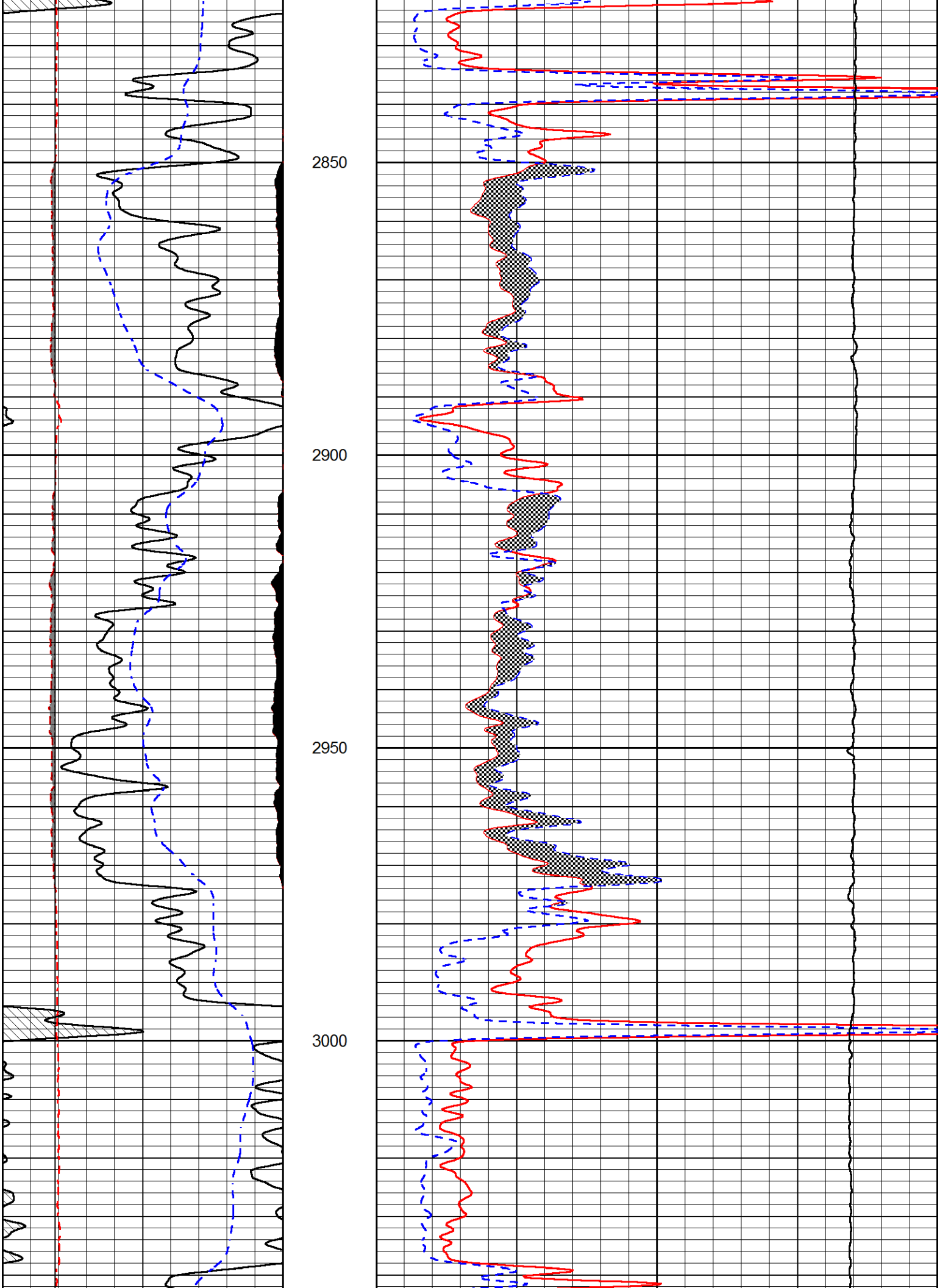
0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0

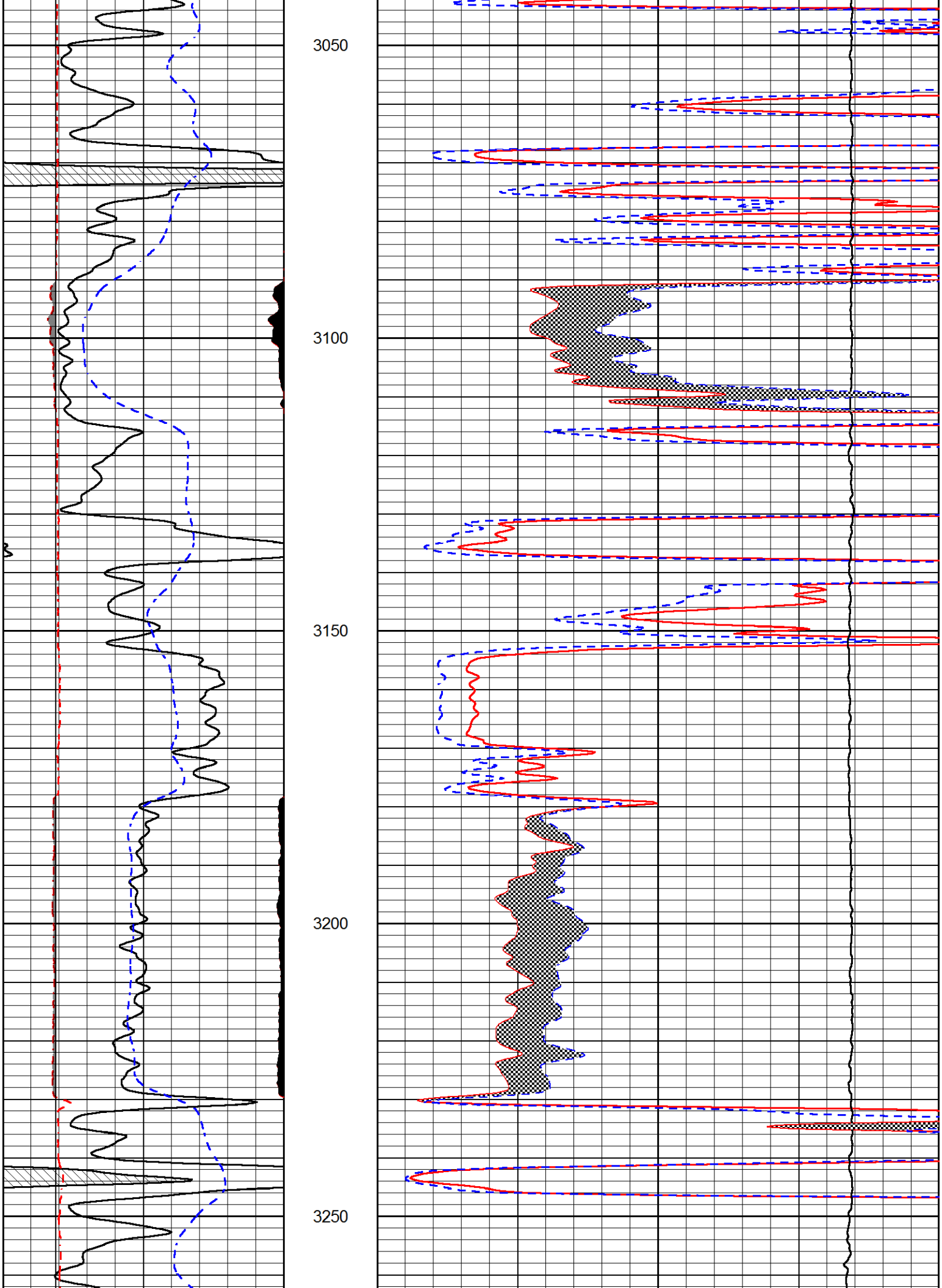
0	Micro Inverese 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

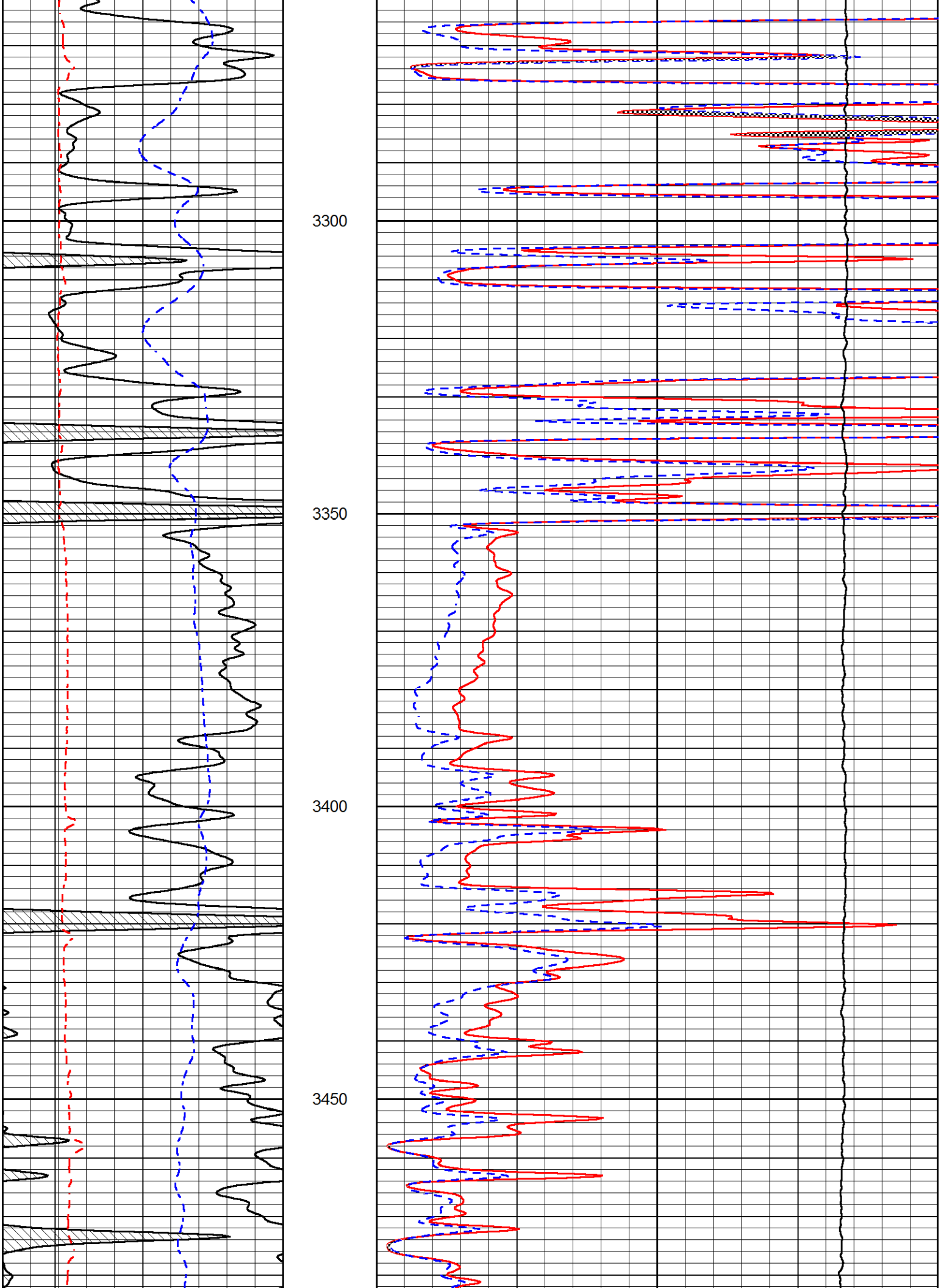


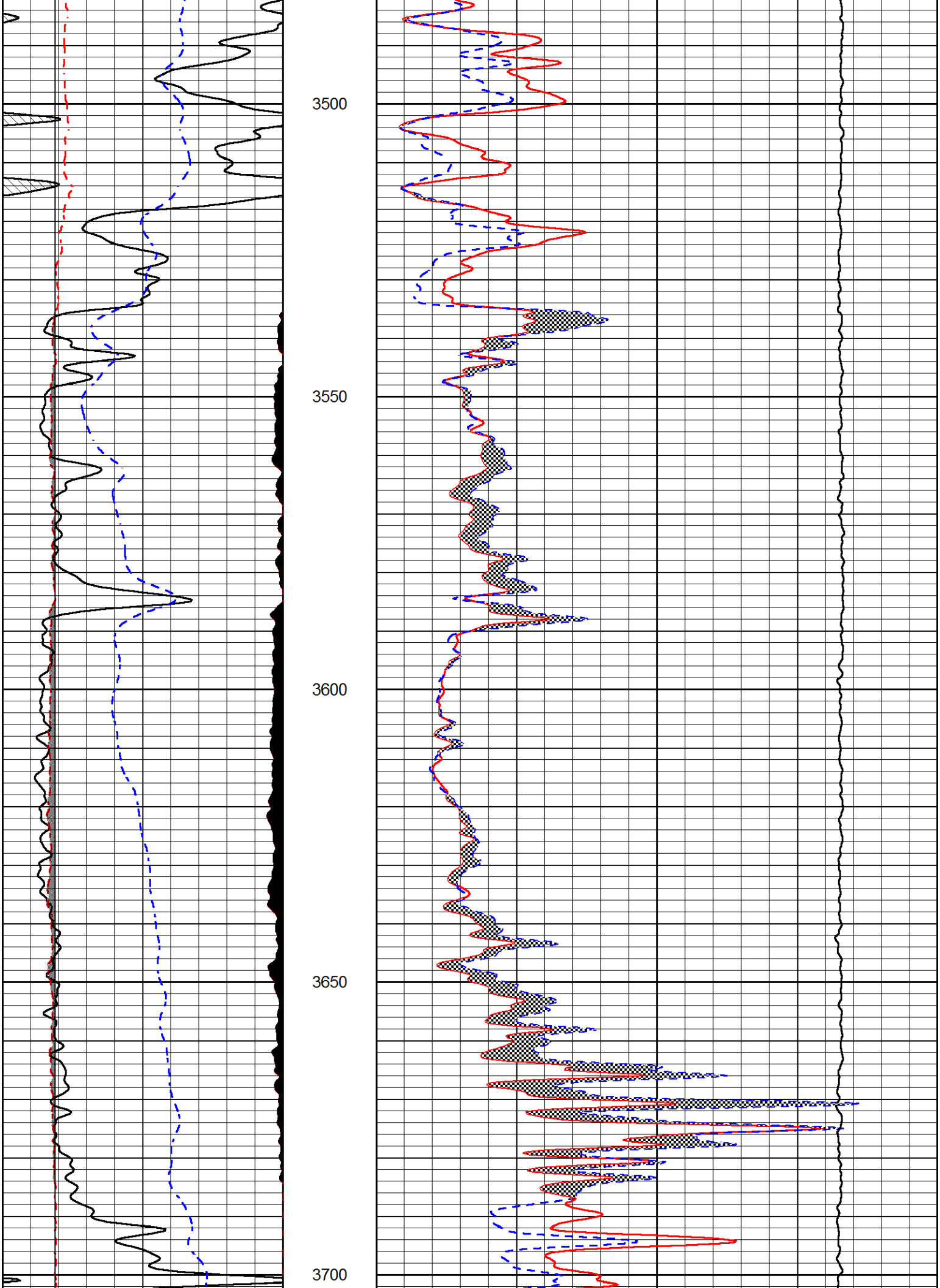

2400
2450
2500
2550
2600

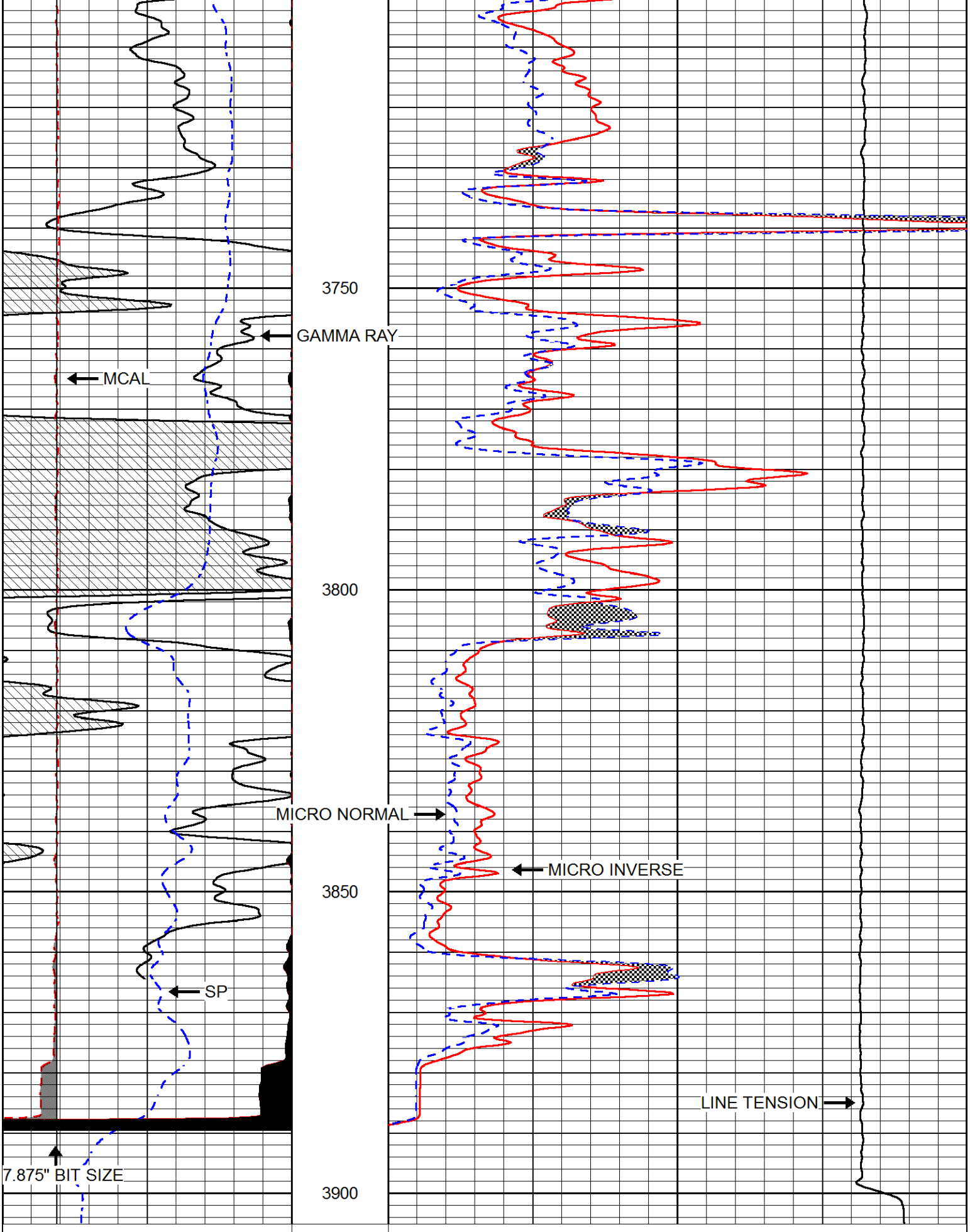

2650
2700
2750
2800


2850
2900
2950
3000


3050
3100
3150
3200
3250


3300
3350
3400
3450


3500
3550
3600
3650
3700


3750
3800
3850
3900
GAMMA RAY
MCAL
MICRO NORMAL
MICRO INVERSE
SP
LINE TENSION
7.875" BIT SIZE
0 Gamma Ray (GAPI) 150
6 MCAL (in) 16
2.875 mcal (in) 7.875
6 Bit Size (in) 16
0 Micro Inverese 1 X 1 (Ohm-m) 40
0 Micro Normal 2" (Ohm-m) 40
10000 Line Weight (lb) 0

	Bit Size (in)	16
-200	SP (mV)	0

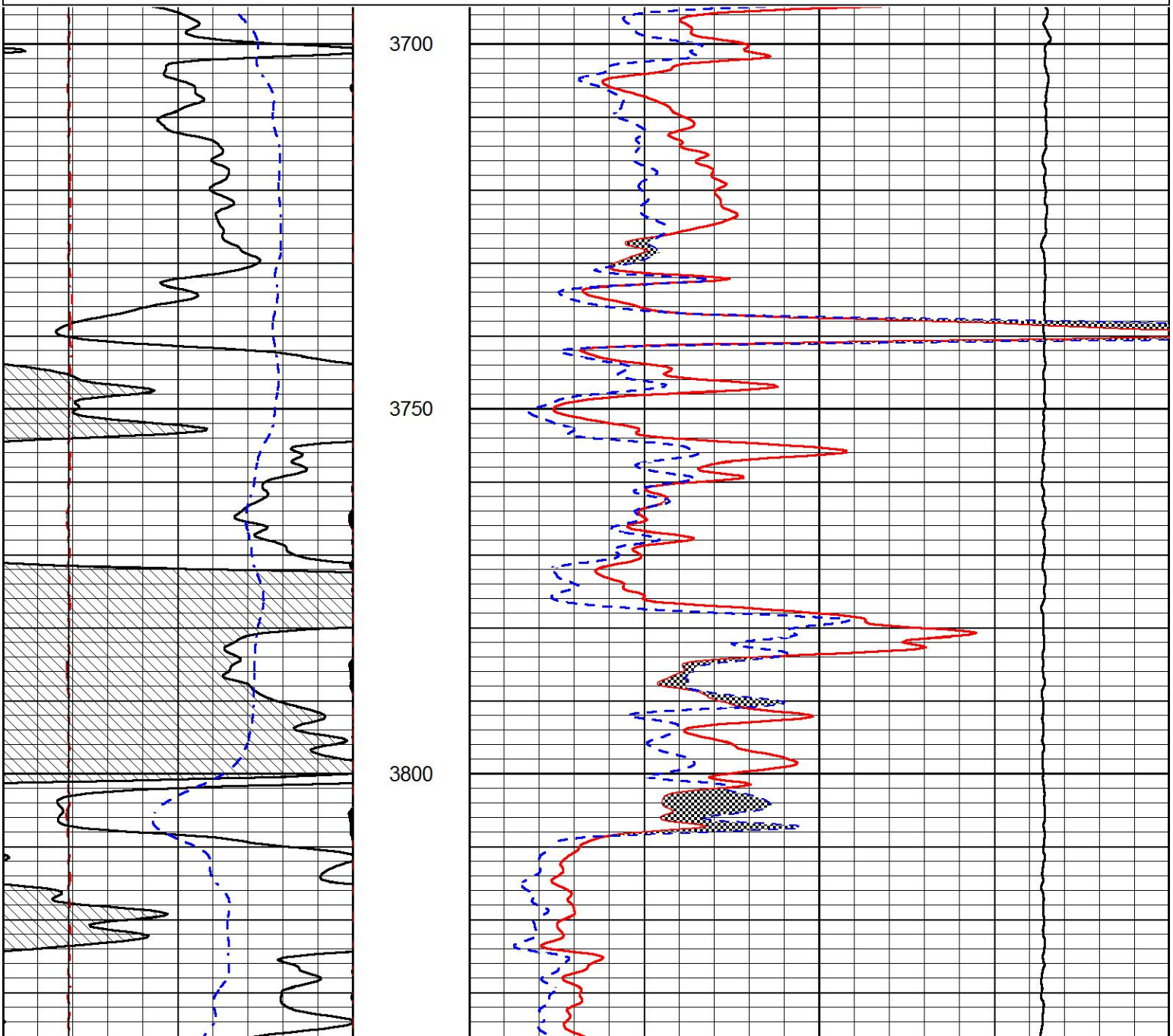
PIONEER
Pioneer Energy Services

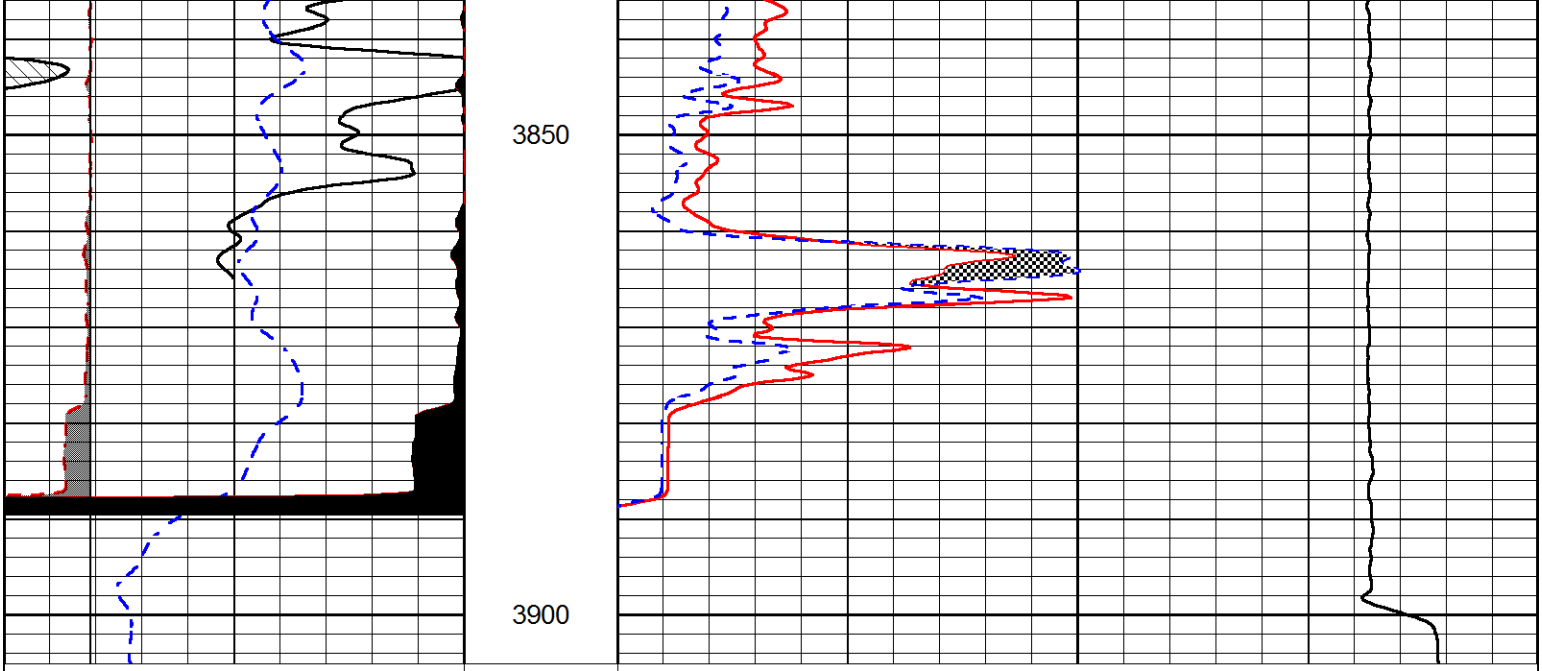
REPEAT SECTION

Database File	raney_cully 1-a.db
Dataset Pathname	stkml/pass2.1
Presentation Format	micro
Dataset Creation	Mon Apr 09 21:11:09 2018
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0

0	Micro Inverese 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0





0	Gamma Ray (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
6	Bit Size (in)	16
-200	SP (mV)	0

0	Micro Inverese 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

Calibration Report

Database File	raney_cully 1-a.db
Dataset Pathname	stkml/pass3.3
Dataset Creation	Mon Apr 09 21:12:16 2018

Dual Induction Calibration Report

Serial-Model:	933 (HT)-PSI HIGH TEMP
Calibration Performed:	Sun Feb 18 17:32:17 2018

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.700	-18.350
Medium	142.000	1349.000	0.000	255.000	mmho/m	0.565	-63.000

Microlog Calibration Report

Serial-Model:	PSI-01-PSIML
Performed:	Sun Mar 18 23:48:42 2018

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	20000.0000	-0.9000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	23000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.9200

Compensated Density Calibration Report

Serial-Model:	182-152-M&W
Source / Verifier:	16955B / 2ci

Master Calibration Performed: Wed Mar 28 03:05:33 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4992.81	6098.44	cps
Aluminum	2.670	g/cc	945.67	3945.60	cps

Spine Angle = 75.33 Density/Spine Ratio = 0.532

	Size		Reading
Small Ring	4.50	in	1.09
Large Ring	15.00	in	1.03

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W
Calibration Performed: FRI MAR 9 10:30:30 2018

Detector	Readings		Target		Normalization
Short Space	6240.00	cps	1000.00	cps	1.6025
Long Space	460.00	cps	1000.00	cps	1.9500

Gamma Ray Calibration Report

Serial Number: 89
Tool Model: M&W
Calibration Performed: Mon Jan 15 11:20:44 2018

Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps

PIONEER
Pioneer Energy Services

Company	RANEY OIL COMPANY, LLC
Well	CULLY #1-A
Field	ASHTON SE
County	SUMNER
State	KANSAS