MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company Darrah Oil Company LLC
Well Knop #1-5
Field Chase - Silica
County Rice State Kansas

Location: API # : 15-159-22875-00-00
890' FNL & 2475' FEL
NW SW NW NE
Lat 38.345113 Lng -98.452086 NAD 83
SEC 5 TWP 20S RGE 10W

Other Services
CNL/CDL
DIL

Permanent Datum Ground Level Elevation 1802'
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation
K.B. 1813'
D.F. N/A
G.L. 1802'

Date	8/12/2021		
Run Number	One		
Depth Driller	3300'		
Depth Logger	3299'		
Bottom Logged Interval	3298'		
Top Log Interval	2500'		
Casing Driller	8.625" @ 288'		
Casing Logger	289'		
Bit Size	7.875"		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	N/A		
Density / Viscosity	N/A N/A		
pH / Fluid Loss	N/A N/A		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.16 @ 80		
Rmf @ Meas. Temp	0.12 @ 80		
Rmc @ Meas. Temp	0.22 @ 80		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.12 @ 109		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	109		
Equipment Number	P-24		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Larry Nicholson		

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All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline LLC will not be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Silica,
3/4 East, South into

Log Measured From: Kelly Bushing 11 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew	This Log Record Was Witnessed By
Engineer: D. Schmidt	Primary Witness: Larry Nicholson
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			GR-M&W (233-M&W)	3.00	3.50	50.00
GR	40.58					
CNLSC	37.48		CNT-M&W (207-MW)	5.50	3.50	100.00
CNSSC	36.73					
			CDL-M&W (934-226)	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 (952-828)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					

Dataset: darrah_knop 1-5.db: field/well/stkml/pass3.1
Total length: 43.08 ft
Total weight: 685.00 lb
O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\darrah_knop 1-5.db
Dataset field/well/stkml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	109	5.5	0	1	2	2.71

NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	285	80	Off	3299

Variable Description

A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

MIDWEST WIRELINE

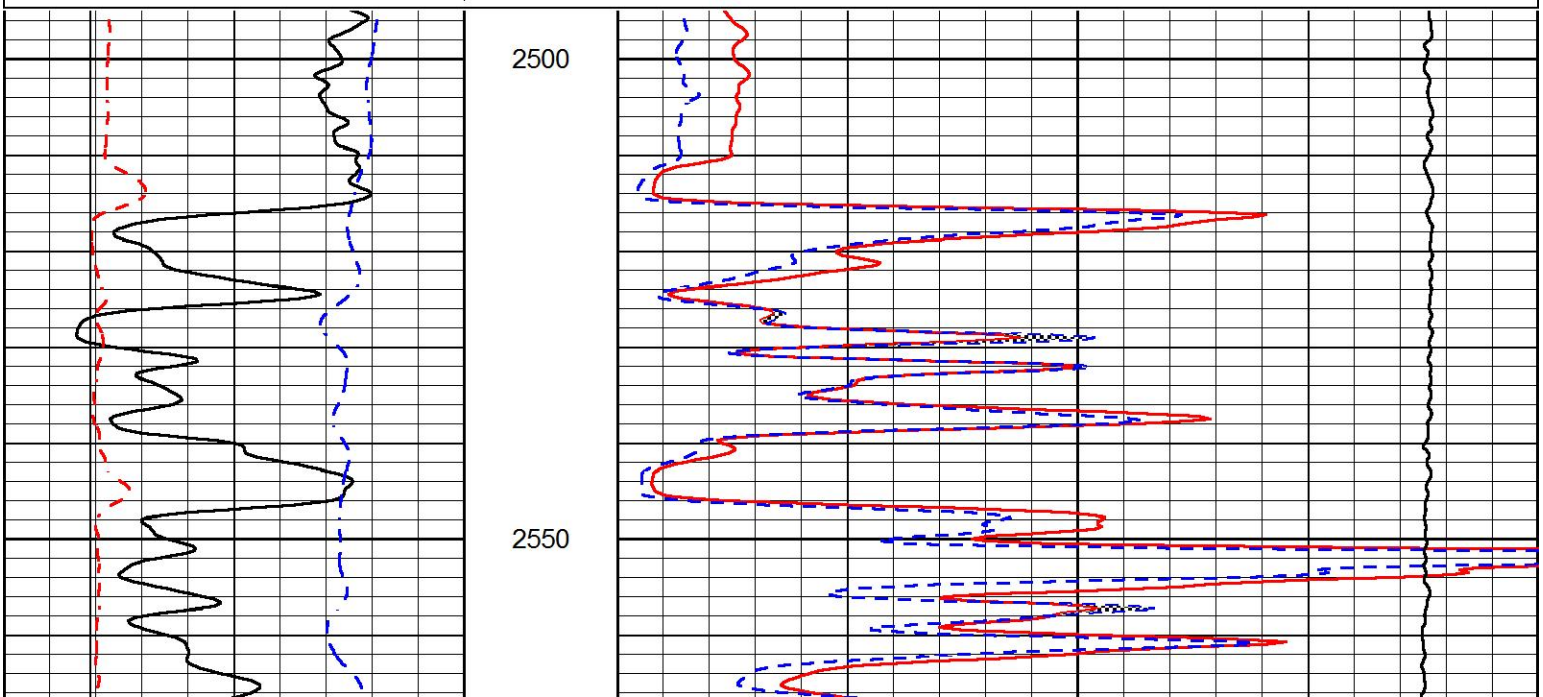
DETAIL SECTION

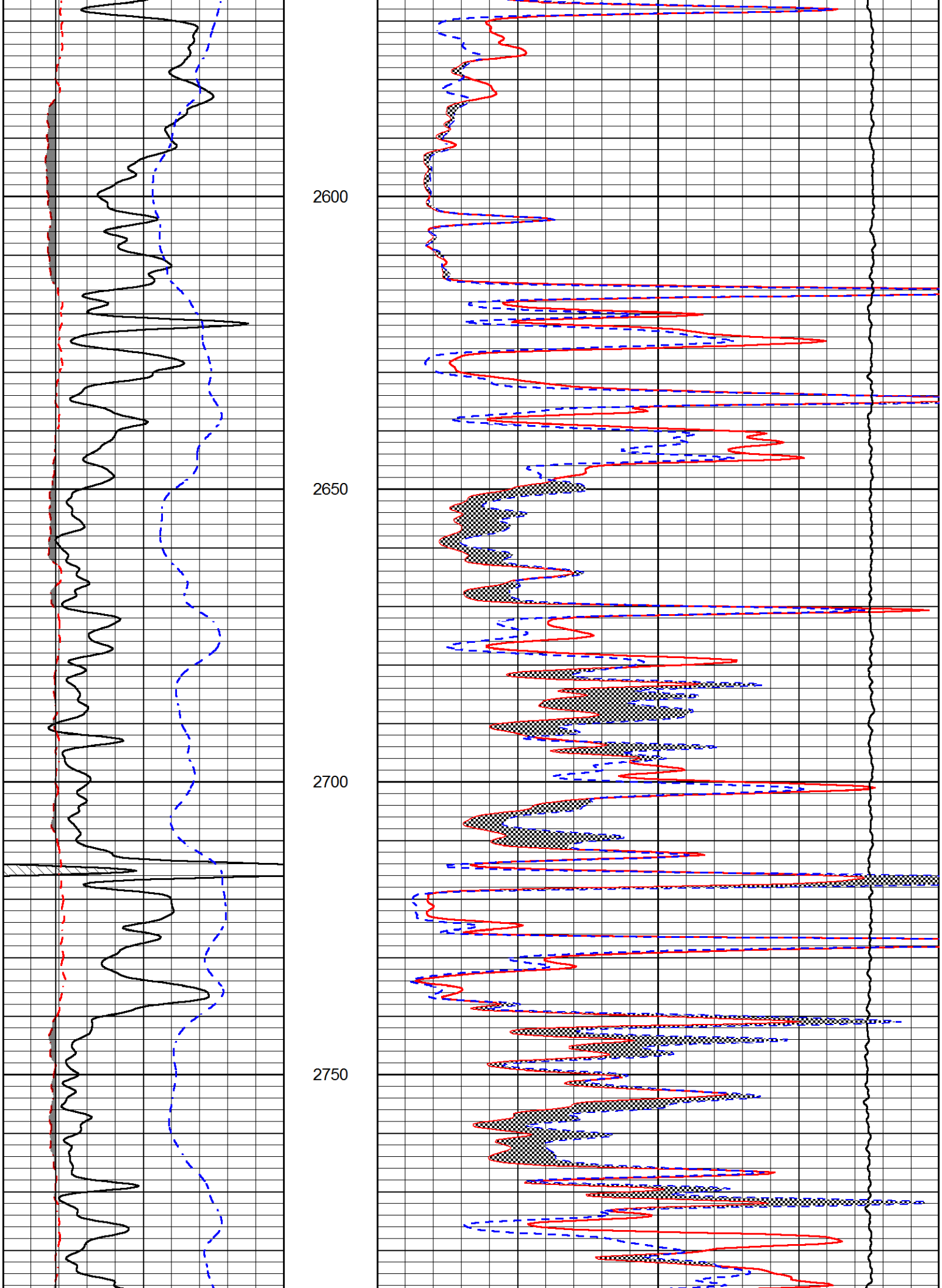
MAIN PASS

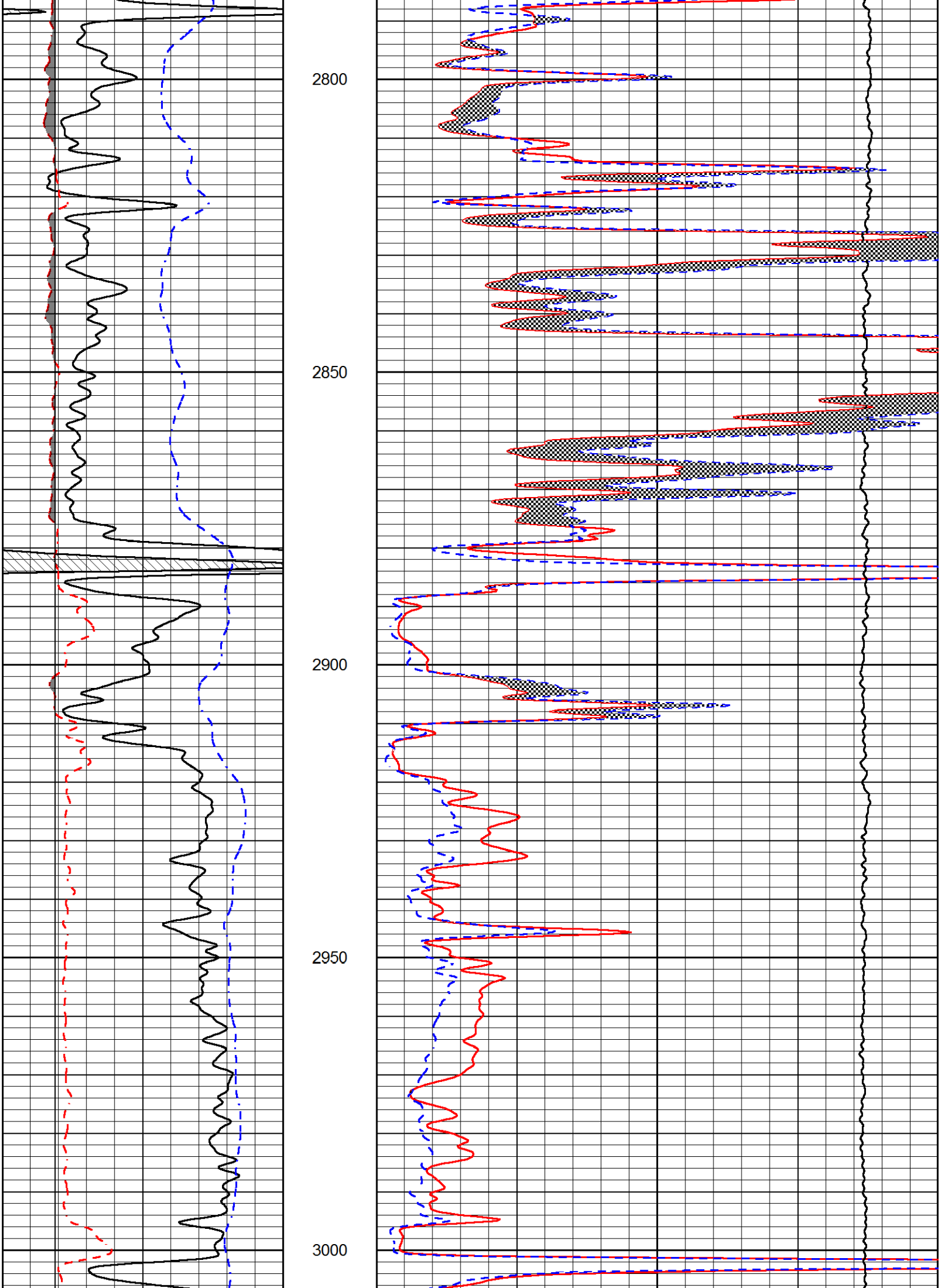
Database File	darrah_knop 1-5.db
Dataset Pathname	stkml/pass3.1
Presentation Format	_micro
Dataset Creation	Thu Aug 12 10:11:42 2021
Charted by	Depth in Feet scaled 1:240

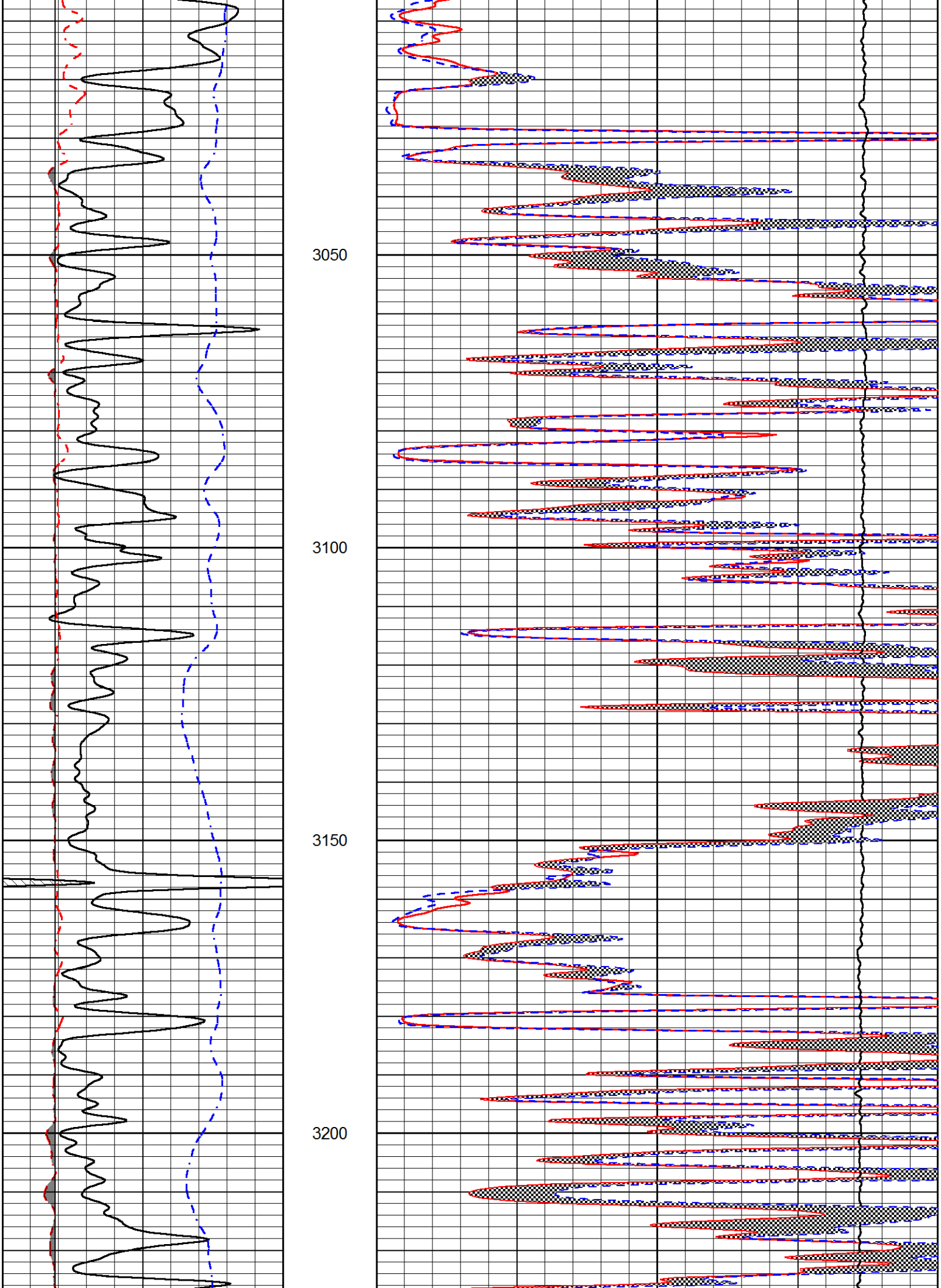
0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
6	Bit Size (in)	16
-200	sp (mV)	0

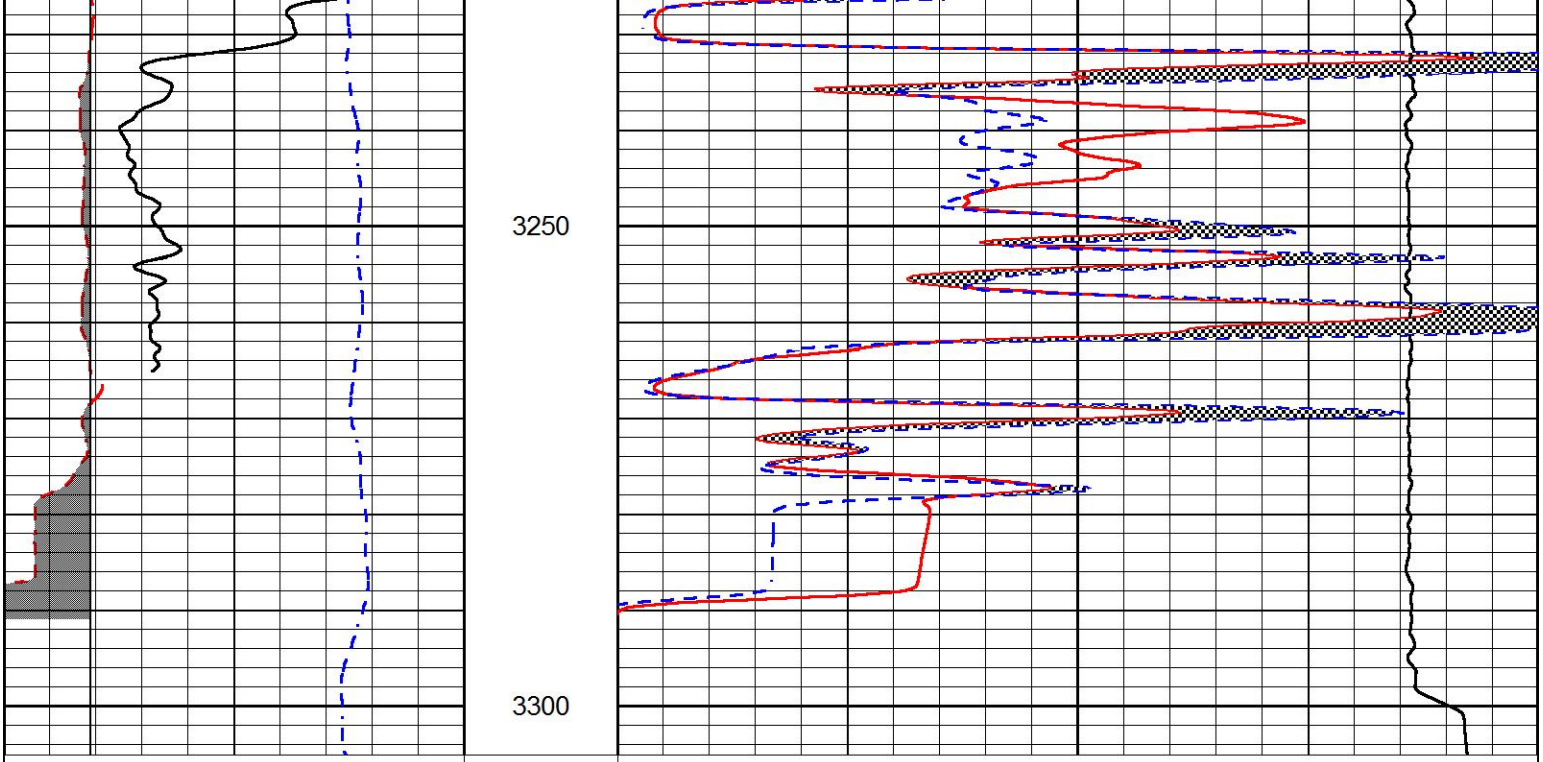
0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
10000	Line Weight (lb)	0




2600
2650
2700
2750


2800
2850
2900
2950
3000


3050
3100
3150
3200



0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
6	Bit Size (in)	16
-200	sp (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
10000	Line Weight (lb)	0

MIDWEST WIRELINE

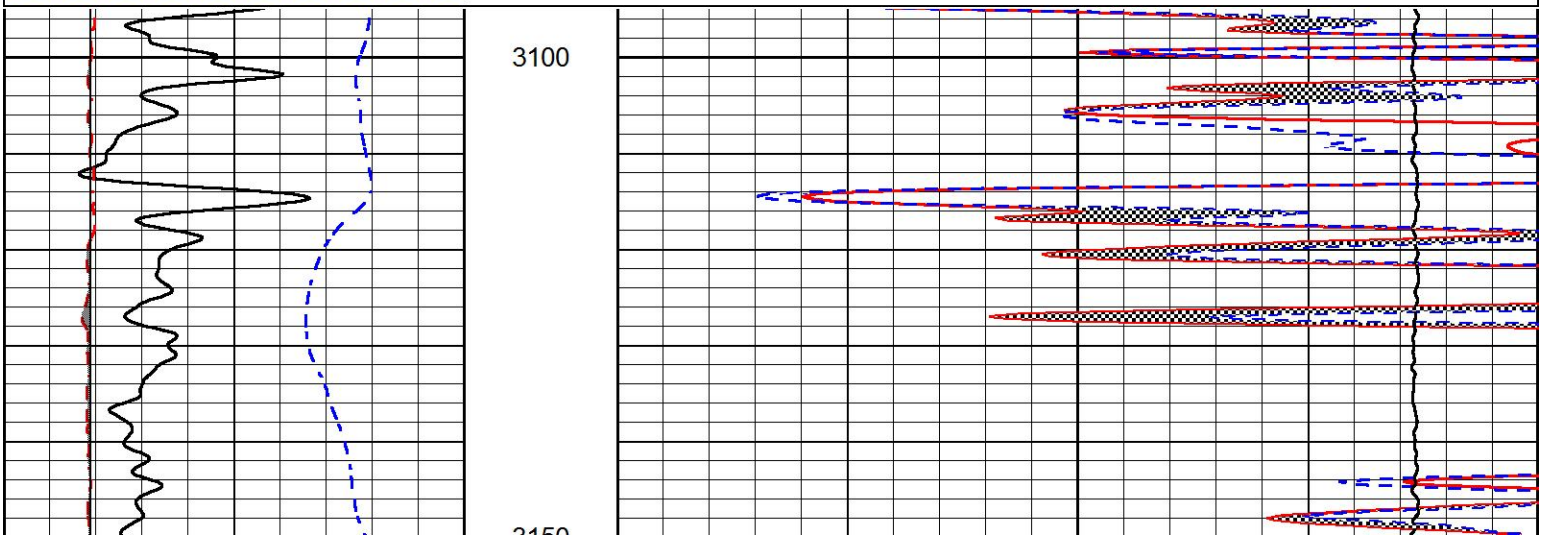
REPEAT SECTION

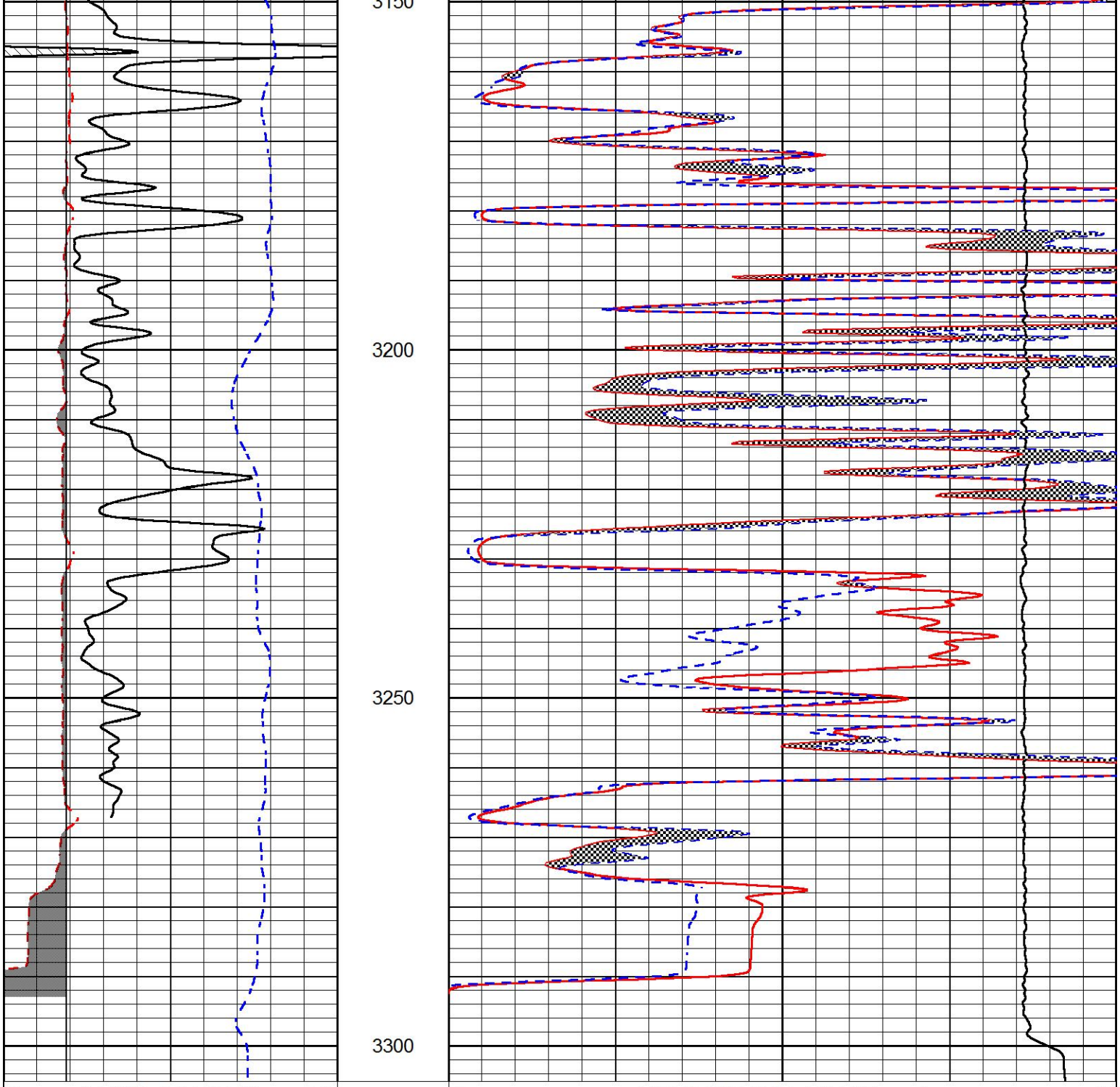
REPEAT PASS

Database File	darrah_knop 1-5.db
Dataset Pathname	stkml/pass2.1
Presentation Format	_micro
Dataset Creation	Thu Aug 12 10:15:21 2021
Charted by	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
6	Bit Size (in)	16
-200	sp (mV)	0

0	MICRO INVERSE 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
6	Bit Size (in)	16
-200	sp (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
10000	Line Weight (lb)	0

MIDWEST WIRELINE

Company	Darrah Oil Company LLC
Well	Knop #1-5
Field	Chase - Silica
County	Rice
State	Kansas