



MICRORESISTIVITY LOG

Company CHOLLA PRODUCTION, LLC
Well ZIMMERMAN #1-3
Field WILDCAT
County RUSH **State** KANSAS

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Well ZIMMERMAN #1-3
Field WILDCAT
County RUSH
State KANSAS

Location: API #: 15-165-22166-00-00
 735' FNL & 2065' FWL
 SEC 3 TWP 16S RGE 20W
Permanent Datum GROUND LEVEL Elevation 2166'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING
Other Services CNL/CDL MEL/BHCS
Elevation K.B. 2173'
D.F. N/A
G.L. 2166'

Date	10/4/2019
Run Number	TWO
Depth Driller	3900'
Depth Logger	3900'
Bottom Logged Interval	3899'
Top Log Interval	2900'
Casing Driller	8.625" @ 258'
Casing Logger	258'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	3900
Density / Viscosity	9.2 53
pH / Fluid Loss	10.0 8.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.75 @ 81
Rmt @ Meas. Temp	.56 @ 81
Rmc @ Meas. Temp	1.01 @ 81
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.53 @ 115
Operating Rig Time	4 HOURS
Max Rec. Temp. F	115 DEGF
Equipment Number	P-108
Location	HAYS
Recorded By	J. HENRICKSON
Witnessed By	CHARLIE STURDAVANT

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, 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.
 ELLIS, KANSAS
 SOUTH TO RUSH COUNTY LINE, 2 1/2 EAST, SOUTH INTO

Log Measured From: KELLY BUSHING 7 Ft. Above Permanent Datum

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


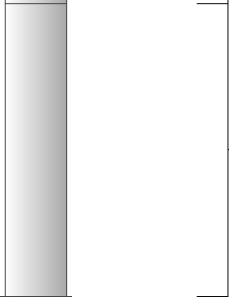
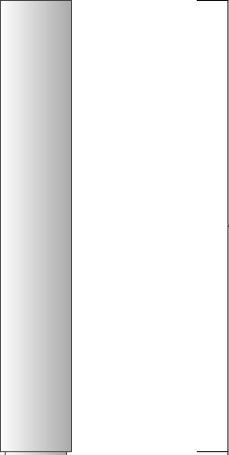

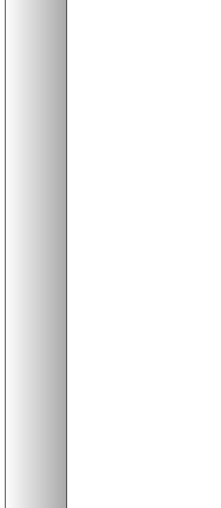
Your Pioneer Energy Services Crew Engineer: J. HENRICKSON Operator: Operator: Operator:	This Log Record Was Witnessed By Primary Witness: CHARLIE STURDAVANT Secondary Witness: Secondary Witness: Secondary Witness:
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\cholla_zimmerman_1_3.db
 Dataset field/well/stack/pass4.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	115	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	0	0	Off	3900

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	29.90 29.15		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	20.85 20.83 20.35		CDL-M&W (979-229)	8.50	4.00	250.00
RLL3 RLL3F	15.80 15.79		DIL-M&W (976)	18.50	3.50	220.00
CILD	8.00					

CILM 4.70

SP 0.20

Dataset: cholla_zimmerman_1_3.db: field/well/stack/pass4.1
 Total length: 35.50 ft
 Total weight: 620.00 lb
 O.D.: 4.00 in

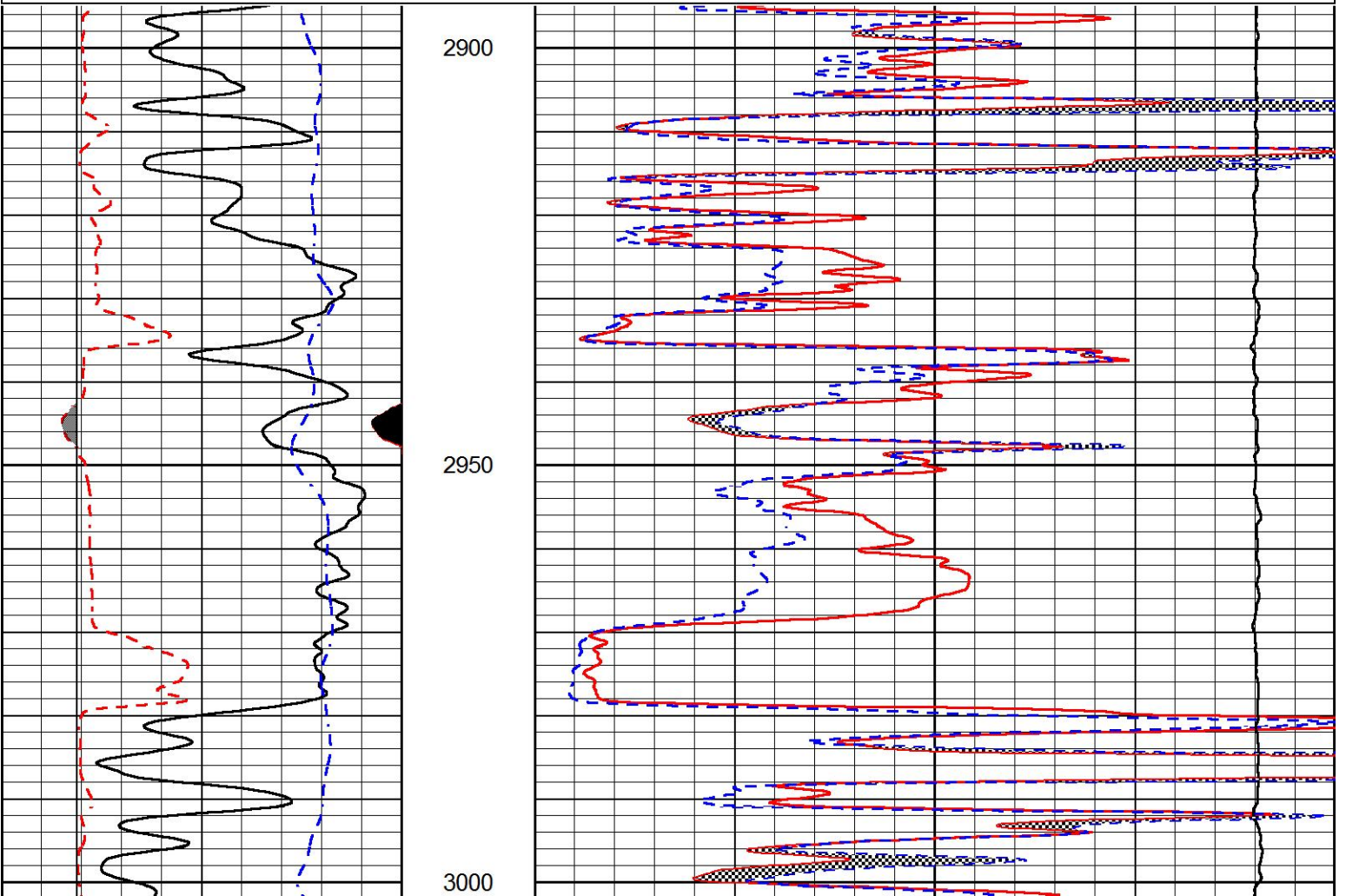


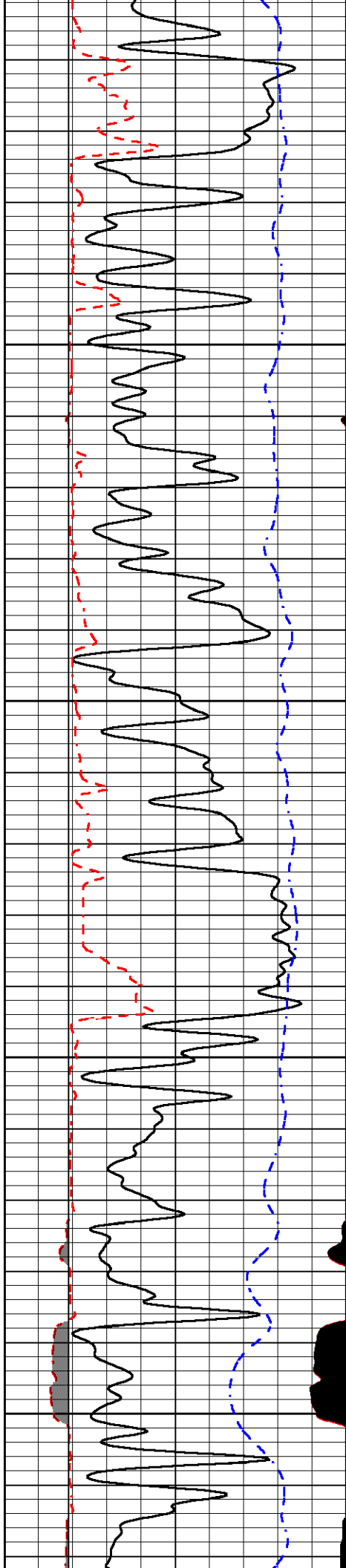
MAIN PASS

Database File cholla_zimmerman_1_3.db
 Dataset Pathname stack/pass4.1
 Presentation Format micro
 Dataset Creation Fri Oct 04 06:23:11 2019
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (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
15000	LINE TENSION (lb)	0



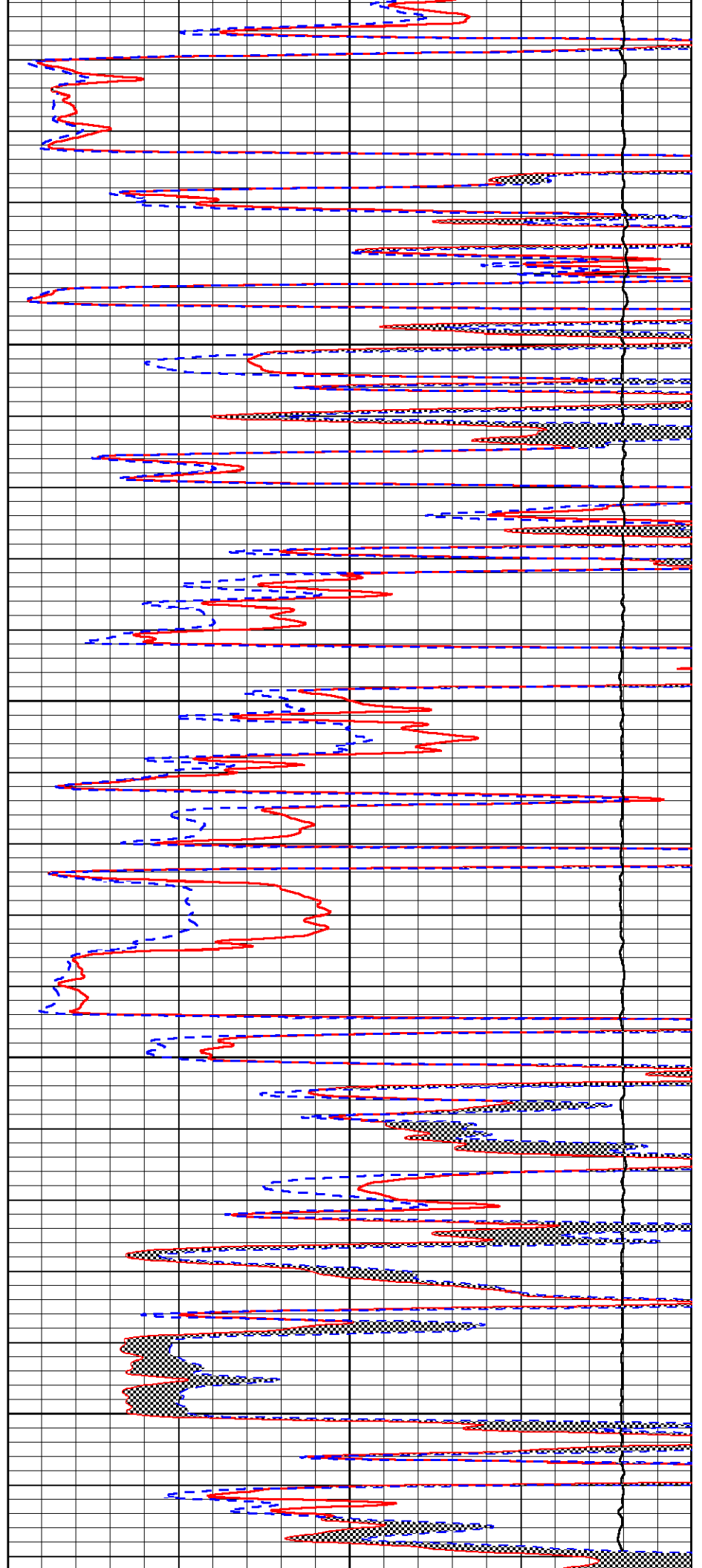


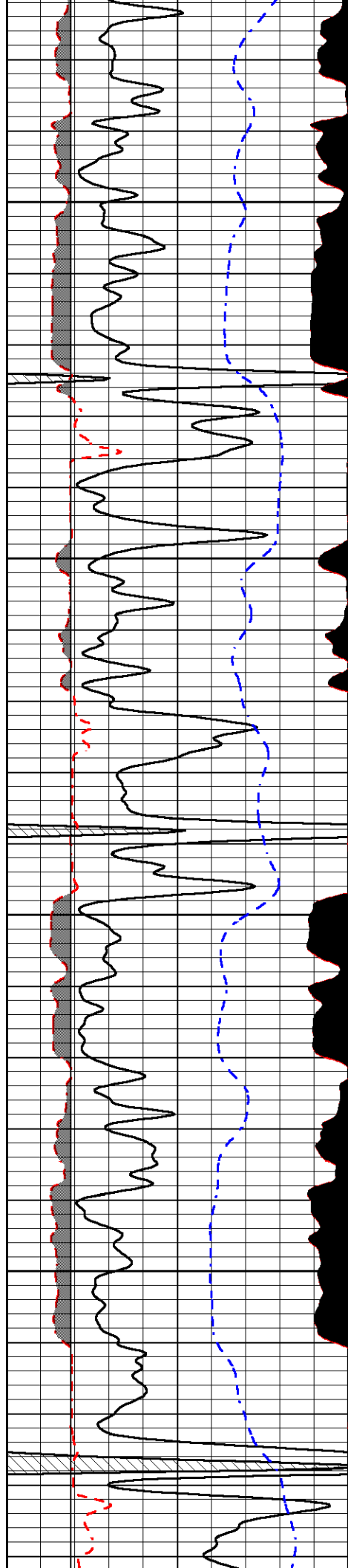
3050

3100

3150

3200



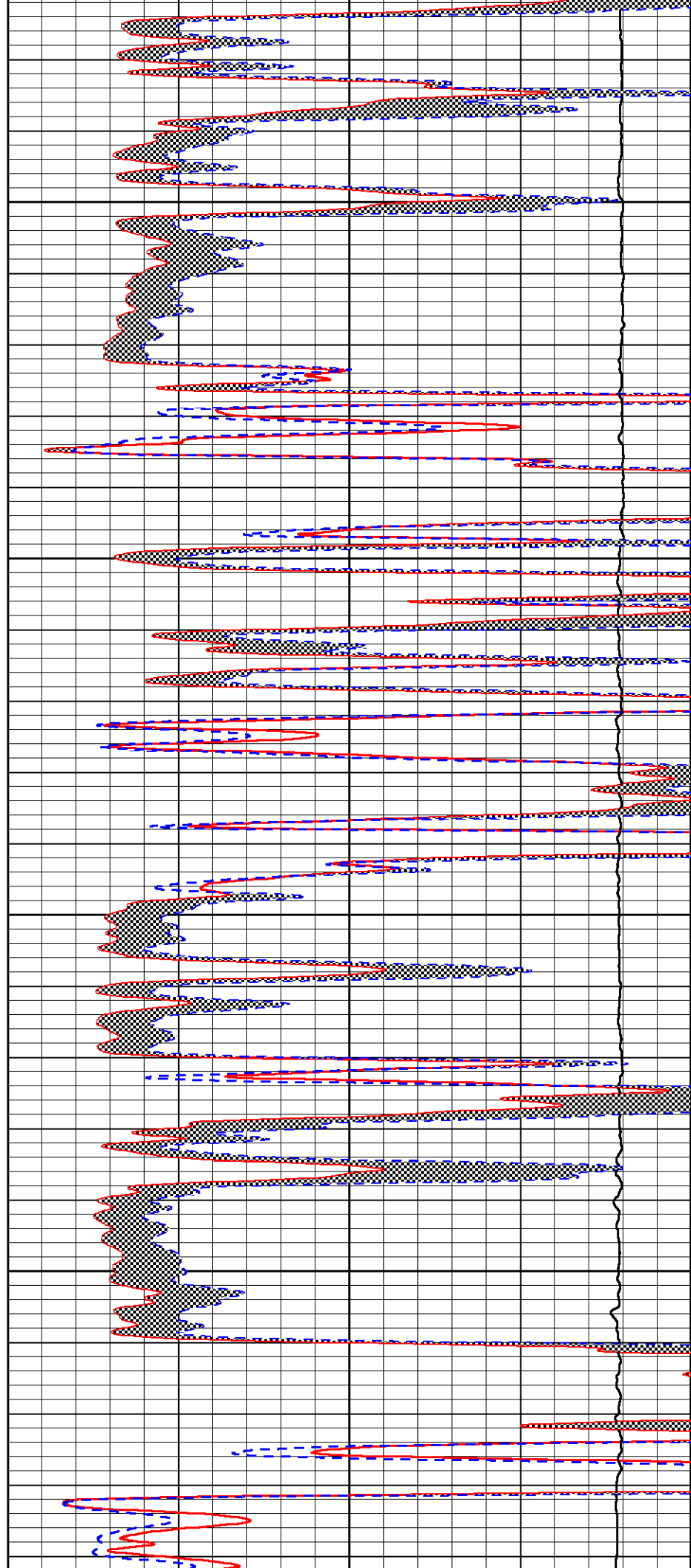


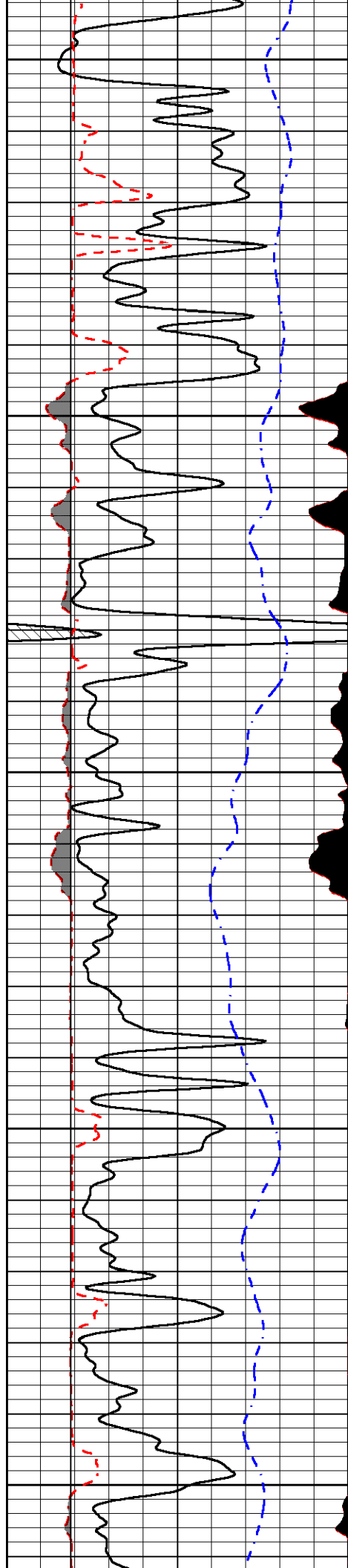
3250

3300

3350

3400





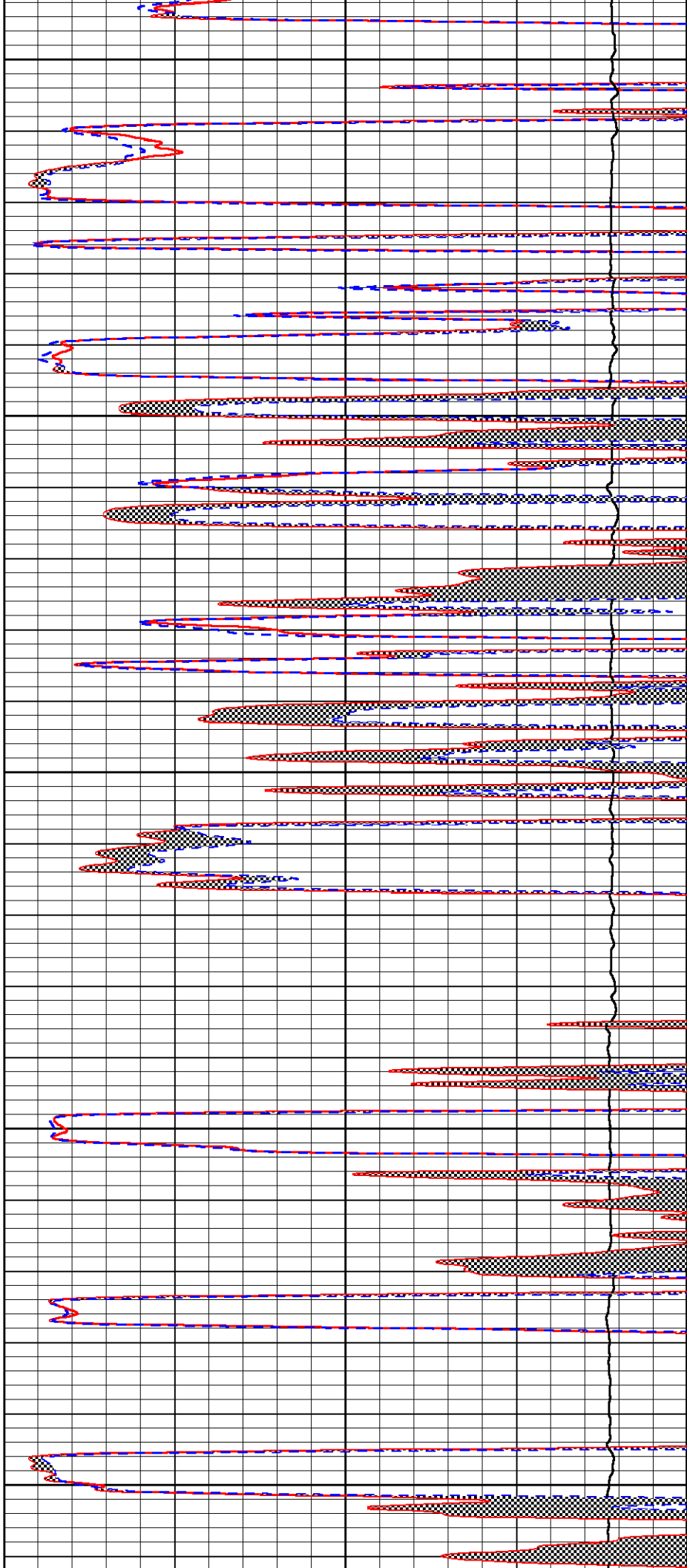
3450

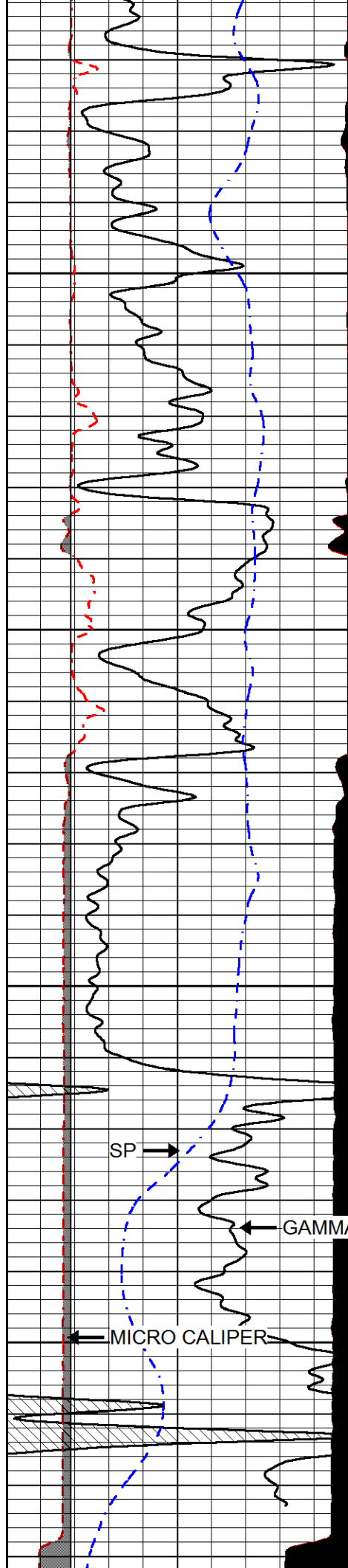
3500

3550

3600

3650





3700

3750

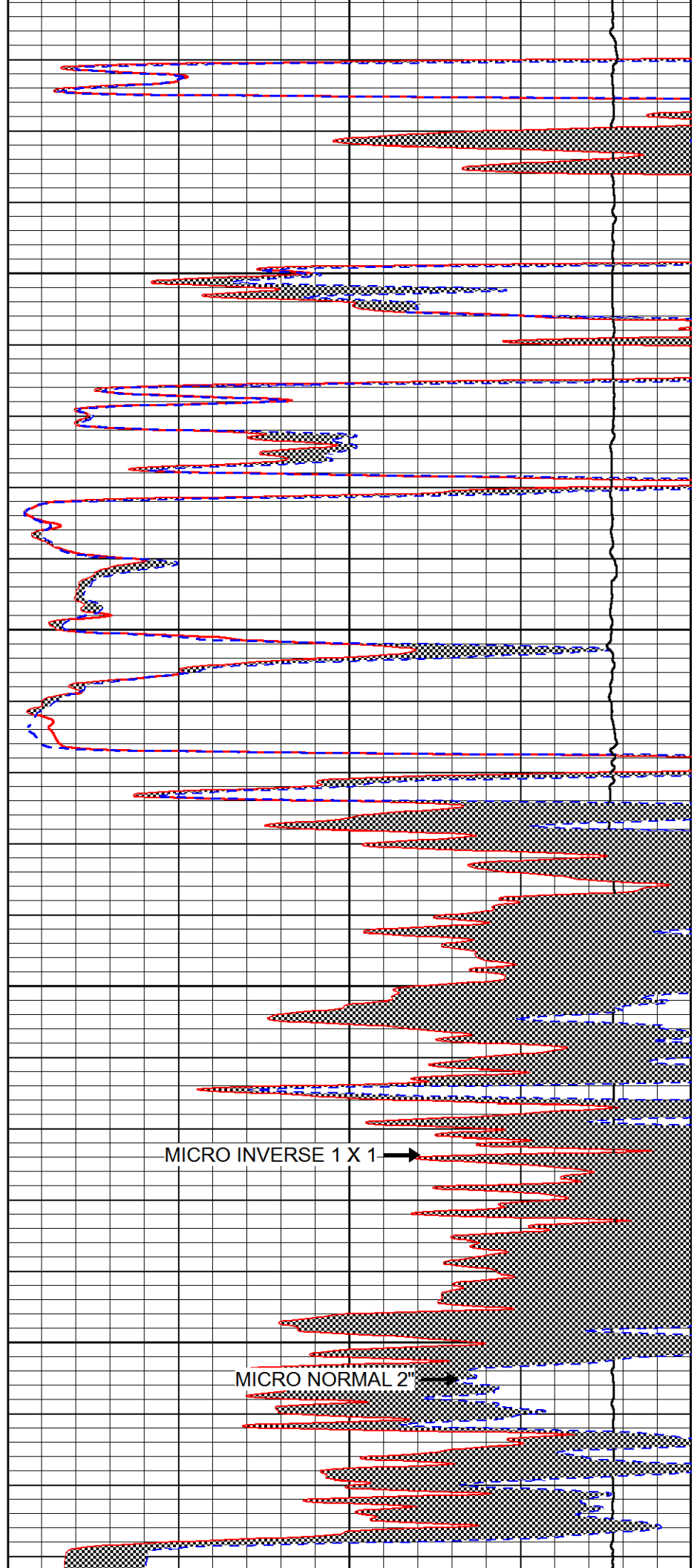
3800

3850

SP →

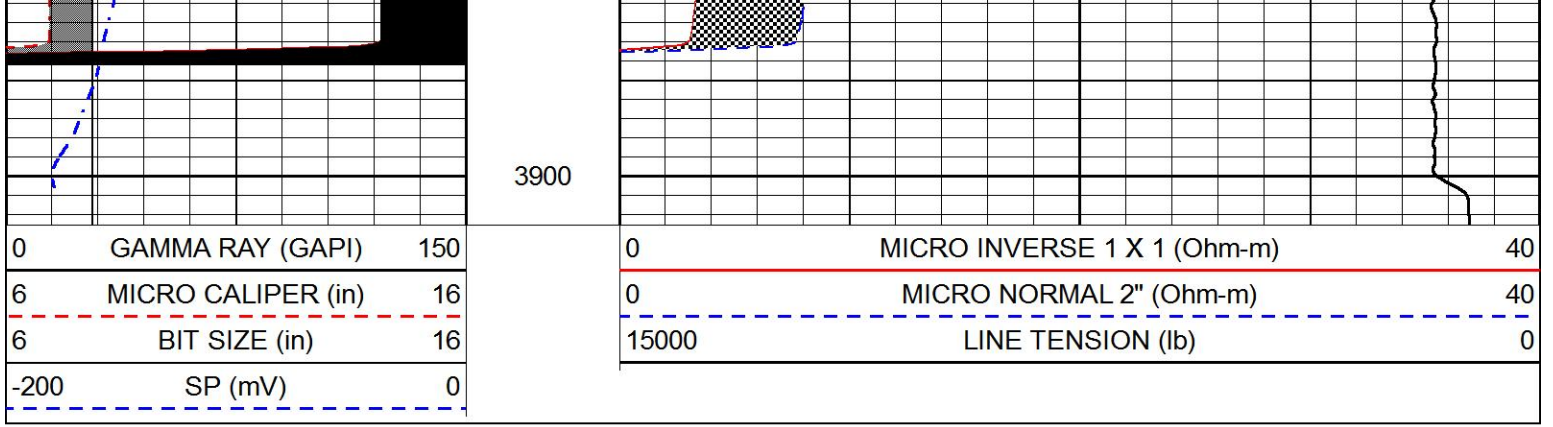
← GAMMA RAY

← MICRO CALIPER



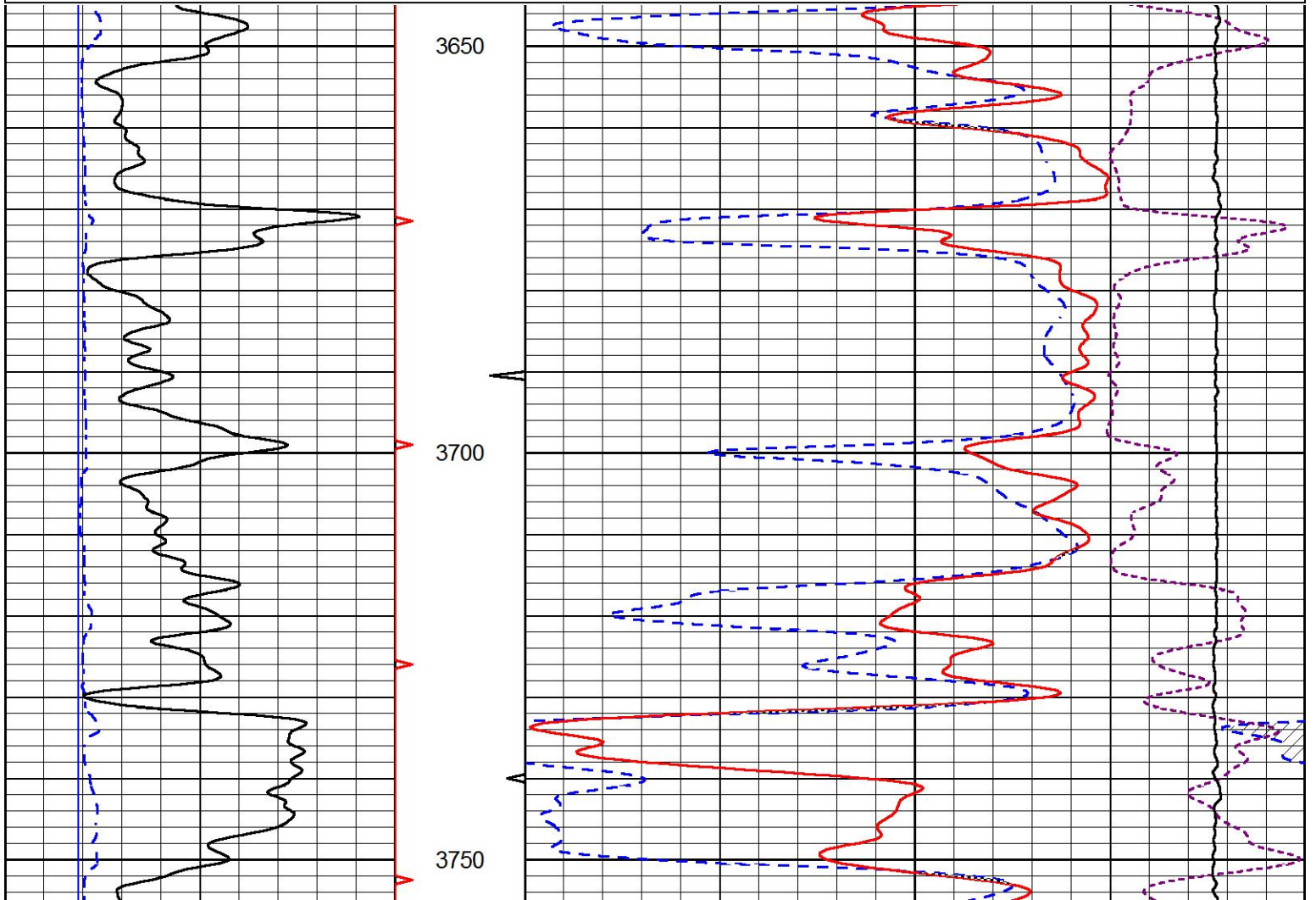
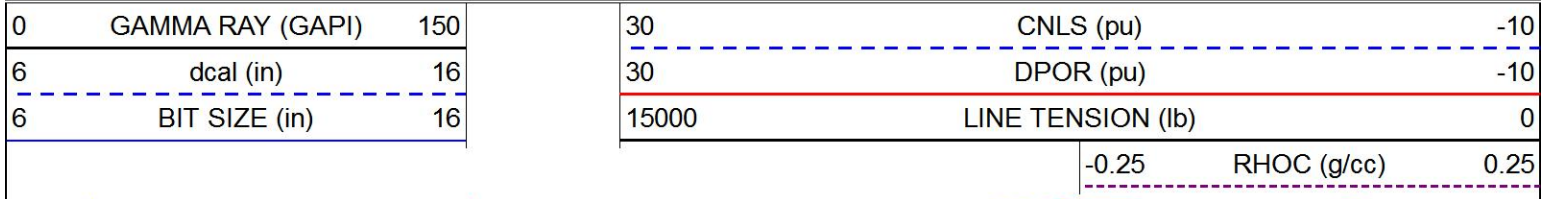
MICRO INVERSE 1 X 1 →

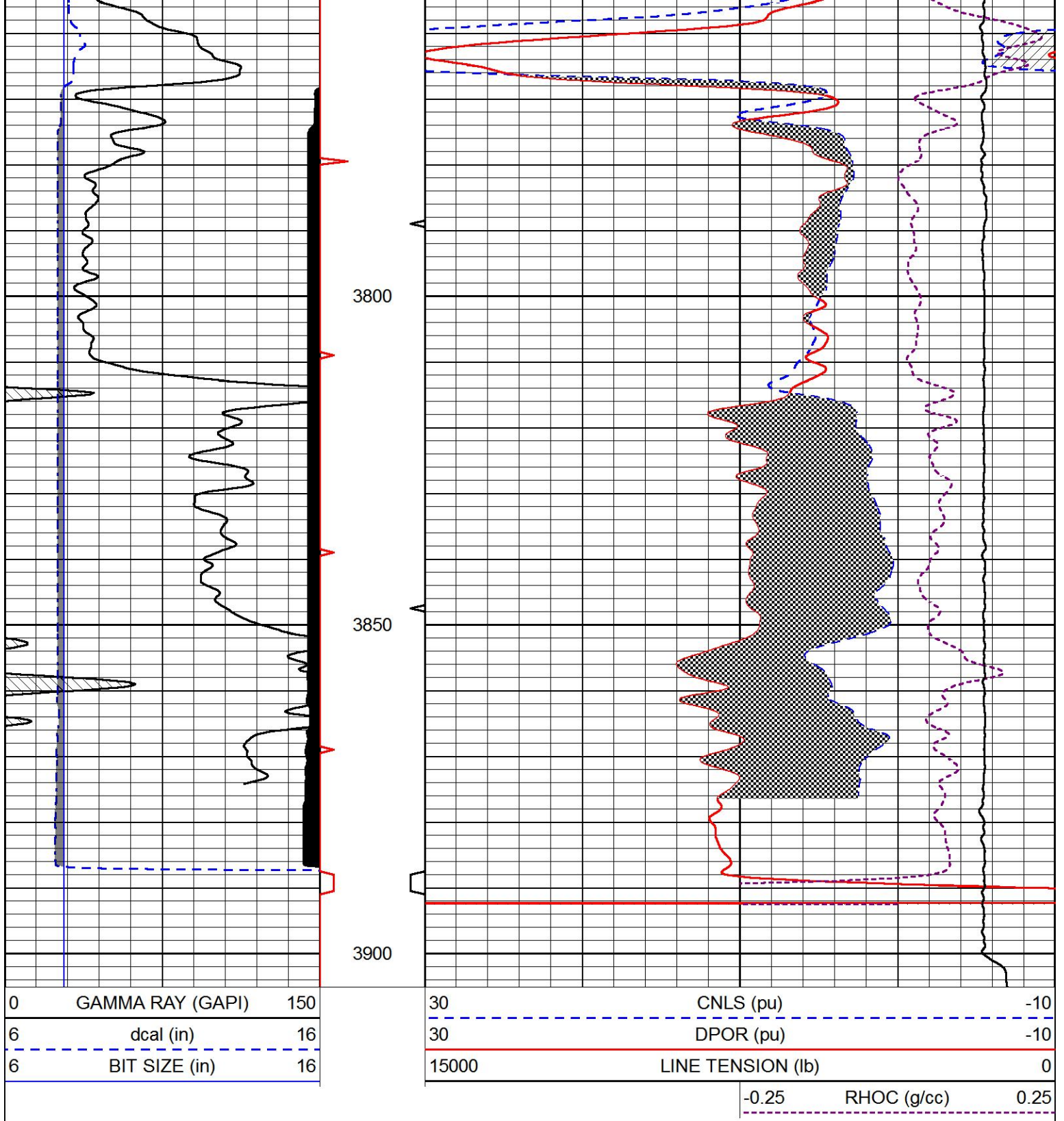
← MICRO NORMAL 2"



REPEAT SECTION

Database File cholla_zimmerman_1_3.db
 Dataset Pathname stack/pass2.1
 Presentation Format cndlspec
 Dataset Creation Fri Oct 04 05:37:31 2019
 Charted by Depth in Feet scaled 1:240





Company	CHOLLA PRODUCTION, LLC
Well	ZIMMERMAN #1-3
Field	WILDCAT
County	RUSH
State	KANSAS