



FILE NO:
US090179J
API NO:
05017077610000

COMPANY
WELL
FIELD
COUNTY

PRONGHORN OPERATING LLC
EVAN #1
SPUR
CHEYENNE

STATE
COLORADO

Ver. 3.87

LOCATION:

1980' FNL 1896' FEL
LAT 38.88446 LON -102.35200

SEC 7 TWP 13S RGE 44W

OTHER SERVICES
NONE

PERMANENT DATUM
LOG MEASURED FROM
DRILL. MEAS. FROM

ELEVATIONS:
KB 4295 FT
DF
GL 4284 FT

DATE	02-SEP-2014	03-SEP-2014
RUN	1	2
SERVICE ORDER	US090179J	
DEPTH DRILLER	5495 FT	
DEPTH LOGGER	5496 FT	
BOTTOM LOGGED INTERVAL	5488 FT	
TOP LOGGED INTERVAL	5250 FT	
CASING DRILLER	5.5 IN @ 5379 FT	
CASING LOGGER	5374 FT	
BIT SIZE	7.875 IN	
TYPE OF FLUID IN HOLE	OIL/WATER	
DENSITY	NA	NA
PH	NA	NA
SOURCE OF SAMPLE	NA	
RM AT MEAS. TEMP.	NA @ NA	
RMF AT MEAS. TEMP.	NA @ NA	
RMC AT MEAS. TEMP.	NA @ NA	
SOURCE OF RMF	NA	
RM AT BHT	0.644 OHMM @ 171.5 DEGF	
TIME SINCE CIRCULATION	4 DAYS	
MAX. RECORDED TEMP.	171.5 DEGF	
EQUIP. NO.	6685	
RECORDED BY	W. QUIGLEY	
WITNESSED BY	MR. FRANK RABBIO	

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE THE CUSTOMER THE BENEFIT OF THEIR BEST JUDGEMENT. BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

BOREHOLE RECORD

BIT SIZE	FROM	TO
7.875 IN	0 FT	5496 FT

CASING RECORD

SIZE	WEIGHT	GRADE	FROM	TO
5.5 IN	15 LB/F	J-55	0 FT	5376 FT

REMARKS

RUN 1 TRIP 1: ABC TO CALCULATE MUD CONDUCTIVITY

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES
CREW: HOLLAR/COATE/QUIGLEY

DEPTH CORRELATED TO PEAK WIRELINE CBL RECORDED 8-4-14
TOOLSTRING RUN COMPLETELY SLICK DUE TO 5.5" CASING RESTRICTION

RUN 1 TRIP 2: ZDL CN RAN IN COMBINATION

CALIPER VERIFIED IN CASING

RHO MATRIX RECORDED IN 2.71 G/CC. 2.85 ALSO PRESENTED

RHO FLUID: 1.00 G/CC

CN MATRIX: LIMESTONE/DOLOMITE
CN RAN WITHOUT BOWSPRING DUE TO CASING RESTRICTION
CASING CORRECTION TURNED ON FOR CN IN CASING

THANK YOU FOR CHOOSING BAKER HUGHES WIRELINE SERVICES
CREW: HOLLAR/COATE/QUIGLEY

DEPTH CORRELATED TO PEAK WIRELINE CBL RECORDED 8-4-14

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	SWIVEL	3950XA	10102176	FREE
1	1	TTMA	3980XA	10120299	FREE
1	1	TEL/GR	3518EB/EG	10126400/10139870	FREE
1	1	HDIL	1530XA	10118612	FREE
1	2	SWIVEL	3950XA	10102176	FREE
1	2	TTMA	3980XA	10120299	FREE
1	2	TEL/GR	3518EB/3518EG	10126400/10139870	FREE
1	2	CN	2436XA	10137930	FREE
1	2	ZDL	2223XA	10123024	FREE

COMBINED LOG - LIMESTONE MATRIX

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1 Patches: 2

Plotted: Wed Sep 3 02:16:09 2014

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/90179J/n970a05.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5244.250 ft BOTTOM DEPTH: 5500.543 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR LOW RES	FILTER (.i)	medium (1)		TOP	BOTTOM
GR MED RES	FILTER ()	medium (1)		"	"
GR HIGH RES	FILTER (.h)	light		"	"
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
CN MED RES	FILTER ()	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	0.000	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
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ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON	TOP	BOTTOM
CN PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
CN MATRIX	2436 MATRIX	LIMESTONE		TOP BOTTOM
CN BOREHOLE CORRECTION	SALINITY	0	ppm	" "
	BOREHOLE CORRECTION	ON		" "
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		" "
	STANDOFF AMOUNT	0.00	in	" "
CN CASING & CEMENT CORRECTION	CORRECTION	ON		TOP
		OFF		5316.287
	BIT SIZE BEHIND CSNG	7.875	in	TOP BOTTOM
ZDL PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
DENSITY POROSITY	Air Filled Borehole	NO		TOP BOTTOM
	RHOmatrix	2.710	g/cm3	" "
	RHOfluid	1.000	g/cm3	" "

PARAMETER AND FILTER SUMMARY REPORT				
FILE: /dat1a/90179J/n970a03.prm LOGGING MODE: DEPTH DIRECTION: UP TOP DEPTH: 5239.250 ft BOTTOM DEPTH: 5501.456 ft				
SYMMETRIC FILTER				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
GR LOW RES	FILTER (.i)	medium (1)		TOP BOTTOM
GR MED RES	FILTER ()	medium (1)		" "
GR HIGH RES	FILTER (.h)	light		" "
CALIPER	FILTER ()	medium (1)		" "
TENSION	FILTER ()	medium (1)		" "
SP-SPDH	FILTER ()	medium (1)		" "
BOREHOLE & CEMENT				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
BIT SIZE	BIT SIZE	7.875	in	TOP BOTTOM
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE FIXED SIZE		" "
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	7.875	in	" "
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		" "
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	" "
	MUD SAMPLE RES	1.000	ohm.m	" "
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	" "
	at BH REF DEPTH	0.0	ft	" "
	with TEMP GRADIENT	1.200	0.01 degF/ft	" "
ACCELERATION PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON	TOP	BOTTOM
HDIL PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		" "
	ABC to CALCULATE	MUD CONDUCTIVITY		" "
	STANDOFF	1.50	in	" "
	TOOL POSITION	ECCENTERED		" "
	Rmud MULTIPLIER	1.000		" "

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Sep 3 00:48:01 2014	BIT SIZE

F1:CAL	Sep 3 00:48:01 2014	CALIPER
F1:CNC	Sep 3 00:48:01 2014	BOREHOLE SIZE CORRECTED COMPENSATED NEUTRON POROSITY
F1:GR	Sep 3 00:48:01 2014	GAMMA RAY
F2:M2R1	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F2:M2R2	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F2:M2R3	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F2:M2R6	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F2:M2R9	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Sep 3 00:48:01 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Sep 3 00:48:01 2014	POROSITY FOR SELECTABLE MATRIX
F1:TEN	Sep 3 00:48:01 2014	DIFFERENTIAL TENSION
F1:ZCOR	Sep 3 00:48:01 2014	DENSITY CORRECTION
F1:ZDEN	Sep 3 00:48:01 2014	FORMATION BULK DENSITY

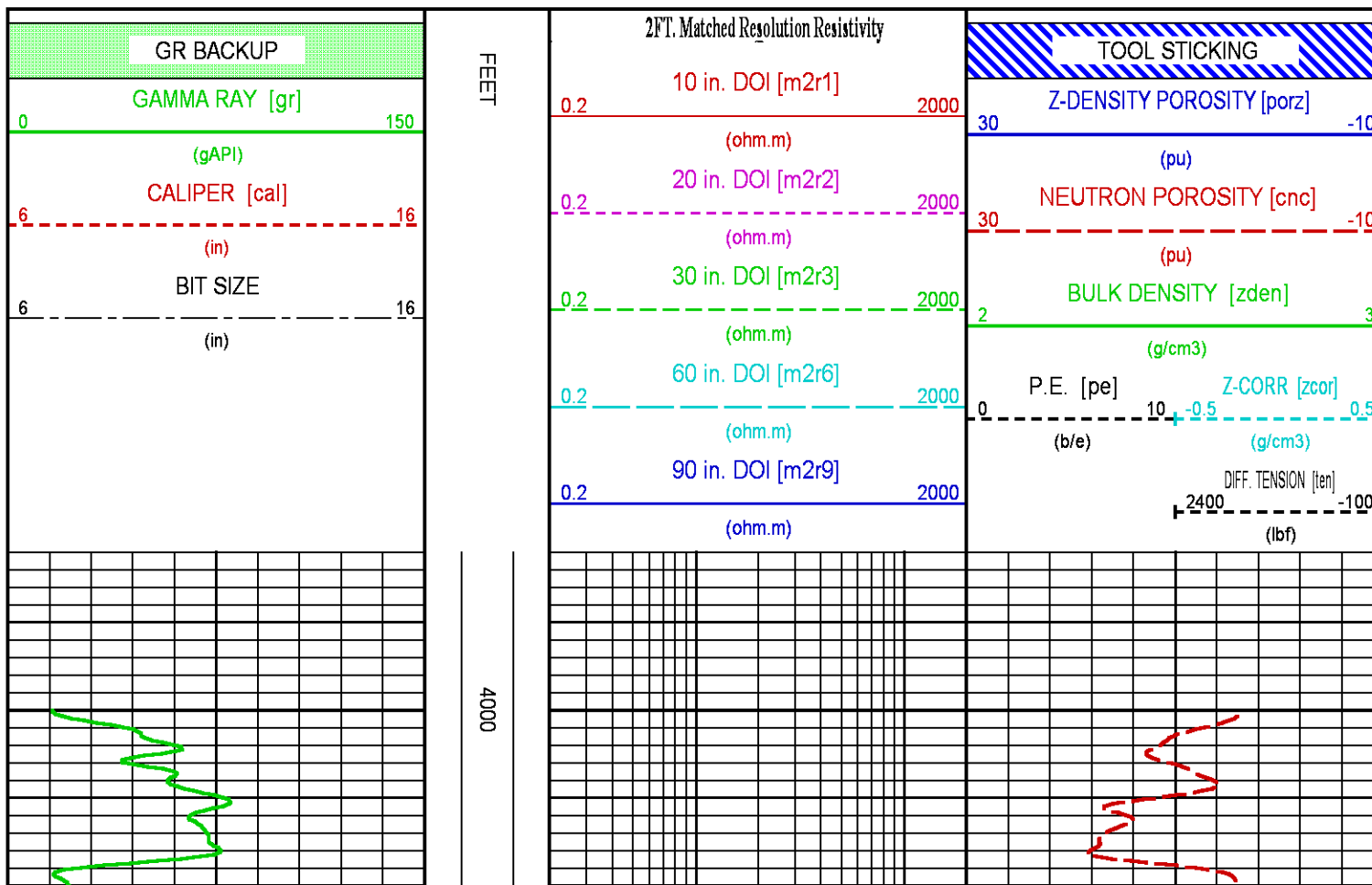
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	M2R1	2.75	M2R9	2.75	ZCOR	1.75
CAL	1.75	M2R2	2.75	PE	1.75	ZDEN	1.75
CNC	11.00	M2R3	2.75	PORZ	1.75		
GR	18.62	M2R6	2.75	TEN	0.00		

Presentation : cas6685:/dat1a/90179J/hdil2slam_LIME.fvpdf [5"/100' Scale]
Plot Interval : 3983.75 - 5516 Feet

Data File 1 : F1 : cas6685:/dat1a/90179J/n970a05_ZDLCN.xtf
Created On : Sep 3 01:38:22 2014
Company : PRONGHORN OPERATING LLC
Well : EVAN #1
Field : SPUR
File Interval : 3983.75 - 5516 Feet
OCT : n970a

Data File 2 : F2 : cas6685:/dat1a/90179J/n970a03_HDIL.xtf
Created On : Sep 2 23:06:33 2014
Company : PRONGHORN OPERATING LLC
Well : EVAN #1
Field : SPUR
File Interval : 5228.75 - 5513.5 Feet
OCT : n970a

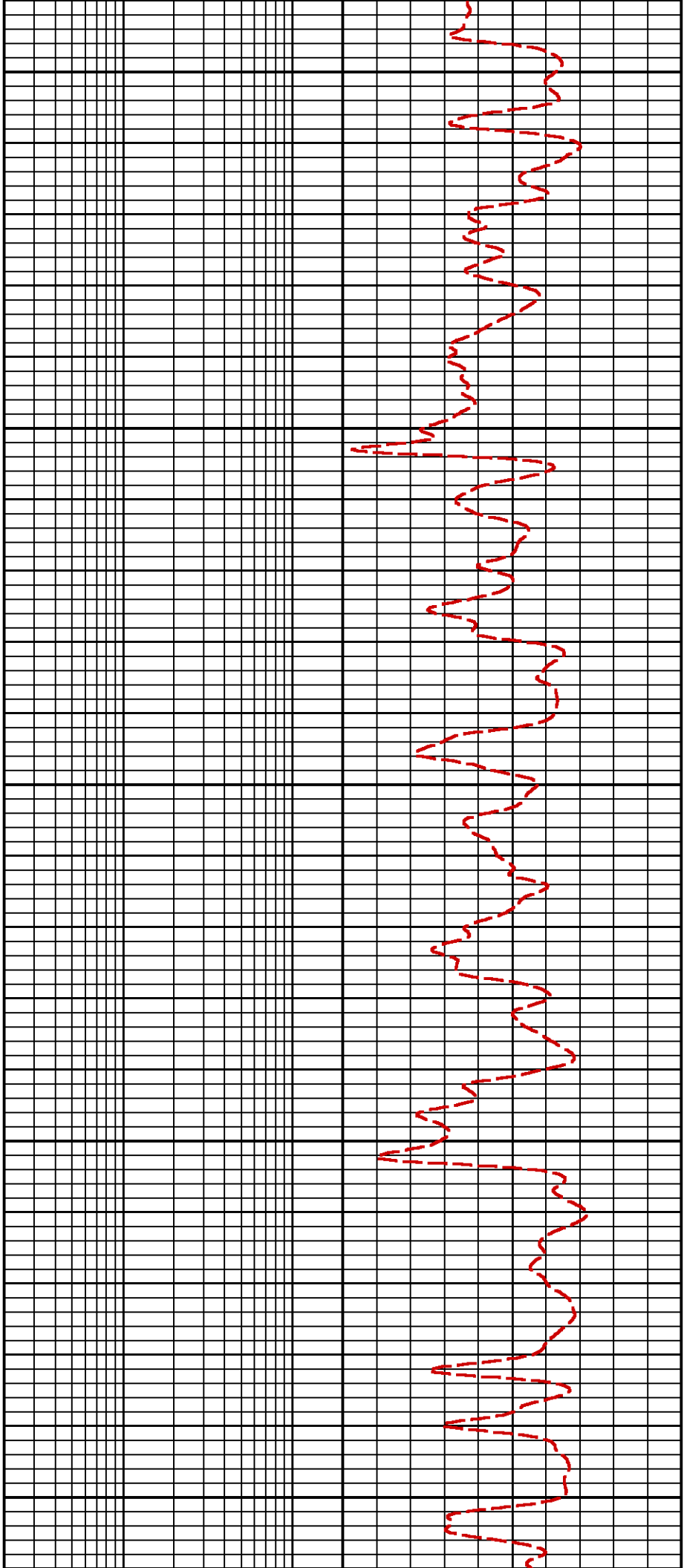


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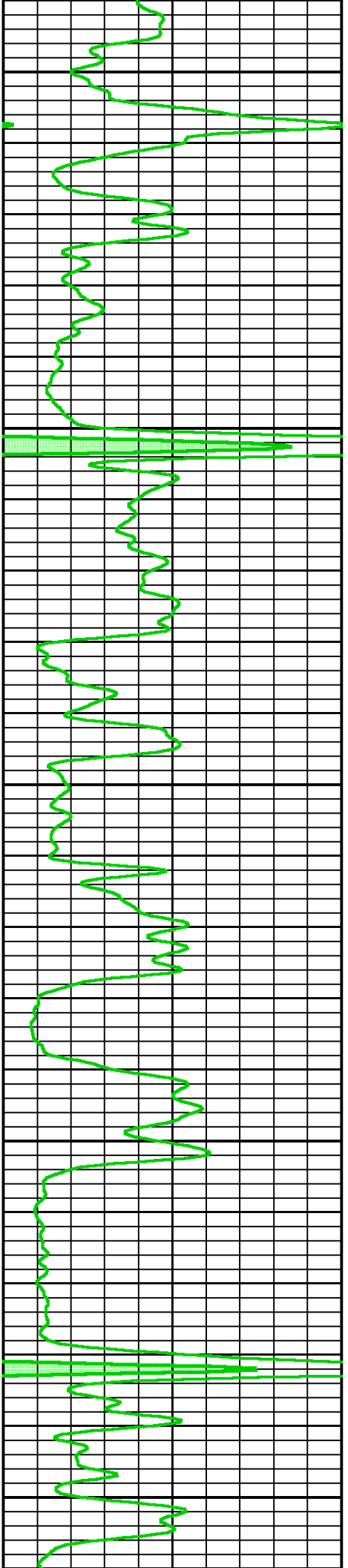
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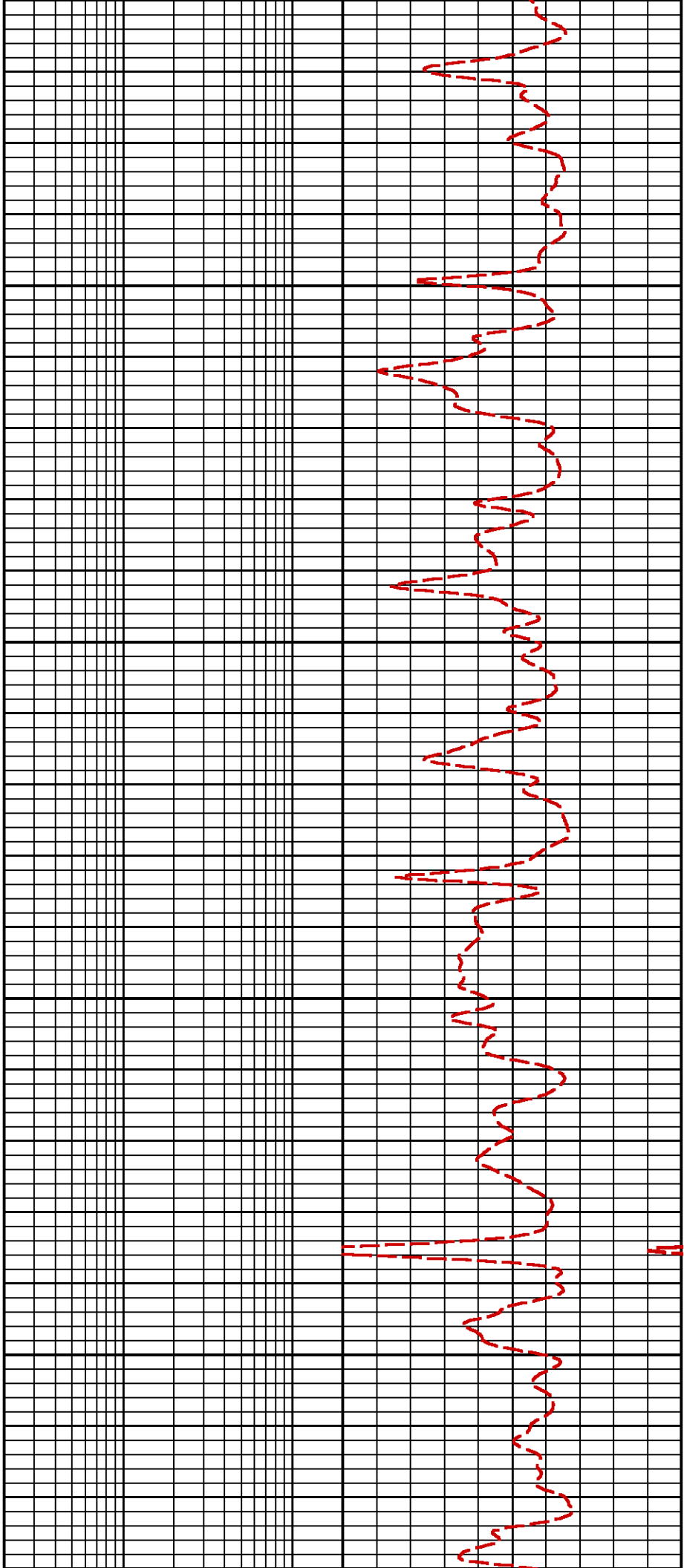
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4300

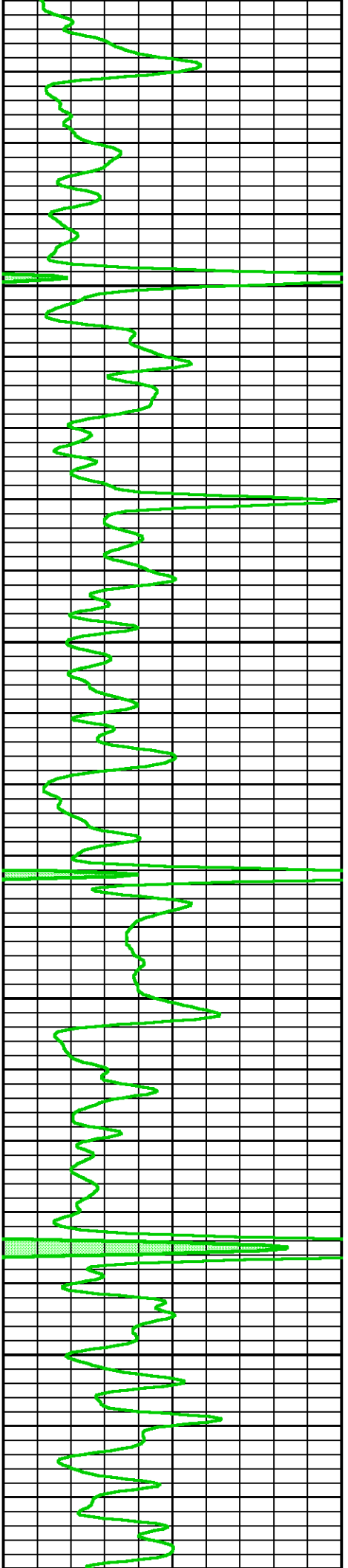
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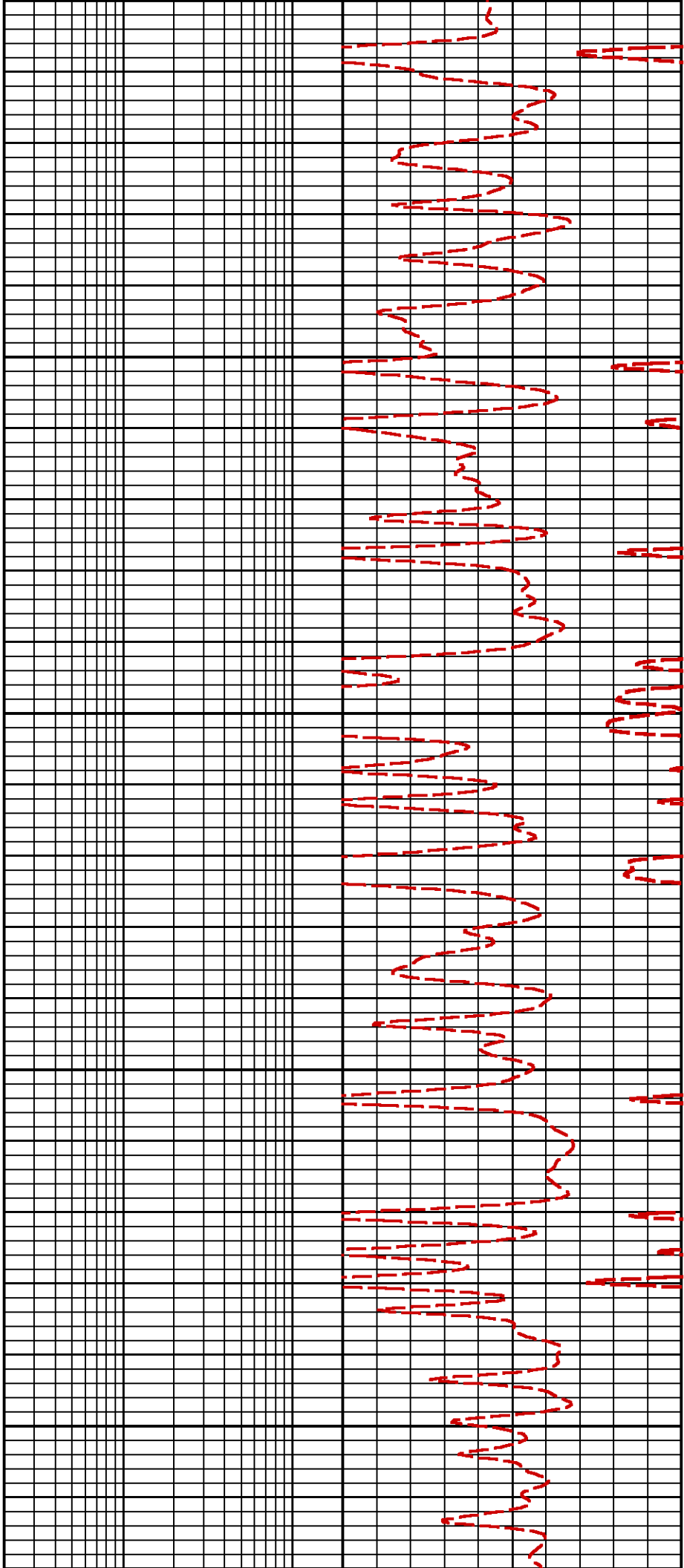




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4600

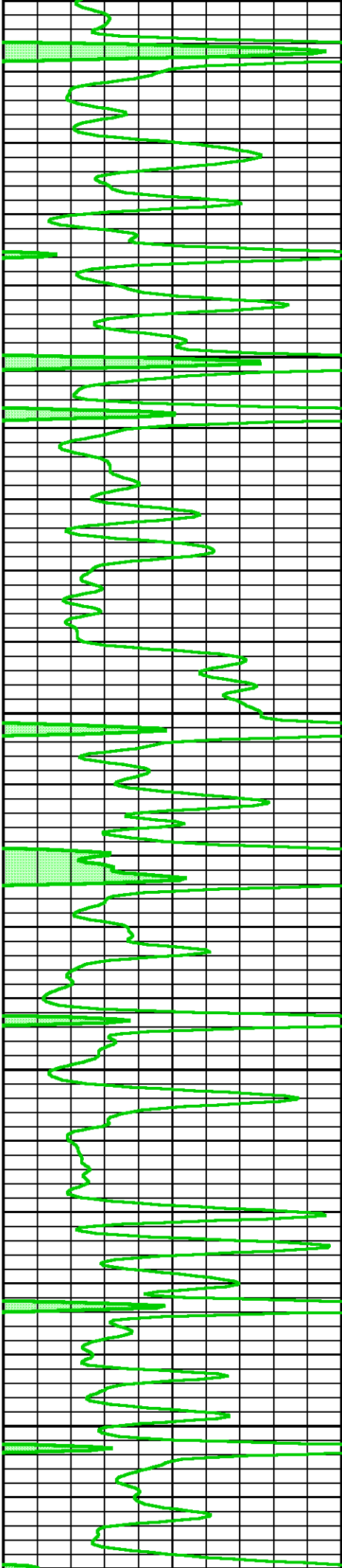


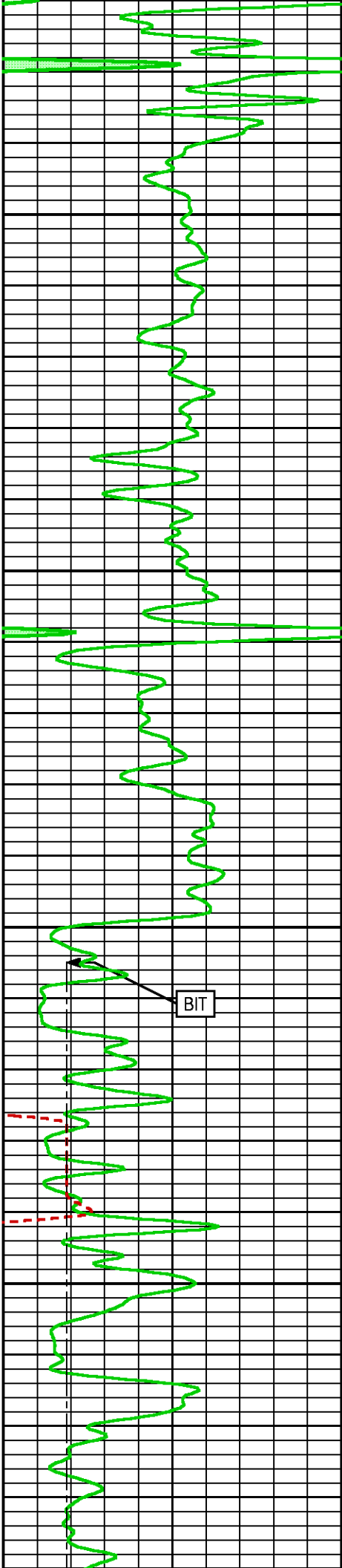


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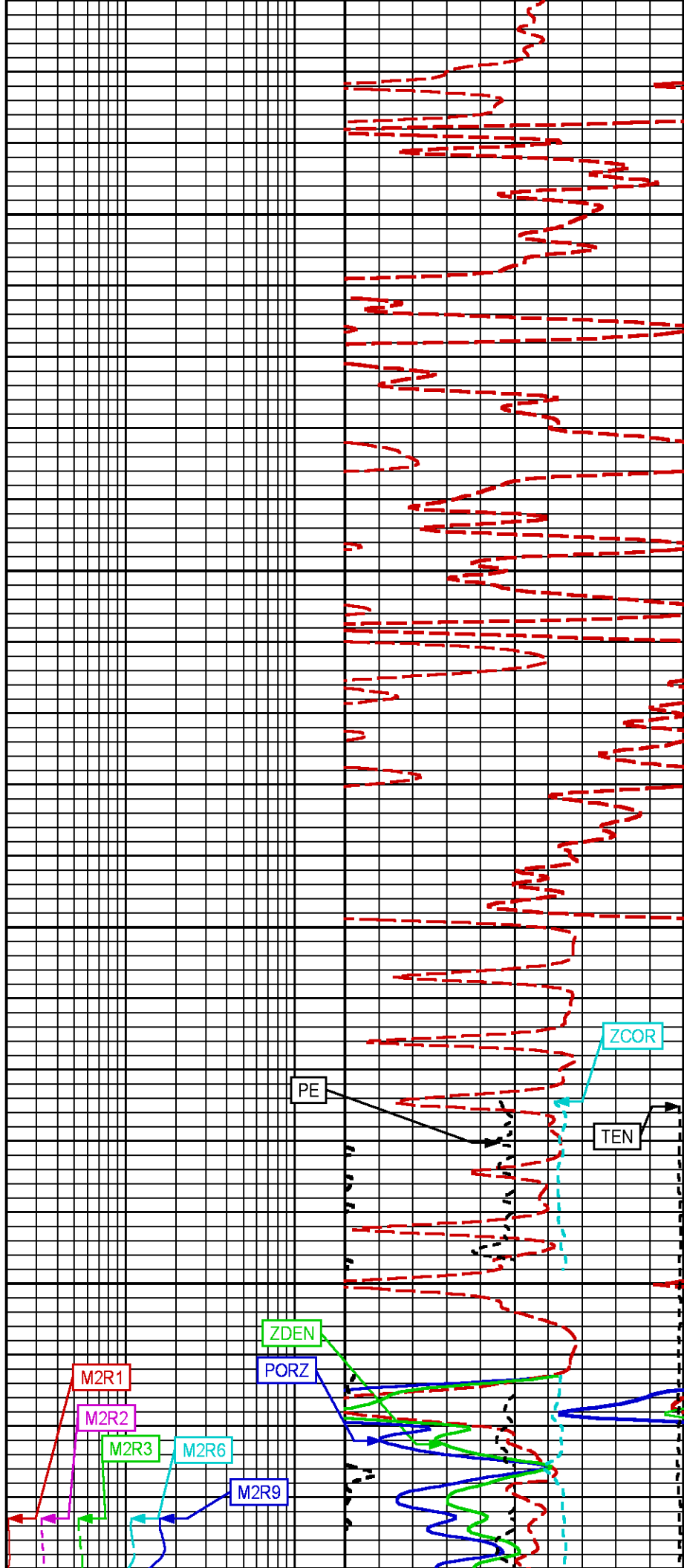
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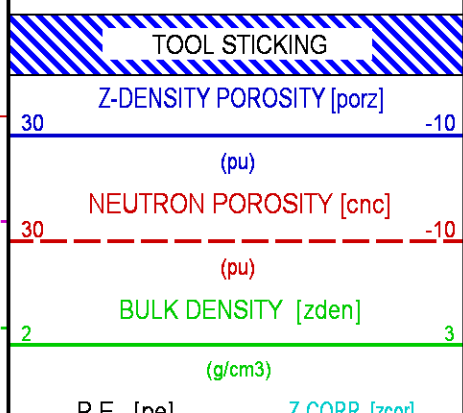
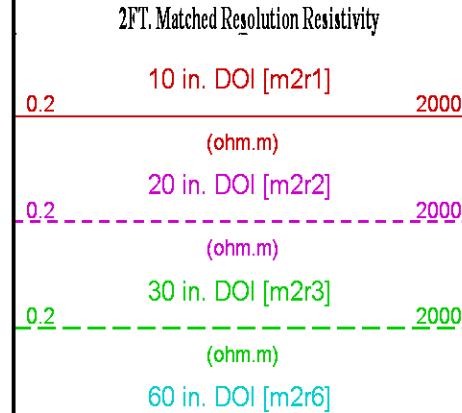
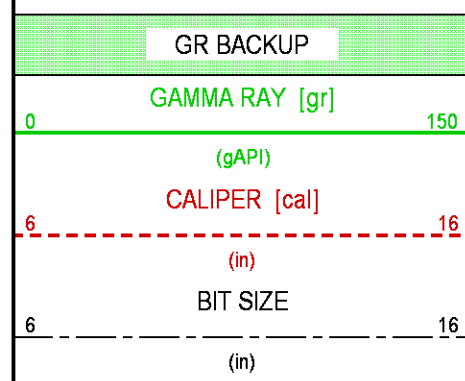
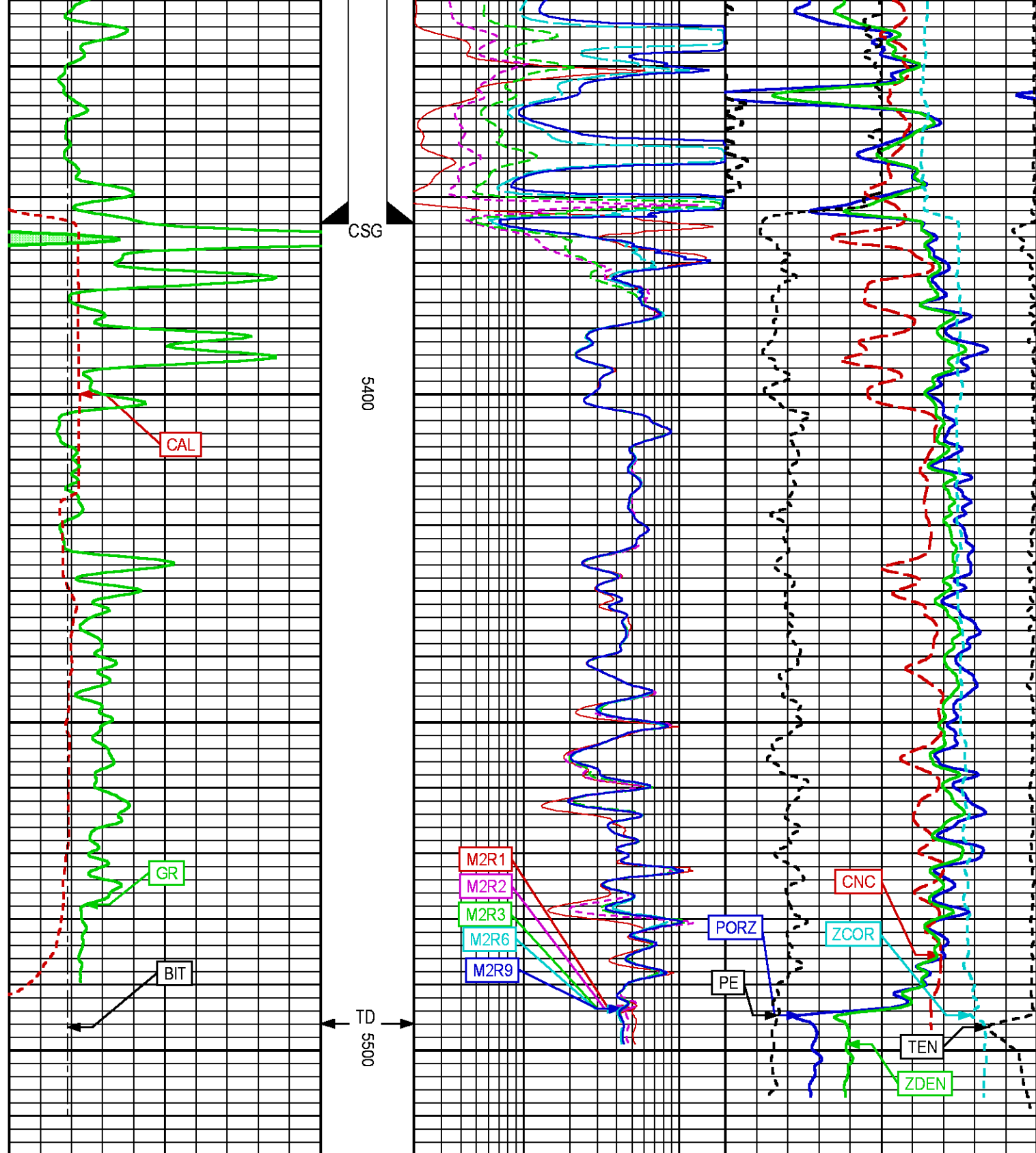


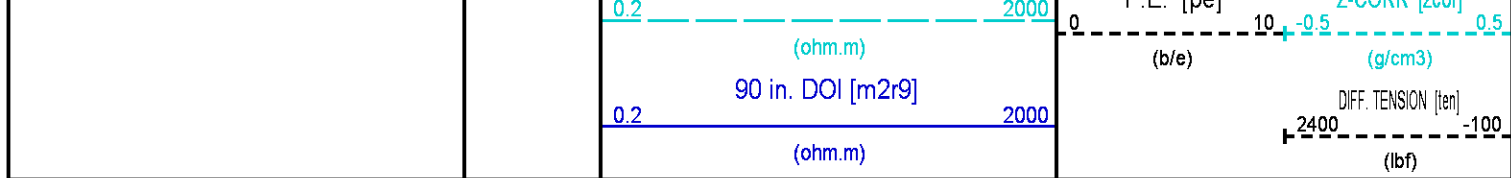


5200

5300







COMBINED LOG - DOLOMITE MATRIX

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013

Updates: 1 Patches: 2

Plotted: Wed Sep 3 02:18:44 2014

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/90179J/n970a05.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5244.250 ft BOTTOM DEPTH: 5500.543 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR LOW RES	FILTER (.i)	medium (1)		TOP	BOTTOM
GR MED RES	FILTER ()	medium (1)		"	"
GR HIGH RES	FILTER (.h)	light		"	"
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
CN MED RES	FILTER ()	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	0.000	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN BOREHOLE CORRECTION	SALINITY	0	ppm	TOP	BOTTOM
	BOREHOLE CORRECTION	ON		"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	ON		TOP	5316.287
		OFF		5316.287	BOTTOM
	BIT SIZE BEHIND CSNG	7.875	in	TOP	BOTTOM

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
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DENSITY POROSITY	Air Filled Borehole	NO		TOP	BOTTOM
	RHOfluid	1.000	g/cm3	"	"
	RHOfmatrix (dolo)	2.860	g/cm3	"	"

PARAMETER AND FILTER SUMMARY REPORT

FILE:	/dat1a/90179J/n970a03.prm				
LOGGING MODE:	DEPTH	DIRECTION:	UP		
TOP DEPTH:	5239.250 ft	BOTTOM DEPTH:	5501.456 ft		

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR LOW RES	FILTER (.i)	medium (1)		TOP	BOTTOM
GR MED RES	FILTER ()	medium (1)		"	"
GR HIGH RES	FILTER (.h)	light		"	"
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
SP-SPDH	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	7.875	in	TOP	BOTTOM
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE FIXED SIZE		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	"	"
	MUD SAMPLE RES	1.000	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	MUD CONDUCTIVITY		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Sep 3 00:48:01 2014	BIT SIZE
F1:CAL	Sep 3 00:48:01 2014	CALIPER
F1:CNCDL	Sep 3 00:48:01 2014	BOREHOLE SIZE CORRECTED DOLOMITE COMPENSATED NEU POROSITY
F1:GR	Sep 3 00:48:01 2014	GAMMA RAY
F2:M2R1	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F2:M2R2	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F2:M2R3	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F2:M2R6	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F2:M2R9	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:PE	Sep 3 00:48:01 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PZDL	Sep 3 00:48:01 2014	POROSITY FOR DOLOMITE MATRIX
F1:TEN	Sep 3 00:48:01 2014	DIFFERENTIAL TENSION
F1:ZCOR	Sep 3 00:48:01 2014	DENSITY CORRECTION
F1:ZDEN	Sep 3 00:48:01 2014	FORMATION BULK DENSITY

CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
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BIT	0.00	M2R1	2.75	M2R9	2.75	ZCOR	1.75
CAL	1.75	M2R2	2.75	PE	1.75	ZDEN	1.75
CNCDL	11.00	M2R3	2.75	PZDL	1.75		
GR	18.62	M2R6	2.75	TEN	0.00		

Presentation : cas6685:/dat1a/90179J/hdil2slam_DOLO.fvpdf [5"/100' Scale]

Plot Interval : 3983.75 - 5516 Feet

Data File 1 : F1 : cas6685:/dat1a/90179J/n970a05 ZDLCN.xtf

Created On : Sep 3 01:38:22 2014

Company : PRONGHORN OPERATING LLC

Well : EVAN #1

Field : SPUR

File Interval : 3983.75 - 5516 Feet

OCT : n970a

Data File 2 : F2 : cas6685:/dat1a/90179J/n970a03_HDIL.xtf

Created On : Sep 2 23:06:33 2014

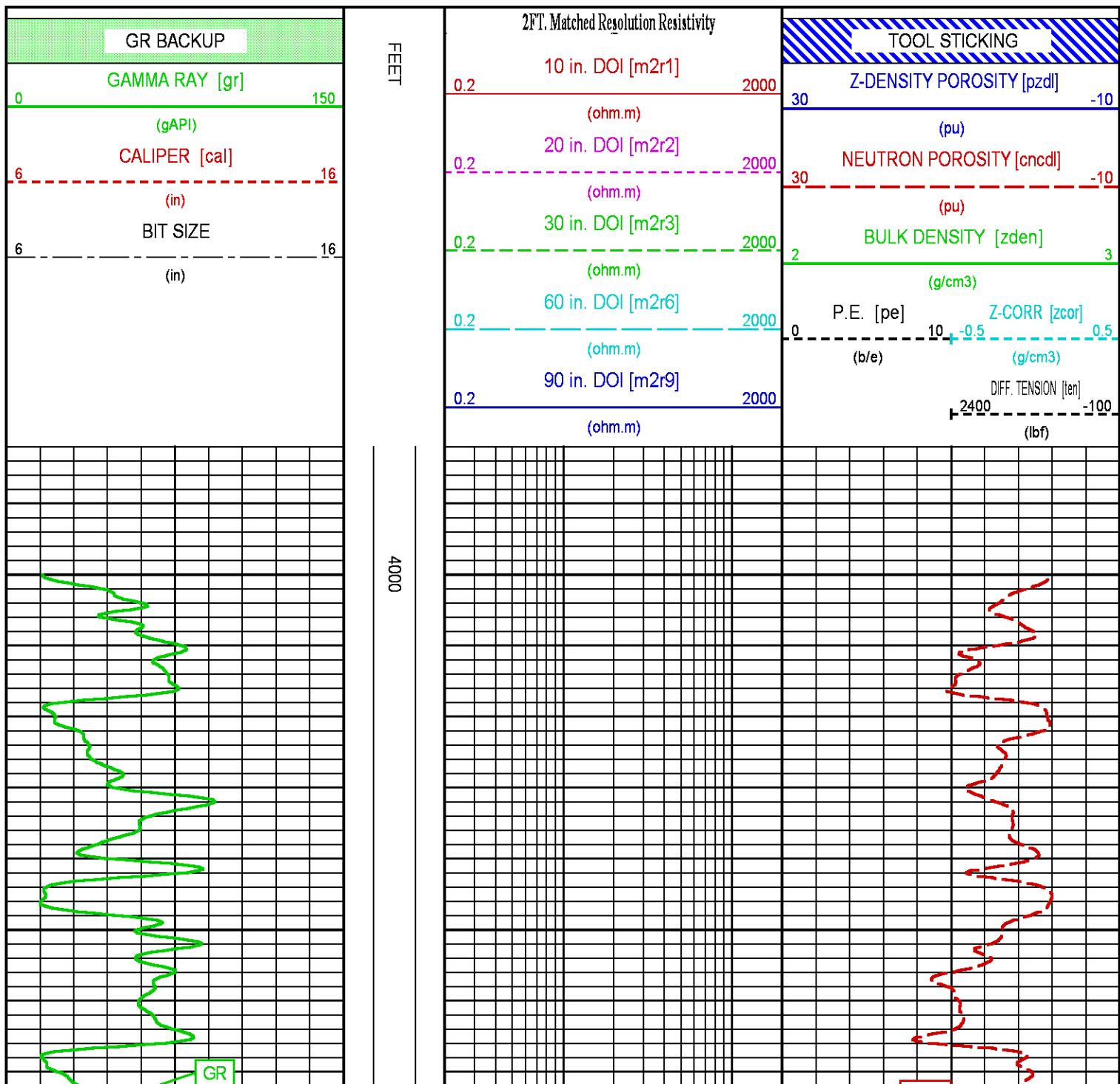
Company : PRONGHORN OPERATING LLC

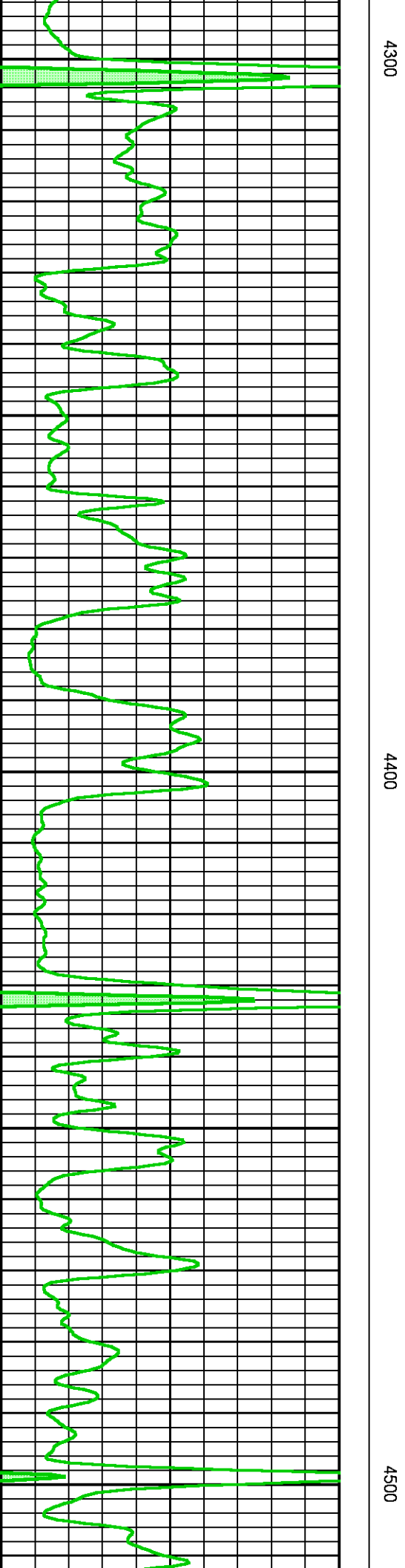
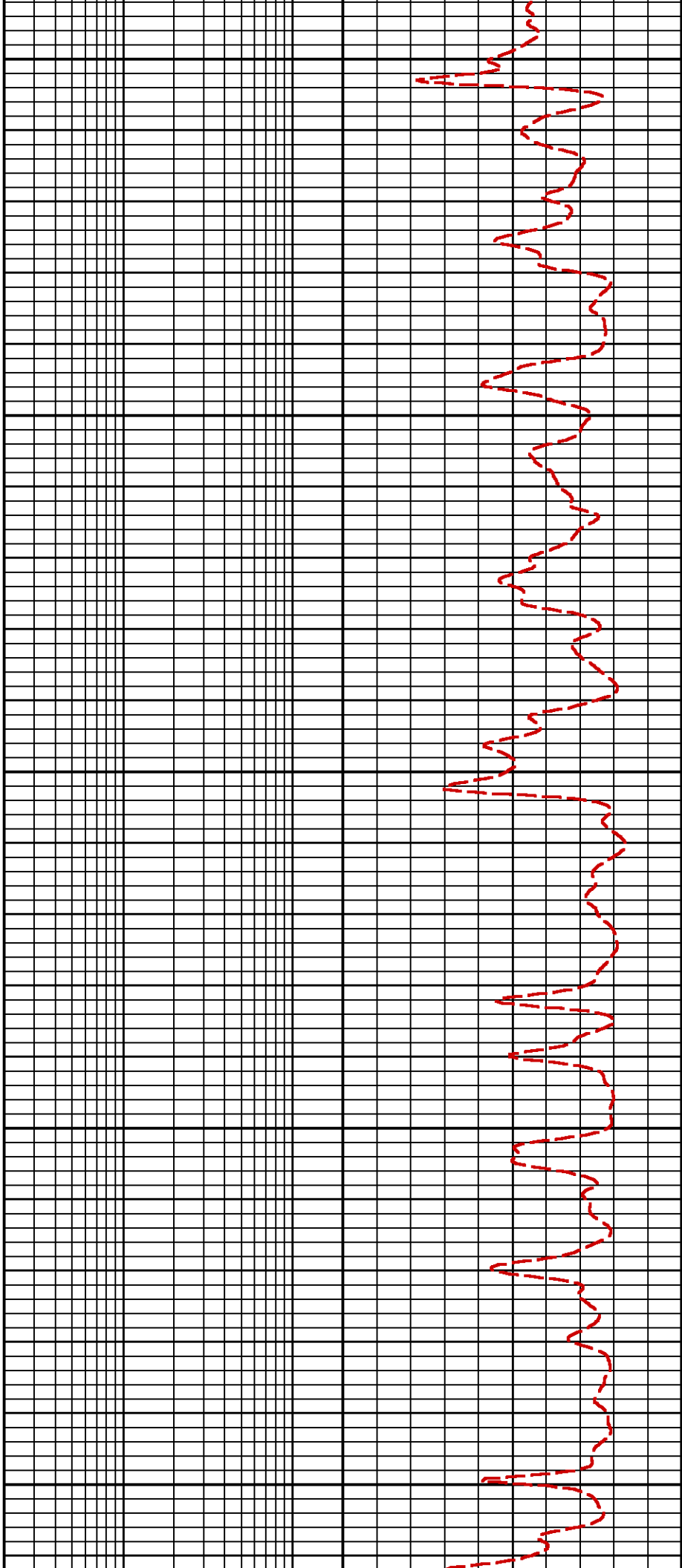
Well : EVAN #1

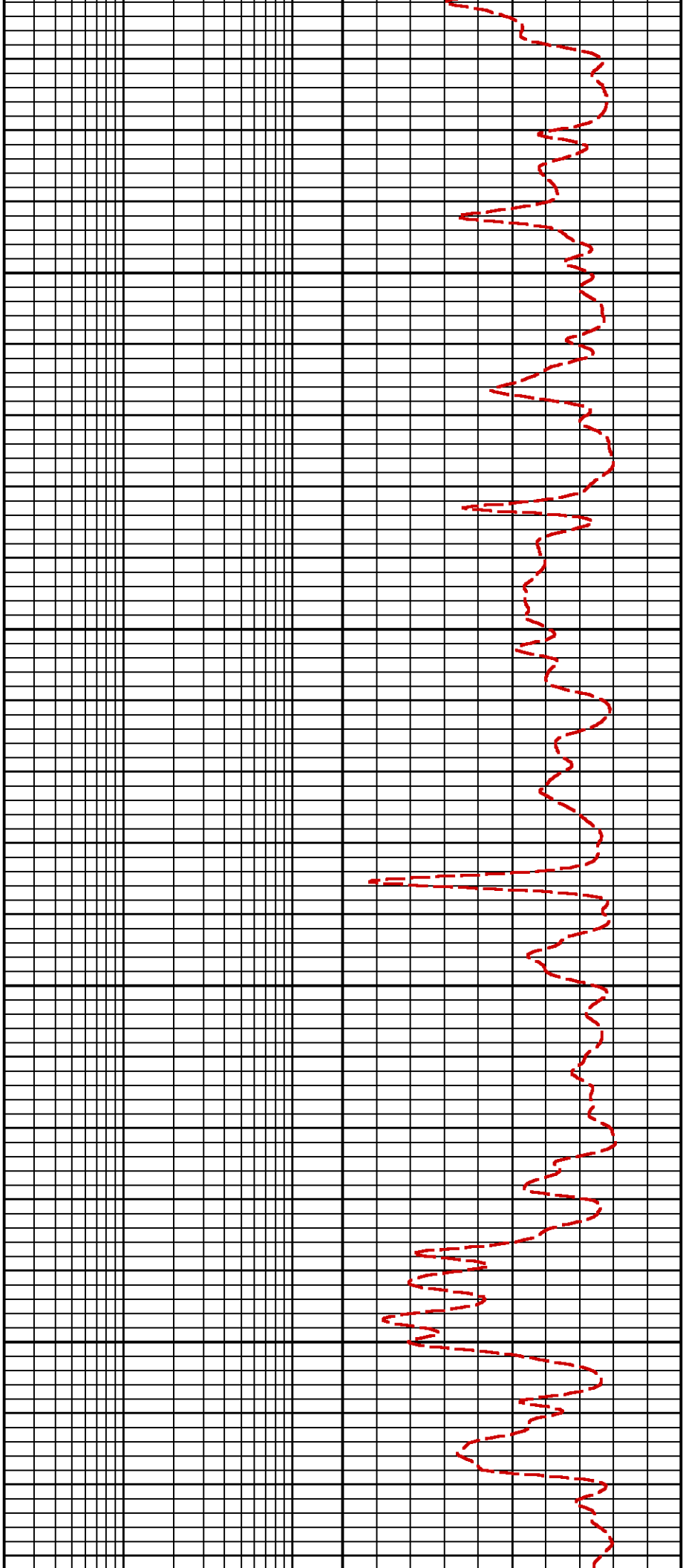
Field : SPUR

File Interval : 5228.75 - 5513.5 Feet

OCT : n970a

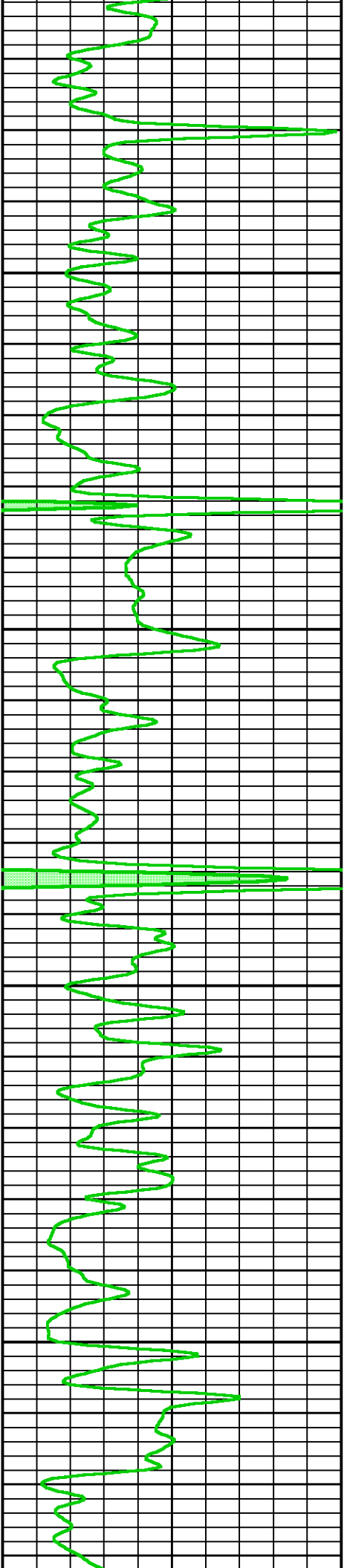


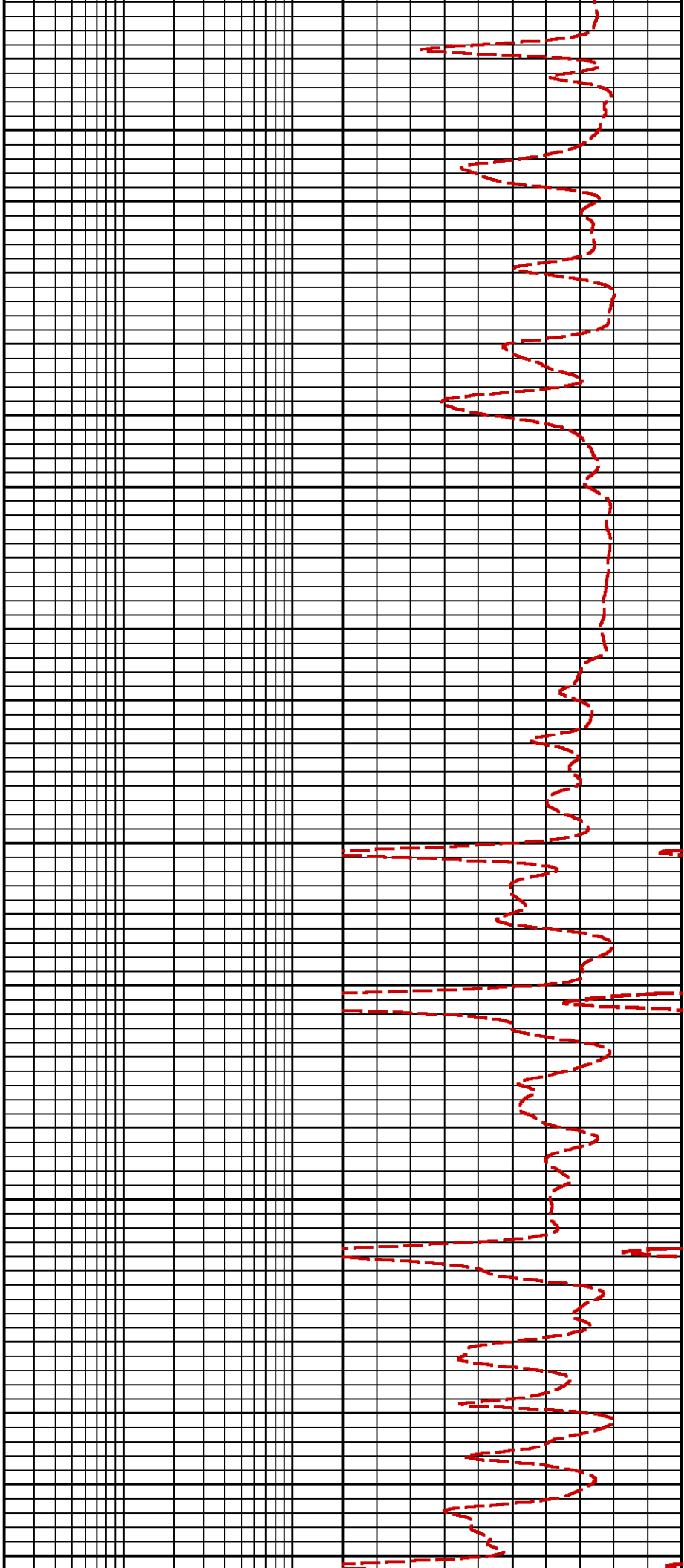




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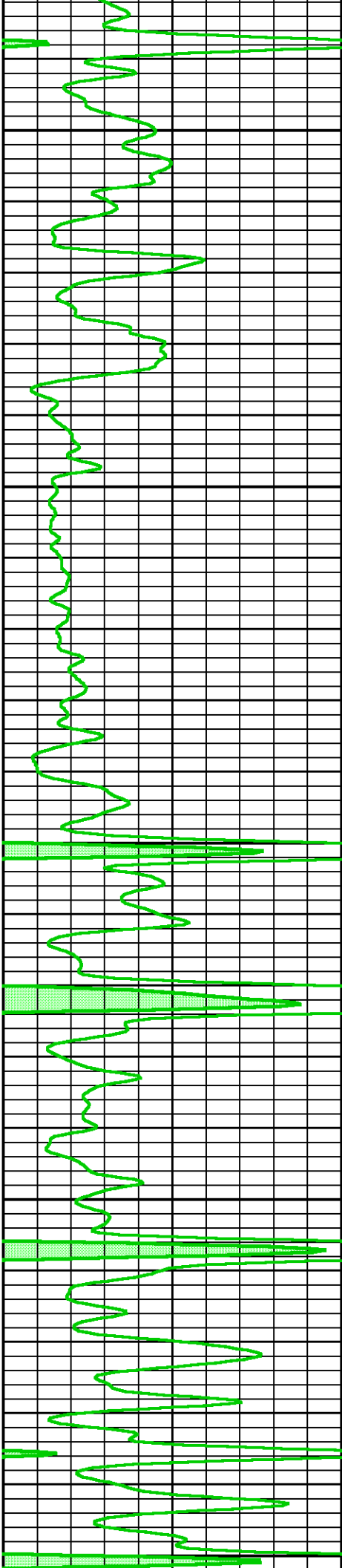
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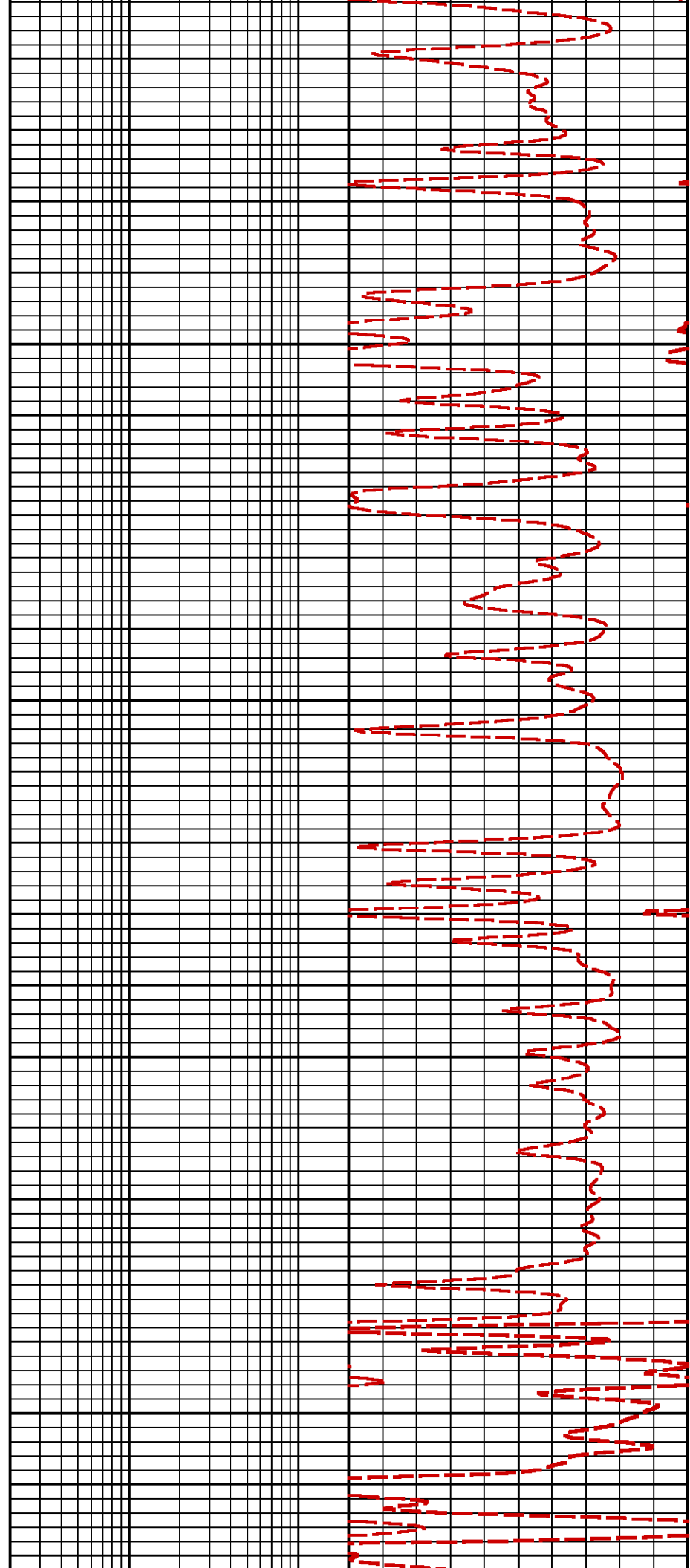




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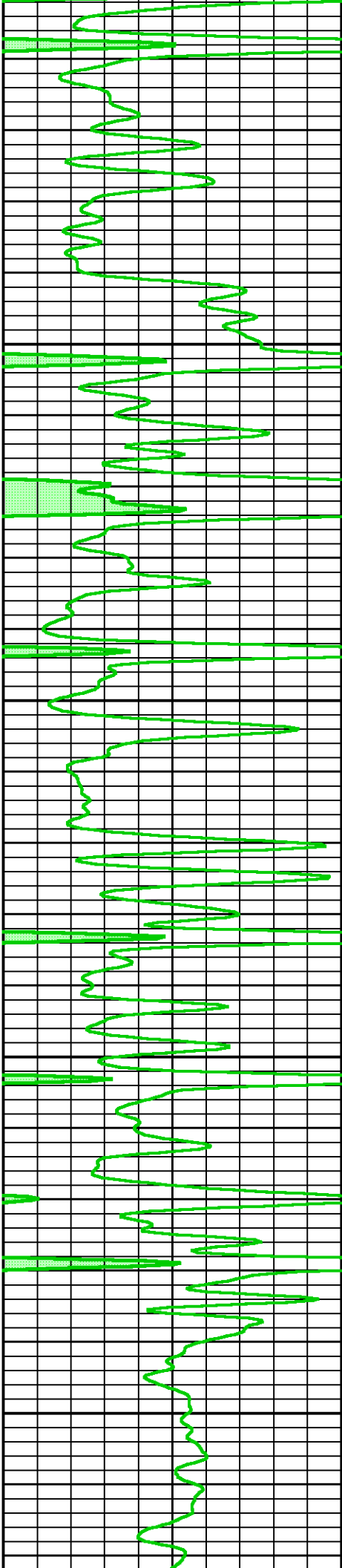
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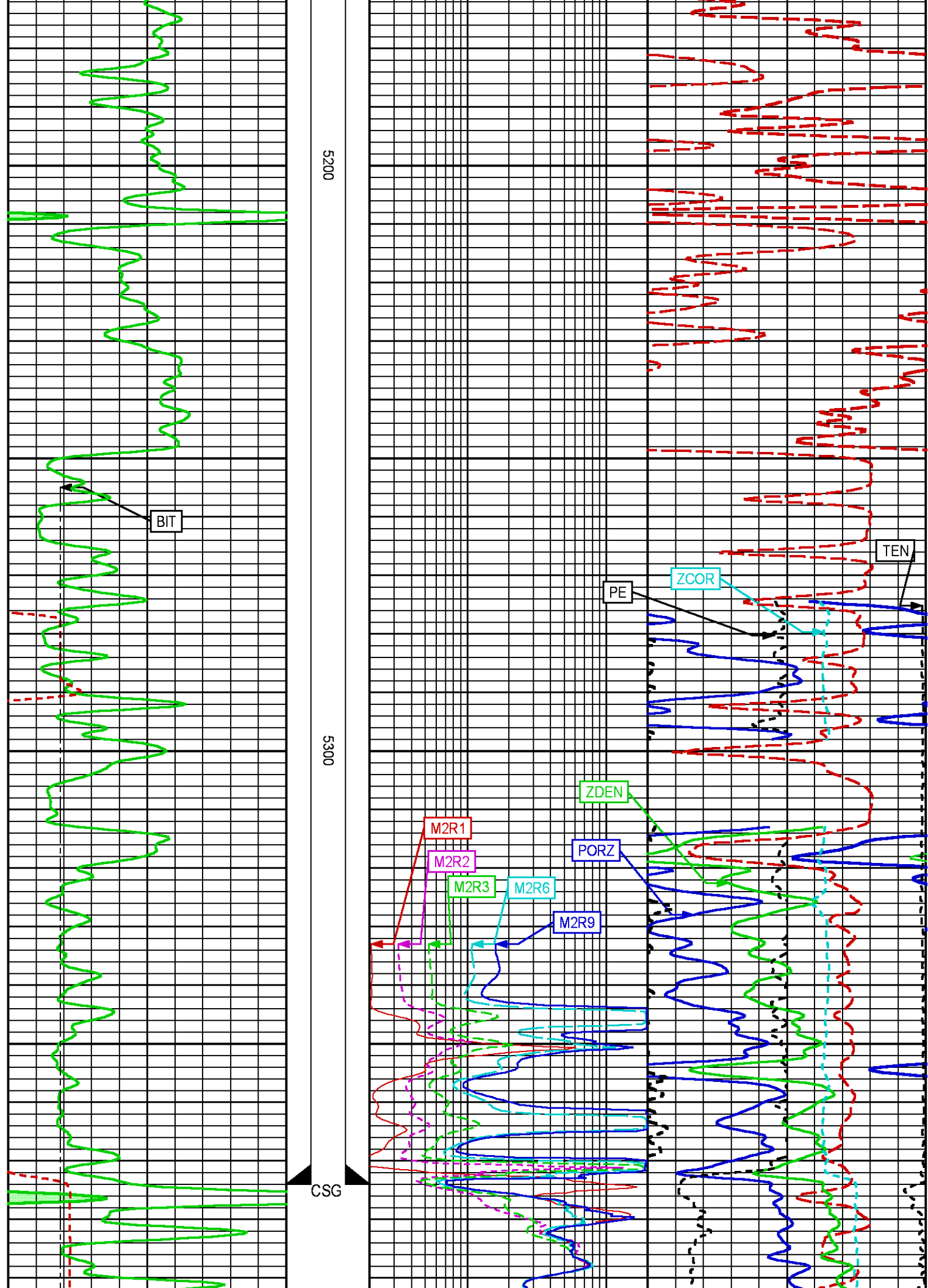


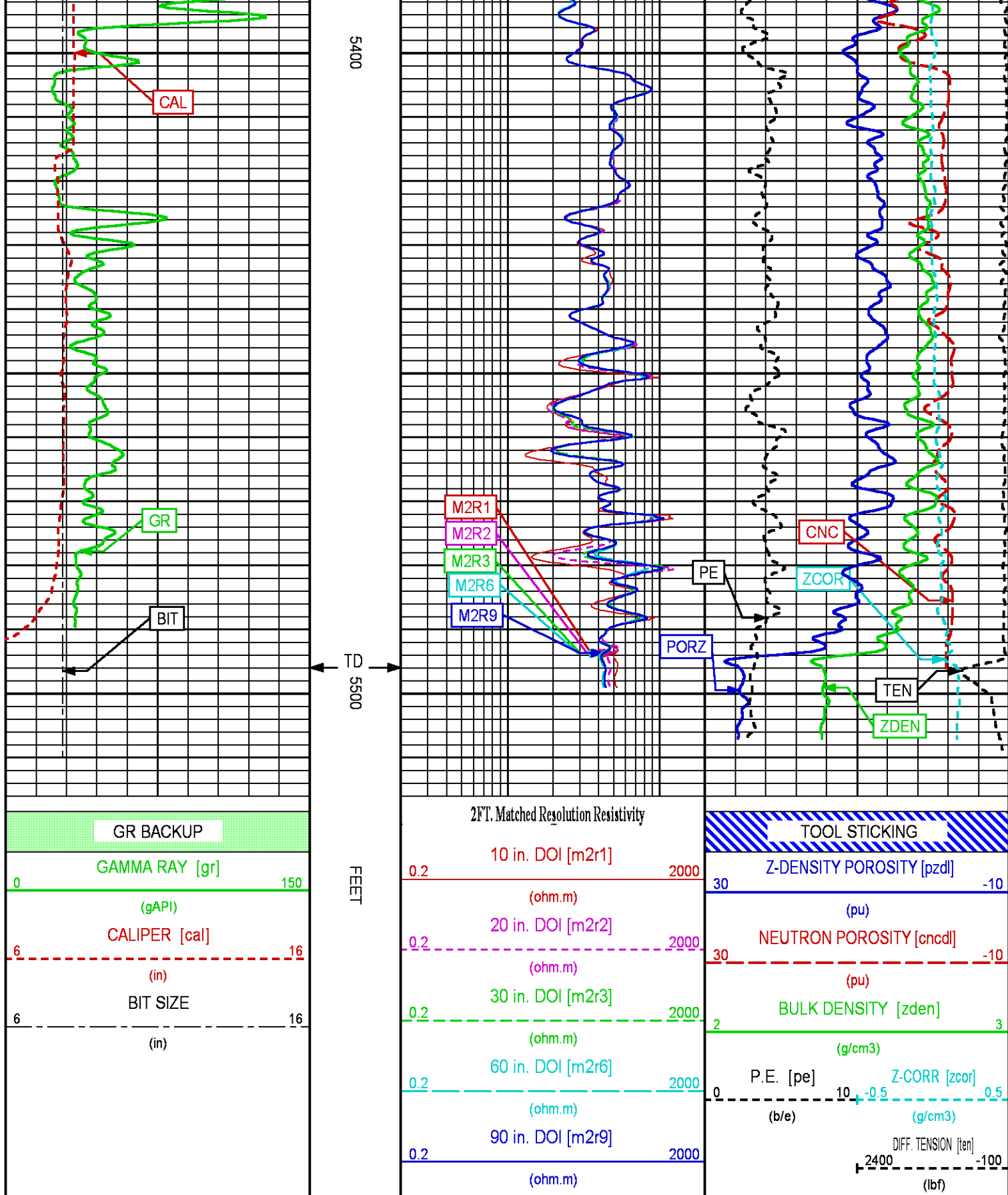


5000

5100







ZDL/CN LOG, LIMESTONE MATRIX

Plotted: Wed Sep 3 02:06:22 2014

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/90179J/n970a05.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5244.250 ft BOTTOM DEPTH: 5500.543 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER ()	medium (1)		TOP	BOTTOM
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
CN MED RES	FILTER ()	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	0.000	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	LIMESTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	0	ppm	"	"
	BOREHOLE CORRECTION	ON		"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	ON		TOP	5316.287
		OFF		5316.287	BOTTOM
	BIT SIZE BEHIND CSNG	7.875	in	TOP	BOTTOM

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	Air Filled Borehole	NO		TOP	BOTTOM
	RHOfmatrix	2.710	g/cm3	"	"
	RHOfluid	1.000	g/cm3	"	"

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Sep 3 00:48:01 2014	BIT SIZE
F1:CAL	Sep 3 00:48:01 2014	CALIPER
F1:CNC	Sep 3 00:48:01 2014	BOREHOLE SIZE CORRECTED COMPENSATED NEUTRON POROSITY
F1:GR	Sep 3 00:48:01 2014	GAMMA RAY
F1:PE	Sep 3 00:48:01 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Sep 3 00:48:01 2014	POROSITY FOR SELECTABLE MATRIX
F1:TEN	Sep 3 00:48:01 2014	DIFFERENTIAL TENSION
F1:ZCOR	Sep 3 00:48:01 2014	DENSITY CORRECTION
F1:ZDEN	Sep 3 00:48:01 2014	FORMATION BULK DENSITY

CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	18.62	TEN	0.00		
CAL	1.75	PE	1.75	ZCOR	1.75		
CNC	11.00	PORZ	1.75	ZDEN	1.75		

Presentation : cas6685:/dat1a/90179J/focus_zdl_cn_LIME.fvpdf [5"/100' Scale]
 Plot Interval : 3983.75 - 5514.75 Feet

Data File 1 : F1 : cas6685:/dat1a/90179J/n970a05_ZDLCN.xtf
 Created On : Sep 3 01:38:22 2014
 Company : PRONGHORN OPERATING LLC
 Well : EVAN #1
 Field : SPUR
 File Interval : 3983.75 - 5516 Feet
 OCT : n970a

GR BACKUP

GAMMA RAY [gr]

0 150

(gAPI)

CALIPER [cal]

6 16

(in)

BIT SIZE

6 16

(in)

FEET

4000

TOOL STICKING

Z-DENSITY POROSITY [porz]

30 -10

(pu)

NEUTRON POROSITY [cnc]

30 -10

(pu)

P.E. [pe]

0 10

(b/e)

Z-CORR [zcor]

-0.5 0.5

(g/cm3)

BULK DENSITY [zden]

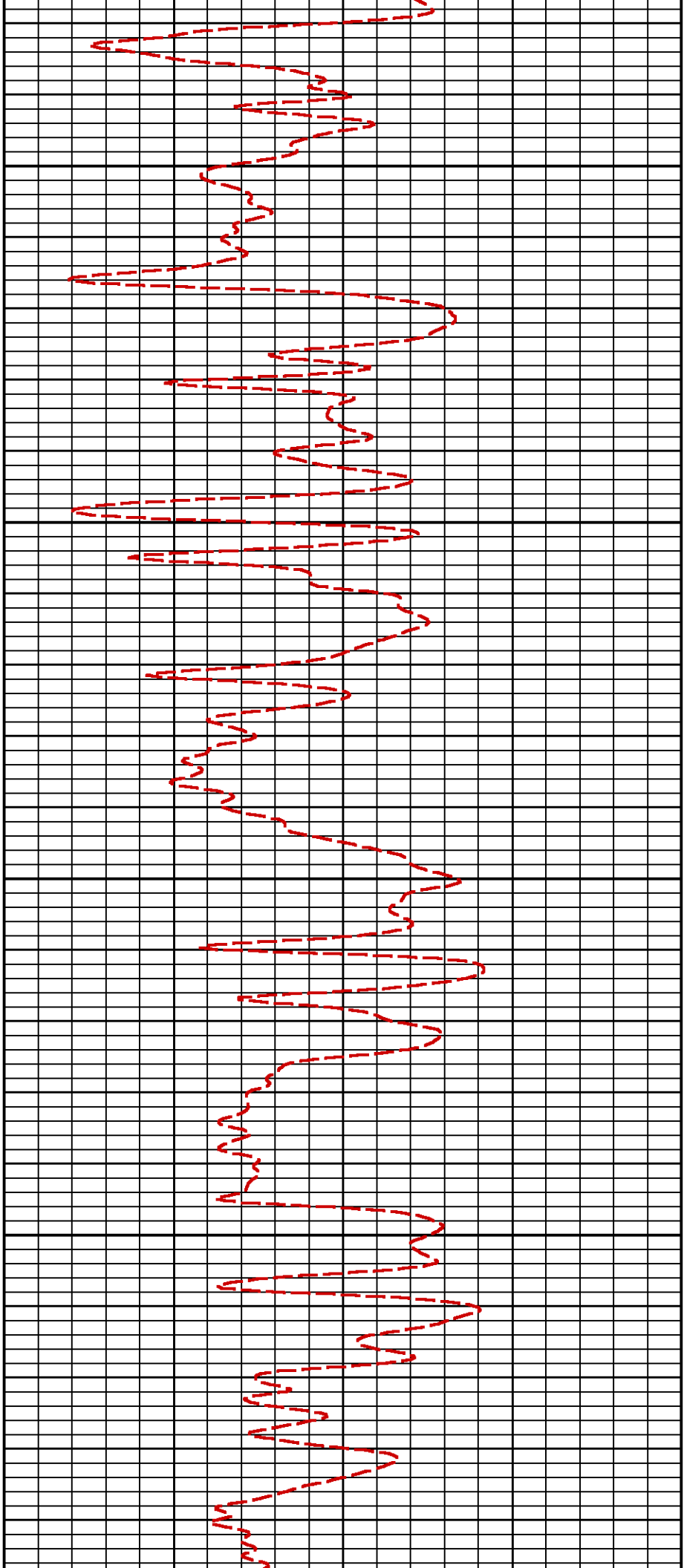
2 3

(g/cm3)

DIFF. TENSION [ten]

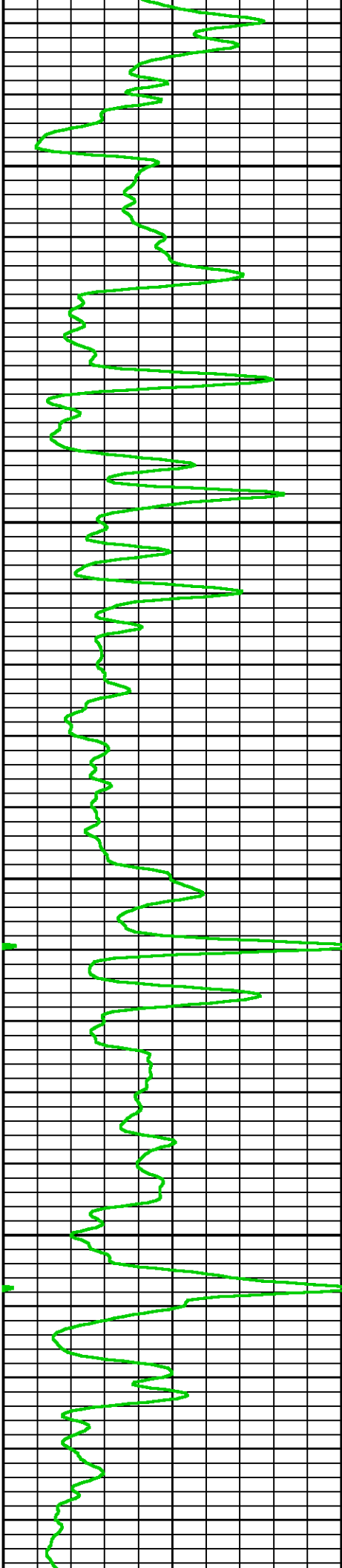
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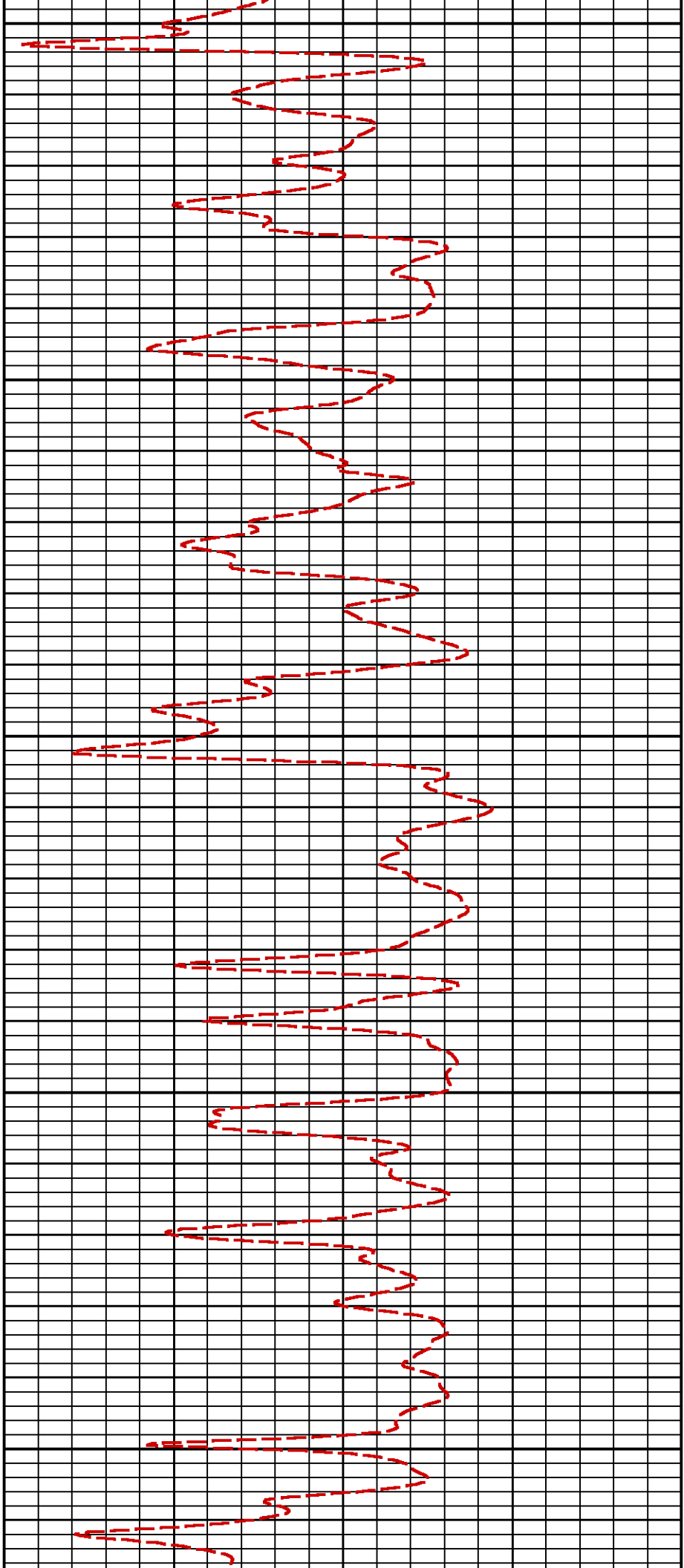
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4100

4200

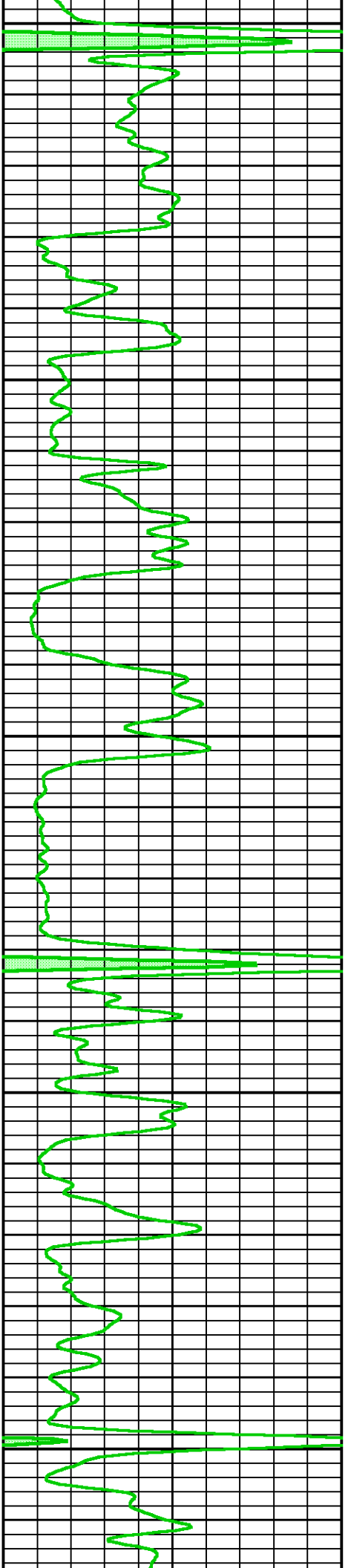


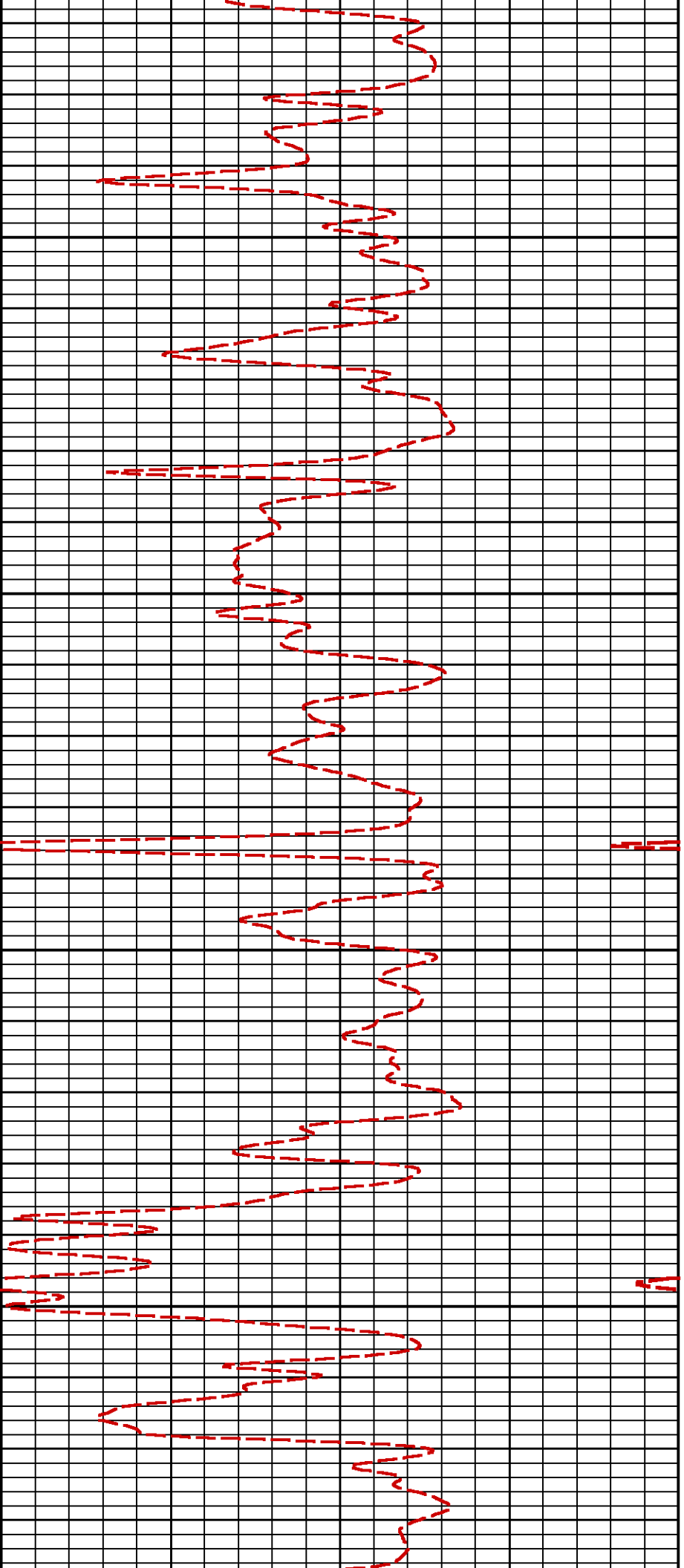


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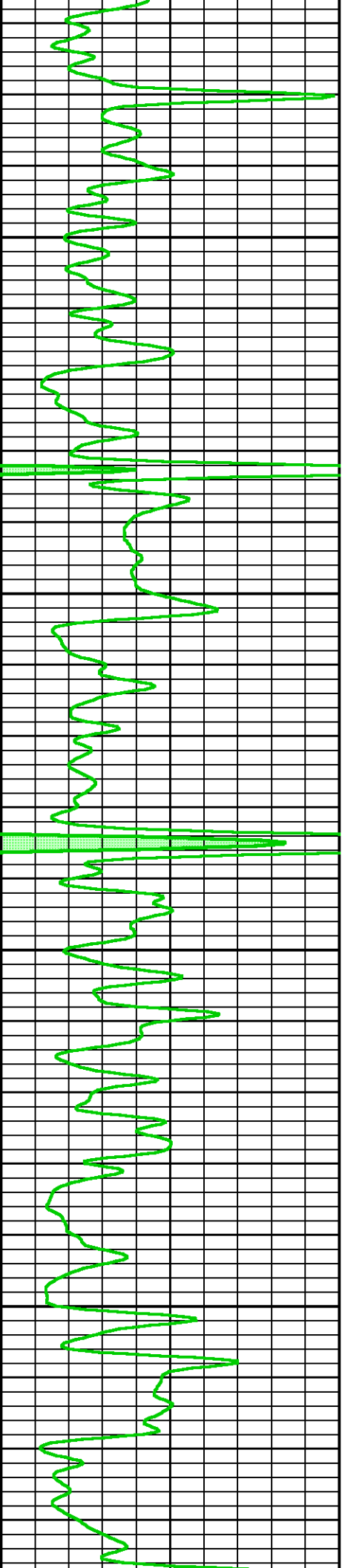
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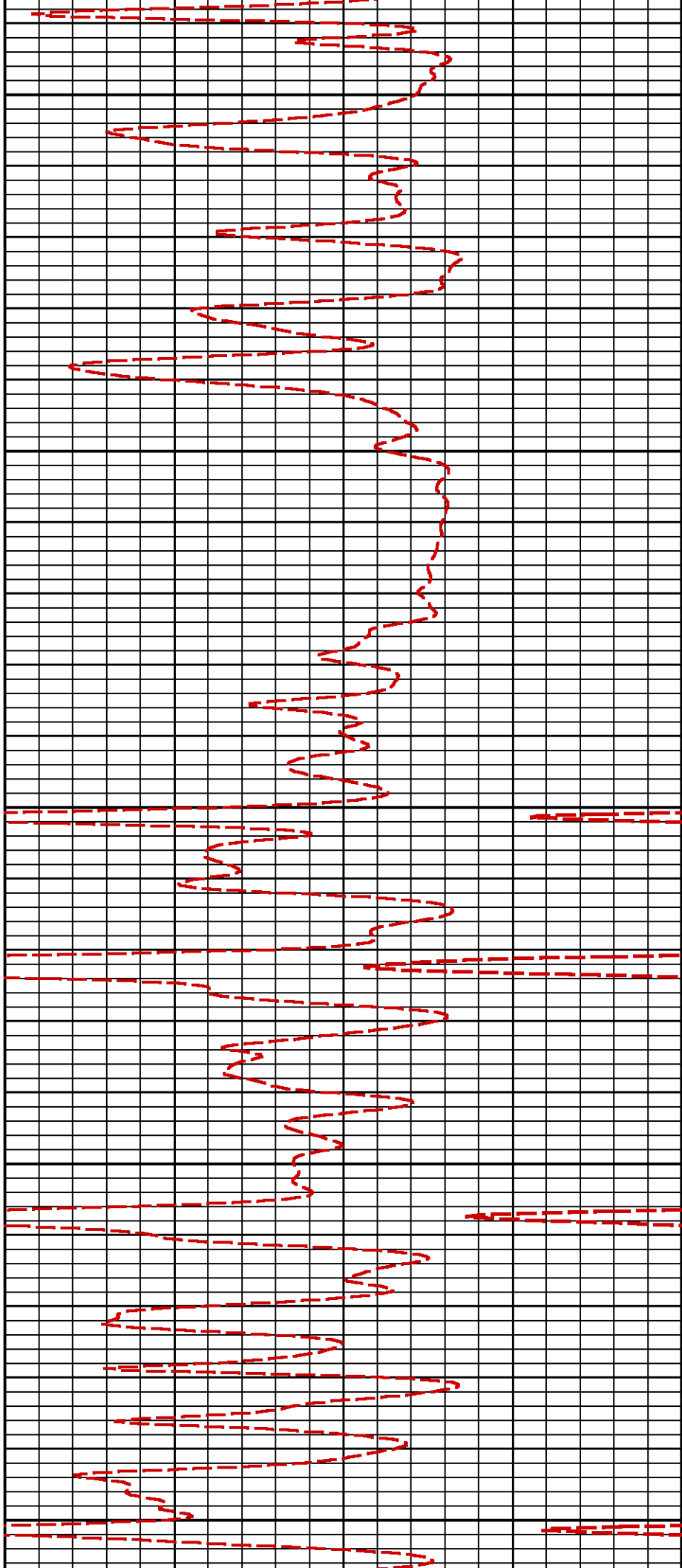




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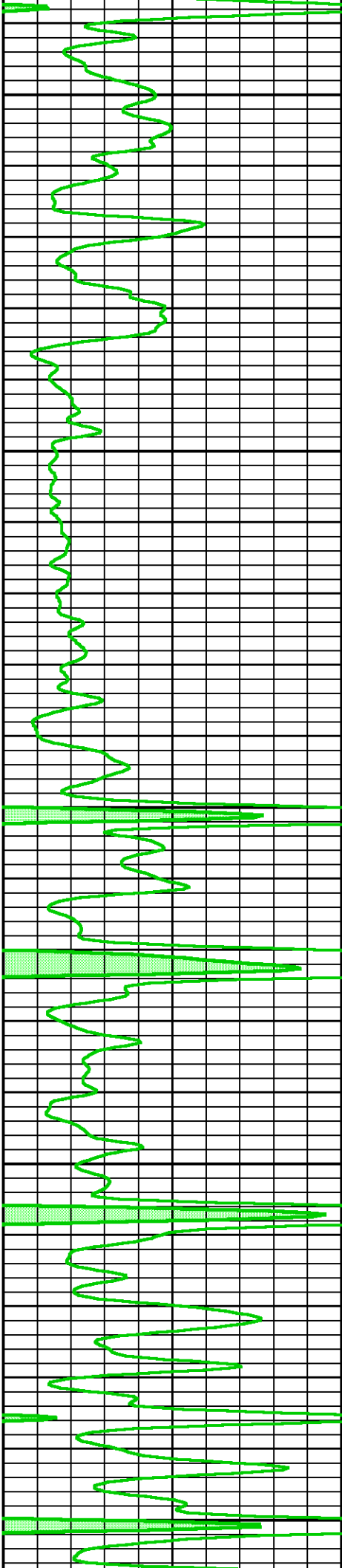
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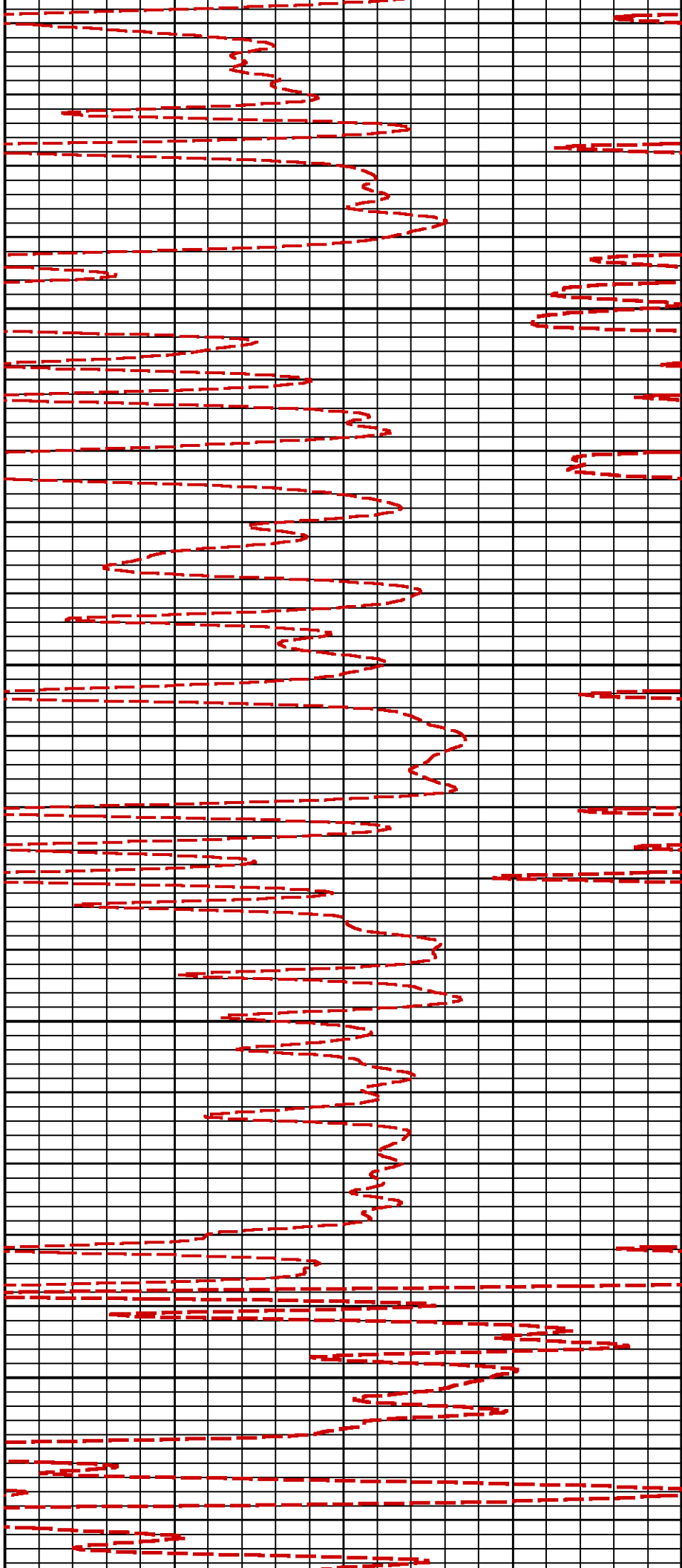




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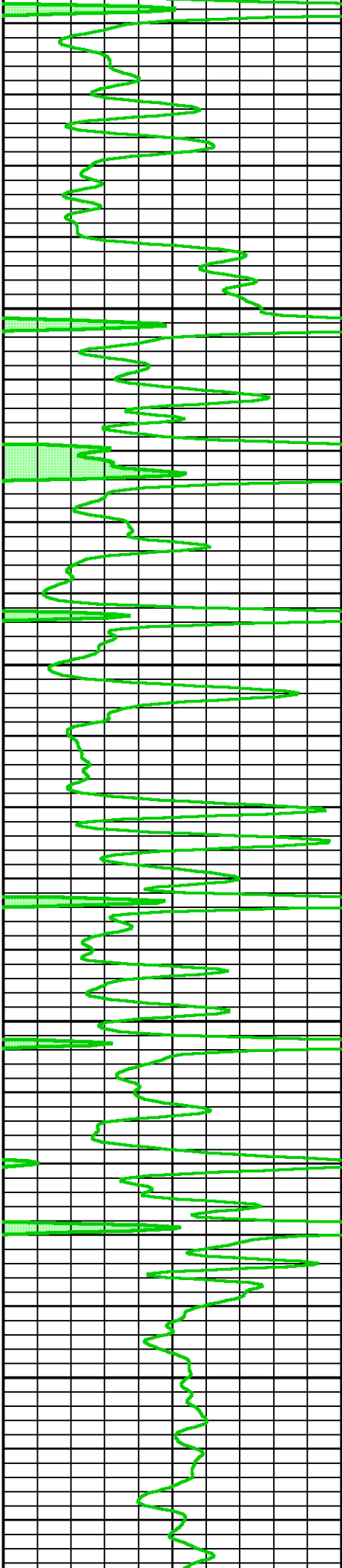
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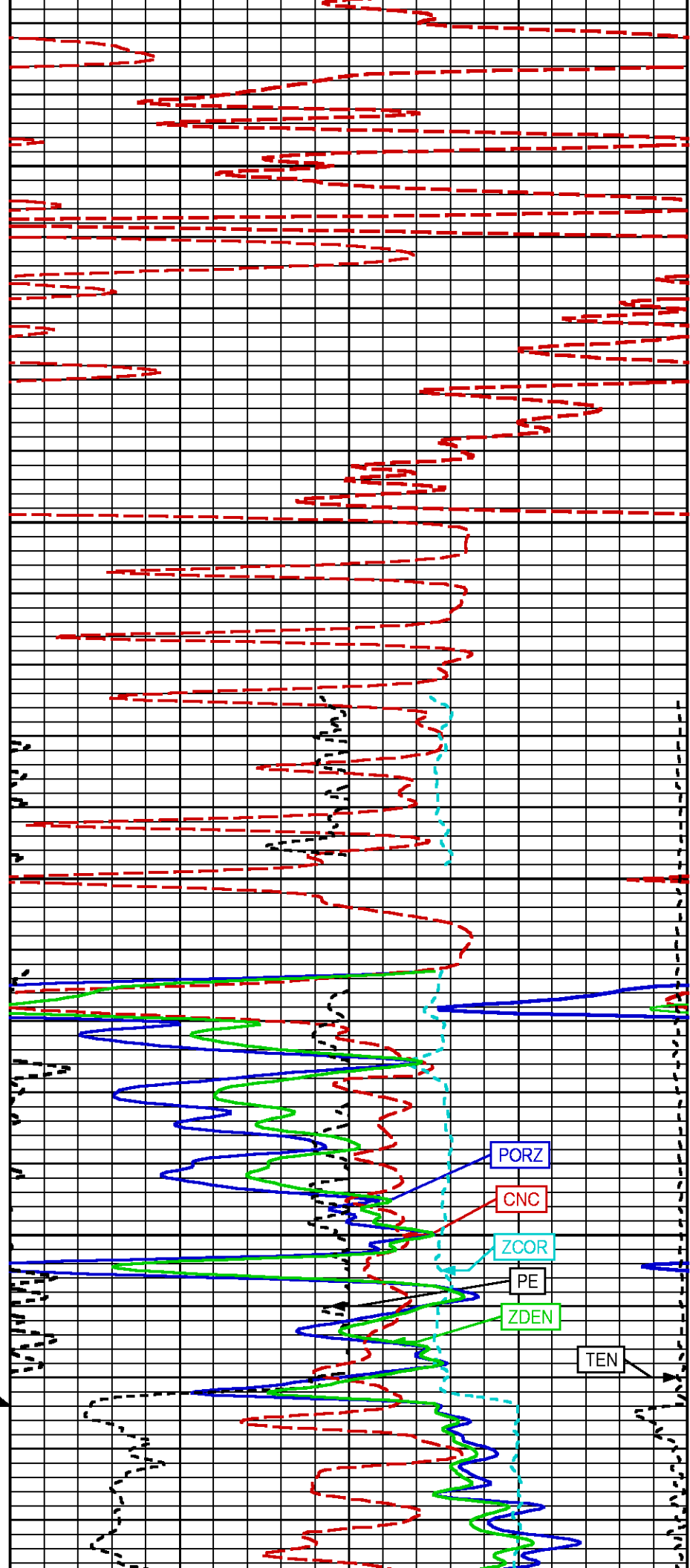




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5100

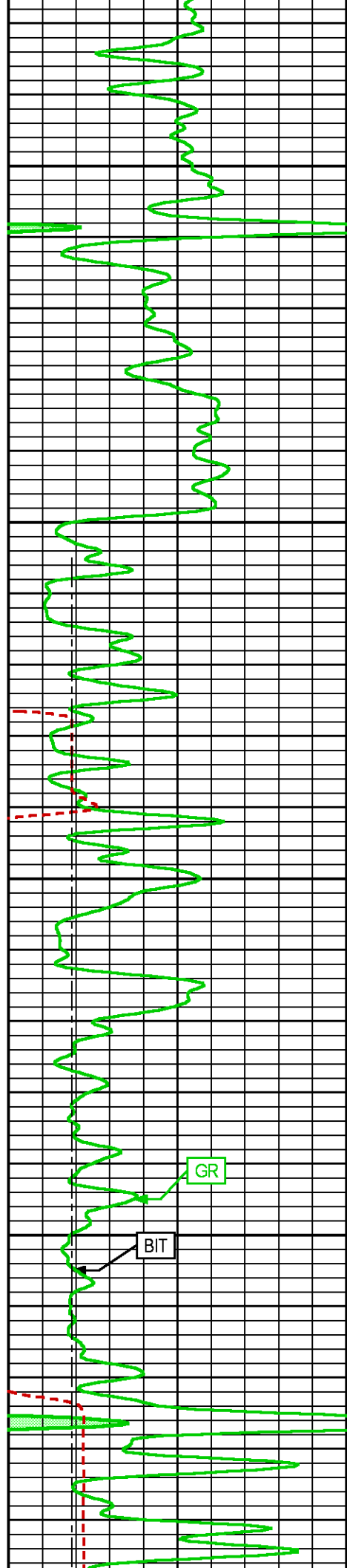




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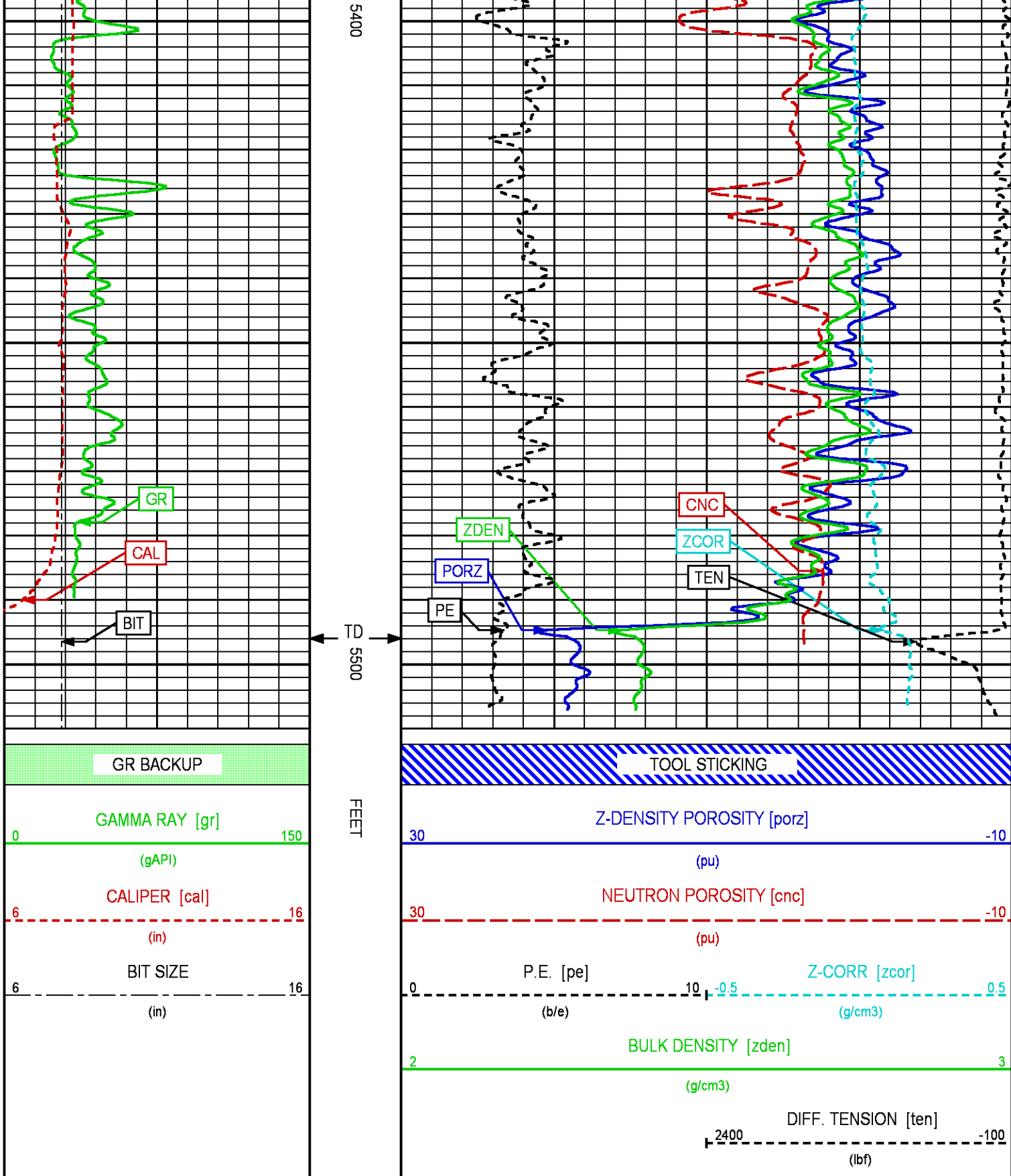
5300

CSG



GR

BIT



ZDL/CN LOG, DOLOMITE MATRIX

Plotted: Wed Sep 3 02:08:59 2014

PARAMETER AND FILTER SUMMARY REPORT

File: /dat1a/90179J/n970a05.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5244.250 ft BOTTOM DEPTH: 5500.543 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER ()	medium (1)		TOP	BOTTOM
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
CN MED RES	FILTER ()	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	0.000	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN BOREHOLE CORRECTION	SALINITY	0	ppm	TOP	BOTTOM
	BOREHOLE CORRECTION	ON		"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	ON		TOP	5316.287
		OFF		5316.287	BOTTOM
	BIT SIZE BEHIND CSNG	7.875	in	TOP	BOTTOM

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	Air Filled Borehole	NO		TOP	BOTTOM
	RHOfluid	1.000	g/cm3	"	"
	RHOfmatrix (dolo)	2.860	g/cm3	"	"

CURVE DESCRIPTION REPORT

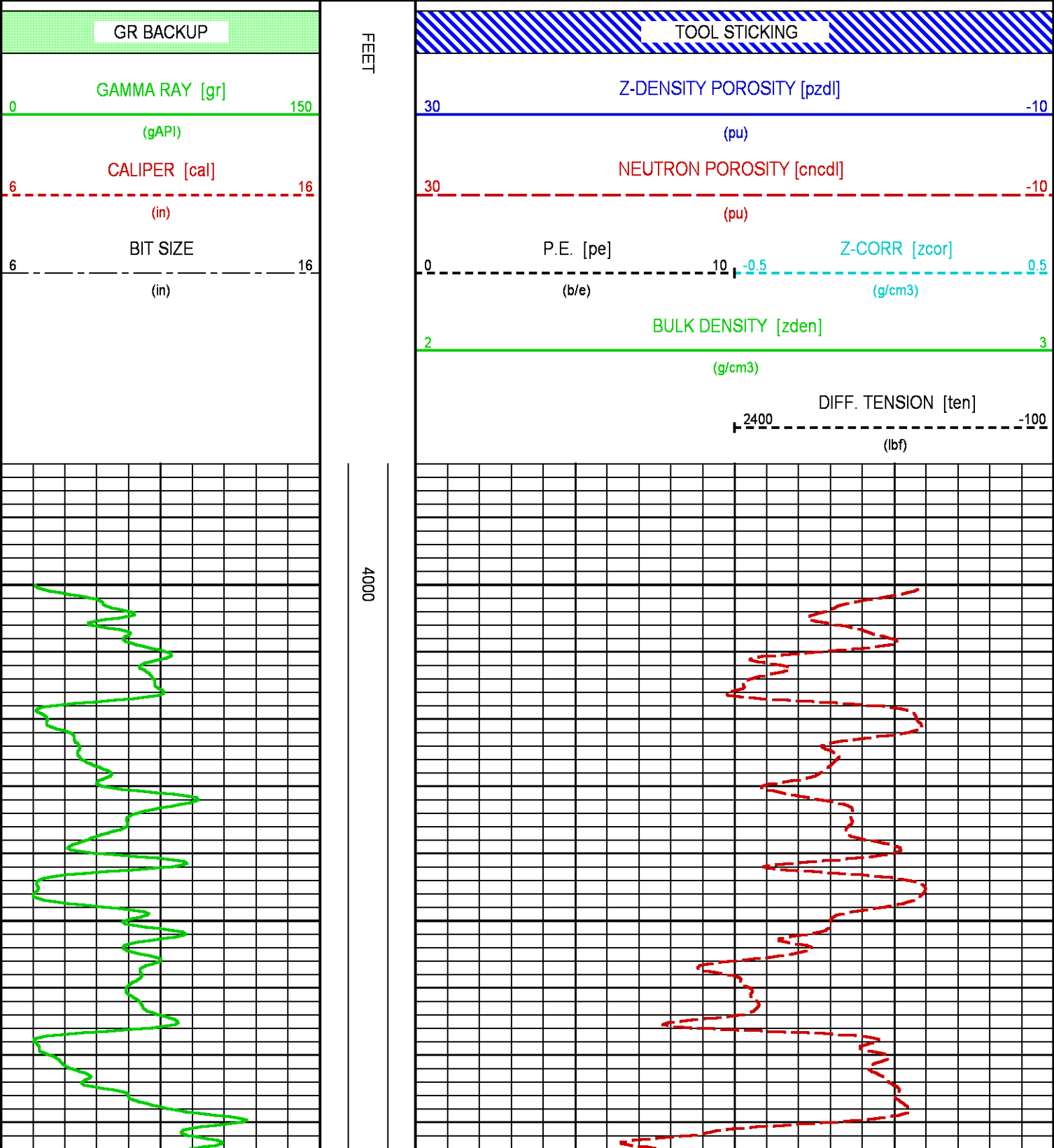
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
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F1:CAL	Sep 3 00:48:01 2014	CALIPER
F1:CNCDL	Sep 3 00:48:01 2014	BOREHOLE SIZE CORRECTED DOLOMITE COMPENSATED NEU POROSITY
F1:GR	Sep 3 00:48:01 2014	GAMMA RAY
F1:PE	Sep 3 00:48:01 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PZDL	Sep 3 00:48:01 2014	POROSITY FOR DOLOMITE MATRIX
F1:TEN	Sep 3 00:48:01 2014	DIFFERENTIAL TENSION
F1:ZCOR	Sep 3 00:48:01 2014	DENSITY CORRECTION
F1:ZDEN	Sep 3 00:48:01 2014	FORMATION BULK DENSITY

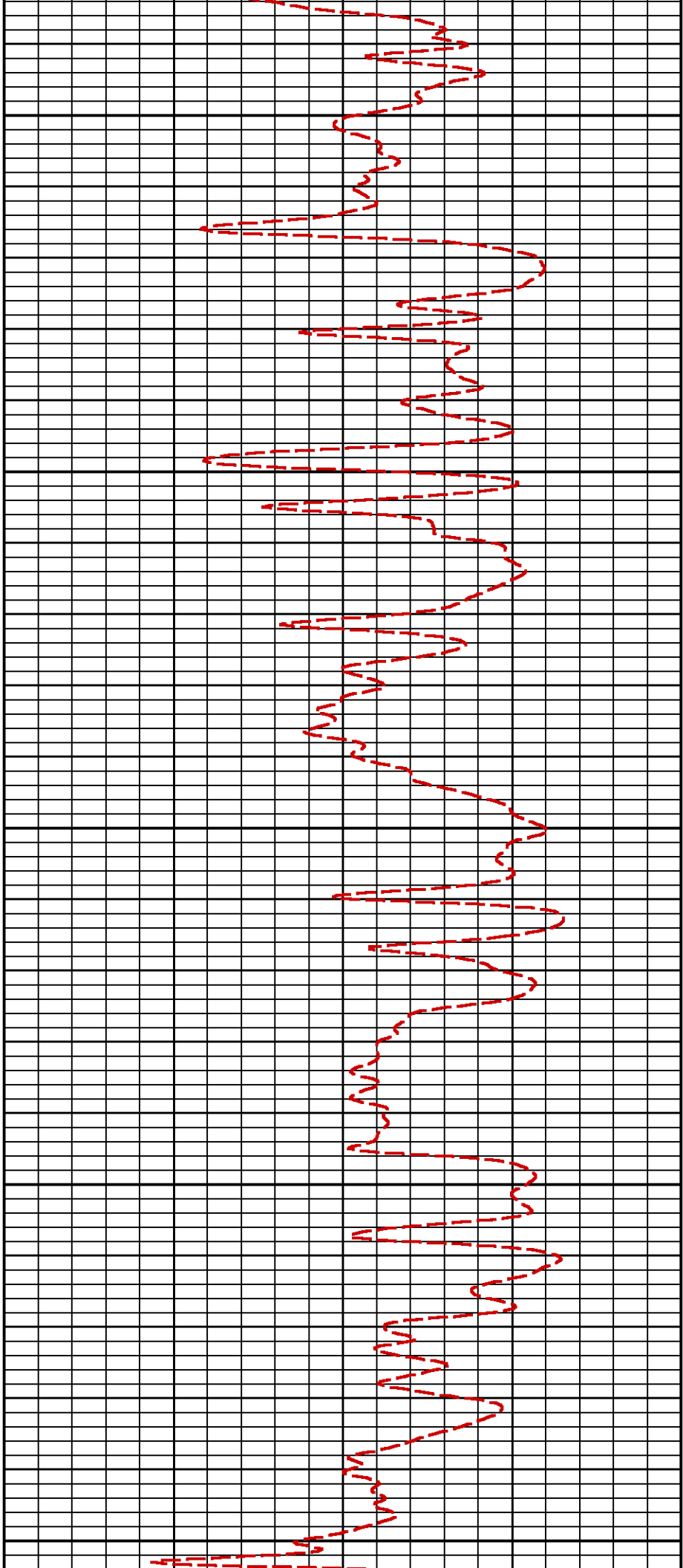
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	GR	18.62	TEN	0.00		
CAL	1.75	PE	1.75	ZCOR	1.75		
CNCDL	11.00	PZDL	1.75	ZDEN	1.75		

Presentation : cas6685:/dat1a/90179J/focus_zdl_cn_DOLO.fvpdf [5"/100' Scale]
Plot Interval : 3983.75 - 5514.75 Feet

Data File 1 : F1 : cas6685:/dat1a/90179J/n970a05_ZDLCN.xtf
Created On : Sep 3 01:38:22 2014
Company : PRONGHORN OPERATING LLC
Well : EVAN #1
Field : SPUR
File Interval : 3983.75 - 5516 Feet
OCT : n970a

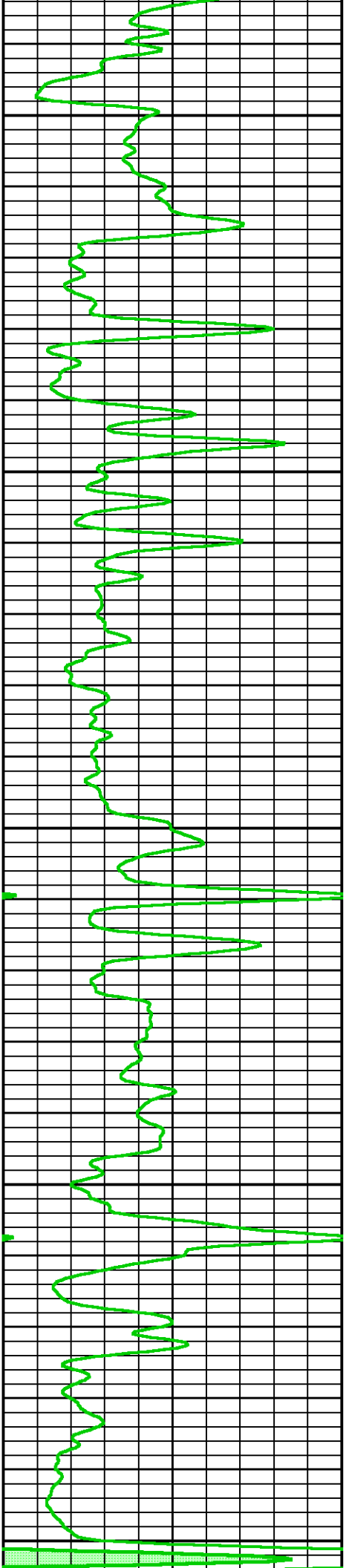


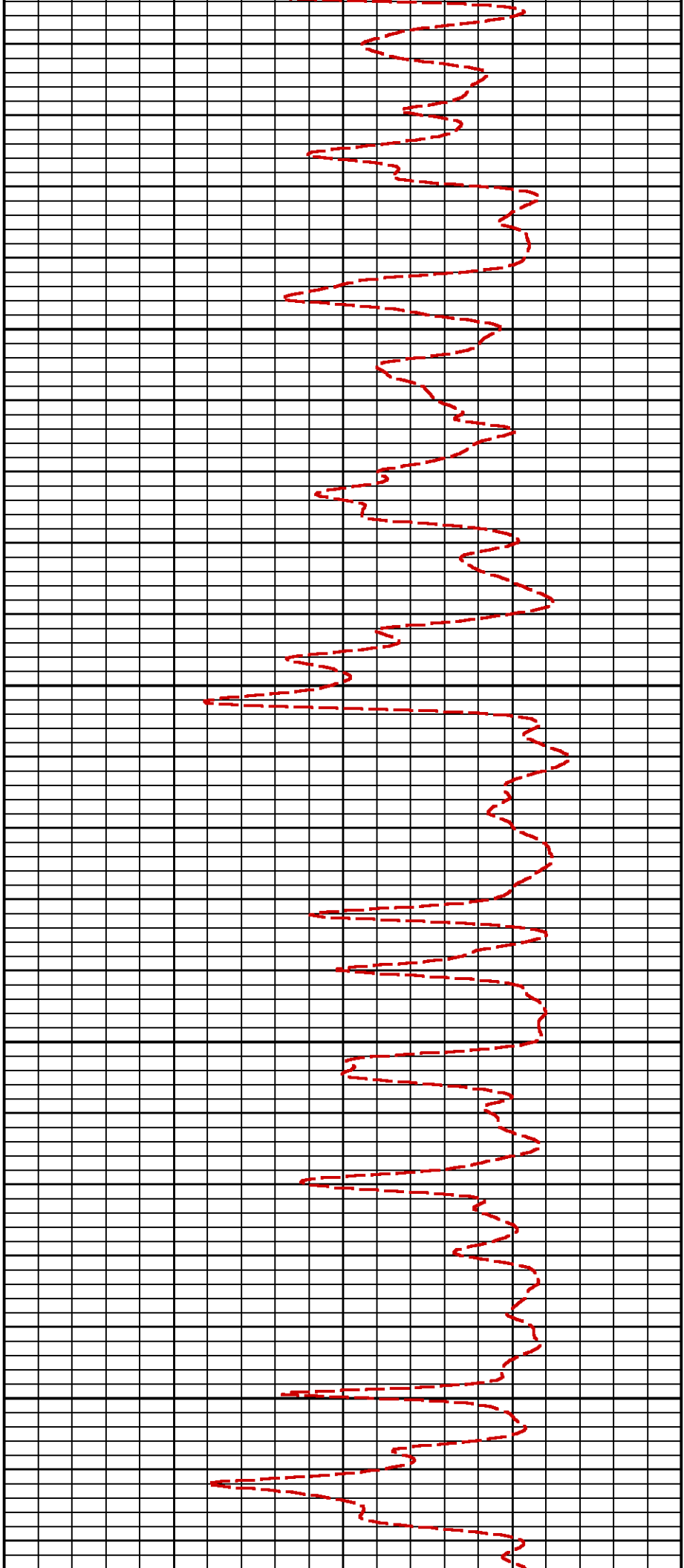


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4200

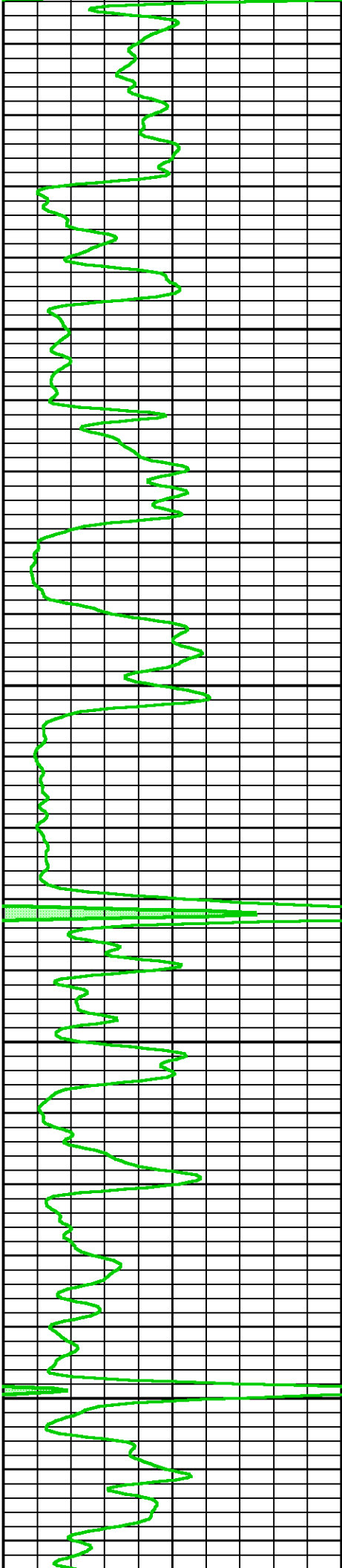
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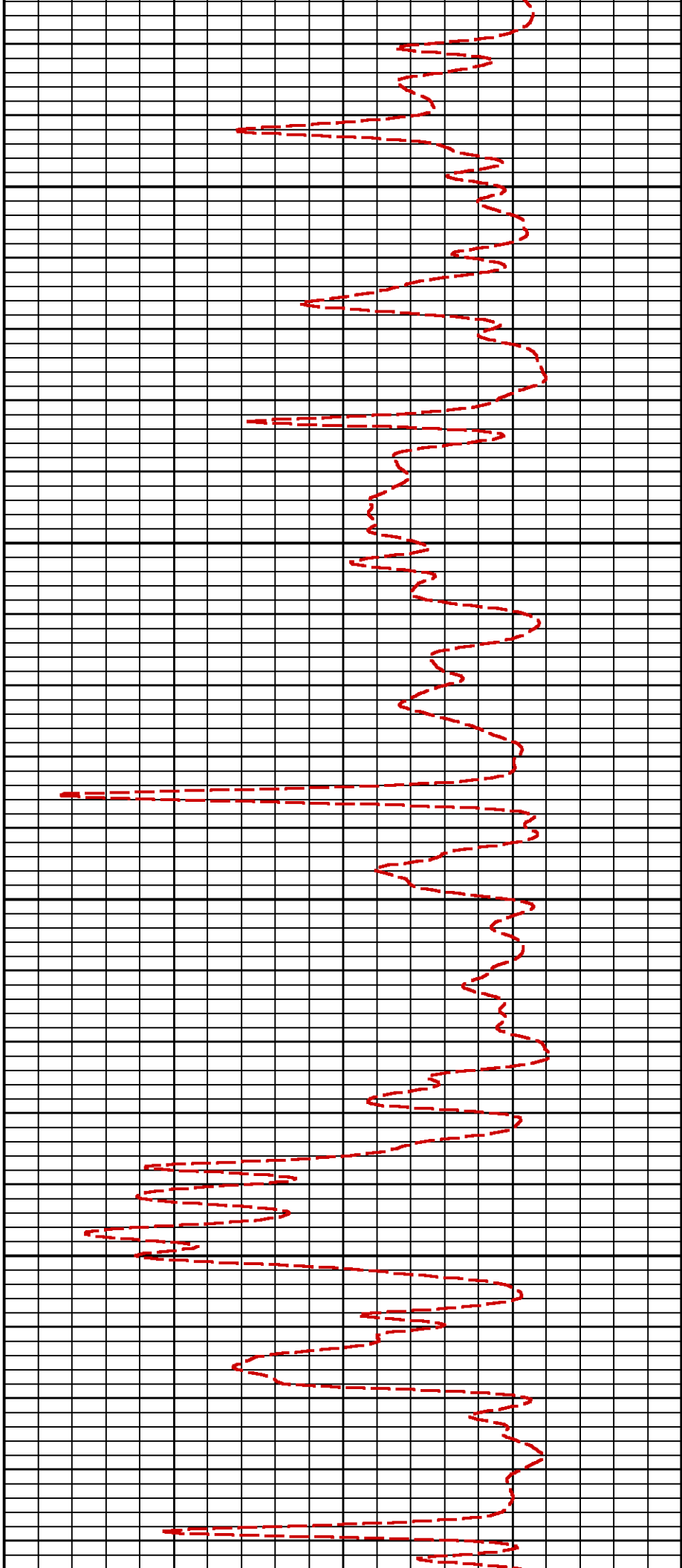




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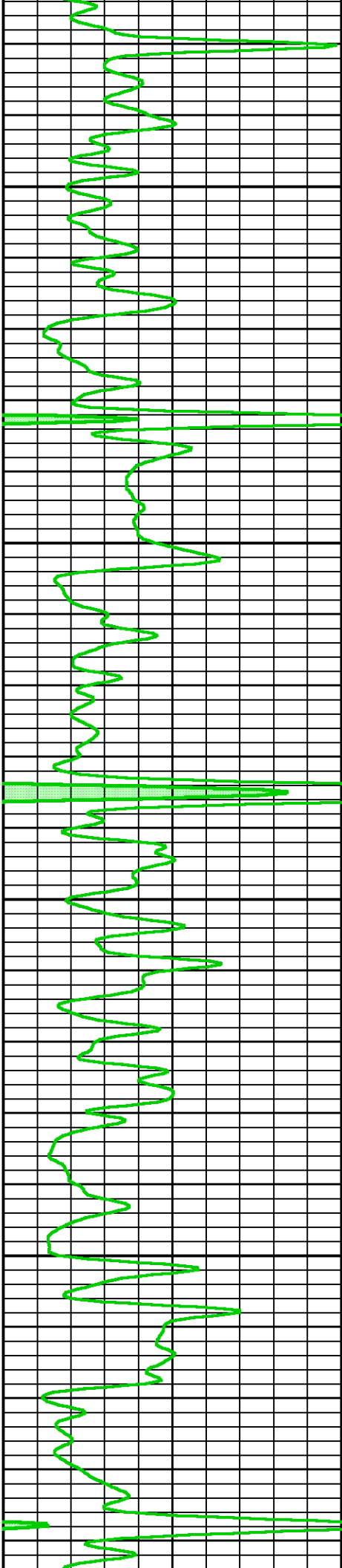
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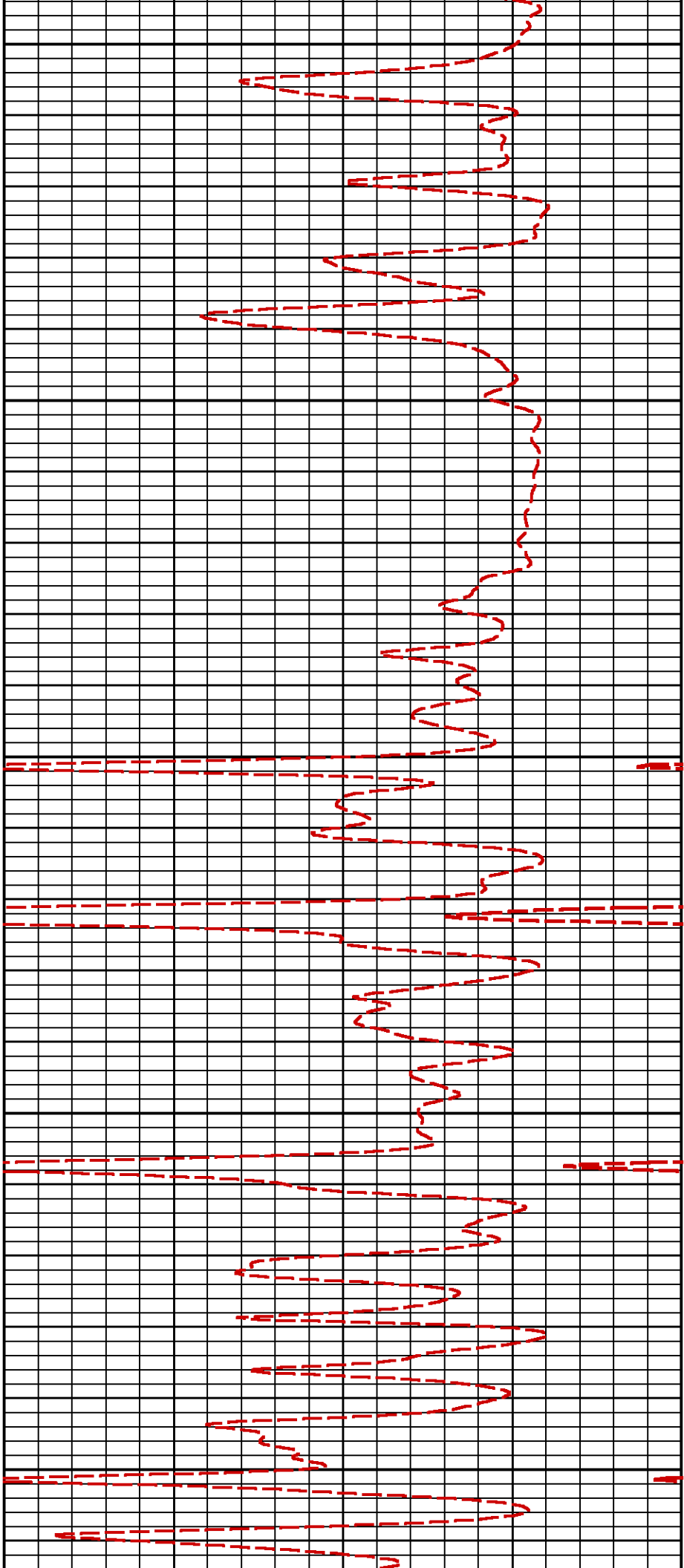




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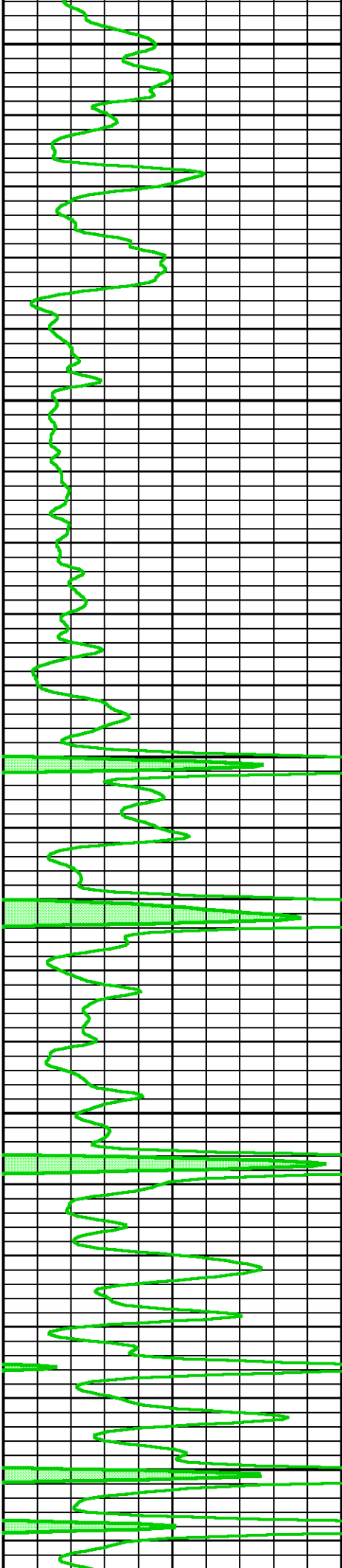
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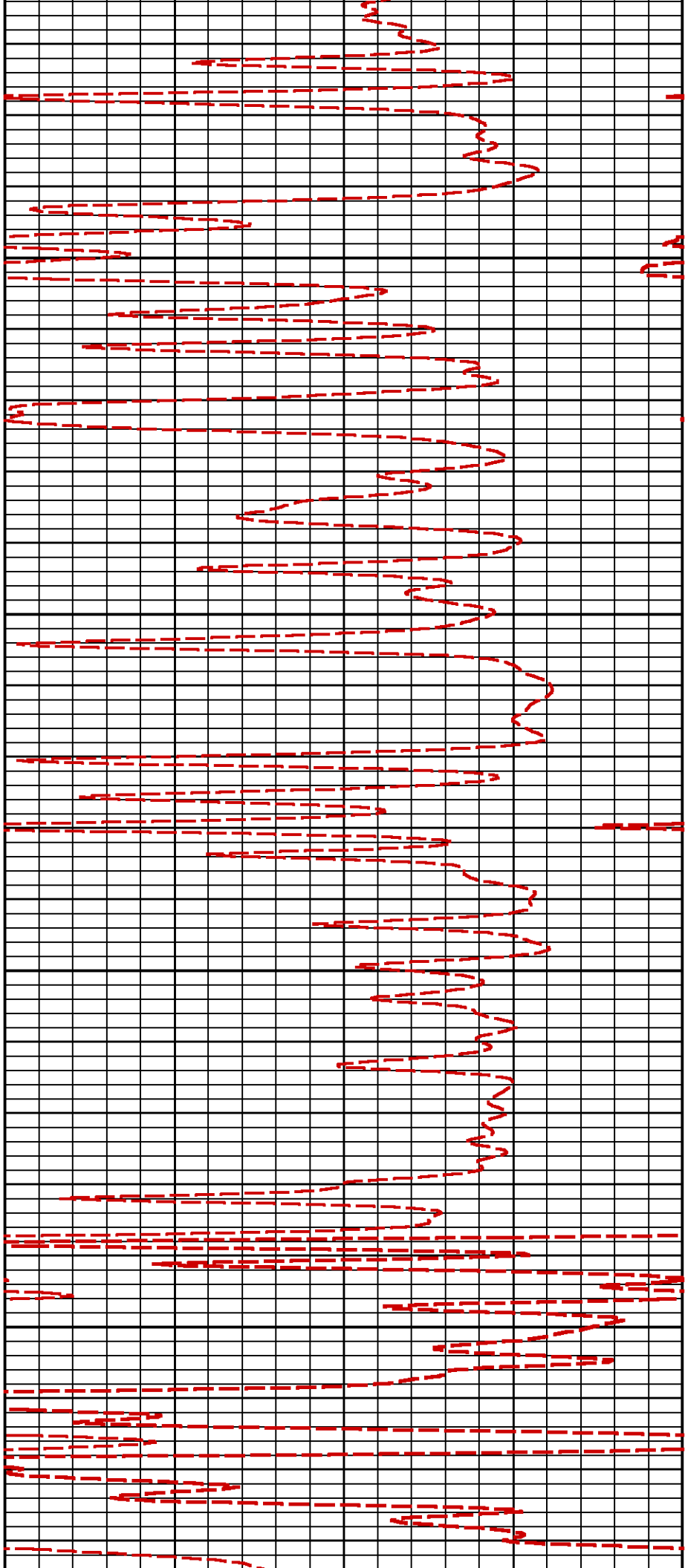




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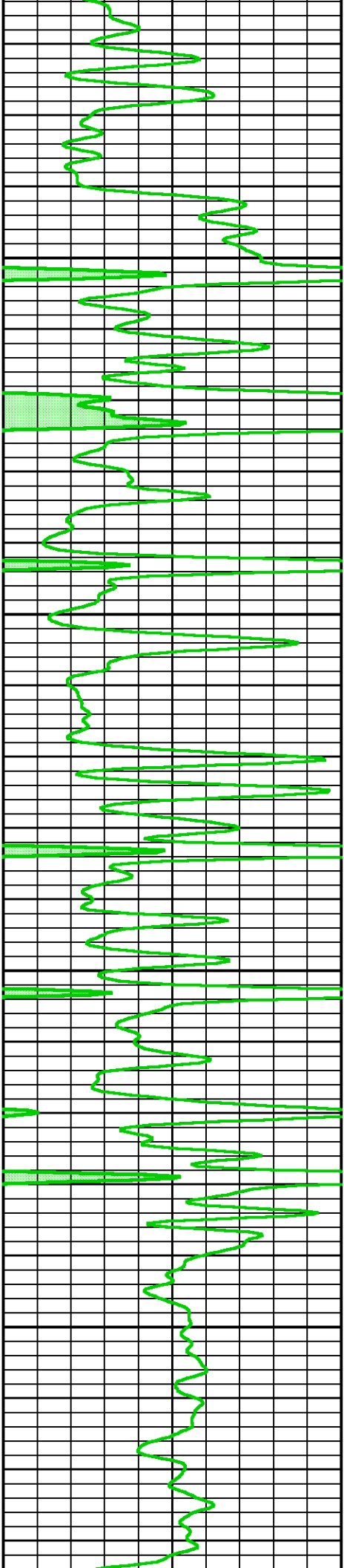
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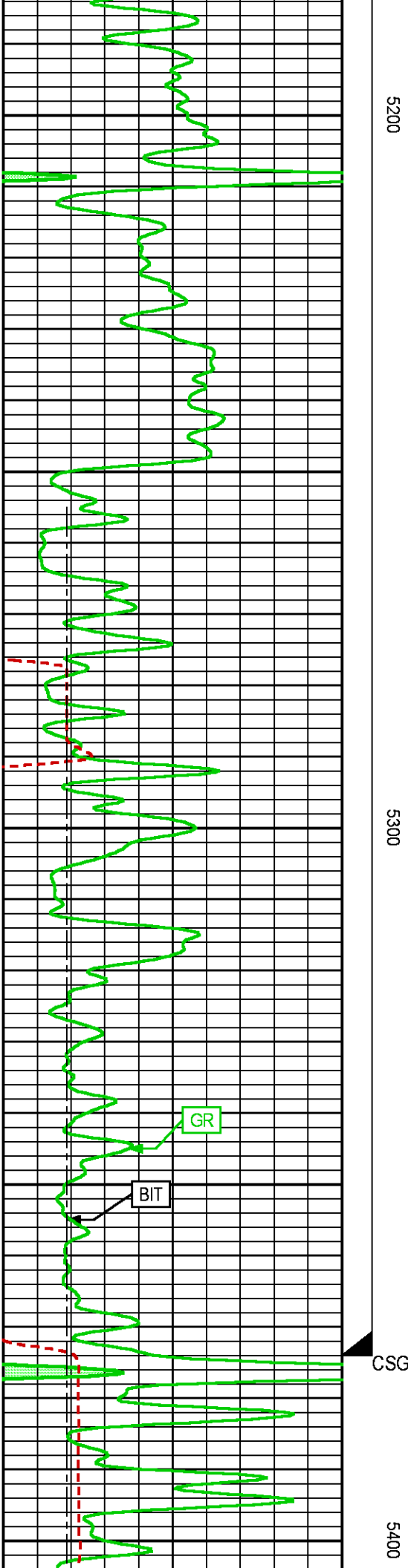
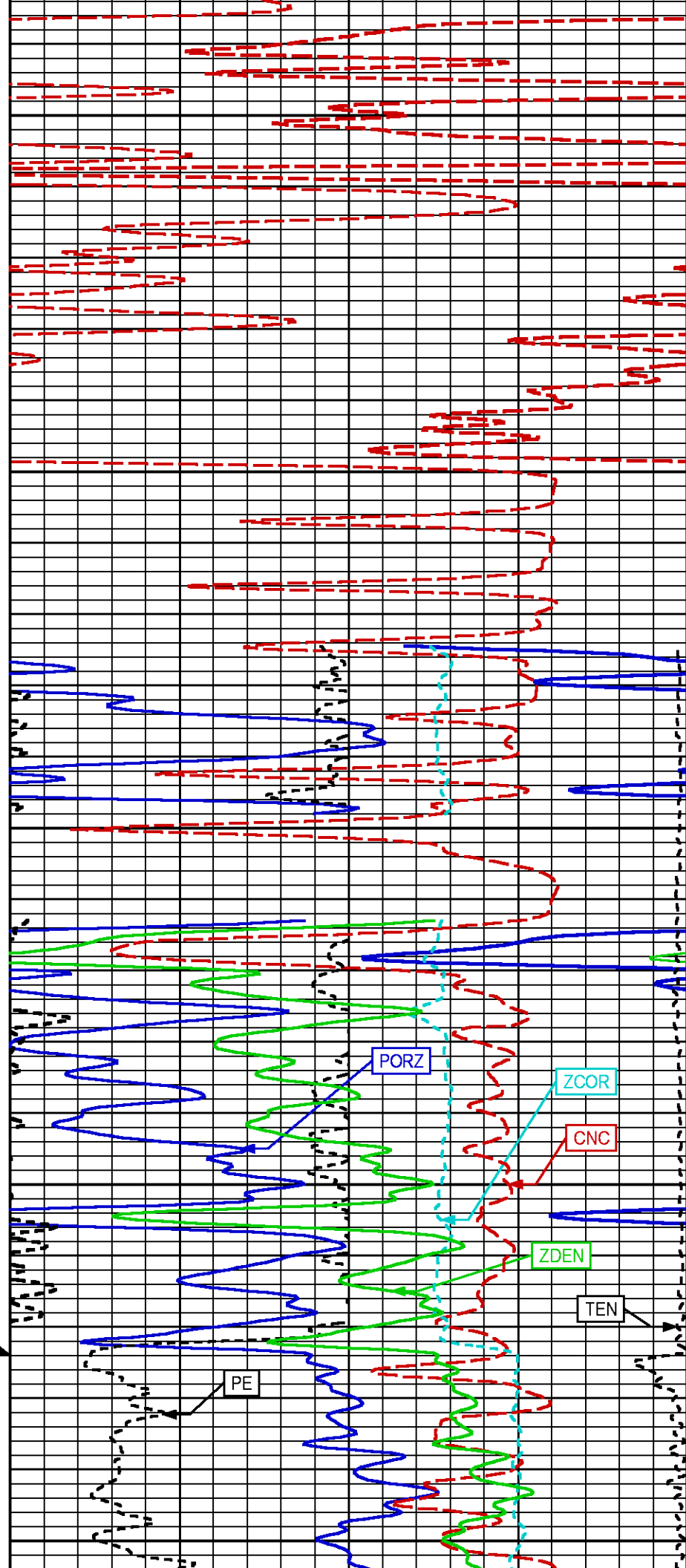


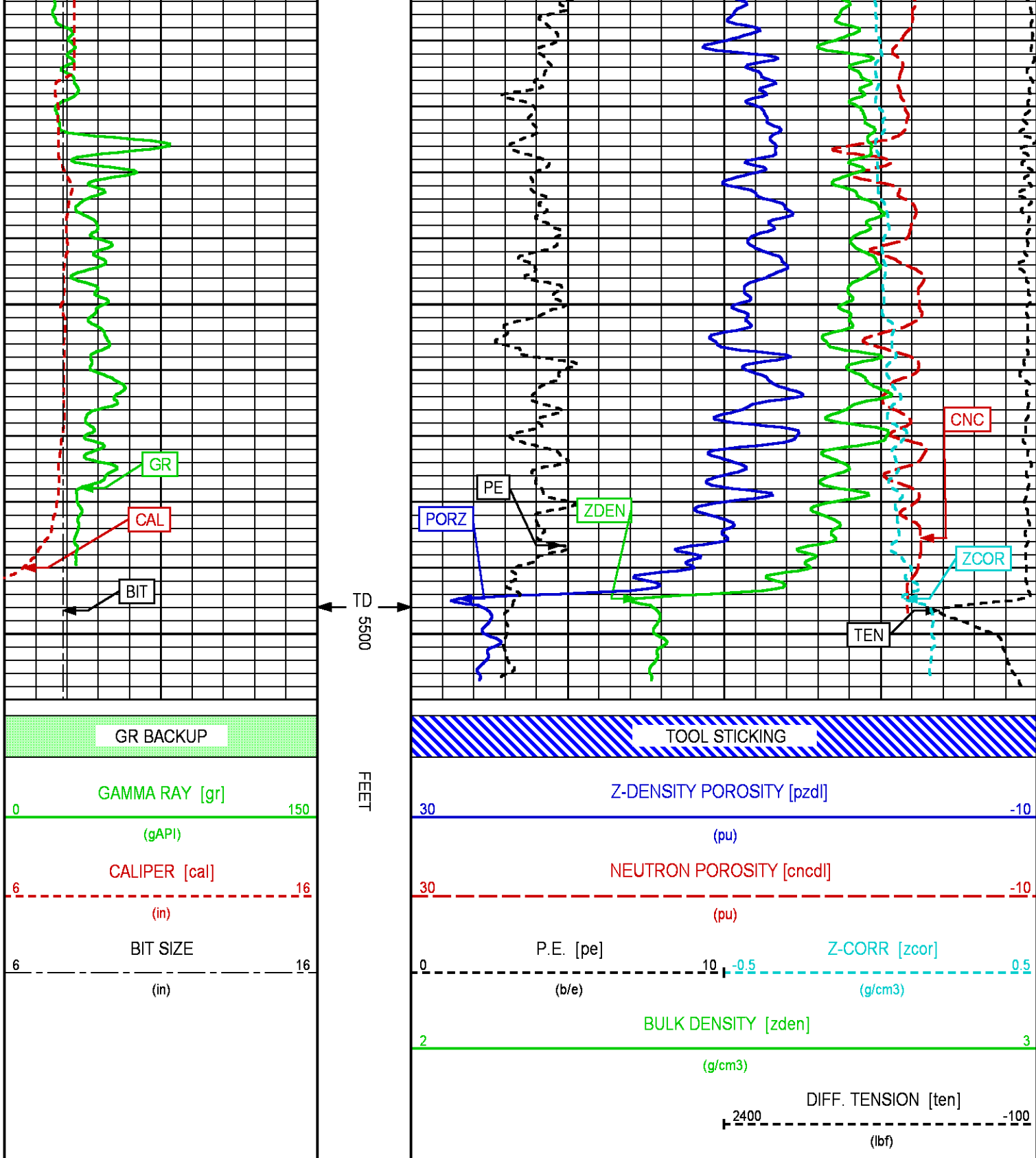


5000

5100







DENSITY/NEUTRON LOG - REPEAT

PARAMETER AND FILTER SUMMARY REPORT

File:	/dat1a/90179J/n970a04.prm			
LOGGING MODE:	DEPTH	DIRECTION:	UP	
TOP DEPTH:	5254.000 ft	BOTTOM DEPTH:	5501.133 ft	

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR MED RES	FILTER ()	medium (1)		TOP	BOTTOM
CALIPER	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
CN MED RES	FILTER ()	medium (1)		"	"
ZDL MED RES	FILTER (hrd1*)	medium		"	"
	FILTER (hrd1s*)	medium		"	"
	FILTER (hrd2*)	medium		"	"
	FILTER (hrd2s*)	medium		"	"
	FILTER (soft*)	medium		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	0.000	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CN MATRIX	2436 MATRIX	LIMESTONE		TOP	BOTTOM
CN BOREHOLE CORRECTION	SALINITY	0	ppm	"	"
	BOREHOLE CORRECTION	ON		"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	Air Filled Borehole	NO		TOP	BOTTOM
	RHOmatrix	2.710	g/cm3	"	"
	RHOfluid	1.000	g/cm3	"	"

CURVE DESCRIPTION REPORT

CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Sep 3 00:37:44 2014	BIT SIZE
F1:CAL	Sep 3 00:37:44 2014	CALIPER
F1:CNC	Sep 3 00:37:44 2014	BOREHOLE SIZE CORRECTED COMPENSATED NEUTRON POROSITY
F1:GR	Sep 3 00:37:44 2014	GAMMA RAY
F1:PE	Sep 3 00:37:44 2014	PHOTO ELECTRIC CROSS-SECTION
F1:PORZ	Sep 3 00:37:44 2014	POROSITY FOR SELECTABLE MATRIX
F1:TEN	Sep 3 00:37:44 2014	DIFFERENTIAL TENSION
F1:ZCOR	Sep 3 00:37:44 2014	DENSITY CORRECTION
F1:ZDEN	Sep 3 00:37:44 2014	FORMATION BULK DENSITY

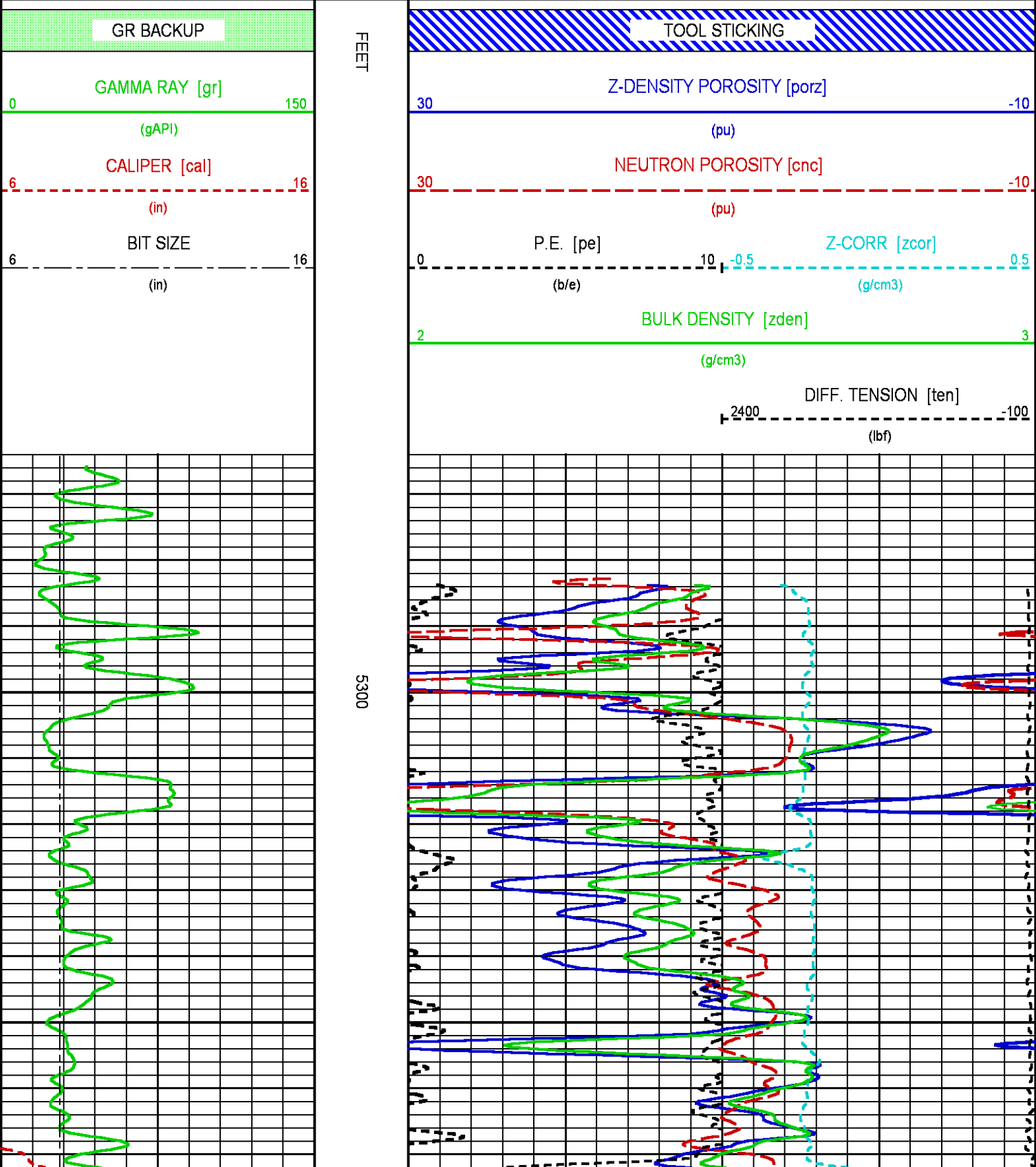
CURVE MEASURE POINT OFFSET

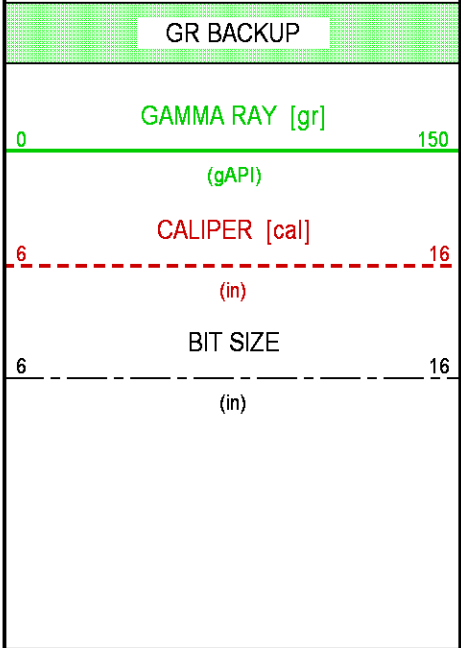
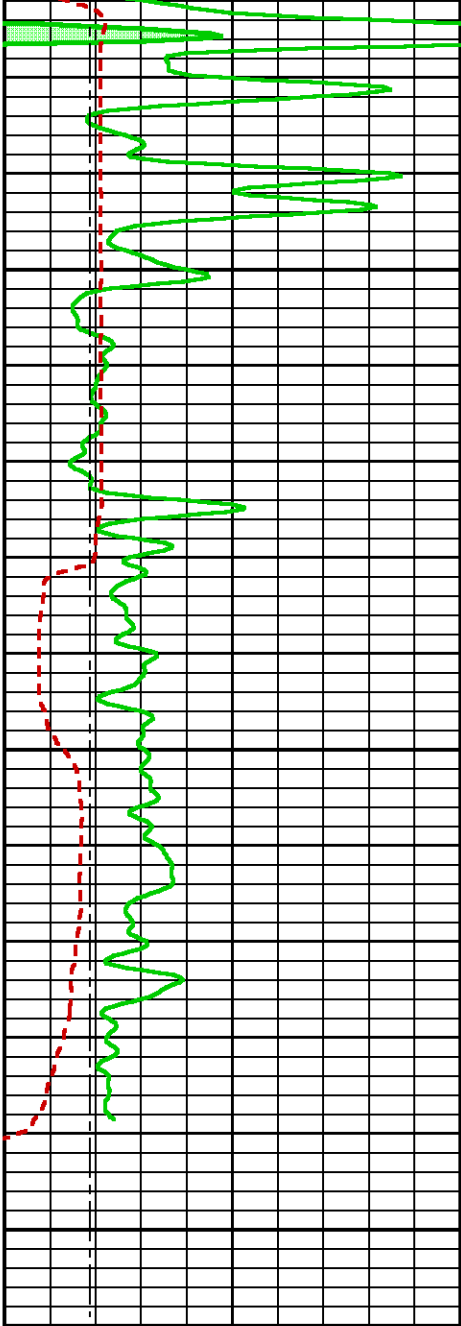
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
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BIT	0.00	GR	18.62	TEN	0.00
CAL	1.75	PE	1.75	ZCOR	1.75
CNC	11.00	PORZ	1.75	ZDEN	1.75

Presentation : cas6685:/dat1a/90179J/focus_zdl_cn_REPEAT.fvpdf [5"/100' Scale]
Plot Interval : 5264.25 - 5513.75 Feet

Data File 1 : F1 : cas6685:/dat1a/90179J/n970a04_ZDLCN_REP.xtf
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Company : PRONGHORN OPERATING LLC
Well : EVAN #1
Field : SPUR
File Interval : 5244 - 5515 Feet
OCT : n970a

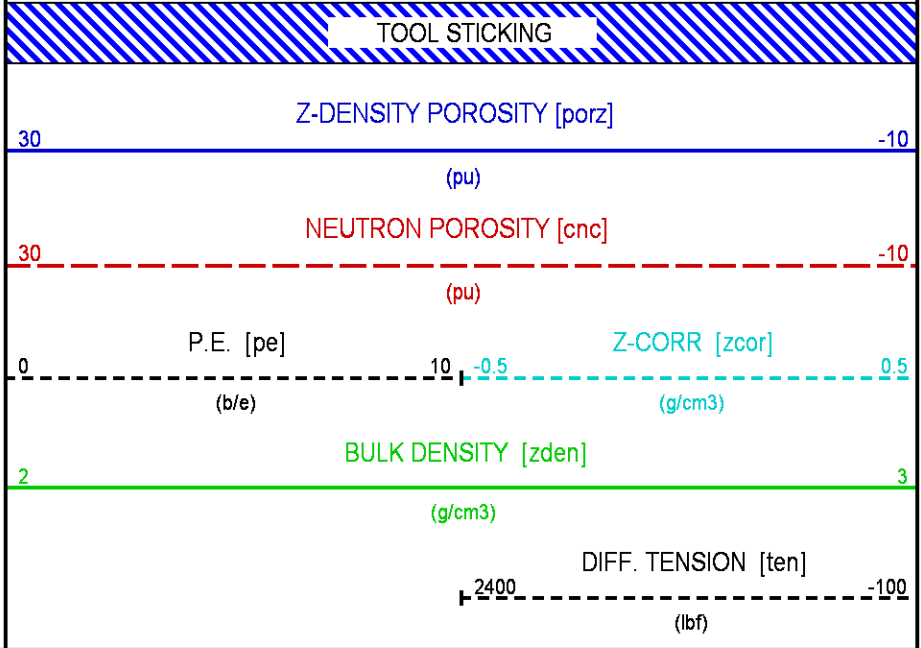
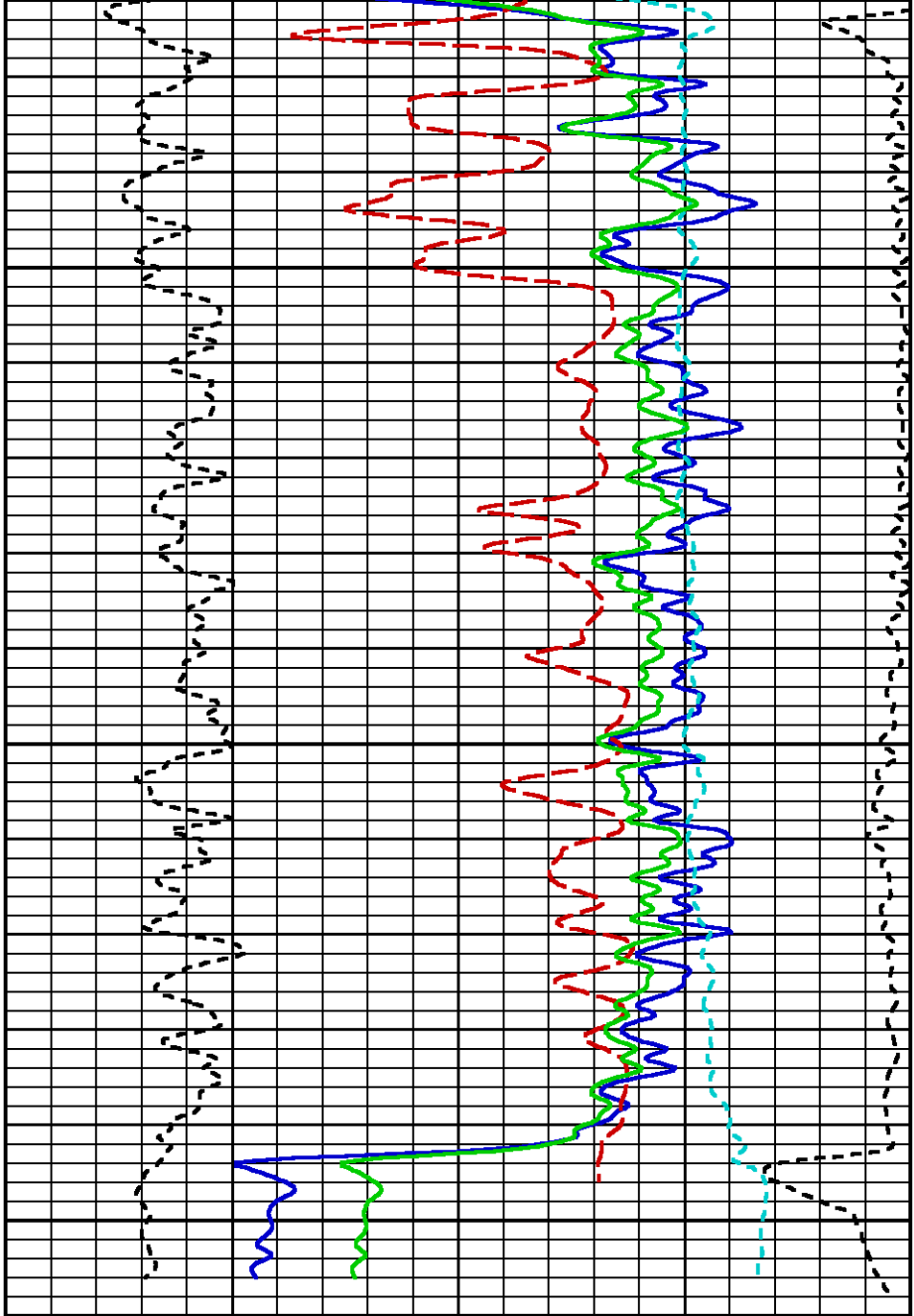




5400

5500

FEET



RESISTIVITY LOG - 5"/100FT SCALE

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 2

Plotted: Wed Sep 3 02:20:05 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/90179J/n970a03.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5239.250 ft BOTTOM DEPTH: 5501.456 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR LOW RES	FILTER (.i)	medium (1)		TOP	BOTTOM
GR MED RES	FILTER ()	medium (1)		"	"
GR HIGH RES	FILTER (.h)	light		"	"
TENSION	FILTER ()	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
SP-SPDH	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
BIT SIZE	BIT SIZE	7.875	in	TOP	BOTTOM
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE FIXED SIZE		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED		"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	"	"
	MUD SAMPLE RES	1.000	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"

ACCELERATION PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP	BOTTOM

HDIL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP	BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		"	"
	ABC to CALCULATE	MUD CONDUCTIVITY		"	"
	STANDOFF	1.50	in	"	"
	TOOL POSITION	ECCENTERED		"	"
	Rmud MULTIPLIER	1.000		"	"

CURVE DESCRIPTION REPORT

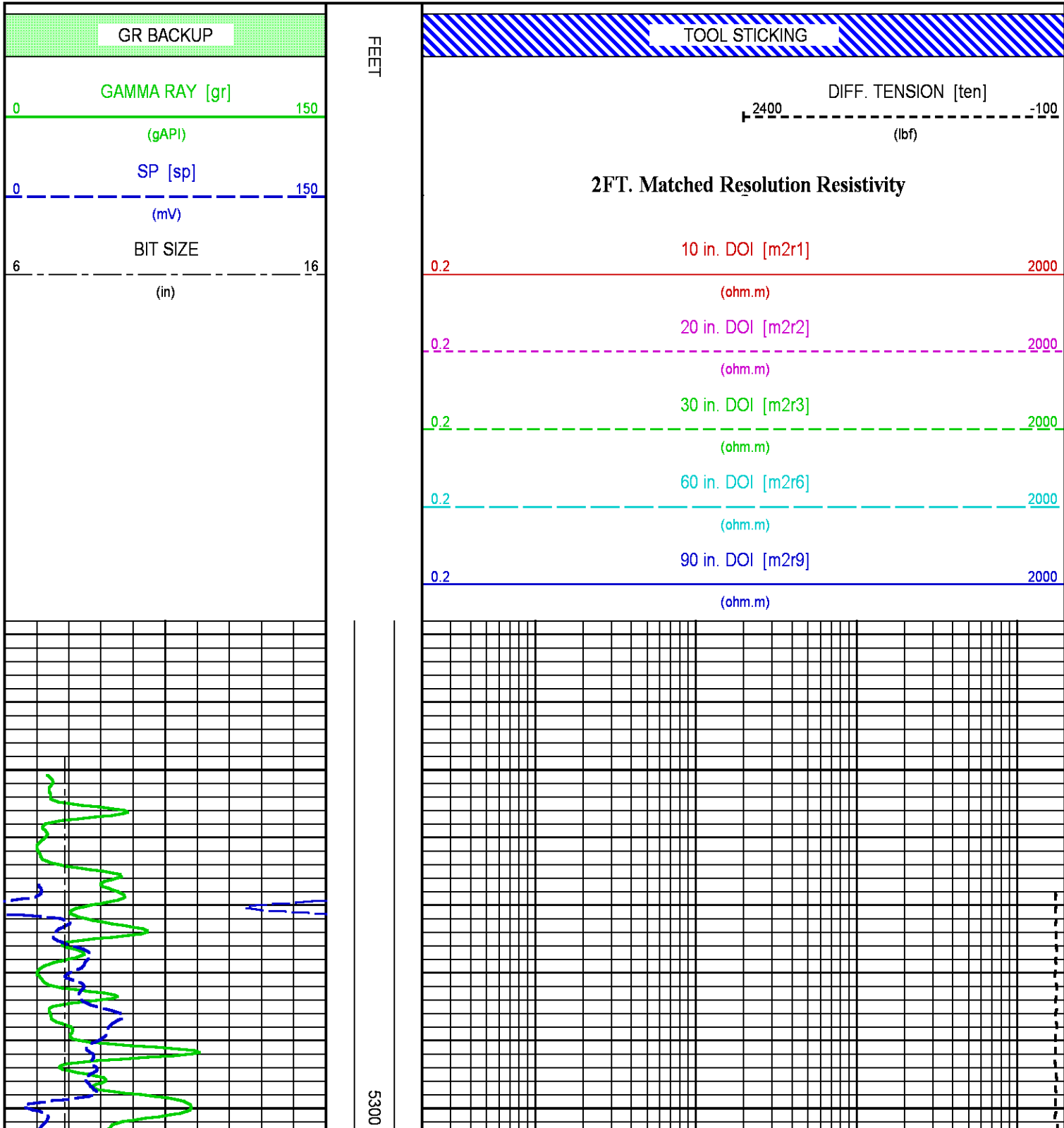
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Sep 2 23:06:33 2014	BIT SIZE
F1:GR	Sep 2 23:06:33 2014	GAMMA RAY
F1:M2R1	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Sep 2 23:06:33 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:SP	Sep 2 23:06:33 2014	SPONTANEOUS POTENTIAL
F1:TEN	Sep 2 23:06:33 2014	DIFFERENTIAL TENSION

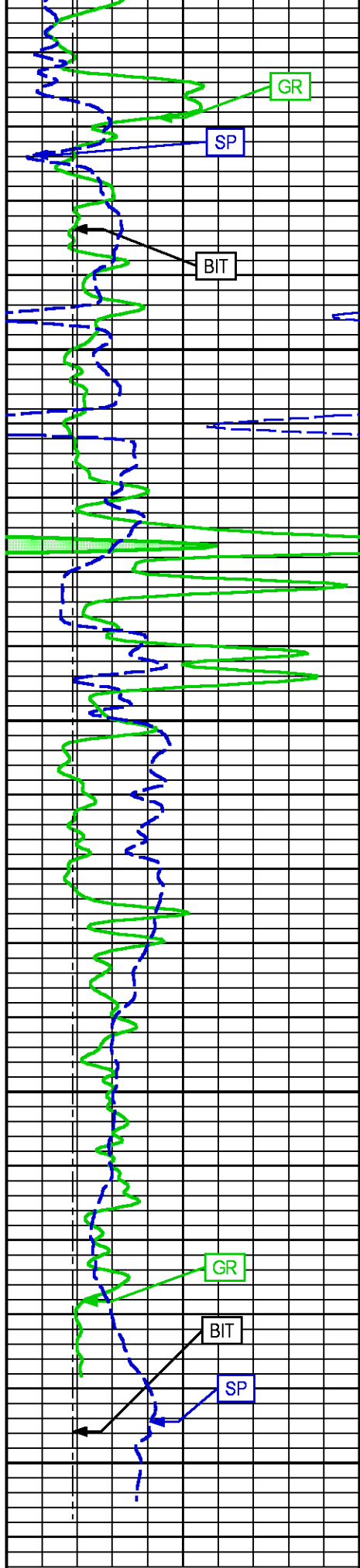
CURVE MEASURE POINT OFFSET

CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	M2R2	2.75	M2R9	2.75		
GR	17.50	M2R3	2.75	SP	1.25		
M2R1	2.75	M2R6	2.75	TEN	0.00		

Presentation : cas6685:/dat1a/90179J/hdil_res2.fvpdf [5"/100' Scale]
 Plot Interval : 5228.75 - 5513.5 Feet

Data File 1 : F1 : cas6685:/dat1a/90179J/n970a03_HDIL.xtf
 Created On : Sep 2 23:06:33 2014
 Company : PRONGHORN OPERATING LLC
 Well : EVAN #1
 Field : SPUR
 File Interval : 5228.75 - 5513.5 Feet
 OCT : n970a

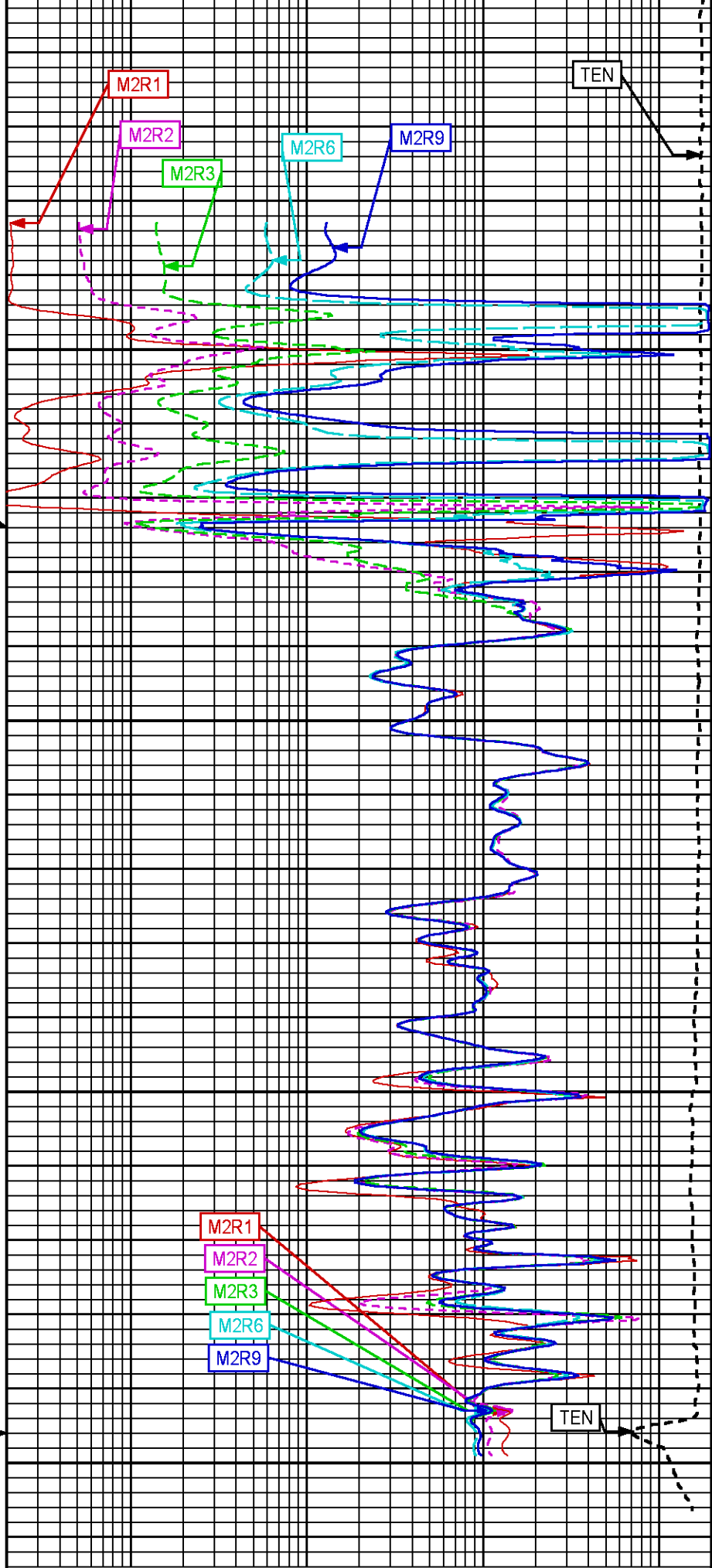




CSG

5400

TD 5500



TEN

M2R1

M2R2

M2R3

M2R6

M2R9

M2R1

M2R2

M2R3

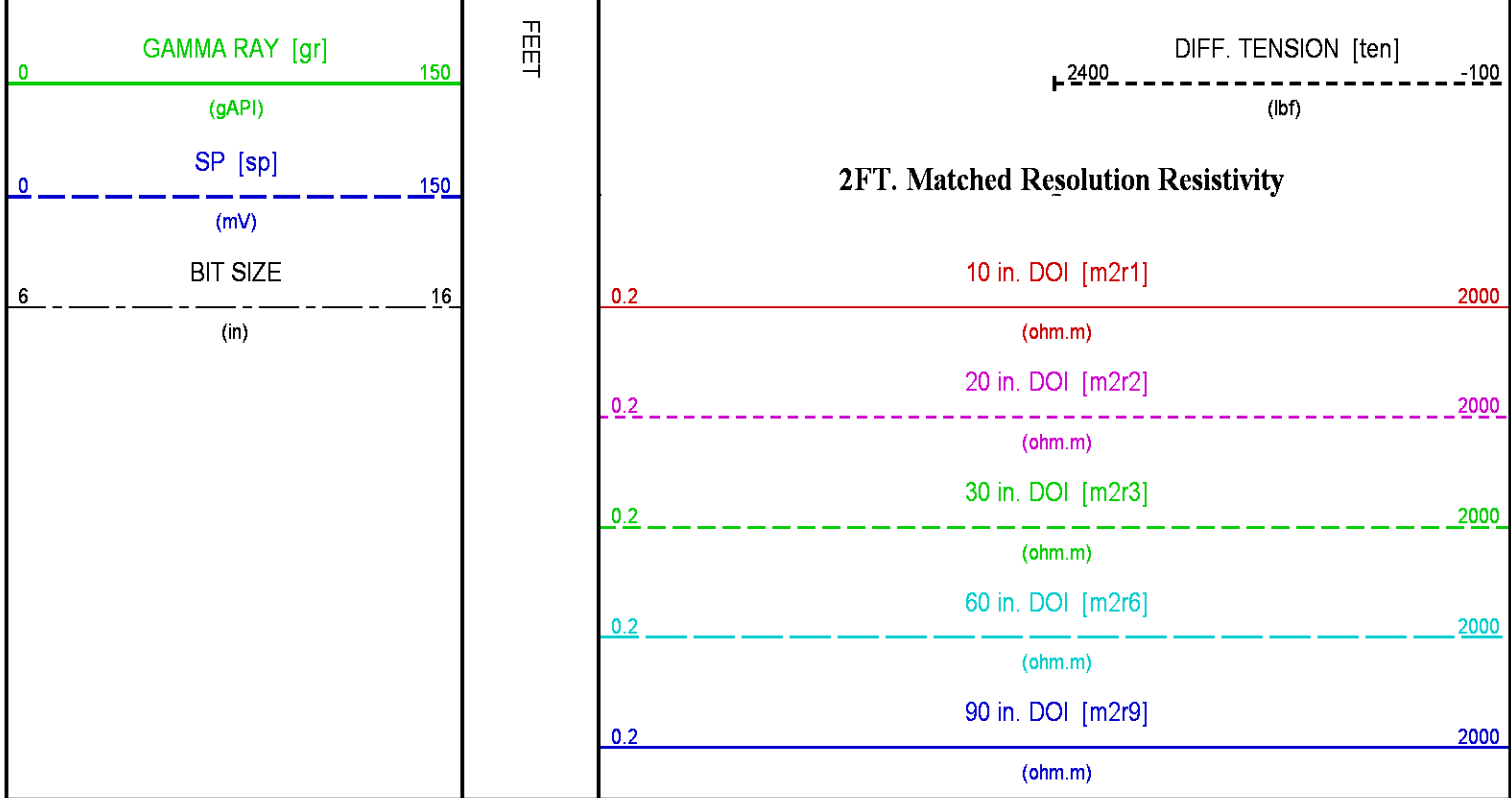
M2R6

M2R9

TEN

GR BACKUP

TOOL STICKING



RESISTIVITY LOG - REPEAT

ECLIPS 6.2i ECLIPS General Release Rel 6.2i Wed Jun 12 12:21:40 CDT 2013
Updates: 1 Patches: 2

Plotted: Tue Sep 2 23:18:18 2014

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/90179J/n970a02.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5246.500 ft BOTTOM DEPTH: 5501.810 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
GR LOW RES	FILTER (.i)	medium (1)		TOP	BOTTOM
GR MED RES	FILTER ()	medium (1)		"	"
GR HIGH RES	FILTER (.h)	light		"	"
CALIPER	FILTER ()	medium (1)		"	"
SPEED	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
	FILTER (.i)	medium (1)		"	"
	FILTER (.j)	medium (1)		"	"
SP-SPDH	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	0.000	in	TOP	BOTTOM
BIT SIZE	BIT SIZE	7.875	in	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (mbh*)	USE FIXED SIZE		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (mbh*)	7.875	in	"	"

BH MUD RESISTIVITY SOURCE	RMUD SOURCE (HDIL)	TOOL MEASURED	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	"
	MUD SAMPLE RES	1.000	ohm.m	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	"
	at BH REF DEPTH	0.0	ft	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"

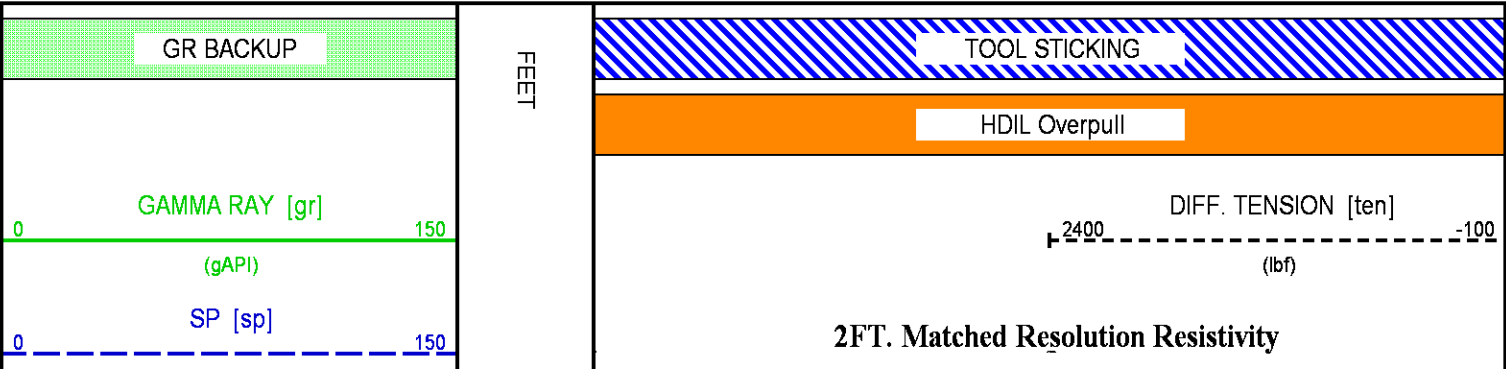
ACCELERATION PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
ACCEL CORR SWITCH	ACCEL DEPTH CORR	CORRECTION ON		TOP BOTTOM

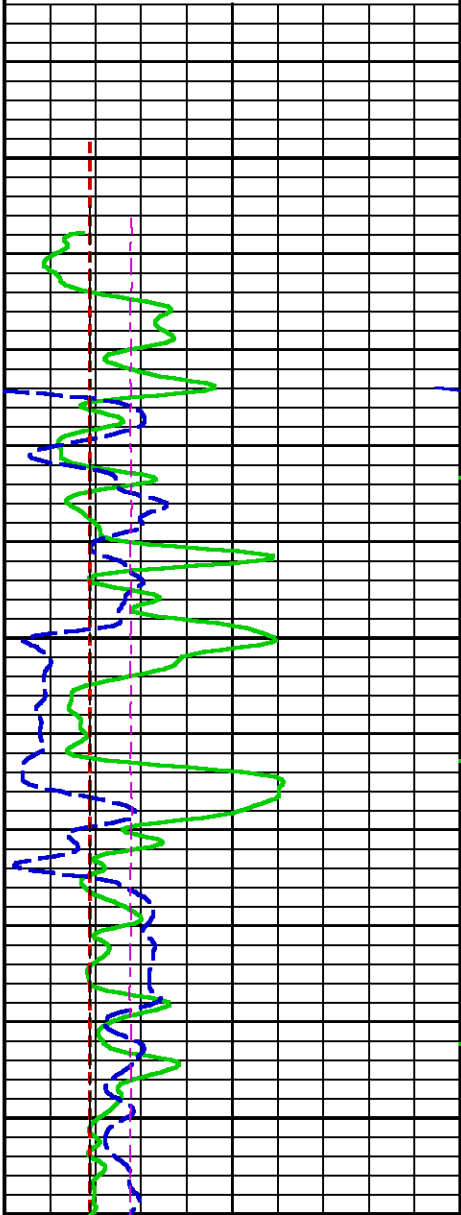
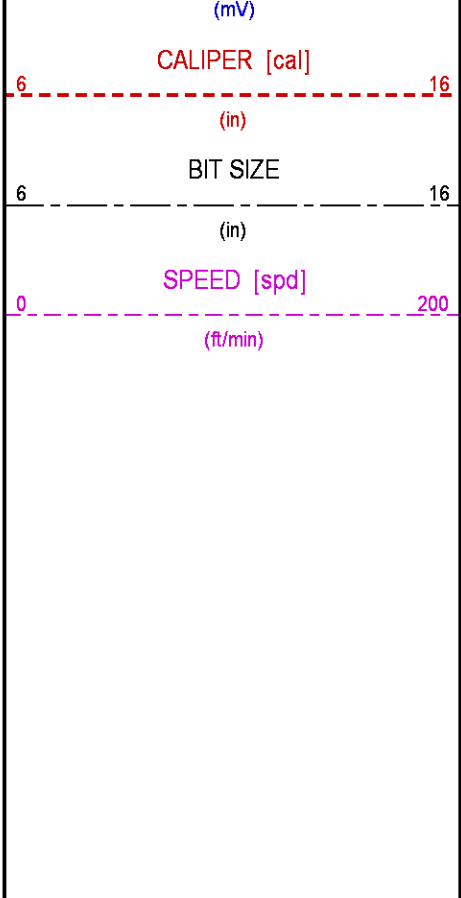
HDIL PROCESSING				
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
HDIL TEMPERATURE CORRECTION	TEMP CORRECTION	ON		TOP BOTTOM
ADAPTIVE BOREHOLE CORRECTION	ABC PROCESSING	ON		" "
	ABC to CALCULATE	MUD CONDUCTIVITY		" "
	STANDOFF	1.50	in	" "
	TOOL POSITION	ECCENTERED		" "
	Rmud MULTIPLIER	1.000		" "
HDIL DIFF TEN LIMIT	DIFF TENSION LIMIT	500		" "

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:BIT	Sep 2 22:58:49 2014	BIT SIZE
F1:BVOL	Sep 2 22:58:49 2014	BOREHOLE VOLUME
F1:CAL	Sep 2 22:58:49 2014	CALIPER
F1:CVOL	Sep 2 22:58:49 2014	CEMENT VOLUME
F1:GR	Sep 2 22:58:49 2014	GAMMA RAY
F1:M2R1	Sep 2 22:58:49 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 10-INCH DOI
F1:M2R2	Sep 2 22:58:49 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 20-INCH DOI
F1:M2R3	Sep 2 22:58:49 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 30-INCH DOI
F1:M2R6	Sep 2 22:58:49 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 60-INCH DOI
F1:M2R9	Sep 2 22:58:49 2014	VERTICAL 2-FOOT RESOLUTION MATCHED RESISTIVITY, 90-INCH DOI
F1:QHDL	Sep 2 22:58:49 2014	QUALITY FOR DIFFERENTIAL TENSION PULLS FOR HDIL
F1:SP	Sep 2 22:58:49 2014	SPONTANEOUS POTENTIAL
F1:SPD	Sep 2 22:58:49 2014	SPEED
F1:TEN	Sep 2 22:58:49 2014	DIFFERENTIAL TENSION

CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
BIT	0.00	M2R1	2.75	M2R6	2.75	SP	1.25
CAL	26.75	M2R2	2.75	M2R9	2.75	SPD	0.00
GR	17.50	M2R3	2.75	QHDL	5.25	TEN	0.00

Presentation	: cas6685:/dat1a/90179J/hdil_res2_REPEAT.fvpdf [5"/100' Scale]
Plot Interval	: 5235.75 - 5517 Feet
Data File 1	: F1 : cas6685:/dat1a/90179J/n970a02_HDILREP.xtf
Created On	: Sep 2 22:58:49 2014
Company	: PRONGHORN OPERATING LLC
Well	: EVAN #1
Field	: SPUR
File Interval	: 5235.75 - 5517 Feet
OCT	: n970a





BVOL

10

100

1000

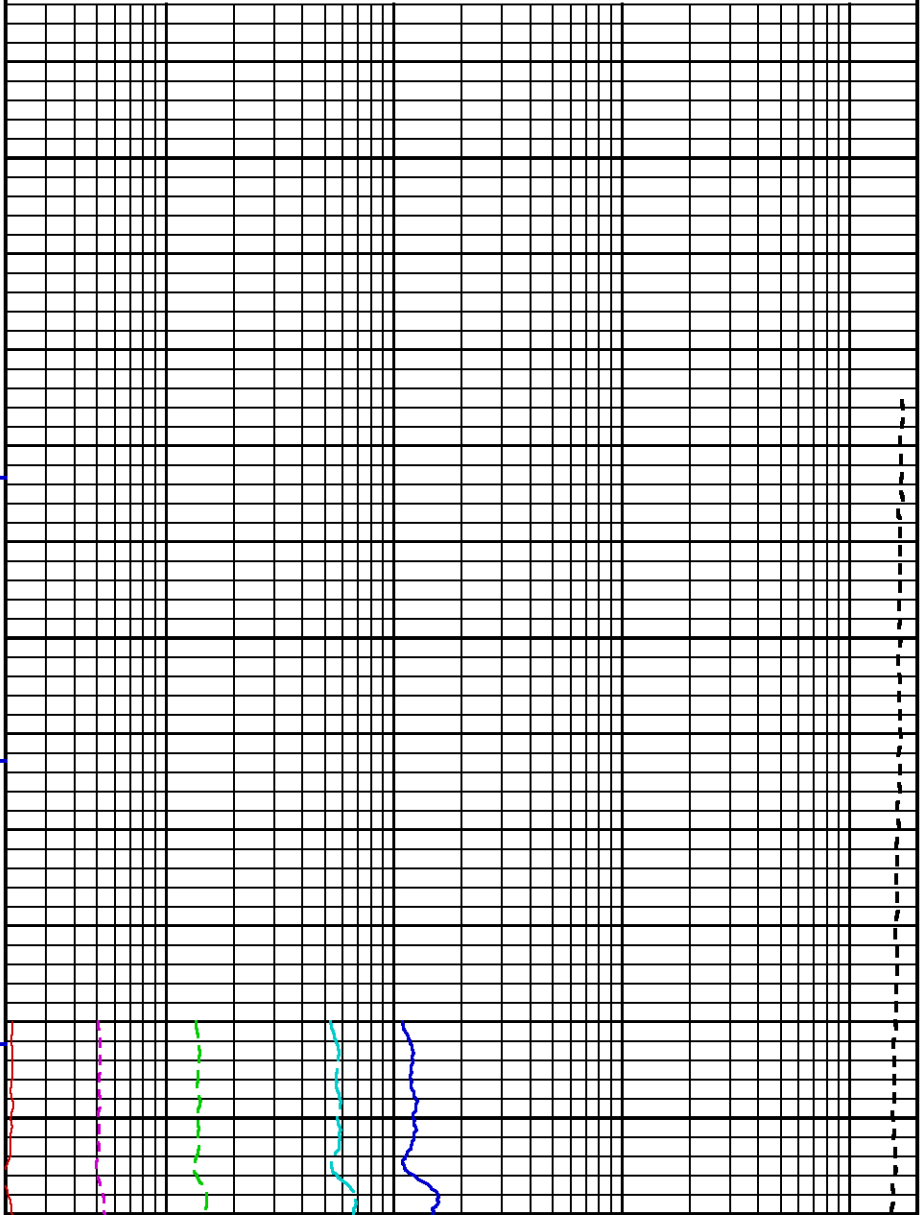
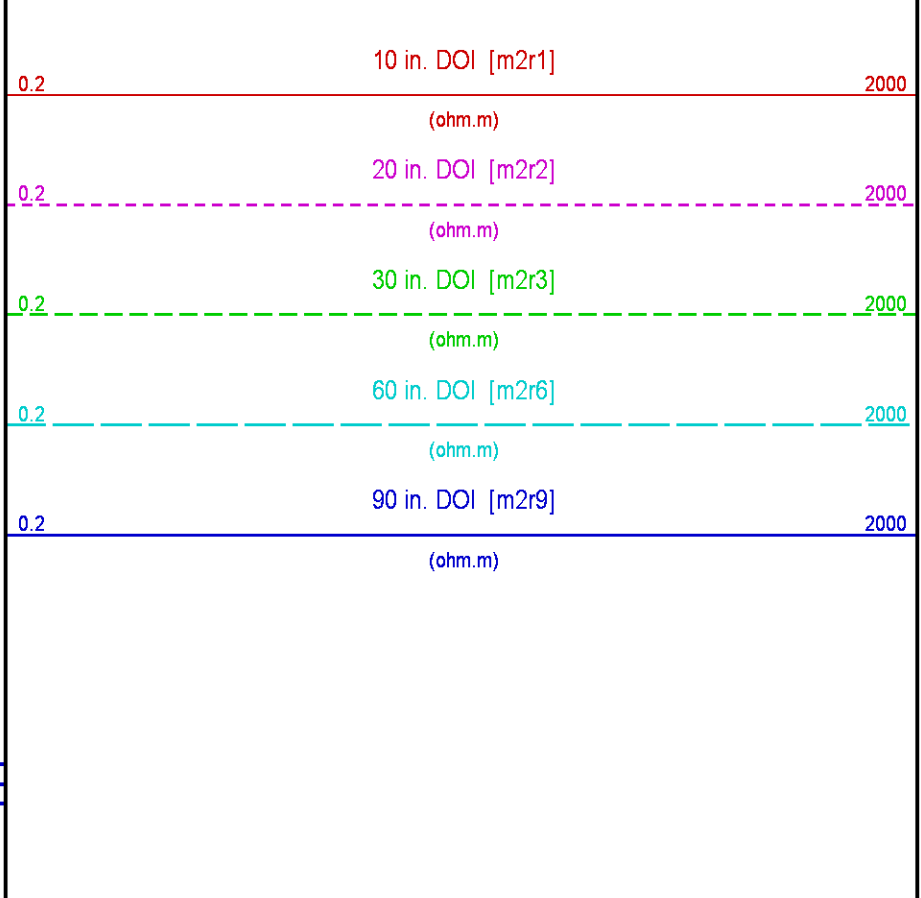
CVOL

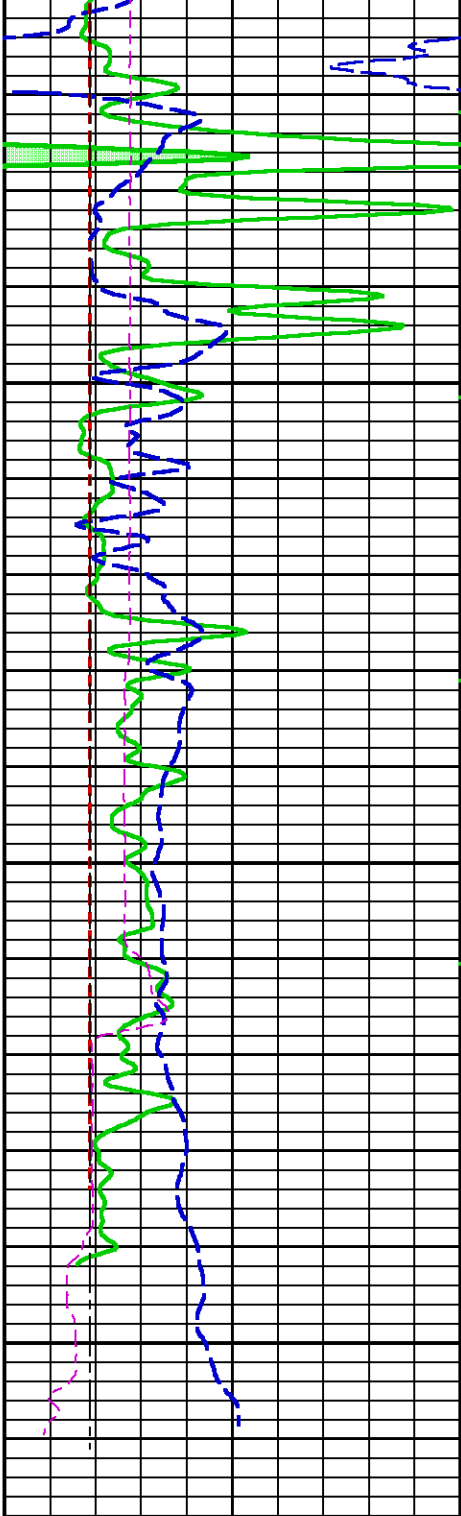
10

100

1000

5300



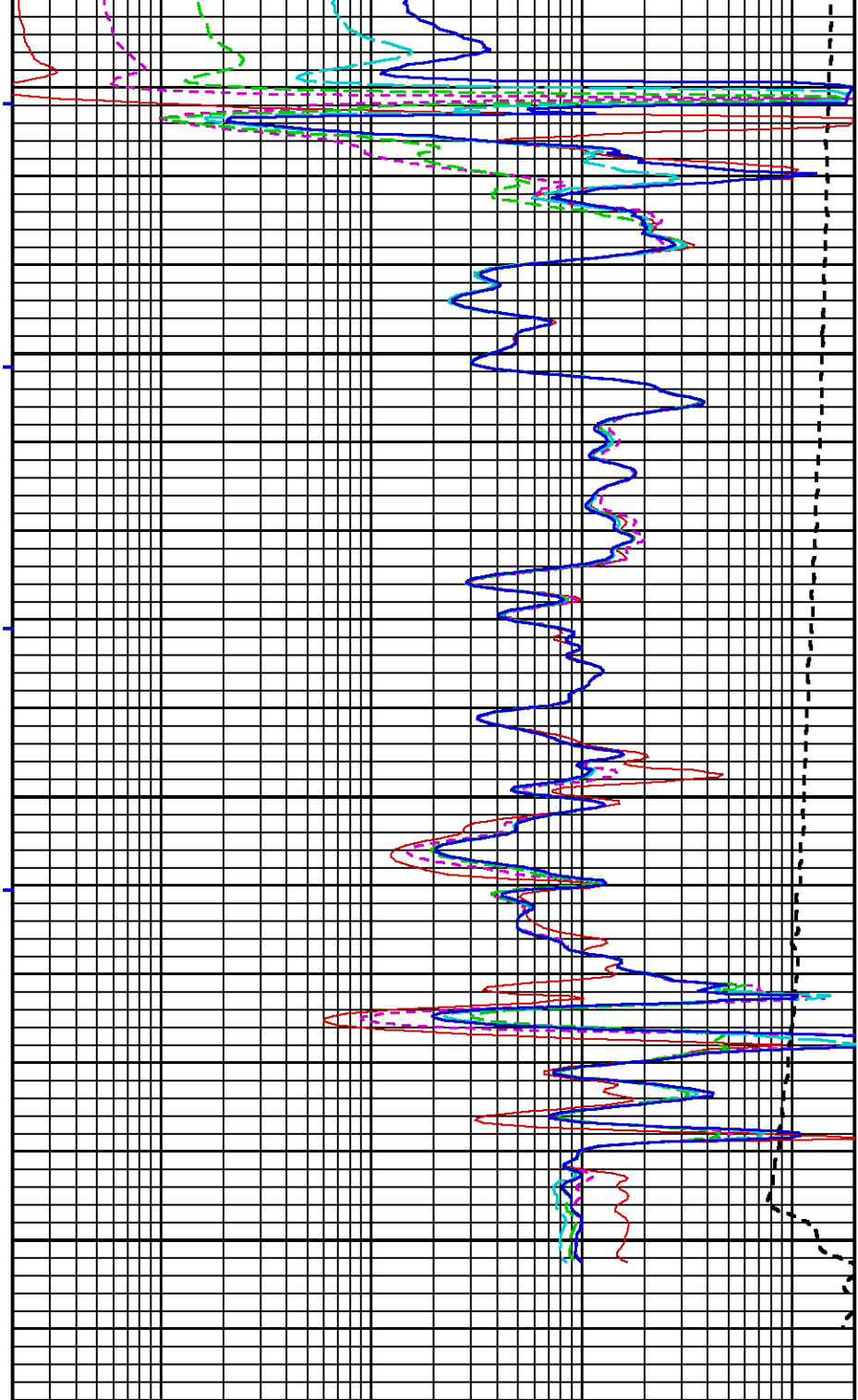
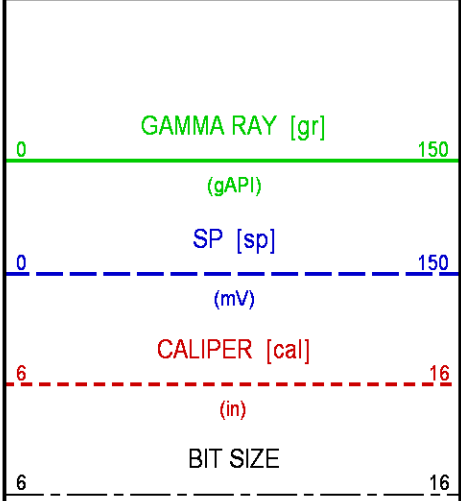


5400

5500

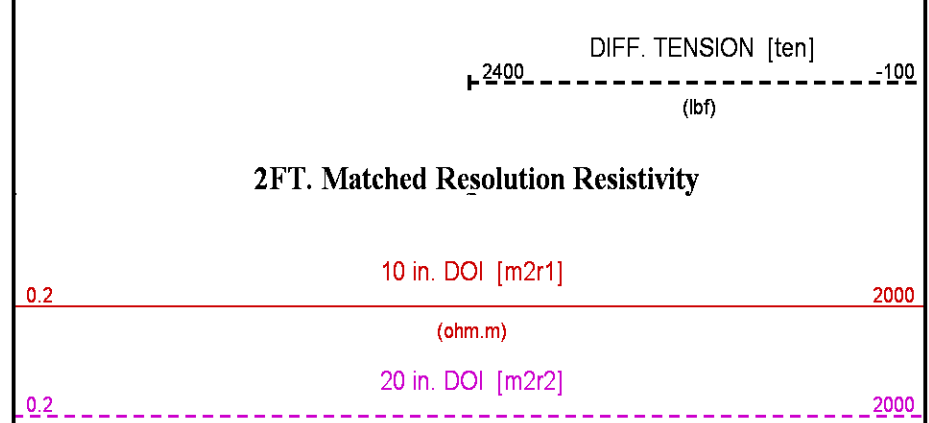
FEET

GR BACKUP



TOOL STICKING

HDIL Overpull



(in)

SPEED [spd]

0

200

(ft/min)

(ohm.m)

30 in. DOI [m2r3]

0.2

2000

(ohm.m)

60 in. DOI [m2r6]

0.2

2000

(ohm.m)

90 in. DOI [m2r9]

0.2

2000

(ohm.m)

BVOL

10
100
1000

CVOL

10
100
1000**CALIBRATION / VERIFICATION SUMMARY**

Source File: /dat1a/90179J/n970a.tp1

TTMA PRIMARY CALIBRATION SUMMARY

TOOL #: 3980XA 10120299

DATE/TIME PERFORMED: Wed Jul 31 10:29:42 2013

UNIT #: 3880TA HL6670

ACCEL #: 3980XA 10120299

ACCEL CAL DATE: 14:43 05/21/2004

GAIN

OFFSET

(ohm.m)

Rm K Factors

0.14570

-0.01679

Sig Low

Sig High

Mult Factor

Add Factor

Engr Low

Engr High

(ohm)

(ohm)

(ohm)

(ohm)

Rm Measurements

0.25

9.97

1.003059

0.000362

0.25

10.00

0.20 0.30

8.00 12.00

TTMA BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10120299

DATE/TIME PERFORMED: Tue Sep 2 22:13:40 2014

DAYS SINCE CAL: 398

UNIT #: 3885TC 6685

CHT

(lbf)

MUD TEMP

(degF)

RES M Q

(ohm)

ACCEL Q

CAL	18825	498.18	9.97	997.82
	18030 19630	491.36 505.76	8.00 12.00	980.00 1020.00
ZERO	-23331	-436.02	0.249	997.802
	-24131 -22531	-443.20 -428.80	0.200 0.300	980.000 1020.000

TTMA AFTER LOG VERIFICATION SUMMARY

TOOL #: 3980XA 10120299 DATE/TIME PERFORMED: Tue Sep 2 23:32:16 2014 DAYS SINCE CAL: 398

UNIT #: 3885TC 6685

	CHT (lbf)	MUD TEMP (degF)	RES M Q (ohm)	ACCEL Q
CAL	18836	500.15	9.95	998.09
	18030 19630	491.36 505.76	8.00 12.00	980.00 1020.00
ZERO	-23331	-436.02	0.250	997.010
	-24131 -22531	-443.20 -428.80	0.200 0.300	980.000 1020.000

GR PRIMARY CALIBRATION SUMMARY

Tool #: 3518EG 10139870 DATE/TIME PERFORMED: Fri Aug 22 15:39:25 2014

Unit #: 3885TC 6685 Jig Series: 4702NK VBA-905

Background	Calibrator ON	Jig Value (gAPI)	Mult	Background (gAPI)	Calibrator ON (gAPI)
18.03	800.21	185	0.237	4.26	189.26
			0.230 0.280		

GR BEFORE LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870 DATE/TIME PERFORMED: Tue Sep 2 22:13:58 2014 DAYS SINCE CAL: 11

UNIT #: 3885TC 6685 Jig: INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67	71.17	1361.74
929.00 1027.00	536.00	1237.00 1512.00

GR AFTER LOG VERIFICATION SUMMARY

TOOL #: 3518EG 10139870 DATE/TIME PERFORMED: Tue Sep 2 23:32:46 2014 DAYS SINCE CAL: 11

UNIT #: 3885TC 6685 Jig: INTRNL N/A

Counts	TEMP (degF)	HV (V)
976.67	143.10	1372.83

929.00	1027.00	536.00	1237.00	1512.00
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CN PRIMARY CALIBRATION SUMMARY

TOOL #: 2436XA 10137930

DATE/TIME PERFORMED: Tue Jul 1 11:37:32 2014

UNIT #: 3885TC 6685

CALIBRATOR #: 2437XB 112674

SOURCE #: 4718XA N-0897

SSN DT CPS	LSN DT CPS	SSN/LSN	MCF	CNRATIO	CN PU
4694.62	793.23	5.91832	0.96936 0.95000 1.05000	5.73700	25.241

CN BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10137930

DATE/TIME PERFORMED: Tue Sep 2 23:54:57 2014

DAYS SINCE CAL: 63

UNIT #: 3885TC 6685

CALIBRATOR #: INTRNL N/A

SSN DT CPS	LSN DT CPS	SSN/LSN	TEMP (degF)	HV (V)	LV (V)
991.41	993.42	0.99797 0.95000 1.05000	61.7 280.4	1355.7 1250.0 1450.0	4.612 4.300 5.000

CN AFTER LOG VERIFICATION SUMMARY

TOOL #: 2436XA 10137930

DATE/TIME PERFORMED: Wed Sep 3 01:31:42 2014

DAYS SINCE CAL: 63

UNIT #: 3885TC 6685

CALIBRATOR #: INTRNL N/A

SSN DT CPS	LSN DT CPS	SSN/LSN	TEMP (degF)	HV (V)	LV (V)
991.41	993.42	0.99797 0.95000 1.05000	146.6 280.4	1368.8 1250.0 1450.0	4.612 4.300 5.000

CAL PRIMARY CALIBRATION SUMMARY

TOOL #: 2223XA 10123024

DATE/TIME PERFORMED: Tue Aug 5 09:45:04 2014

UNIT #: 3885TC 6685

	SIZE (in)	VALUE	MULTIPLIER	ADD
SMALL RING (Arm)	7.000	1481.6		
LARGE RING (Arm)	11.000	2738.0	0.00318	2.28303

PAD CLOSED

1320.0

0.00250

-3.30000

CAL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10123024

DATE/TIME PERFORMED: Wed Sep 3 00:31:45 2014

DAYS SINCE CAL: 28

UNIT #: 3885TC 6685

	VALUE	MULTIPLIER	ADD	SIZE (in)
ARM	744.4	0.00318	2.28303	4.7
PAD	1580.0	0.00250	-3.30000	0.6

	ACTUAL (in)	MEASURED (in)
DIAMETER (arm+pad)	4.950	5.0
		4.5 5.3

CAL AFTER LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10123024

DATE/TIME PERFORMED: Wed Sep 3 00:55:17 2014

DAYS SINCE CAL: 28

UNIT #: 3885TC 6685

	VALUE	MULTIPLIER	ADD	SIZE (in)
ARM	748.0	0.00318	2.28303	4.7
PAD	1524.0	0.00250	-3.30000	0.5

	ACTUAL (in)	MEASURED (in)
DIAMETER (arm+pad)	4.950	4.9
		4.5 5.3

ZDL PRIMARY CALIBRATION SUMMARY

TOOL: 2223XA 10123024

DATE/TIME PERFORMED: Tue Aug 5 10:25:19 2014

UNIT: 3885TC 6685

CALB BLKS: 2225XA 094292F

CS SRC: 4705XA 16068B

PAD TYPE: PADTYP 7.5" PAD

SS CS PK (Channel)	LS CS PK (Channel)	SS_BKGD (cps)	LS BKGD (cps)
223.7	223.9	1348.7	1362.2
220.0 230.0	220.0 230.0		

	SS (cps)	LS (cps)	SHR	DEN (g/cm3)	CORR (g/cm3)	PE (b/e)
MG (LO PE)	31746.7	11803.2	0.732 0.720 0.890	1.679	0.000	1.900
AL	19832.5	1318.8		2.667	-0.016	
AL + SHIM	27179.5	2291.6		2.558	0.098	
MG + SHIM (HI PE)	15604.0	5633.1	0.289 0.280 0.360			8.550
RATIO AL + SHIM/AL	1.37 1.30 1.40	1.74 1.60 1.80				
RATIO MG/AL	1.60 1.58 1.70	8.95 8.55 9.55				

ZDL BEFORE LOG VERIFICATION SUMMARY

TOOL #: 2223XA 10123024 DATE/TIME PERFORMED: Tue Sep 2 23:55:26 2014 DAYS SINCE CAL: 28

UNIT #: 3885TC 6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1 3332.1 3352.1	224.9 220.0 230.0	1351.0 1250.0 1550.0
SS	22354.8 22344.8 22364.8	224.2 220.0 230.0	1321.0 1250.0 1550.0
	LV (V)	PAD CURRENT (mA)	
	5.0 4.8 5.2	99.2 50.0 120.0	

ZDL AFTER LOG VERIFICATION SUMMARY

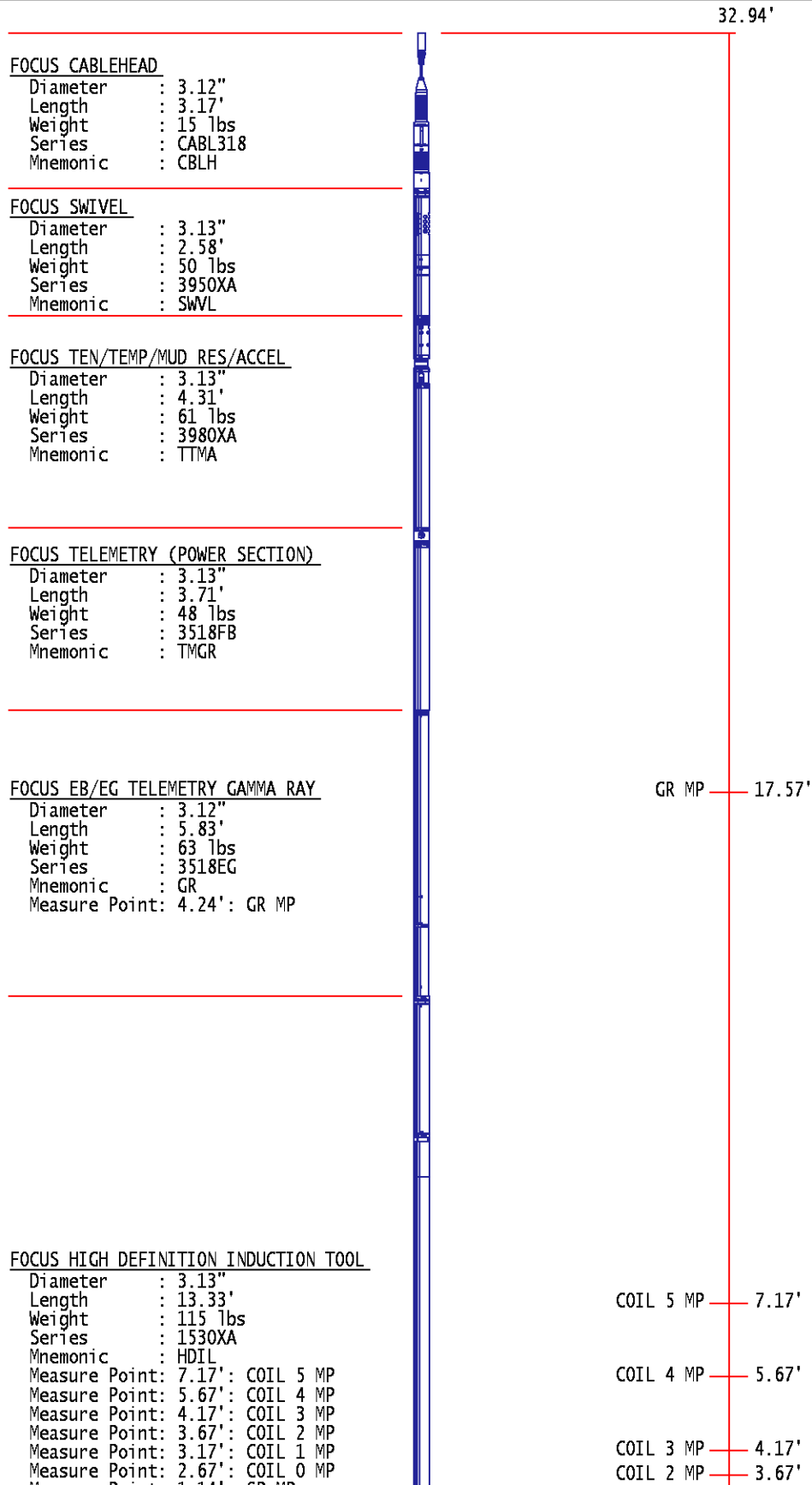
TOOL #: 2223XA 10123024 DATE/TIME PERFORMED: Wed Sep 3 00:54:51 2014 DAYS SINCE CAL: 28

UNIT #: 3885TC 6685

	TOTAL (cps)	CSPK (Channel)	HV (V)
LS	3342.1 3332.1 3352.1	224.3 220.0 230.0	1469.7 1250.0 1550.0
SS	22354.8 22344.8 22364.8	223.9 220.0 230.0	1340.7 1250.0 1550.0
	LV (V)	PAD CURRENT (mA)	
	4.9 4.8 5.2	105.6 50.0 120.0	

INSTRUMENT CONFIGURATION

Source File: /dat1a/90179J/n970aH-tdg



Measure Point: 1.14': SP MP

COIL 1 MP 3.17'
COIL 0 MP 2.67'

SP MP 1.14'

0.00'

TOTAL LENGTH: 32.94'
TOTAL WEIGHT: 352 lbs
MAX DIAMETER: 0'3.13"

INSTRUMENT CONFIGURATION

Source File: /dat1a/90179J/n970aRA-tdg

FOCUS CABLEHEAD

Diameter : 3.12"
Length : 3.17'
Weight : 15 lbs
Series : CABL318
Mnemonic : CBLH

FOCUS SWIVEL

Diameter : 3.13"
Length : 2.58'
Weight : 50 lbs
Series : 3950XA
Mnemonic : SWVL

FOCUS TEN/TEMP/MUD RES/ACCEL

Diameter : 3.13"
Length : 4.31'
Weight : 61 lbs
Series : 3980XA
Mnemonic : TTMA

FOCUS TELEMETRY (POWER SECTION)

Diameter : 3.13"
Length : 3.71'
Weight : 48 lbs
Series : 3518FB
Mnemonic : TMGR

FOCUS EB/EG TELEMETRY GAMMA RAY

Diameter : 3.12"
Length : 5.83'
Weight : 63 lbs
Series : 3518EG
Mnemonic : GR
Measure Point: 4.24': GR MP

FOCUS COMPENSATED NEUTRON

Diameter : 3.13"
Length : 4.81'
Weight : 65 lbs
Series : 2436XA
Mnemonic : CN
Measure Point: 1.92': LSN MP
SSN MP

34.23'

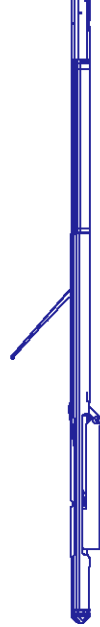
GR MP 18.86'

LSN MP 11.73'
SSN MP 11.27'

Measure Point: 1.46': SSN MP

FOCUS Z-DENSILOG

Diameter : 3.75"
Length : 9.58'
Weight : 200 lbs
Series : 2223XA
Mnemonic : ZDL
Measure Point: 4.33': CR1 MP
Measure Point: 1.69': LSD / CR2 MP
Measure Point: 1.29': SSD MP



CR1 MP 4.56'

LSD / CR2 MP 1.91'

SSD MP 1.52'

0.00'

BULL PLUG 3 1/8

TOTAL LENGTH: 34.23'
TOTAL WEIGHT: 504 lbs
MAX DIAMETER: 0'3.75"



COMPANY **PRONGHORN OPERATING LLC**
WELL **EVAN #1**
FIELD **SPUR**
COUNTY **CHEYENNE** STATE **COLORADO**

FILE NO: **US090179J**
API NO: **05017077610000**

LOCATION:
1980' FNL 1896' FEL
LAT 38.88446 LON -102.35200
SEC **7** TWP **13S** RGE **44W**

ELEVATIONS:
KB 4295 FT
DF
GL 4284 FT
DATE **02-SEP-2014**