



| | |
|----------------|--------------------|
| FILE NO: | COMPANY |
| CH132065 | LARAMIE ENERGY LLC |
| API NO: | WELL |
| 05077104700000 | BRUTON 30-16E |
| | FIELD |
| | VEGA |
| | COUNTY |
| | MESA |
| | STATE |
| | COLORADO |

| | | |
|---------|----------------------------|----------------|
| Version | LOCATION: | OTHER SERVICES |
| | SHL: 2614' FNL & 1869' FEL | RAL |
| | BHL: 1617' FSL & 1336' FEL | |
| | SEC 30 | TWP 9S |
| | | RGE 93W |

| | | | | | |
|-------------------|----|-----------|------------|----|---------|
| PERMANENT DATUM | GL | ELEVATION | 7643 FT | KB | 7673 FT |
| LOG MEASURED FROM | KB | 30 FT | ABOVE P.D. | DF | |
| DRILL. MEAS. FROM | KB | | | GL | 7643 FT |

| | |
|------------------------|------------------|
| DATE | 05-Feb-2018 |
| RUN | 1 |
| TRIP | 1 |
| SERVICE ORDER | US132065 |
| DEPTH DRILLER | 7775 FT |
| DEPTH LOGGER | 7725 FT |
| BOTTOM LOGGED INTERVAL | 7725 FT |
| TOP LOGGED INTERVAL | 2515 FT |
| TIME STARTED | 9:00 |
| TIME FINISHED | 14:30 |
| OPERATOR RIG TIME | 5.5 HOURS |
| TYPE OF FLUID IN HOLE | WATER |
| FLUID DENSITY | NA |
| FLUID SALINITY | NA |
| FLUID LEVEL | 54 FT |
| LOGGED CEMENT TOP | 1576 FT |
| WELLHEAD PRESSURE | 0 PSI |
| MAXIMUM HOLE DEVIATION | NA |
| NOMINAL LOGGING SPEED | 10 FMIN |
| MAX. RECORDED TEMP. | 227 DEGF |
| REFERENCE LOG | BAKER HUGHES RAL |
| REFERENCE LOG DATE | 02-Feb-2018 |
| EQUIP. NO. | ML-4291 |
| LOCATION | GRAND JCT. |
| RECORDED BY | T. NEWELL |
| WITNESSED BY | NA |

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.

REMARKS

RUN 1 TRIP 1: *2 OPERATIONS IN WELLBORE*

OPERATION 2: RPM/GR/CCL RUN IN PNC-3D MODE

SJ: 5843' - 5865'

SJ: 6940' - 6961'

EQUIPMENT DATA

| RUN | TRIP | TOOL | SERIES NO. | SERIAL NO. | POSITION |
|-----|------|---------|------------|------------|----------|
| 1 | 1 | PCM | 8250EA | 11175584 | FREE |
| 1 | 1 | TEL/CCL | 8248ED | 10193585 | FREE |
| 1 | 1 | GR | 8262 XA | 10317216 | FREE |
| 1 | 1 | RPM | 8281EA | 10179238 | FREE |
| 1 | 1 | RPM | 8283PA | 10190200 | FREE |
| 1 | 1 | RPM | 8281FA | 10318654 | FREE |
| 1 | 1 | TEMP | 8255 XA | 11774568 | FREE |

RPM MAIN PASS G-SAND

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017

Patches: 2

Plotted: Mon Feb 5 14:54:26 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30-15E/p353h03.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 2505.750 ft BOTTOM DEPTH: 3133.164 ft

SYMMETRIC FILTER

| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) |
|------------------|------------|------------|-------|---------------|
| GR | FILTER () | medium (1) | | TOP BOTTOM |

RPM PROCESSING

| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) |
|------------------|-------------------|------------|-------|---------------|
| PNC Parameters | BOREHOLE CONTENTS | FLUID | | TOP BOTTOM |
| | OPEN/CASED HOLE | CASED HOLE | | " " |
| | BOREHOLE SIZE | 8.50 | in | " " |
| | LARGEST CASING OD | 4.50 | in | " " |
| | MATRIX | SANDSTONE | | " " |

CURVE DESCRIPTION REPORT

| CURVE NAME | CREATION DATE | CURVE DESCRIPTION |
|------------|---------------|---|
| F1:CCL | N/A | CASING COLLAR LOCATOR |
| F1:GR | N/A | GAMMA RAY |
| F1:ISS | N/A | INELASTIC SHORT SPACE COUNT RATE |
| F1:LS | N/A | LONG SPACE COUNT RATE |
| F1:RATO | N/A | SHORT/LONG SPACE COUNT RATE RATIO |
| F1:RICS | N/A | SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS) |
| F1:SGFC | N/A | BOREHOLE AND DIFFUSION CORRECTED SIGMA |
| F1:SS | N/A | SHORT SPACE COUNT RATE |

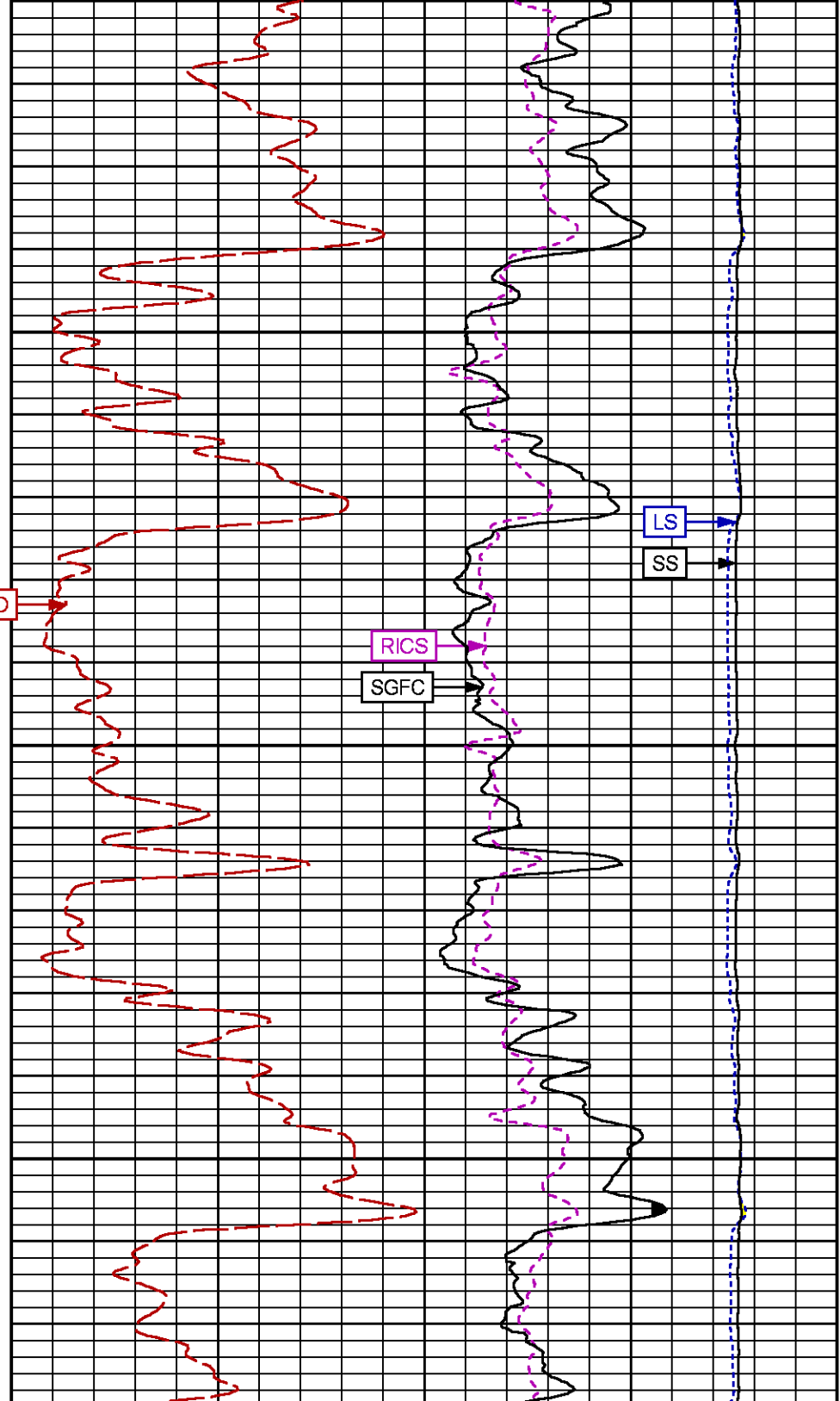
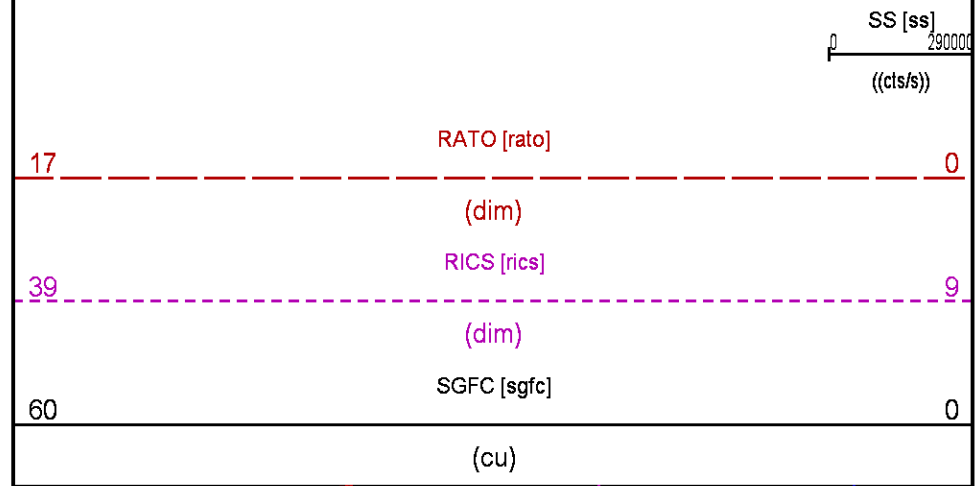
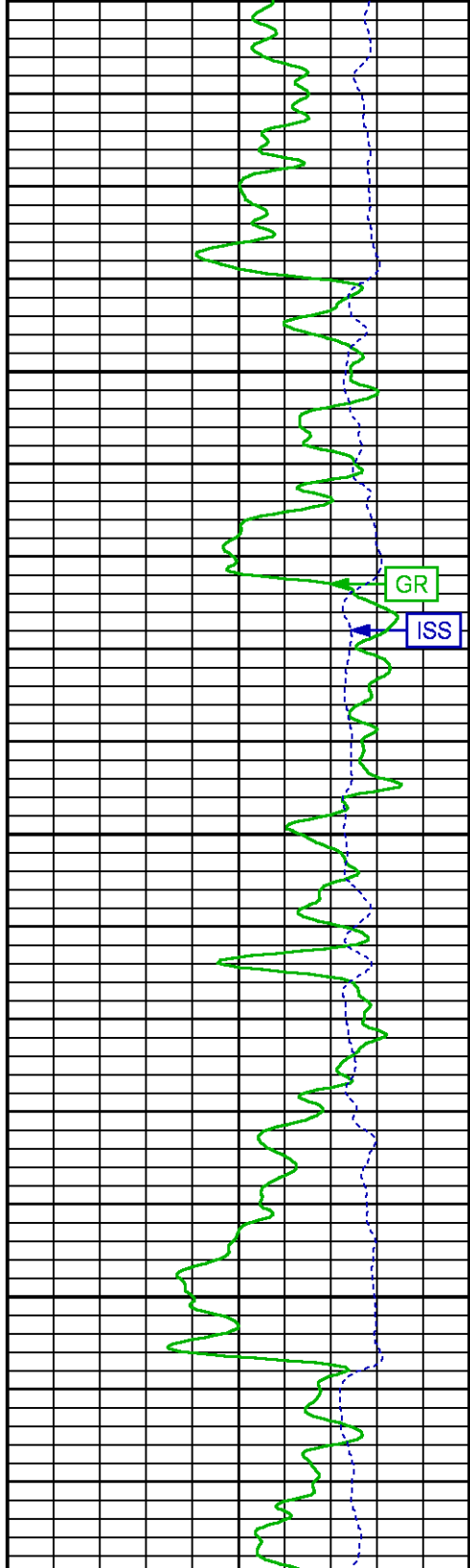
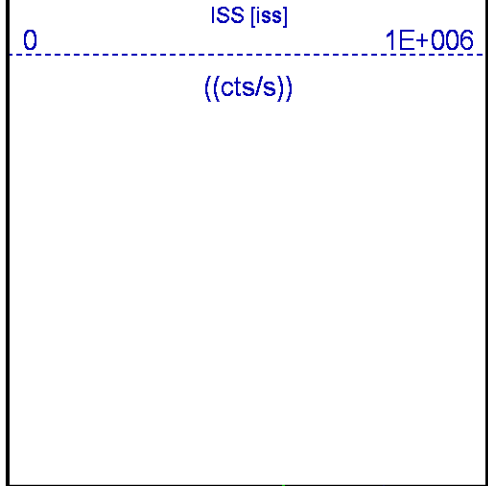
CURVE MEASURE POINT OFFSET

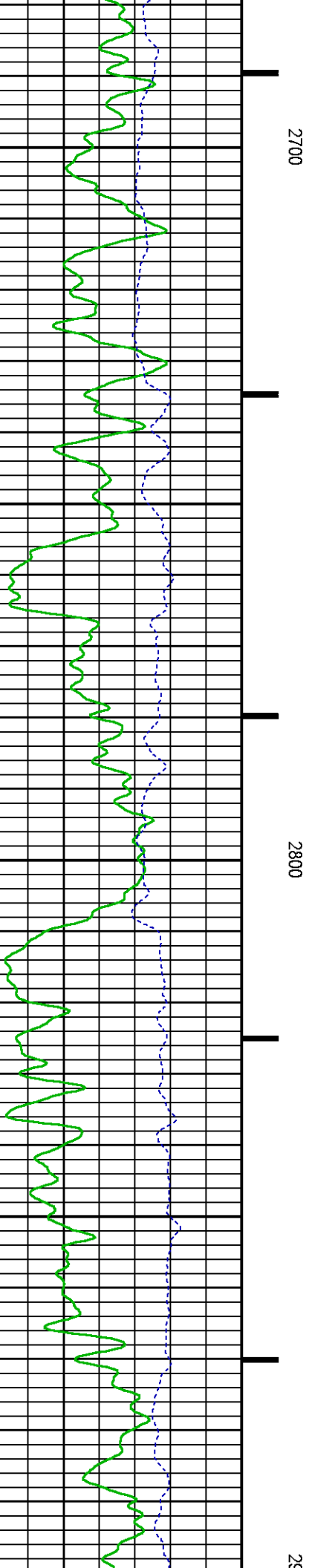
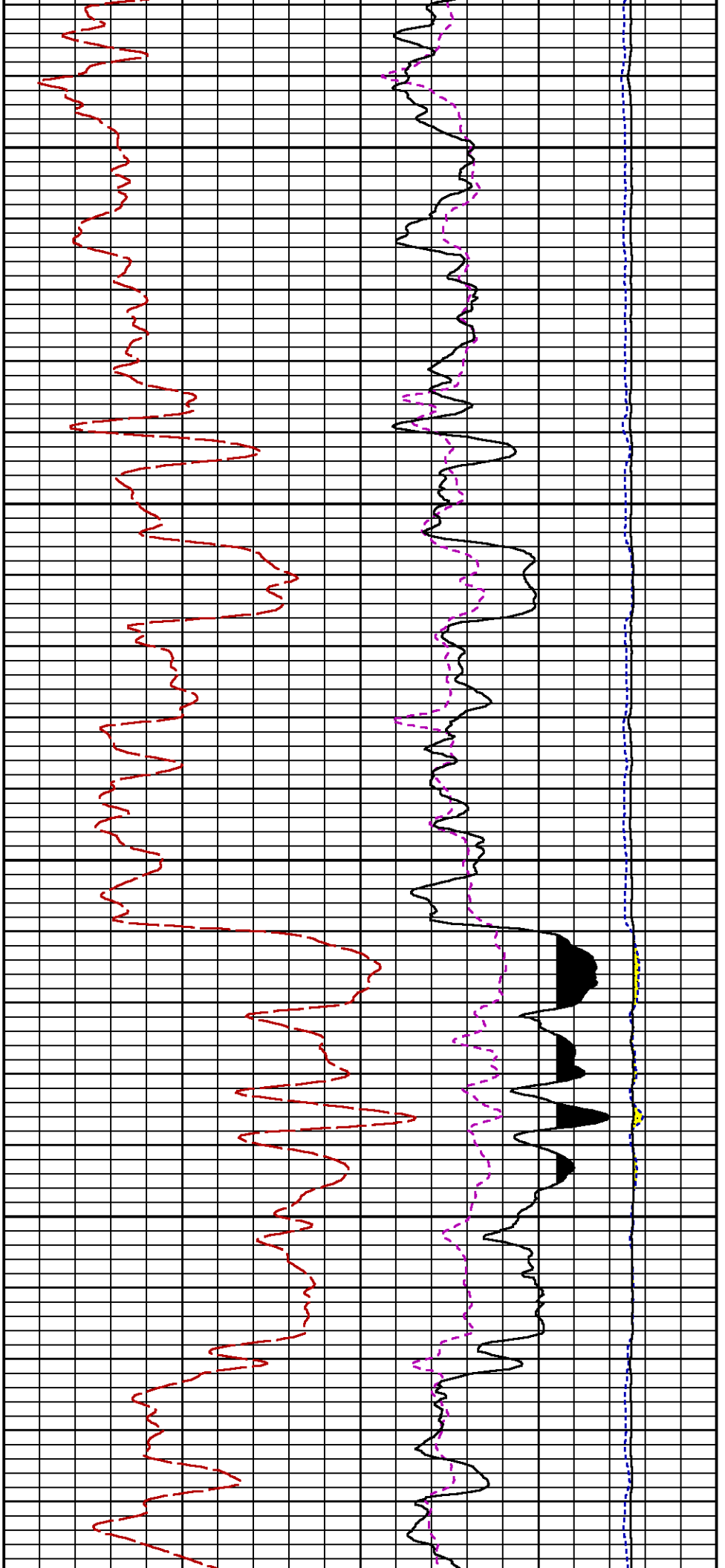
| CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) |
|-------|-------------|-------|-------------|-------|-------------|-------|-------------|
| CCL | -26.00 | ISS | -12.75 | RATO | -12.75 | SGFC | -12.75 |
| GR | -23.00 | LS | -12.75 | RICS | -12.75 | SS | -12.75 |

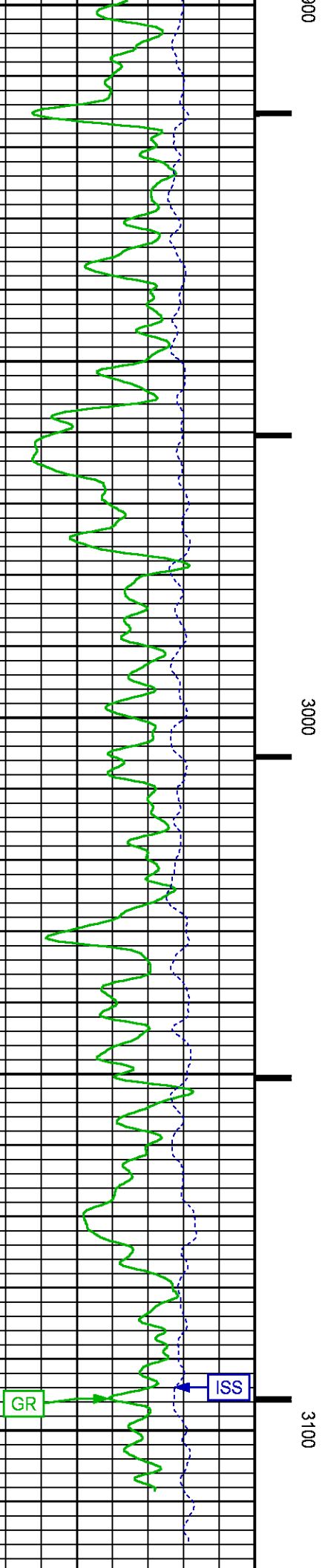
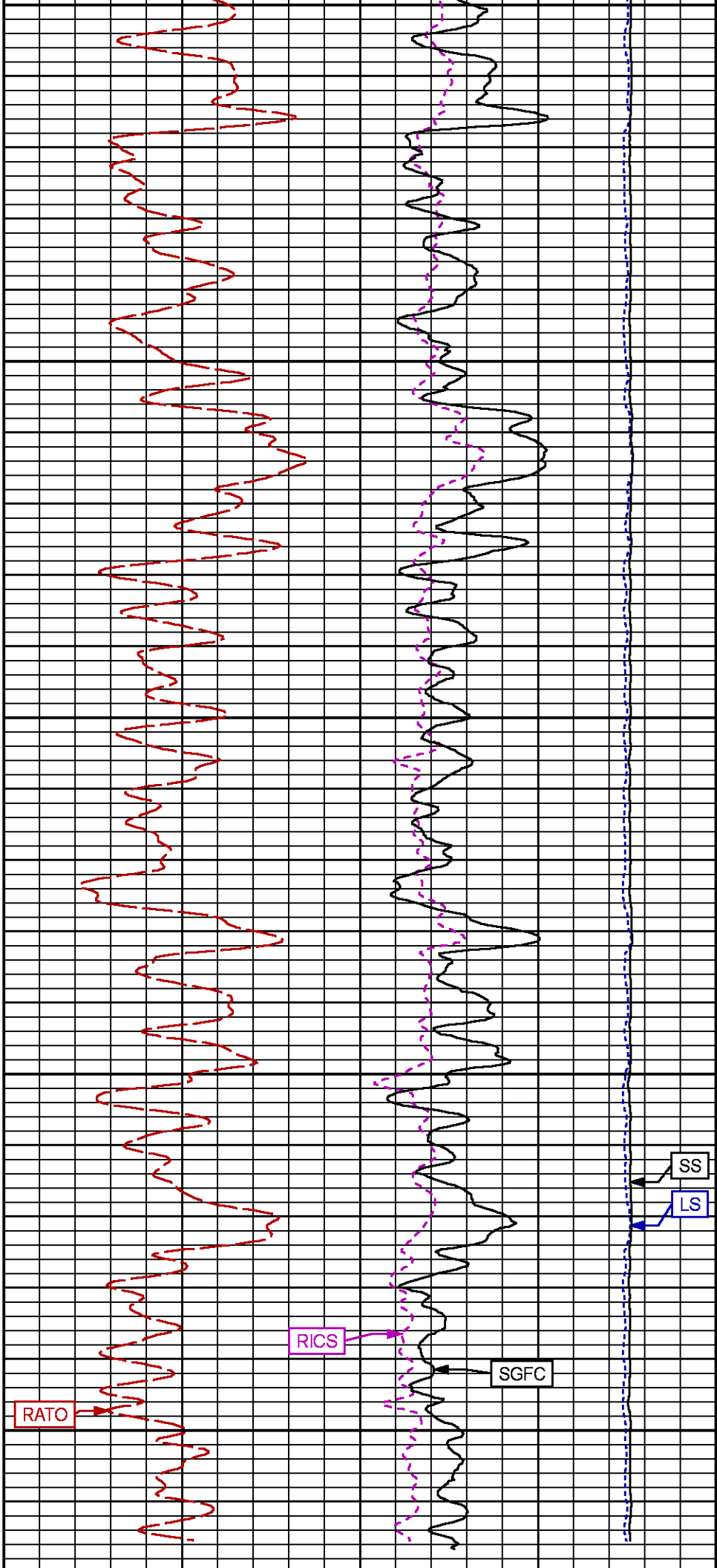
Presentation : SysA:/dat1a/LARAMIE_BRUTON_30-15E/30-15E_RPM_GS.fvpdf [5"/100' Scale]
 Plot Interval : 2510 - 3120 Feet

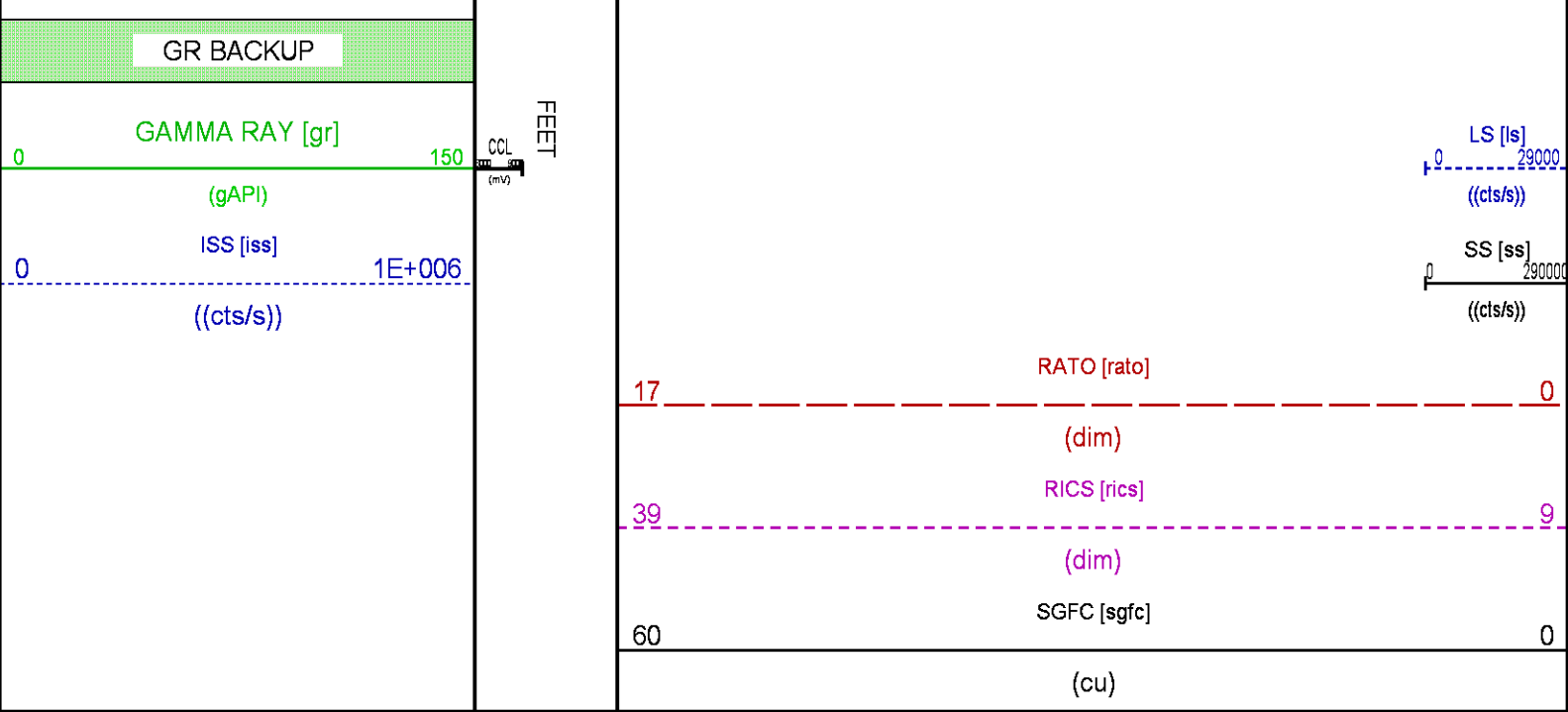
Data File 1 : F1 : SysA:C:\Users
 Created On : 2/5/2018
 Company : LARAMIE ENERGY LLC
 Well : BRUTON 30-15E
 Field : VEGA
 File Interval : 2482.25 - 3131.75 Feet
 OCT : p353h











RPM MAIN PASS WILLIAMS FORK

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Patches: 2

Plotted: Mon Feb 5 14:30:12 2018

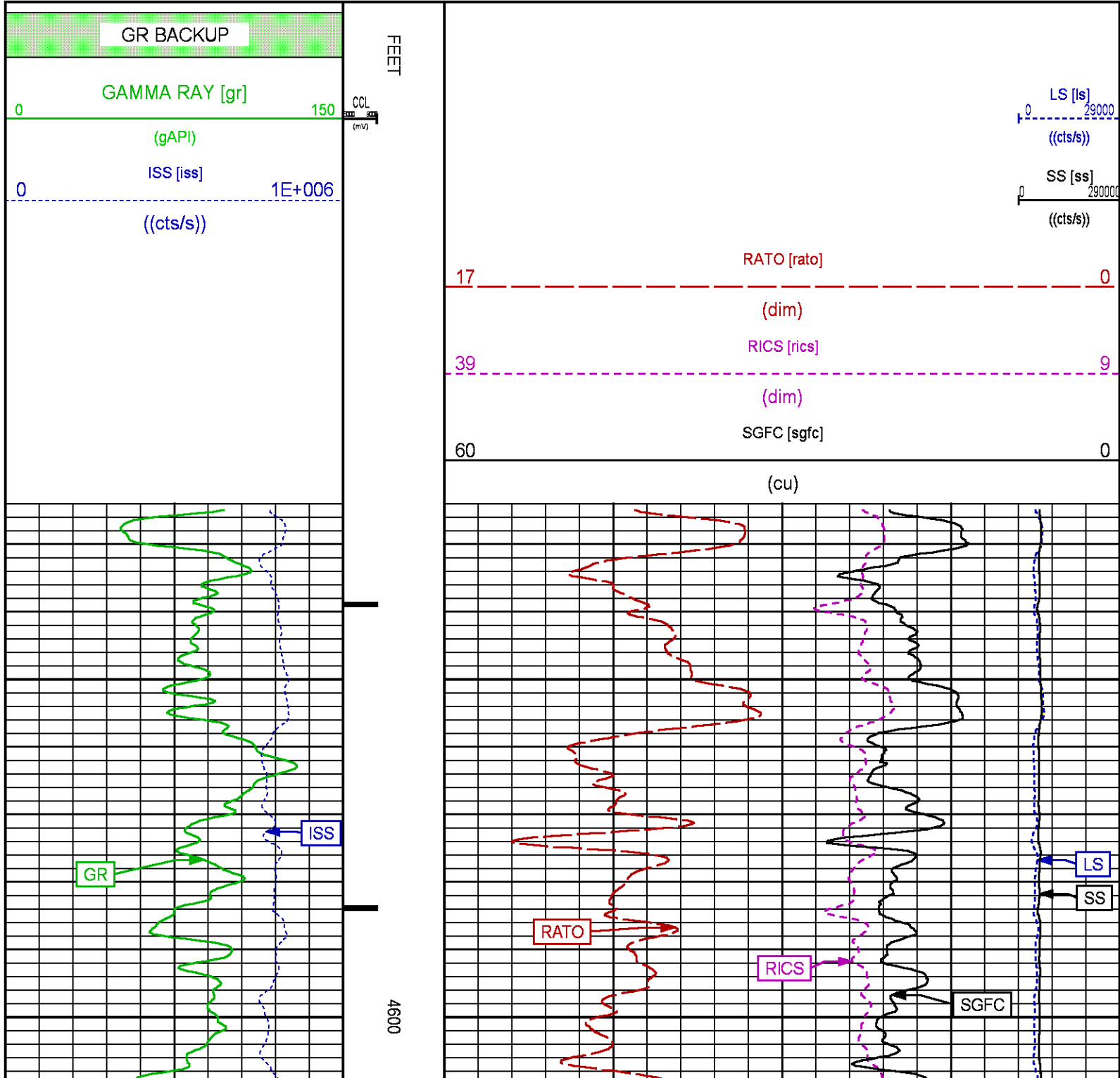
| PARAMETER AND FILTER SUMMARY REPORT | | | | |
|--|-------------------|------------|-------|---------------|
| FILE: /dat1a/LARAMIE_BRUTON_30-15E/p353h02.prm | | | | |
| LOGGING MODE: DEPTH DIRECTION: UP | | | | |
| TOP DEPTH: 4508.000 ft BOTTOM DEPTH: 7743.474 ft | | | | |
| SYMMETRIC FILTER | | | | |
| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) |
| GR | FILTER () | medium (1) | | TOP BOTTOM |
| RPM PROCESSING | | | | |
| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) |
| PNC Parameters | BOREHOLE CONTENTS | FLUID | | TOP BOTTOM |
| | OPEN/CASED HOLE | CASED HOLE | | " " |
| | BOREHOLE SIZE | 8.50 | in | " " |
| | LARGEST CASING OD | 4.50 | in | " " |
| | MATRIX | SANDSTONE | | " " |

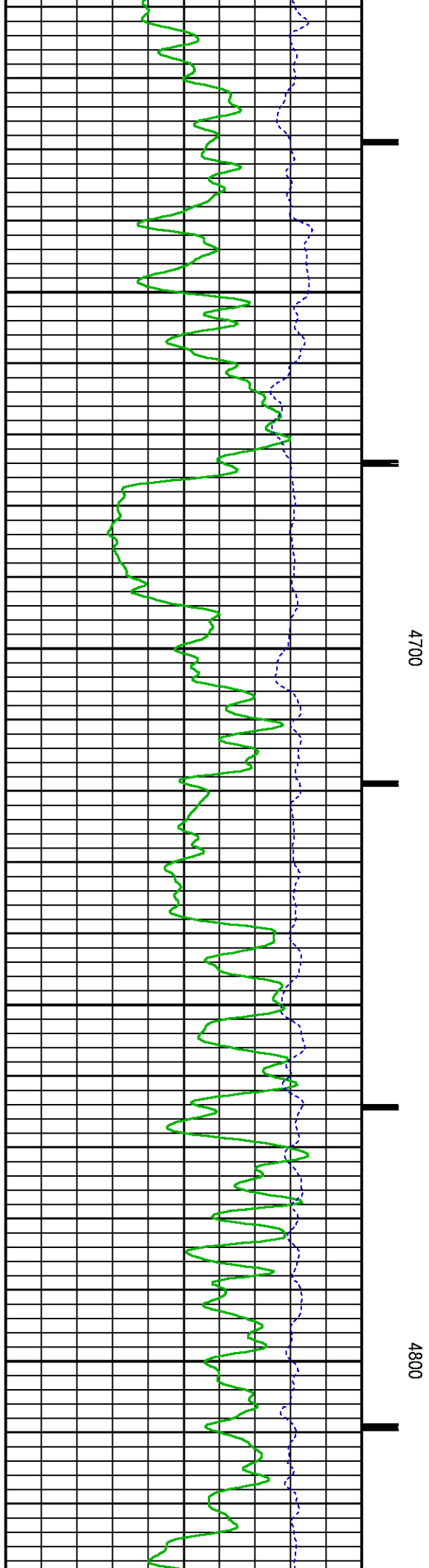
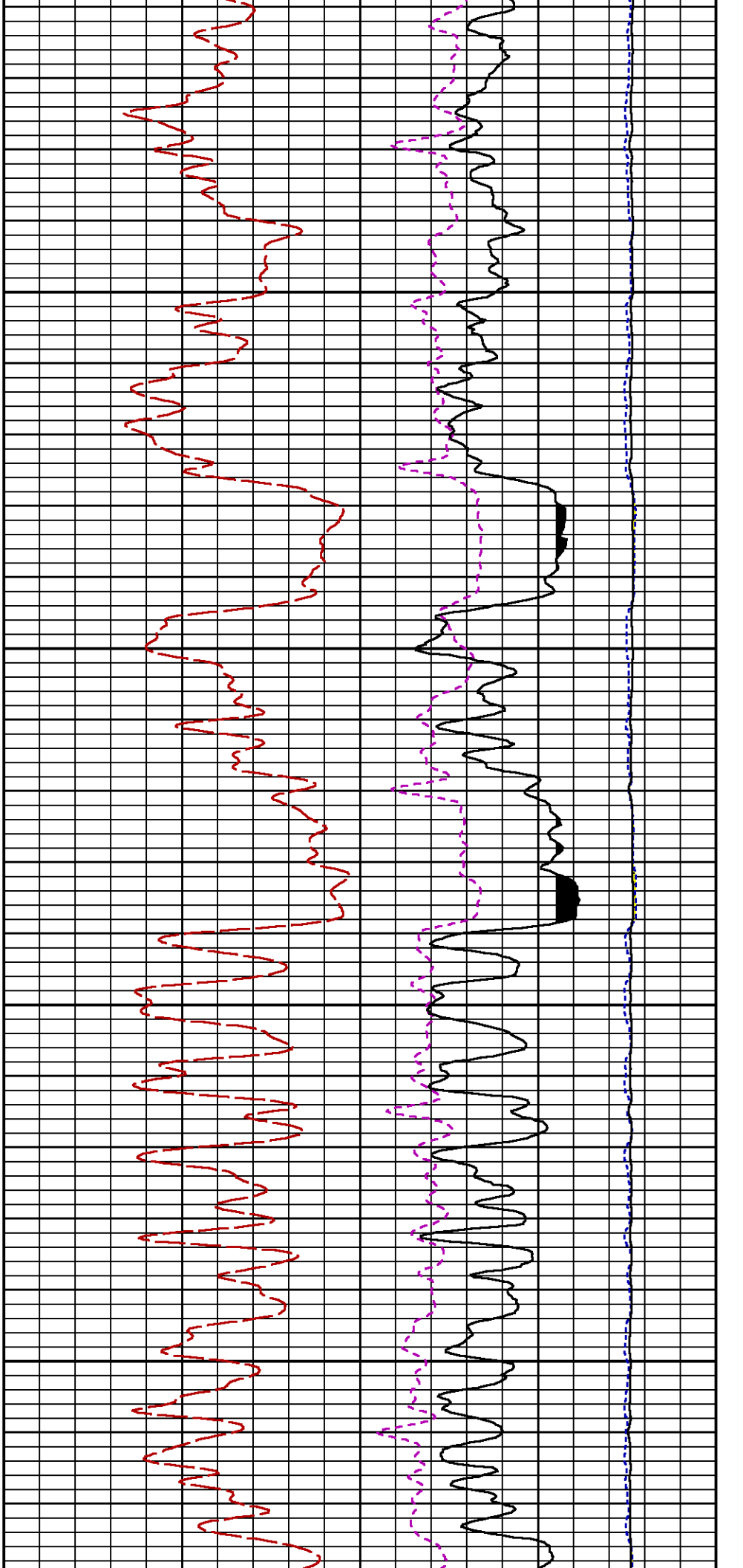
| CURVE DESCRIPTION REPORT | | |
|--------------------------|---------------|---|
| CURVE NAME | CREATION DATE | CURVE DESCRIPTION |
| F1:CCL | N/A | CASING COLLAR LOCATOR |
| F1:GR | N/A | GAMMA RAY |
| F1:ISS | N/A | INELASTIC SHORT SPACE COUNT RATE |
| F1:LS | N/A | LONG SPACE COUNT RATE |
| F1:RATO | N/A | SHORT/LONG SPACE COUNT RATE RATIO |
| F1:RICS | N/A | SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS) |
| F1:SGFC | N/A | BOREHOLE AND DIFFUSION CORRECTED SIGMA |

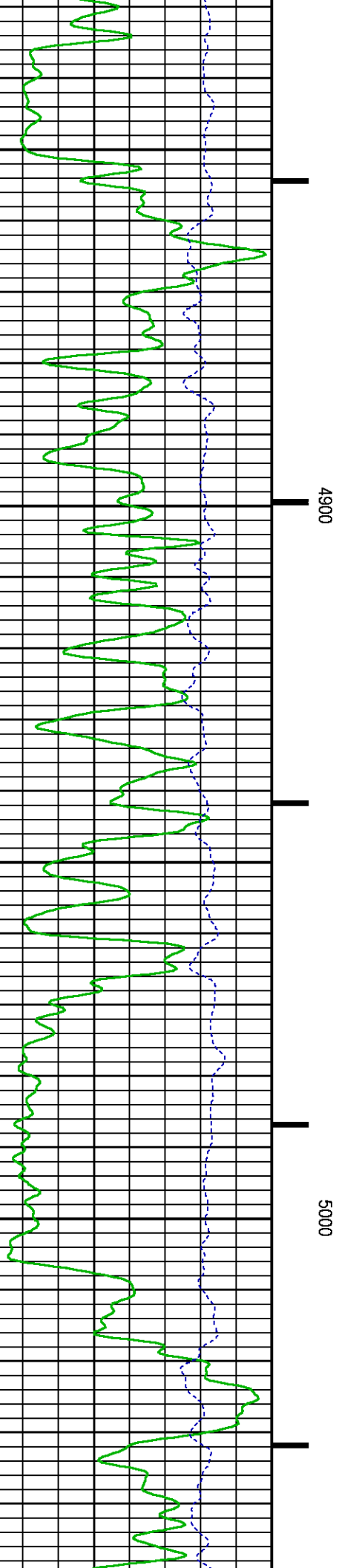
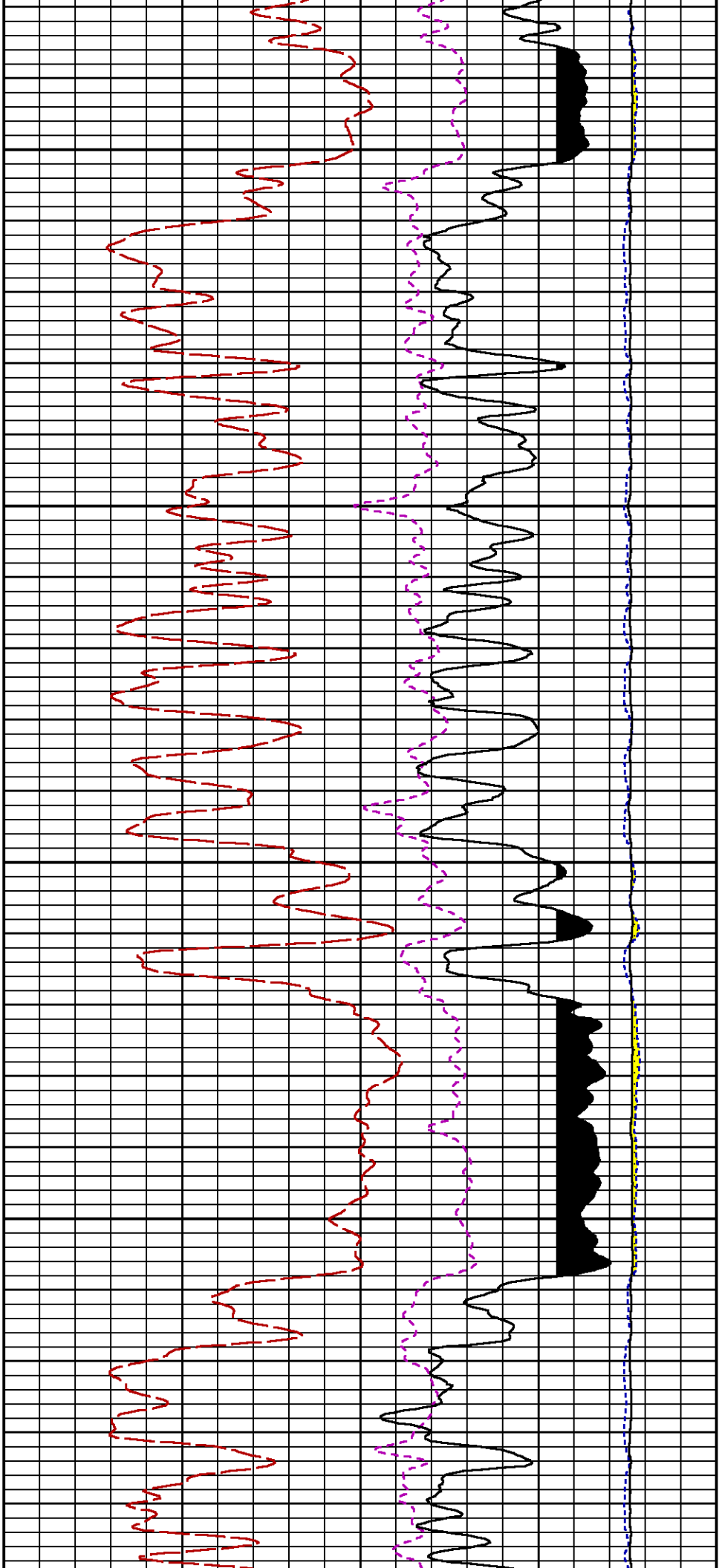
| | | | | | |
|---------|-----|--|--|--|--|
| F1:SGFC | N/A | BOREHOLE AND DIFFUSION CORRECTED SIGMA | | | |
| F1:SS | N/A | SHORT SPACE COUNT RATE | | | |

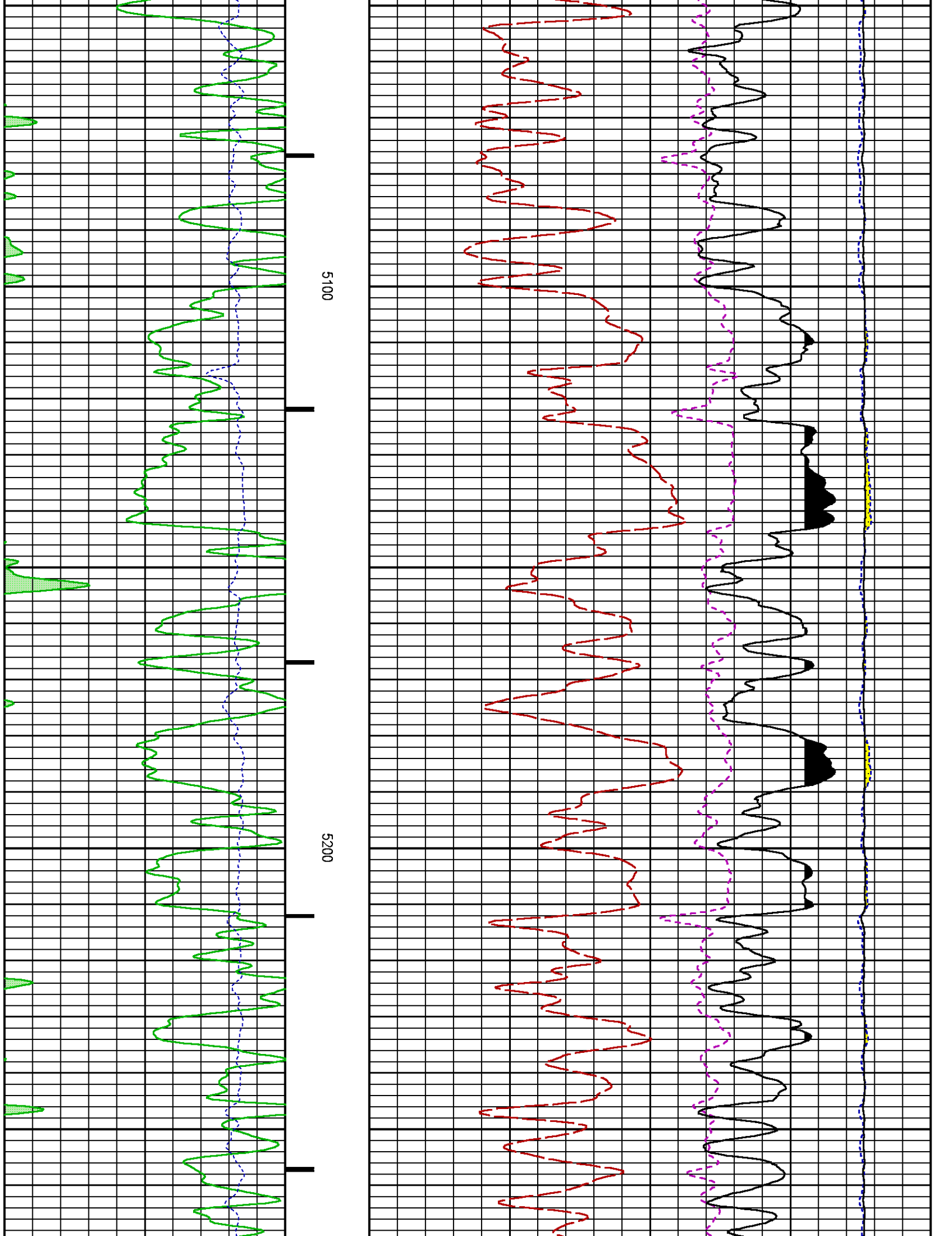
| CURVE MEASURE POINT OFFSET | | | | | | | | | | | | | | | |
|----------------------------|--|-------------|--|-------|--|-------------|--|-------|--|-------------|--|------|--|--------|--|
| CURVE | | OFFSET (ft) | | CURVE | | OFFSET (ft) | | CURVE | | OFFSET (ft) | | | | | |
| CCL | | -26.00 | | ISS | | -12.75 | | RATO | | -12.75 | | SGFC | | -12.75 | |
| GR | | -23.00 | | LS | | -12.75 | | RICS | | -12.75 | | SS | | -12.75 | |

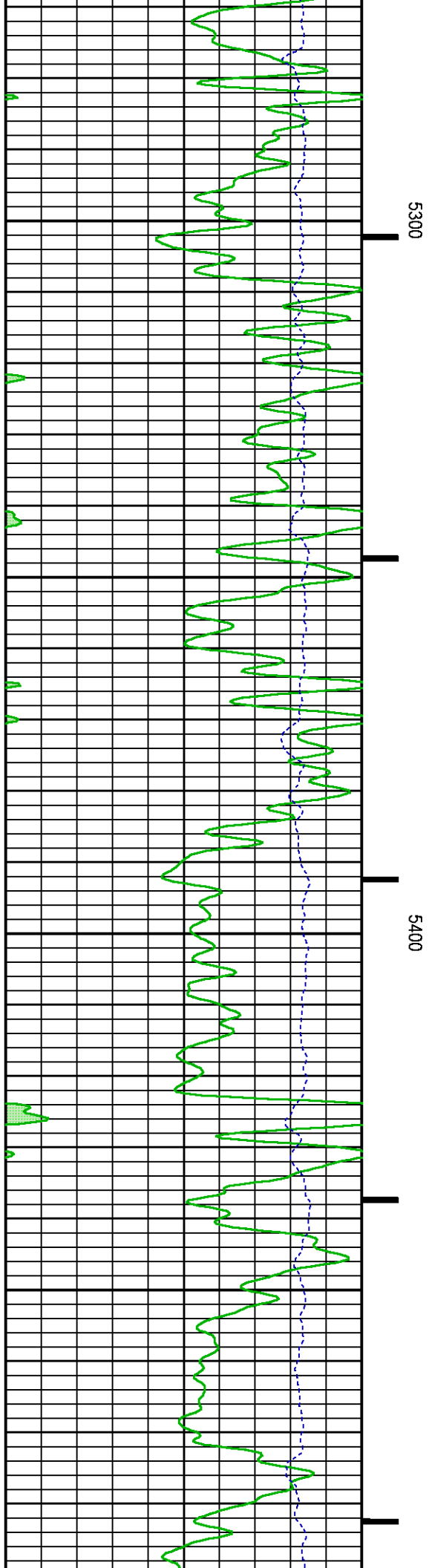
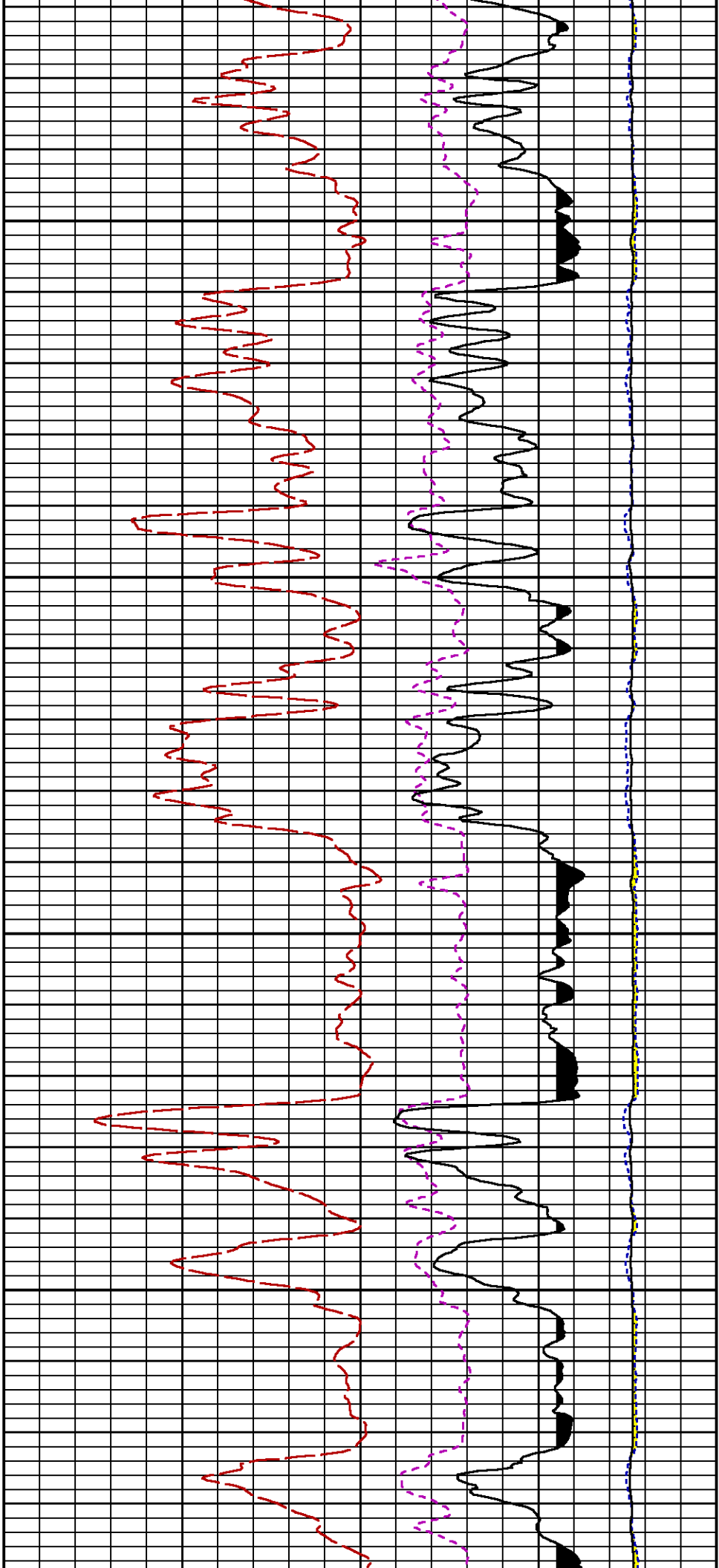
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|----------------------|--|---|--|
| Presentation | | : SysA:/dat1a/LARAMIE_BRUTON_30-15E/30-15E_RPM_WF.fvpdf [5"/100' Scale] | |
| Plot Interval | | : 4525 - 7735 Feet | |
| | | | |
| Data File 1 | | : F1 : SysA:C:\Users | |
| Created On | | : \\Nimj\Desktop\LARAMIE_BRUTON_30-15E\30-15E_RPM_WF.xtf | |
| Company | | : LARAMIE ENERGY LLC | |
| Well | | : BRUTON 30-15E | |
| Field | | : VEGA | |
| File Interval | | : 4486 - 7743 Feet | |
| OCT | | : p353h | |

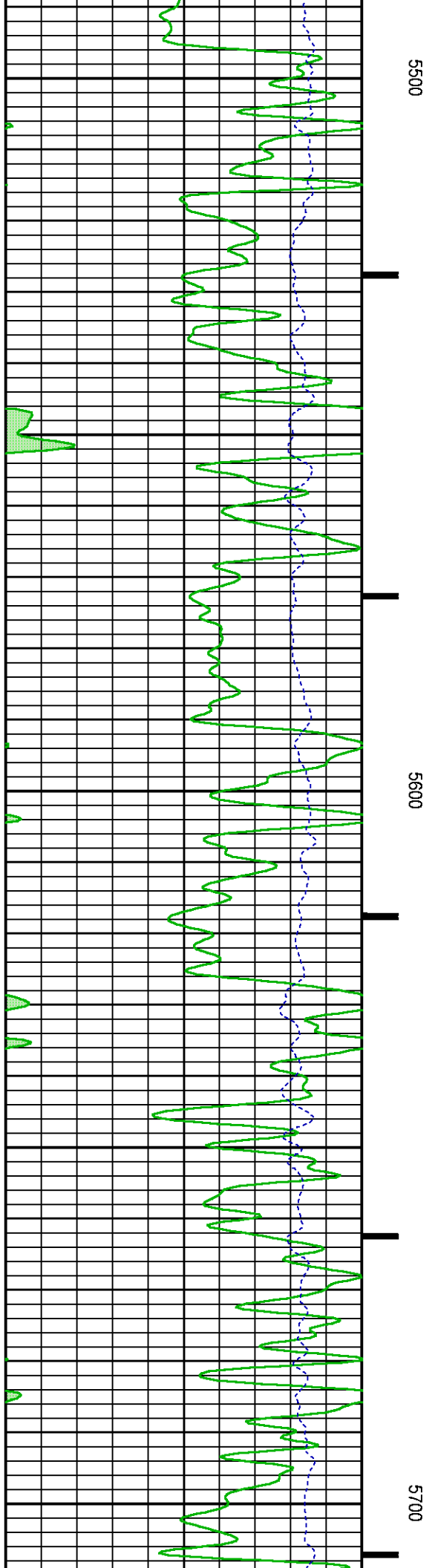
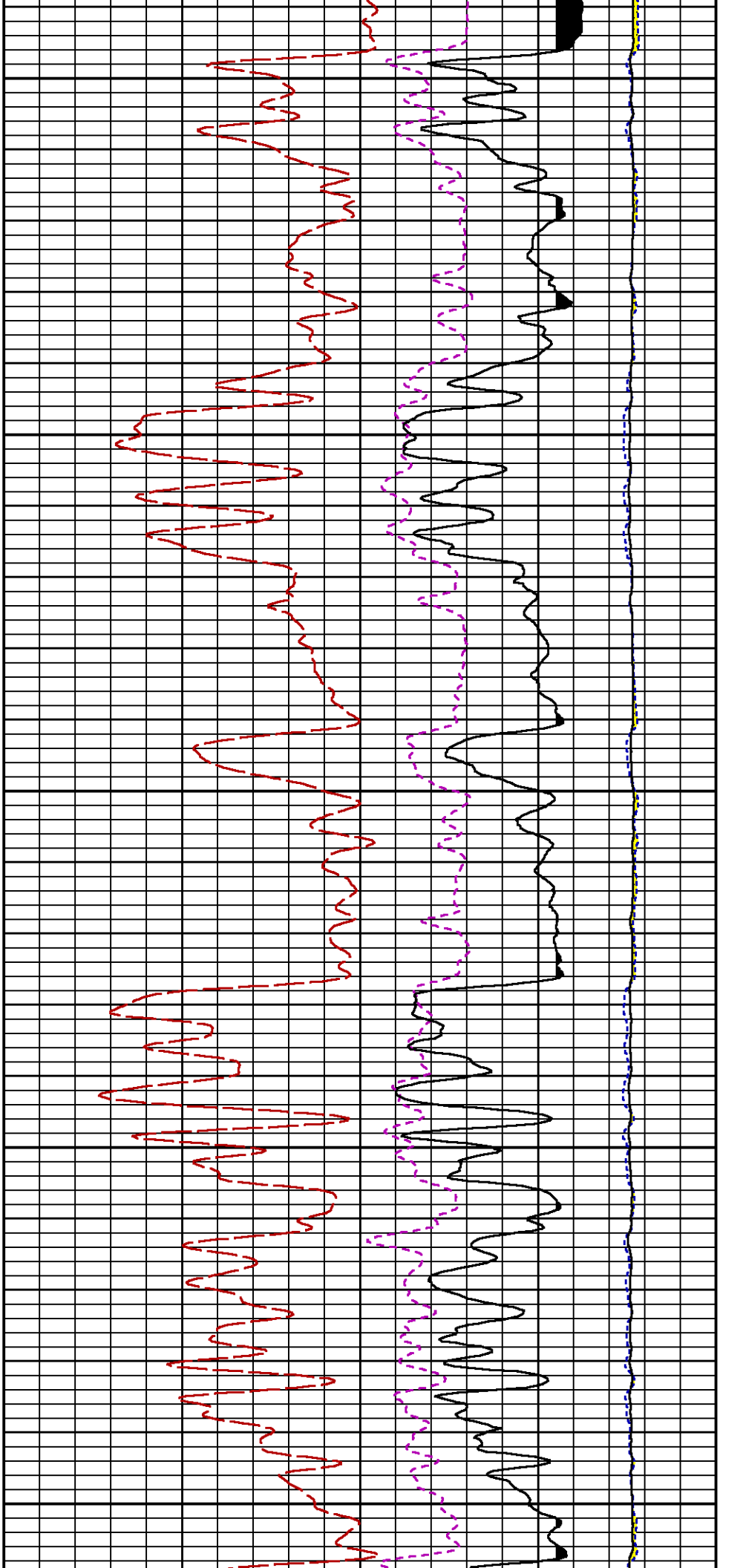


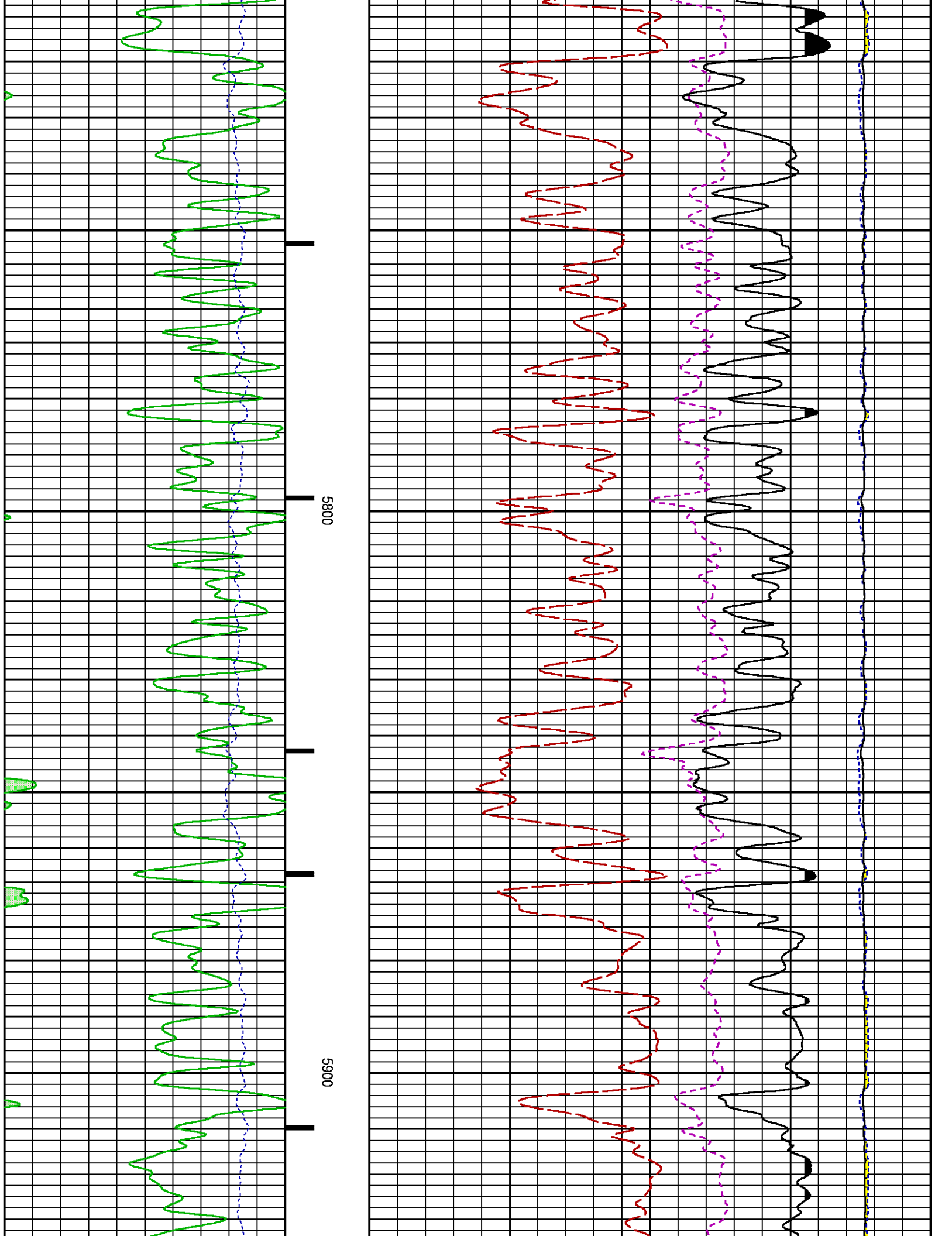


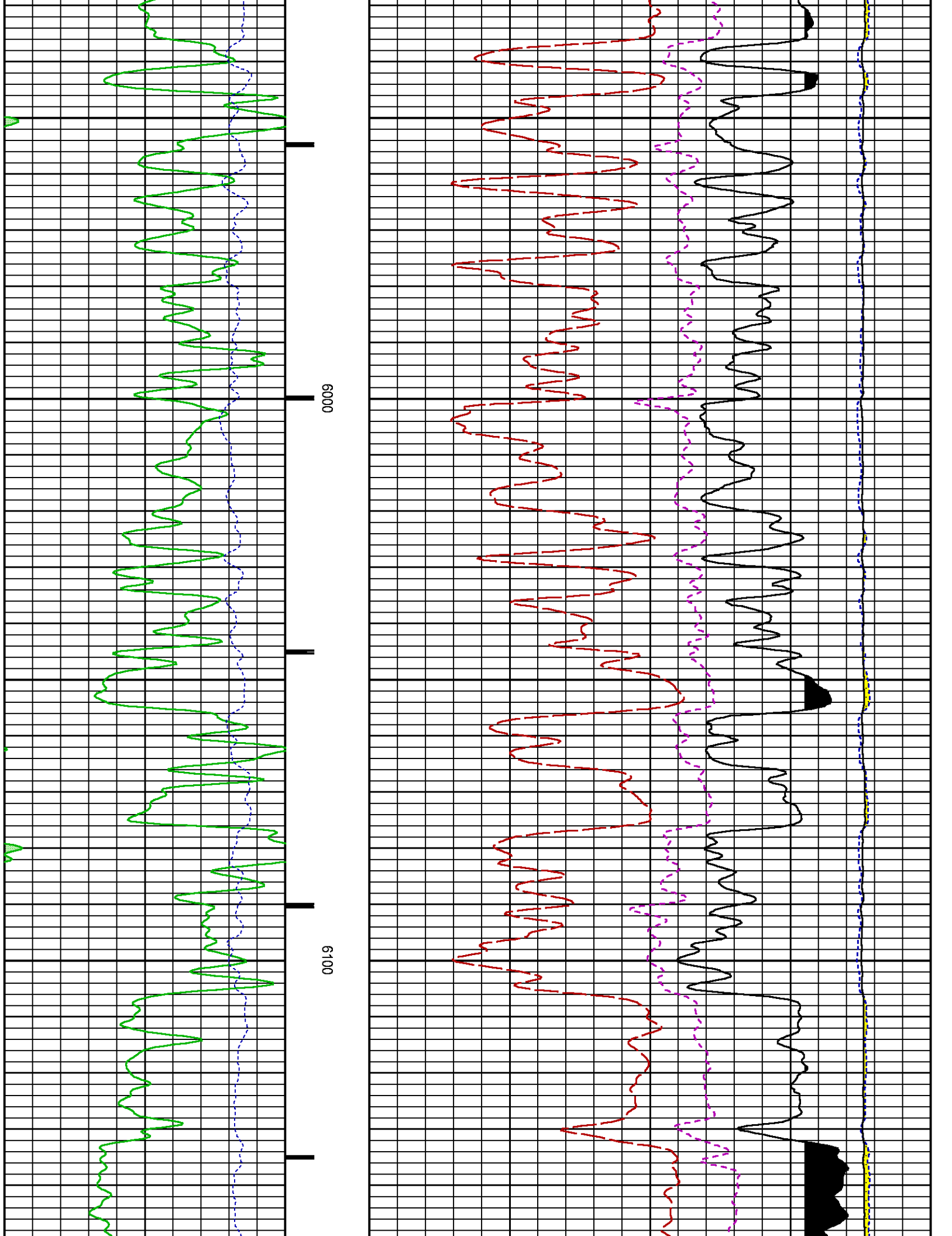


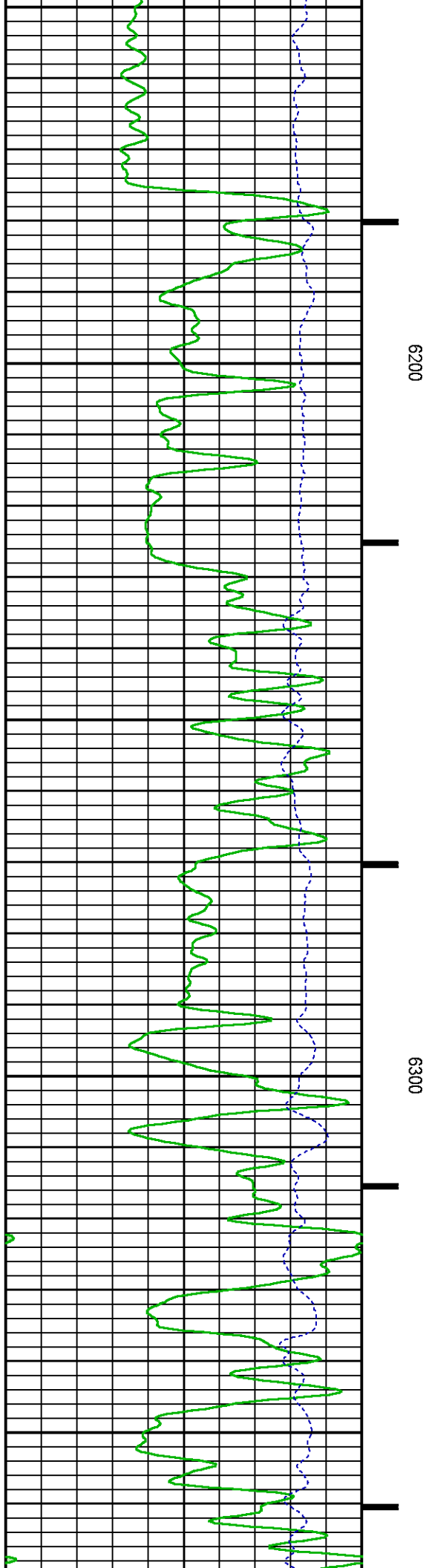
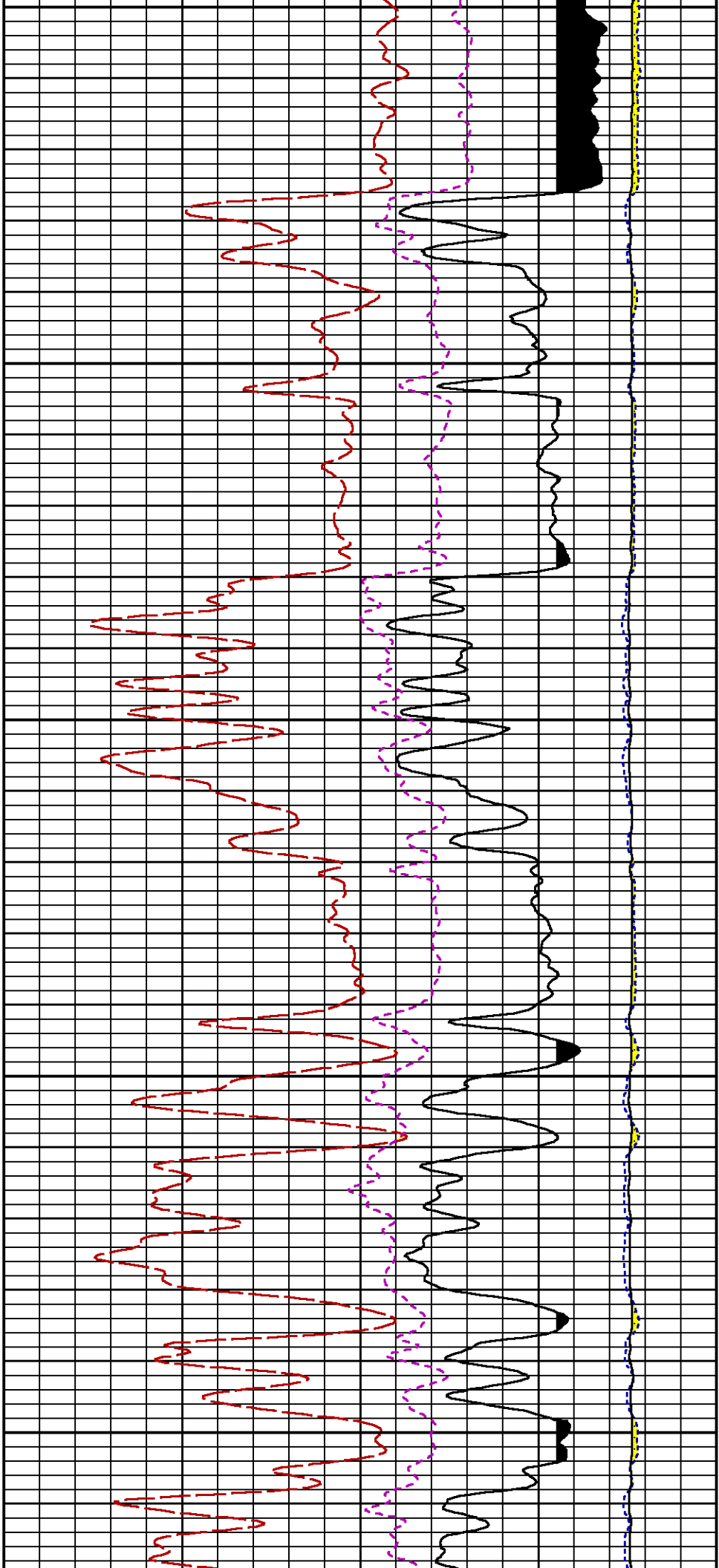


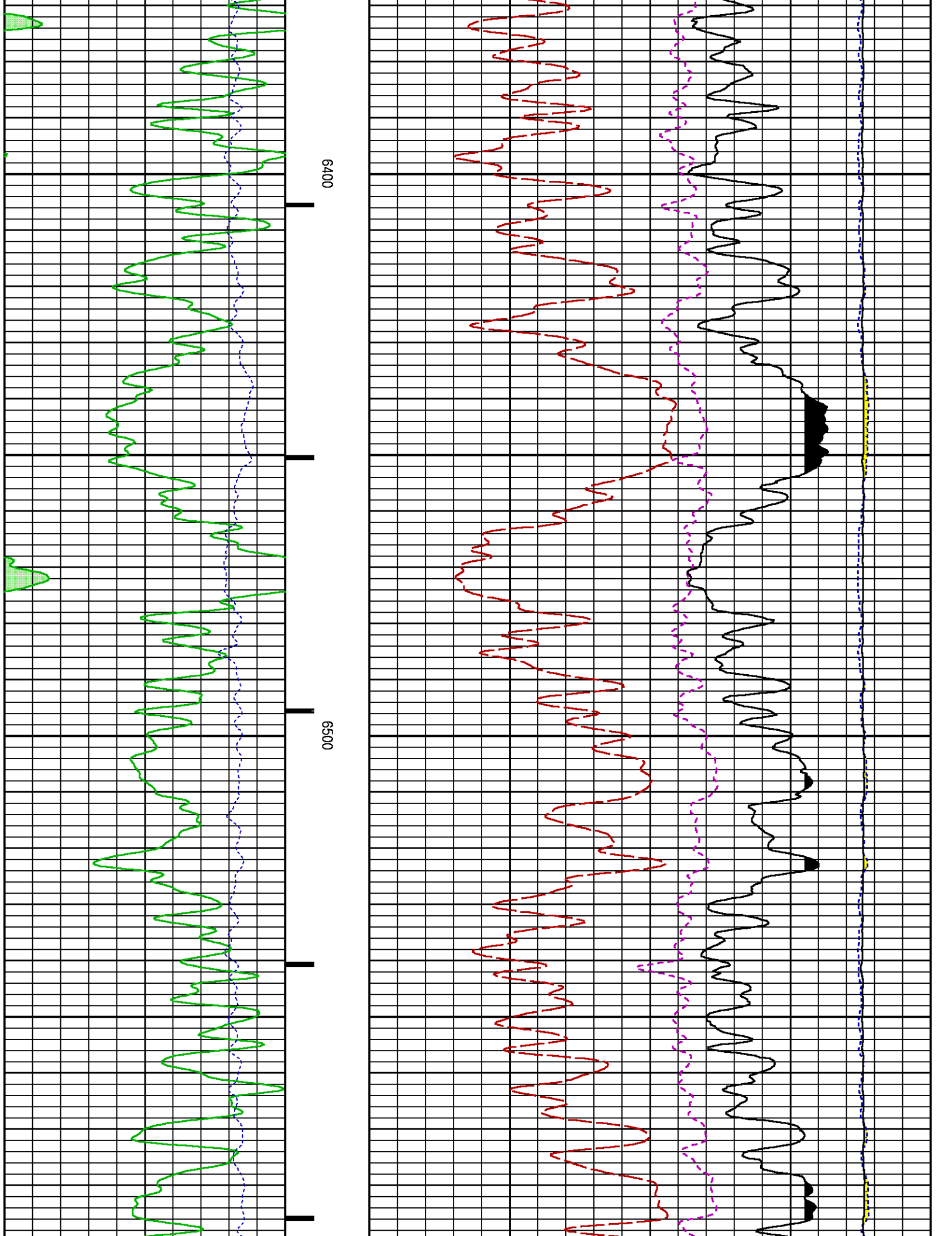


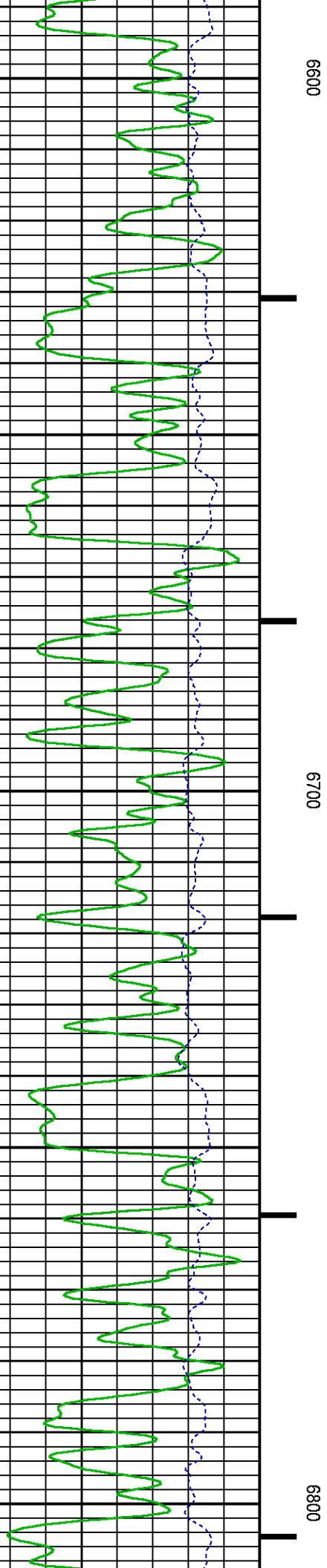
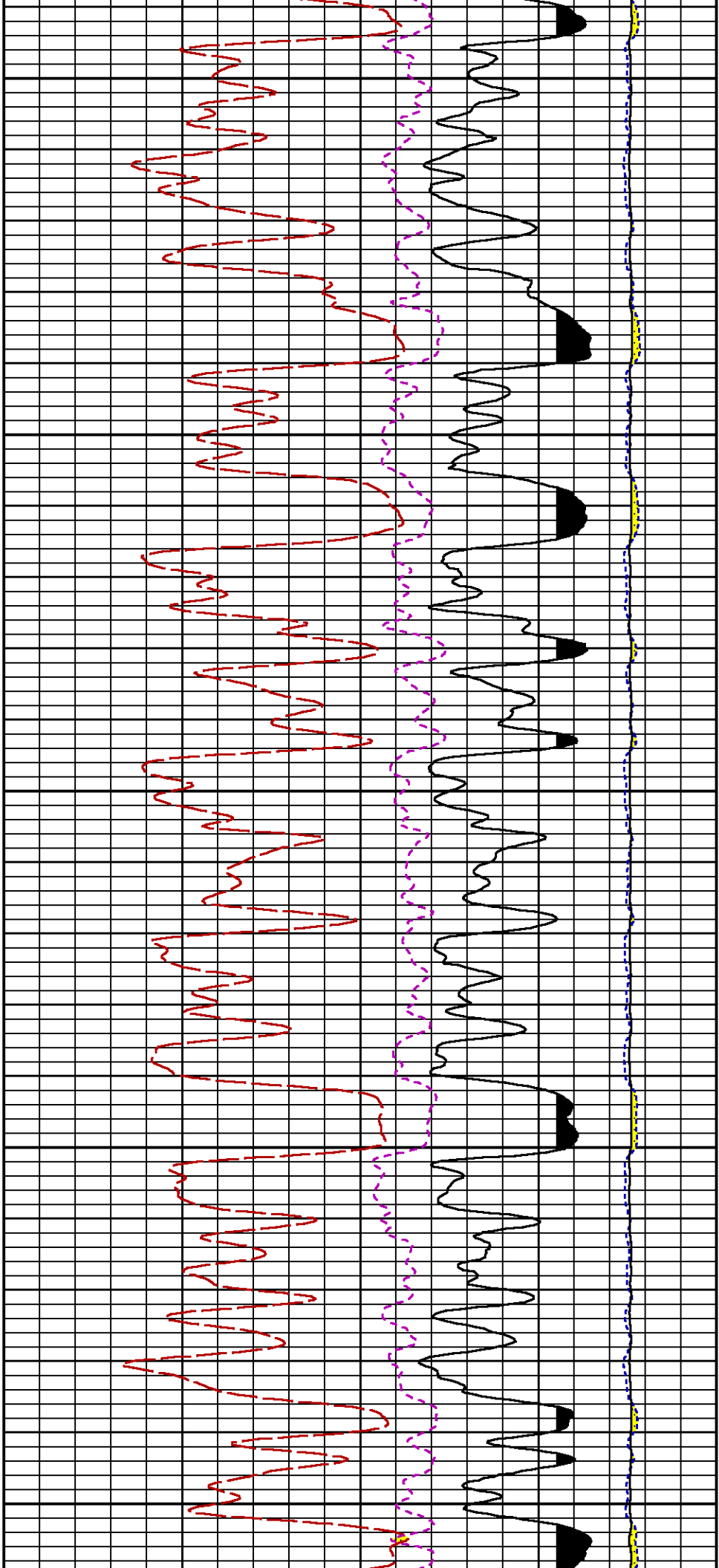


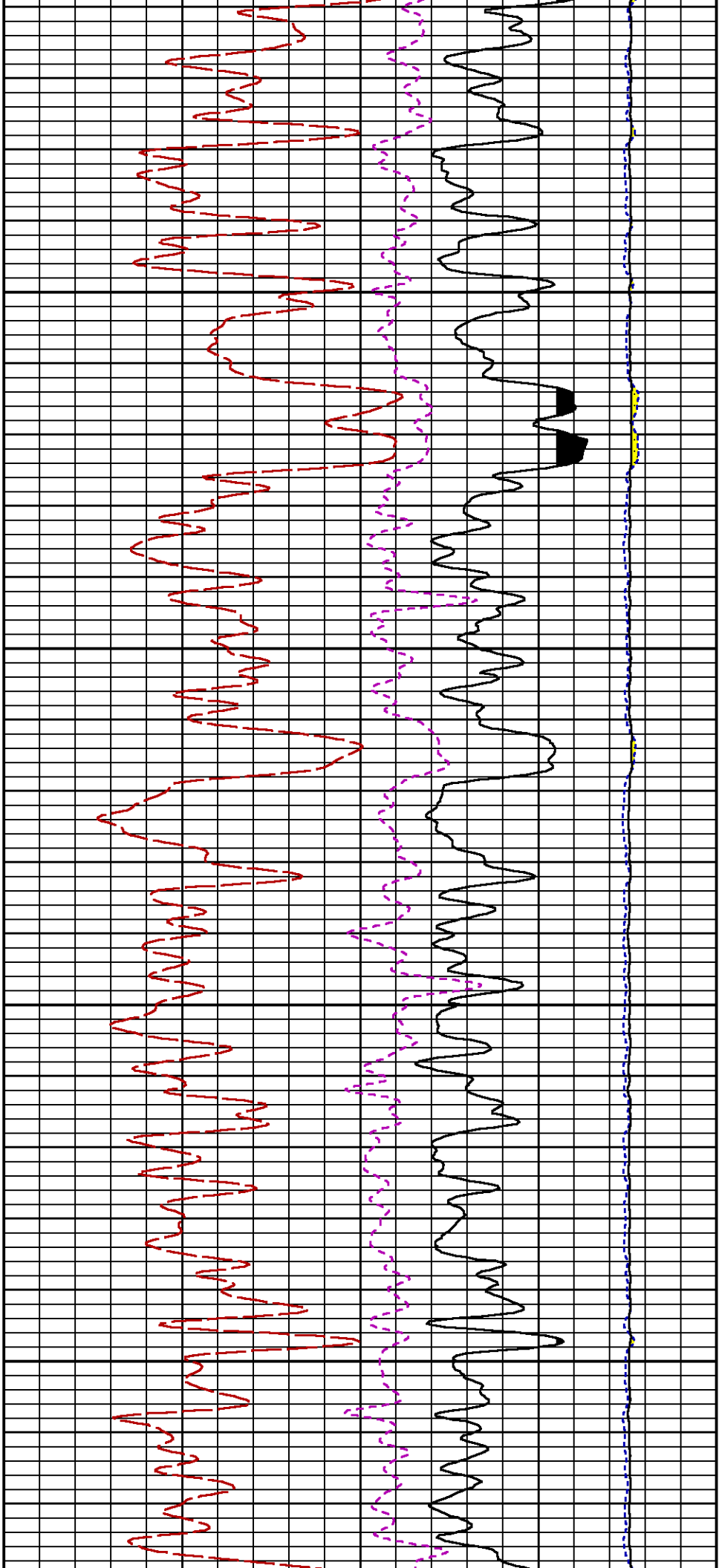






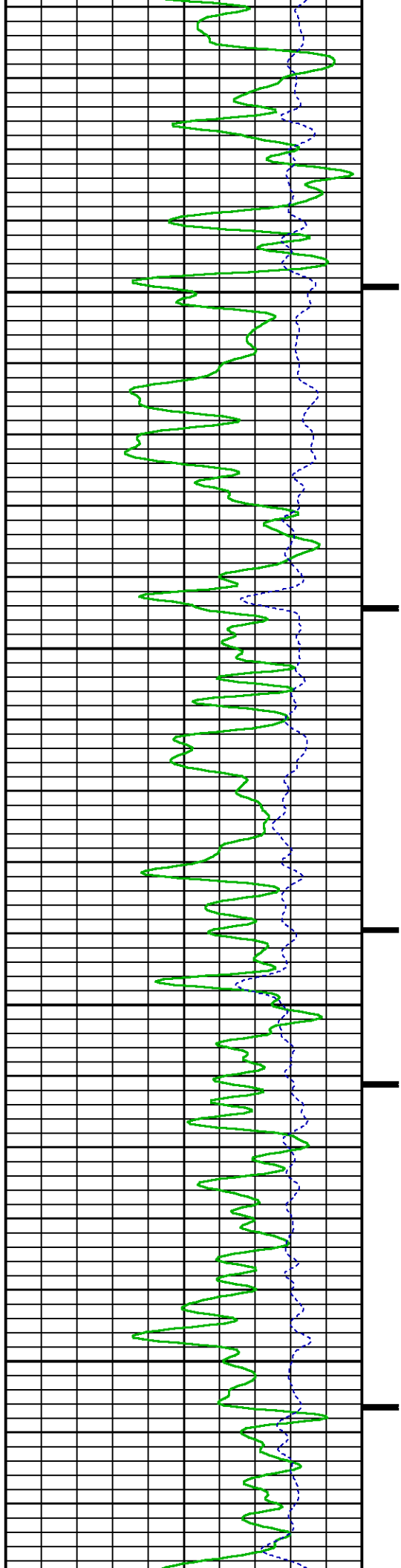


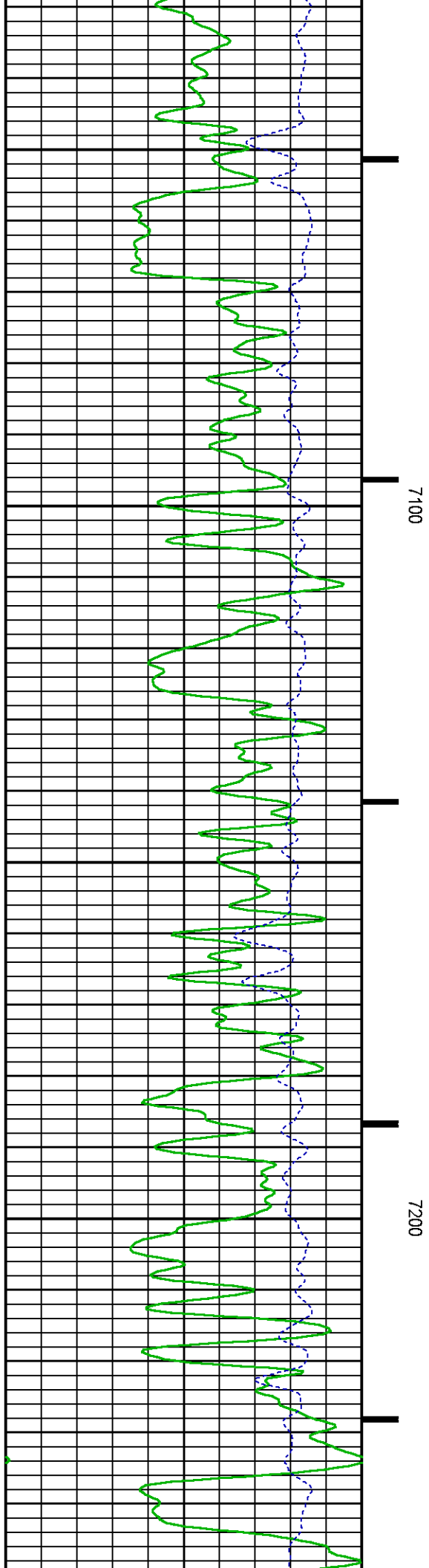
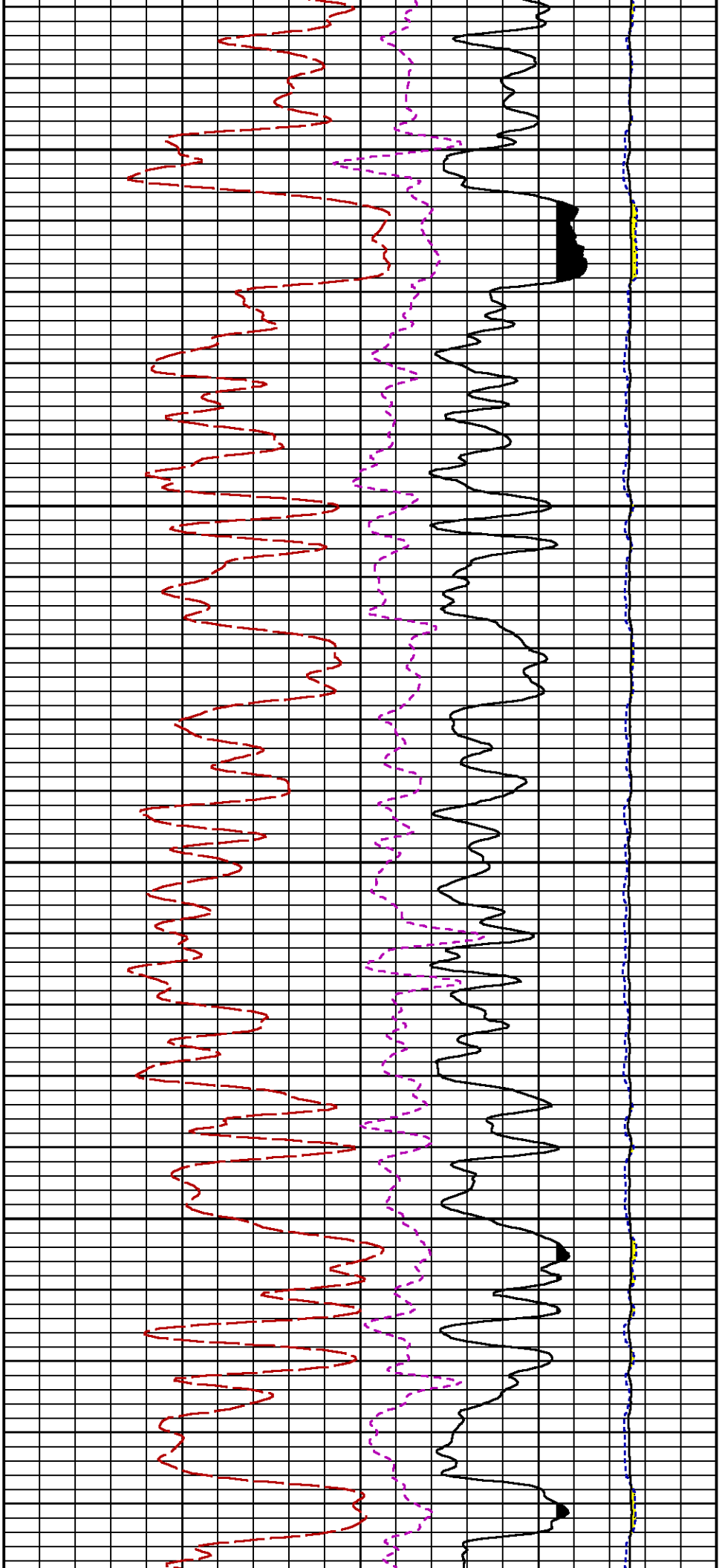


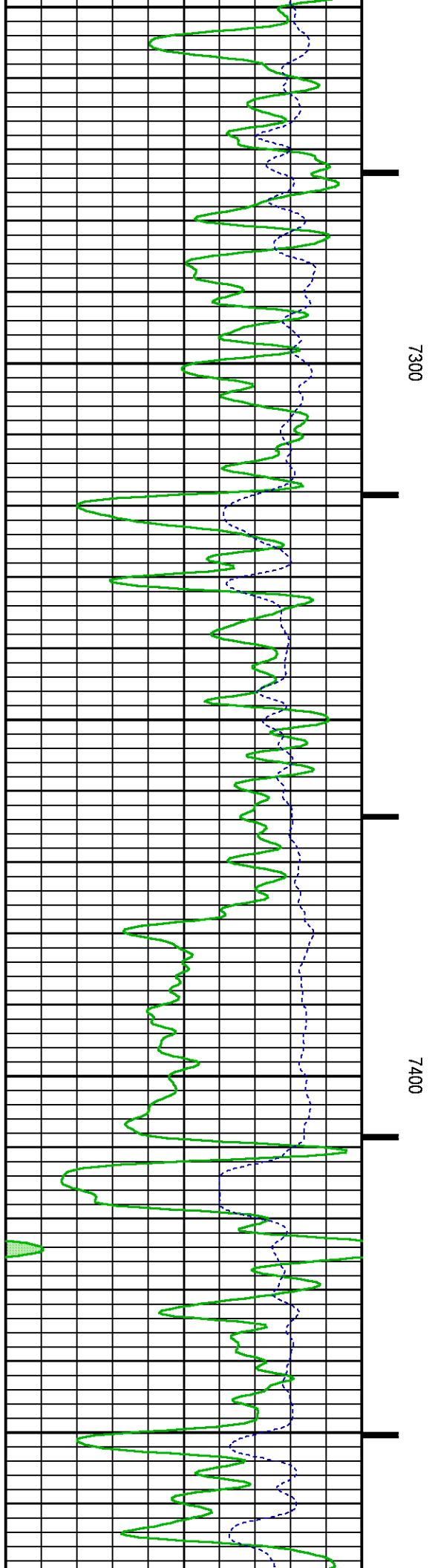
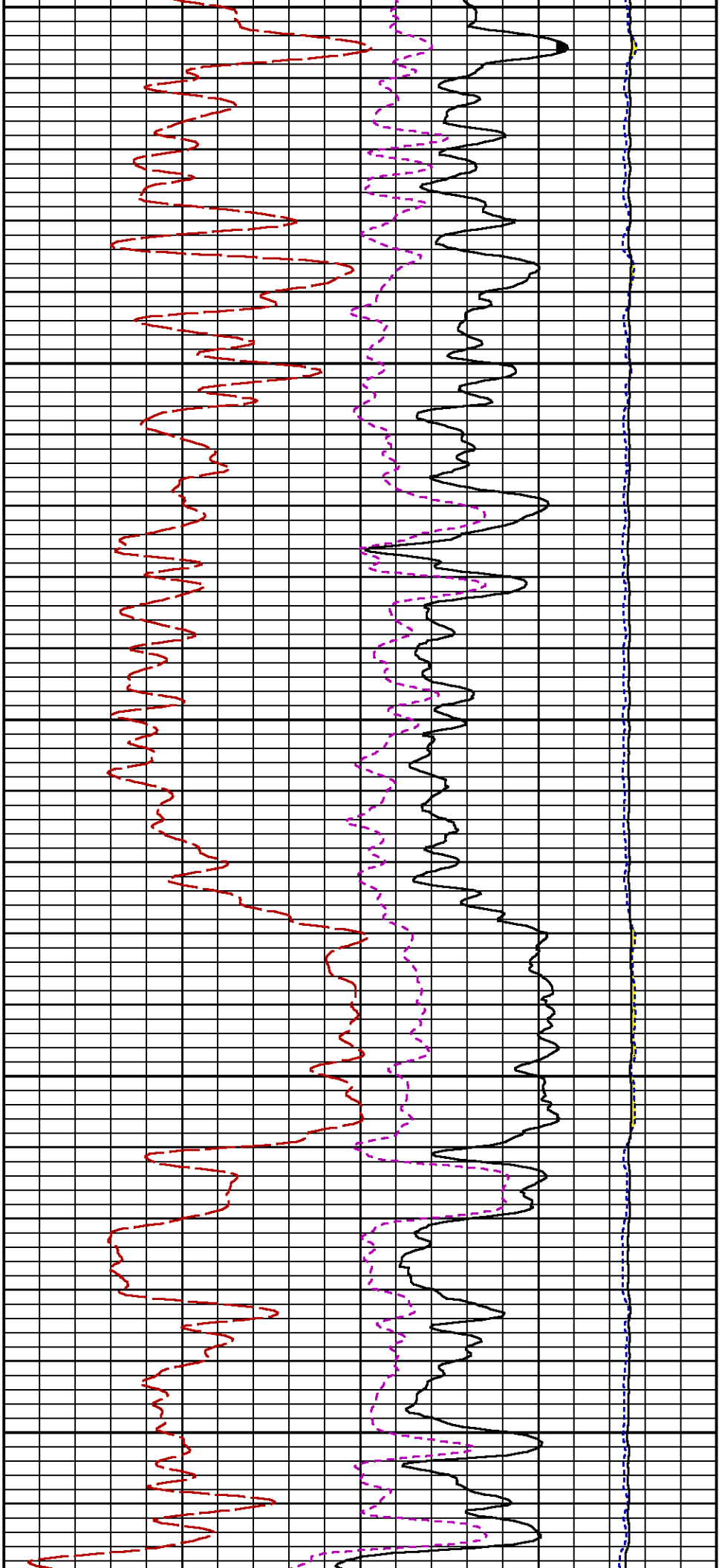


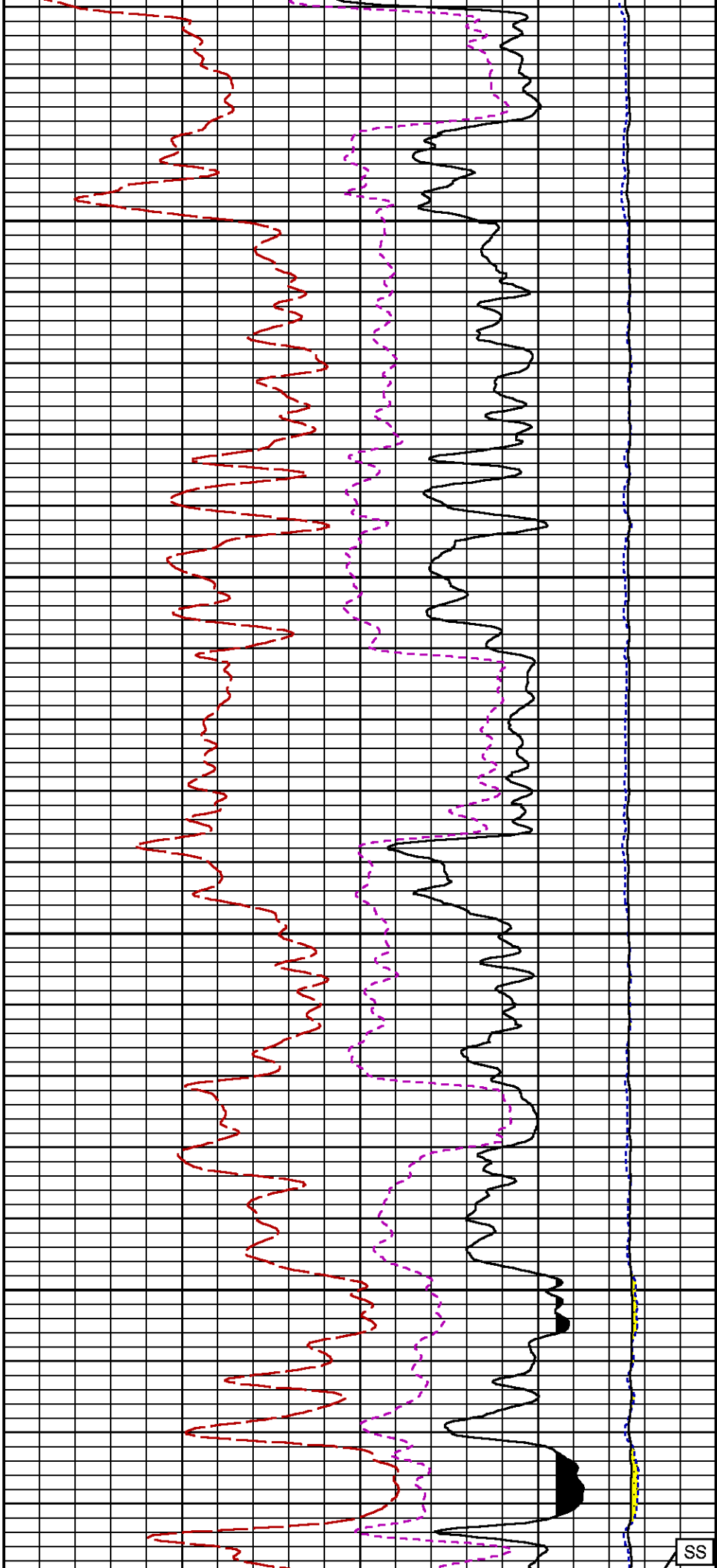
6900

7000





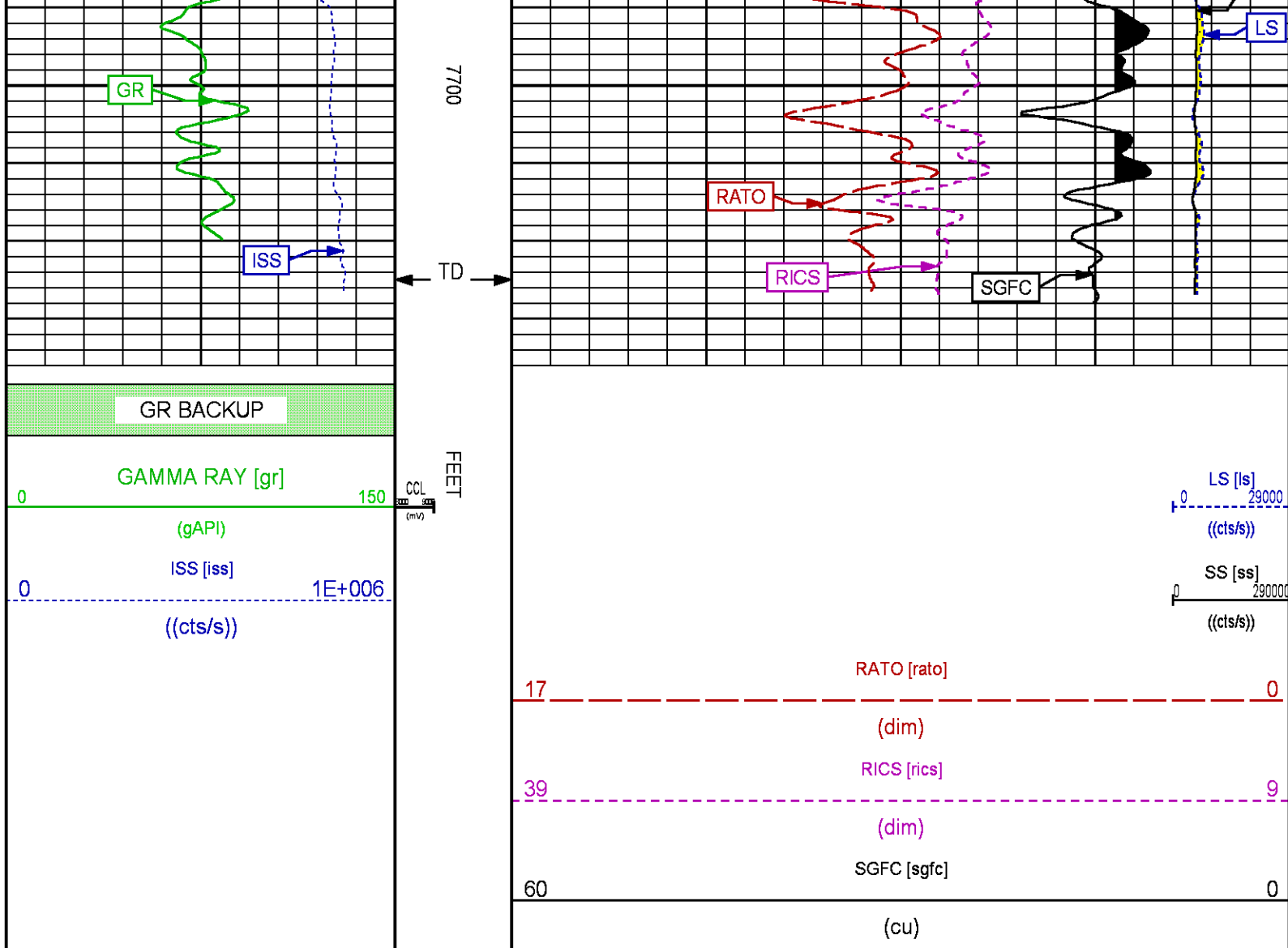




SS

7500

7600



REPEAT PASS

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017
Patches: 2

Plotted: Mon Feb 5 14:30:37 2018

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/LARAMIE_BRUTON_30-15E/p353h01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 5062.750 ft BOTTOM DEPTH: 5305.067 ft

SYMMETRIC FILTER

| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) |
|------------------|-----------|------------|-------|---------------|
| GR | FILTER () | medium (1) | | TOP BOTTOM |

RPM PROCESSING

| MEASUREMENT TYPE | PARAMETER | VALUE | UNITS | INTERVAL (ft) |
|------------------|-------------------|-------|-------|---------------|
| PNC Parameters | BOREHOLE CONTENTS | FLUID | | TOP BOTTOM |

| | | | | | |
|---------------|-------------------|------------|----|---|---|
| NO Parameters | OPEN/CASED HOLE | CASED HOLE | | | |
| | BOREHOLE SIZE | 8.50 | in | " | " |
| | LARGEST CASING OD | 4.50 | in | " | " |
| | MATRIX | SANDSTONE | | " | " |

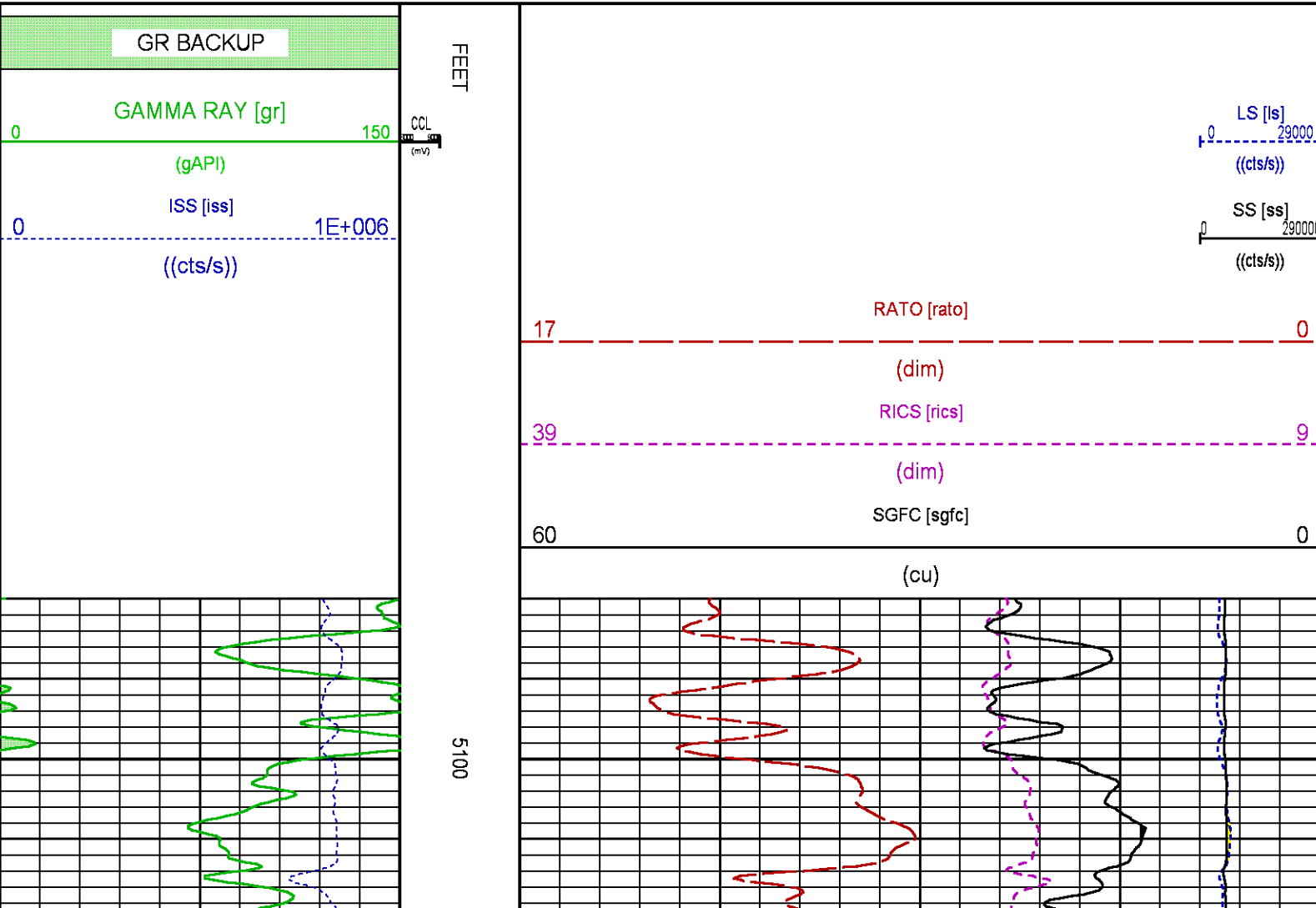
CURVE DESCRIPTION REPORT

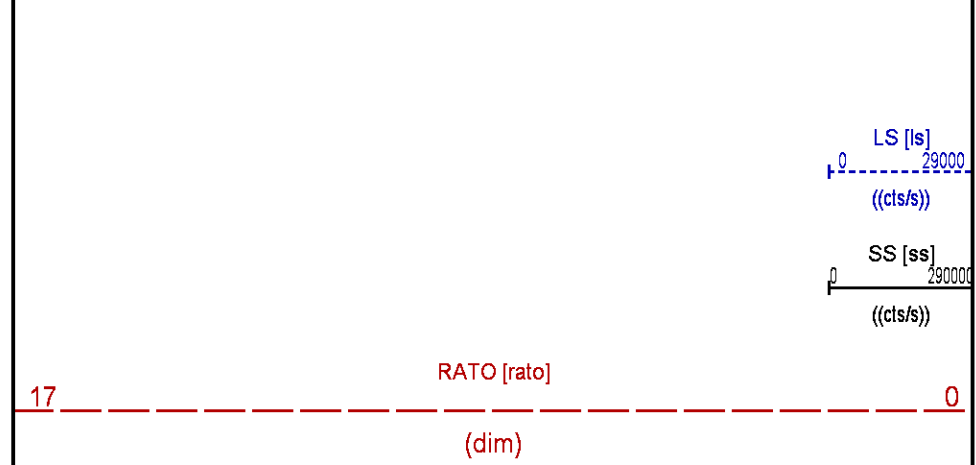
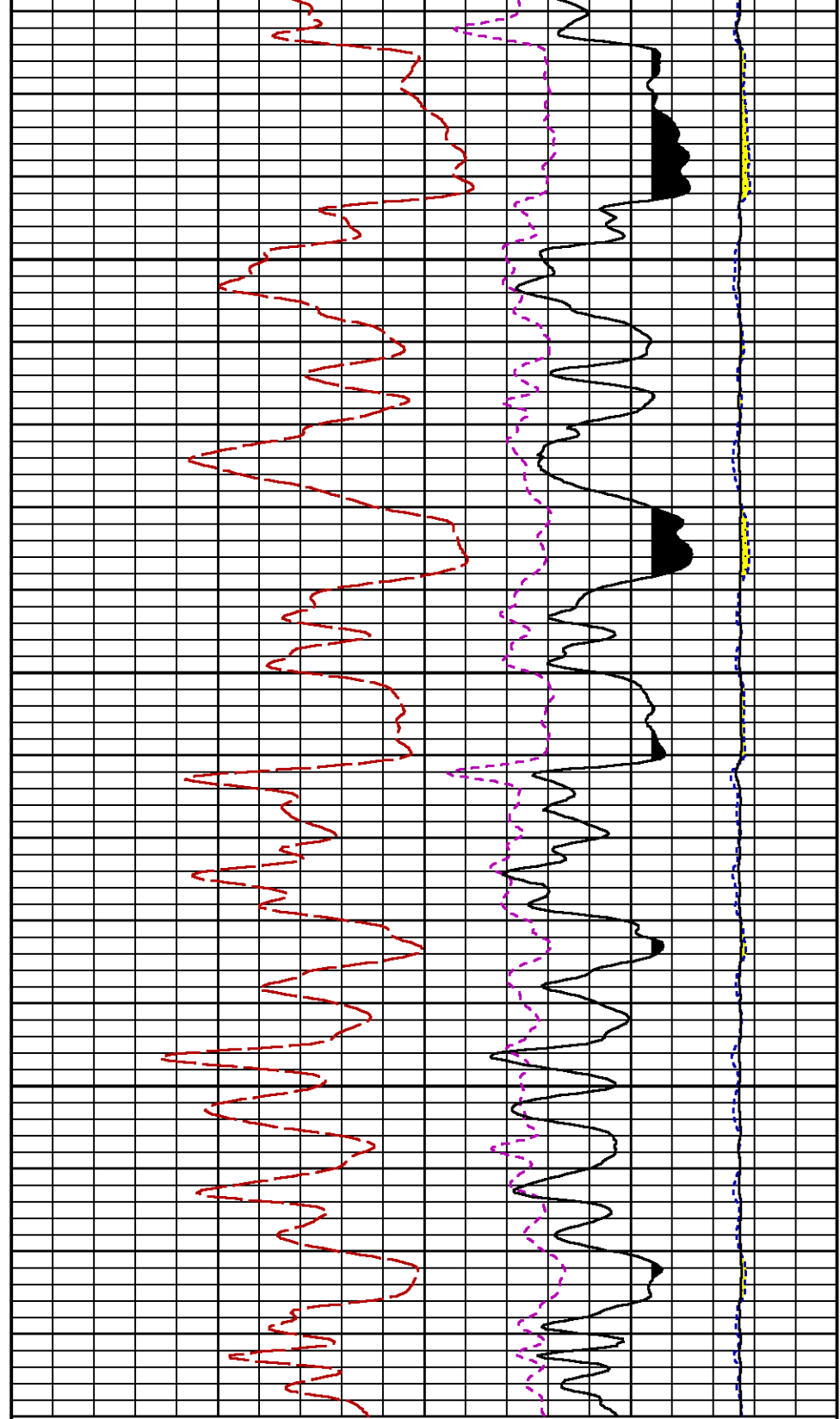
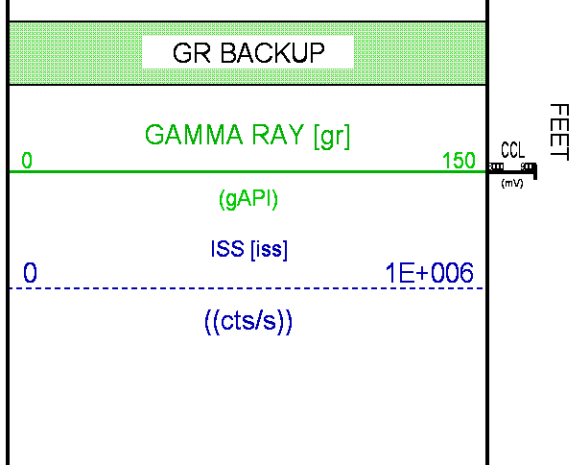
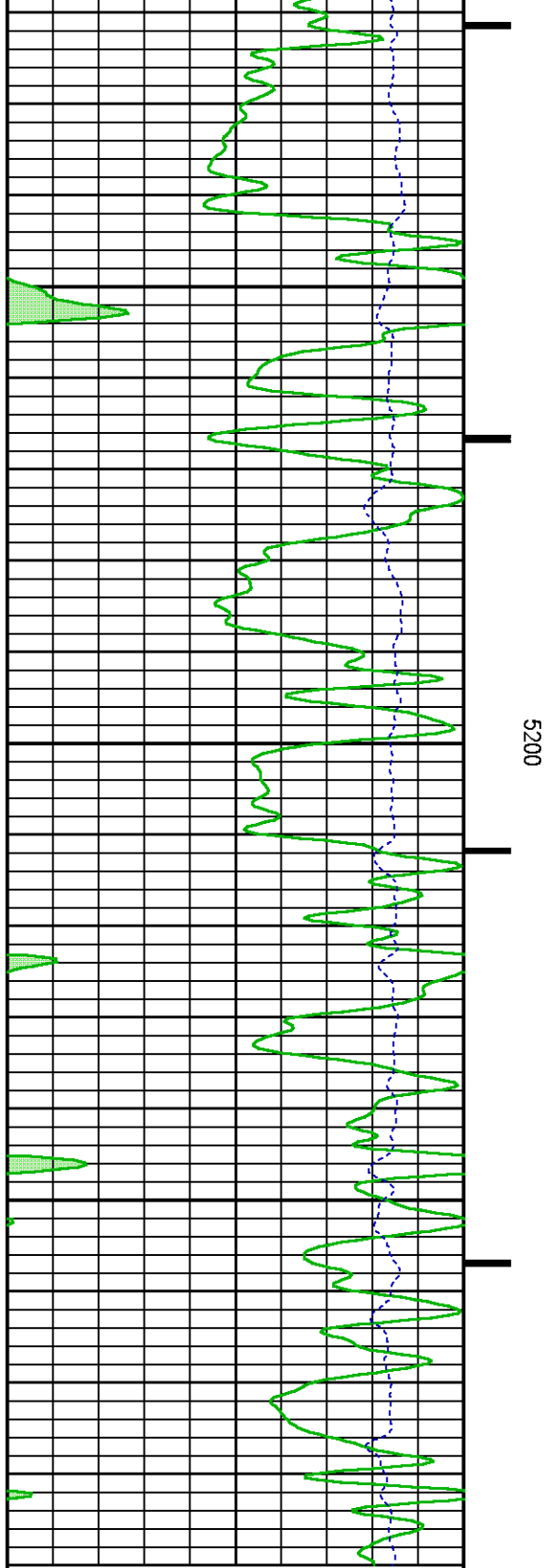
| CURVE NAME | CREATION DATE | CURVE DESCRIPTION |
|------------|---------------|-------------------|
|------------|---------------|-------------------|

| | | |
|---------|-----|---|
| F1:CCL | N/A | CASING COLLAR LOCATOR |
| F1:GR | N/A | GAMMA RAY |
| F1:ISS | N/A | INELASTIC SHORT SPACE COUNT RATE |
| F1:LS | N/A | LONG SPACE COUNT RATE |
| F1:RATO | N/A | SHORT/LONG SPACE COUNT RATE RATIO |
| F1:RICS | N/A | SHORT SPACE INELASTIC TO CAPTURE COUNT RATE RATIO (ISS/CSS) |
| F1:SGFC | N/A | BOREHOLE AND DIFFUSION CORRECTED SIGMA |
| F1:SS | N/A | SHORT SPACE COUNT RATE |

| CURVE MEASURE POINT OFFSET | | | | | | | |
|----------------------------|-------------|-------|-------------|-------|-------------|-------|-------------|
| CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) | CURVE | OFFSET (ft) |
| CCL | -26.00 | ISS | -12.75 | RATO | -12.75 | SGFC | -12.75 |
| GR | -23.00 | LS | -12.75 | RICS | -12.75 | SS | -12.75 |

| | |
|---------------|---|
| Presentation | : SysA:/dat1a/LARAMIE_BRUTON_30-15E/30-15E_RPM_REPEAT.fvpdf [5"/100' Scale] |
| Plot Interval | : 5080 - 5290 Feet |
| Data File 1 | : F1 : SysA:C:\Users |
| Created On | : 2/11/2011 10:00:00 AM |
| Company | : LARAMIE ENERGY LLC |
| Well | : BRUTON 30-15E |
| Field | : VEGA |
| File Interval | : 5050 - 5314.5 Feet |
| OCT | : p353h |





39

RICS [rics]

9

(dim)

SGFC [sgfc]

60

0

(cu)

INSTRUMENT CONFIGURATION

Source File: C:\Users\newetim\Desktop\LARAMIE_BRUTON_30-15VRPM-tdg

A3 CABLEHEAD

Diameter : 1.37"

PCM POWER SUPPLY

Diameter : 1.70"
Length : 3.86'
Weight : 18 lbs
Series : 8250EA
Mnemonic : PCM

TELEMETRY / CCL

Diameter : 1.70"
Length : 4.46'
Weight : 20 lbs
Series : 8248ED
Mnemonic : PCM
Measure Point: 1.00': CCL MP

GAMMA RAY

Diameter : 1.70"
Length : 3.02'
Weight : 15 lbs
Series : 8262XA
Mnemonic : GR
Measure Point: 0.89': GR MP

RPM ELECTRONICS

Diameter : 1.70"
Length : 4.48'
Weight : 16 lbs
Series : 8281EA
Mnemonic : RPM

34.08'

CCL MP 26.03'

GR MP 22.90'

RPM C DETECTOR SECTION

Diameter : 1.70"
Length : 9.40'
Weight : 41 lbs
Series : 8283PA
Mnemonic : RPM
Measure Point: 5.45': XLS MP
Measure Point: 5.04': LS MP
Measure Point: 4.79': SS MP

XLS MP 13.58'
LS MP 13.16'
SS MP 12.91'

RPM SOURCE SECTION

Diameter : 1.70"
Length : 4.70'
Weight : 18 lbs
Series : 8281FA
Mnemonic : RPM

TEMPERATURE / PRESSURE

Diameter : 1.70"
Length : 3.30'
Weight : 13 lbs
Series : 8255XA
Mnemonic : SRPL
Measure Point: 1.52': TEMP MP

TEMP MP 1.65'
PRES MP

BULL PLUG 1 11/16

0.00'

TOTAL LENGTH: 34.08'
TOTAL WEIGHT: 144 lbs
MAX DIAMETER: 0'1.70"

**BAKER
HUGHES**
a GE company



ECLIPS

COMPANY LARAMIE ENERGY LLC

WELL BRUTON 30-15E

FIELD VEGA

COUNTY MESA **STATE** COLORADO

FILE NO:

CH132065

API NO:

05077104700000

LOCATION:

SHL: 2614' FNL & 1869' FEL

BHL: 1617' FSL & 1336' FEL

SEC 30 **TWP** 9S **RGE** 93W

ELEVATIONS:

KB 7673 FT

DF

GL 7643 FT

DATE 05-Feb-2018