

Company: Encana Oil & Gas Inc

Well: Federal 29-6B (PF-29)

Field: Parachute

County: Garfield

State: Colorado

Cement Bond Log

Gamma Ray

County: Garfield

Field: Parachute

Location: 39.410550 N X 108.024700 W

Well: Federal 29-6B (PF-29)

Company: Encana Oil & Gas Inc

LOCATION			
39.410550 N X 108.024700 W		Elev.: K.B. 6058.00 ft G.L. 6036.00 ft D.F. 6059.00 ft	
Permanent Datum:	GROUND LEVEL	Elev.: 6036.00 ft	
Log Measured From:	Kelly Bushing	22.00 ft	above Perm. Datum
Drilling Measured From:	Kelly Bushing		
API Serial No. 050452119400	Section 29	Township 7S	Range R95W

		Run 1	Run 2	Run
PVT DATA				
Oil Density				
Water Salinity				
Gas Gravity				
Bo				
Bw				
1/Bg				
Bubble Point Pressure				
Bubble Point Temperature				
Solution GOR				
Maximum Deviation				
CEMENTING DATA				
Primary/Squeeze		Primary		
Casing String No				
Lead Cement Type				
Volume				
Density				
Water Loss				
Additives				
Tail Cement Type				
Volume				
Density				
Water Loss				
Additives				
Expected Cement Top				

Logging Date	3-Jun-2012			
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Run Number	1			
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Depth Driller				
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Schlumberger Depth	1022 ft			
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Bottom Log Interval	1022 ft			
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Top Log Interval	0 ft			
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Casing Fluid Type	Water based mud			
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Salinity				
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Density	8.6 lbm/gal			
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Fluid Level	0 ft			
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BIT/CASING/TUBING STRING				
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Bit Size	8.000 in			
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From				
To				
Casing/Tubing Size	9.675 in			
Weight	36 lbm/ft			
Grade				
From				
To				
Maximum Recorded Temperatures	76 degF			
Logger On Bottom	Time			
Unit Number	Location	383	Fort Morgan	
Recorded By	Christopher Ryan Parent			
Witnessed By	Marco Silva			

DEPTH SUMMARY LISTING

Date Created: 21-SEP-2005 0:53:58

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	1-25ZT
Serial Number:	383	Serial Number:	1064	Serial Number:	383
Calibration Date:		Calibration Date:	23-Apr-2012	Length:	24000 FT
Calibrator Serial Number:	33	Calibrator Serial Number:	1747874	Conveyance Method: Wireline Rig Type: LAND	
Calibration Cable Type:	1-25ZT	Number of Calibration Points:	10		
Wheel Correction 1:	-3	Calibration RMS:			
Wheel Correction 2:	-3	Calibration Peak Error:			

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	
Rig Up Length At Bottom:	
Rig Up Length Correction:	
Stretch Correction:	
Tool Zero Check At Surface:	

Depth Control Remarks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1	OTHER SERVICES2
OS1:	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Tagged packer at 974FT.	
CBL ran under no surface pressure.	
Max recorded temperature 73DEGF.	
Bond log ran to determine cause of excess surface cement.	
Fluid level is 0FT.	

Your crew today has been Christopher Parent & Kelly Johns.					
Thank you for choosing E&P Wireline we appreciate your business!					
RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
BYKM-00024 19C0-187 0 ft					
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP
EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		
SURFACE EQUIPMENT					
WITM-A PSC_16MHZ					
DOWNHOLE EQUIPMENT					

CBL5 DTSC — 12.8
CBL3 — 11.8
MAP — 11.3
AUX — 10.3

HV
Tension SCMT — 0.0
TOOL ZERO

MAXIMUM STRING DIAMETER 1.69 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Schlumberger

Main Pass

MAXIS Field Log

Company: Encana Oil & Gas Inc

Well: Federal 29-6B (PF-29)

Input DLIS Files

DEFAULT	SCMT_PSP_011LUP	FN:13	PRODUCER	03-Jun-2012 17:20	958.5 FT	-11.9 FT
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Output DLIS Files

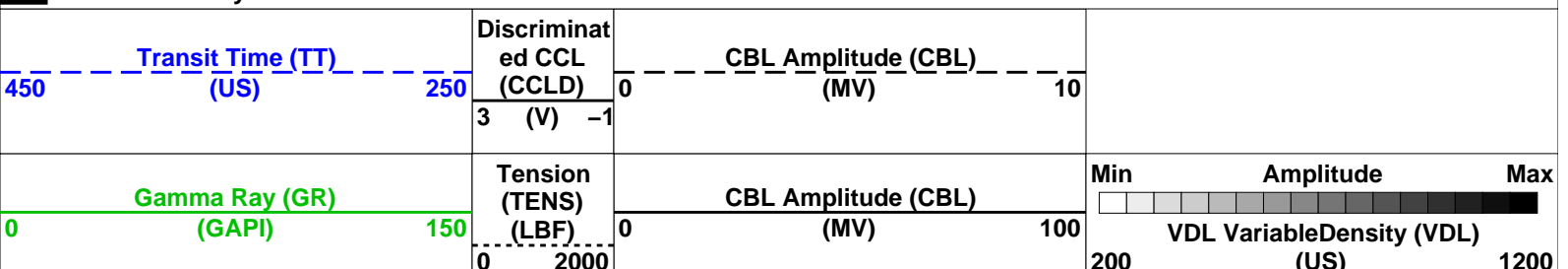
DEFAULT	SCMT_PSP_016PUP	FN:3	PRODUCER	03-Jun-2012 17:26	980.5 FT	10.5 FT
CLIENT	SCMT_PSP_016PUC	FN:4	CUSTOMER	03-Jun-2012 17:26	980.5 FT	10.5 FT

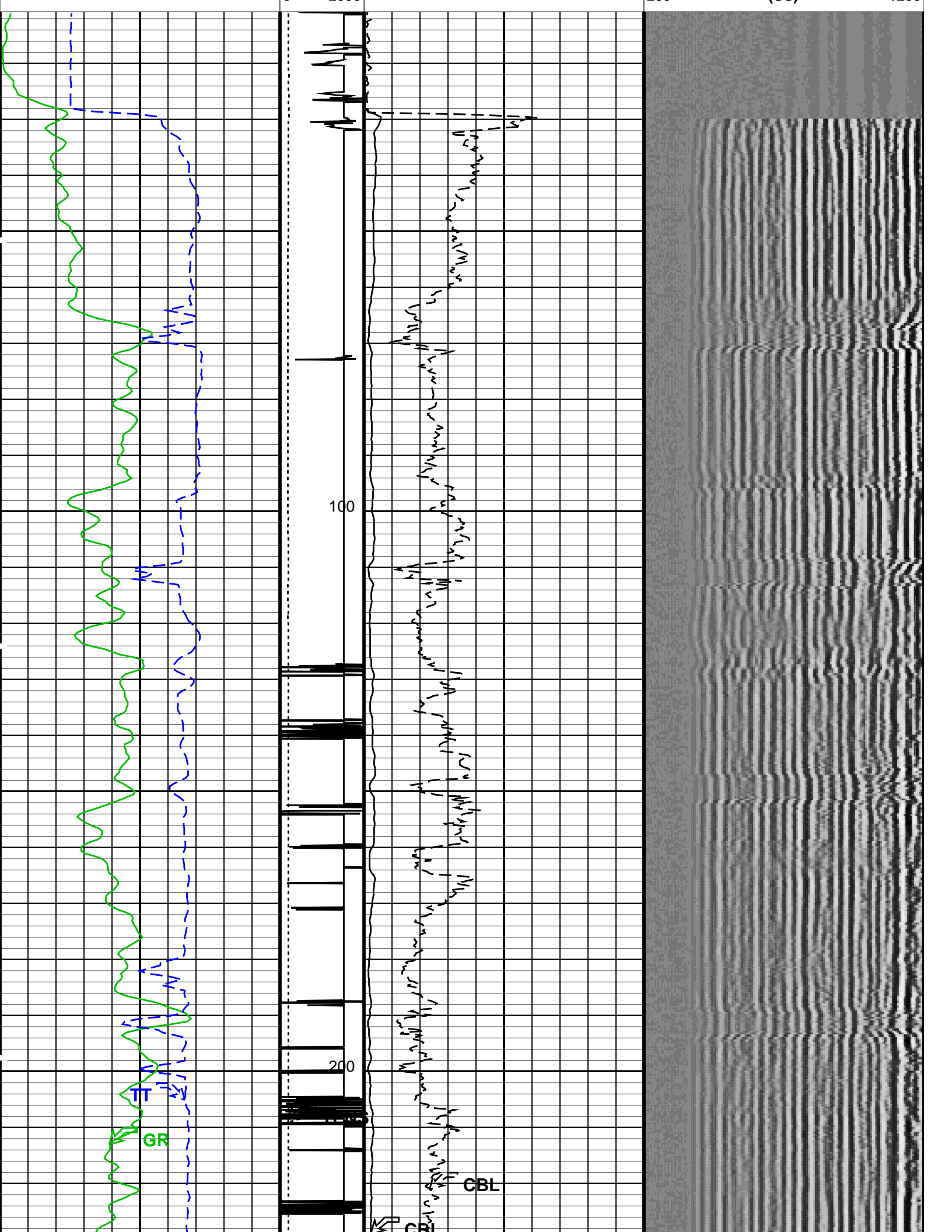
OP System Version: 19C0-187

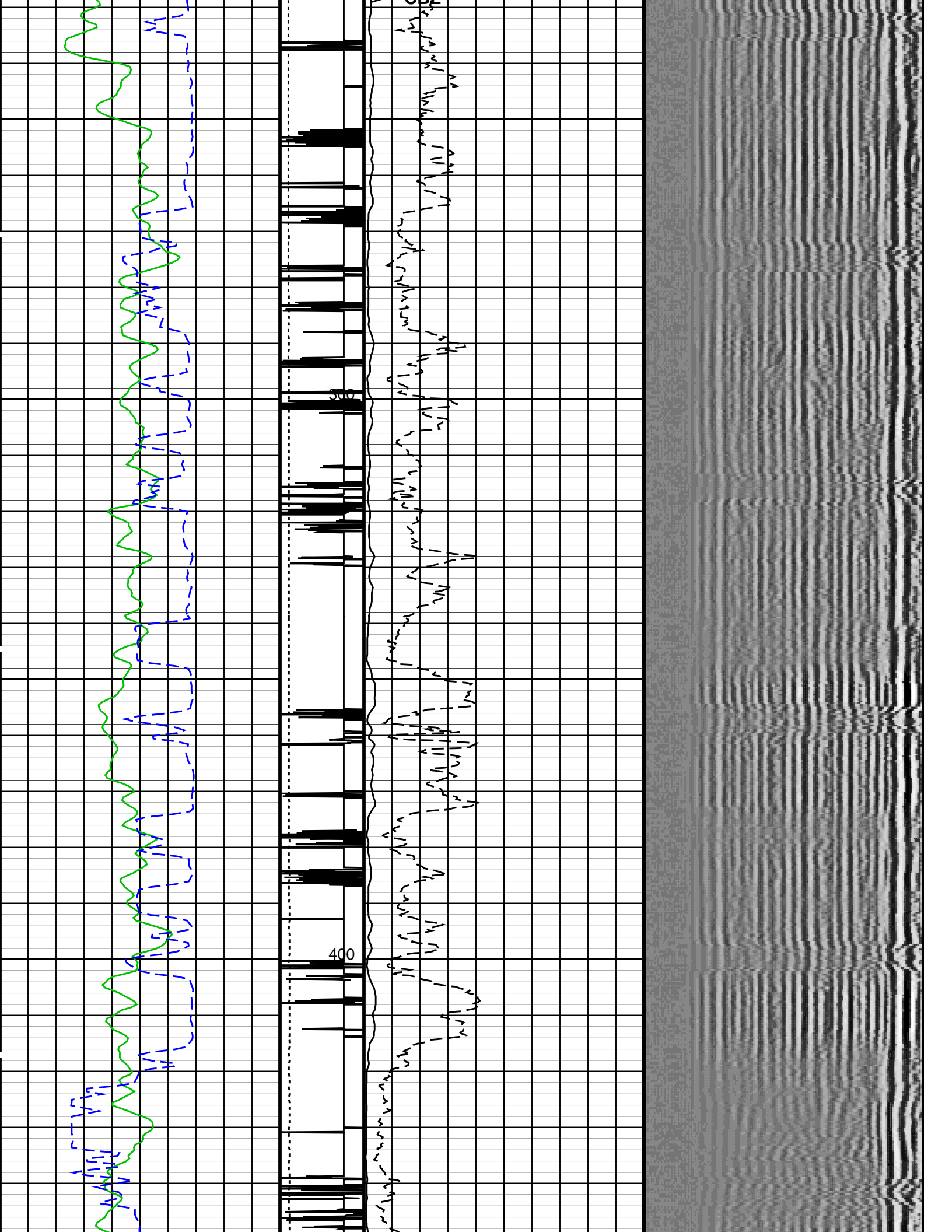
SCMT-CB	19C0-187	PSPT	19C0-187
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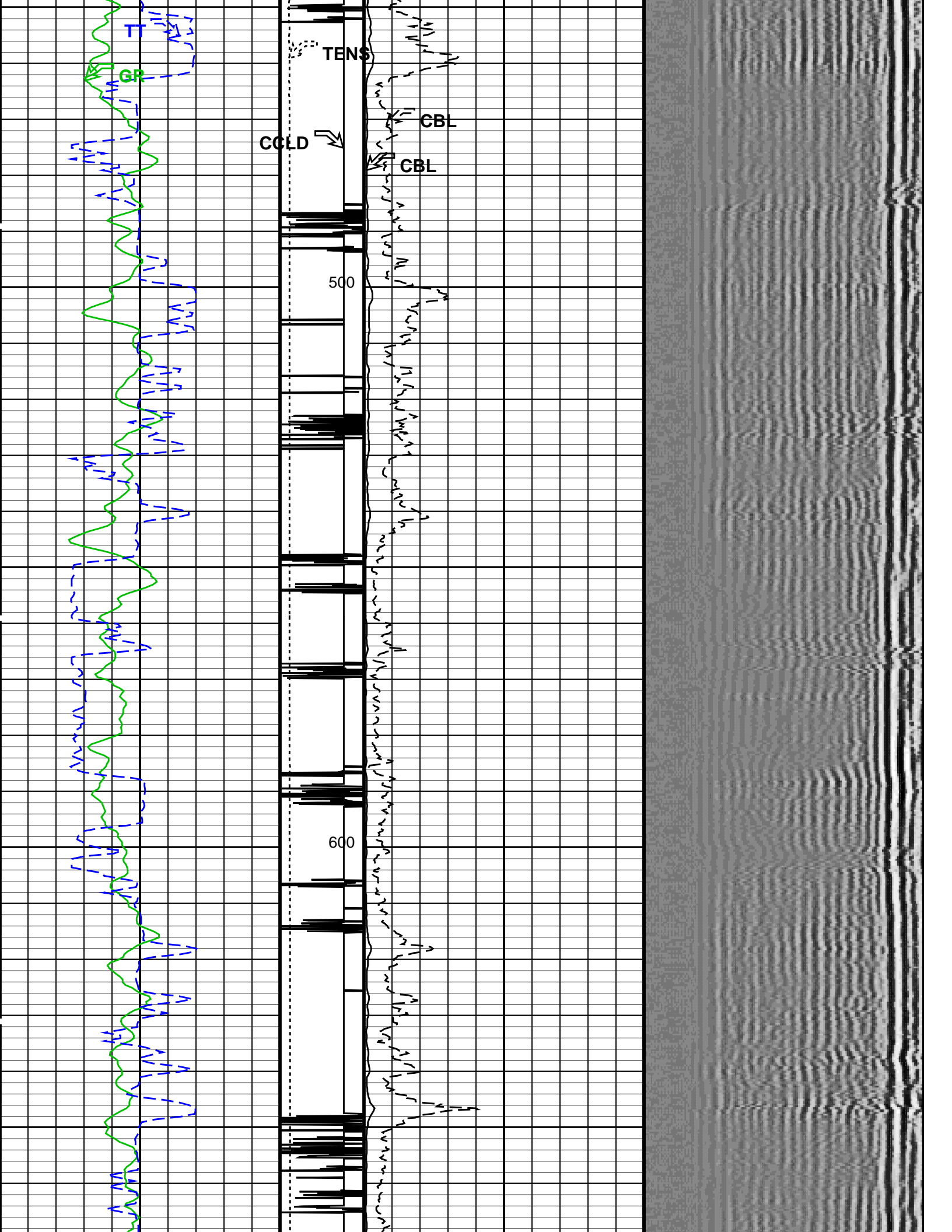
PIP SUMMARY

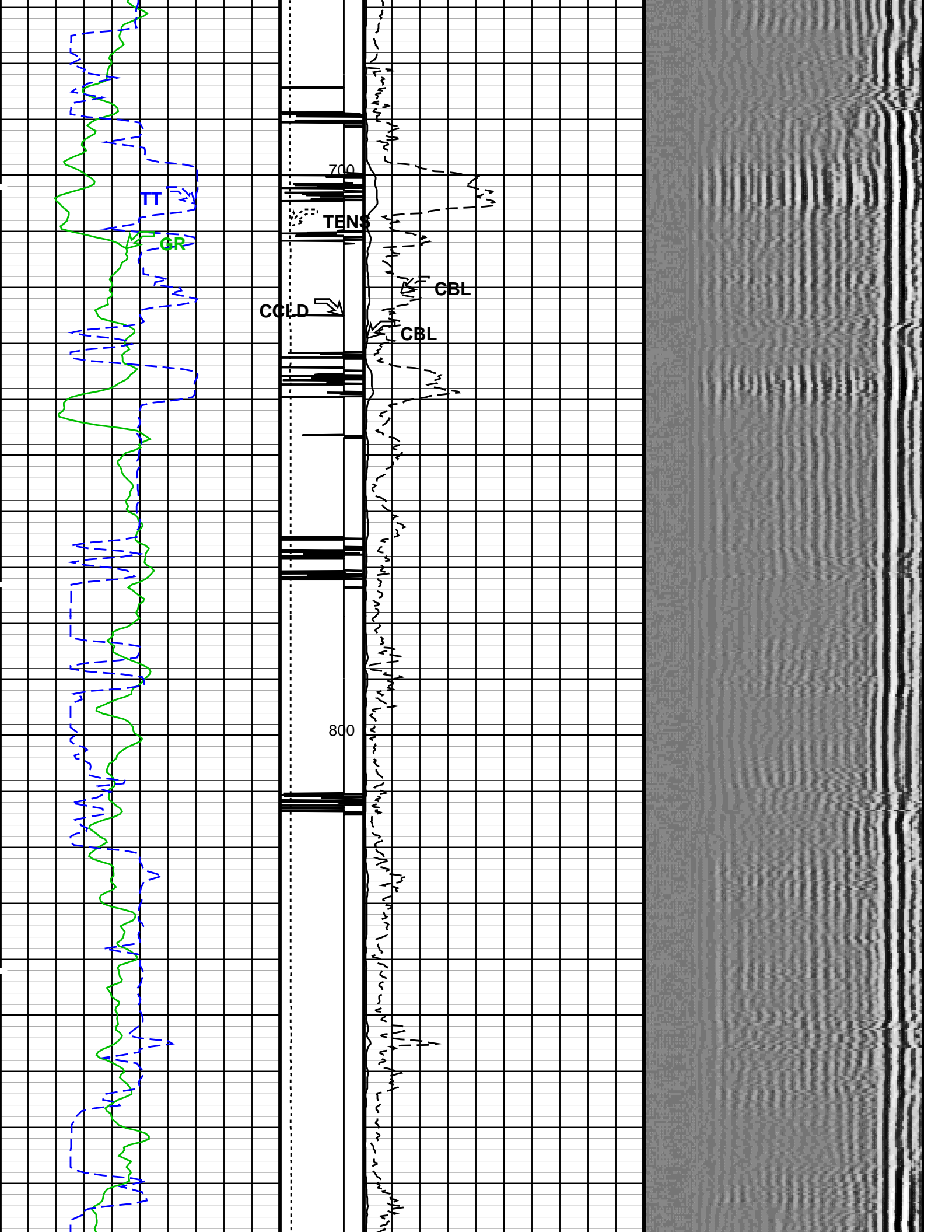
Time Mark Every 60 S

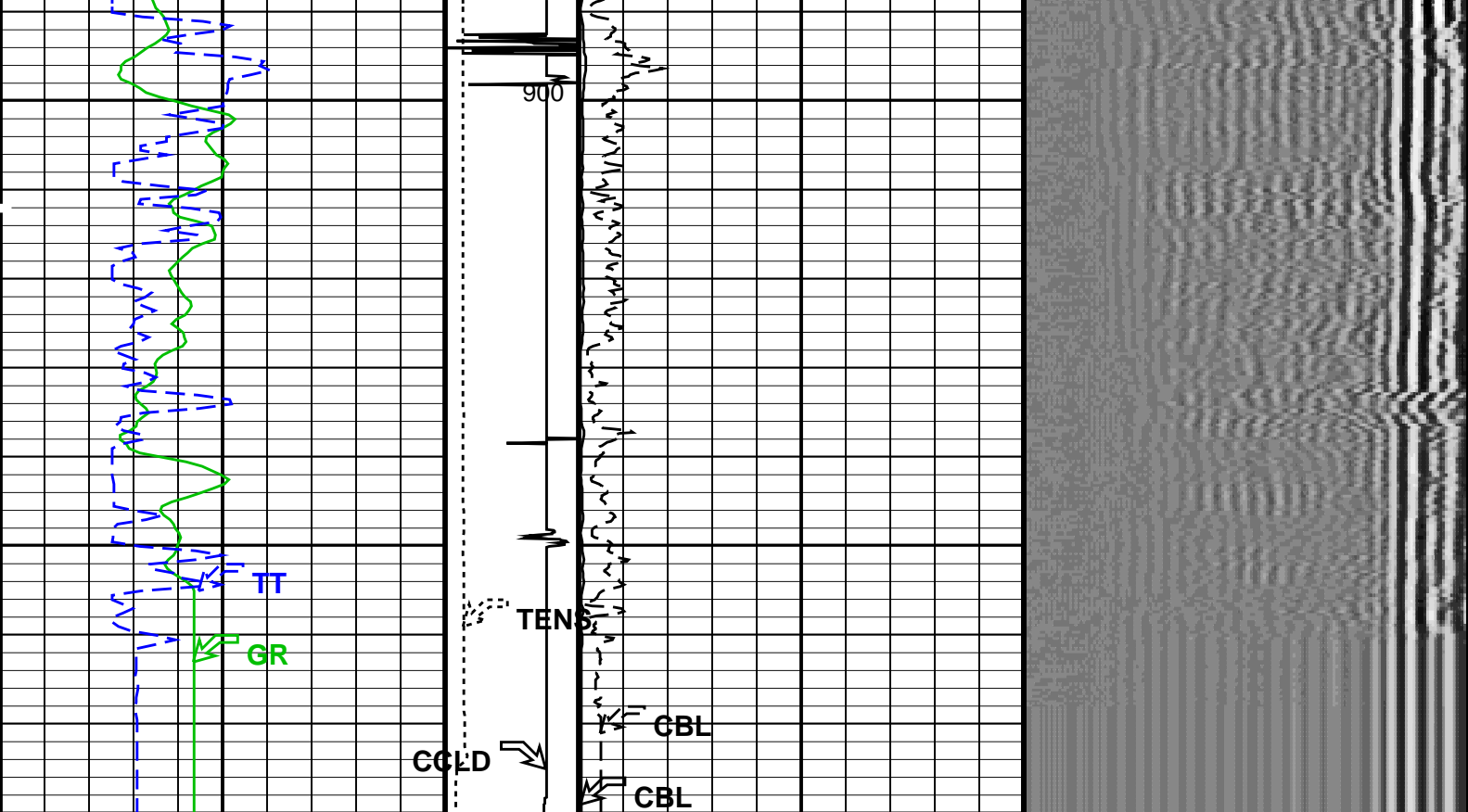












Gamma Ray (GR) (GAPI)		Tension (TENS) (LBF)	CBL Amplitude (CBL) (MV)		Min	Amplitude	Max
0	150	0 2000	0	100	200		1200
Transit Time (TT) (US)		Discriminat ed CCL (CCLD) (V)	CBL Amplitude (CBL) (MV)		VDL VariableDensity (VDL) (US)		
450	250	3 -1	0	10			

PIP SUMMARY

Time Mark Every 60 S
Format: CBL_VDL Vertical Scale: 5" per 100' Graphics File Created: 03-Jun-2012 17:26

OP System Version: 19C0-187

SCMT-CB 19C0-187 PSPT 19C0-187

<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number	SCMS–CB 8150		
Current Casing Size	9.67500 IN		
Casing Weight	36.0 LB/F		
Expected CBL Amplitude in Free Pipe Section	51 MV	Minimum Sonic Amplitude	1.56589 MV (100% Cement)
			3.14284 MV (80% Cement)
		MAP Minimum Sonic Amplitude	11.5625 MV (100% Cement)
			17.8008 MV (80% Cement)
Master Calibration (Normalization)		Before Calibration (Adjustment)	
Date of Master Calibration	15–SEP–2011		
CBL Correction Factor	0.0704035	CBL Adjustment Factor (CBAF)	1.0
MAP 1 Correction Factor	0.0943008	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.0954480		
MAP 3 Correction Factor	0.0954593		
MAP 4 Correction Factor	0.103213		

MAP 5 Correction Factor	0.0887287
MAP 6 Correction Factor	0.0833684
MAP 7 Correction Factor	0.0874583
MAP 8 Correction Factor	0.0870242

Parameters

DLIS Name	Description	Value	
SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD			
BILI	Bond Index Level for Zone Isolation	0.8	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	299.09	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	413.09	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	40	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	51	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMTC	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.361523	IN
DTF	Delta-T Fluid	189	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.902782	
GOBO	Good Bond	3.14284	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	242.09	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	11.8335	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	14.9053	FT
MMSA	MAP Minimum Sonic Amplitude	11.5625	MV
MSA	Minimum Sonic Amplitude	1.56589	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	6.8	MRAY
System and Miscellaneous			
DO	Depth Offset for Playback	22.0	FT
PP	Playback Processing	NORMAL	
TD	Total Depth	6836	FT

Input DLIS Files

DEFAULT	SCMT_PSP_011LUP	FN:13	PRODUCER	03-Jun-2012 17:20	958.5 FT	-11.9 FT
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Output DLIS Files

DEFAULT	SCMT_PSP_016PUP	FN:3	PRODUCER	03-Jun-2012 17:26		
CLIENT	SCMT_PSP_016PUC	FN:4	CUSTOMER	03-Jun-2012 17:26		



Repeat Pass

MAXIS Field Log

Input DLIS Files

DEFAULT	SCMT_PSP_010LUP	FN:11	PRODUCER	03-Jun-2012 17:20	989.5 FT	725.5 FT
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Output DLIS Files

OP System Version: 19C0-187

SCMT-CB

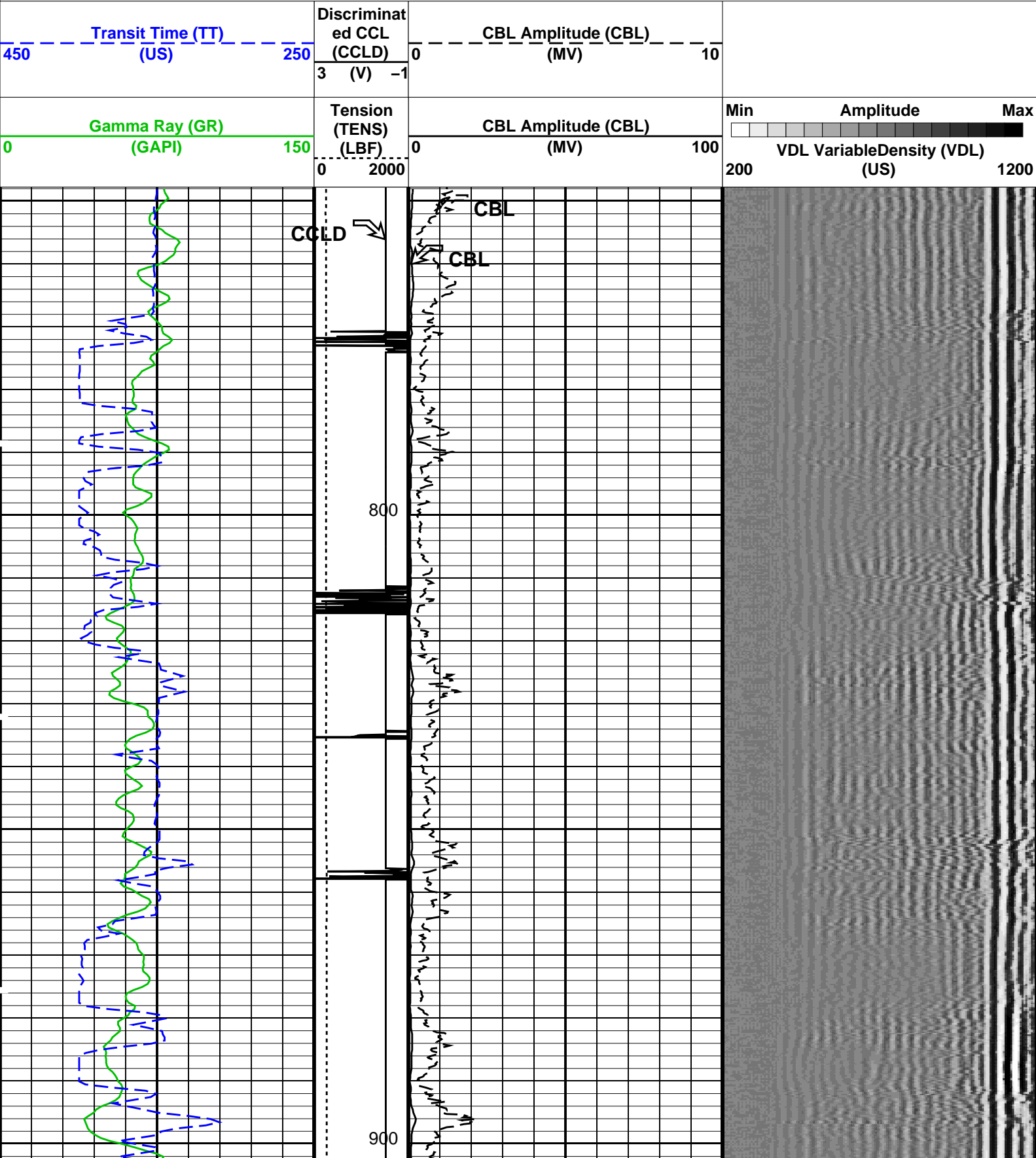
19C0-187

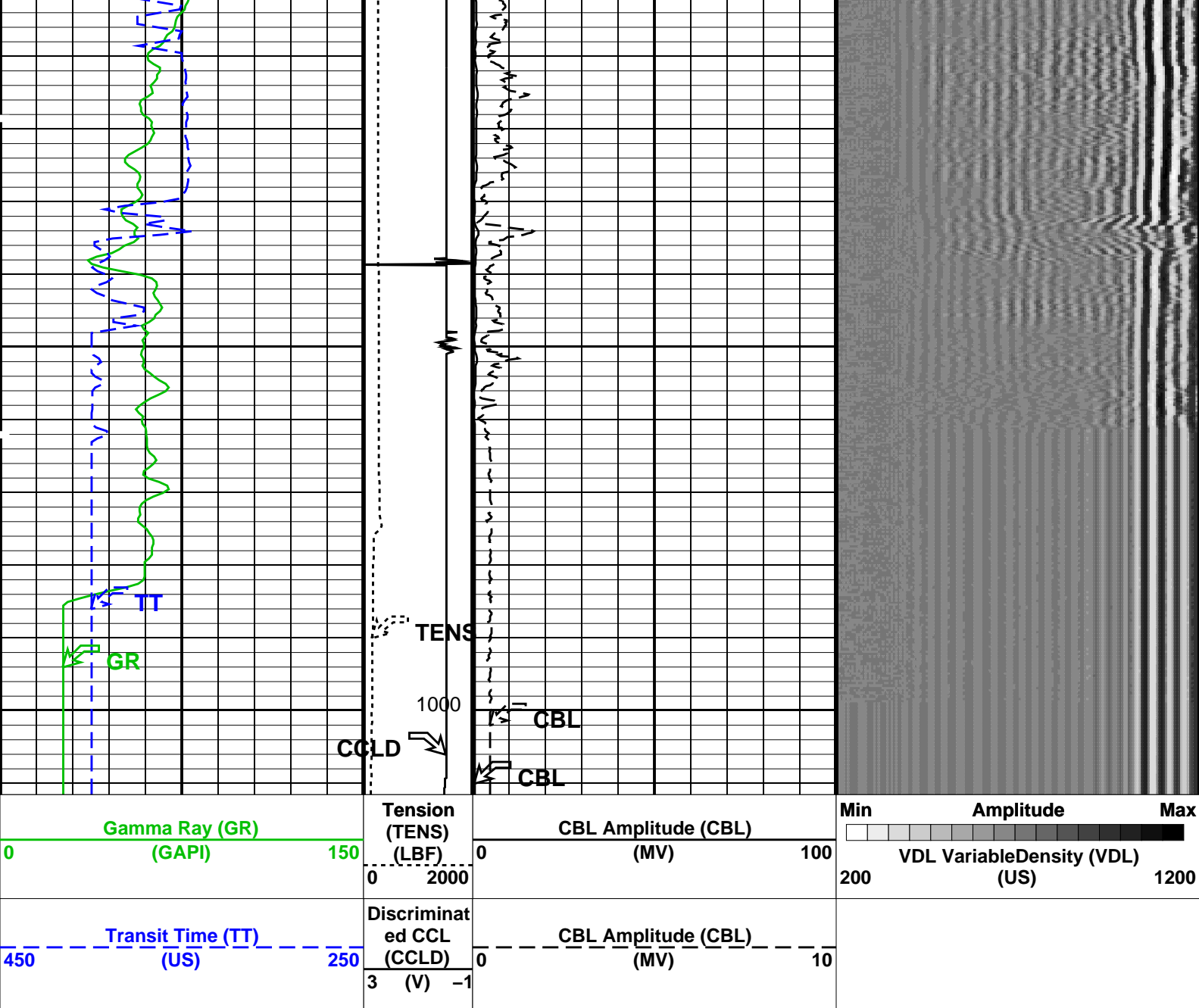
PSPT

19C0-187

PIP SUMMARY

Time Mark Every 60 S





PIP SUMMARY

Time Mark Every 60 S

Format: CBL_VDL Vertical Scale: 5" per 100'

Graphics File Created: 03-Jun-2012 17:27

OP System Version: 19C0-187

SCMT-CB 19C0-187 PSPT 19C0-187

<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number SCMS-CB 8150

Current Casing Size 9.67500 IN

Casing Weight 36.0 LB/F

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in Free Pipe Section 51 MV

Minimum Sonic Amplitude 1.56589 MV (100% Cement)
3.14284 MV (80% Cement)
MAP Minimum Sonic Amplitude 11.5625 MV (100% Cement)
17.8008 MV (80% Cement)

Master Calibration (Normalization)

Before Calibration (Adjustment)

Date of Master Calibration 15-SEP-2011

CBL Correction Factor 0.0704035

CBL Adjustment Factor (CBAF) 1.0

CBL Correction Factor	0.0704033	CBL Adjustment Factor (CBAP)	1.0
MAP 1 Correction Factor	0.0943008	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.0954480		
MAP 3 Correction Factor	0.0954593		
MAP 4 Correction Factor	0.103213		
MAP 5 Correction Factor	0.0887287		
MAP 6 Correction Factor	0.0833684		
MAP 7 Correction Factor	0.0874583		
MAP 8 Correction Factor	0.0870242		

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CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	413.09	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	40	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	51	MV
CMCF	CBL Cement Type Compensation Factor	1	
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CMTM	SCMT Operating Mode	LOG	
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MAPD	SCMT MAP Peak Detection Mode	PEAK	
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PEDE	Peak Detection On/Off Switch in Playback	OFF	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	6.8	MRAY
System and Miscellaneous			
DO	Depth Offset for Playback	22.0	FT
PP	Playback Processing	NORMAL	
TD	Total Depth	6836	FT

Input DLIS Files

DEFAULT	SCMT_PSP_010LUP	FN:11	PRODUCER	03-Jun-2012 17:20	989.5 FT	725.5 FT
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Output DLIS Files

DEFAULT	SCMT_PSP_017PUP	FN:5	PRODUCER	03-Jun-2012 17:27
CLIENT	SCMT_PSP_017PUC	FN:6	CUSTOMER	03-Jun-2012 17:27

Schlumberger

Calibration

MAXIS Field Log

Field: Parachute

Well: Federal 29–6B (PF–29)

Run date: 21–Sep–2005

Sub Type:

Sensor:

PBMS

Clock Model

PBMS Digitalization Clock

Sonde Serial NB

Sensor Serial NB1772

Calib Date ddmmyy250102

Matrix Size16

Coeff CRC279D

Clock Coeff

	Temp**0	Temp**1	Temp**2
Temp**0	–.161517143435E+03	–.455833634022E+01	–.104938566503E+00
	Temp**3	Temp**4	Temp**5
Temp**0	+.665806803953E–03	+.215816423936E–05	0.0

Client: Encana Oil & Gas Inc

Field: Parachute

Well: Federal 29–6B (PF–29)

Run date: 21–Sep–2005

Tool:

Sub Type:

Sensor:

PSP

PBMS

Sapphire

PBMS Sapphire 10kPsi Gauge

Sonde Serial NB

COEFFICIENTS FOR SAPPHIRE PBMS–A.1772 S/N:

Sensor Serial NB1772

Calib Date ddmmyy250102

Matrix Size66

Coeff CRC7015

Pres Coeff

	Tt**0	Tt**1	Tt**2
Tp**0	–.301728254764E+05	+.213698779657E+05	–.667784145806E+04
Tp**1	+.222783691269E+05	–.154949942910E+05	+.506915258152E+04
Tp**2	–.219998557234E+03	+.903672682639E+02	–.973284421881E+01
Tp**3	+.373083861809E+01	–.914930924512E+00	0.0
Tp**4	0.0	0.0	0.0

Tp**4	0.0	0.0	0.0
Tp**5	0.0	0.0	0.0
	Tt**3	Tt**4	Tt**5
Tp**0	+.999867705458E+03	-.587093588268E+02	0.0
Tp**1	-.790152285056E+03	+.481404114544E+02	0.0
Tp**2	0.0	0.0	0.0
Tp**3	0.0	0.0	0.0
Tp**4	0.0	0.0	0.0
Tp**5	0.0	0.0	0.0

PBMS Sapphire 10kPsi Gauge

Sonde Serial NB :
 Sensor Serial NB 1772
 Calib Date ddmmyy 250102
 Matrix Size 66
 Coeff CRC 8D09

Temp Coeff

	Tp**0	Tp**1	Tp**2
Tt**0	+.232726172867E+04	+.748146006300E+01	-.308596169368E+01
Tt**1	-.145543937674E+04	-.382344629538E+01	+.886665691754E+00
Tt**2	+.319573055861E+03	+.722043926946E+00	-.543588515298E-01
Tt**3	-.247026874426E+02	-.512988254724E-01	0.0
Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0
	Tp**3	Tp**4	Tp**5
Tt**0	+.711608702827E+00	-.763411838100E-01	0.0
Tt**1	-.147911019947E+00	+.159378916834E-01	0.0
Tt**2	0.0	0.0	0.0
Tt**3	0.0	0.0	0.0
Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0

Client: Encana Oil & Gas Inc
 Field: Parachute
 Well: Federal 29-6B (PF-29)
 Run date: 21-Sep-2005

Tool: PSP
 Sub Type: PBMS
 Sensor: GR

PBMS Gamma Ray

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

RESISTORS FOR GR SENSOR N.33401,TOOL PBMS-AA1772. SENSOR S/N:
33401
021101
12
1F7D

GR HV Rt

	Rt**0	Rt**1
Rt**0	+.150000000000e+04	+.236000000000e+04

Client: Encana Oil & Gas Inc

Field: Parachute

Well: Federal 29-6B (PF-29)

Run date: 21-Sep-2005

Tool: PSP

Sub Type: PBMS

Sensor: WellTemp RTD

PBMS RTD Well Thermometer

Sonde Serial NB

Sensor Serial NB

Calib Date ddmmyy

Matrix Size

Coeff CRC

1772

250102

16

0B6D

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt**0	-.578338733285E+03	+.354557410577E+03	-.963404561888E+02
	Tt**3	Tt**4	Tt**5
Tt**0	+.167992041034E+02	-.106406976994E+01	0.0

Company: **Encana Oil & Gas Inc**

Schlumberger

Well: **Federal 29–6B (PF–29)**

Field: **Parachute**

County: **Garfield**

State: **Colorado**

Cement Bond Log
Gamma Ray