

Company: Esso Australia Pty Ltd.

Well: A-9b

Field: Bream A

Rig : Prod4 / Crane Country: Australia

2 1/8" Powerjet Perforation
7"HPI Plug
Setting Record

Rig : Prod4 / Crane

Field: Bream A

Location: Gippsland

Well: A-9b

Company: Esso Australia Pty Ltd.

LOCATION		Elev.: K.B. 32.82 m G.L. -59 m D.F. 32.82 m	
Gippsland Basin Bass Strait			
Permanent Datum: M.S.L.	Elev.: 0 m		
Log Measured From: D.F.	32.8 m above Perm. Datum		
Drilling Measured From: D.F.			
State : Victoria	Max. Well Deviation 48 deg	Longitude 147 46'15"E	Latitude 038 30'04"S

Logging Date	14-Sep-2007		
Run Number	1 thru 4		
Depth Driller	2201 m		
Schlumberger Depth	2201 m		
Bottom Log Interval	2201 m		
Top Log Interval	2150 m		
Casing Fluid Type	Production Fluids		
Salinity			
Density			
Fluid Level	347 m		
BIT/CASING/TUBING STRING			
Bit Size	8.500 in		
From			
To			
Casing/Tubing Size	7.000 in		
Weight	26 lbm/ft		
Grade	L-80		
From	1602 m		
To	2281 m		
Maximum Recorded Temperatures	208 degF		
Logger On Bottom	14-Sep-2007		12:00
Unit Number	889	Prod4 / Ausl	
Recorded By	G Wright.		
Witnessed By	B White.		

	Run 1
Oil Density	
Water Salinity	
Gas Gravity	
Bo	
Bw	
1/Bq	
Bubble Point Pressure	
Bubble Point Temperature	
Solution GOR	
Maximum Deviation	48 deg
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	
Run Number	
Depth Driller	
Schlumberger Depth	
Bottom Log Interval	
Top Log Interval	
Casing Fluid Type	
Salinity	
Density	
Fluid Level	
BIT/CASING/TUBING STRING	
Bit Size	
From	
To	
Casing/Tubing Size	
Weight	
Grade	
From	
To	
Maximum Recorded Temperatures	
Logger On Bottom	
Unit Number	
Recorded By	
Witnessed By	

DEPTH SUMMARY LISTING

Date Created: 14-SEP-2007 8:15:45

Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-EB Serial Number: 6373 Calibration Date: 4-Jan-2007 Calibrator Serial Number: 9 Calibration Cable Type: 2-23ZT Wheel Correction 1: -2 Wheel Correction 2: -4	Type: PSDS/OSDS Serial Number: 325357 Calibration Date: 05-Sep-2007 Calibrator Serial Number: 1174 Calibration Gain: 0.95 Calibration Offset: 268.00	Type: 2-32ZT Serial Number: 24425 Length: 5584.85 M Conveyance Method: Wireline Rig Type: Rigless

Depth Control Parameters

Log Sequence:	Subsequent Log In the Well
Reference Log Name:	Solar Composite Log

Depth Control Remarks

1. IDW used as primary depth control. 2. Z-chart used as secondary backup
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DISCLAIMER

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OTHER SERVICES1 OS1: None OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1
Log correlated to ExxonMobil composite supplied with logging program.
Maximum well deviation = 48 degrees at 1702.8m MDKB.
Objective: Perforate the well using a 3.5m 2 1/8" 45deg Phased Powerjet gun over the interval 2188m to 2191.5m MDKB. Set a 7"HPI Plug with top of seal @ 2195m MDKB.
Before Gun- SBHP: 2588 psia SBHT: 204 degf
After Gun- SBHP: 2602 psia SBHT: 212 degf
Top Shot @ 2188 m MDKB

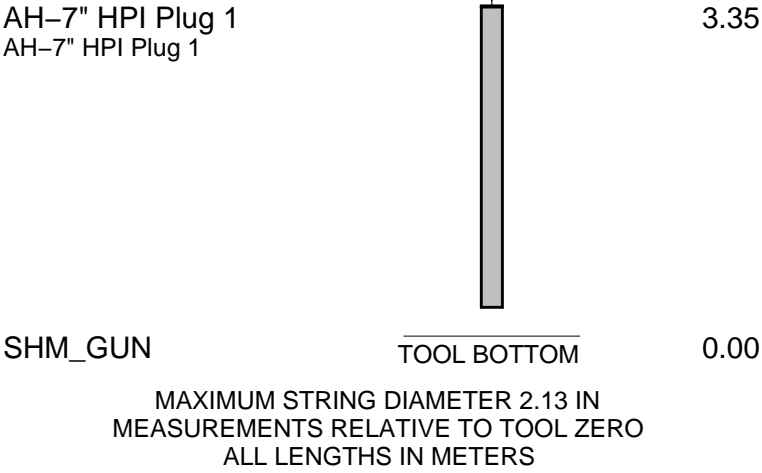
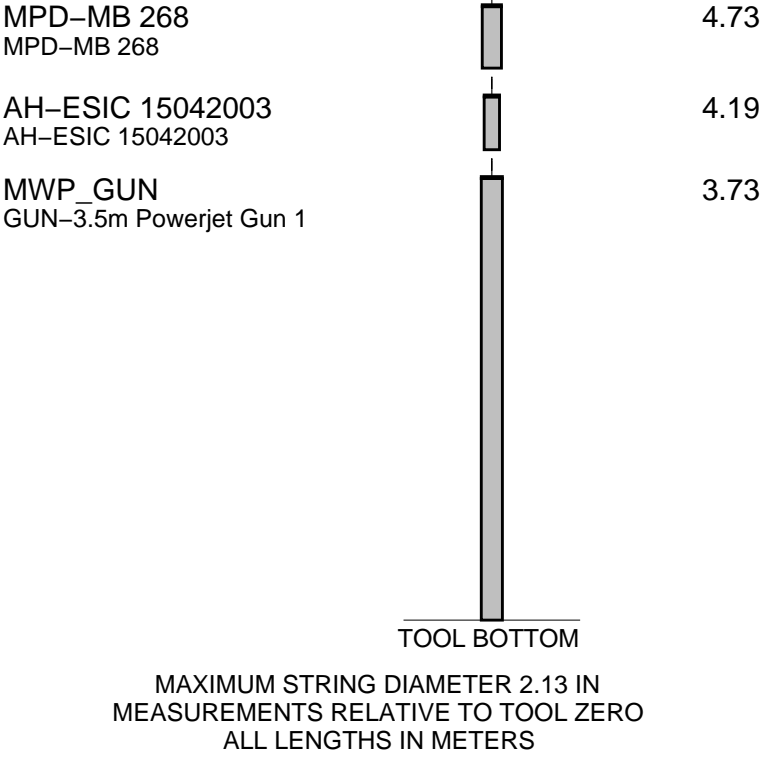
Top Shot @ 2195 m MDKB
CCL to Top Shot = 4.8 m
CCL Stop Depth = 2183.2 m MDKB
Top of Seal @ 2195 m MDKB
CCL to Top of Seal = 10.5 m
CCL Stop Depth = 2184.5 m MDKB
Crew : J Annear,J Light.

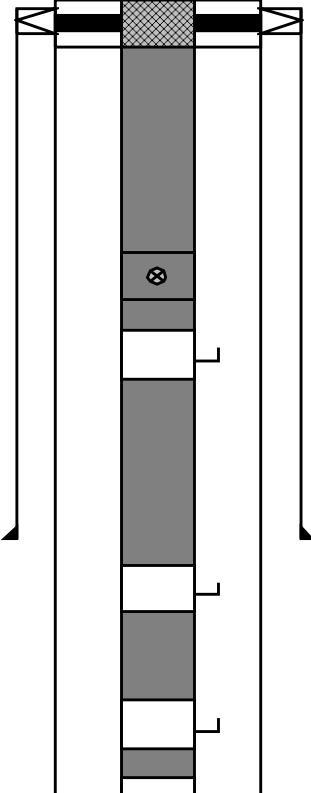
RUN 1 SERVICE ORDER #: Ausl07484973 PROGRAM VERSION: 14C0-302 FLUID LEVEL: 347 m			RUN 2		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1		RUN 2	
MWPM-. 3008	SURFACE EQUIPMENT	WITM (SHM)	SURFACE EQUIPMENT

DOWNHOLE EQUIPMENT			DOWNHOLE EQUIPMENT		
AH-SWBS-B 761 AH-SWBS-B 761		12.23	AH-SWBS-B 763 AH-SWBS-B 763		17.17
AH-SWBS-B 762 AH-SWBS-B 762		11.55	AH-SWBS-B 761 AH-SWBS-B 761		16.43
AH-SWBS-B 763 AH-SWBS-B 763		10.86	AH-SWBS-B 762 AH-SWBS-B 762		15.75
MH-SWHS-A 726 MH-SWHS-A 726		10.18	MH-SWHS-A 726 MH-SWHS-A 726		15.06
AH-124 1001		9.85	CCL-L 4195 Tension CCL CCL-L 4195	— TOOL ZERO	14.66
MWGT-AA 69 MWPG-AA 69 MWGH-AA 69 MWPG GR	— 2.41	9.64	AH-Hydraulic Actuator 1 AH-Hydraulic Actuator 1		14.20
MWPT-CA 74 MWPH-AA 74 MWPS-AA 74		8.67	AH-Setting Tool 1 AH-Setting Tool 1		12.80
	CCL SMWP Pres SMWP Temp Tension — TOOL ZERO				
AH-Flex Joint 41 AH-Flex Joint 41		5.85			
AH-122 7002		5.29			
AH-SAH-G 1047 AH-SAH-G 1047		5.19			



Production String	(in)		(m)	Well Schematic	(m)	(in)		Casing String
	OD	ID	MD		MD	OD	ID	
Tubing Hanger	9.675	3.500	11.3		11.8	9.675	9.675	Casing String
	3.500		11.3		11.8	13.375	9.675	
Tubing					12.3	13.375		Liner Hanger
								Casing String
Shut-in Valve	3.500		443.0					
Gas Lift Mandrel	3.500		559.0					
Gas Lift Mandrel	3.500		904.0		796.0	13.375		Casing Shoe
Gas Lift Mandrel	3.500		1104.0					
Gas Lift Mandrel	3.500		1247.0					

Schlumberger

MAXIS Field Log

Time	Elapsed Time	Depth (M)	File
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Log Pass (down)	14-Sep-2007 13:26	000:25	632.0	-	2093.8	PERFO_082LDP
Log Pass (down)	14-Sep-2007 13:52	000:02	2104.3	-	2193.6	PERFO_084LDP
Log Pass (up)	14-Sep-2007 13:54	000:04	2191.2	-	2151.1	PERFO_085LUP
Log Pass (up)	14-Sep-2007 14:09	000:04	2192.1	-	2157.4	PERFO_087LUP
Log Pass (up)	14-Sep-2007 14:14	000:31	2197.3	-	2144.4	PERFO_088LUP
Station Log	14-Sep-2007 14:16	000:26	2183.2	-	3.9	PERFO_089LTP
Log Pass (down)	14-Sep-2007 15:59	000:33	18.9	-	2200.5	PERFO_092LDP
Log Pass (up)	14-Sep-2007 16:32	000:06	2200.5	-	2145.0	PERFO_093LUP
Log Pass (up)	14-Sep-2007 16:44	000:26	1887.9	-	-9.9	PERFO_095LUP
Log Pass (down)	15-Sep-2007 15:24	000:36	57.9	-	2195.3	PERFO_099LDP
Log Pass (up)	15-Sep-2007 16:01	000:03	2195.3	-	2145.9	PERFO_100LUP
Log Pass (up)	15-Sep-2007 16:04	000:25	2192.3	-	2147.5	PERFO_101LUP
Log Pass (up)	15-Sep-2007 16:29	000:03	2188.0	-	2157.7	PERFO_102LUP



Plug Setting Pass
Set @ 2195m MDKB

MAXIS Field Log

Output DLIS Files

DEFAULT PERFO_101LUP FN:38 PRODUCER 15-Sep-2007 16:04 2192.3 M 2147.5 M

OP System Version: 14C0-302
MCM

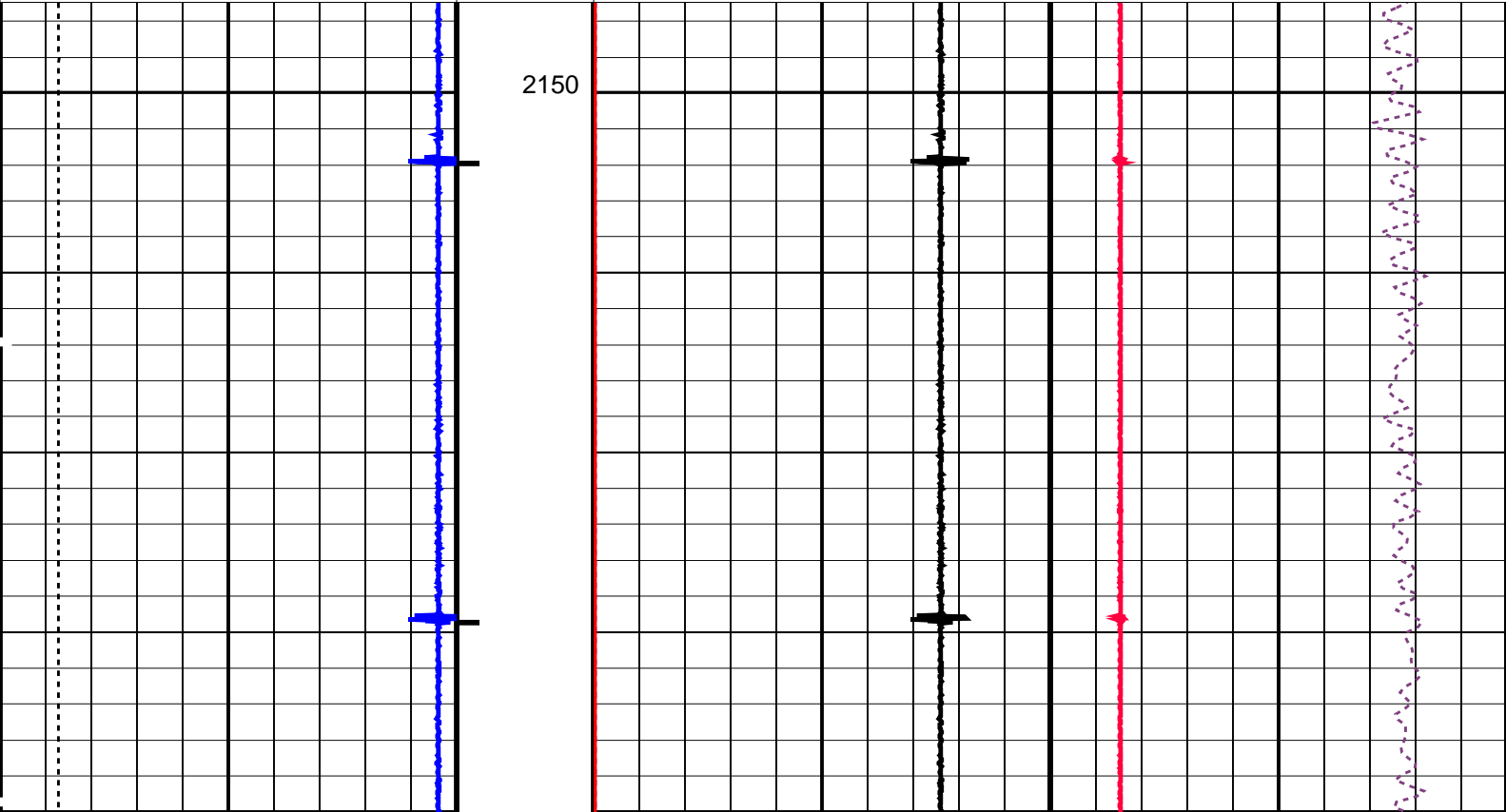
SHM_GUN 14C0-302 CCL-L 14C0-302

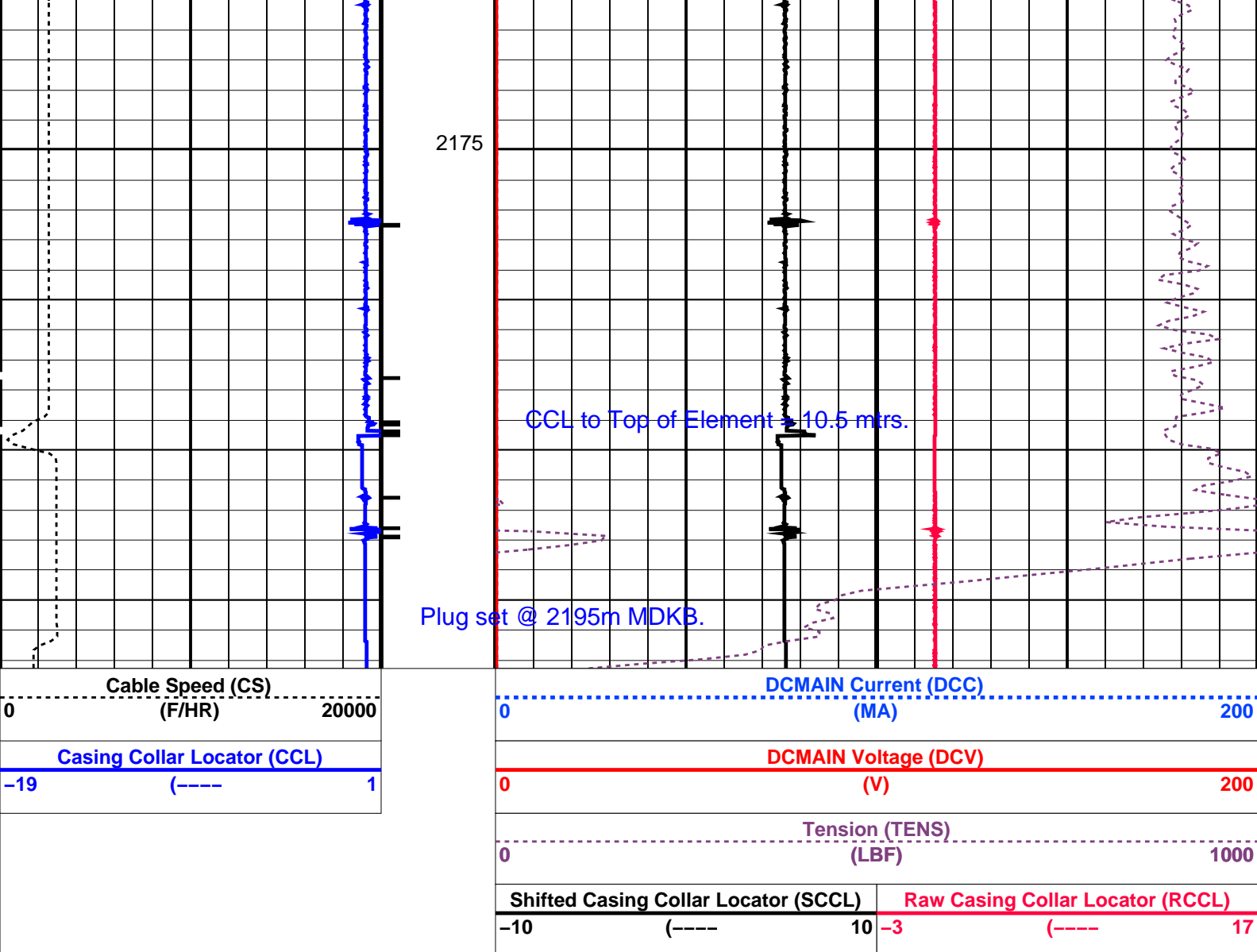
PIP SUMMARY

└─ Casing Collars

Time Mark Every 60 S

	Shifted Casing Collar Locator (SCCL)		Raw Casing Collar Locator (RCCL)		
	-10	(----	10	-3 (----	17
	Tension (TENS)				
	0				1000
Casing Collar Locator (CCL)		DCMAIN Voltage (DCV)			
-19	(----	1	0		200
Cable Speed (CS)		DCMAIN Current (DCC)			
0	(F/HR)	20000	0		200





PIP SUMMARY

Time Mark Every 60 S

Casing Collars

Parameters		
DLIS Name	Description	Value
CCL-L: Casing Collar Locator		
CCLD	CCL reset delay	12 IN
CCLT	CCL Detection Level	0.3 V

Format: PERFO Vertical Scale: 1:200 Graphics File Created: 15-Sep-2007 16:04

OP System Version: 14C0-302

MCM

SHM_GUN 14C0-302 CCL-L 14C0-302

Output DLIS Files		
DEFAULT	PERFO_101LUP	FN:38 PRODUCER 15-Sep-2007 16:04



Plug Correlation Pass

Output DLIS Files

DEFAULT PERFO_100LUP FN:37 PRODUCER 15-Sep-2007 16:01 2195.3 M 2145.9 M

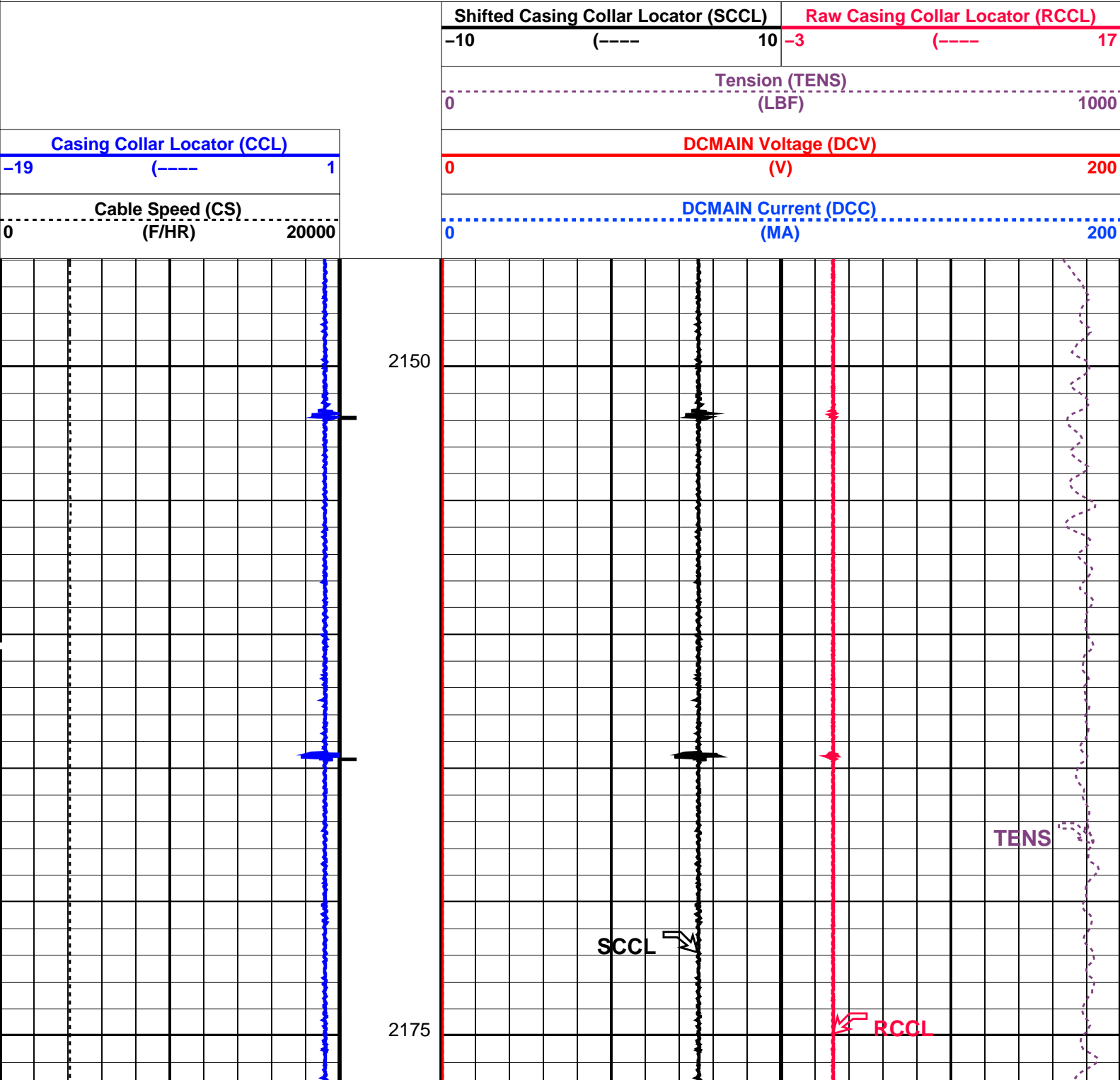
OP System Version: 14C0-302
MCM

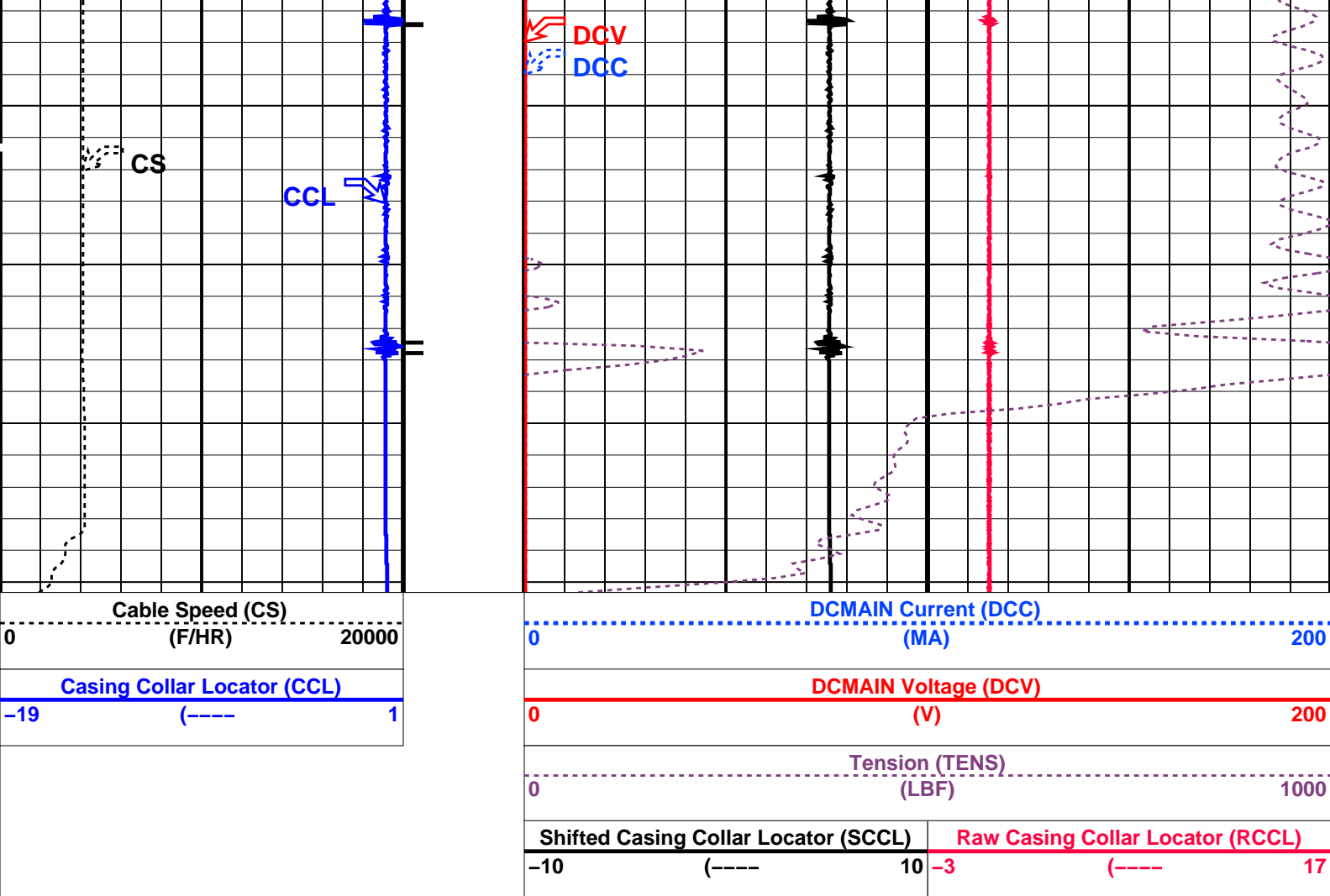
SHM_GUN 14C0-302 CCL-L 14C0-302

PIP SUMMARY

└─ Casing Collars

Time Mark Every 60 S





PIP SUMMARY

Time Mark Every 60 S

Casing Collars

Parameters		
DLIS Name	Description	Value
CCL-L	Casing Collar Locator	
CCLD	CCL reset delay	12 IN
CCLT	CCL Detection Level	0.3 V

Format: PERFO Vertical Scale: 1:200 Graphics File Created: 15-Sep-2007 16:01

OP System Version: 14C0-302			
MCM			
SHM_GUN	14C0-302	CCL-L	14C0-302

Output DLIS Files			
DEFAULT	PERFO_100LUP	FN:37 PRODUCER	15-Sep-2007 16:01



2.13" Dummy Plug Pass
14-Sep-2007

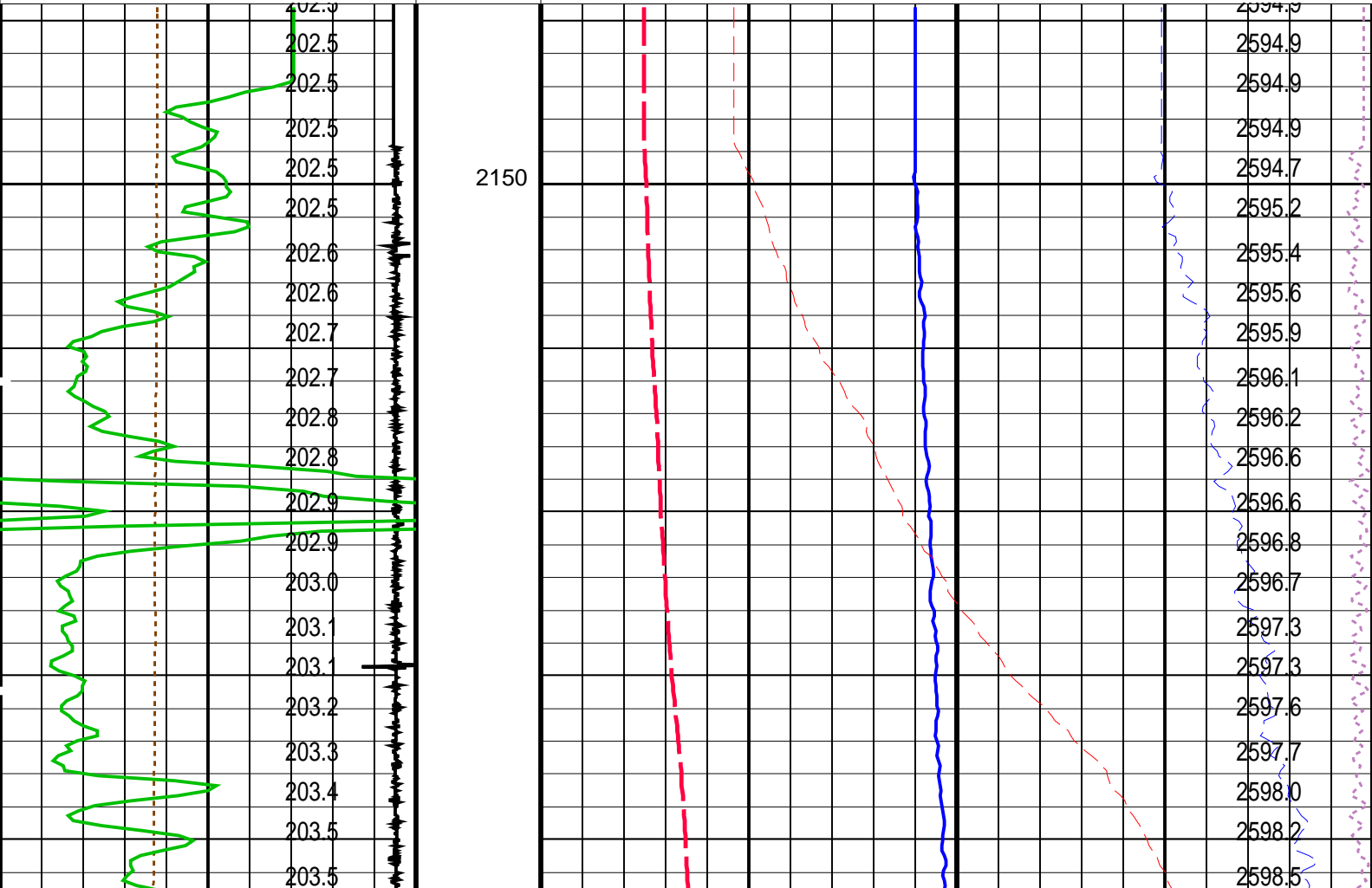
Input DLIS Files					
DEFAULT	PERFO_093LUP	FN:30	PRODUCER	14-Sep-2007 16:32	2200.5 M 2145.0 M
Output DLIS Files					
DEFAULT	PERFO_094PUP	FN:31	PRODUCER	14-Sep-2007 16:39	2201.9 M 2144.4 M

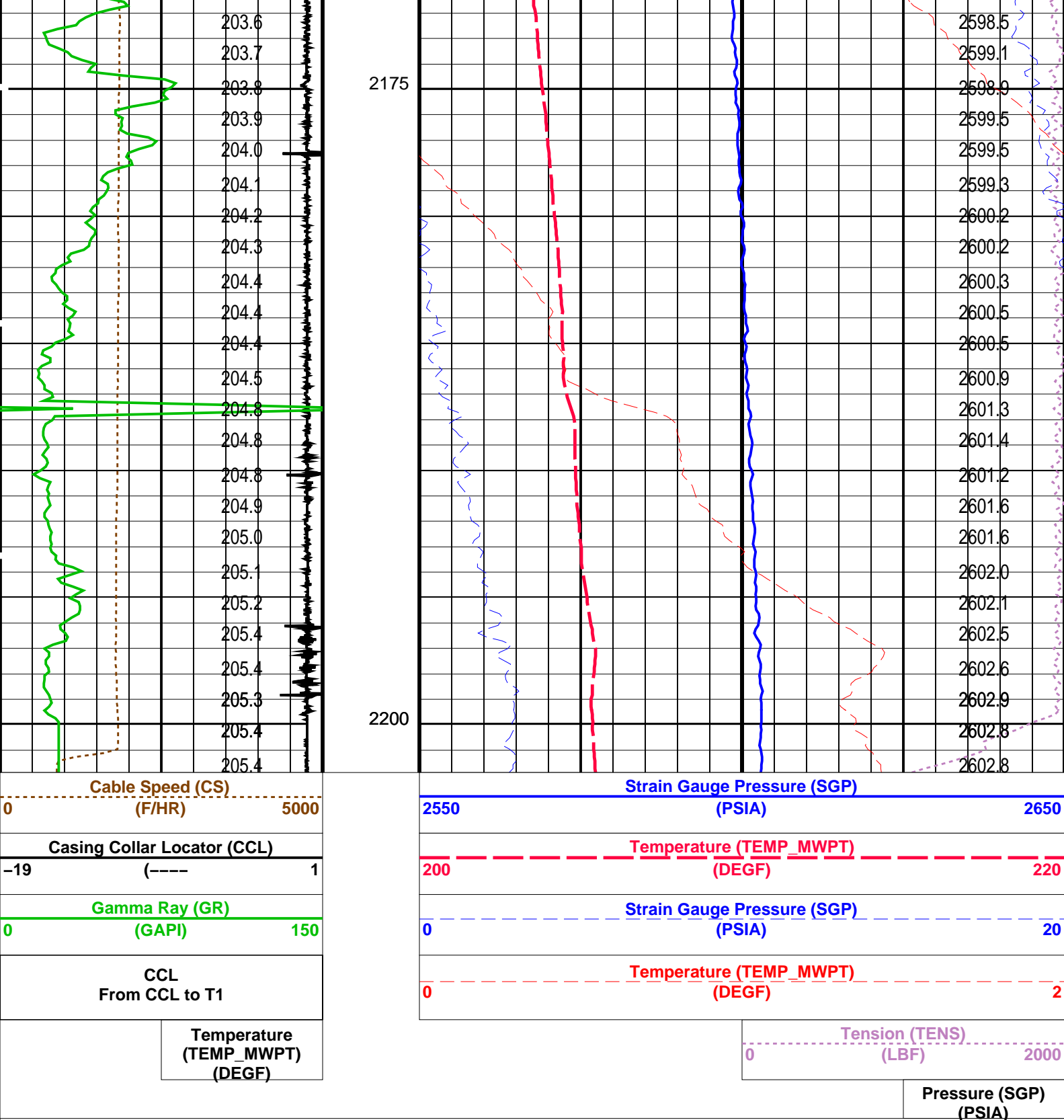
OP System Version: 14C0-302					
MCM					
MWPT-CA	14C0-302	MWGT-AA	14C0-302		

PIP SUMMARY

Time Mark Every 60 S

Temperature (TEMP_MWPT) (DEGF)		Pressure (SGP) (PSIA)	
CCL From CCL to T1		Tension (TENS) (LBF)	
Gamma Ray (GR) (GAPI)		Temperature (TEMP_MWPT) (DEGF)	
Casing Collar Locator (CCL)		Strain Gauge Pressure (SGP) (PSIA)	
Cable Speed (CS) (F/HR)		Temperature (TEMP_MWPT) (DEGF)	
		Strain Gauge Pressure (SGP) (PSIA)	





PIP SUMMARY

Time Mark Every 60 S

Parameters		
DLIS Name	Description	Value
MWPT-CA: MEASUREMENT WHILE PERFORATING TOOL		
DEVI_FL_CORR	Deviation Angle for Flow Line Correction	0 DEG
FLD	Flow Line Density	1 G/C3
MWPT_NULL_SOURCE	MWPT NULL Temperature Source	TEMS
MWPT_NULL_TEMP	MWPT NULL Temperature	0.0 DEGC
System and Miscellaneous		
DO	Depth Offset for Playback	1.4 M
PP	Playback Processing	NORMAL

OP System Version: 14C0-302

MCM

MWPT-CA

14C0-302

MWGT-AA

14C0-302

Input DLIS Files

DEFAULT

PERFO_093LUP

FN:30

PRODUCER

14-Sep-2007 16:32

2200.5 M

2145.0 M

Output DLIS Files

DEFAULT

PERFO_094PUP

FN:31

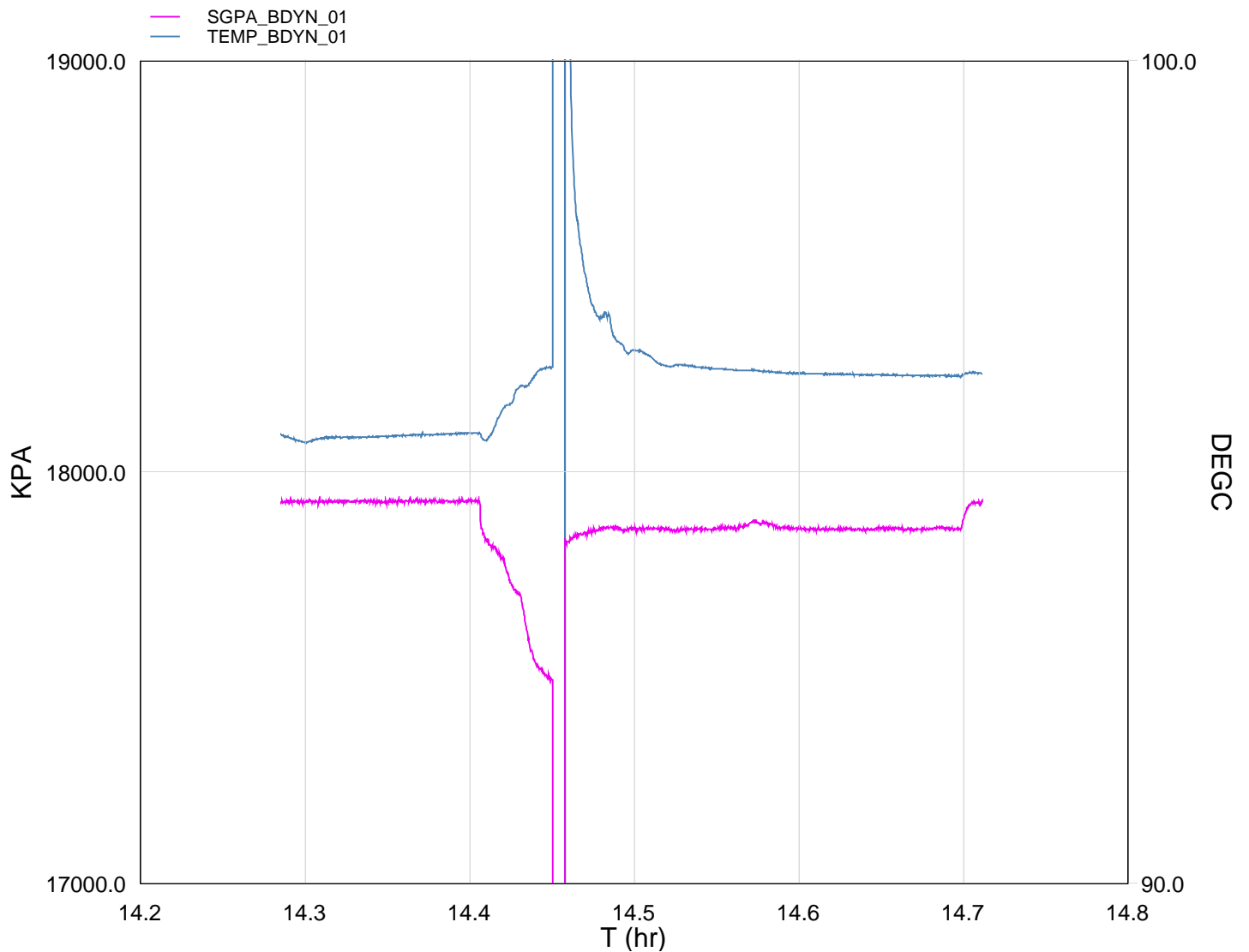
PRODUCER

14-Sep-2007 16:39

Schlumberger

Gun # 1
2188m to 2191.5m MDKB

MAXIS Field Log



TIME	DEGF	PSIA
2100.0	205.13	2593.197
2040.0	205.12	2590.788
1980.0	205.13	2590.544
1920.0	205.14	2591.138
1860.0	205.14	2591.340
1800.0	205.17	2590.640
1740.0	205.17	2590.539
1680.0	205.20	2592.241
1620.0	205.23	2591.422
1560.0	205.28	2591.294
1500.0	205.34	2590.907
1440.0	205.36	2590.725
1380.0	205.69	2590.402
1320.0	206.44	2591.146
1260.0	208.23	2588.744
1200.0	205.29	2537.603
1140.0	204.88	2560.129
1080.0	204.13	2582.886
1020.0	203.86	2600.583
960.0	203.82	2600.423
900.0	203.83	2600.331
840.0	203.78	2600.421
780.0	203.77	2600.403
720.0	203.76	2600.540
660.0	203.64	2600.208
600.0	203.80	2600.458

Company: Esso Australia Pty Ltd.

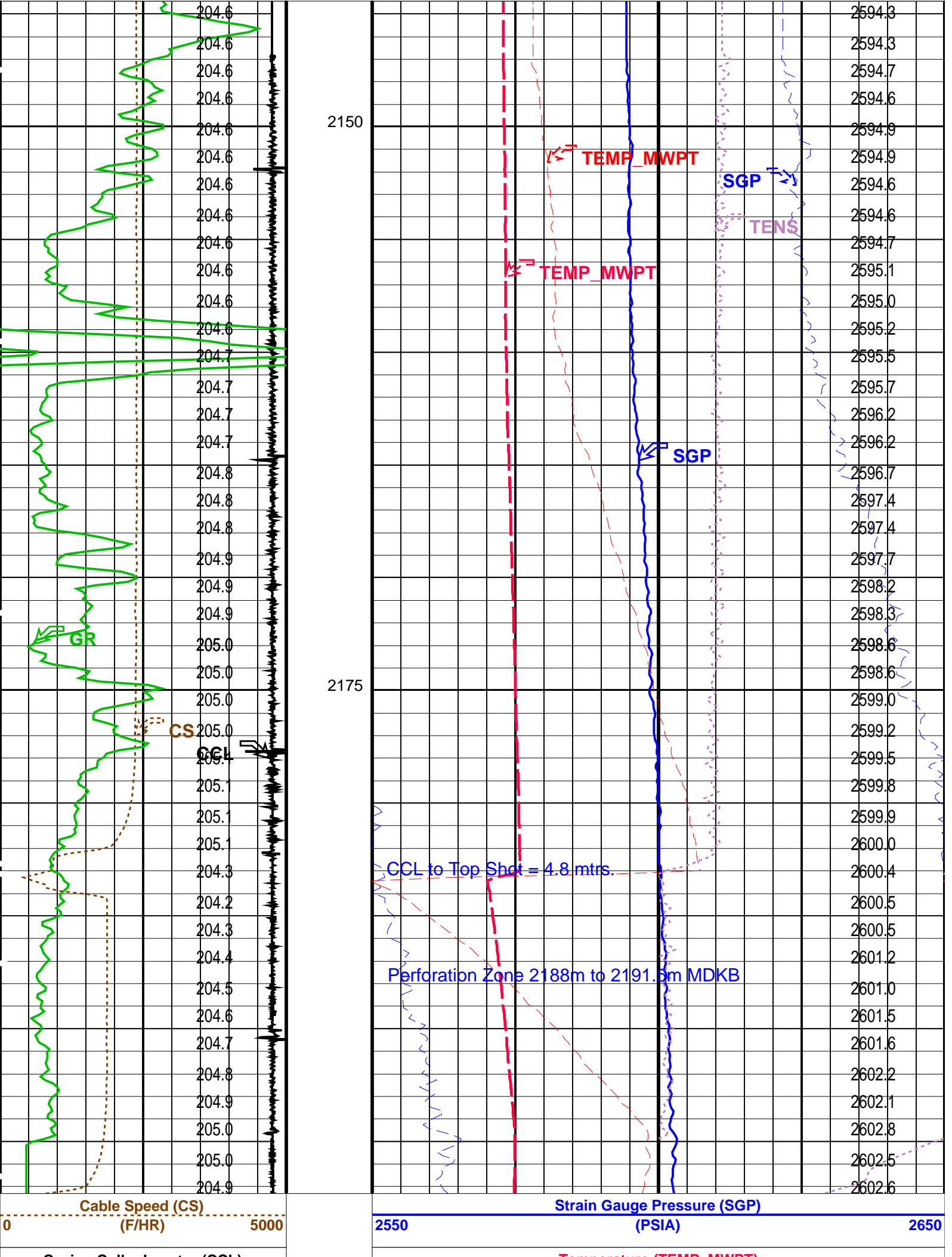
Well: A-9b

Output DLIS Files						
DEFAULT	PERFO_088LUP	FN:25	PRODUCER	14-Sep-2007 14:14	2197.3 M	2144.4 M
OP System Version: 14C0-302						
MCM						
MWP_GUN	14C0-302		MWPT-CA	14C0-302		
MWGT-AA	14C0-302					

PIP SUMMARY

Time Mark Every 60 S

		Pressure (SGP) (PSIA)
	Temperature (TEMP_MWPT) (DEGF)	<div> <div>Tension (TENS) (LBF)</div> <div>02000</div> </div>
CCL From CCL to T1		<div> <div>Temperature (TEMP_MWPT) (DEGF)</div> <div>02</div> </div>
Gamma Ray (GR) (GAPI)	0150	<div> <div>Strain Gauge Pressure (SGP) (PSIA)</div> <div>020</div> </div>
Casing Collar Locator (CCL) (----	-191	<div> <div>Temperature (TEMP_MWPT) (DEGF)</div> <div>200220</div> </div>
Cable Speed (CS) (F/HR)	05000	<div> <div>Strain Gauge Pressure (SGP) (PSIA)</div> <div>25502650</div> </div>



Casing Collar Locator (CCL)		Temperature (TEMP_MWPT) (DEGF)	
-19	(----	200	220
Gamma Ray (GR) (GAPI)		Strain Gauge Pressure (SGP) (PSIA)	
0	150	0	20
CCL From CCL to T1		Temperature (TEMP_MWPT) (DEGF)	
		0	2
Temperature (TEMP_MWPT) (DEGF)		Tension (TENS) (LBF)	
		0	2000
		Pressure (SGP) (PSIA)	

PIP SUMMARY	
Time Mark Every 60 S	

Parameters			
DLIS Name	Description	Value	
MWPT-CA: MEASUREMENT WHILE PERFORATING TOOL			
DEVI_FL_CORR	Deviation Angle for Flow Line Correction	0	DEG
FLD	Flow Line Density	1	G/C3
MWPT_NULL_SOURCE	MWPT NULL Temperature Source	TEMS	
MWPT_NULL_TEMP	MWPT NULL Temperature	0.0	DEGC

Format: MWP	Vertical Scale: 1:200	Graphics File Created: 14-Sep-2007 14:14
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OP System Version: 14C0-302			
MCM			
MWP_GUN	14C0-302	MWPT-CA	14C0-302
MWGT-AA	14C0-302		

Output DLIS Files			
DEFAULT	PERFO_088LUP	FN:25	PRODUCER 14-Sep-2007 14:14

Schlumberger

Gun Correlation Pass

MAXIS Field Log

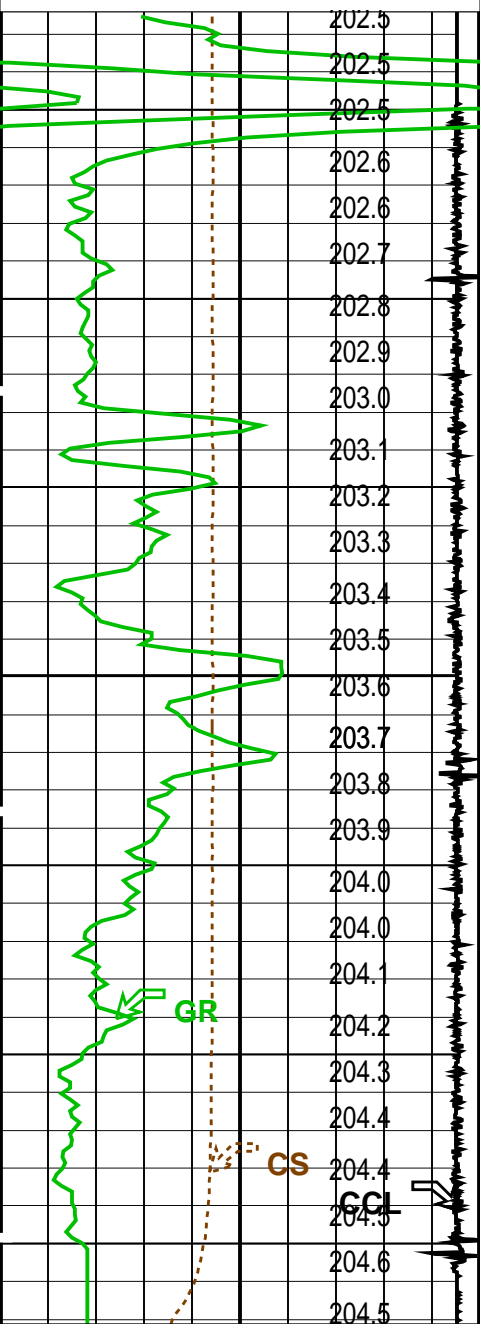
Company: Esso Australia Pty Ltd.	Well: A-9b
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Output DLIS Files					
DEFAULT	PERFO_087LUP	FN:24	PRODUCER	14-Sep-2007 14:09	2192.1 M 2157.4 M
OP System Version: 14C0-302					
MCM					
MWP_GUN	14C0-302	MWPT-CA	14C0-302		
MWGT-AA	14C0-302				

PIP SUMMARY	
Time Mark Every 60 S	

		Pressure (SGP) (PSIA)	
Temperature (TEMP_MWPT) (DEGF)		Tension (TENS) (LBF)	
		0	2000
CCL		Temperature (TEMP_MWPT)	

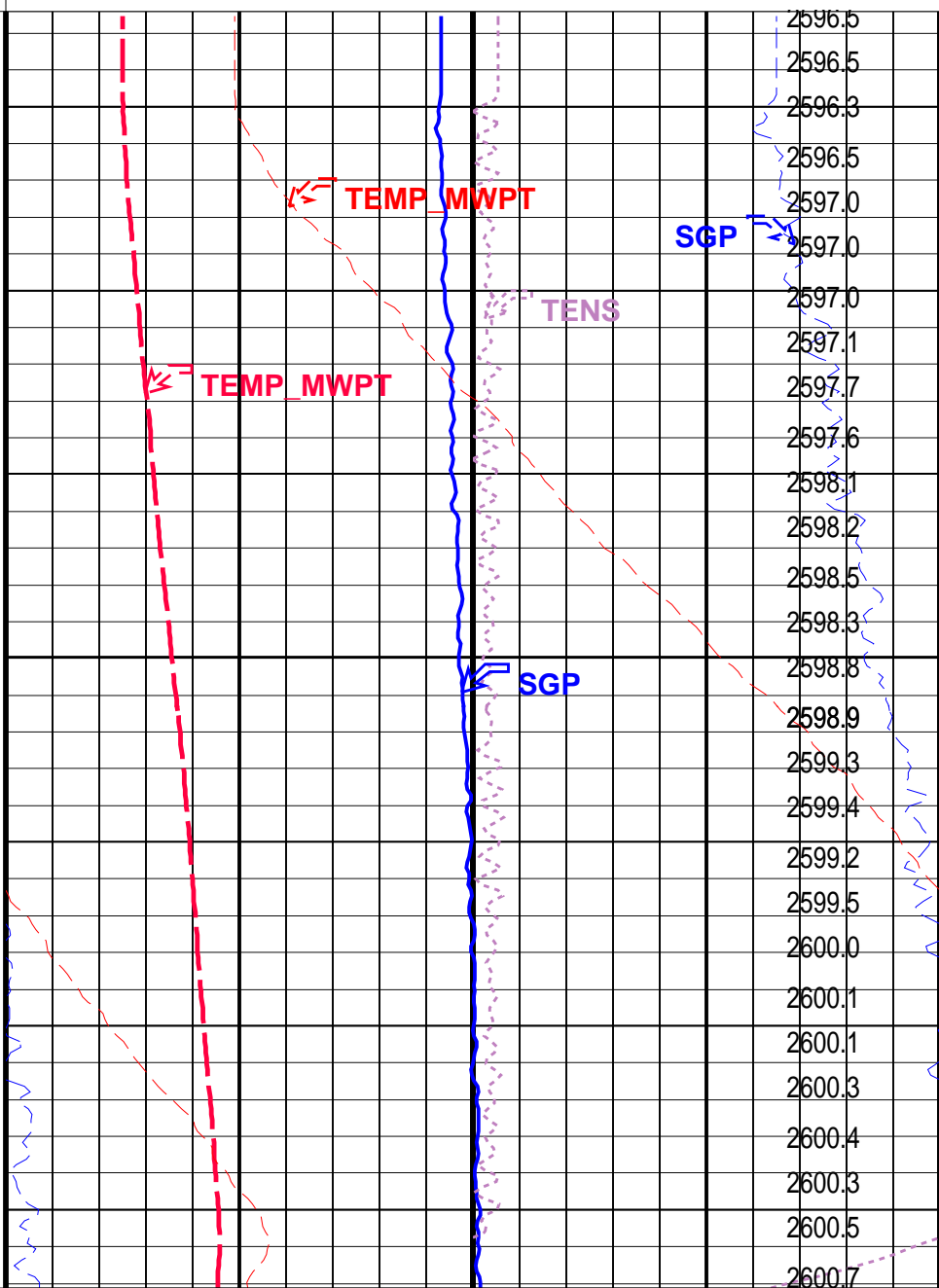
CCL From CCL to T1		
Gamma Ray (GR) (GAPI)		
0		150
Casing Collar Locator (CCL)		
-19	(----	1
Cable Speed (CS) (F/HR)		
0		5000



Cable Speed (CS) (F/HR)		
0		5000
Casing Collar Locator (CCL)		
-19	(----	1
Gamma Ray (GR) (GAPI)		
0		150
CCL From CCL to T1		

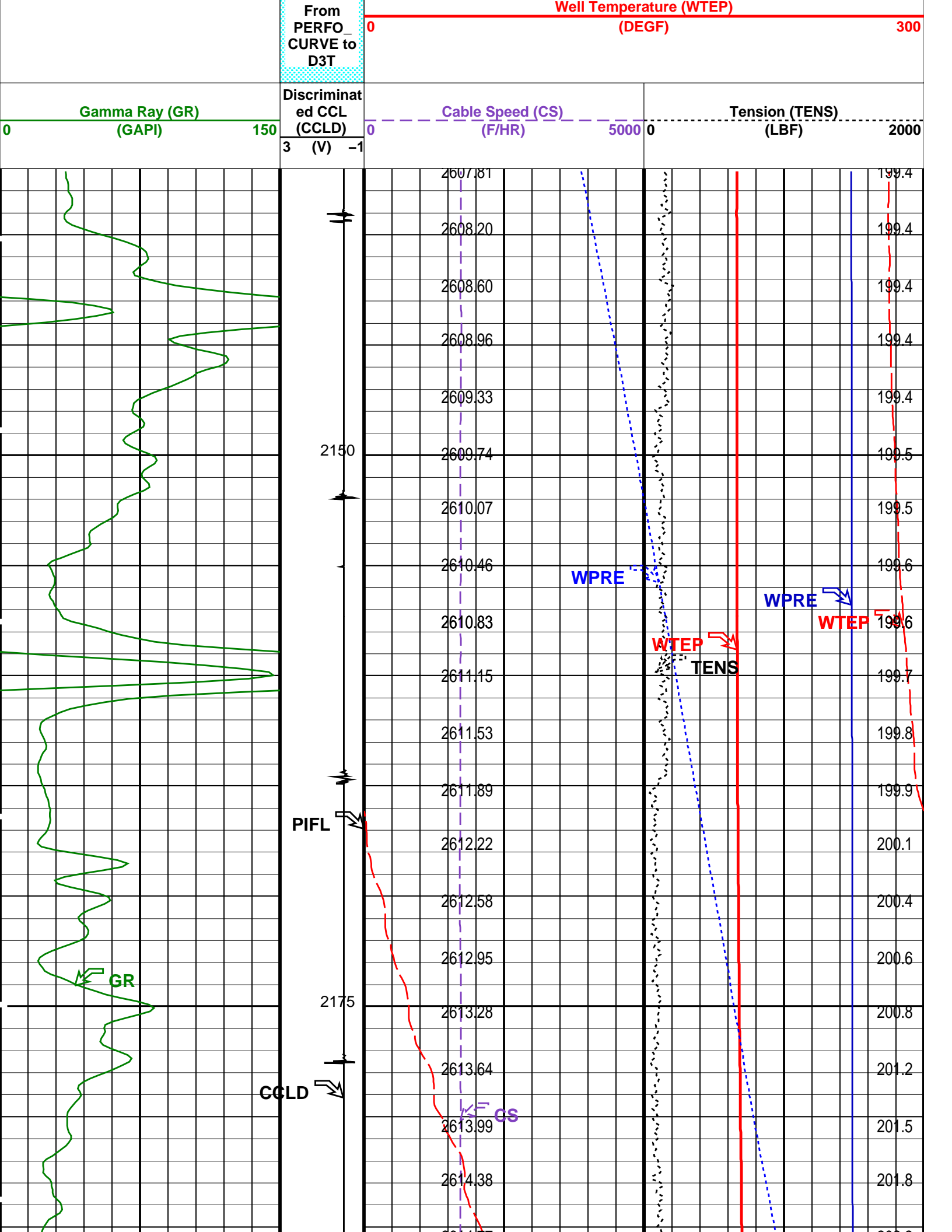
Temperature (TEMP_MWPT) (DEGF)

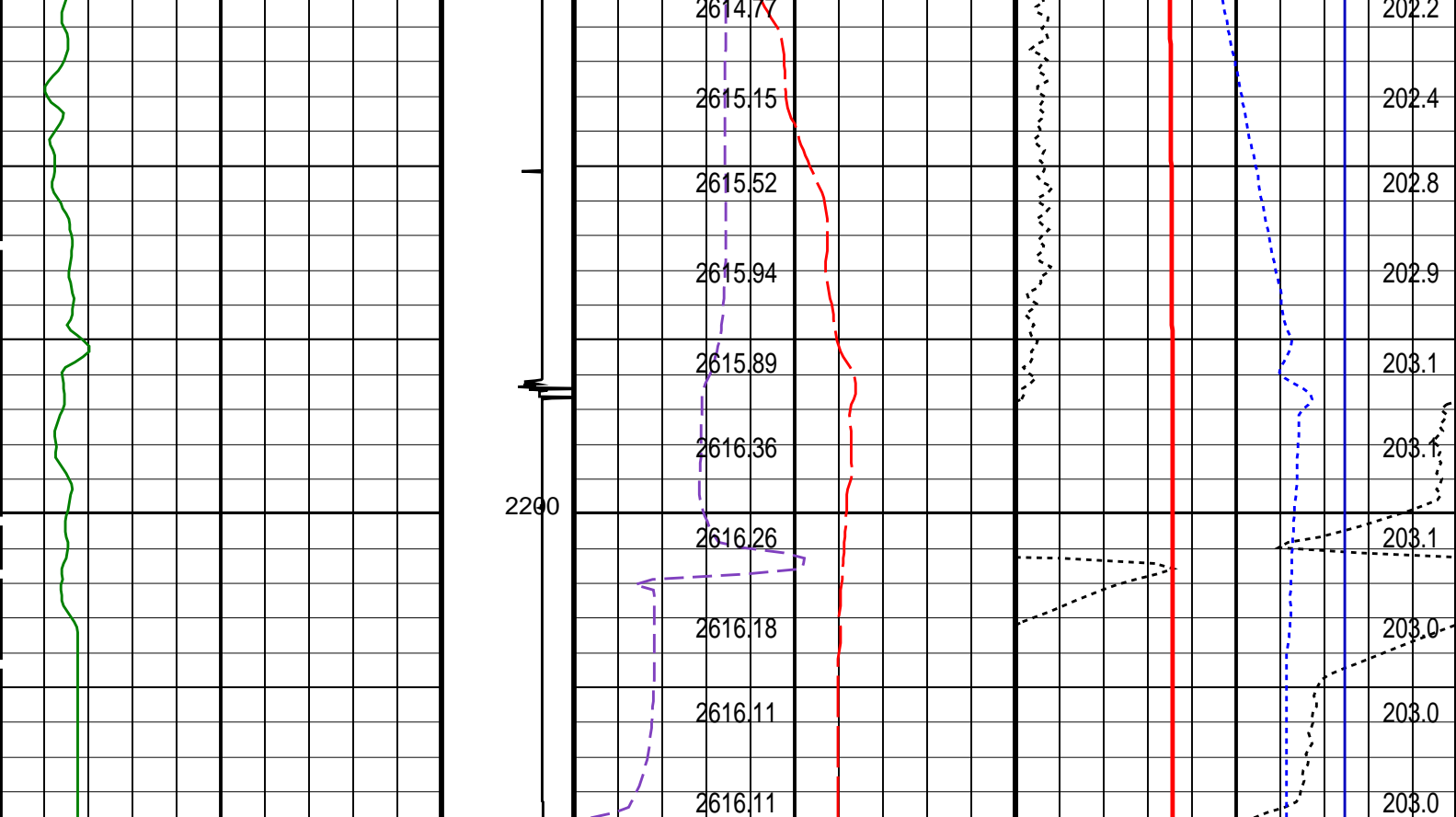
Temperature (TEMP_MWPT) (DEGF)		
0		220
Strain Gauge Pressure (SGP) (PSIA)		
0		20
Temperature (TEMP_MWPT) (DEGF)		
200		220
Strain Gauge Pressure (SGP) (PSIA)		
2550		2650



Strain Gauge Pressure (SGP) (PSIA)		
2550		2650
Temperature (TEMP_MWPT) (DEGF)		
200		220
Strain Gauge Pressure (SGP) (PSIA)		
0		20
Temperature (TEMP_MWPT) (DEGF)		
0		2

Tension (TENS) (LBF)
0
2000





Gamma Ray (GR) (GAPI)		Discriminat ed CCL (CCLD)		Cable Speed (CS) (F/HR)		Tension (TENS) (LBF)	
0		3 (V) -1		0		0	
150				5000		2000	

Perfo Zone From PERFO_ CURVE to D3T	Well Temperature (WTEP) (DEGF)		0	300
	Well Pressure (WPRE) (PSIA)			Temperature (WTEP) (DEGF)
	Well Temperature (WTEP) (DEGF)		0	10
	Well Pressure (WPRE) (PSIA)		0	3000
	Amplified Well Pressure (WPRE) (PSIA)		0	20

PIP SUMMARY	
Time Mark Every 60 S	

Format: PSP_1	Vertical Scale: 1:200	Graphics File Created: 08-Sep-2007 15:19
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OP System Version: 14C0-302	
MCM	
PSPT-A/B	14C0-302

Parameters		
DLIS Name	Description	Value
DO PP	System and Miscellaneous Depth Offset for Playback Playback Processing	-2.6 M NORMAL

Input DLIS Files

DEFAULT	PSP_070LUP	FN:7	PRODUCER	08-Sep-2007 15:05	2211.3 M	2139.1 M
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Output DLIS Files

DEFAULT	PSP_071PUP	FN:8	PRODUCER	08-Sep-2007 15:19
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Company:

Esso Australia Pty Ltd.

Schlumberger

Well:

A-9b

Field:

Bream A

Rig :

Prod4 / Crane

Country:

Australia

2 1/8" Powerjet Perforation

7"HPI Plug

Setting Record