

Company: Esso Australia Pty Ltd.

Well: W-23

Field: West Tuna

Rig: Crane / Prod 4 Country: Australia

2" Phased Powerjet Omega HSD GR/CCL
2" Phased Powerjet HSD MWPT
Perforation Record

Rig: Crane / Prod 4
Field: West Tuna
Location: Gippsland
Well: W-23
Company: Esso Australia Pty Ltd.

Rig:		Crane / Prod 4		
Field:		West Tuna		
Location:		Gippsland		
Well:		W-23		
Company:		Esso Australia Pty Ltd		
Logging Date		LOCATION		
		State: Victoria	Gippsland	
			Basin	
			Bass Strait	
Permanent Datum:		Elev.: K.B. 38.90 m		
Log Measured From:		G.L. 60.00 m		
Drilling Measured From:		D.F. 38.90 m		
State: Victoria		Max. Well Deviation 37.5 deg	Longitude 148° 25' 05.29"E	Latitude 38° 10' 16.00"S
Run Number		5-Sep-2009		
Depth Driller		1-2		
Schlumberger Depth		1745 m		
Bottom Log Interval		1694 m		
Top Log Interval		1666.5 m		
Casing Fluid Type		1656.5 m		
Salinity		Production Fluids		
Density				
Fluid Level		0 m		
BIT/CASING/TUBING STRING				
Bit Size		8.500 in		
From		662.5 m		
To		1740 m		
Casing/Tubing Size		3.500 in		
Weight		29.7 lbm/ft		
Grade		L-80		
From		17.05 m		
To		1654.88 m		
Maximum Recorded Temperatures		175 degF		
Logger On Bottom		5-Sep-2009	9:30	
Unit Number		889	Prod 4 / AUSL	
Recorded By		B.Donahoe		
Witnessed By		B.Robinson		

PVT DATA			Run 1	Run 2
Oil Density				
Water Salinity				
Gas Gravity				
Bo				
Bw				
1/Bq				
Bubble Point Pressure				
Bubble Point Temperature				
Solution GOR				
Maximum Deviation	37.5 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: 6-SEP-2009 8:28:53

Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-EB Serial Number: 6373 Calibration Date: 2-Dec-2008 Calibrator Serial Number: 30 Calibration Cable Type: 2-32ZT Wheel Correction 1: -1 Wheel Correction 2: -2	Type: PSDS/OSDS Serial Number: 325357 Calibration Date: 20-7-2009 Calibrator Serial Number: 1174 Number of Calibration Points: 10 Calibration RMS: 281 Calibration Peak Error: 454	Type: 2-32ZT Serial Number: 20750 Length: 6461 M Conveyance Method: Wireline Rig Type: Rigless

Depth Control Parameters

Log Sequence:	Subsequent Log In the Well
Reference Log Name:	West Tuna W-19 Petrophysical Analysis
Reference Log Run Number:	1
Reference Log Date:	Not provided

Depth Control Remarks

1. IDW-EB 6373 used as primary depth control.
2. Z-Chart as back-up.
3.
4.
5.
6.

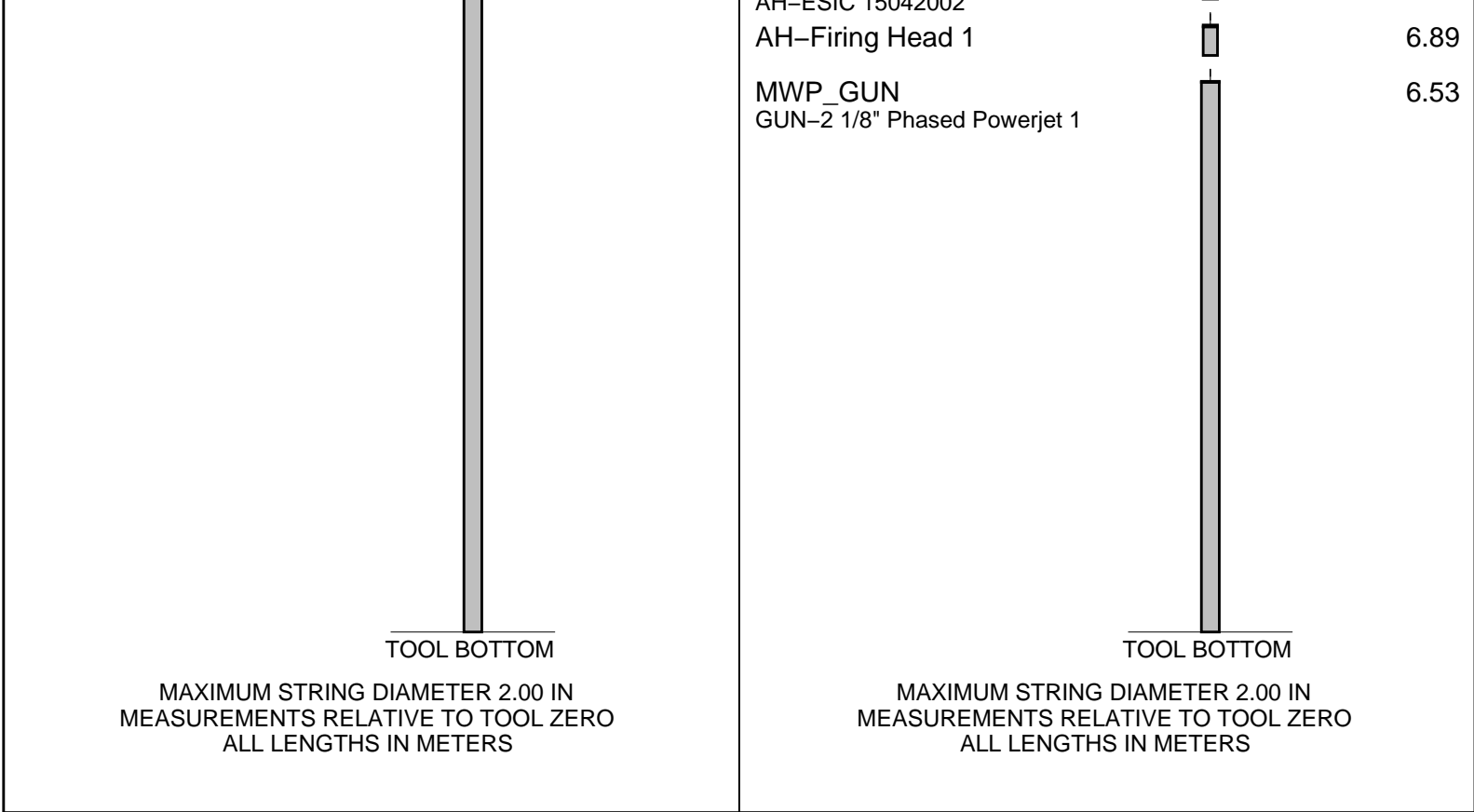
DISCLAIMER

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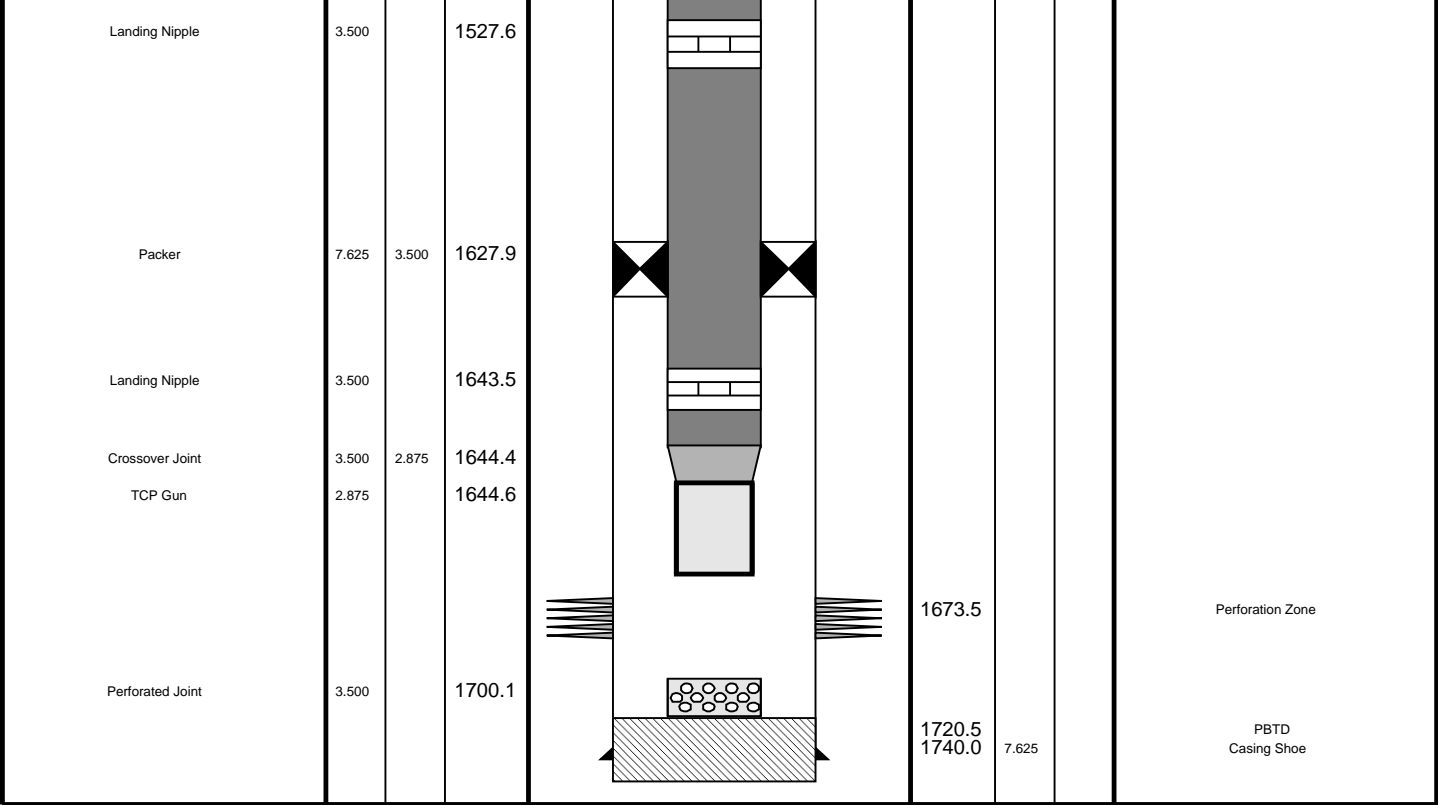
OTHER SERVICES1 OS1: None

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Log correlated to ExxonMobil West Tuna Petrophysical Analysis Log supplied with logging program.	
Objectives: Perforate the well over the intervals 1661.5m to 1666.5m MDKB and 1656.5m to 1661.5m MDKB using 10m (2 x 5m guns) of 2-1/8" 6 SPF, 45 deg phased Powerjet gun with MWPT.	
Maximum Deviation = 37.5deg @ 710m MDKB	
Gun 1 was fired using Powerjet Omega Charges, Gun 2 was fired using Powerjet Charges.	

Gun 1 Fired @ 1661.5m to 1666.5m MDKB			Gun 2 Fired @ 1656.5m to 1661.5m MDKB		
CCL to Top Shot = 2.28 m			CCL to Top Shot = 3.56 m		
CCL Stop Depth @ 1659.22 m MDKB			CCL Stop Depth @ 1652.94m MDKB		
BHT = 174.7 F BHP 1884 psi					
Schlumberger crews: Nathan Simmons, Rick Murray, Gary Martin					
RUN 1			RUN 2		
SERVICE ORDER #: AUSL07336279			SERVICE ORDER #:		
PROGRAM VERSION: 17C0-154			PROGRAM VERSION:		
FLUID LEVEL: 0 m			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP
EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		
SURFACE EQUIPMENT			SURFACE EQUIPMENT		
WITM (SHM)			MWPM-AA		
DOWNHOLE EQUIPMENT			DOWNHOLE EQUIPMENT		
AH-SWBS-B 789 AH-SWBS-B 789			AH-SWBS-B 789 AH-SWBS-B 789		
12.84			15.67		
AH-SWBS-B 788 AH-SWBS-B 788			AH-SWBS-B 788 AH-SWBS-B 788		
12.16			14.98		
AH-SWBS-B 787 AH-SWBS-B 787			AH-SWBS-B 787 AH-SWBS-B 787		
11.47			14.30		
AH-SWBS-B 786 AH-SWBS-B 786			AH-SWBS-B 786 AH-SWBS-B 786		
10.79			13.61		
AH-SWBS-B 785 AH-SWBS-B 785			AH-SWBS-B 785 AH-SWBS-B 785		
10.10			12.93		
MH-SWHS-A 759 MH-SWHS-A 759			MH-SWHS-A 759 MH-SWHS-A 759		
9.41			12.24		
ERS ERS-E			AH-124 7002 MWGT-AA 59 MWPG-AA 59 MWGH-AA 59		
9.08			MWPG GR 2.41		
UPCT-A UPCC-A UPCH-A			MWPT-CA 74 MWPH-AA 74 MWPS-AA 74		
8.70			10.83		
Gamma Ray 0.79			CCL SMWP Pres SMWP Temp Tension		
Casing Co Tension TOOL ZERO			TOOL ZERO		
AH-1/2" Adaptor AH-ESIC 15042002 AH-ESIC 15042002			AH-122 8 AH-WPSA-BA AH-WPSA-BA 4001		
7.33			8.01		
7.32			7.88		
AH-Firing Head 1 AH-Firing Head 1			AH-ESIC 15042002 AH-ESIC 15042002		
6.89			7.32		
SHM_GUN GUN					
6.53					



Production String	(in) (m)			Well Schematic	(m) (in)			Casing String
	OD	ID	MD		MD	OD	ID	
Tubing	3.500		17.1		17.8	10.625		Casing String
SSSV	3.500		454.7					
Side Pocket Mandrel	3.500		857.7		662.5	10.750		Casing Shoe
Side Pocket Mandrel	3.500		1511.5					



Job Event Summary

MAXIS Field Log

Schlumberger Job Event Summary						
Time		Elapsed Time	Depth (M)		File	
Log Pass (up)	5-Sep-2009 9:56	000:07	1696.4	- 1629.0	PERFO_025LUP	
Log Pass (up)	5-Sep-2009 10:06	000:08	1695.4	- 1622.1	PERFO_026LUP	
Log Pass (up)	5-Sep-2009 13:20	000:07	1695.6	- 1623.7	PERFO_033LUP	
Log Pass (up)	5-Sep-2009 13:34	000:17	1695.1	- 1603.9	PERFO_034LUP	
Station Log	5-Sep-2009 13:38	000:03	1652.9		PERFO_035LTP	

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Output DLIS Files

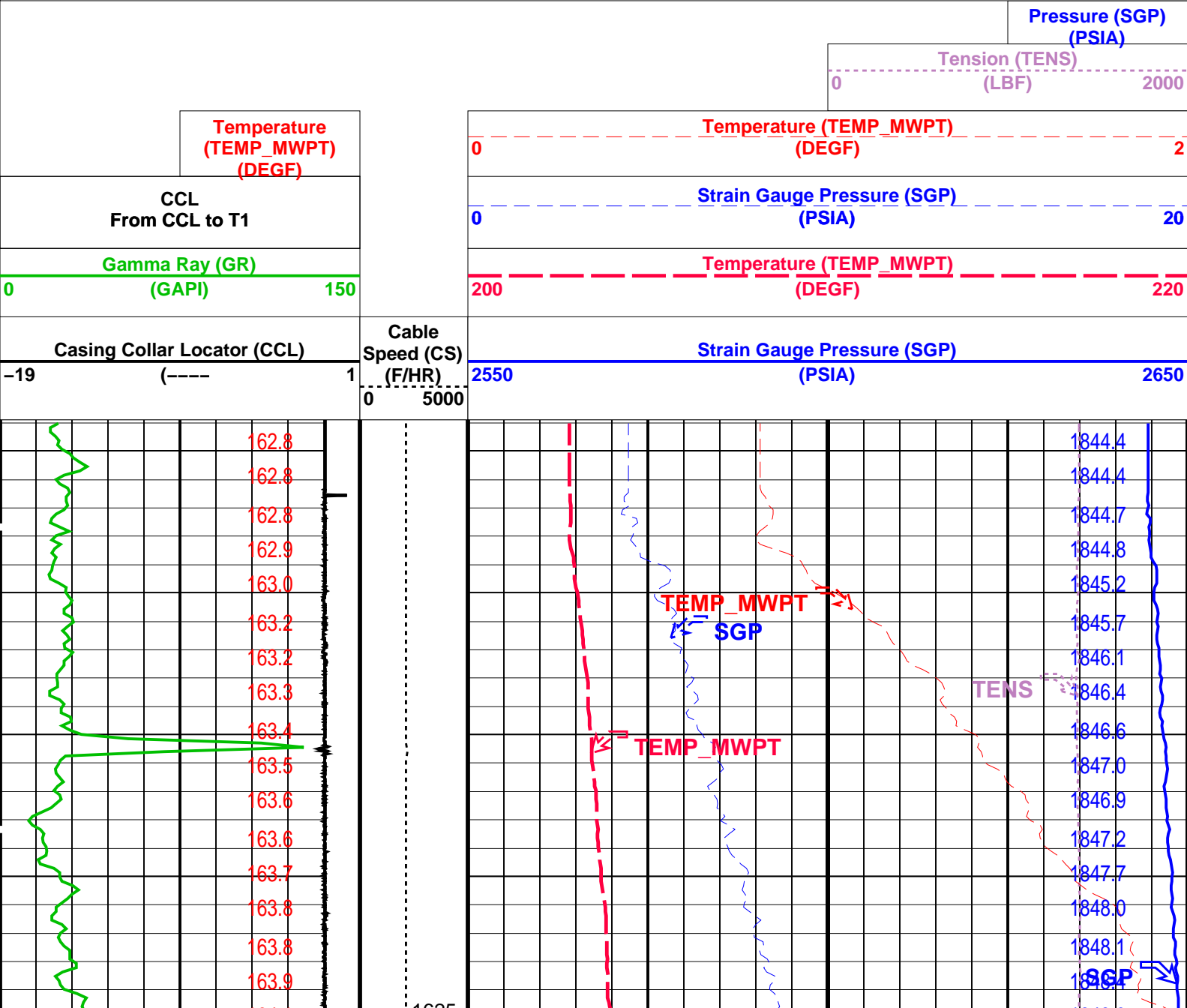
DEFAULT PERFO_034LUP FN:33 PRODUCER 05-Sep-2009 13:34 1695.1 M 1603.9 M

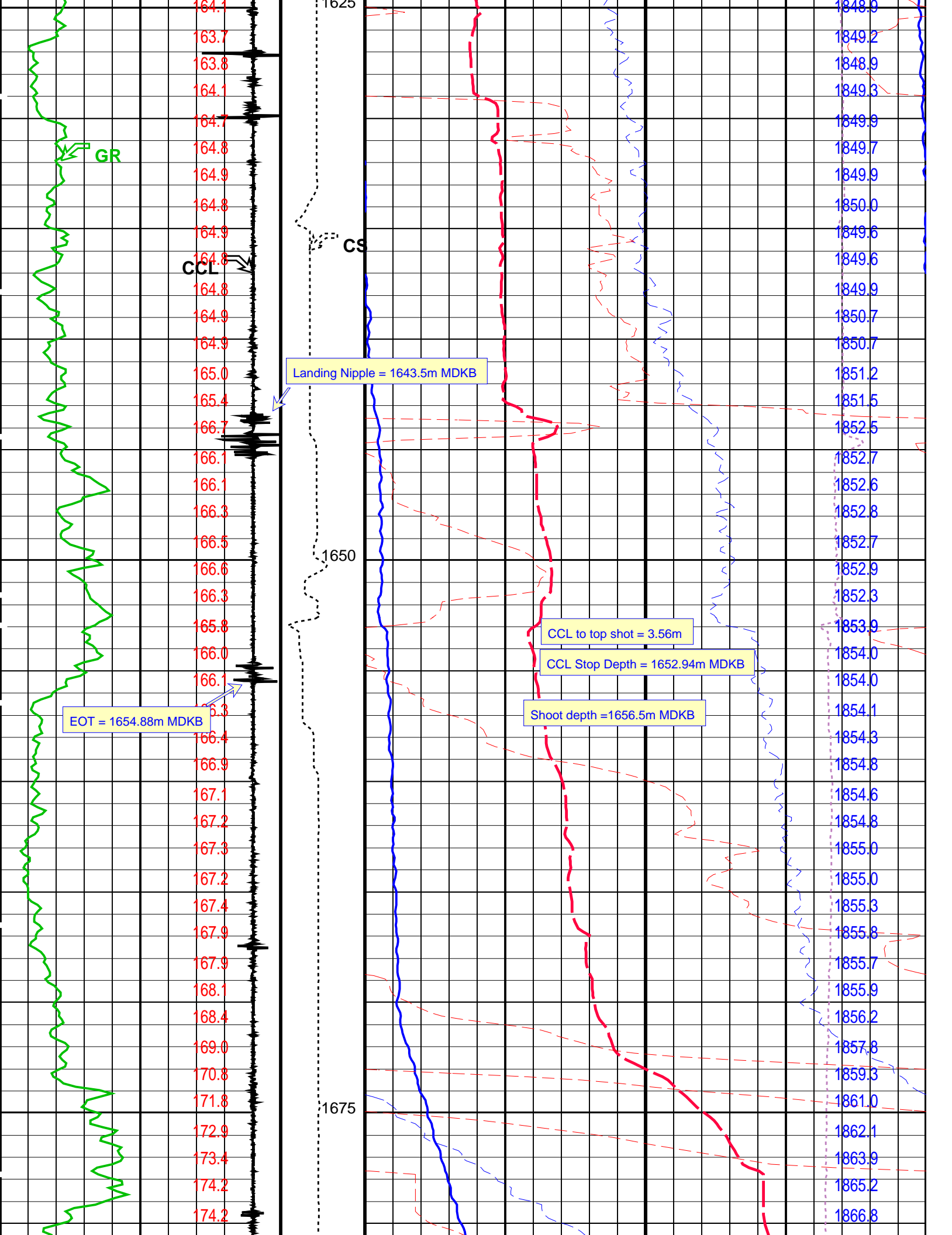
OP System Version: 17C0-154

MWP_GUN 17C0-154 MWPT-CA 17C0-154
MWGT-AA 17C0-154

PIP SUMMARY

Time Mark Every 60 S





Company: Esso Australia Pty Ltd.

Well: W-23

Output DLIS Files

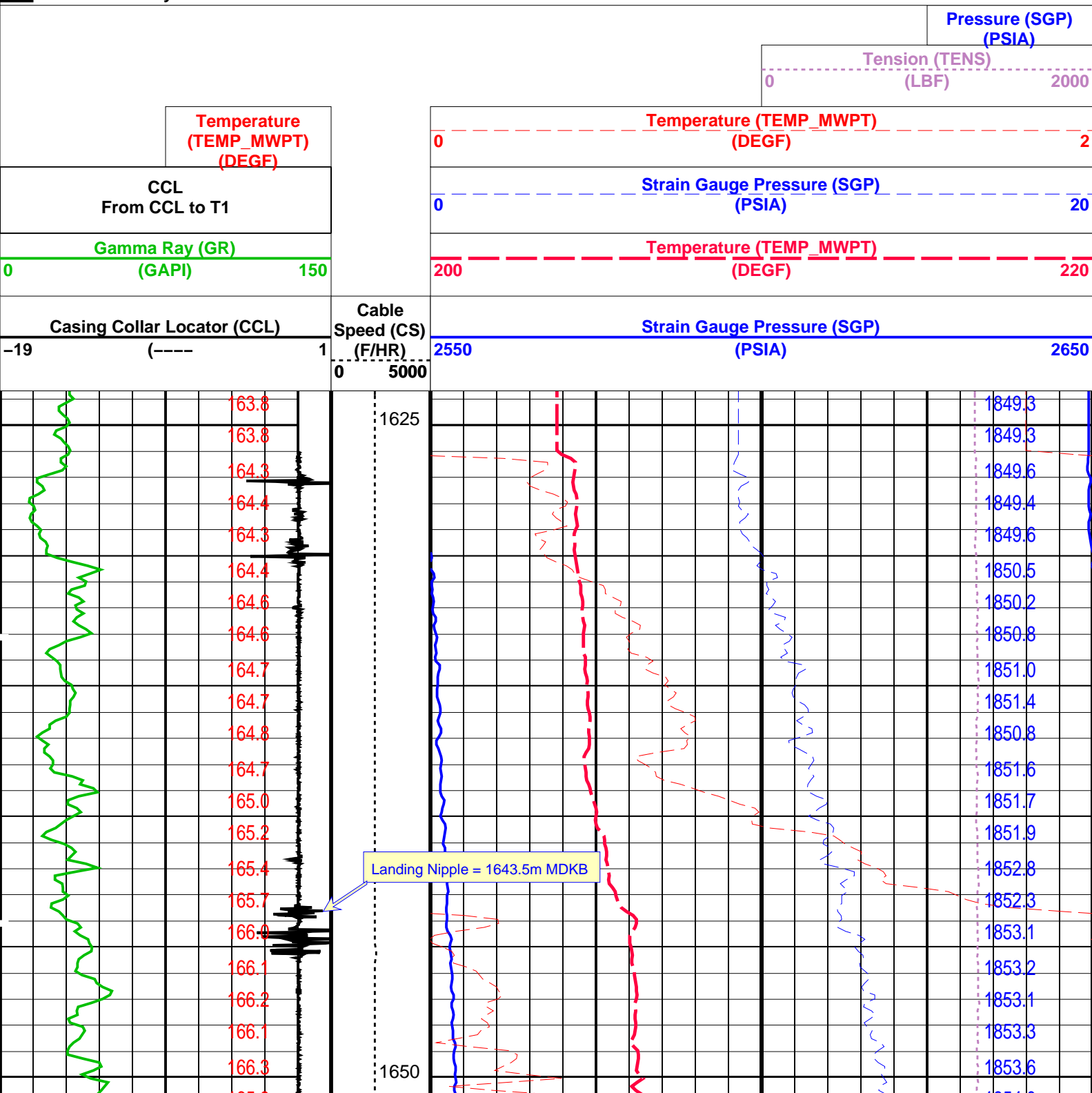
DEFAULT PERFO_033LUP FN:32 PRODUCER 05-Sep-2009 13:20 1695.6 M 1623.7 M

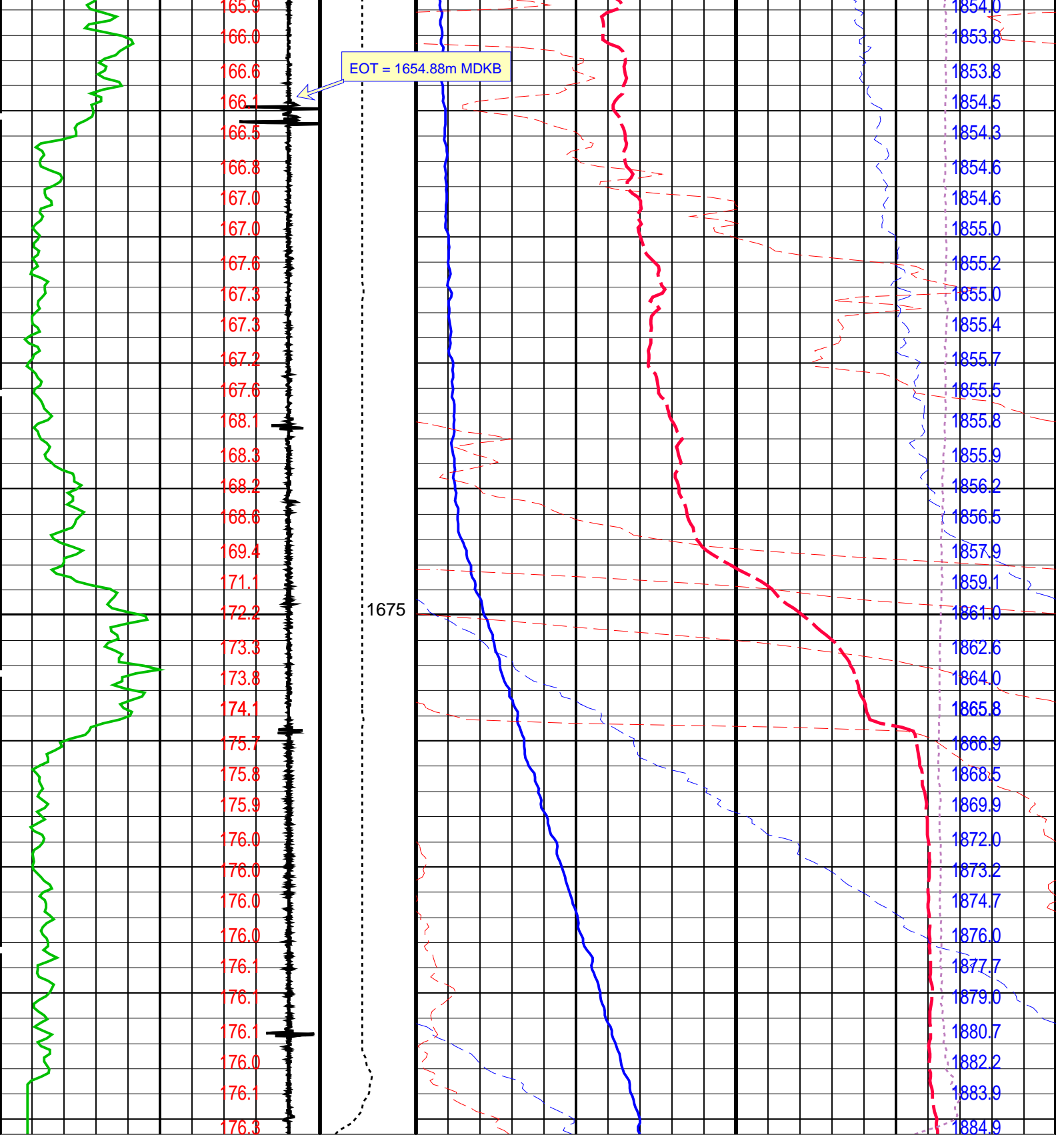
OP System Version: 17C0-154

MWP_GUN 17C0-154 MWPT-CA 17C0-154
MWGT-AA 17C0-154

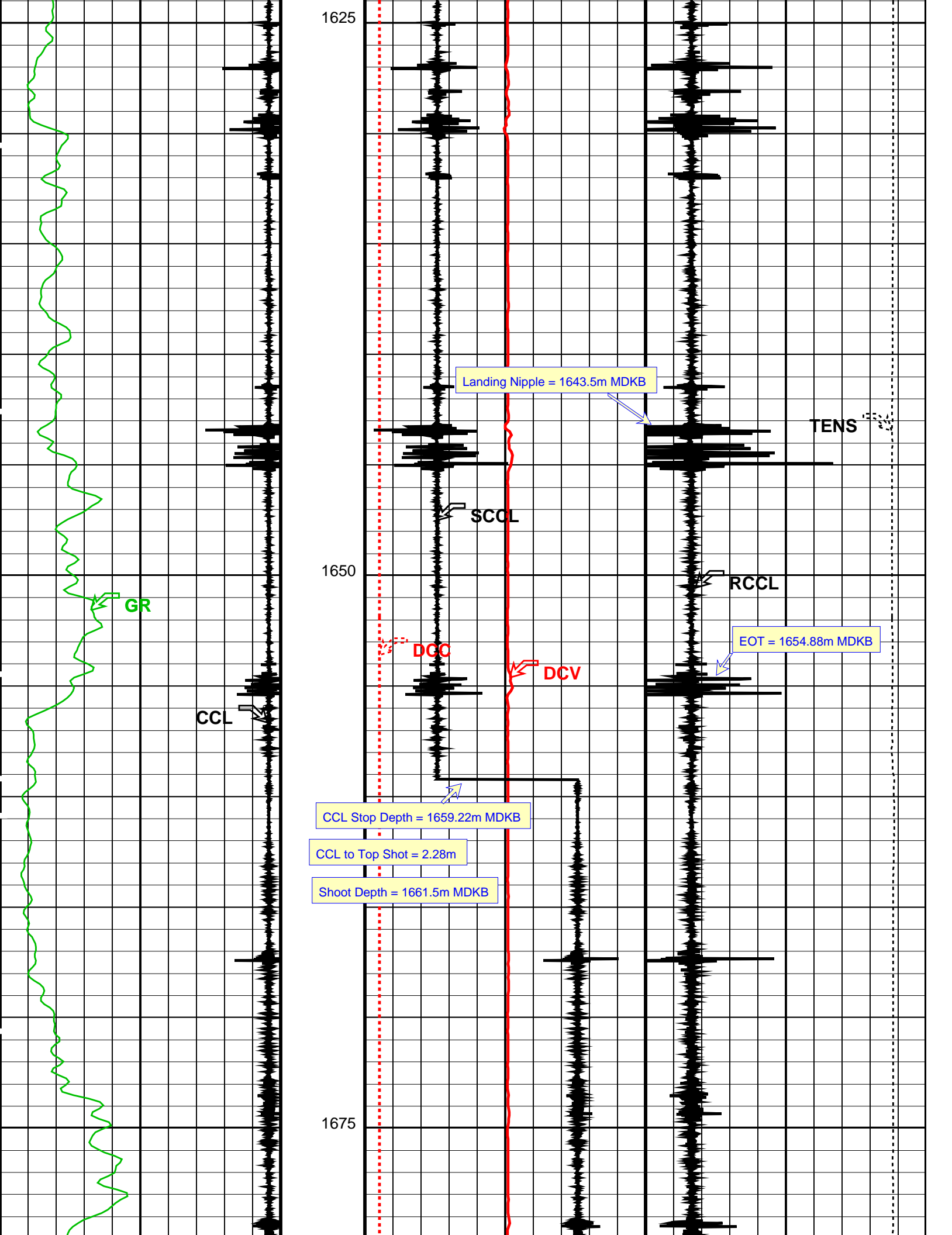
PIP SUMMARY

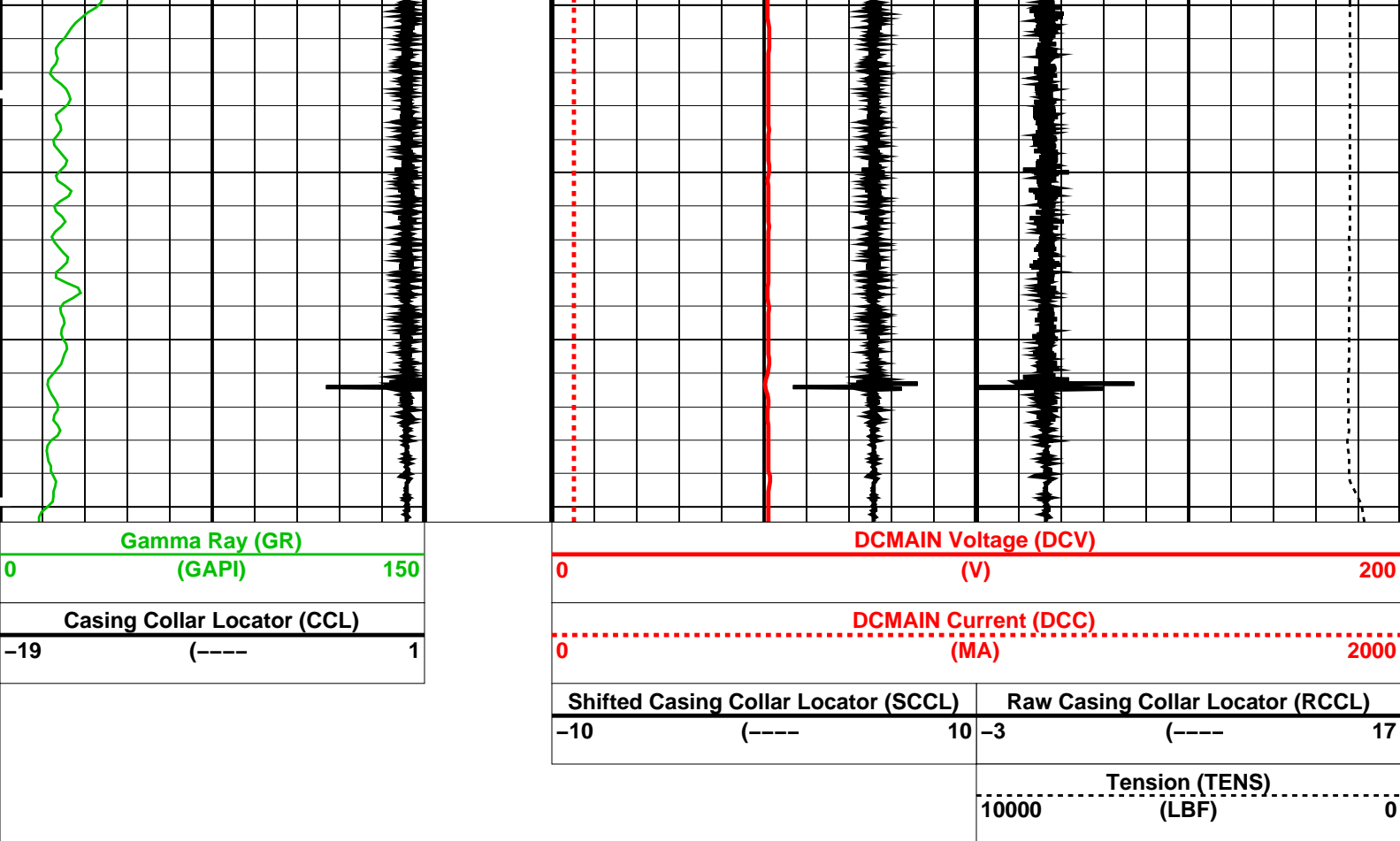
Time Mark Every 60 S





Casing Collar Locator (CCL)		Cable Speed (CS) (F/HR) 0-----5000	Strain Gauge Pressure (SGP)	
-19	(-----1		2550	2650
Gamma Ray (GR)			Temperature (TEMP_MWPT)	
0	(GAPI)150		200	220
CCL From CCL to T1			Strain Gauge Pressure (SGP)	
		0	20	
	Temperature (TEMP_MWPT) (DEGF)	Temperature (TEMP_MWPT)		
		0	2	





PIP SUMMARY

Time Mark Every 60 S

Format: PERFO Vertical Scale: 1:200

Graphics File Created: 05-Sep-2009 10:06

OP System Version: 17C0-154

SHM_GUN
ERS

17C0-154
17C0-154

UPCT-A

17C0-154

Output DLIS Files

DEFAULT

PERFO_026LUP

FN:25

PRODUCER

05-Sep-2009 10:06

Schlumberger

Gun 1 Correlation Pass

MAXIS Field Log

Company: Esso Australia Pty Ltd.

Well: W-23

Output DLIS Files

DEFAULT

PERFO_025LUP

FN:24

PRODUCER

05-Sep-2009 09:56 1696.4 M

1629.0 M

OP System Version: 17C0-154

SHM_GUN

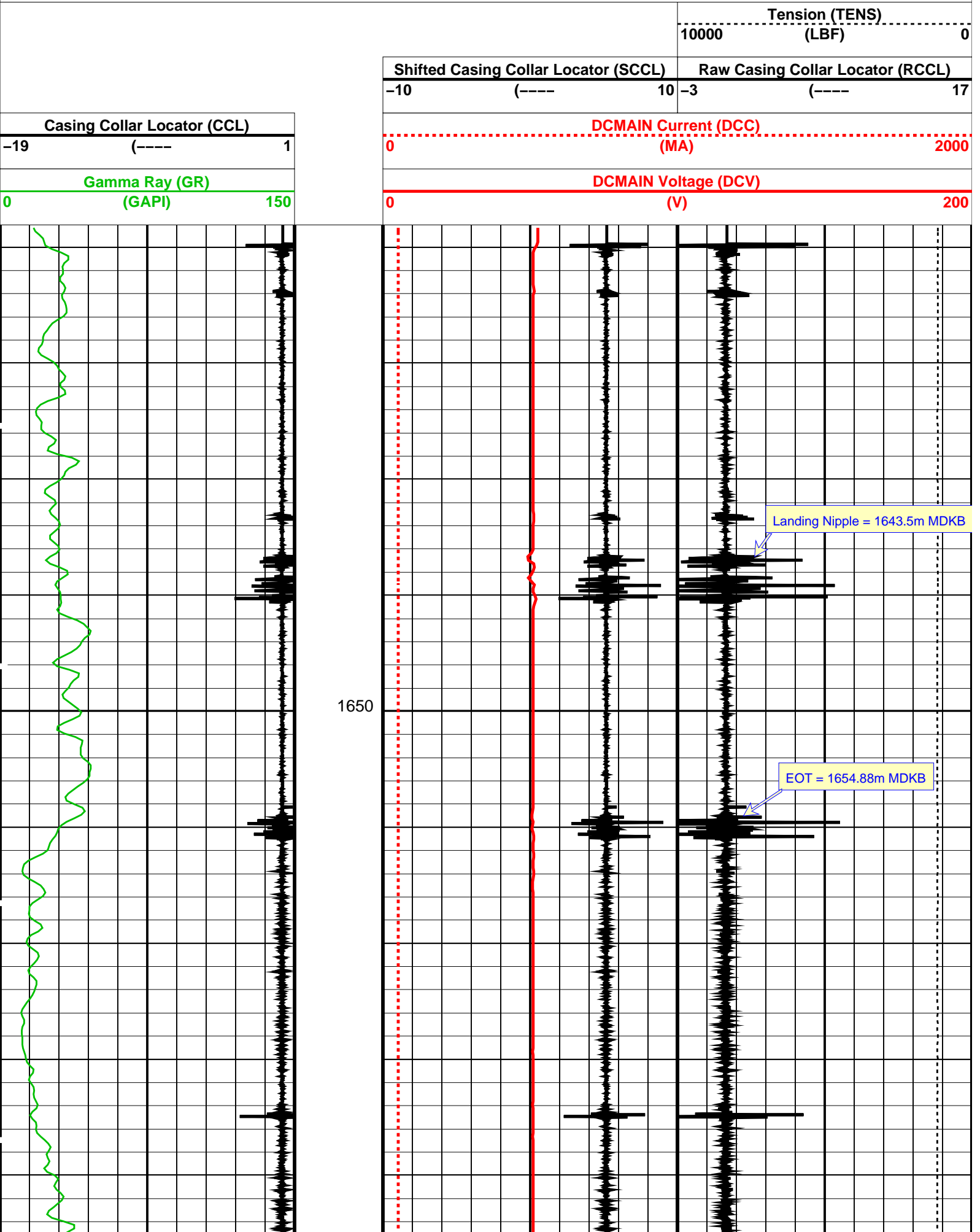
17C0-154

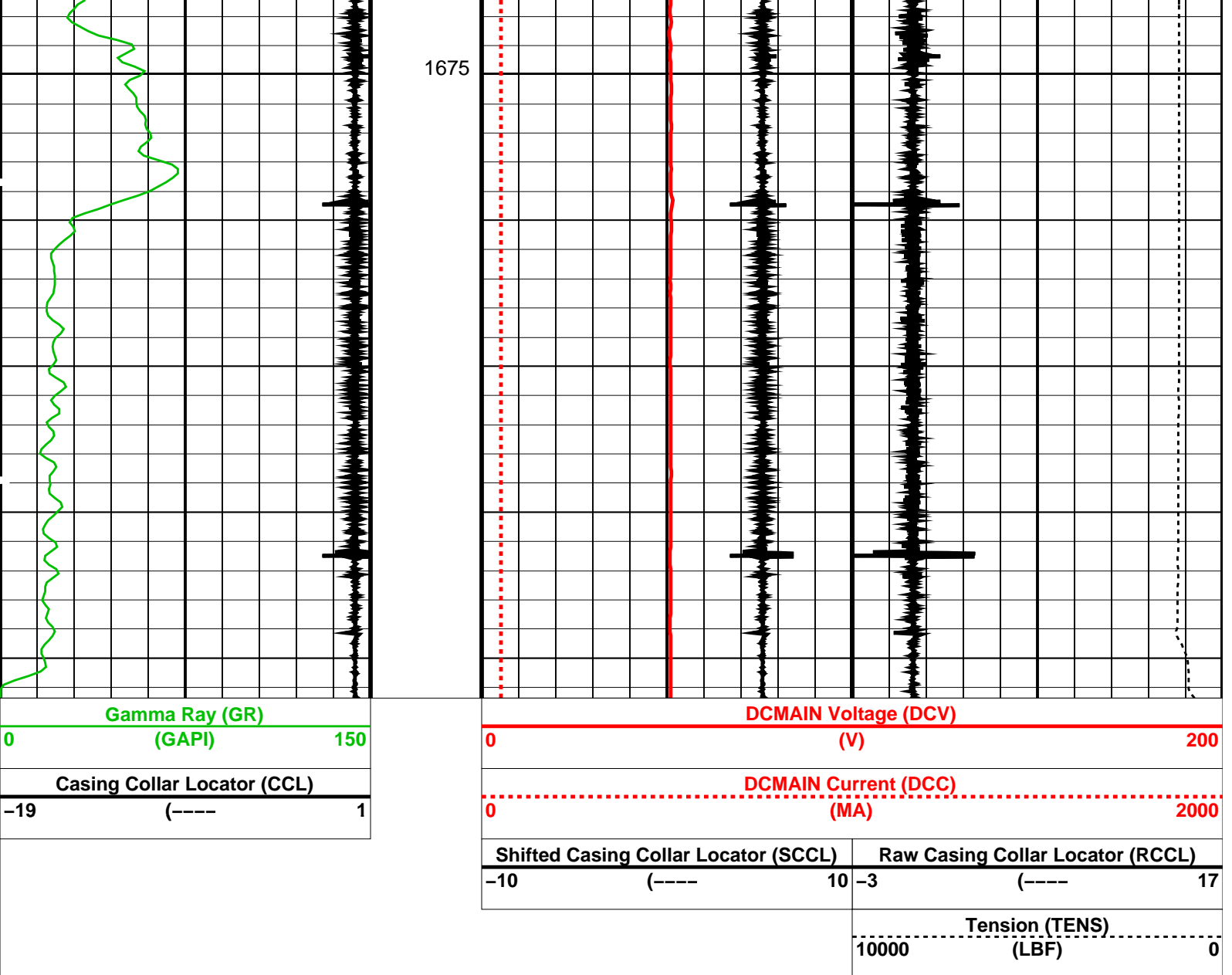
UPCT-A

17C0-154

PIP SUMMARY

Time Mark Every 60 S





PIP SUMMARY

Time Mark Every 60 S

Format: PERFO Vertical Scale: 1:200

Graphics File Created: 05-Sep-2009 09:56

OP System Version: 17C0-154

SHM_GUN 17C0-154
ERS 17C0-154

UPCT-A

17C0-154

Output DLIS Files

DEFAULT PERFO_025LUP

FN:24

PRODUCER

05-Sep-2009 09:56

Company: **Esso Australia Pty Ltd.**

Schlumberger

Well: **W-23**

Field: **West Tuna**

Rig: **Crane / Prod 4**

Country: **Australia**

2" Phased Powerjet Omega HSD GR/CCL

2" Phased Powerjet HSD MWPT

