

Company: Esso Australia Pty Ltd.

Well: A15

Field: Halibut

Rig: Crane/Prod 4

Country: Australia

GR / Pressure / Temperature / Dual DEFT  
Inline and Fullbore / Spinner Survey  
30-Jun-2009

Rig: Crane/Prod 4  
Field: Halibut  
Location: Gippsland  
Well: A15  
Company: Esso Australia Pty Ltd.

LOCATION			
Gippsland Basin Bass Strait	Permanent Datum:	Mean Sea Level	Elev.: K.B. 28.70 m
	Log Measured From:	K.B	G.L. -73.00 m
	Drilling Measured From:	K.B	D.F. 28.70 m
State: Victoria	Max. Well Deviation 43.1 deg	Longitude 148°19'07.62"E	Latitude 38°24'20.36"S

Logging Date	30-Jun-2009								
Run Number	1 & 2								
Depth Driller	2999 m								
Schlumberger Depth	2998 m								
Bottom Log Interval	2730 m								
Top Log Interval	2680 m								
Casing Fluid Type	Production fluids								
Salinity									
Density	0.79 g/cm3								
Fluid Level	13 m								
BIT/CASING/TUBING STRING									
Bit Size	8.500 in								
From	556.3 m								
To	2791.1 m								
Casing/Tubing Size	7.625 in								
Weight	29.7 lbm/ft								
Grade	N-80								
From	11.25 m								
To	2789.2 m								
Maximum Recorded Temperatures	226 degF								
Logger On Bottom	30-Jun-2009	Time	7:09						
Unit Number	889	Location	Prod 4/AUSL						
Recorded By	G.Rimmer & B.Robinson								
Witnessed By	B.Donahoe & O.Darby								

PVT DATA				Run 1	Run 2	Run 3
Oil Density						
Water Salinity						
Gas Gravity	1					
Bo						
Bw						
1/Bg						
Bubble Point Pressure	0 kPa					
Bubble Point Temperature	-17.7778 degC					
Solution GOR						
Maximum Deviation	43.1 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		Time				
Unit Number		Location				
Recorded By						
Witnessed By						

## DEPTH SUMMARY LISTING

Date Created: 9-JUL-2009 8:52:04

## Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-EB	Type:	PSDS/OSDS	Type:	2-32ZT
Serial Number:	6373	Serial Number:	854	Serial Number:	207308
Calibration Date:	2-Dec-2009	Calibration Date:	5-5-2009	Length:	6180 M
Calibrator Serial Number:	30	Calibrator Serial Number:	1167		
Calibration Cable Type:	2-32ZT	Number of Calibration Points:	10	Conveyance Method:	Wireline
Wheel Correction 1:	-1	Calibration RMS:	281	Rig Type:	Offshore Fixed
Wheel Correction 2:	-1	Calibration Peak Error:	399		

Depth Control Parameters	
Depth (m)	0.0
Depth (m)	0.5
Depth (m)	1.0
Depth (m)	1.5
Depth (m)	2.0
Depth (m)	2.5
Depth (m)	3.0
Depth (m)	3.5
Depth (m)	4.0
Depth (m)	4.5
Depth (m)	5.0
Depth (m)	5.5
Depth (m)	6.0
Depth (m)	6.5
Depth (m)	7.0
Depth (m)	7.5
Depth (m)	8.0
Depth (m)	8.5
Depth (m)	9.0
Depth (m)	9.5
Depth (m)	10.0
Depth (m)	10.5
Depth (m)	11.0
Depth (m)	11.5
Depth (m)	12.0
Depth (m)	12.5
Depth (m)	13.0
Depth (m)	13.5
Depth (m)	14.0
Depth (m)	14.5
Depth (m)	15.0
Depth (m)	15.5
Depth (m)	16.0
Depth (m)	16.5
Depth (m)	17.0
Depth (m)	17.5
Depth (m)	18.0
Depth (m)	18.5
Depth (m)	19.0
Depth (m)	19.5
Depth (m)	20.0
Depth (m)	20.5
Depth (m)	21.0
Depth (m)	21.5
Depth (m)	22.0
Depth (m)	22.5
Depth (m)	23.0
Depth (m)	23.5
Depth (m)	24.0
Depth (m)	24.5
Depth (m)	25.0
Depth (m)	25.5
Depth (m)	26.0
Depth (m)	26.5
Depth (m)	27.0
Depth (m)	27.5
Depth (m)	28.0
Depth (m)	28.5
Depth (m)	29.0
Depth (m)	29.5
Depth (m)	30.0
Depth (m)	30.5
Depth (m)	31.0
Depth (m)	31.5
Depth (m)	32.0
Depth (m)	32.5
Depth (m)	33.0
Depth (m)	33.5
Depth (m)	34.0
Depth (m)	34.5
Depth (m)	35.0
Depth (m)	35.5
Depth (m)	36.0
Depth (m)	36.5
Depth (m)	37.0
Depth (m)	37.5
Depth (m)	38.0
Depth (m)	38.5
Depth (m)	39.0
Depth (m)	39.5
Depth (m)	40.0
Depth (m)	40.5
Depth (m)	41.0
Depth (m)	41.5
Depth (m)	42.0
Depth (m)	42.5
Depth (m)	43.0
Depth (m)	43.5
Depth (m)	44.0
Depth (m)	44.5
Depth (m)	45.0
Depth (m)	45.5
Depth (m)	46.0
Depth (m)	46.5
Depth (m)	47.0
Depth (m)	47.5
Depth (m)	48.0
Depth (m)	48.5
Depth (m)	49.0
Depth (m)	49.5
Depth (m)	50.0
Depth (m)	50.5
Depth (m)	51.0
Depth (m)	51.5
Depth (m)	52.0
Depth (m)	52.5
Depth (m)	53.0
Depth (m)	53.5
Depth (m)	54.0
Depth (m)	54.5
Depth (m)	55.0
Depth (m)	55.5
Depth (m)	56.0
Depth (m)	56.5
Depth (m)	57.0
Depth (m)	57.5
Depth (m)	58.0
Depth (m)	58.5
Depth (m)	59.0
Depth (m)	59.5
Depth (m)	60.0
Depth (m)	60.5
Depth (m)	61.0
Depth (m)	61.5
Depth (m)	62.0
Depth (m)	62.5
Depth (m)	63.0
Depth (m)	63.5
Depth (m)	64.0
Depth (m)	64.5
Depth (m)	65.0
Depth (m)	65.5
Depth (m)	66.0
Depth (m)	66.5
Depth (m)	67.0
Depth (m)	67.5
Depth (m)	68.0
Depth (m)	68.5
Depth (m)	69.0
Depth (m)	69.5
Depth (m)	70.0
Depth (m)	70.5
Depth (m)	71.0
Depth (m)	71.5
Depth (m)	72.0
Depth (m)	72.5
Depth (m)	73.0
Depth (m)	73.5
Depth (m)	74.0
Depth (m)	74.5
Depth (m)	75.0
Depth (m)	75.5
Depth (m)	76.0
Depth (m)	76.5
Depth (m)	77.0
Depth (m)	77.5
Depth (m)	78.0

Log Sequence:	Subsequent Log In the Well
Reference Log Name:	Halibut A15
Reference Log Run Number:	
Reference Log Date:	Not provided

Depth Control Remarks	
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1. Correlate to ExxonMobil petrophysical log supplied by client
2. Used IDW as primary depth control
3. Used Z-Chart as secondary depth control
4. PCFS DEFT probe readings offset by 90 Deg due to relative bearing offset, Probes 1,2,3 & 4
- 5.
- 6.

DISCLAIMER
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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

Log correlated to ExxonMobil Petrophysical Log Dated May 06.

Maximum Well deviation = 43.1 deg @ 990m MDKB .

Objectives:
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Prepare PLT toolstring with pressure, temperature. GR, CCL, in-line / full bore
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spinners dual DEFT components with weight stem as required. RIH & conduct shut

in 3 x upwards and downwards passes @ 5 m/min, 10m/min, 20m/min and 30m/min as

per ExxonMobil production logging protocol to determine the presents of cross

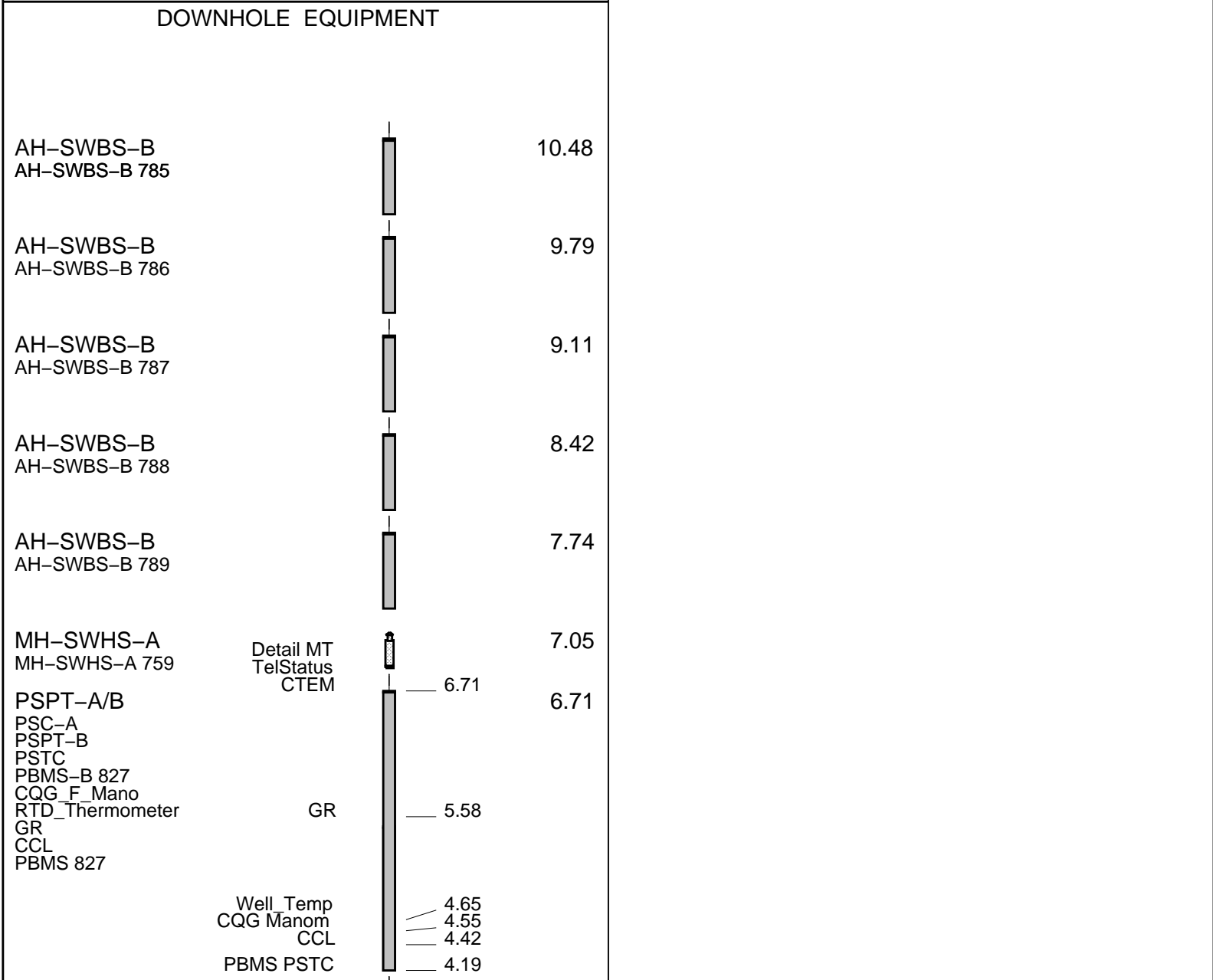
per Exxonmobil production logging protocol to determine the presents of cross  
flow and calibrate spinners.  
RIH to HUD start station log, flow well , wait for well to stabilize & conduct  
3 x flowing upwards and downwards passes @ 5m/min, 10m/min, 20m/min & 30m/min.  
POOH  
Note: Due to a relative bearing offset of 90Deg in the PFCS DEFT probes 1-4 will  
show a 90 Deg offset from DEFT probes 5-8.  
-HUD: 2730m MDKB

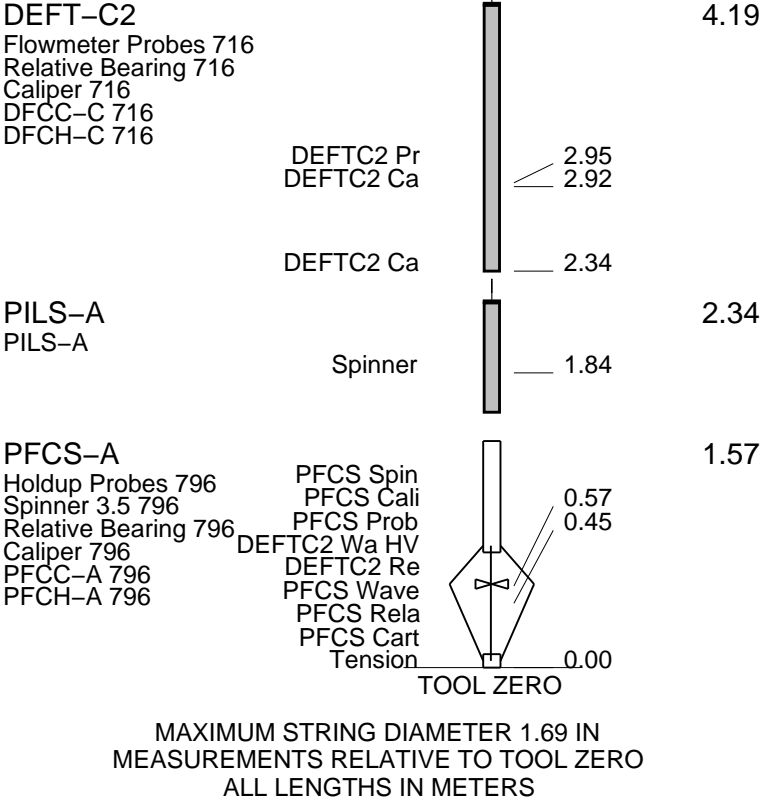
Schlumberger Crew : R Murray , N.Simmons, G.Martin & D. Halstead

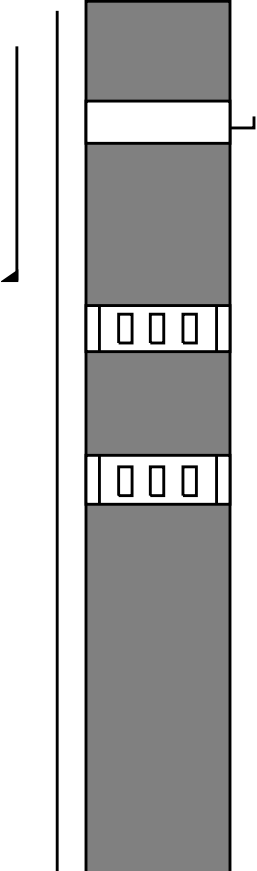
RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
AXWT-00097 16C0-147 13 m					
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT					
WITM-A PSC_16MHZ					





Production String	(m)		(m)	Well Schematic	(m)		(m)	Casing String
	OD	ID	MD		MD	OD	ID	
Tubing	5.500		10.6		11.3	7.625		Casing String
SSSV Landing Nipple	5.500		133.1		11.3	10.750		Casing String
Sliding Sleeve	5.500		759.9		556.3	10.750		Casing Shoe
Sliding Sleeve	5.500		1203.9					



Log	Static Pass down @ 30m/min	7-Jul-2009 12:50	000:14	2728.6	-	2660.0	FCS_ILS_DEFT_GMS_154LUP
Log	Pass (up)						
	Flowing Pass up @ 5m/min						
Log	Pass (down)	7-Jul-2009 13:05	000:16	2653.7	-	2739.1	FCS_ILS_DEFT_GMS_155LDP
	Flowing Pass down @ 5m/min						
Log	Pass (up)	7-Jul-2009 13:21	000:07	2738.9	-	2672.6	FCS_ILS_DEFT_GMS_156LUP
	Flowing Pass up @ 10m/min						
Log	Pass (down)	7-Jul-2009 13:29	000:15	2651.9	-	2730.9	FCS_ILS_DEFT_GMS_157LDP
	Flowing Pass down @ 10m/min						
Log	Pass (up)	7-Jul-2009 13:44	000:07	2730.7	-	2660.0	FCS_ILS_DEFT_GMS_158LUP
	Flowing Pass up @ 20m/min						
Log	Pass (down)	7-Jul-2009 13:52	000:08	2651.9	-	2730.7	FCS_ILS_DEFT_GMS_159LDP
	Flowing Pass down @ 20m/min						
Log	Pass (up)	7-Jul-2009 14:00	000:04	2730.7	-	2659.8	FCS_ILS_DEFT_GMS_160LUP
	Flowing Pass up @ 30m/min						
Log	Pass (down)	7-Jul-2009 14:04	000:04	2651.6	-	2730.9	FCS_ILS_DEFT_GMS_161LDP
	Flowing Pass down @ 30m/min						

**Schlumberger**

## SPRINT 2680m – 2730m MDKB

MAXIS Field Log

Company: Esso Australia Pty Ltd.

Well: A15

### Input DLIS Files

DEFAULT	FCS_ILS_DEFT_GMS_194PUP	FN:178	PRODUCER	07-Jul-2009 15:53	2729.9 M	2680.0 M
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### Output DLIS Files

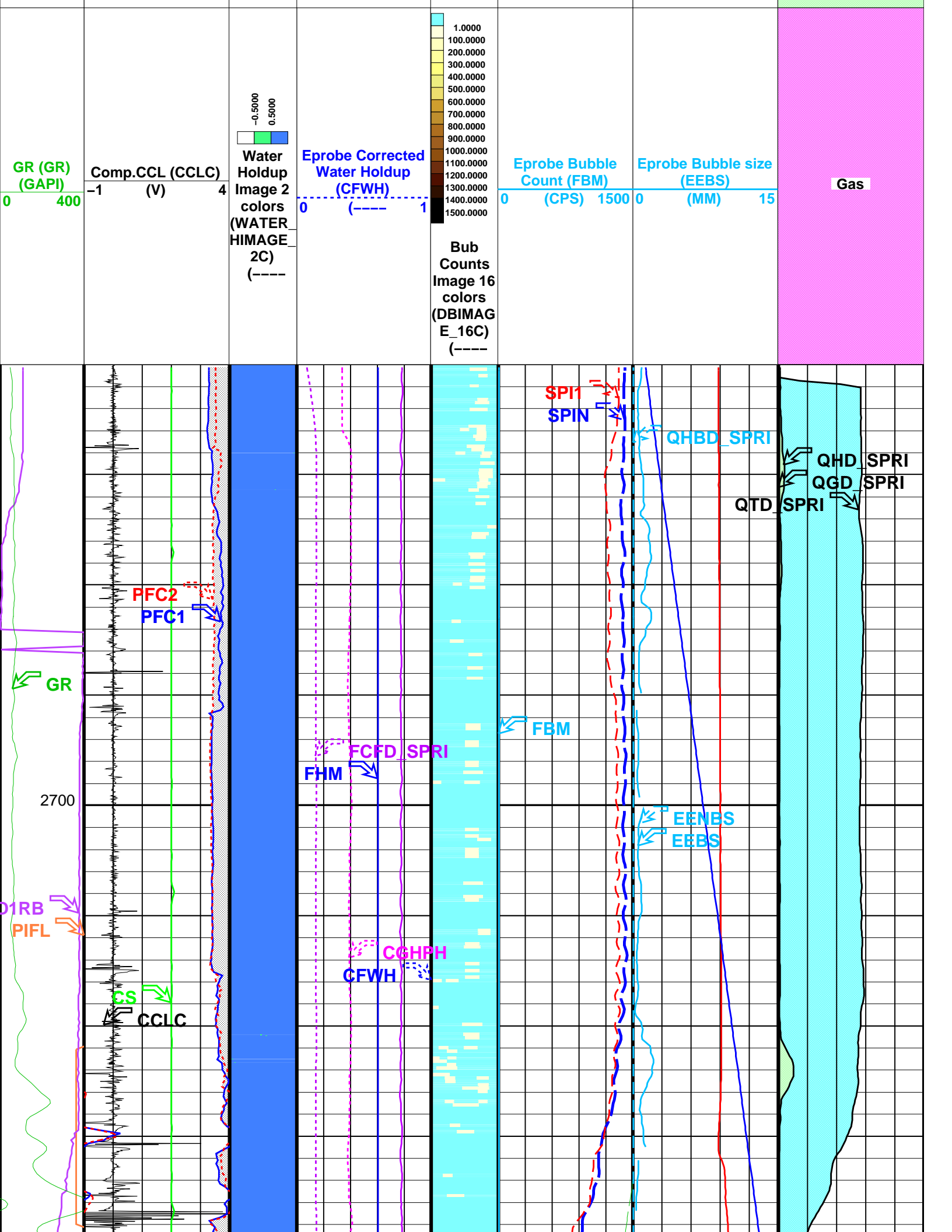
DEFAULT	FCS_ILS_DEFT_GMS_275PUP	FN:259	PRODUCER	08-Jul-2009 20:21	2729.9 M	2680.0 M
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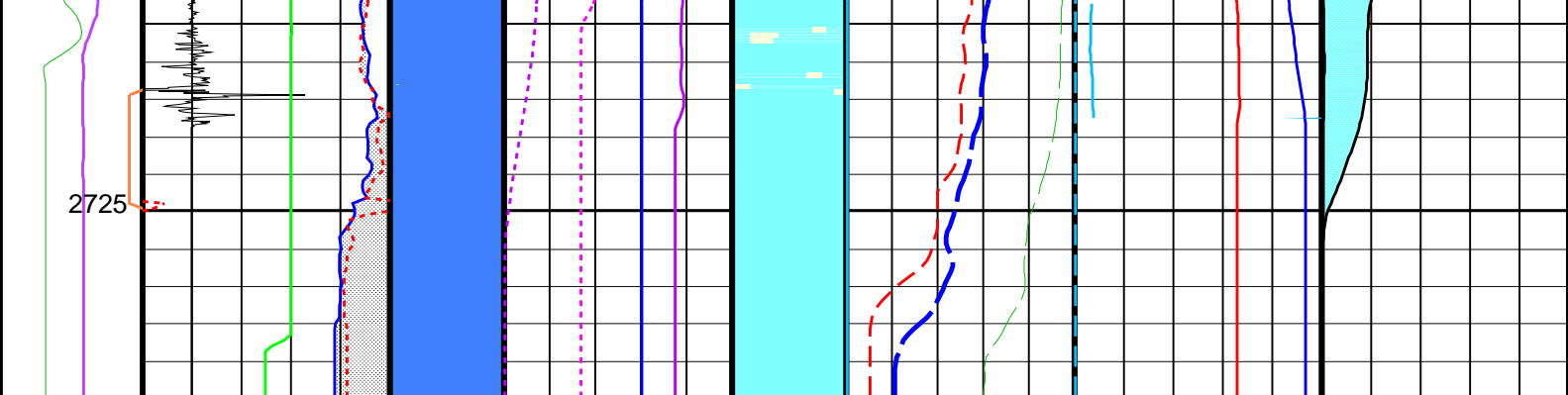
### OP System Version: 16C0-147

MCM

PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16
PSPT-A/B	SRPC-3777-Q4_2008_OP16		

	Well Diameter From PFC2 to PFCS_T1								
	Well Diameter From PFC1 to PFCS_T1	Well Fluid Density (WFDE)	Well Pressure (WPRE)						
		0.2 (G/C3) 1.2	3040 (PSIA) 3100						
	PFCS Caliper Y (PFC2)	Friction Corrected Well Fluid Density (FCFD_SPRI)	Filtered Auxiliary Spinner 1 (SPI1)	Well Temperature (WTEP)					
	3 (IN) 8	0 (G/C3) 6	-2 (RPS) 18	224 (DEGF) 226					
Probe1 RB (D1RB) (DEG)	PFCS Caliper X (PFC1)	Eprobe Water Holdup (FHM)	Filtered Main Spinner (SPIN)	Eprobe Bubble Rate (QHBD_SPRI)	Water Flowrate				
0 360	3 (IN) 8	0.4 (----) 1.4	-4 (RPS) 18	0 (BB/D) 15000					
Perfo Zone (PIFL)	Cable Speed (CS)	Corrected Gradio Heavy Phase Holdup (CGHPH)	Apparent spinner pitch (ASPI)	Eprobe Standalone Computed Bubble size (EENBS)	Oil				
20 (----) 0	0 (M/HR) 2000	-1 (----) 2	6 (IN) 1	0 (MM) 15					





GR (GR) (GAPI) 0 400		Comp.CCL (CCLC) (V) -1 4		Water Holdup Image 2 colors (WATER HIMAGE 2C) (---- -0.5000 0.5000		Eprobe Corrected Water Holdup (CFWH) 0 1 (----		Eprobe Bubble Count (FBM) 0 1500 (CPS)		Eprobe Bubble size (EEBS) 0 15 (MM)		Gas
Perfo Zone (PIFL) 20 (---- 0		Cable Speed (CS) (M/HR) 0 2000		Corrected Gradio Heavy Phase Holdup (CGHPH) -1 2 (----		Eprobe Water Holdup (FHM) 0.4 (---- 1.4		Apparent spinner pitch (ASPI) 6 1 (IN)		Eprobe Standalone Computed Bubble size (EENBS) 0 15 (MM)		Oil
Probe1 RB (D1RB) (DEG) 0 360		PFCS Caliper X (PFC1) 3 (IN) 8		Friction Corrected Well Fluid Density (FCFD_SPRI) 0 6 (G/C3)		Filtered Main Spinner (SPIN) -4 (RPS) 18		Filtered Auxiliary Spinner 1 (SPI1) -2 (RPS) 18		Eprobe Bubble Rate (QHBD_SPRI) 0 15000 (BB/D)		Water Flowrate
		PFCS Caliper Y (PFC2) 3 (IN) 8		Well Fluid Density (WFDE) 0.2 (G/C3) 1.2				Well Temperature (WTEP) 224 (DEGF) 226				
		Well Diameter From PFC1 to PFCS_T1						Well Pressure (WPRE) 3040 (PSIA) 3100				
		Well Diameter From PFC2 to PFCS_T1										

Format: SPRINT\_PFCImage\_DL Vertical Scale: 1:200 Graphics File Created: 08-Jul-2009 20:21

## OP System Version: 16C0-147 MCM

PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16
PSPT-A/B	SRPC-3777-Q4_2008_OP16		

## Parameters

DLIS Name	Description	Value
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PFCS-A: PSP Flow and caliper Tool

ANCD File A LINEAR AVERAGE



AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
CSID	Casing Size I.D.	6.875	IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB	
DDRS	Dual DEFT RB Source	D1RB	
DFBD	DEFT Blank Disallowed Probes	NO	
DFFI	DEFT Flip Image	NO	
DFII	DEFT Image Interpolation	YES	
DFIRS	DEFT Image Rotation Selection	TOP_MIDDLE	
DFPP	Probes Arm Position	C	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
SDCF	Spinner Depth Constant Filter	6	
SP11	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
SPIN	Main Spinner Flowmeter Sonde	PFCs-A_3.5	
PILS-A: PSP In Line Spinner Flowmeter			
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
SDCF	Spinner Depth Constant Filter	6	
SP11	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
SPIN	Main Spinner Flowmeter Sonde	PFCs-A_3.5	
DEFT-C2: DEFT_C Tool			
CSID	Casing Size I.D.	6.875	IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB	
DDRS	Dual DEFT RB Source	D1RB	
DFBD	DEFT Blank Disallowed Probes	NO	
DFFI	DEFT Flip Image	NO	
DFII	DEFT Image Interpolation	YES	
DFIRS	DEFT Image Rotation Selection	TOP_MIDDLE	
PGMC-A/B: PSP Gradiomanometer Measurement Module			
CSID	Casing Size I.D.	6.875	IN
PDSH	Gradio Correction Density Shift	0	G/C3
PSPT-A/B: Production Services Logging Platform			
CSID	Casing Size I.D.	6.875	IN
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
SPRI: Single Pass Rate Interpretation			
DENS_SEL	SPRint Density Selector	MWFD	
DGHC	Deft Ghost Probe Holdup Correction	MANU	
ESBS	Electrical-probe Stand-alone Bubble Size	0.06	IN
FLOWVIEW_FLAG	FlowView Water Holdup Used Flag	YES	
GDD_SPRI	Gas Downhole Density	0.15	G/C3
GFECF	Gradio Friction Effect Correction Factor	1	
GHCF	GHOST Gas Holdup Correction Factor	0	
GHOST_FLAG	Ghost Gas Holdup Used Flag	NO	
GOR_SPRI	Gas Oil Ratio	89.0538	M3M3
GRADIO_FLAG	Gradiomaometer Holdup Used Flag	NO	
ODD_SPRI	Oil Downhole Density	0.8	G/C3
OGRA_SPRI	Gravity of Oil	40	DAPI
OSBS	Optical-probe Stand-alone Bubble Size	0.06	IN
PVT_DDENS_FLAG	Compute Downhole Densities from PVT Data	NO	
SEFF	Spinner Efficiency	1	
SPINNER_PITCH	Spinner Pitch	2.08	IN
SPIN_SEL	SPRint Spinner Selector	SPIN	
SPRI_INTPR_TYPE	SPRint Type of Interpretation	WATER_OIL_FLOW	
SURFACE_SPRI	Surface Flowrates Computation	NO	
THRE	Spinner Threshold	1.2192	M/MN
WDD_SPRI	Water Downhole Density	1	G/C3
WHCF	PFCs/DEFT Water Holdup Correction Factor	0	
WSAL_SPRI	Water Salinity	50000	PPM
BORDYN: BorDyn (Well Test Validation)			
CSID	Casing Size I.D.	6.875	IN
System and Miscellaneous			
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

### Input DLIS Files

DEFAULT	FCS_ILS_DEFT_GMS_194PUP	FN:178	PRODUCER	07-Jul-2009 15:53	2729.9 M	2680.0 M
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### Output DLIS Files

DEFAULT	FCS_ILS_DEFT_GMS_275PUP	FN:259	PRODUCER	08-Jul-2009 20:21
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**Schlumberger**

**Spinners Multipass  
Flowing 2680m – 2730m MDKB**

PLQL Data Manager Files

- Pass # 1
- Pass # 2
- Pass # 3
- Pass # 4
- Pass # 5
- Pass # 6
- Pass # 7
- Pass # 8

Output DLIS Files

DEFAULT

FCS\_ILS\_DEFT\_GMS\_256PUP

FN:240

PRODUCER

08-Jul-2009 16:00

2729.8 M

2680.3 M

OP System Version: 16C0-147

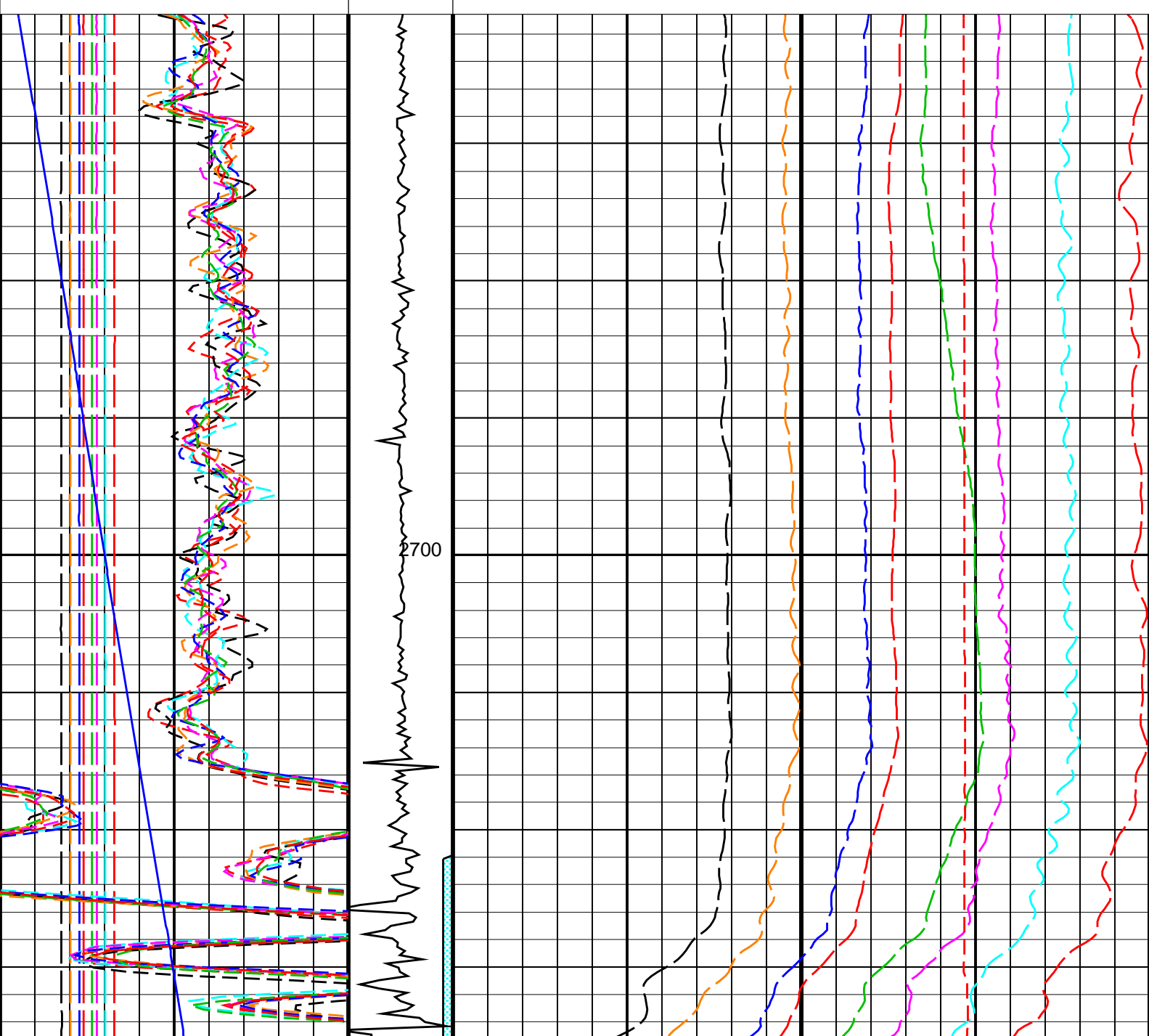
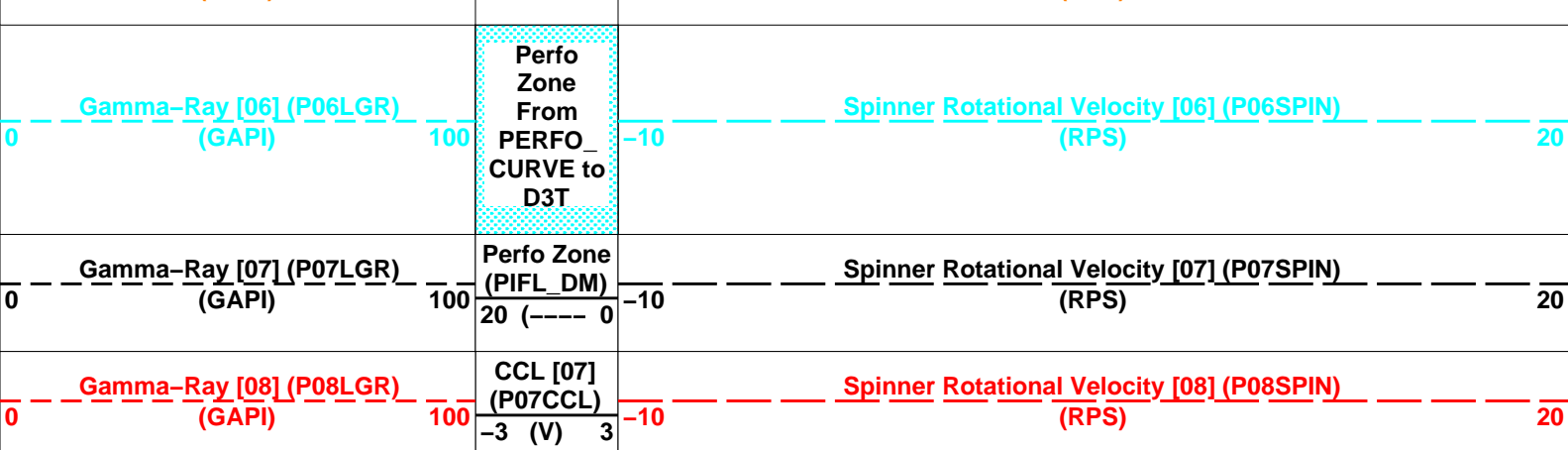
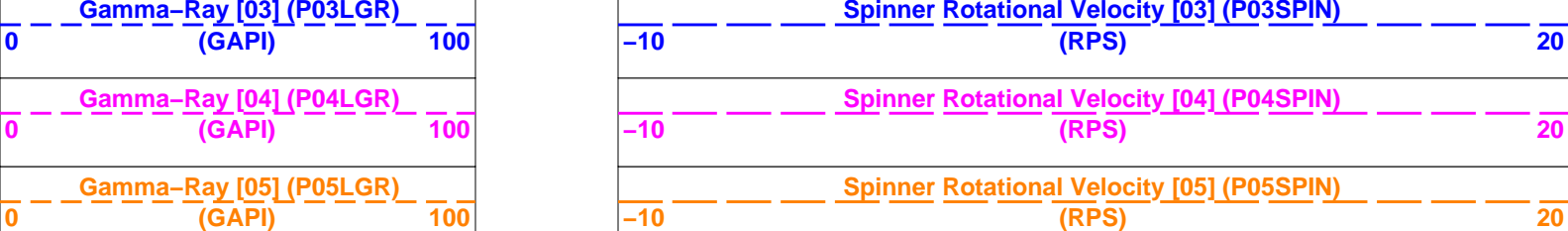
MCM

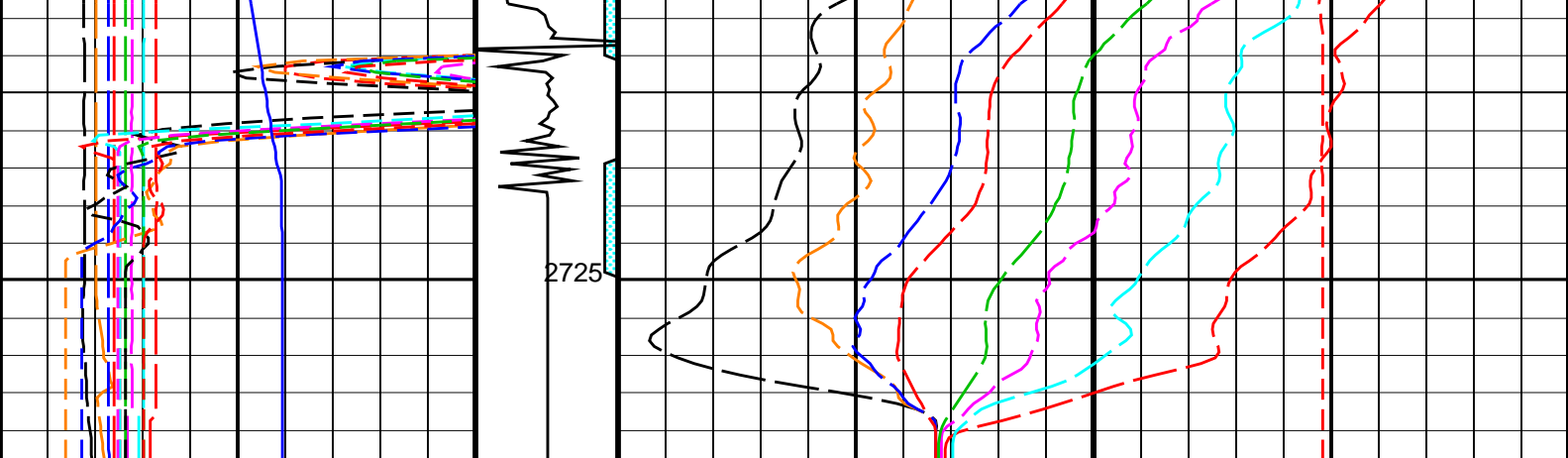
PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16
PSPT-A/B	SRPC-3777-Q4_2008_OP16		

Cable Velocity [01] (P01CVL)
-100 (M/MN) 100
Cable Velocity [02] (P02CVL)
-100 (M/MN) 100
Cable Velocity [03] (P03CVL)
-100 (M/MN) 100
Cable Velocity [04] (P04CVL)
-100 (M/MN) 100
Cable Velocity [05] (P05CVL)
-100 (M/MN) 100
Cable Velocity [06] (P06CVL)
-100 (M/MN) 100
Cable Velocity [07] (P07CVL)
-100 (M/MN) 100
Cable Velocity [08] (P08CVL)
-100 (M/MN) 100

Well Pressure [03] (P03LPR)
3040 (PSIA) 3135
Gamma-Ray [01] (P01LGR)
0 (GAPI) 100
Gamma-Ray [02] (P02LGR)
0 (GAPI) 100

Fluid Temperature [01] (P01TMP)
60 (DEGC) 70
Spinner Rotational Velocity [01] (P01SPIN)
-10 (RPS) 20
Spinner Rotational Velocity [02] (P02SPIN)
-10 (RPS) 20





<u>Gamma-Ray [08] (P08LGR)</u> (GAPI) 0 100	<u>CCL [07] (P07CCL)</u> -3 (V) 3	<u>Spinner Rotational Velocity [08] (P08SPIN)</u> (RPS) -10 20
<u>Gamma-Ray [07] (P07LGR)</u> (GAPI) 0 100	<u>Perfo Zone (PIFL_DM)</u> 20 (---- 0	<u>Spinner Rotational Velocity [07] (P07SPIN)</u> (RPS) -10 20
<u>Gamma-Ray [06] (P06LGR)</u> (GAPI) 0 100	<u>Perfo Zone From PERFO CURVE to D3T</u>	<u>Spinner Rotational Velocity [06] (P06SPIN)</u> (RPS) -10 20
<u>Gamma-Ray [05] (P05LGR)</u> (GAPI) 0 100		<u>Spinner Rotational Velocity [05] (P05SPIN)</u> (RPS) -10 20
<u>Gamma-Ray [04] (P04LGR)</u> (GAPI) 0 100		<u>Spinner Rotational Velocity [04] (P04SPIN)</u> (RPS) -10 20
<u>Gamma-Ray [03] (P03LGR)</u> (GAPI) 0 100		<u>Spinner Rotational Velocity [03] (P03SPIN)</u> (RPS) -10 20
<u>Gamma-Ray [02] (P02LGR)</u> (GAPI) 0 100		<u>Spinner Rotational Velocity [02] (P02SPIN)</u> (RPS) -10 20
<u>Gamma-Ray [01] (P01LGR)</u> (GAPI) 0 100		<u>Spinner Rotational Velocity [01] (P01SPIN)</u> (RPS) -10 20
<u>Well Pressure [03] (P03LPR)</u> (PSIA) 3040 3135		<u>Fluid Temperature [01] (P01TMP)</u> (DEGC) 60 70


<u>Cable Velocity [08] (P08CVL)</u> -100 (M/MN) 100
<u>Cable Velocity [07] (P07CVL)</u> -100 (M/MN) 100
<u>Cable Velocity [06] (P06CVL)</u> -100 (M/MN) 100
<u>Cable Velocity [05] (P05CVL)</u> -100 (M/MN) 100
<u>Cable Velocity [04] (P04CVL)</u> -100 (M/MN) 100
<u>Cable Velocity [03] (P03CVL)</u> -100 (M/MN) 100

100 (M/MN)	100
Cable Velocity [02] (P02CVL)	
-100 (M/MN)	100
Cable Velocity [01] (P01CVL)	
-100 (M/MN)	100

Parameters			
DLIS Name	Description	Value	
CSID	PFCS-A: PSP Flow and caliper Tool Casing Size I.D.	6.875	IN
CSID	DEFT-C2: DEFT_C Tool Casing Size I.D.	6.875	IN
CSID	PGMC-A/B: PSP Gradiomanometer Measurement Module Casing Size I.D.	6.875	IN
CSID	PSPT-A/B: Production Services Logging Platform Casing Size I.D.	6.875	IN
CSID	PLQL: Production Logging Quick Look CCL Selector	CCLC	
CCLS	Cased Hole Diameter Selector	PFC1	
FCHD	CVEL Selector	CVEL	
PCVS	GR Selector	GR	
PGRS	Pressure Gauge Selector	WPRE	
PGS	PLQL Water HoldUp Selector	DFHM	
PWHS	Fluid Density Selector	WFDE	
RHOS	Spinner Selector	SPIN	
SPIS	Temperature Selector	WTEP	
TMPS	BORDYN: BorDyn (Well Test Validation) Casing Size I.D.	6.875	IN
CSID			
Format: PLQLMultipasses    Vertical Scale: 1:200    Graphics File Created: 08-Jul-2009 16:00			

OP System Version: 16C0-147			
MCM			
PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16
PSPT-A/B	SRPC-3777-Q4_2008_OP16		

Output DLIS Files			
DEFAULT	FCS_ILS_DEFT_GMS_256PUP	FN:240	PRODUCER    08-Jul-2009 16:00



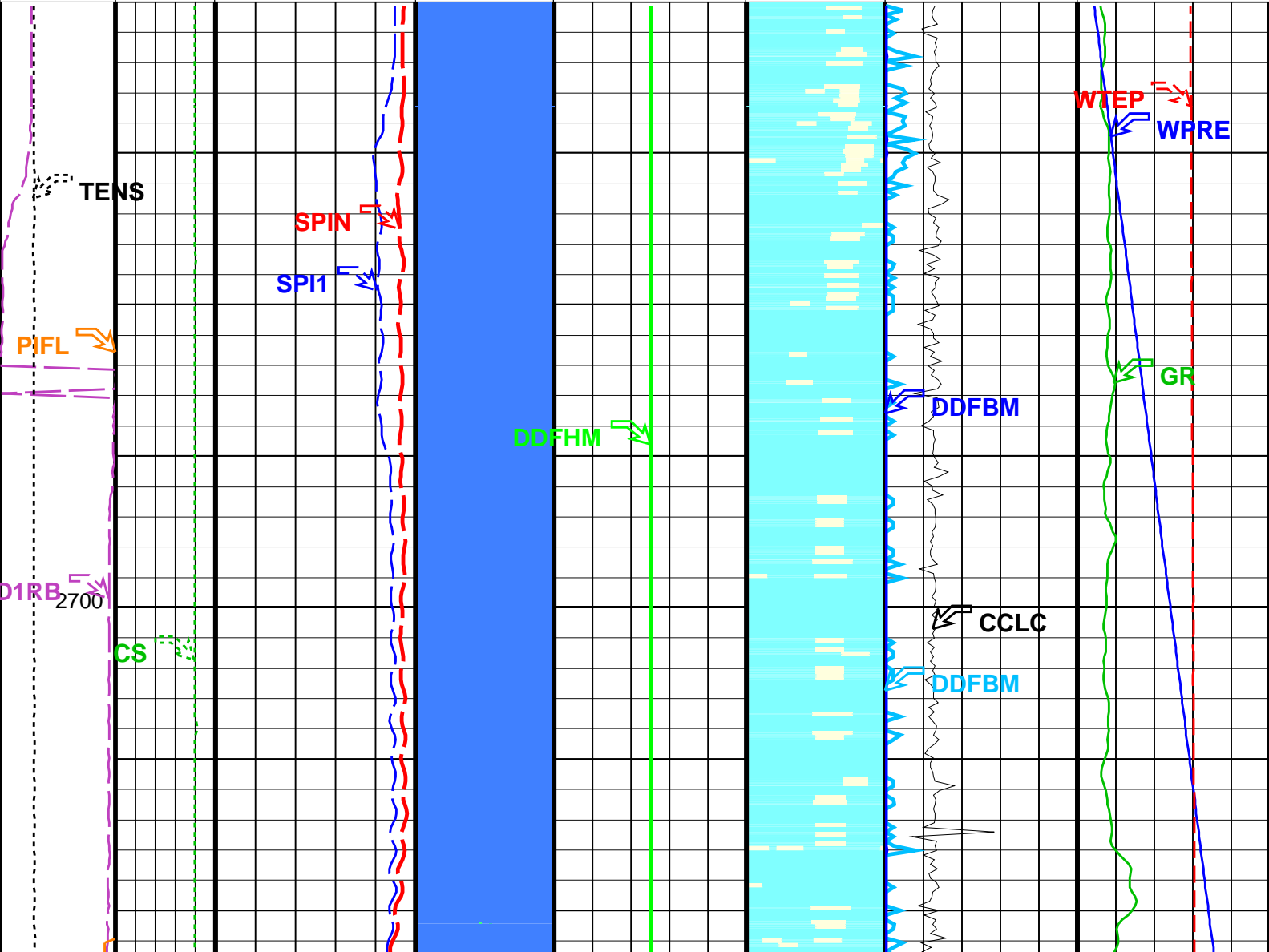
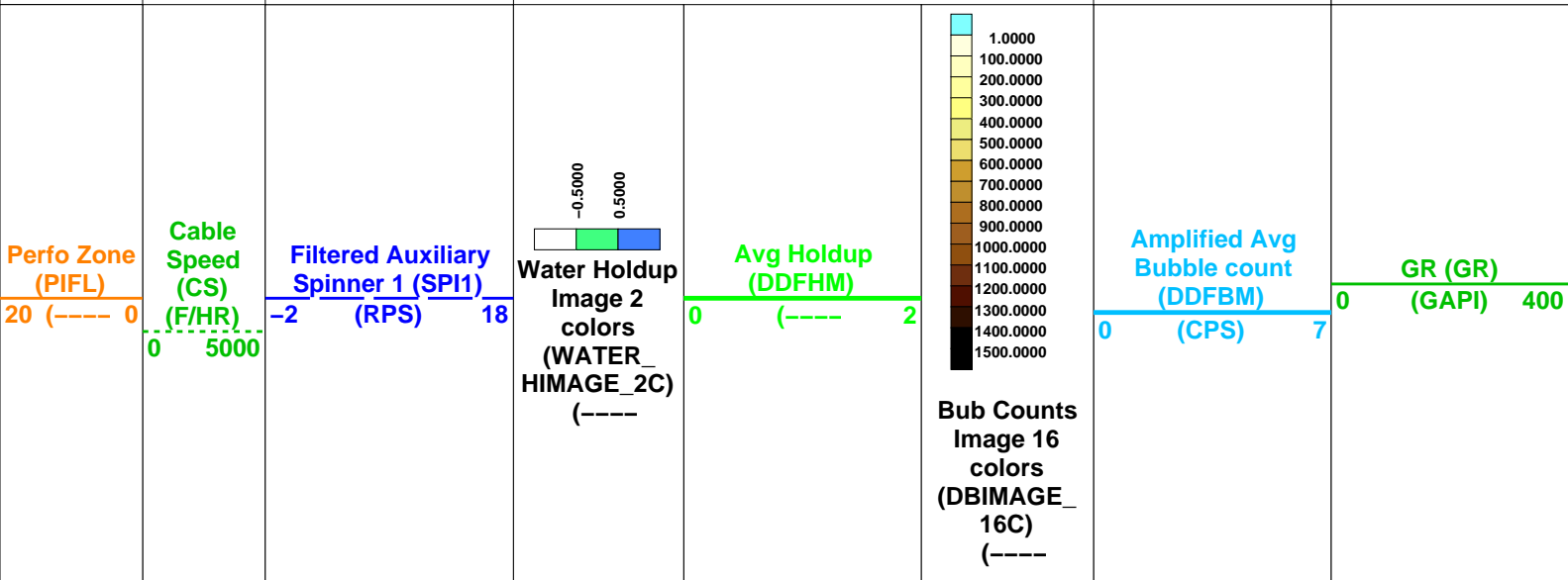
Flowing down log 2680m – 2730m  
20m/min (3940 ft/hr)

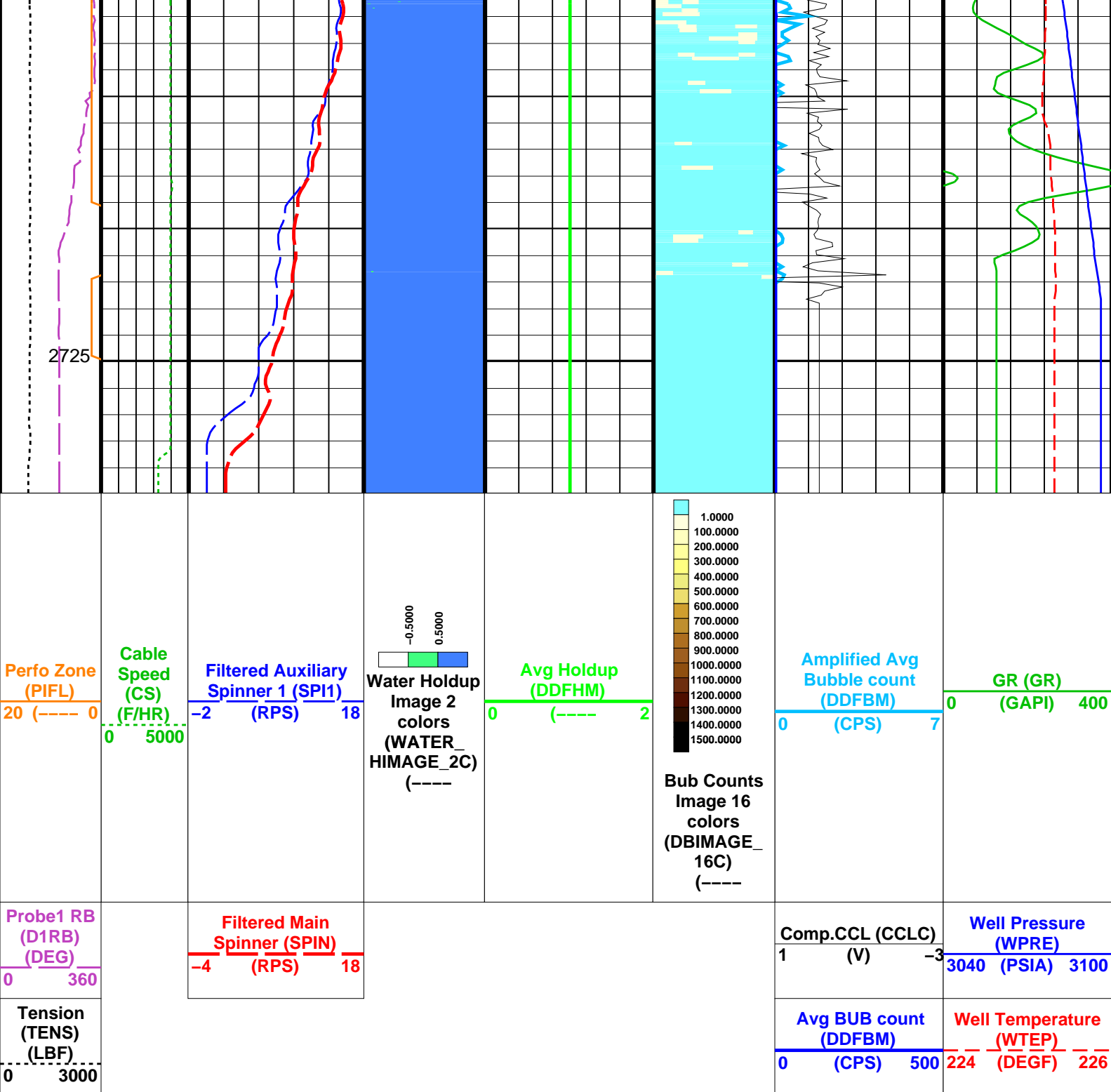
MAXIS Field Log

Input DLIS Files					
DEFAULT	FCS_ILS_DEFT_GMS_194PUP	FN:178	PRODUCER	07-Jul-2009 15:53	2729.9 M    2680.0 M
Output DLIS Files					
DEFAULT	FCS_ILS_DEFT_GMS_270PUP	FN:254	PRODUCER	08-Jul-2009 19:46	2729.9 M    2680.0 M

OP System Version: 16C0-147			
MCM			
PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16

Tension (TENS) (LBF)					Avg BUB count (DDFBM)	Well Temperature (WTEP)
0 3000					0 (CPS) 500	224 (DEGF) 226
Probe1 RB (D1RB) (DEG)	Filtered Main Spinner (SPIN)				Comp.CCL (CCLC)	Well Pressure (WPRE)
0 360	-4 (RPS) 18				1 (V) -3	3040 (PSIA) 3100





Format: DEFT\_Image\_DL Vertical Scale: 1:200 Graphics File Created: 08-Jul-2009 19:46

## OP System Version: 16C0-147

MCM

PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16
PSPT-A/B	SRPC-3777-Q4_2008_OP16		

## Parameters

DLIS Name	Description	Value
-----------	-------------	-------

PFCS-A: PSP Flow and caliper Tool

AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE
CSID	Casing Size I.D.	6.875 IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB
DDRS	Dual DEFT RB Source	D1RB
DFBD	DEFT Blank Disallowed Probes	NO
DEFI	DEFT Flip Image	NO

DFII	DEFT Flip Image	NO	
DFIIR	DEFT Image Interpolation	YES	
DFPP	DEFT Image Rotation Selection	TOP_MIDDLE	
SDCF	Probes Arm Position	C	
SPI1	Spinner Depth Constant Filter	6	
SPIN	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
	Main Spinner Flowmeter Sonde	PFCs-A_3.5	
PILS-A: PSP In Line	Spinner Flowmeter		
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
SDCF	Spinner Depth Constant Filter	6	
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
SPIN	Main Spinner Flowmeter Sonde	PFCs-A_3.5	
DEFT-C2: DEFT_C Tool			
CSID	Casing Size I.D.	6.875	IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB	
DDRS	Dual DEFT RB Source	D1RB	
DFBD	DEFT Blank Disallowed Probes	NO	
DFFI	DEFT Flip Image	NO	
DFII	DEFT Image Interpolation	YES	
DFIRS	DEFT Image Rotation Selection	TOP_MIDDLE	
PGMC-A/B: PSP Gradiomanometer Measurement Module			
CSID	Casing Size I.D.	6.875	IN
PSPT-A/B: Production Services Logging Platform			
CSID	Casing Size I.D.	6.875	IN
BORDYN: BorDyn (Well Test Validation)			
CSID	Casing Size I.D.	6.875	IN
System and Miscellaneous			
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

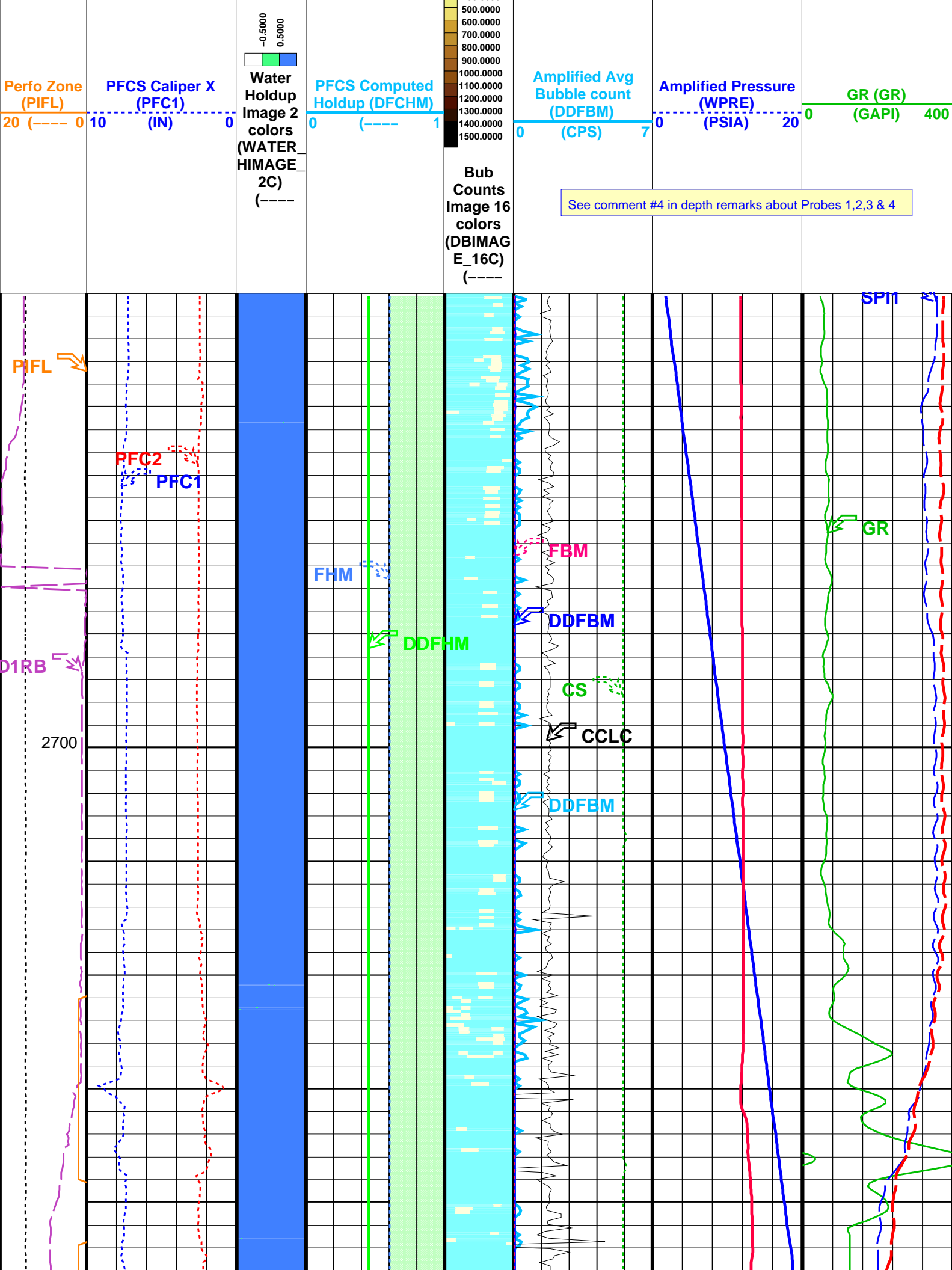
Input DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_194PUP	FN:178	PRODUCER	07-Jul-2009 15:53	2729.9 M	2680.0 M
Output DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_270PUP	FN:254	PRODUCER	08-Jul-2009 19:46		

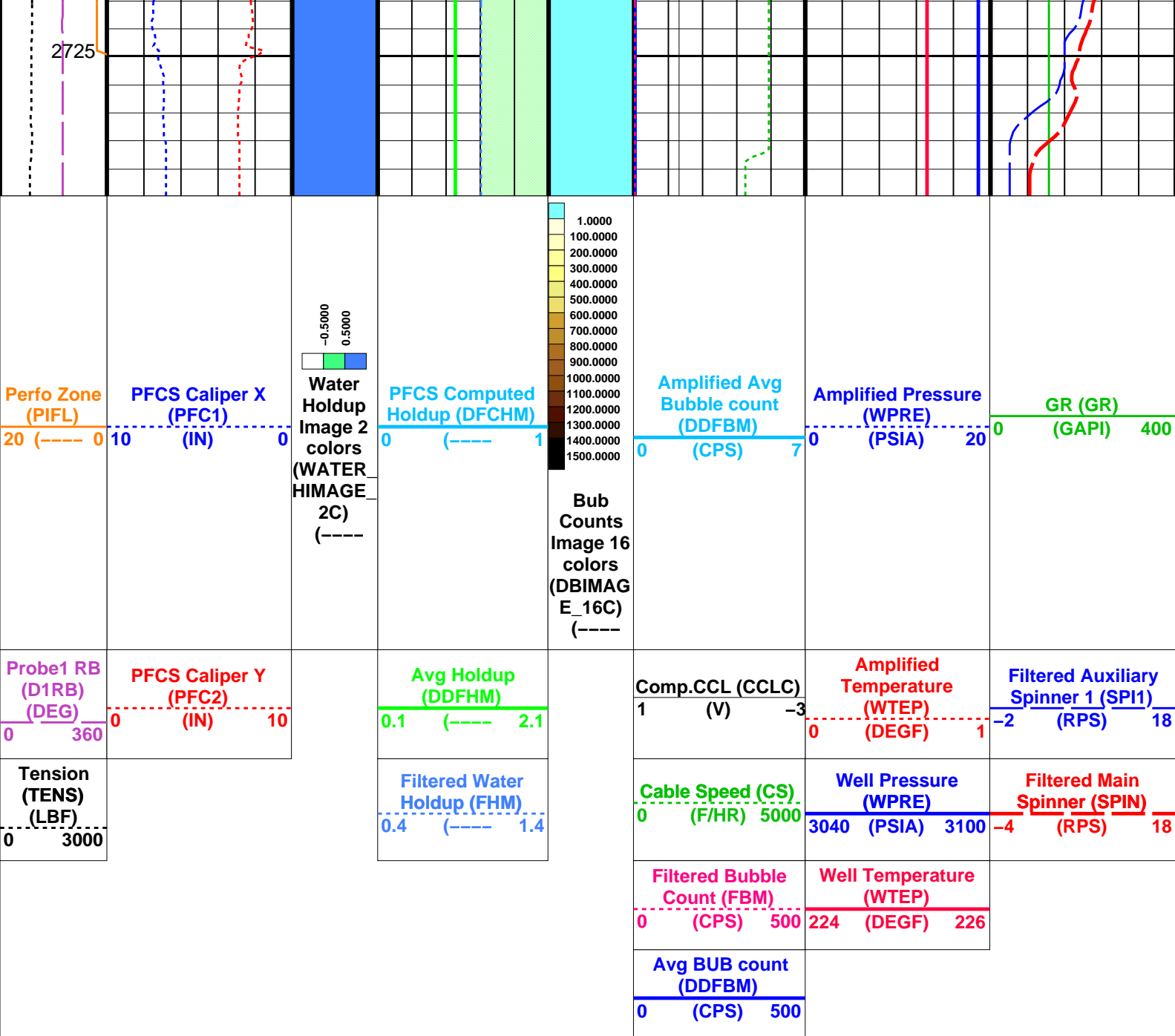
Input DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_194PUP	FN:178	PRODUCER	07-Jul-2009 15:53	2729.9 M	2680.0 M
Output DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_270PUP	FN:254	PRODUCER	08-Jul-2009 19:46	2729.9 M	2680.0 M

OP System Version: 16C0-147			
MCM			
PFCs-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16
PSPT-A/B	SRPC-3777-Q4_2008_OP16		

			<div>Avg BUB count (DDFBM)</div> <div>0 (CPS) 500</div>									
			<div>Filtered Bubble Count (FBM)</div> <div>0 (CPS) 500</div>		<div>Well Temperature (WTEP)</div> <div>224 (DEGF) 226</div>							
<div>Tension (TENS) (LBF)</div> <div>0 3000</div>			<div>Filtered Water Holdup (FHM)</div> <div>0.4 (---- 1.4</div>		<div>Cable Speed (CS)</div> <div>0 (F/HR) 5000</div>		<div>Well Pressure (WPRE)</div> <div>3040 (PSIA) 3100</div>		<div>Filtered Main Spinner (SPIN)</div> <div>-4 (RPS) 18</div>			
<div>Probe1 RB (D1RB) (DEG)</div> <div>0 360</div>			<div>PFCs Caliper Y (PFC2) (IN)</div> <div>0 10</div>		<div>Avg Holdup (DDFHM)</div> <div>0.1 (---- 2.1</div>		<div>Comp.CCL (CCLC) (V)</div> <div>1 -3</div>		<div>Amplified Temperature (WTEP) (DEGF)</div> <div>0 1</div>		<div>Filtered Auxiliary Spinner 1 (SPI1) (RPS)</div> <div>-2 18</div>	







Format: PFCS_Image_DL		Vertical Scale: 1:200		Graphics File Created: 08-Jul-2009 19:46	
OP System Version: 16C0-147					
MCM					
PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16		
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16		
PSPT-A/B	SRPC-3777-Q4_2008_OP16				

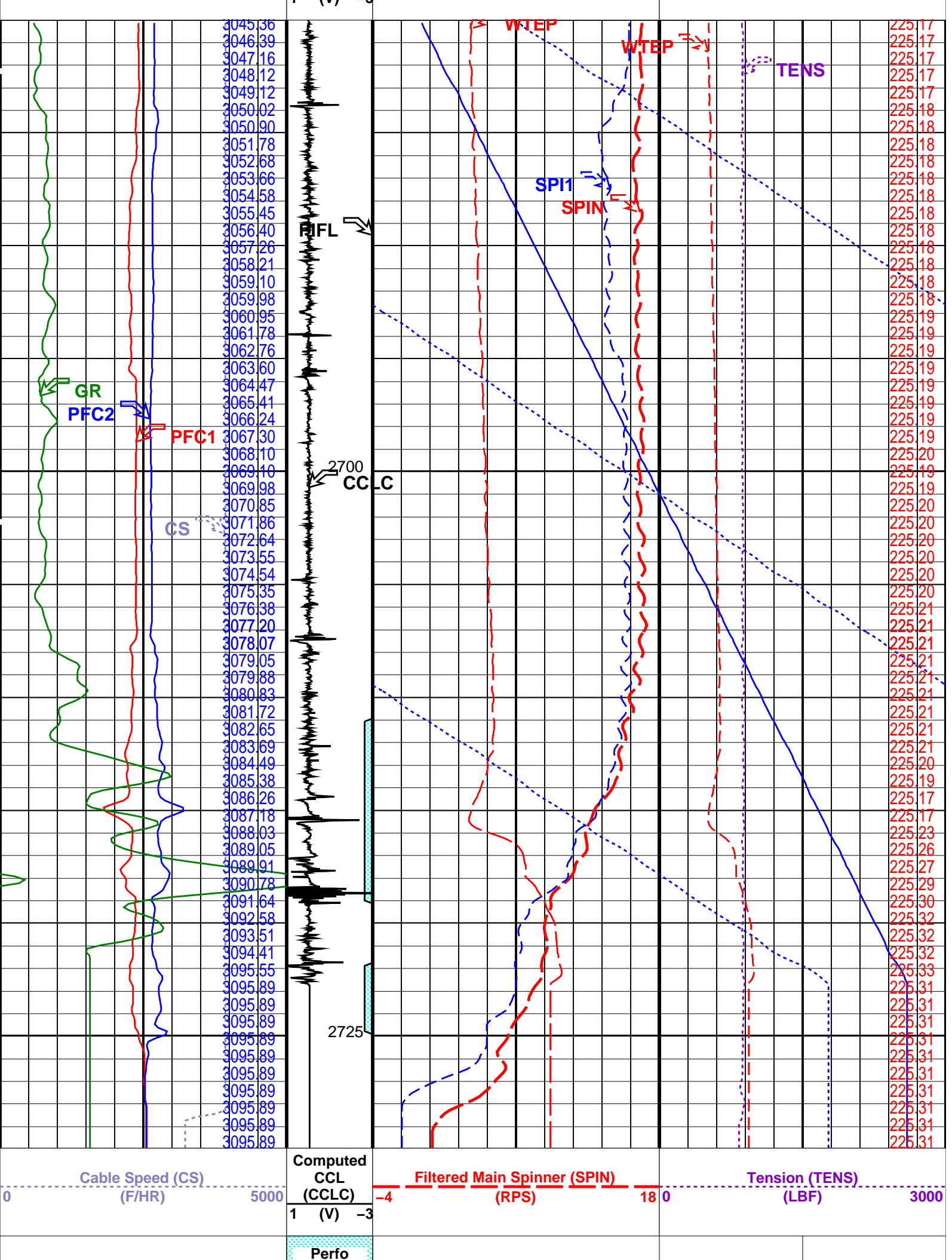
Parameters		
DLIS Name	Description	Value
PFCS-A: PSP Flow and caliper Tool		
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE
CSID	Casing Size I.D.	6.875 IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB
DDRS	Dual DEFT RB Source	D1RB
DFBD	DEFT Blank Disallowed Probes	NO
DFFI	DEFT Flip Image	NO
DFII	DEFT Image Interpolation	YES
DFIRS	DEFT Image Rotation Selection	TOP_MIDDLE
DFPP	Probes Arm Position	C
SDCF	Spinner Depth Constant Filter	6
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5

PILS-A: PSP In Line Spinner Flowmeter	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
AMOD	Spinner Depth Constant Filter	6	
SDCF	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
SPI1	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
SPIN			
DEFT-C2: DEFT_C Tool	Casing Size I.D.	6.875	IN
CSID	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB	
DDRC	Dual DEFT RB Source	D1RB	
DDRS	DEFT Blank Disallowed Probes	NO	
DFBD	DEFT Flip Image	NO	
DFFI	DEFT Image Interpolation	YES	
DFII	DEFT Image Rotation Selection	TOP_MIDDLE	
DFIRS	Probes Arm Position (2nd tool)	D	
DFPP2			
PGMC-A/B: PSP Gradiomanometer Measurement Module	Casing Size I.D.	6.875	IN
CSID	PSPT-A/B: Production Services Logging Platform		
CSID	Casing Size I.D.	6.875	IN
BORDYN: BorDyn (Well Test Validation)	Casing Size I.D.	6.875	IN
CSID			
System and Miscellaneous	Current Casing Size	7.625	IN
CSIZ	Depth Offset for Playback	0.0	M
DO	Playback Processing	NORMAL	
PP			

Input DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_194PUP	FN:178	PRODUCER	07-Jul-2009 15:53	2729.9 M	2680.0 M
Output DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_270PUP	FN:254	PRODUCER	08-Jul-2009 19:46		

Input DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_194PUP	FN:178	PRODUCER	07-Jul-2009 15:53	2729.9 M	2680.0 M
Output DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_259PUP	FN:243	PRODUCER	08-Jul-2009 18:48	2729.9 M	2680.0 M
OP System Version: 16C0-147						
MCM						
PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16			
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16			
PSPT-A/B	SRPC-3777-Q4_2008_OP16					

PIP SUMMARY						
Time Mark Every 60 S						
<div>Well Pressure (WPRE) (PSIA)</div> <div>Gamma Ray (GR) (GAPI)</div> <div>PFCS Y Caliper (PFC2) (IN)</div>		<div>Amplified Well Pressure (WPRE) (PSIA)</div> <div>Well Pressure (WPRE) (PSIA)</div> <div>Well Temperature (WTEP) (DEGF)</div> <div>Well Temperature (WTEP) (DEGF)</div>				
		<div>0</div> <div>3040</div> <div>0</div> <div>224</div>				
		<div>20</div> <div>3100</div> <div>1</div> <div>226</div>				
<div>PFCS X Caliper (PFC1) (IN)</div>		<div>Perfo Zone From PERFO_CURVE to D3T</div>	<div>Filtered Auxiliary Spinner 1 (SPI1) (RPS)</div>		<div>Well Temperature (WTEP) (DEGF)</div>	
<div>14</div>		<div>0</div>	<div>-2</div>		<div>18</div>	
<div>Cable Speed (CS) (F/HR)</div>		<div>Computed CCL (CCLC) (V)</div>	<div>Filtered Main Spinner (SPIN) (RPS)</div>		<div>Tension (TENS) (LBF)</div>	
<div>0</div>		<div>5000</div>	<div>-4</div>		<div>180</div>	
		<div>1</div>			<div>3000</div>	



PFCS X Caliper (PFC1)		Zone From PERFO_ CURVE to D3T	Filtered Auxiliary Spinner 1 (SPI1)		Well Temperature (WTEP) (DEGF)
14	(IN)		-2	(RPS)	
0			18		
PFCS Y Caliper (PFC2)			Well Temperature (WTEP)		
0	(IN)		224	(DEGF)	226
Gamma Ray (GR)			Well Temperature (WTEP)		
0	(GAPI)		0	(DEGF)	1
Well Pressure (WPRESS) (PSIA)			Well Pressure (WPRESS)		
			3040	(PSIA)	3100
			Amplified Well Pressure (WPRESS)		
			0	(PSIA)	20

PIP SUMMARY					
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Time Mark Every 60 S					
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Format: PSP_1		Vertical Scale: 1:200		Graphics File Created: 08-Jul-2009 18:48	
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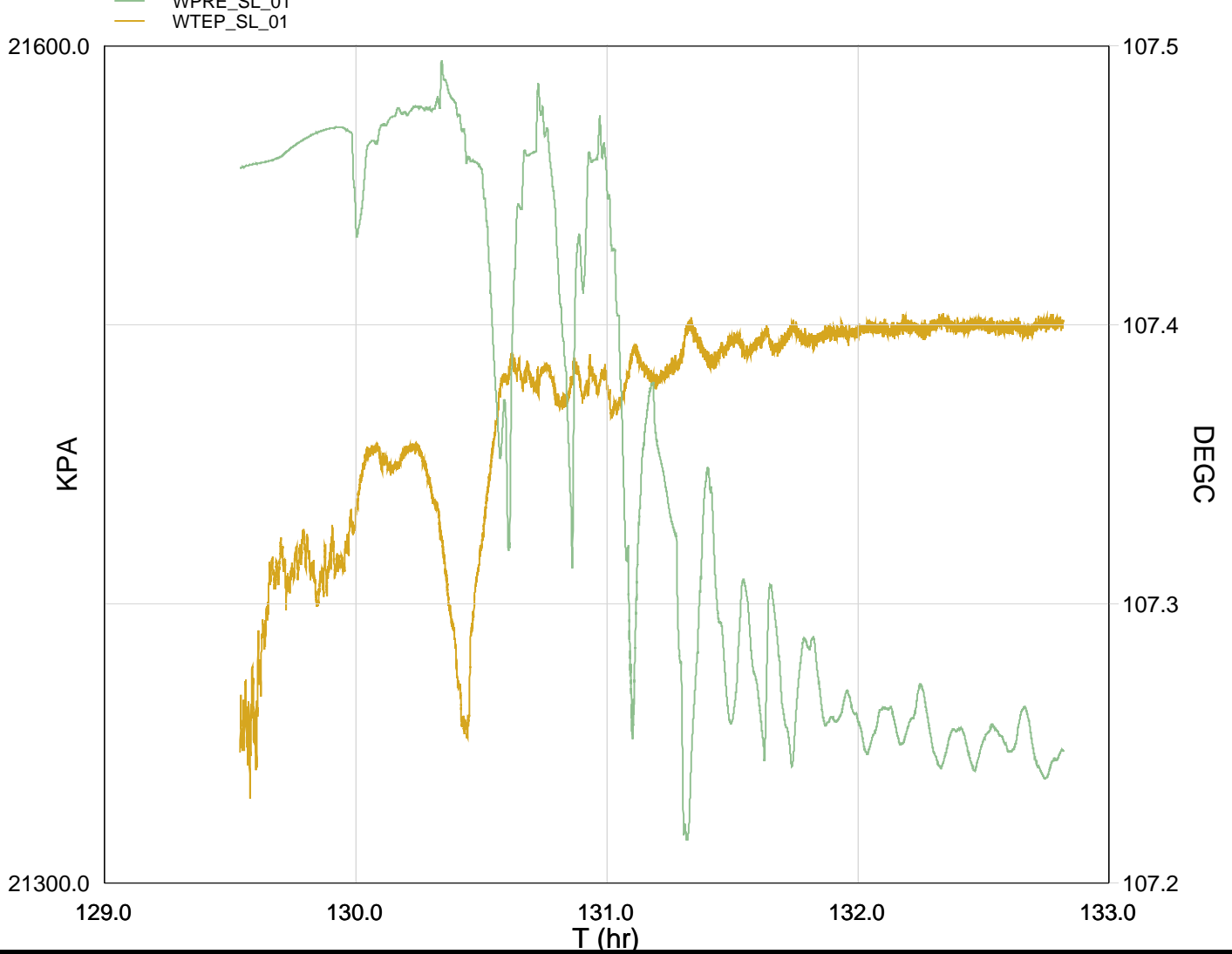
OP System Version: 16C0-147			
MCM			
PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16
PSPT-A/B	SRPC-3777-Q4_2008_OP16		

Parameters			
DLIS Name	Description	Value	
PFCS-A: PSP Flow and caliper Tool			
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
SDCF	Spinner Depth Constant Filter	6	
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
PILS-A: PSP In Line Spinner Flowmeter			
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
SDCF	Spinner Depth Constant Filter	6	
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
System and Miscellaneous			
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

Input DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_194PUP	FN:178	PRODUCER	07-Jul-2009 15:53	2729.9 M	2680.0 M
Output DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_259PUP	FN:243	PRODUCER	08-Jul-2009 18:48		



Station Log @ 2730m MDKB  
Well draw down



**Schlumberger**

**Spinners Multipass  
Static 2680m – 2730m MDKB**

MAXIS Field Log

Company: Esso Australia Pty Ltd.

Well: A15

**PLQL Data Manager Files**

Pass # 1  
Pass # 2  
Pass # 3  
Pass # 4  
Pass # 5  
Pass # 6  
Pass # 7  
Pass # 8

Company: Esso Australia Pty Ltd.

Well: A15

**Output DLIS Files**

DEFAULT FCS\_ILS\_DEFT\_GMS\_254PUP FN:238 PRODUCER 08-Jul-2009 15:56 2729.8 M 2680.3 M

OP System Version: 16C0-147

MCM

PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16
PSPT-A/B	SRPC-3777-Q4_2008_OP16		

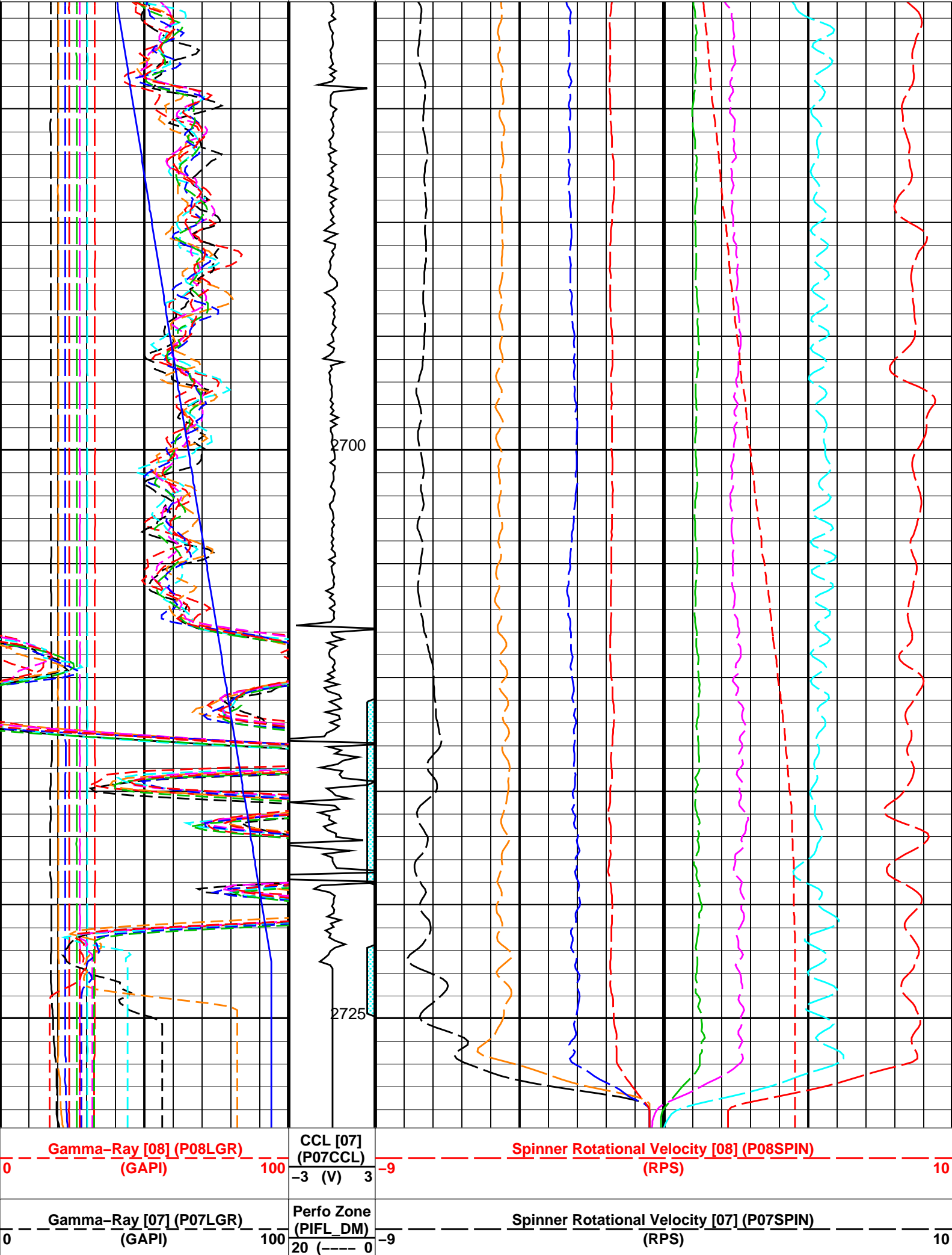
Cable Velocity [01] (P01CVL)
-100 (M/MN) 100
Cable Velocity [02] (P02CVL)
-100 (M/MN) 100
Cable Velocity [03] (P03CVL)
-100 (M/MN) 100
Cable Velocity [04] (P04CVL)
-100 (M/MN) 100
Cable Velocity [05] (P05CVL)
-100 (M/MN) 100
Cable Velocity [06] (P06CVL)
-100 (M/MN) 100
Cable Velocity [07] (P07CVL)
-100 (M/MN) 100
Cable Velocity [08] (P08CVL)
-100 (M/MN) 100

Well Pressure [03] (P03LPR)
3040 (PSIA) 3135
Gamma-Ray [01] (P01LGR)
0 (GAPI) 100
Gamma-Ray [02] (P02LGR)
0 (GAPI) 100
Gamma-Ray [03] (P03LGR)
0 (GAPI) 100
Gamma-Ray [04] (P04LGR)
0 (GAPI) 100
Gamma-Ray [05] (P05LGR)
0 (GAPI) 100

Gamma-Ray [06] (P06LGR)
0 (GAPI) 100
Gamma-Ray [07] (P07LGR)
0 (GAPI) 100
Gamma-Ray [08] (P08LGR)
0 (GAPI) 100

Perfo Zone From PERFO CURVE to D3T
Perfo Zone (PIFL_DM)
20 (---- 0
CCL [07] (P07CCL)
-3 (V) 3

Fluid Temperature [01] (P01TMP)
60 (DEGC) 70
Spinner Rotational Velocity [01] (P01SPIN)
-9 (RPS) 10
Spinner Rotational Velocity [02] (P02SPIN)
-9 (RPS) 10
Spinner Rotational Velocity [03] (P03SPIN)
-9 (RPS) 10
Spinner Rotational Velocity [04] (P04SPIN)
-9 (RPS) 10
Spinner Rotational Velocity [05] (P05SPIN)
-9 (RPS) 10
Spinner Rotational Velocity [06] (P06SPIN)
-9 (RPS) 10
Spinner Rotational Velocity [07] (P07SPIN)
-9 (RPS) 10
Spinner Rotational Velocity [08] (P08SPIN)
-9 (RPS) 10





<div> <div>Gamma-Ray [06] (P06LGR)</div> <div>(GAPI)</div> <div>0100</div> </div>	<div> <div>Spinner Rotational Velocity [06] (P06SPIN)</div> <div>(RPS)</div> <div>-910</div> </div>
<div> <div>Gamma-Ray [05] (P05LGR)</div> <div>(GAPI)</div> <div>0100</div> </div>	<div> <div>Spinner Rotational Velocity [05] (P05SPIN)</div> <div>(RPS)</div> <div>-910</div> </div>
<div> <div>Gamma-Ray [04] (P04LGR)</div> <div>(GAPI)</div> <div>0100</div> </div>	<div> <div>Spinner Rotational Velocity [04] (P04SPIN)</div> <div>(RPS)</div> <div>-910</div> </div>
<div> <div>Gamma-Ray [03] (P03LGR)</div> <div>(GAPI)</div> <div>0100</div> </div>	<div> <div>Spinner Rotational Velocity [03] (P03SPIN)</div> <div>(RPS)</div> <div>-910</div> </div>
<div> <div>Gamma-Ray [02] (P02LGR)</div> <div>(GAPI)</div> <div>0100</div> </div>	<div> <div>Spinner Rotational Velocity [02] (P02SPIN)</div> <div>(RPS)</div> <div>-910</div> </div>
<div> <div>Gamma-Ray [01] (P01LGR)</div> <div>(GAPI)</div> <div>0100</div> </div>	<div> <div>Spinner Rotational Velocity [01] (P01SPIN)</div> <div>(RPS)</div> <div>-910</div> </div>
<div> <div>Well Pressure [03] (P03LPR)</div> <div>(PSIA)</div> <div>30403135</div> </div>	<div> <div>Fluid Temperature [01] (P01TMP)</div> <div>(DEGC)</div> <div>6070</div> </div>

<div> <div>Cable Velocity [08] (P08CVL)</div> <div>(M/MN)</div> <div>-100100</div> </div>
<div> <div>Cable Velocity [07] (P07CVL)</div> <div>(M/MN)</div> <div>-100100</div> </div>
<div> <div>Cable Velocity [06] (P06CVL)</div> <div>(M/MN)</div> <div>-100100</div> </div>
<div> <div>Cable Velocity [05] (P05CVL)</div> <div>(M/MN)</div> <div>-100100</div> </div>
<div> <div>Cable Velocity [04] (P04CVL)</div> <div>(M/MN)</div> <div>-100100</div> </div>
<div> <div>Cable Velocity [03] (P03CVL)</div> <div>(M/MN)</div> <div>-100100</div> </div>
<div> <div>Cable Velocity [02] (P02CVL)</div> <div>(M/MN)</div> <div>-100100</div> </div>
<div> <div>Cable Velocity [01] (P01CVL)</div> <div>(M/MN)</div> <div>-100100</div> </div>

Parameters			
DLIS Name	Description	Value	
CSID	PFCS–A: PSP Flow and caliper Tool Casing Size I.D.	6.875	IN
CSID	DEFT–C2: DEFT_C Tool Casing Size I.D.	6.875	IN
CSID	PGMC–A/B: PSP Gradiomanometer Measurement Module Casing Size I.D.	6.875	IN
CSID	PSPT–A/B: Production Services Logging Platform Casing Size I.D.	6.875	IN
CCLS	PLQL: Production Logging Quick Look CCL Selector	CCLC	
FCHD	Cased Hole Diameter Selector	PFC1	

PCVS	CVEL Selector	CVEL
PGRS	GR Selector	GR
PGS	Pressure Gauge Selector	WPRE
PWHS	PLQL Water HoldUp Selector	DFHM
RHOS	Fluid Density Selector	WFDE
SPIS	Spinner Selector	SPIN
TMPS	Temperature Selector	WTEP
BORDYN: BorDyn (Well Test Validation)		
CSID	Casing Size I.D.	6.875 IN

Format: PLQLMultipasses    Vertical Scale: 1:200    Graphics File Created: 08-Jul-2009 15:56

## OP System Version: 16C0-147

MCM

PFCS-A	SRPC-3777-Q4_2008_OP16	PILS-A	SRPC-3777-Q4_2008_OP16
DEFT-C2	SRPC-3777-Q4_2008_OP16	PGMC-A/B	SRPC-3777-Q4_2008_OP16
PSPT-A/B	SRPC-3777-Q4_2008_OP16		

## Output DLIS Files

DEFAULT    FCS\_ILS\_DEFT\_GMS\_254PUP    FN:238    PRODUCER    08-Jul-2009 15:56

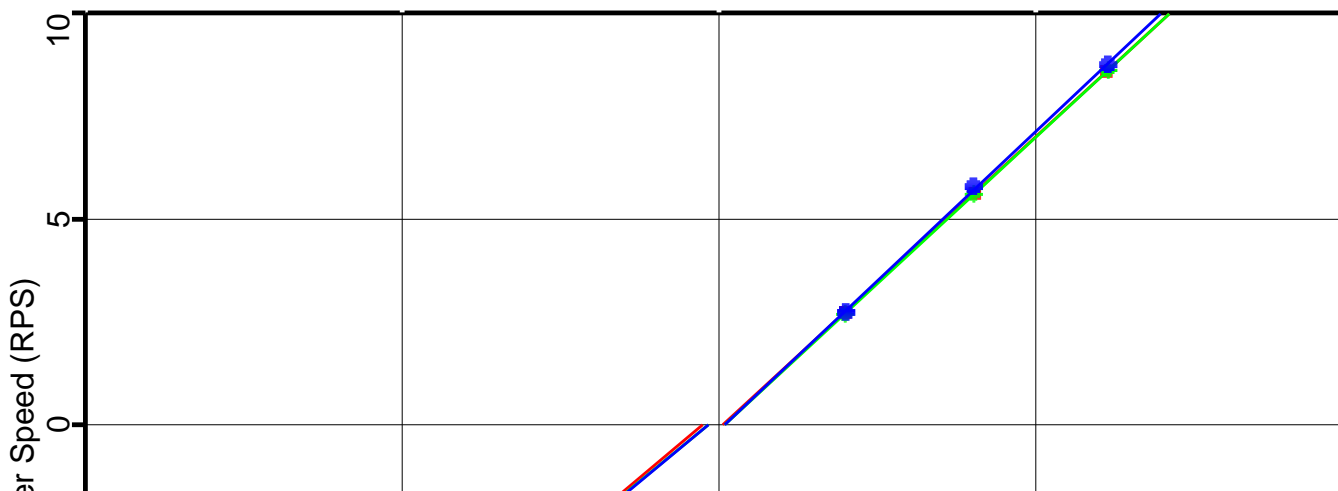
**Schlumberger**

## Spinner calibration

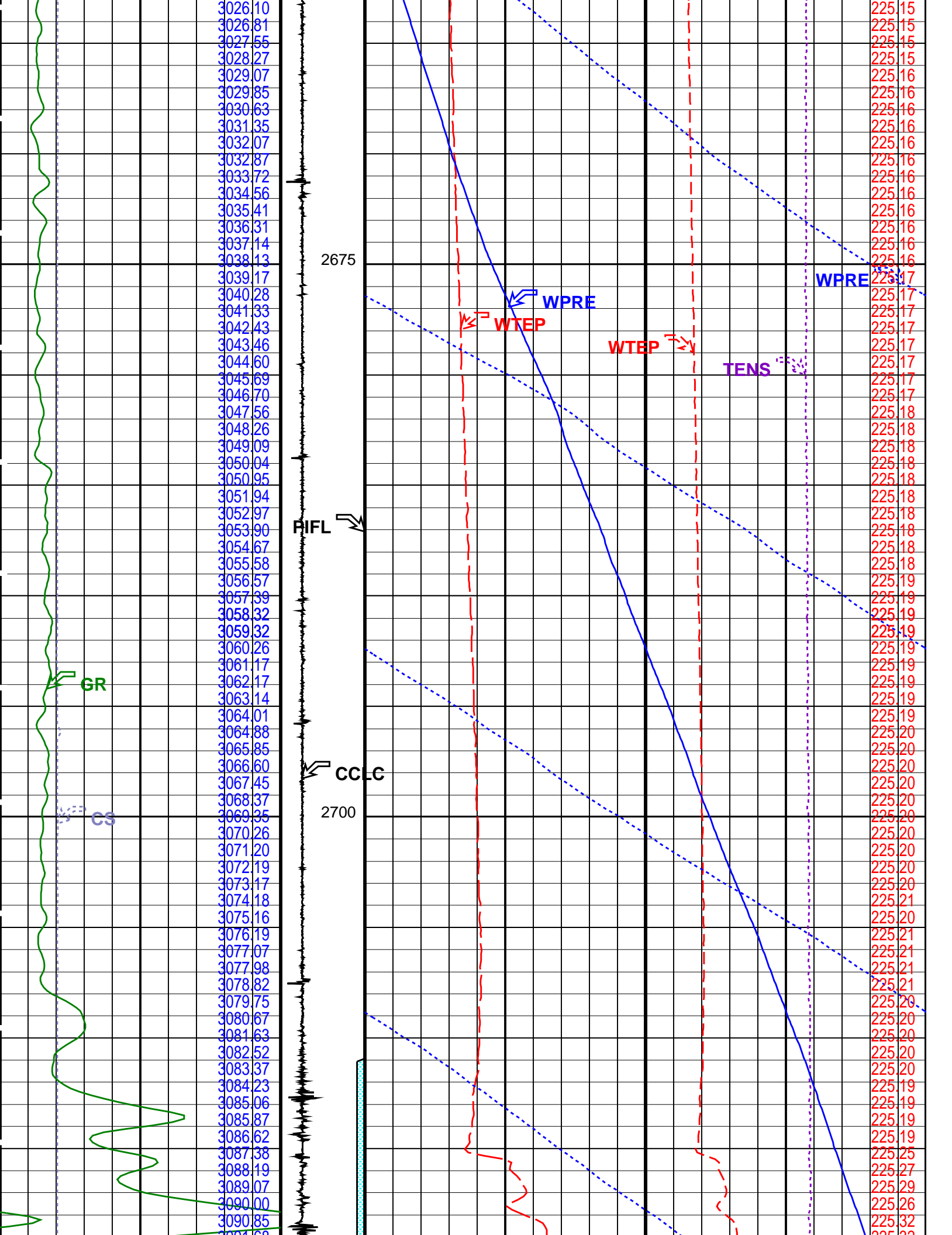
MAXIS Field Log

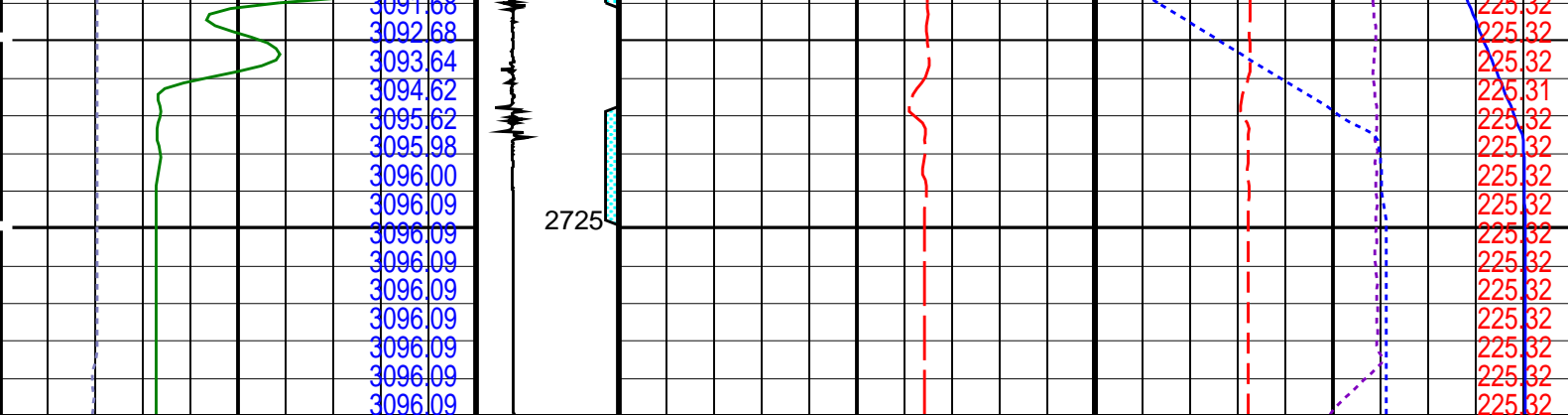
## Production Logging Quicklook Spinner Calibration

	Zone Depth (M)	Fluid Vel. (M/MN)	Positive Spinner			Negative Spinner		
			Slope (RSMM)	Intercept (M/MN)	Correl.	Slope (RSMM)	Intercept (M/MN)	Correl.
■	Zone 1 2685.0 – 2682.0 :	0.1	0.2842	0.4	1	0.2592	-1.3	1
■	Zone 2 2696.0 – 2693.0 :	-0.1	0.2853	0.5	1	0.2526	-0.8	1
■	Zone 3 2702.0 – 2700.0 :	-0.1	0.2908	0.5	1	0.2558	-0.8	1









Cable Speed (CS) (F/HR)		0	5000	Computed CCL (CCLC) 1 (V) -3	Well Temperature (WTEP) (DEGF)		224	226
Gamma Ray (GR) (GAPI)		0	400		Well Temperature (WTEP) (DEGF)		0	1
Well Pressure (WPRES) (PSIA)		Well Pressure (WPRES) (PSIA)		Well Pressure (WPRES) (PSIA)		3020	3100	
		Amplified Well Pressure (WPRES) (PSIA)		Amplified Well Pressure (WPRES) (PSIA)		0	20	
		Tension (TENS) (LBF)		Tension (TENS) (LBF)		0	3000	
		Well Temperature (WTEP) (DEGF)		Well Temperature (WTEP) (DEGF)				

# PIP SUMMARY

Time Mark Every 60 S

Format: PSP\_1 Vertical Scale: 1:200 Graphics File Created: 08-Jul-2009 08:20

OP System Version: 16C0-147  
MCM

PSPT-A/B SRPC-3777-Q4\_2008\_OP16

Parameters		
DLIS Name	Description	Value
DO	System and Miscellaneous	
PP	Depth Offset for Playback	1.8 M
	Playback Processing	NORMAL

Input DLIS Files					
DEFAULT	FCS_ILS_DEFT_GMS_154LUP	FN:142	PRODUCER	07-Jul-2009 12:50	2728.6 M 2660.0 M
Output DLIS Files					
DEFAULT	PSP_220PUP	FN:204	PRODUCER	08-Jul-2009 08:20	



Calibration listing

# MAXIS Field Log

## Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
PSP Flow and caliper Tool Wellsite Calibration – PFCS Caliper Calibration							
Before: 8–Jul–2009 10:37							
PFCS CaliperX Small Ring	5.500	N/A	5.329	N/A	N/A	N/A	IN
PFCS CaliperX Large Ring	8.000	N/A	8.073	N/A	N/A	N/A	IN
PFCS CaliperY Small Ring	5.500	N/A	3.218	N/A	N/A	N/A	IN
PFCS CaliperY Large Ring	8.000	N/A	6.179	N/A	N/A	N/A	IN
DEFT_C Tool Wellsite Calibration – DEFT_C2 Caliper Calibration							
Before: 8–Jul–2009 10:35							
DEFT–C2 Caliper Small Ring	5.500	N/A	5.704	N/A	N/A	N/A	IN
DEFT–C2 Caliper Large Ring	8.000	N/A	8.089	N/A	N/A	N/A	IN
Production Services Logging Platform Wellsite Calibration – Detector Calibration							
Before: 8–Jul–2009 10:40							
Gamma–Ray Jig–Bkg	135.0	N/A	125.7	N/A	N/A	N/A	GAPI

## PSP Flow and caliper Tool / Equipment Identification

### Primary Equipment:





PFCS Cartridge	PFCC – A	796
PFCS Caliper	Cali –	796
PFCS Relative Bearing	Rela –	796
PFCS 3.5 Spinner Diameter	Spin –	796
PFCS Fluid Holdup Electric Probes	Hold –	796

### Auxiliary Equipment:

PFCS Cartridge Housing	PFCH – A	796
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## PSP Flow and caliper Tool Wellsite Calibration

### PFCS Caliper Calibration

Phase	PFCS CaliperX Small Ring IN		Value	Phase	PFCS CaliperX Large Ring IN		Value	Phase	PFCS CaliperY Small Ring IN		Value
Before			5.329	Before			8.073	Before			3.218
	N/A (Minimum)	5.500 (Nominal)	N/A (Maximum)		N/A (Minimum)	8.000 (Nominal)	N/A (Maximum)		N/A (Minimum)	5.500 (Nominal)	N/A (Maximum)
Phase	PFCS CaliperY Large Ring IN		Value								
Before			6.179								
	N/A (Minimum)	8.000 (Nominal)	N/A (Maximum)								

Before: 8–Jul–2009 10:37

## DEFT\_C Tool / Equipment Identification

### Primary Equipment:



DEFTC Cartridge	DFCC – C	716
DEFT_C Caliper	Cali –	716
DEFT_C2 Relative Bearing	Rela –	716
DEFT_C Flowmeter probes	Flow –	716



### Auxiliary Equipment:

DEFTC Cartridge Housing	DFCH – C	716
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## DEFT\_C Tool Wellsite Calibration

### DEFT\_C2 Caliper Calibration

Phase	DEFT–C2 Caliper Small Ring IN	Value	Phase	DEFT–C2 Caliper Large Ring IN	Value
Before		5.704	Before		8.089



Before		5.704	Before		8.089
N/A (Minimum)	5.500 (Nominal)	N/A (Maximum)	N/A (Minimum)	8.000 (Nominal)	N/A (Maximum)
Before: 8-Jul-2009 10:35					

### Production Services Logging Platform / Equipment Identification

#### Primary Equipment:

Production Logging Platform (CQG-F)	PSPT - B	
PSP Basic Measurement Sonde (CQG_F)	PBMS - B	827
PSP Basic measurement module	PBMS -	827
PSP CCL	CCL -	
PSP GR	GR -	
PSP RTD Well Temperature	RTD_ -	
PSP Crystal Quartz Gauge Type F	CQG_ -	
PSP Telemetry and bus master cartridge	PSTC -	

#### Auxiliary Equipment:

Production Services Logging Platform Wellsite Calibration					
Detector Calibration					
Phase	Gamma-Ray Background GAPI	Value	Phase	Gamma-Ray Jig-Bkg GAPI	Value
Before		4.826	Before		125.7
0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)	120.0 (Minimum)	135.0 (Nominal)	150.0 (Maximum)
Before: 8-Jul-2009 10:40					

Company: **Esso Australia Pty Ltd.**

**Schlumberger**

Well: **A15**

Field: **Halibut**

Rig: **Crane/Prod 4**

Country: **Australia**

GR / Pressure / Temperature / Dual DEFT  
 Inline and Fullbore / Spinner Survey  
 30-Jun-2009