Schlumberger

Company: **OXY US LA Basin**

Well: **DOM-002**
Field: **Dominguez**
County: **Los Angeles** State: **California**

MAGNETIC RESONANCE SCANNER
GAMMA RAY TIE IN
5IN / 100FT MD

DOGGR
Received-
OCT 09 2013

County: Los Angeles
Field: Dominguez
Location: Surface Lambert Coordinates:
Well: DOM-002
Company: OXY US LA Basin

LOCATION

Surface Lambert Coordinates:
N: 4 062 757.48
E: 4 214 076.81

Elev.: K.B.
G.L. 168.97 ft
D.F. 194.09 ft

Permanent Datum: Mat — Elev.: 168.97 ft
Log Measured From: Derrick Floor — 25.12 ft above Perm. Datum
Drilling Measured From: Derrick Floor

API Serial No.	Section	Township	Range
03727148	33	3S	13W

		Run 1	Run 2
Logging Date		2-May-2011	
Run Number		THREE	
Depth Driller		13182 ft	
Schlumberger Depth		13181 ft	
Bottom Log Interval		13165 ft	
Top Log Interval		12720 ft	
Casing Driller Size @ Depth		9.625 in @ 9992 ft	@
Casing Schlumberger		9998 ft	
Bit Size		8.500 in	
Type Fluid In Hole		8% KCL GELITE/SP-101	
MUD Density	Viscosity	13.2 lbm/gal 50 s	
MUD Fluid Loss	PH	3.6 cm3 7	
MUD Source Of Sample		FLOWLINE	
RM @ Measured Temperature		0.157 ohm.m @ 73 degF	@
RMF @ Measured Temperature		0.108 ohm.m @ 72 degF	@
RMC @ Measured Temperature		0.269 ohm.m @ 73 degF	@
Source RMF	RMC	MUDPRESS MUDPRESS	
RM @ MRT	RMF @ MRT	@ @	@ @
Maximum Recorded Temperatures			
Circulation Stopped	Time	27-Apr-2011 13:00	
Logger On Bottom	Time	27-Apr-2011 8:51	
Unit Number	Location	2363 BAKERSFIELD	
Recorded By		WILLIAM TURNER	
Witnessed By		MR. HILARIO CAMACHO	

		Run 1	Run 2
Logging Date			
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Driller Size @ Depth			@
Casing Schlumberger			
Bit Size			
Type Fluid In Hole			
MUD Density	Viscosity		
MUD Fluid Loss	PH		
MUD Source Of Sample			
RM @ Measured Temperature			@
RMF @ Measured Temperature			@
RMC @ Measured Temperature			@
Source RMF	RMC		
RM @ MRT	RMF @ MRT	@	@
Maximum Recorded Temperatures			
Circulation Stopped	Time		
Logger On Bottom	Time		
Unit Number	Location		
Recorded By			
Witnessed By			

DEPTH SUMMARY LISTING

Date Created: 28-APR-2011 13:13:57

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	7-48A SUS
Serial Number:	5905	Serial Number:	1311	Serial Number:	708176
Calibration Date:	2-DEC-2010	Calibration Date:	27-APR-2010	Length:	20300 FT
Calibrator Serial Number:		Calibrator Serial Number:	185	Conveyance Method:	Wireline
Calibration Cable Type:	7-48A SUS	Number of Calibration Points:	9	Rig Type:	LAND
Wheel Correction 1:	-5	Calibration RMS:	26		
Wheel Correction 2:	-5	Calibration Peak Error:	48		

Depth Control Parameters

Log Sequence:	Subsequent Log In the Well
Reference Log Name:	CALIPER
Reference Log Run Number:	THREE
Reference Log Date:	27-APR-2011

Depth Control Remarks

1. ALL SLB DEPTH CONTROL PROCEDURES WERE FOLLOWED
2. IDW USED AS PRIMARY DEPTH REFERENCE
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: FMI	OS1:
OS2: SONIC SCANNER	OS2:
OS3: ECS / HNGS	OS3:
OS4: CMR	OS4:
OS5: MSCT	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
SUBSEQUENT LOG IN WELL	
LOG CORRELATED TO "PEX 5IN" DATED 27-APR-2011	
MR SCANNER LOGGED FROM TD TO 12720 WHEN TOOLED FAILED DUE TO TEMPERATURE	

INTERNAL CARTRIDGE TEMP = 296 DEG F, TOOL RATING = 300 DEG F
TOOL RAN ECCENTERED WITH ILE BELOW AND CNT-K FOR BOWSPRING ABOVE
NO STANDOFFS RUN ON TOOL
LOGGING SEQUENCE WAS RP_S1S4_UP850_V25_LOW_AQF
TOOL DID NOT POWER UP AGAIN AFTER COOLING DOWN

RIG: H&P 236
CREW: H. BOJORQUEZ, A. PENA, J. CORONADO
THANK YOU FOR USING SCHLUMBERGER

RUN 1			RUN 2		
SERVICE ORDER #:		BH2Y-00052	SERVICE ORDER #:		
PROGRAM VERSION:		19C0-187	PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

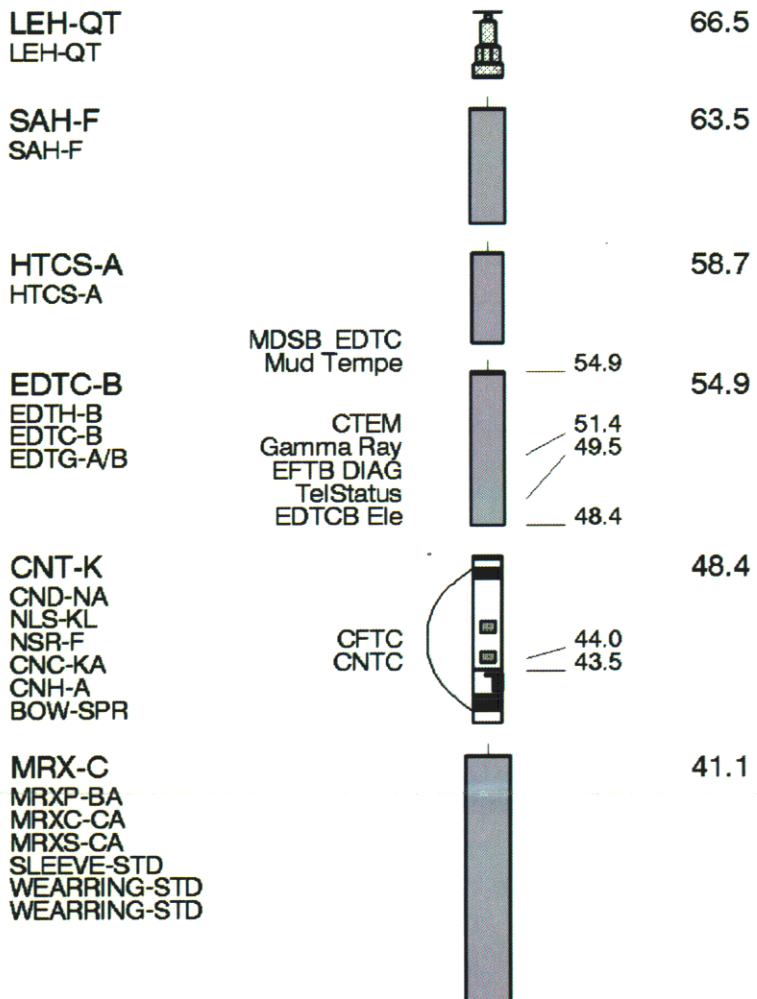
RUN 1 | RUN 2

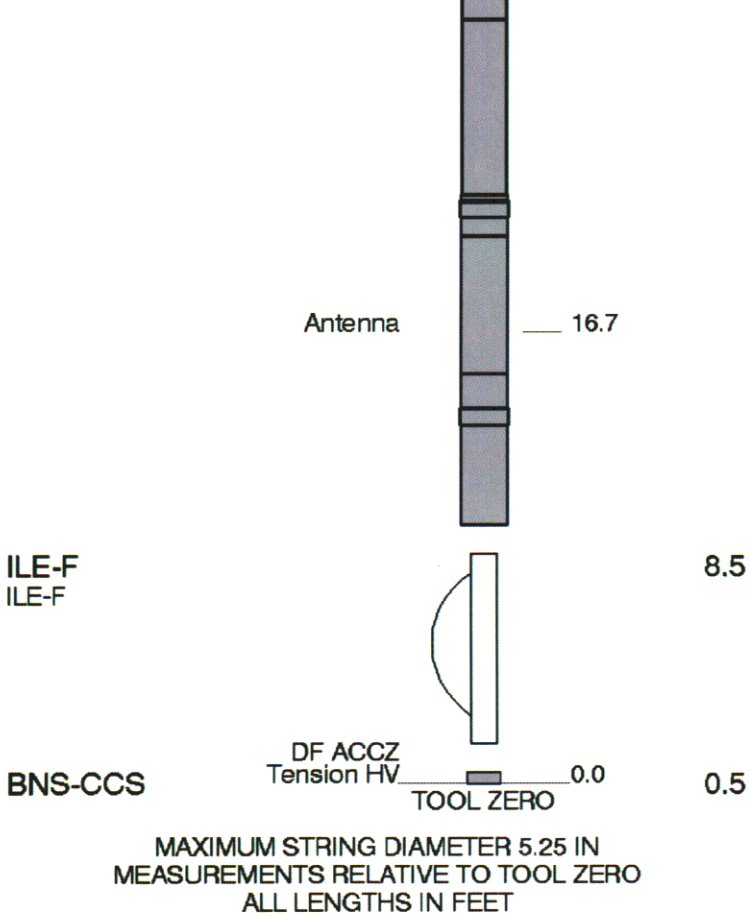
SURFACE EQUIPMENT

MRPP-AA
CNB-AB
NCT-B
NCS-VB

WITM (EDTS)-A

DOWNHOLE EQUIPMENT





Schlumberger

MRX ANSWER PRODUCT

MAXIS Field Log

Input DLIS Files

DEFAULT	MRX_CNL_203LUP	FN:263	PRODUCER	02-May-2011 08:09	13170.0 FT	12684.0 FT

Output DLIS Files

DEFAULT	MRX_CNL_221PUP	FN:279	PRODUCER	02-May-2011 10:30	13200.0 FT	12676.5 FT
CUSTOMER	MRX_CNL_221PUC	FN:280	CUSTOMER	02-May-2011 10:30	13200.0 FT	12676.5 FT

MRX Pulse Sequence

Shell 1 (1.5 in)

Wait Time (ms)	4909	16.4	8.4
Long Echo Spacing (ms)	0.45	0.45	0.45
Short Echo Spacing (ms)	0.45	0.45	0.45
Number of Echoes	1200	32	16
Repetition Count	1	12	32

Shell 4 (2.7 in)

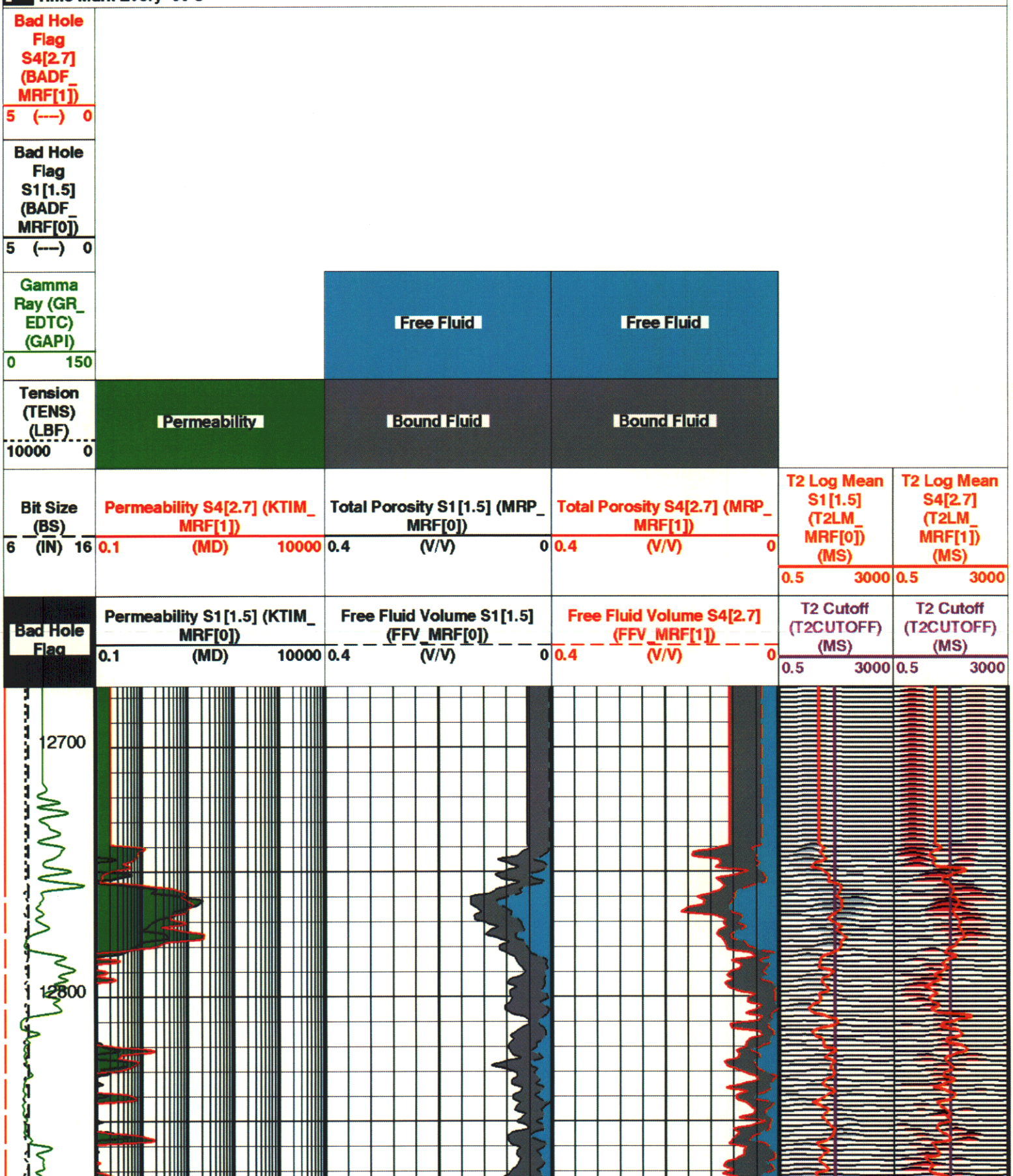
Wait Time (ms)	4771	16.6	8.6

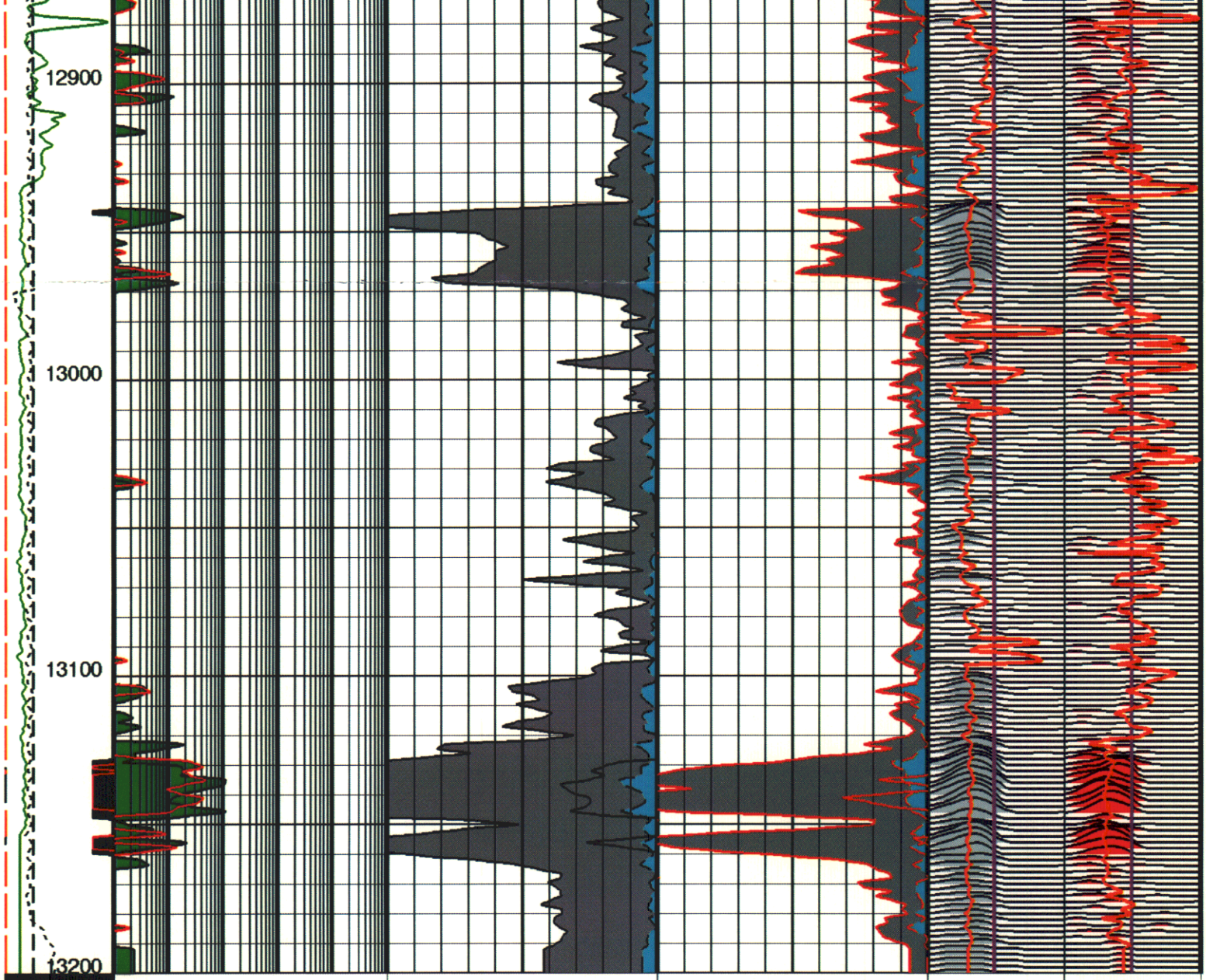
Wait Time (ms)	4771	16.6	8.6
Long Echo Spacing (ms)	0.60	0.60	0.60
Short Echo Spacing (ms)	0.60	0.60	0.60
Number of Echoes	900	32	16
Repetition Count	1	12	32

Note: Wait times do not include the pre-polarization time provided by the MRX magnet.

PIP SUMMARY

Time Mark Every 60 S





Bad Hole Flag	Permeability S1[1.5] (KTIM_MRF[0]) 0.1 (MD) 10000	Free Fluid Volume S1[1.5] (FFV_MRF[0]) 0.4 (V/V) 0	Free Fluid Volume S4[2.7] (FFV_MRF[1]) 0.4 (V/V) 0	T2 Cutoff (T2CUTOFF) (MS) 0.5 3000	T2 Cutoff (T2CUTOFF) (MS) 0.5 3000
Bit Size (BS) 6 (IN) 16	Permeability S4[2.7] (KTIM_MRF[1]) 0.1 (MD) 10000	Total Porosity S1[1.5] (MRP_MRF[0]) 0.4 (V/V) 0	Total Porosity S4[2.7] (MRP_MRF[1]) 0.4 (V/V) 0	T2 Log Mean S1[1.5] (T2LM_MRF[0]) (MS) 0.5 3000	T2 Log Mean S4[2.7] (T2LM_MRF[1]) (MS) 0.5 3000
Tension (TENS) (LBF) 10000 0	Permeability	Bound Fluid	Bound Fluid		
Gamma Ray (GR_EDTC) (GAPI) 0 150		Free Fluid	Free Fluid		
Bad Hole Flag S1[1.5] (BADF_MRF[0]) 5 (---) 0					

Bad Hole Flag S4[2.7] (BADF_MRF[1])

5 (---) 0

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
MRX-C: Magnetic Resonance eXpert Tool			
	Number of Stacking levels for Ringdown	1	
	Merge Scheme for Phase Alternating Sequences	SEQUENTIAL	
BFV_MIN	Bound Fluid Volume - Minimum	0.02	CFCF
CALTABLE	Calibration Coefficient Table	** V **	
DESPIKE_OPT	Despiking Option	ON	
DLSR	Depth Log Sample Rate	18	IN
EDDV	Echo Data Descriptor (Vector)	** V **	
GAMMA_OPT	GAMMA Parameter Option	MANUAL	
GAMMA_REG	Gamma Regularization Parameter	** V **	
HI_H2O	Hydrogen Index of Water	1	
KTIM_A	Multiplier for Timur/Coates Permeability	1	MD
KTIM_B	Porosity Exponent for Timur/Coates Permeability	4	
KTIM_C	PHI Ratio Exponent for Timur/Coates Permeability	2	
MRX_COEFF	MRX Tool Characterization Coefficients	** V **	
NCOMP	Number of Components (depth logging)	30	
NMR_FLUID_MODEL	Fluid Model for Magnetic Resonance Fluid Typing	WATER	
NMR_SEQUENCE	NMR Sequence	** V **	
NSTACK	Number of Stacks down-hole	1	
PHI_FOR_BADF	Porosity Threshold to Trigger Bad Hole Flag	0.5	CFCF
PSDV	Pulse Sequence Descriptor (Vector)	** V **	
SEQUENCE_FILE	Sequence File	RP_S1S4_UP850_V25_LOW_AQF	
SHNM	Shell Number in Sequence	** V **	
SPEED_CORR_OPT	Speed Correction Option	OFF	
START_ECHO_OPT	Starting Echo Option	SECOND	
T2C1	T2 Cutoff 1	1	MS
T2C2	T2 Cutoff 2	3	MS
T2C3	T2 Cutoff 3	10	MS
T2C4	T2 Cutoff 4	33	MS
T2C5	T2 Cutoff 5	100	MS
T2C6	T2 Cutoff 6	300	MS
T2C7	T2 Cutoff 7	1000	MS
T2CUT	T2 Cutoff between BFV and FFV	33	MS
T2_FOR_BADF	T2 Threshold to Trigger Bad Hole Flag	10	MS
T2_MAX	T2 Maximum	3000	MS
T2_MIN	T2 Minimum	0.5	MS
System and Miscellaneous			
BS	Bit Size	8.500	IN
DO	Depth Offset for Playback	30.0	FT
PP	Playback Processing	NORMAL	

Format: MRX_RP_S1S4_ANSW_4TRAC_1 Vertical Scale: 2" per 100' Graphics File Created: 02-May-2011 10:30

OP System Version: 19C0-187

MRX-C	19C0-187	CNT-K	19C0-187
EDTC-B	19C0-187		

Input DLIS Files

DEFAULT	MRX_CNL_203LUP	FN:263	PRODUCER	02-May-2011 08:09	13170.0 FT	12684.0 FT

Output DLIS Files

DEFAULT	MRX_CNL_221PUP	FN:279	PRODUCER	02-May-2011 10:30
CUSTOMER	MRX_CNL_221PUC	FN:280	CUSTOMER	02-May-2011 10:30

Schlumberger

MRX BIN POROSITY

Input DLIS Files

DEFAULT	MRX_CNL_203LUP	FN:263	PRODUCER	02-May-2011 08:09	13170.0 FT	12684.0 FT

Output DLIS Files

DEFAULT	MRX_CNL_221PUP	FN:279	PRODUCER	02-May-2011 10:30	13200.0 FT	12676.5 FT
CUSTOMER	MRX_CNL_221PUC	FN:280	CUSTOMER	02-May-2011 10:30	13200.0 FT	12676.5 FT

MRX Pulse Sequence

Shell 1 (1.5 in)

Wait Time (ms)	4909	16.4	8.4
Long Echo Spacing (ms)	0.45	0.45	0.45
Short Echo Spacing (ms)	0.45	0.45	0.45
Number of Echoes	1200	32	16
Repetition Count	1	12	32

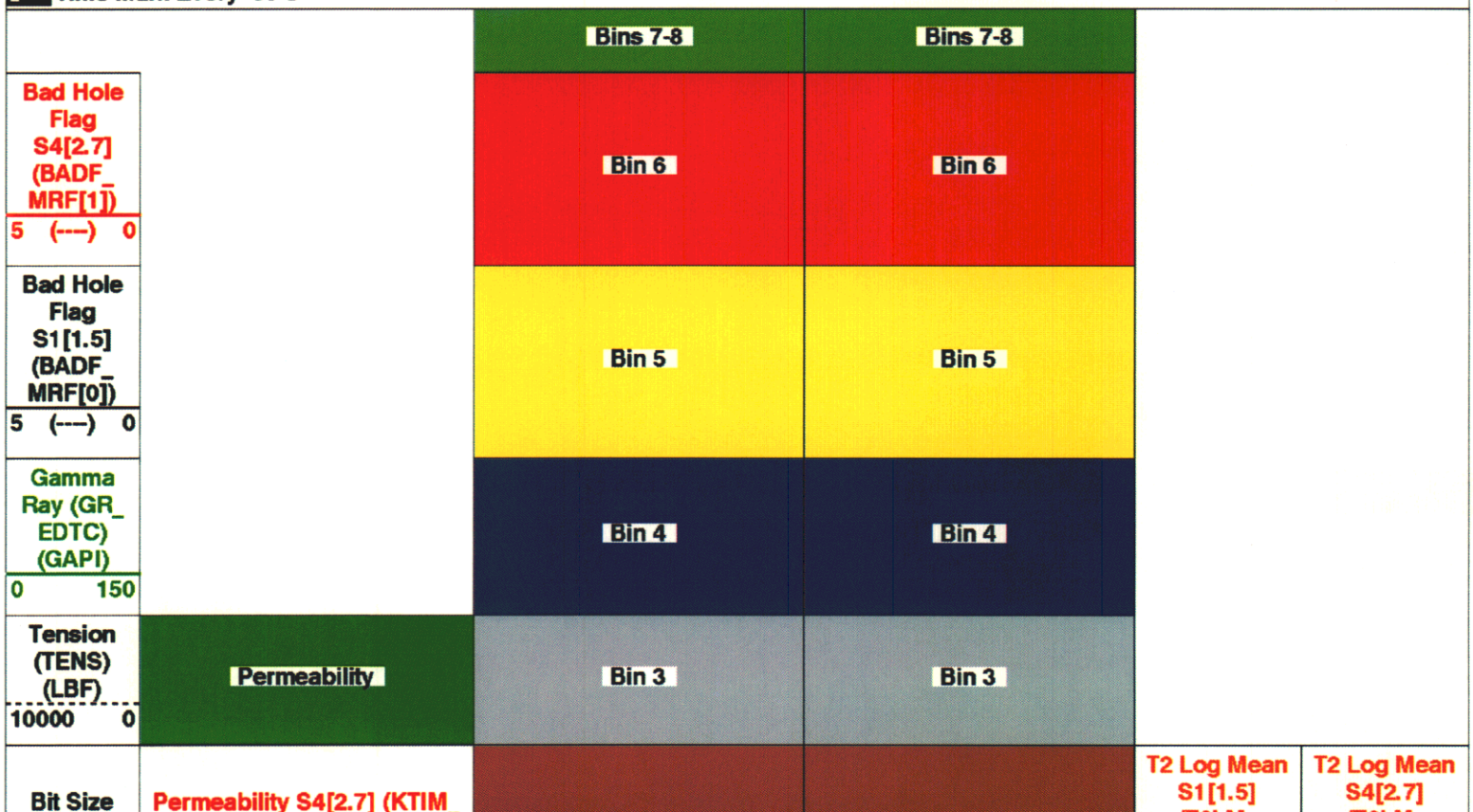
Shell 4 (2.7 in)

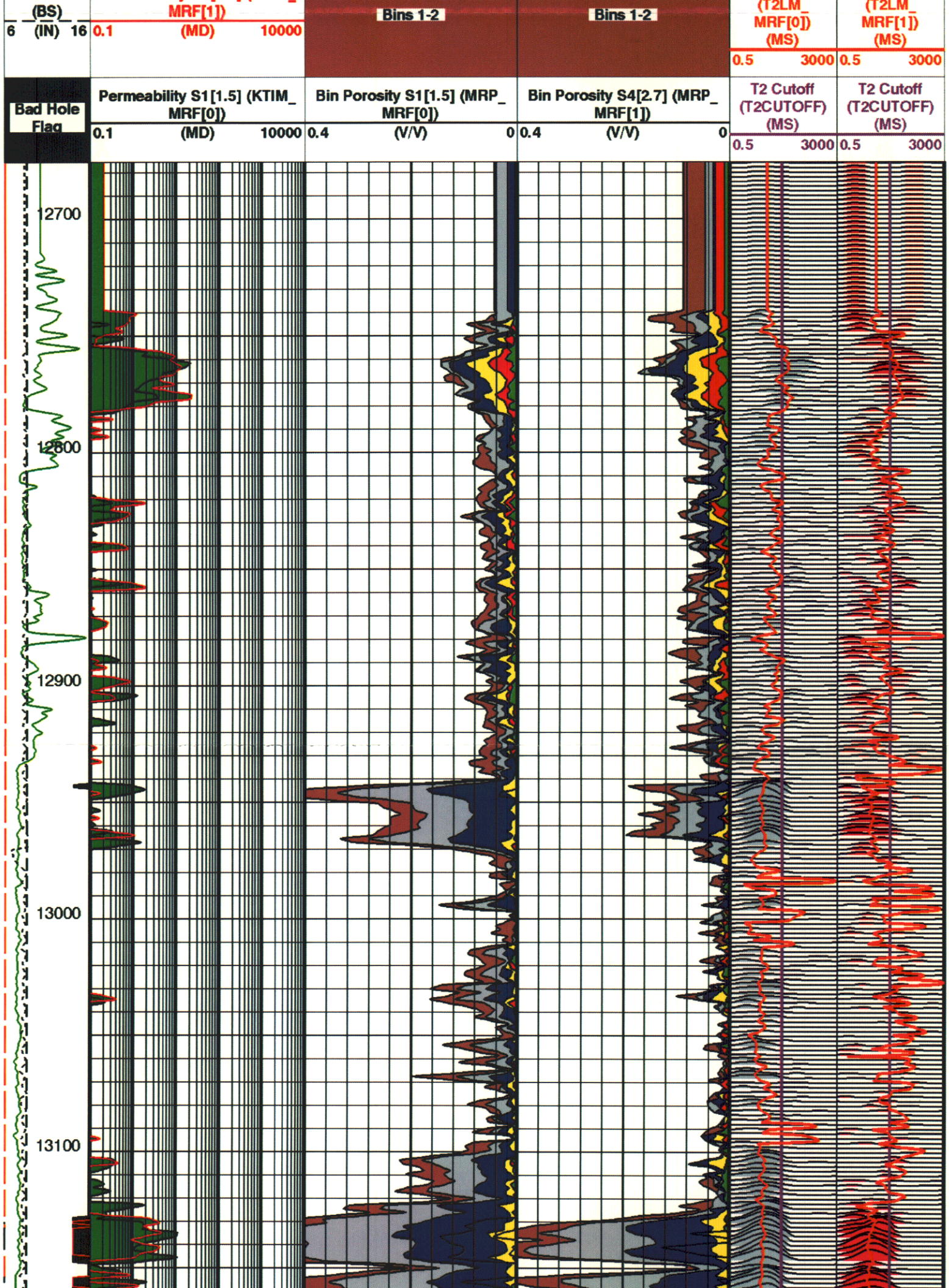
Wait Time (ms)	4771	16.6	8.6
Long Echo Spacing (ms)	0.60	0.60	0.60
Short Echo Spacing (ms)	0.60	0.60	0.60
Number of Echoes	900	32	16
Repetition Count	1	12	32

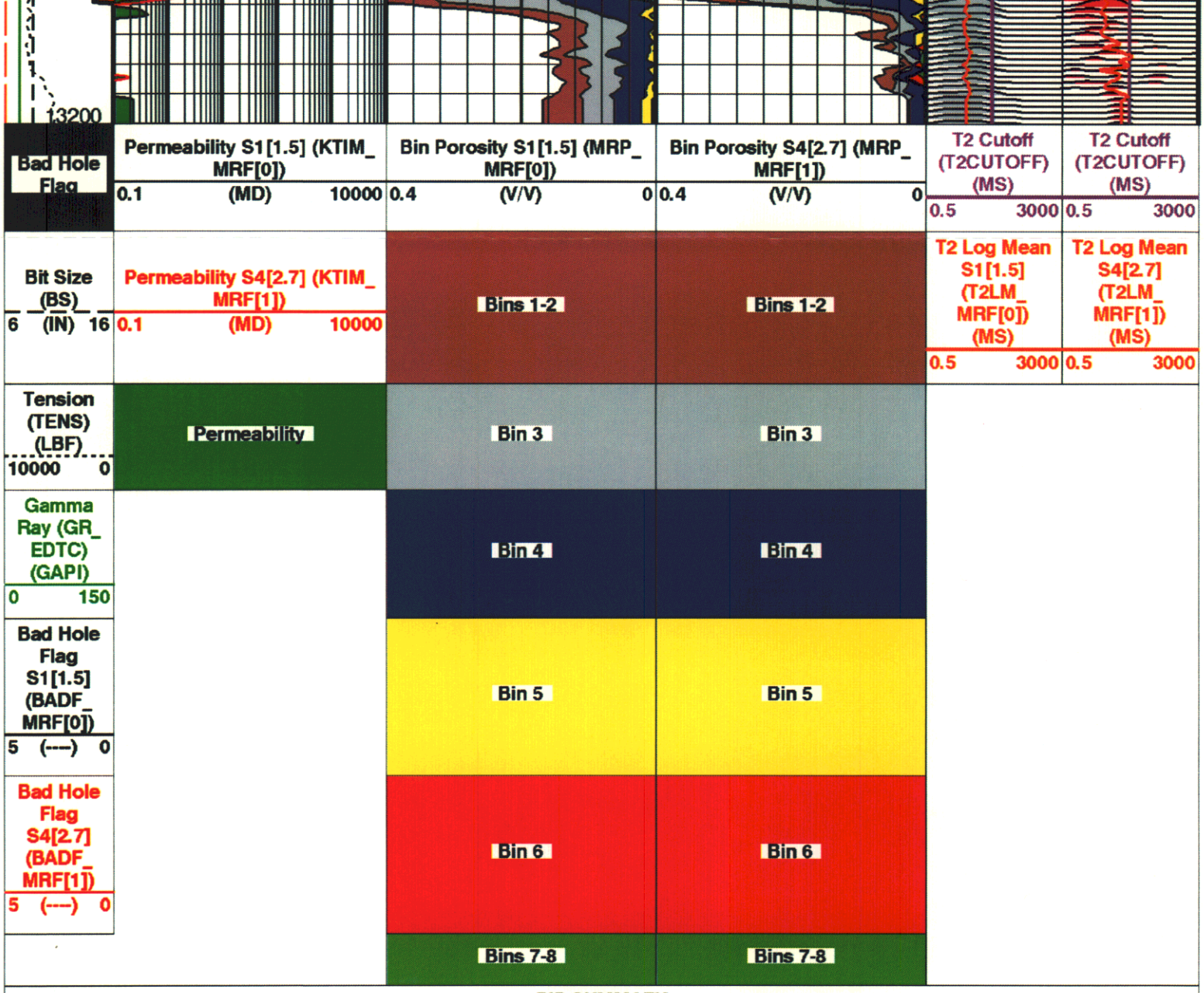
Note: Wait times do not include the pre-polarization time provided by the MRX magnet.

PIP SUMMARY

Time Mark Every 60 S




(BS)
6 (IN) 16
MRF[1])
0.1 (MD) 10000
Bins 1-2
Bins 1-2
(T2LM_
MRF[0])
(MS)
0.5 3000
(T2LM_
MRF[1])
(MS)
0.5 3000
Bad Hole Flag
Permeability S1[1.5] (KTIM_
MRF[0])
0.1 (MD) 10000
Bin Porosity S1[1.5] (MRP_
MRF[0])
0.4 (V/V) 0
Bin Porosity S4[2.7] (MRP_
MRF[1])
0.4 (V/V) 0
T2 Cutoff
(T2CUTOFF)
(MS)
0.5 3000
T2 Cutoff
(T2CUTOFF)
(MS)
0.5 3000
12700
12800
12900
13000
13100



Parameters

DLIS Name	Description	Value	
MRX-C: Magnetic Resonance eXpert Tool			
	Number of Stacking levels for Ringdown	1	
	Merge Scheme for Phase Alternating Sequences	SEQUENTIAL	
BFV_MIN	Bound Fluid Volume - Minimum	0.02	CFCF
CALTABLE	Calibration Coefficient Table	** V **	
DESPIKE_OPT	Despiking Option	ON	
DLSR	Depth Log Sample Rate	18	IN
EDDV	Echo Data Descriptor (Vector)	** V **	
GAMMA_OPT	GAMMA Parameter Option	MANUAL	
GAMMA_REG	Gamma Regularization Parameter	** V **	
HI_H2O	Hydrogen Index of Water	1	
KTIM_A	Multiplier for Timur/Coates Permeability	1	MD
KTIM_B	Porosity Exponent for Timur/Coates Permeability	4	
KTIM_C	PHI Ratio Exponent for Timur/Coates Permeability	2	
MRX_COEFF	MRX Tool Characterization Coefficients	** V **	
NCOMP	Number of Components (depth logging)	30	
NMR_FLUID_MODEL	Fluid Model for Magnetic Resonance Fluid Typing	WATER	
NMR_SEQUENCE	NMR Sequence	** V **	
NSTACK	Number of Stacks down-hole	1	
PHI_FOR_BADF	Porosity Threshold to Trigger Bad Hole Flag	0.5	CFCF
PSDV	Pulse Sequence Descriptor (Vector)	** V **	
SEQUENCE_FILE	Sequence File	RP_S1S4_UP850_V25_LOW_AQF	
SHNM	Shell Number in Sequence	** V **	
SPEED_CORR_OPT	Speed Correction Option	OFF	
START_ECHO_OPT	Starting Echo Option	SECOND	

T2C1	T2 Cutoff 1	1	MS
T2C2	T2 Cutoff 2	3	MS
T2C3	T2 Cutoff 3	10	MS
T2C4	T2 Cutoff 4	33	MS
T2C5	T2 Cutoff 5	100	MS
T2C6	T2 Cutoff 6	300	MS
T2C7	T2 Cutoff 7	1000	MS
T2CUT	T2 Cutoff between BFV and FFV	33	MS
T2_FOR_BADF	T2 Threshold to Trigger Bad Hole Flag	10	MS
T2_MAX	T2 Maximum	3000	MS
T2_MIN	T2 Minimum	0.5	MS
System and Miscellaneous			
BS	Bit Size	8.500	IN
DO	Depth Offset for Playback	30.0	FT
PP	Playback Processing	NORMAL	

Format: MRX_RP_S1S4_BIN_POR_4TRAC_1 Vertical Scale: 2" per 100' Graphics File Created: 02-May-2011 10:30

OP System Version: 19C0-187

MRX-C	19C0-187	CNT-K	19C0-187
EDTC-B	19C0-187		

Input DLIS Files

DEFAULT	MRX_CNL_203LUP	FN:263	PRODUCER	02-May-2011 08:09	13170.0 FT	12684.0 FT

Output DLIS Files

DEFAULT	MRX_CNL_221PUP	FN:279	PRODUCER	02-May-2011 10:30
CUSTOMER	MRX_CNL_221PUC	FN:280	CUSTOMER	02-May-2011 10:30

Schlumberger

REPEAT SECTION

MAXIS Field Log

Input DLIS Files

DEFAULT	MRX_CNL_206LUP	FN:266	PRODUCER	02-May-2011 08:54	12828.0 FT	12626.5 FT

Output DLIS Files

DEFAULT	MRX_CNL_224PUP	FN:285	PRODUCER	02-May-2011 10:34	12858.0 FT	12661.5 FT
CUSTOMER	MRX_CNL_224PUC	FN:286	CUSTOMER	02-May-2011 10:34	12858.0 FT	12661.5 FT

MRX Pulse Sequence

Shell 1 (1.5 in)

Wait Time (ms)	4909	16.4	8.4
Long Echo Spacing (ms)	0.45	0.45	0.45
Short Echo Spacing (ms)	0.45	0.45	0.45
Number of Echoes	1200	32	16
Repetition Count	1	12	32

Shell 4 (2.7 in)

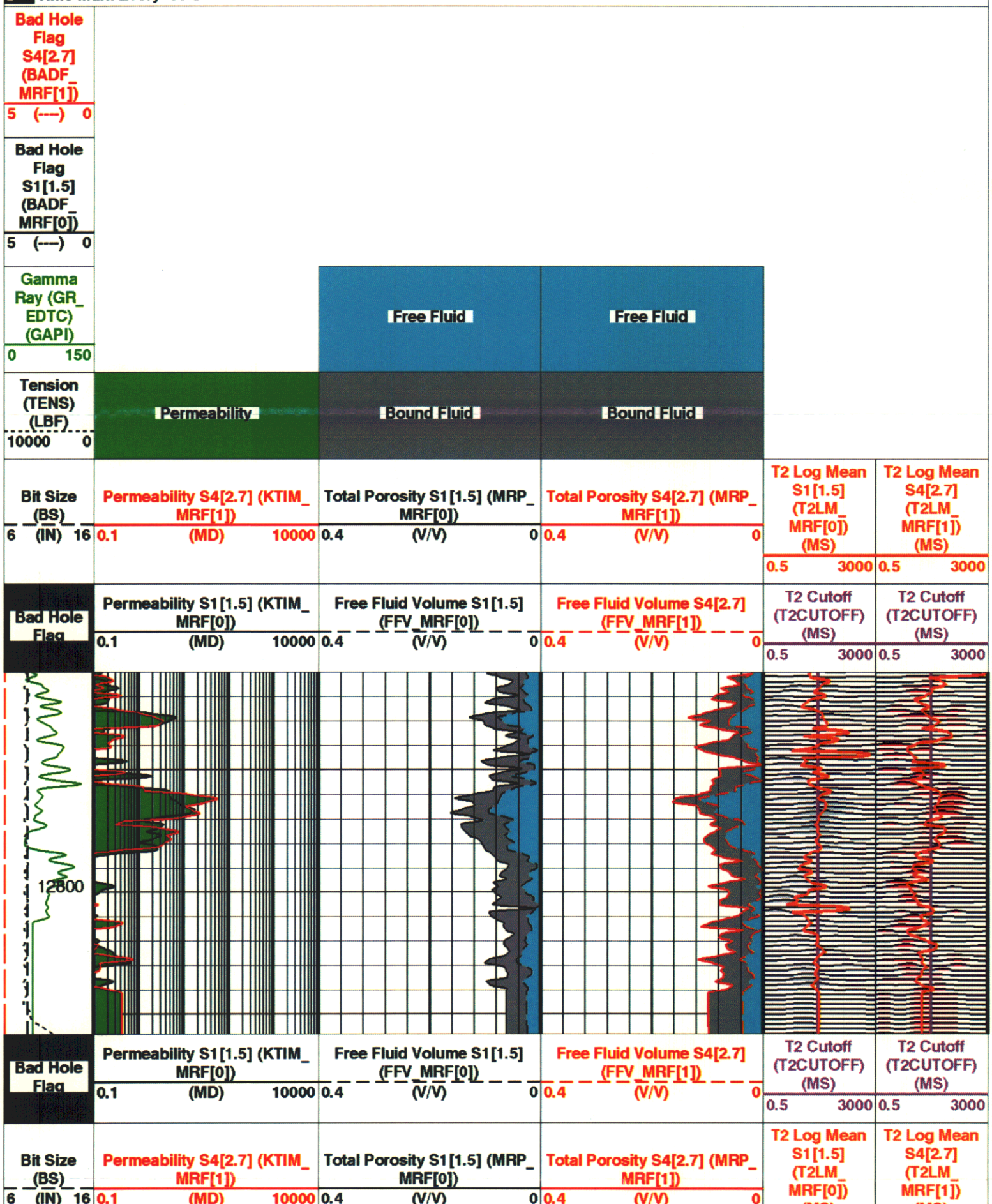
Wait Time (ms)	4771	16.6	8.6
Long Echo Spacing (ms)	0.60	0.60	0.60
Short Echo Spacing (ms)	0.60	0.60	0.60

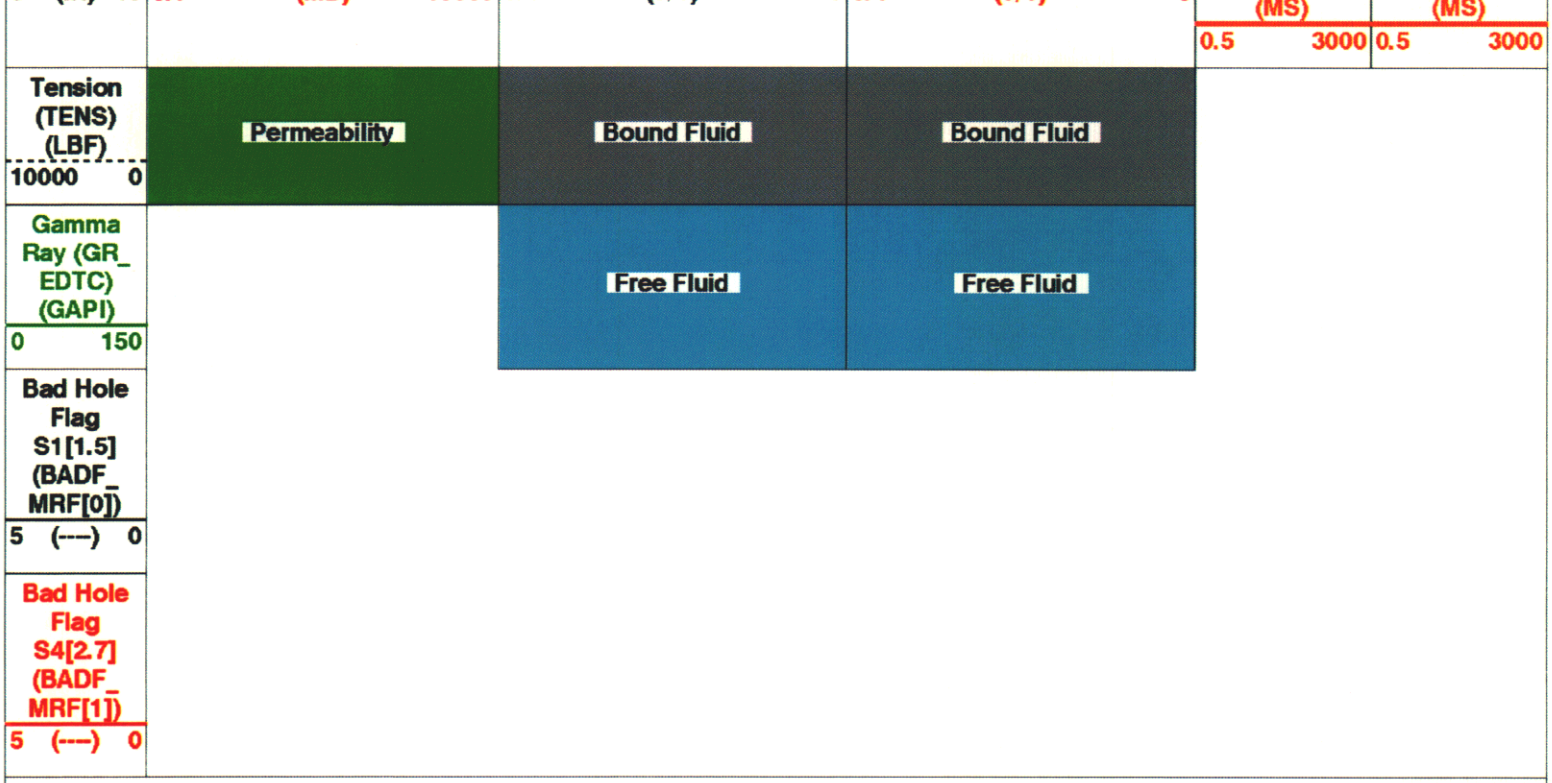
Number of Echoes	900	32	16
Repetition Count	1	12	32

Note: Wait times do not include the pre-polarization time provided by the MRX magnet.

PIP SUMMARY

Time Mark Every 60 S





PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
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CALTABLE	Calibration Coefficient Table	** V **	
DESPIKE_OPT	Despiking Option	ON	
DLSR	Depth Log Sample Rate	18	IN
EDDV	Echo Data Descriptor (Vector)	** V **	
GAMMA_OPT	GAMMA Parameter Option	MANUAL	
GAMMA_REG	Gamma Regularization Parameter	** V **	
HI_H2O	Hydrogen Index of Water	1	
KTIM_A	Multiplier for Timur/Coates Permeability	1	MD
KTIM_B	Porosity Exponent for Timur/Coates Permeability	4	
KTIM_C	PHI Ratio Exponent for Timur/Coates Permeability	2	
MRX_COEFF	MRX Tool Characterization Coefficients	** V **	
NCOMP	Number of Components (depth logging)	30	
NMR_FLUID_MODEL	Fluid Model for Magnetic Resonance Fluid Typing	WATER	
NMR_SEQUENCE	NMR Sequence	** V **	
NSTACK	Number of Stacks down-hole	1	
PHI_FOR_BADF	Porosity Threshold to Trigger Bad Hole Flag	0.5	CFCF
PSDV	Pulse Sequence Descriptor (Vector)	** V **	
SEQUENCE_FILE	Sequence File	RP_S1S4_UP850_V25_LOW_AQF	
SHNM	Shell Number in Sequence	** V **	
SPEED_CORR_OPT	Speed Correction Option	OFF	
START_ECHO_OPT	Starting Echo Option	SECOND	
T2C1	T2 Cutoff 1	1	MS
T2C2	T2 Cutoff 2	3	MS
T2C3	T2 Cutoff 3	10	MS
T2C4	T2 Cutoff 4	33	MS
T2C5	T2 Cutoff 5	100	MS
T2C6	T2 Cutoff 6	300	MS
T2C7	T2 Cutoff 7	1000	MS
T2CUT	T2 Cutoff between BFV and FFV	33	MS
T2_FOR_BADF	T2 Threshold to Trigger Bad Hole Flag	10	MS
T2_MAX	T2 Maximum	3000	MS
T2_MIN	T2 Minimum	0.5	MS
System and Miscellaneous			
BS	Bit Size	8.500	IN
DO	Depth Offset for Playback	30.0	FT
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Format: MRX_RP_S1S4_ANSW_4TRAC_1 Vertical Scale: 2" per 100' Graphics File Created: 02-May-2011 10:34

OP System Version: 19C0-187

MRX-C	19C0-187	CNT-K	19C0-187
EDTC-B	19C0-187		

Input DLIS Files

DEFAULT	MRX_CNL_206LUP	FN:266	PRODUCER	02-May-2011 08:54	12828.0 FT	12626.5 FT

Output DLIS Files

DEFAULT	MRX_CNL_224PUP	FN:285	PRODUCER	02-May-2011 10:34
CUSTOMER	MRX_CNL_224PUC	FN:286	CUSTOMER	02-May-2011 10:34

Input DLIS Files

DEFAULT	MRX_CNL_206LUP	FN:266	PRODUCER	02-May-2011 08:54	12828.0 FT	12626.5 FT

Output DLIS Files

DEFAULT	MRX_CNL_224PUP	FN:285	PRODUCER	02-May-2011 10:34	12858.0 FT	12661.5 FT
CUSTOMER	MRX_CNL_224PUC	FN:286	CUSTOMER	02-May-2011 10:34	12858.0 FT	12661.5 FT

MRX Pulse Sequence

Shell 1 (1.5 in)

Wait Time (ms)	4909	16.4	8.4
Long Echo Spacing (ms)	0.45	0.45	0.45
Short Echo Spacing (ms)	0.45	0.45	0.45
Number of Echoes	1200	32	16
Repetition Count	1	12	32

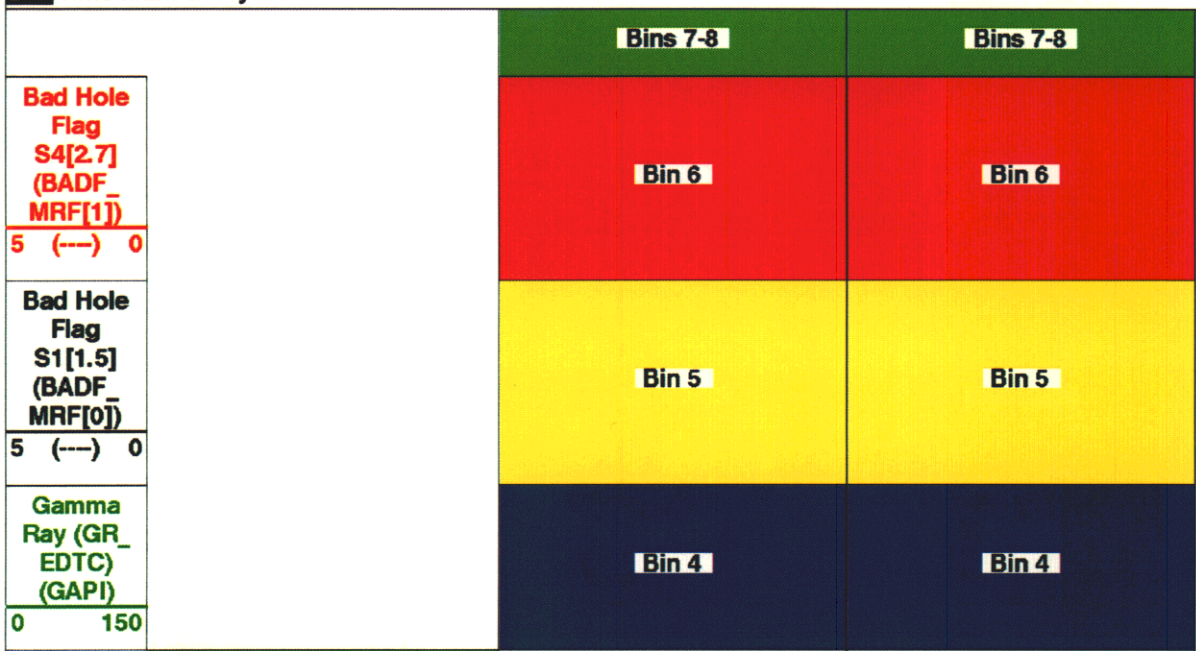
Shell 4 (2.7 in)

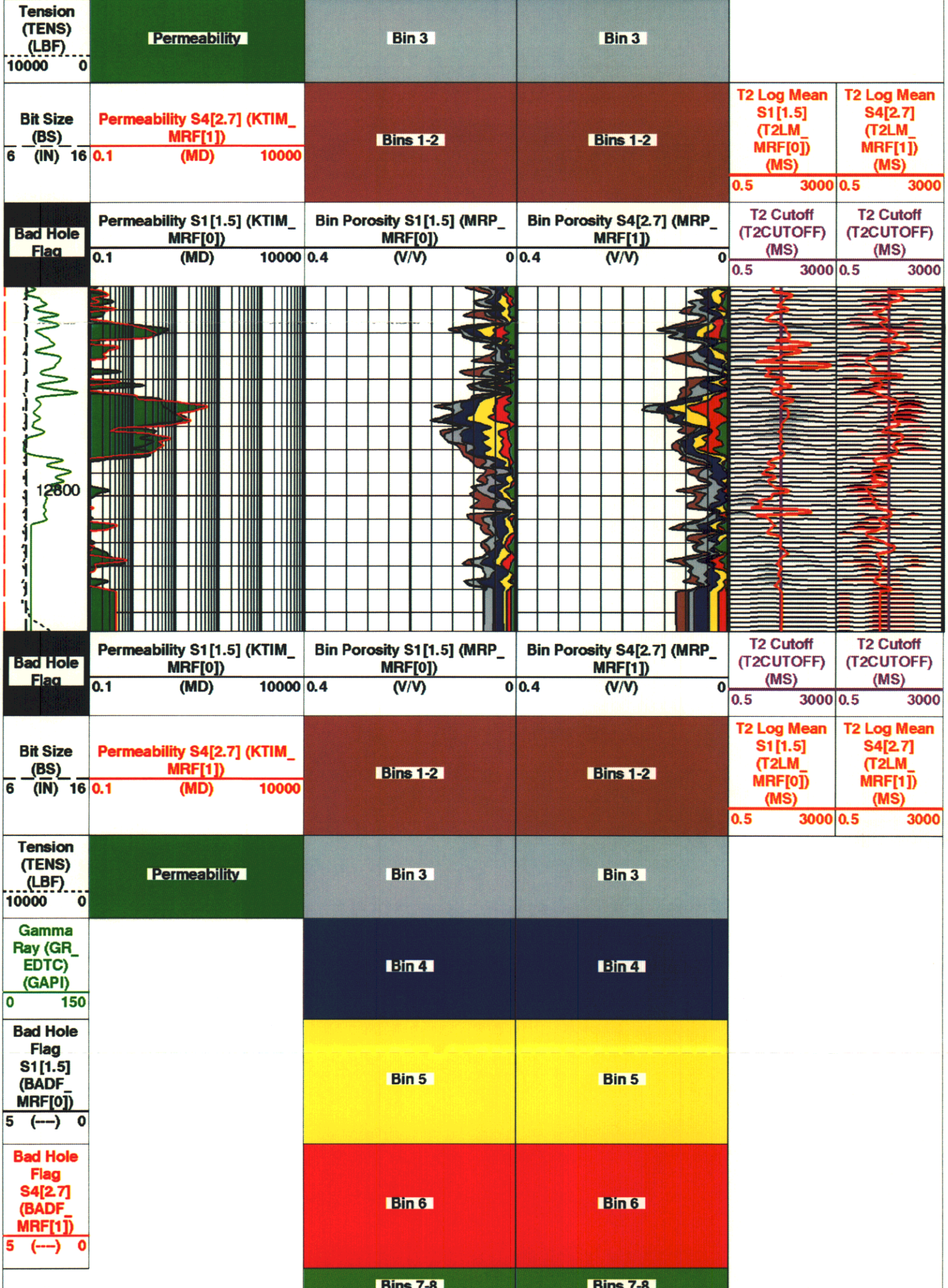
Wait Time (ms)	4771	16.6	8.6
Long Echo Spacing (ms)	0.60	0.60	0.60
Short Echo Spacing (ms)	0.60	0.60	0.60
Number of Echoes	900	32	16
Repetition Count	1	12	32

Note: Wait times do not include the pre-polarization time provided by the MRX magnet.

PIP SUMMARY

Time Mark Every 60 S




Tension (TENS) (LBF)
10000 0
Permeability
Bin 3
Bin 3
Bit Size (BS)
6 (IN) 16
Permeability S4[2.7] (KTIM_MRF[1])
0.1 (MD) 10000
Bins 1-2
Bins 1-2
T2 Log Mean S1[1.5] (T2LM_MRF[0]) (MS)
0.5 3000
T2 Log Mean S4[2.7] (T2LM_MRF[1]) (MS)
0.5 3000
Bad Hole Flag
Permeability S1[1.5] (KTIM_MRF[0])
0.1 (MD) 10000
Bin Porosity S1[1.5] (MRP_MRF[0])
0.4 (V/V) 0
Bin Porosity S4[2.7] (MRP_MRF[1])
0.4 (V/V) 0
T2 Cutoff (T2CUTOFF) (MS)
0.5 3000
T2 Cutoff (T2CUTOFF) (MS)
0.5 3000
12800
Bad Hole Flag
Permeability S1[1.5] (KTIM_MRF[0])
0.1 (MD) 10000
Bin Porosity S1[1.5] (MRP_MRF[0])
0.4 (V/V) 0
Bin Porosity S4[2.7] (MRP_MRF[1])
0.4 (V/V) 0
T2 Cutoff (T2CUTOFF) (MS)
0.5 3000
T2 Cutoff (T2CUTOFF) (MS)
0.5 3000
Bit Size (BS)
6 (IN) 16
Permeability S4[2.7] (KTIM_MRF[1])
0.1 (MD) 10000
Bins 1-2
Bins 1-2
T2 Log Mean S1[1.5] (T2LM_MRF[0]) (MS)
0.5 3000
T2 Log Mean S4[2.7] (T2LM_MRF[1]) (MS)
0.5 3000
Tension (TENS) (LBF)
10000 0
Permeability
Bin 3
Bin 3
Gamma Ray (GR_EDTC) (GAPI)
0 150
Bin 4
Bin 4
Bad Hole Flag S1[1.5] (BADF_MRF[0])
5 (---) 0
Bin 5
Bin 5
Bad Hole Flag S4[2.7] (BADF_MRF[1])
5 (---) 0
Bin 6
Bin 6
Bins 7-8
Bins 7-8

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
MRX-C: Magnetic Resonance eXpert Tool			
	Number of Stacking levels for Ringdown	1	
	Merge Scheme for Phase Alternating Sequences	SEQUENTIAL	
BFV_MIN	Bound Fluid Volume - Minimum	0.02	CFCF
CALTABLE	Calibration Coefficient Table	** V **	
DESPIKE_OPT	Despiking Option	ON	
DLSR	Depth Log Sample Rate	18	IN
EDDV	Echo Data Descriptor (Vector)	** V **	
GAMMA_OPT	GAMMA Parameter Option	MANUAL	
GAMMA_REG	Gamma Regularization Parameter	** V **	
HI_H2O	Hydrogen Index of Water	1	
KTIM_A	Multiplier for Timur/Coates Permeability	1	MD
KTIM_B	Porosity Exponent for Timur/Coates Permeability	4	
KTIM_C	PHI Ratio Exponent for Timur/Coates Permeability	2	
MRX_COEFF	MRX Tool Characterization Coefficients	** V **	
NCOMP	Number of Components (depth logging)	30	
NMR_FLUID_MODEL	Fluid Model for Magnetic Resonance Fluid Typing	WATER	
NMR_SEQUENCE	NMR Sequence	** V **	
NSTACK	Number of Stacks down-hole	1	
PHI_FOR_BADF	Porosity Threshold to Trigger Bad Hole Flag	0.5	CFCF
PSDV	Pulse Sequence Descriptor (Vector)	** V **	
SEQUENCE_FILE	Sequence File	RP_S1S4_UP850_V25_LOW_AQF	
SHNM	Shell Number in Sequence	** V **	
SPEED_CORR_OPT	Speed Correction Option	OFF	
START_ECHO_OPT	Starting Echo Option	SECOND	
T2C1	T2 Cutoff 1	1	MS
T2C2	T2 Cutoff 2	3	MS
T2C3	T2 Cutoff 3	10	MS
T2C4	T2 Cutoff 4	33	MS
T2C5	T2 Cutoff 5	100	MS
T2C6	T2 Cutoff 6	300	MS
T2C7	T2 Cutoff 7	1000	MS
T2CUT	T2 Cutoff between BFV and FFV	33	MS
T2_FOR_BADF	T2 Threshold to Trigger Bad Hole Flag	10	MS
T2_MAX	T2 Maximum	3000	MS
T2_MIN	T2 Minimum	0.5	MS
System and Miscellaneous			
BS	Bit Size	8.500	IN
DO	Depth Offset for Playback	30.0	FT
PP	Playback Processing	NORMAL	

Format: MRX_RP_S1S4_BIN_POR_4TRAC_1 Vertical Scale: 2" per 100' Graphics File Created: 02-May-2011 10:34

OP System Version: 19C0-187

MRX-C	19C0-187	CNT-K	19C0-187
EDTC-B	19C0-187		

Input DLIS Files

DEFAULT	MRX_CNL_206LUP	FN:266	PRODUCER	02-May-2011 08:54	12828.0 FT	12626.5 FT

Output DLIS Files

DEFAULT	MRX_CNL_224PUP	FN:285	PRODUCER	02-May-2011 10:34
CUSTOMER	MRX_CNL_224PUC	FN:286	CUSTOMER	02-May-2011 10:34

Schlumberger

Calibrations

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Magnetic Resonance eXpert Tool Wellsite Calibration - Shell 1							
Master: Calibration out of date 14-Oct-2010 19:58							
RF Pulse Frequency SH1	960000	942100	N/A	N/A	N/A	N/A	HZ
System Gain SH1	7500	7039	N/A	N/A	N/A	N/A	
Drivecurrent Gain SH1	27500	28920	N/A	N/A	N/A	N/A	
RF Pulse Amplitude SH1	700.0	627.2	N/A	N/A	N/A	N/A	
Calibration Factor SH1	0.0006300	0.0006133	N/A	N/A	N/A	N/A	
Antenna Quality Factor SH1	80.00	85.08	N/A	N/A	N/A	N/A	
T2 Log Mean SH1	150.0	165.1	N/A	N/A	N/A	N/A	MS
Noise Per Single Acq SH1	0.02200	0.02135	N/A	N/A	N/A	N/A	CFCF
SNR SH1	250.0	298.3	N/A	N/A	N/A	N/A	
Magnetic Resonance eXpert Tool Wellsite Calibration - Shell 2							
Master: Calibration out of date 14-Oct-2010 20:28							
RF Pulse Frequency SH2	800000	798500	N/A	N/A	N/A	N/A	HZ
System Gain SH2	7000	6210	N/A	N/A	N/A	N/A	
Drivecurrent Gain SH2	27500	29250	N/A	N/A	N/A	N/A	
RF Pulse Amplitude SH2	650.0	589.6	N/A	N/A	N/A	N/A	
Calibration Factor SH2	0.0009100	0.0008808	N/A	N/A	N/A	N/A	
Antenna Quality Factor SH2	80.00	85.92	N/A	N/A	N/A	N/A	
T2 Log Mean SH2	150.0	169.4	N/A	N/A	N/A	N/A	MS
Noise Per Single Acq SH2	0.02600	0.02648	N/A	N/A	N/A	N/A	CFCF
SNR SH2	200.0	240.7	N/A	N/A	N/A	N/A	
Magnetic Resonance eXpert Tool Wellsite Calibration - Shell 3							
Master: Calibration out of date 14-Oct-2010 20:43							
RF Pulse Frequency SH3	710000	703200	N/A	N/A	N/A	N/A	HZ
System Gain SH3	6500	5287	N/A	N/A	N/A	N/A	
Drivecurrent Gain SH3	27500	29300	N/A	N/A	N/A	N/A	
RF Pulse Amplitude SH3	625.0	563.3	N/A	N/A	N/A	N/A	
Calibration Factor SH3	0.001250	0.001220	N/A	N/A	N/A	N/A	
Antenna Quality Factor SH3	80.00	82.21	N/A	N/A	N/A	N/A	
T2 Log Mean SH3	150.0	173.0	N/A	N/A	N/A	N/A	MS
Noise Per Single Acq SH3	0.03600	0.03179	N/A	N/A	N/A	N/A	CFCF
SNR SH3	160.0	200.5	N/A	N/A	N/A	N/A	
Magnetic Resonance eXpert Tool Wellsite Calibration - Shell 4							
Master: Calibration out of date 14-Oct-2010 20:56							
RF Pulse Frequency SH4	640000	635500	N/A	N/A	N/A	N/A	HZ
System Gain SH4	12000	9132	N/A	N/A	N/A	N/A	
Drivecurrent Gain SH4	27500	30000	N/A	N/A	N/A	N/A	
RF Pulse Amplitude SH4	600.0	566.5	N/A	N/A	N/A	N/A	
Calibration Factor SH4	0.0008350	0.0008021	N/A	N/A	N/A	N/A	
Antenna Quality Factor SH4	80.00	76.33	N/A	N/A	N/A	N/A	
T2 Log Mean SH4	150.0	170.1	N/A	N/A	N/A	N/A	MS
Noise Per Single Acq SH4	0.04400	0.06199	N/A	N/A	N/A	N/A	CFCF
SNR SH4	130.0	101.4	N/A	N/A	N/A	N/A	
Magnetic Resonance eXpert Tool Wellsite Calibration - Shell 8							
Master: Calibration out of date 14-Oct-2010 21:30							
RF Pulse Frequency SH8	460000	448900	N/A	N/A	N/A	N/A	HZ
System Gain SH8	12000	9935	N/A	N/A	N/A	N/A	
Drivecurrent Gain SH8	15000	16360	N/A	N/A	N/A	N/A	
RF Pulse Amplitude SH8	500.0	427.3	N/A	N/A	N/A	N/A	
Calibration Factor SH8	0.001000	0.0009524	N/A	N/A	N/A	N/A	
Antenna Quality Factor SH8	70.00	65.01	N/A	N/A	N/A	N/A	
T2 Log Mean SH8	150.0	167.3	N/A	N/A	N/A	N/A	MS
Noise Per Single Acq SH4	0.07000	0.06270	N/A	N/A	N/A	N/A	CFCF
SNR SH8	100.0	167.7	N/A	N/A	N/A	N/A	
Magnetic Resonance eXpert Tool Wellsite Calibration - Shell 9							
Master: Calibration out of date 14-Oct-2010 22:53							
RF Pulse Frequency SH9	1075000	1072000	N/A	N/A	N/A	N/A	HZ
System Gain SH9	6000	7203	N/A	N/A	N/A	N/A	
Drivecurrent Gain SH9	27500	28130	N/A	N/A	N/A	N/A	
RF Pulse Amplitude SH9	1200	1273	N/A	N/A	N/A	N/A	
Calibration Factor SH9	0.001000	0.001110	N/A	N/A	N/A	N/A	
Antenna Quality Factor SH9	115.0	113.7	N/A	N/A	N/A	N/A	
T2 Log Mean SH9	150.0	158.1	N/A	N/A	N/A	N/A	MS
Noise Per Single Acq SH9	0.04000	0.05059	N/A	N/A	N/A	N/A	CFCF
SNR SH9	150.0	125.8	N/A	N/A	N/A	N/A	

Magnetic Resonance eXpert Tool Wellsite Calibration - Shell 10
Master: Calibration out of date 14-Oct-2010 22:32

RF Pulse Frequency SH10	1075000	1089000	N/A	N/A	N/A	N/A	HZ
System Gain SH10	6000	6497	N/A	N/A	N/A	N/A	
Drivecurrent Gain SH10	27500	28030	N/A	N/A	N/A	N/A	
RF Pulse Amplitude SH10	1200	1128	N/A	N/A	N/A	N/A	
Calibration Factor SH10	0.001000	0.001036	N/A	N/A	N/A	N/A	
Antenna Quality Factor SH10	115.0	112.8	N/A	N/A	N/A	N/A	
T2 Log Mean SH10	150.0	152.3	N/A	N/A	N/A	N/A	MS
Noise Per Single Acq SH10	0.04000	0.06612	N/A	N/A	N/A	N/A	CFCF
SNR SH10	150.0	165.6	N/A	N/A	N/A	N/A	

The MRX Master Calibration was Done with the Following Parameter :
Water Bottle Temperature 70.00 DEGF

The MRX Before Tool Check was Done with the Following Parameter :
Water Bottle Temperature N/A

The MRX After Tool Check was Done with the Following Parameter :
Water Bottle Temperature N/A

Magnetic Resonance eXpert Tool / Equipment Identification

Primary Equipment:

MRX Sonde	MRXS - CA	2
MRX Cartridge	MRXC - CA	2
MRX Power Cartridge	MRXP - BA	2
5.25 in Standard Wear Ring	WEAR - STD	
5.25 in Standard Wear Ring	WEAR - STD	
5.0 in Standard Sleeve	SLEE - STD	
MRTT Power Panel	MRPP - AA	

Auxiliary Equipment:

Magnetic Resonance eXpert Tool Wellsite Calibration
Shell 1

Phase	RF Pulse Frequency SH1 HZ	Value	Phase	System Gain SH1	Value	Phase	Drivecurrent Gain SH1	Value
Master		942100	Master		7039	Master		28920
	912000 (Minimum) 960000 (Nominal) 1008000 (Maximum)			4500 (Minimum) 7500 (Nominal) 10000 (Maximum)			25000 (Minimum) 27500 (Nominal) 30000 (Maximum)	
Phase	RF Pulse Amplitude SH1	Value	Phase	Calibration Factor SH1	Value	Phase	Antenna Quality Factor SH1	Value
Master		627.2	Master		0.0006133	Master		85.08
	500.0 (Minimum) 700.0 (Nominal) 900.0 (Maximum)			0.0005000 (Minimum) 0.0006300 (Nominal) 0.0009000 (Maximum)			70.00 (Minimum) 80.00 (Nominal) 90.00 (Maximum)	
Phase	T2 Log Mean SH1 MS	Value	Phase	Noise Per Single Acq SH1 CFCF	Value	Phase	SNR SH1	Value
Master		165.1	Master		0.02135	Master		298.3
	120.0 (Minimum) 150.0 (Nominal) 180.0 (Maximum)			0.01600 (Minimum) 0.02200 (Nominal) 0.04400 (Maximum)			100.0 (Minimum) 250.0 (Nominal) 400.0 (Maximum)	

Master: Calibration out of date 14-Oct-2010 19:58

Magnetic Resonance eXpert Tool Wellsite Calibration
Shell 2

Phase	RF Pulse Frequency SH2 HZ	Value	Phase	System Gain SH2	Value	Phase	Drivecurrent Gain SH2	Value
Master		796500	Master		6210	Master		29250
	760000 (Minimum) 800000 (Nominal) 840000 (Maximum)			4000 (Minimum) 7000 (Nominal) 9500 (Maximum)			25000 (Minimum) 27500 (Nominal) 30000 (Maximum)	
Phase	RF Pulse Amplitude SH2	Value	Phase	Calibration Factor SH2	Value	Phase	Antenna Quality Factor SH2	Value
Master		589.6	Master		0.0008808	Master		85.92
	450.0 (Minimum) 650.0 (Nominal) 850.0 (Maximum)			0.0007000 (Minimum) 0.0009100 (Nominal) 0.001300 (Maximum)			70.00 (Minimum) 80.00 (Nominal) 90.00 (Maximum)	
Phase	T2 Log Mean SH2 MS	Value	Phase	Noise Per Single Acq SH2 CFCF	Value	Phase	SNR SH2	Value
Master		169.4	Master		0.02648	Master		240.7
	120.0 (Minimum) 150.0 (Nominal) 180.0 (Maximum)			0.02000 (Minimum) 0.02600 (Nominal) 0.05200 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 350.0 (Maximum)	

Master: Calibration out of date 14-Oct-2010 20:28

Magnetic Resonance eXpert Tool Wellsite Calibration

Shell 3

Phase	RF Pulse Frequency SH3 HZ	Value	Phase	System Gain SH3	Value	Phase	Drivecurrent Gain SH3	Value
Master		703200	Master		5287	Master		29300
	674500 (Minimum) / 710000 (Nominal) / 745500 (Maximum)			3500 (Minimum) / 6500 (Nominal) / 9000 (Maximum)			25000 (Minimum) / 27500 (Nominal) / 30300 (Maximum)	
Phase	RF Pulse Amplitude SH3	Value	Phase	Calibration Factor SH3	Value	Phase	Antenna Quality Factor SH3	Value
Master		563.3	Master		0.001220	Master		82.21
	425.0 (Minimum) / 625.0 (Nominal) / 825.0 (Maximum)			0.0009000 (Minimum) / 0.001250 (Nominal) / 0.002000 (Maximum)			70.00 (Minimum) / 80.00 (Nominal) / 90.00 (Maximum)	
Phase	T2 Log Mean SH3 MS	Value	Phase	Noise Per Single Acq SH3 CFCF	Value	Phase	SNR SH3	Value
Master		173.0	Master		0.03179	Master		200.5
	120.0 (Minimum) / 150.0 (Nominal) / 180.0 (Maximum)			0.02700 (Minimum) / 0.03600 (Nominal) / 0.07200 (Maximum)			100.0 (Minimum) / 160.0 (Nominal) / 300.0 (Maximum)	

Master: Calibration out of date 14-Oct-2010 20:43

Magnetic Resonance eXpert Tool Wellsite Calibration

Shell 4

Phase	RF Pulse Frequency SH4 HZ	Value	Phase	System Gain SH4	Value	Phase	Drivecurrent Gain SH4	Value
Master		635500	Master		9132	Master		30000
	608000 (Minimum) / 640000 (Nominal) / 672000 (Maximum)			6000 (Minimum) / 12000 (Nominal) / 17000 (Maximum)			25000 (Minimum) / 27500 (Nominal) / 30300 (Maximum)	
Phase	RF Pulse Amplitude SH4	Value	Phase	Calibration Factor SH4	Value	Phase	Antenna Quality Factor SH4	Value
Master		566.5	Master		0.0008021	Master		76.33
	400.0 (Minimum) / 600.0 (Nominal) / 800.0 (Maximum)			0.0006000 (Minimum) / 0.0008350 (Nominal) / 0.001500 (Maximum)			70.00 (Minimum) / 80.00 (Nominal) / 90.00 (Maximum)	
Phase	T2 Log Mean SH4 MS	Value	Phase	Noise Per Single Acq SH4 CFCF	Value	Phase	SNR SH4	Value
Master		170.1	Master		0.06199	Master		101.4
	120.0 (Minimum) / 150.0 (Nominal) / 180.0 (Maximum)			0.03100 (Minimum) / 0.04400 (Nominal) / 0.08800 (Maximum)			100.0 (Minimum) / 130.0 (Nominal) / 250.0 (Maximum)	

Master: Calibration out of date 14-Oct-2010 20:56

Magnetic Resonance eXpert Tool Wellsite Calibration

Shell 8

Phase	RF Pulse Frequency SH8 HZ	Value	Phase	System Gain SH8	Value	Phase	Drivecurrent Gain SH8	Value
Master		448900	Master		9935	Master		16360
	437000 (Minimum) / 460000 (Nominal) / 483000 (Maximum)			4000 (Minimum) / 12000 (Nominal) / 20000 (Maximum)			13000 (Minimum) / 15000 (Nominal) / 17000 (Maximum)	
Phase	RF Pulse Amplitude SH8	Value	Phase	Calibration Factor SH8	Value	Phase	Antenna Quality Factor SH8	Value
Master		427.3	Master		0.0009524	Master		65.01
	300.0 (Minimum) / 500.0 (Nominal) / 650.0 (Maximum)			0.0006250 (Minimum) / 0.001000 (Nominal) / 0.002500 (Maximum)			55.00 (Minimum) / 70.00 (Nominal) / 85.00 (Maximum)	
Phase	T2 Log Mean SH8 MS	Value	Phase	Noise Per Single Acq SH4 CFCF	Value	Phase	SNR SH8	Value
Master		167.3	Master		0.06270	Master		167.7
	120.0 (Minimum) / 150.0 (Nominal) / 180.0 (Maximum)			0.05000 (Minimum) / 0.07000 (Nominal) / 0.1400 (Maximum)			60.00 (Minimum) / 100.0 (Nominal) / 200.0 (Maximum)	

Master: Calibration out of date 14-Oct-2010 21:30

Magnetic Resonance eXpert Tool Wellsite Calibration

Shell 9

Phase	RF Pulse Frequency SH9 HZ	Value	Phase	System Gain SH9	Value	Phase	Drivecurrent Gain SH9	Value
Master		1072000	Master		7203	Master		28130
	1021000 (Minimum) / 1075000 (Nominal) / 1129000 (Maximum)			2000 (Minimum) / 6000 (Nominal) / 10000 (Maximum)			25000 (Minimum) / 27500 (Nominal) / 30000 (Maximum)	
Phase	RF Pulse Amplitude SH9	Value	Phase	Calibration Factor SH9	Value	Phase	Antenna Quality Factor SH9	Value
Master		1273	Master		0.001110	Master		113.7
	600.0 (Minimum) / 1200 (Nominal) / 1800 (Maximum)			0.0008000 (Minimum) / 0.001000 (Nominal) / 0.001500 (Maximum)			90.00 (Minimum) / 115.0 (Nominal) / 140.0 (Maximum)	
Phase	T2 Log Mean SH9 MS	Value	Phase	Noise Per Single Acq SH9 CFCF	Value	Phase	SNR SH9	Value
Master		158.1	Master		0.05059	Master		125.8
	120.0 (Minimum) / 150.0 (Nominal) / 180.0 (Maximum)			0.02500 (Minimum) / 0.04000 (Nominal) / 0.08000 (Maximum)			100.0 (Minimum) / 150.0 (Nominal) / 300.0 (Maximum)	

Master: Calibration out of date 14-Oct-2010 22:53

Magnetic Resonance eXpert Tool Wellsite Calibration

Shell 10

Phase	RF Pulse Frequency SH10 HZ	Value	Phase	System Gain SH10	Value	Phase	Drivecurrent Gain SH10	Value
Master		1089000	Master		6497	Master		28030
	1021000 (Minimum) 1075000 (Nominal) 1129000 (Maximum)			2000 (Minimum) 6000 (Nominal) 10000 (Maximum)			25000 (Minimum) 27500 (Nominal) 30000 (Maximum)	
Phase	RF Pulse Amplitude SH10	Value	Phase	Calibration Factor SH10	Value	Phase	Antenna Quality Factor SH10	Value
Master		1128	Master		0.001036	Master		112.8
	600.0 (Minimum) 1200 (Nominal) 1800 (Maximum)			0.0008000 (Minimum) 0.001000 (Nominal) 0.001500 (Maximum)			90.00 (Minimum) 115.0 (Nominal) 140.0 (Maximum)	
Phase	T2 Log Mean SH10 MS	Value	Phase	Noise Per Single Acq SH10 CFCF	Value	Phase	SNR SH10	Value
Master		152.3	Master		0.06612	Master		165.6
	120.0 (Minimum) 150.0 (Nominal) 180.0 (Maximum)			0.02500 (Minimum) 0.04000 (Nominal) 0.08000 (Maximum)			100.0 (Minimum) 150.0 (Nominal) 300.0 (Maximum)	

Master: Calibration out of date 14-Oct-2010 22:32

Magnetic Resonance eXpert Tool Master Calibration

Shell 1

Phase	RF Pulse Frequency SH1 HZ	Value	Phase	System Gain SH1	Value	Phase	Drivecurrent Gain SH1	Value
Master		942100	Master		7039	Master		28920
	912000 (Minimum) 960000 (Nominal) 1008000 (Maximum)			4500 (Minimum) 7500 (Nominal) 10000 (Maximum)			25000 (Minimum) 27500 (Nominal) 30000 (Maximum)	
Phase	RF Pulse Amplitude SH1	Value	Phase	Calibration Factor SH1	Value	Phase	Antenna Quality Factor SH1	Value
Master		627.2	Master		0.0006133	Master		85.08
	500.0 (Minimum) 700.0 (Nominal) 900.0 (Maximum)			0.0005000 (Minimum) 0.0006300 (Nominal) 0.0009000 (Maximum)			70.00 (Minimum) 80.00 (Nominal) 90.00 (Maximum)	
Phase	T2 Log Mean SH1 MS	Value	Phase	Noise Per Single Acq SH1 CFCF	Value	Phase	SNR SH1	Value
Master		165.1	Master		0.02135	Master		298.3
	120.0 (Minimum) 150.0 (Nominal) 180.0 (Maximum)			0.01600 (Minimum) 0.02200 (Nominal) 0.04400 (Maximum)			100.0 (Minimum) 250.0 (Nominal) 400.0 (Maximum)	

Master: Calibration out of date 14-Oct-2010 19:58

Magnetic Resonance eXpert Tool Master Calibration

Shell 2

Phase	RF Pulse Frequency SH2 HZ	Value	Phase	System Gain SH2	Value	Phase	Drivecurrent Gain SH2	Value
Master		798500	Master		6210	Master		29250
	760000 (Minimum) 800000 (Nominal) 840000 (Maximum)			4000 (Minimum) 7000 (Nominal) 9500 (Maximum)			25000 (Minimum) 27500 (Nominal) 30000 (Maximum)	
Phase	RF Pulse Amplitude SH2	Value	Phase	Calibration Factor SH2	Value	Phase	Antenna Quality Factor SH2	Value
Master		589.6	Master		0.0008808	Master		85.92
	450.0 (Minimum) 650.0 (Nominal) 850.0 (Maximum)			0.0007000 (Minimum) 0.0009100 (Nominal) 0.001300 (Maximum)			70.00 (Minimum) 80.00 (Nominal) 90.00 (Maximum)	
Phase	T2 Log Mean SH2 MS	Value	Phase	Noise Per Single Acq SH2 CFCF	Value	Phase	SNR SH2	Value
Master		169.4	Master		0.02648	Master		240.7
	120.0 (Minimum) 150.0 (Nominal) 180.0 (Maximum)			0.02000 (Minimum) 0.02600 (Nominal) 0.05200 (Maximum)			100.0 (Minimum) 200.0 (Nominal) 350.0 (Maximum)	

Master: Calibration out of date 14-Oct-2010 20:28

Magnetic Resonance eXpert Tool Master Calibration

Shell 3

Phase	RF Pulse Frequency SH3 HZ	Value	Phase	System Gain SH3	Value	Phase	Drivecurrent Gain SH3	Value
Master		703200	Master		5287	Master		29300
	674500 (Minimum) 710000 (Nominal) 745500 (Maximum)			3500 (Minimum) 6500 (Nominal) 9000 (Maximum)			25000 (Minimum) 27500 (Nominal) 30300 (Maximum)	
Phase	RF Pulse Amplitude SH3	Value	Phase	Calibration Factor SH3	Value	Phase	Antenna Quality Factor SH3	Value
Master		563.3	Master		0.001220	Master		82.21
	425.0 (Minimum) 625.0 (Nominal) 825.0 (Maximum)			0.0009000 (Minimum) 0.001250 (Nominal) 0.002000 (Maximum)			70.00 (Minimum) 80.00 (Nominal) 90.00 (Maximum)	
Phase	T2 Log Mean SH3 MS	Value	Phase	Noise Per Single Acq SH3 CFCF	Value	Phase	SNR SH3	Value
Master		173.0	Master		0.03179	Master		200.5
	120.0 (Minimum) 150.0 (Nominal) 180.0 (Maximum)			0.02700 (Minimum) 0.03600 (Nominal) 0.07200 (Maximum)			100.0 (Minimum) 160.0 (Nominal) 300.0 (Maximum)	

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Magnetic Resonance eXpert Tool Master Calibration

Shell 4

Phase	RF Pulse Frequency SH4 HZ	Value	Phase	System Gain SH4	Value	Phase	Drivecurrent Gain SH4	Value
Master		635500	Master		9132	Master		30000
608000 (Minimum)	640000 (Nominal)	672000 (Maximum)	6000 (Minimum)	12000 (Nominal)	17000 (Maximum)	25000 (Minimum)	27500 (Nominal)	30300 (Maximum)
Phase	RF Pulse Amplitude SH4	Value	Phase	Calibration Factor SH4	Value	Phase	Antenna Quality Factor SH4	Value
Master		566.5	Master		0.0008021	Master		76.33
400.0 (Minimum)	600.0 (Nominal)	800.0 (Maximum)	0.0006000 (Minimum)	0.0008350 (Nominal)	0.001500 (Maximum)	70.00 (Minimum)	80.00 (Nominal)	90.00 (Maximum)
Phase	T2 Log Mean SH4 MS	Value	Phase	Noise Per Single Acq SH4 CFCF	Value	Phase	SNR SH4	Value
Master		170.1	Master		0.06199	Master		101.4
120.0 (Minimum)	150.0 (Nominal)	180.0 (Maximum)	0.03100 (Minimum)	0.04400 (Nominal)	0.08800 (Maximum)	100.0 (Minimum)	130.0 (Nominal)	250.0 (Maximum)

Master: Calibration out of date 14-Oct-2010 20:56

Magnetic Resonance eXpert Tool Master Calibration

Shell 8

Phase	RF Pulse Frequency SH8 HZ	Value	Phase	System Gain SH8	Value	Phase	Drivecurrent Gain SH8	Value
Master		448900	Master		9935	Master		16360
437000 (Minimum)	460000 (Nominal)	483000 (Maximum)	4000 (Minimum)	12000 (Nominal)	20000 (Maximum)	13000 (Minimum)	15000 (Nominal)	17000 (Maximum)
Phase	RF Pulse Amplitude SH8	Value	Phase	Calibration Factor SH8	Value	Phase	Antenna Quality Factor SH8	Value
Master		427.3	Master		0.0009524	Master		65.01
300.0 (Minimum)	500.0 (Nominal)	650.0 (Maximum)	0.0006250 (Minimum)	0.001000 (Nominal)	0.002500 (Maximum)	55.00 (Minimum)	70.00 (Nominal)	85.00 (Maximum)
Phase	T2 Log Mean SH8 MS	Value	Phase	Noise Per Single Acq SH4 CFCF	Value	Phase	SNR SH8	Value
Master		167.3	Master		0.06270	Master		167.7
120.0 (Minimum)	150.0 (Nominal)	180.0 (Maximum)	0.05000 (Minimum)	0.07000 (Nominal)	0.1400 (Maximum)	60.00 (Minimum)	100.0 (Nominal)	200.0 (Maximum)

Master: Calibration out of date 14-Oct-2010 21:30

Magnetic Resonance eXpert Tool Master Calibration

Shell 9

Phase	RF Pulse Frequency SH9 HZ	Value	Phase	System Gain SH9	Value	Phase	Drivecurrent Gain SH9	Value
Master		1072000	Master		7203	Master		28130
1021000 (Minimum)	1075000 (Nominal)	1129000 (Maximum)	2000 (Minimum)	6000 (Nominal)	10000 (Maximum)	25000 (Minimum)	27500 (Nominal)	30000 (Maximum)
Phase	RF Pulse Amplitude SH9	Value	Phase	Calibration Factor SH9	Value	Phase	Antenna Quality Factor SH9	Value
Master		1273	Master		0.001110	Master		113.7
600.0 (Minimum)	1200 (Nominal)	1800 (Maximum)	0.0008000 (Minimum)	0.001000 (Nominal)	0.001500 (Maximum)	90.00 (Minimum)	115.0 (Nominal)	140.0 (Maximum)
Phase	T2 Log Mean SH9 MS	Value	Phase	Noise Per Single Acq SH9 CFCF	Value	Phase	SNR SH9	Value
Master		158.1	Master		0.05059	Master		125.8
120.0 (Minimum)	150.0 (Nominal)	180.0 (Maximum)	0.02500 (Minimum)	0.04000 (Nominal)	0.08000 (Maximum)	100.0 (Minimum)	150.0 (Nominal)	300.0 (Maximum)

Master: Calibration out of date 14-Oct-2010 22:53

Magnetic Resonance eXpert Tool Master Calibration

Shell 10

Phase	RF Pulse Frequency SH10 HZ	Value	Phase	System Gain SH10	Value	Phase	Drivecurrent Gain SH10	Value
Master		1089000	Master		6497	Master		28030
1021000 (Minimum)	1075000 (Nominal)	1129000 (Maximum)	2000 (Minimum)	6000 (Nominal)	10000 (Maximum)	25000 (Minimum)	27500 (Nominal)	30000 (Maximum)
Phase	RF Pulse Amplitude SH10	Value	Phase	Calibration Factor SH10	Value	Phase	Antenna Quality Factor SH10	Value
Master		1128	Master		0.001036	Master		112.8
600.0 (Minimum)	1200 (Nominal)	1800 (Maximum)	0.0008000 (Minimum)	0.001000 (Nominal)	0.001500 (Maximum)	90.00 (Minimum)	115.0 (Nominal)	140.0 (Maximum)
Phase	T2 Log Mean SH10 MS	Value	Phase	Noise Per Single Acq SH10 CFCF	Value	Phase	SNR SH10	Value
Master		152.3	Master		0.06612	Master		165.6
120.0 (Minimum)	150.0 (Nominal)	180.0 (Maximum)	0.02500 (Minimum)	0.04000 (Nominal)	0.08000 (Maximum)	100.0 (Minimum)	150.0 (Nominal)	300.0 (Maximum)

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Company: OXY US LA Basin

Schlumberger

Well: DOM-002
Field: Dominguez
County: Los Angeles
State: California

MAGNETIC RESONANCE SCANNER
GAMMA RAY TIE IN
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