Schlumberger

Company: OXY US LA Basin

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

Modular Formation Dynamic Tester
Low Shock Sampling, LFA
Gamma Ray, Short Print

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
Log Measured From: Derrick Floor
Drilling Measured From: Derrick Floor

Elev.: 168.97 ft
25.12 ft above Perm. Datum

API Serial No.	Section	Township	Range
037-27148	33	3S	13W

	Run 1	Run 2	Run
Logging Date	5-Mar-2011		
Run Number	One		
Depth Driller	5710 ft		
Schlumberger Depth	5713 ft		
Bottom Log Interval	5710 ft		
Top Log Interval	2358 ft		
Casing Driller Size @ Depth	13.375 in @ 2364 ft	@	
Casing Schlumberger	2358 ft		
Bit Size	12.250 in		
Type Fluid In Hole	Gelite/KCL		
MUD Density / Viscosity	10.3 lbm/gal / 56 s		
MUD Fluid Loss / PH	3.5 cm3 / 7.1		
MUD Source Of Sample	Mudpit		
RM @ Measured Temperature	0.211 ohm.m @ 69 degF	@	
RMF @ Measured Temperature	0.179 ohm.m @ 58 degF	@	
RMC @ Measured Temperature	0.222 ohm.m @ 58 degF	@	
Source RMF / RMC	Meas / Meas		
RM @ MRT / RMF @ MRT	0.102 @ 150 / 0.074 @ 150	@ / @	
Maximum Recorded Temperatures	150 degF		
Circulation Stopped / Time	4-Mar-2011 / 11:30		
Logger On Bottom / Time	5-Mar-2011 / 12:30		
Unit Number / Location	2220 / Long Beach		
Recorded By	John Cason		
Witnessed By	Chris Smart		

	Run 1	Run 2	Run
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			

@
@ @ @ @
@

Run 3

Run 4

DEPTH SUMMARY LISTING

Date Created: 5-MAR-2011 7:31:39

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	7-46A XS
Serial Number:	4977	Serial Number:	6	Serial Number:	6383
Calibration Date:		Calibration Date:	24-jan-2011	Length:	18000 FT
Calibrator Serial Number:		Calibrator Serial Number:	76031		
Calibration Cable Type:	7-46A XS	Number of Calibration Points:	10	Conveyance Method:	Wireline
Wheel Correction 1:	-4	Calibration RMS:	30	Rig Type:	LAND
Wheel Correction 2:	-2	Calibration Peak Error:	30		

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	0.00 FT
Rig Up Length At Bottom:	0.00 FT
Rig Up Length Correction:	0.00 FT
Stretch Correction:	
Tool Zero Check At Surface:	44.50 FT

Depth Control Remarks

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

DISCLAIMER
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OTHER SERVICES1	OTHER SERVICES2
OS1: PEX-AIT	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
1. - MDT was correlated and run under the direction of the client.	
2. - Log also correlated between the MWD/LWD and OH Tcom logs	
3. - Log run as per client request.	
4. - Conveyance Type: TLC, drill pipe logging	
5. - Live Fluid analysis used to monitor formation fluid as well	
as resistivity meter located in the probe section.	
6. - 9 zones requested by the client for sampling, with two latches	
that were needed to attempt the logging run on TLC	
7. - 2 Multi Sampling Devices used with 12 sampling bottles total	
8. - Total of 10 confirmed samples were taken although 12 bottles will	
be sent to the lab and tested at the descretion of OXY, 2 bottles	
contain cross contamination. See sample summary.	

9. - Client referenced samples to be taken to:

PENCOR Division of Core Labratories LP
5820 Hwy East
Broussard, LA
Tel. (800) 234-4205

RUN 1			RUN 2		
SERVICE ORDER #:		B1PN-00231	SERVICE ORDER #:		
PROGRAM VERSION:		19C0-187	PROGRAM VERSION:		
FLUID LEVEL:		0 ft	FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

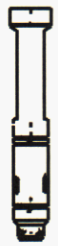
EQUIPMENT DESCRIPTION

RUN 1 | RUN 2

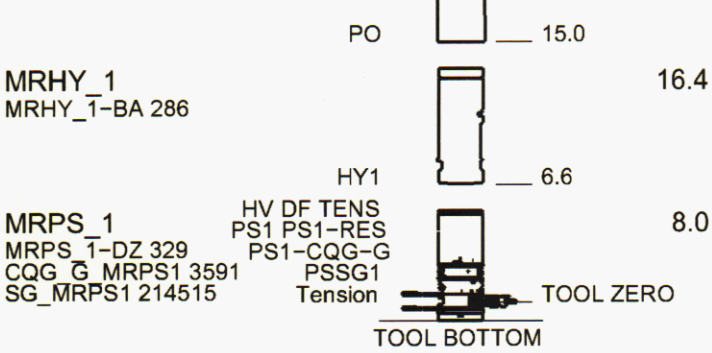
SURFACE EQUIPMENT

MRPP-AA 461
GSR-U/Y
WITM (CTS)-A

DOWNHOLE EQUIPMENT



Equipment	Sensor	Depth	Top
DWCH-H DWCH-H			97.0
AH-107			80.0
ACTS-B1 ACTM-A 1711 ACTE-A			78.0
TCC-BF ECH-KC 548	TelStatus	69.6	74.0
SGT-L SGH-K 1012 SGC-SA	Gamma Ray	68.7	71.0
AH-107			65.5
MRPC MRPC-CA 546	PC	57.1	63.5
MRMS_2 BOTT_6-AA 690 BOTT_5-AA 3210 BOTT_4-AA 2445 BOTT_3-AA 3209 BOTT_2-AA 2269 BOTT_1-AA 3207 MRMS_2-BA 308	MS2	43.9	58.5
MRMS_1 BOTT_6-AA 2441 BOTT_5-AA 3230 BOTT_4-AA 455 BOTT_3-AA 3225 BOTT_2-AA 1675 BOTT_1-AA 1979 MRMS_1-BA 352	MS1	30.7	45.3
LFA MRFA-EA 8296	FA-BA	25.6	32.1
MRPO MRPO-DU-BA 42 MRPO-CA 253			27.1



MAXIMUM STRING DIAMETER 4.75 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Schlumberger

General Summary

MAXIS Field Log

Client:	**OXY US LA Basin**	**Tool:**	**MRPS_1-**
Field:	**Dominguez**	**Probe Type:**	**Large-Diameter probe**
Well:	**DOM-002**	**Gauge:**	**BQP1**
Run date:	**5-Mar-2011**	**Gauge Resolution:**	**0.010 psi**

Test	File	Depth FT	TVD FT	Drawdown Mobility MD/CP	Mud Pressure Before PSIA	Mud Pressure After PSIA	Last read build-up Pres PSIA	Formation Pressure PSIA	Test Type
2	71	4766.50	4265.99	66.74	2314.73	2311.52	964.52	964.52	Volumetric Pretest
4	72	5059.27	4555.76	7.79	2476.65	2475.96	1115.08	1115.08	Volumetric Pretest
8	74	5061.23	4557.70	17.22	2476.86	2472.71	1115.23	1115.23	Volumetric Pretest
10	75	5312.71	4808.04	8.27	2615.31	676.21	1325.98	1325.98	Volumetric Pretest
11	76	5614.90	5108.90	2.80	630.24	1828.21	207.94		Dry Test
13	77	5624.26	5118.22	2.58	1798.82	2782.31	1419.96	1419.96	Volumetric Pretest
15	78	5619.82	5113.80	4.47	2779.46	2774.85	1417.20	1417.20	Volumetric Pretest
17	86	3147.82	2874.19	12.34	1547.23	1543.81	1097.69	1097.69	Volumetric Pretest
19	87	3330.11	3020.58	452.85	1636.35	1633.33	1135.27	1135.27	Volumetric Pretest
21	88	3756.47	3365.21	240.91	1824.13	1821.18	1231.28	1231.28	Volumetric Pretest
24	89	4246.30	3780.34		2049.75	2049.16	156.47		Dry Test
26	90	4245.05	3779.23		2048.60	2048.25	400.34		Dry Test
28	91	4244.27	3778.54	39.67	2048.32	2045.18	1287.50	1287.50	Volumetric Pretest
30	92	4373.68	3894.71	8.82	2111.74	2108.25	1199.32	1199.32	Volumetric Pretest

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Detailed Summary

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Detailed Summary

MAXIS Field Log

Client:	OXY US LA Basin	Tool:	MRPS_1-
Field:	Dominguez	Probe Type:	Large-Diameter probe
Well:	DOM-002	Gauge:	BQP1
Run date:	5-Mar-2011	Gauge Resolution:	0.010 psi

Test Number	24	26	28	30
File Number	89	90	91	92
Test Type	Dry Test	Dry Test	Volumetric Pretest	Volumetric Pretest
Depth,FT	4246.30	4245.05	4244.27	4373.68
Vertical Depth,FT	3780.34	3779.23	3778.54	3894.71
Mud Pressure before,PSIA	2049.75	2048.60	2048.32	2111.74
Mud Pressure after,PSIA	2049.16	2048.25	2045.18	2108.25
Last read build-up Pressure,PSIA	156.47	400.34	1287.50	1199.32
Formation Pressure,PSIA			1287.50	1199.32
Pretest 1 duration, SEC			12.0	11.7
Pretest 1 volume, CC			9.9	9.9
Pretest 1 flow-rate, CC/SEC			0.83	0.85
Draw-down Mobility, MD/CP			39.671	8.817
Draw-down Permeability, MD				
Viscosity,CP				
Spherical Extrapolated Pressure,PSIA				
Spherical Mobility, MD/CP				
Porosity				
Total Compressibility, 1/PSI				
Depth of investigation,FT				
Radial Extrapolated Pressure,PSIA				
Horizontal Mobility-Thickness, MD.FT/CP				

Client:	OXY US LA Basin	Tool:	MRPS_1-
Field:	Dominguez	Probe Type:	Large-Diameter probe
Well:	DOM-002	Gauge:	BQP1
Run date:	5-Mar-2011	Gauge Resolution:	0.010 psi

Test Number	13	15	17	19	21
File Number	77	78	86	87	88
Test Type	Volumetric Pretest	Volumetric Pretest	Volumetric Pretest	Volumetric Pretest	Volumetric Pretest
Depth,FT	5624.26	5619.82	3147.82	3330.11	3756.47
Vertical Depth,FT	5118.22	5113.80	2874.19	3020.58	3365.21
Mud Pressure before,PSIA	1798.82	2779.46	1547.23	1636.35	1824.13
Mud Pressure after,PSIA	2782.31	2774.85	1543.81	1633.33	1821.18
Last read build-up Pressure,PSIA	1419.96	1417.20	1097.69	1135.27	1231.28
Formation Pressure,PSIA	1419.96	1417.20	1097.69	1135.27	1231.28
Pretest 1 duration, SEC	12.3	12.0	11.4	15.9	11.7
Pretest 1 volume, CC	9.8	9.9	9.8	10.0	9.9
Pretest 1 flow-rate, CC/SEC	0.79	0.83	0.86	0.63	0.85
Draw-down Mobility, MD/CP	2.578	4.471	12.337	452.851	240.907
Draw-down Permeability, MD					
Viscosity,CP					

Spherical Extrapolated Pressure,PSIA Spherical Mobility, MD/CP Porosity Total Compressibility, 1/PSI Depth of investigation,FT					
Radial Extrapolated Pressure,PSIA Horizontal Mobility-Thickness, MD.FT/CP					

Client:	OXY US LA Basin	Tool:	MRPS_1-
Field:	Dominguez	Probe Type:	Large-Diameter probe
Well:	DOM-002	Gauge:	BQP1
Run date:	5-Mar-2011	Gauge Resolution:	0.010 psi

Test Number File Number Test Type	2 71 Volumetric Pretest	4 72 Volumetric Pretest	8 74 Volumetric Pretest	10 75 Volumetric Pretest	11 76 Dry Test
Depth,FT Vertical Depth,FT	4766.50 4265.99	5059.27 4555.76	5061.23 4557.70	5312.71 4808.04	5614.90 5108.90
Mud Pressure before,PSIA Mud Pressure after,PSIA Last read build-up Pressure,PSIA Formation Pressure,PSIA	2314.73 2311.52 964.52 964.52	2476.65 2475.96 1115.08 1115.08	2476.86 2472.71 1115.23 1115.23	2615.31 676.21 1325.98 1325.98	630.24 1828.21 207.94
Pretest 1 duration, SEC Pretest 1 volume, CC Pretest 1 flow-rate, CC/SEC	9.9 9.8 0.99	11.4 9.9 0.87	11.4 9.7 0.85	11.1 9.6 0.86	3.3 0.9 0.28
Draw-down Mobility, MD/CP Draw-down Permeability, MD Viscosity,CP	66.741	7.789	17.224	8.271	2.800
Spherical Extrapolated Pressure,PSIA Spherical Mobility, MD/CP Porosity Total Compressibility, 1/PSI Depth of investigation,FT					
Radial Extrapolated Pressure,PSIA Horizontal Mobility-Thickness, MD.FT/CP					

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Plots

MAXIS Field Log

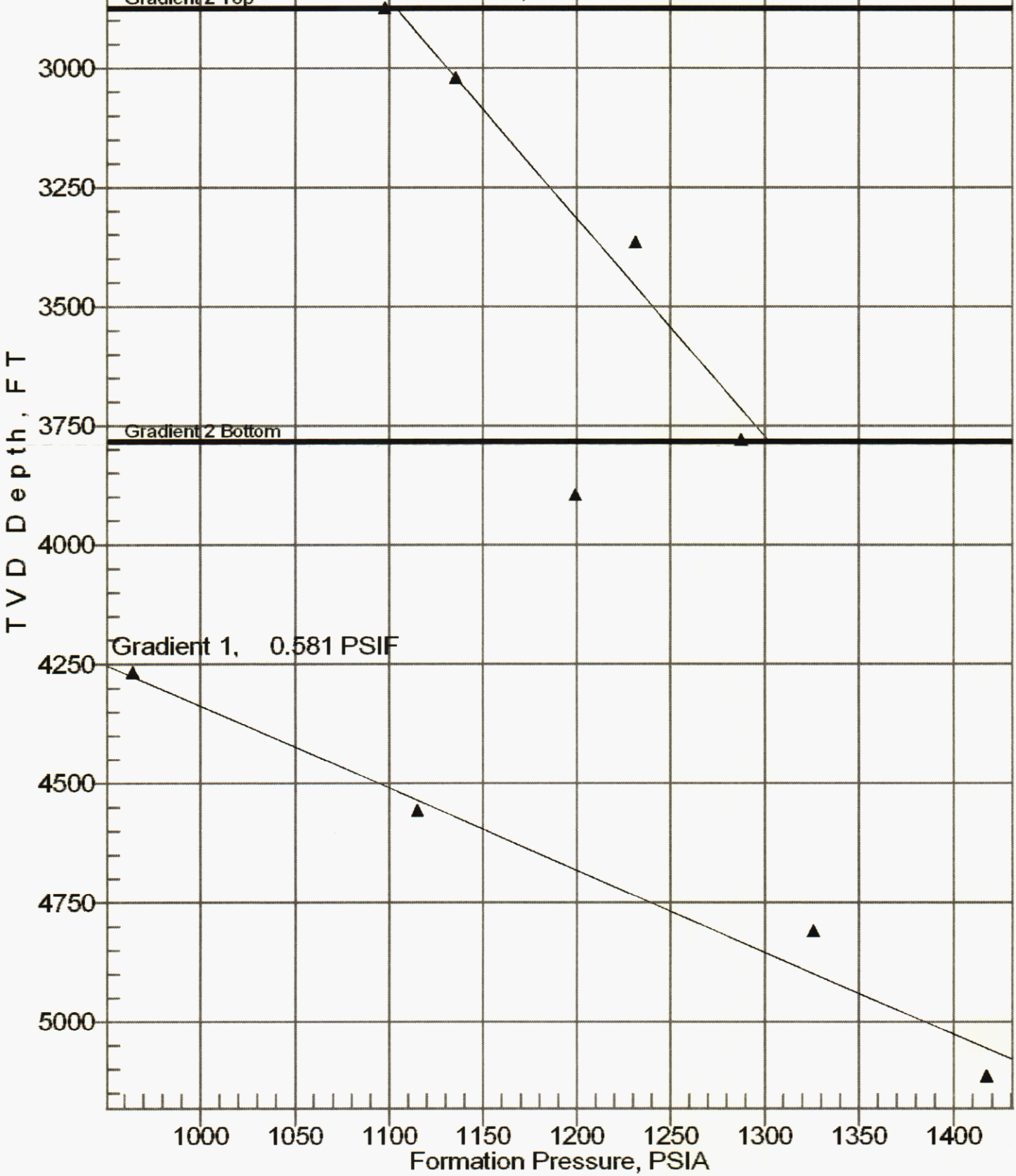
Depth vs. Formation Pressure

5-Mar-2011

OXY US LA Basin
Dominguez
DOM-002

BQP1

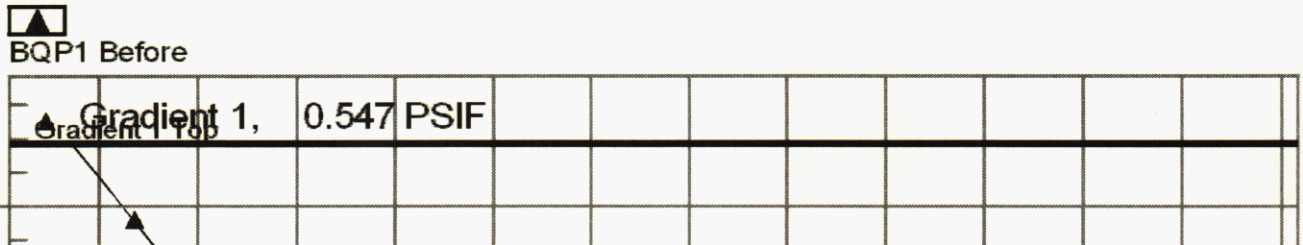
Gradient 2, 0.219 PSI/F

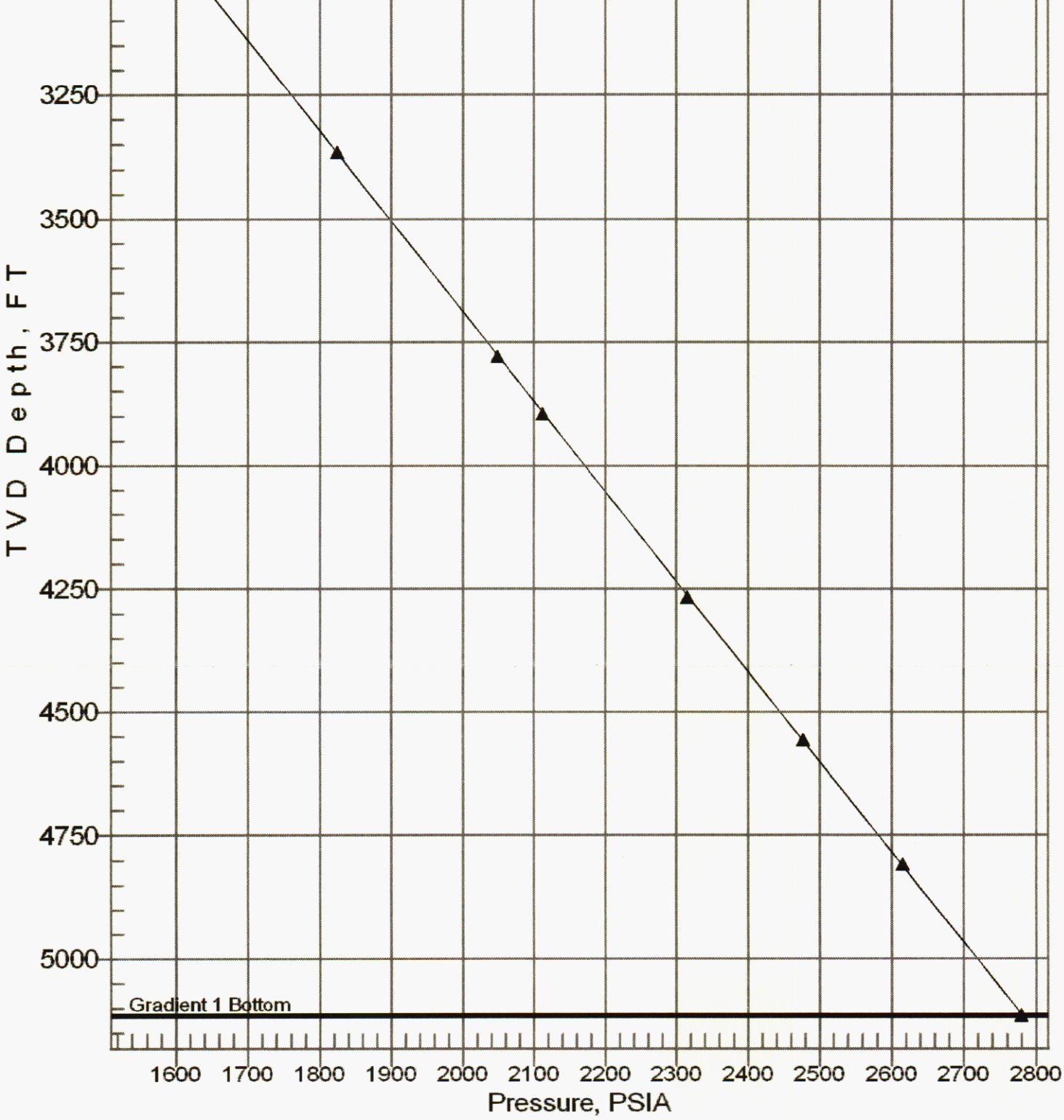


Depth vs. Mud Pressure

5-Mar-2011

OXY US LA Basin
Dominguez
DOM-002

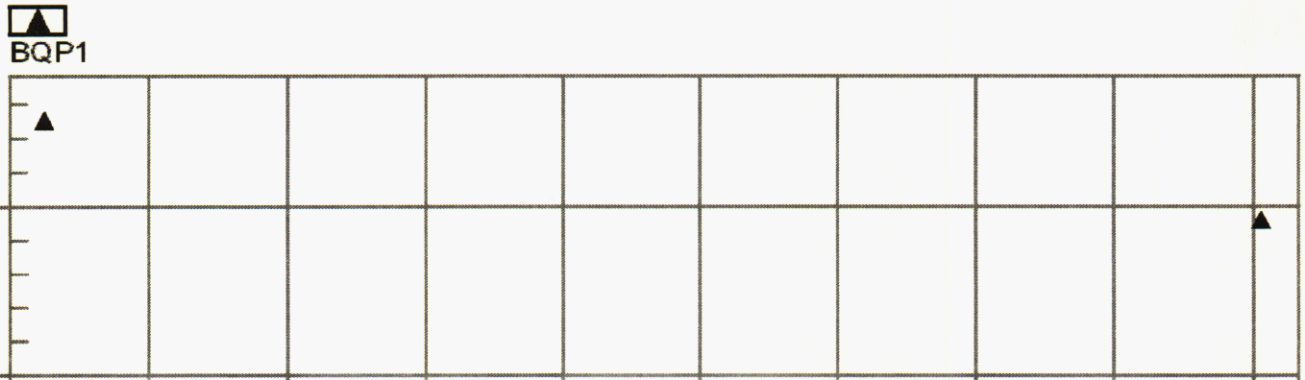


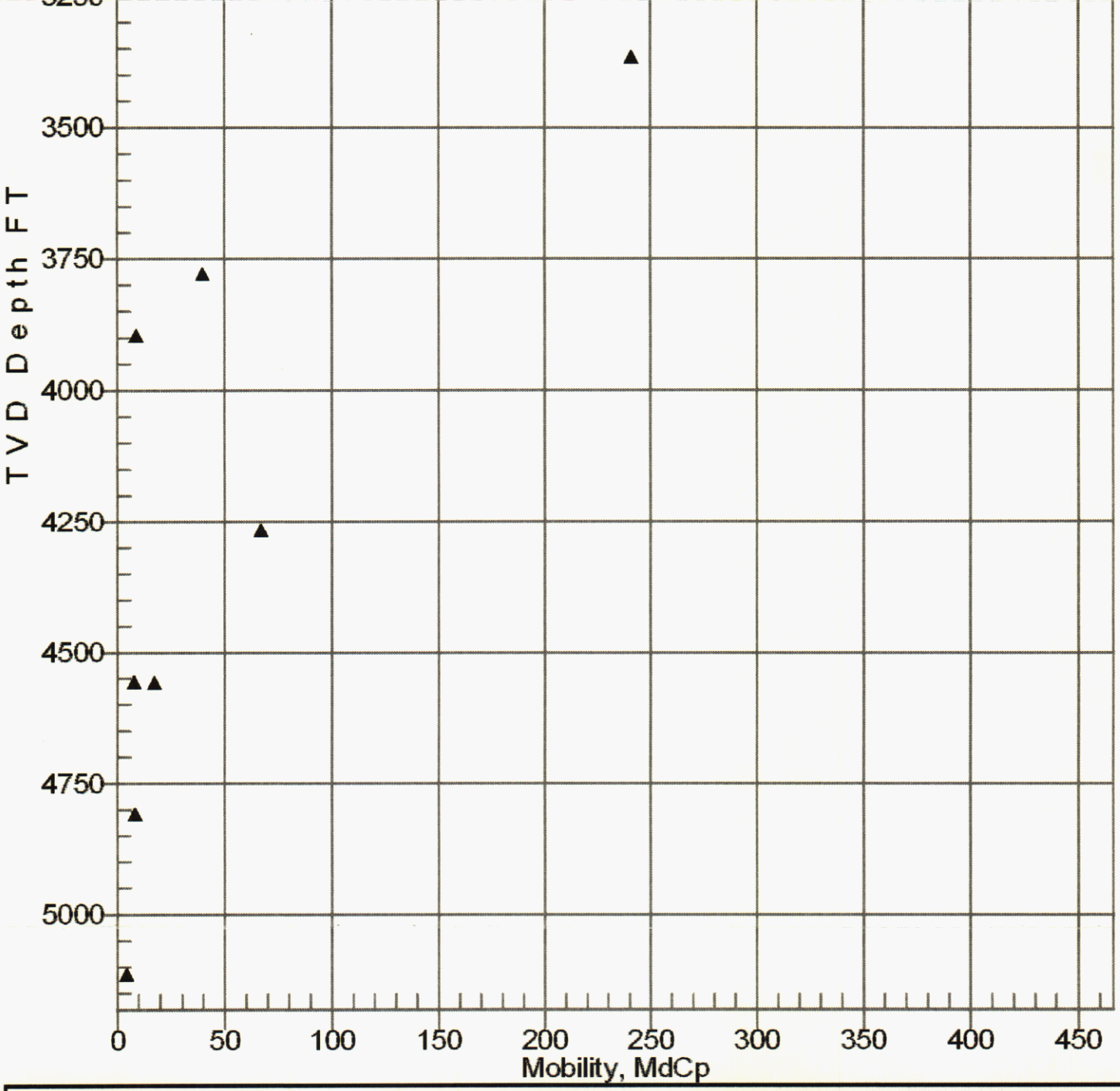


Depth vs. Mobility

5-Mar-2011

OXY US LA Basin
Dominguez
DOM-002





Schlumberger

Sample Summary

MAXIS Field Log

SAMPLE SUMMARY

Sample Point 1

Measured Depth: 4766.5 ft
True Vertical Depth: 4266.0 ft

File No.: 71
Formation Temperature: 142.0 F

Hydrostatic Pressure: 2311.0 psia
Formation Pressure: 964.0 psia

Sample #1: MRMS 352 MPSR 1979 420 cc

Slot # 1

Sample Pump Time: 64 mins
Pump Volume 20862 cc

Remarks: mostly water with traces of gas,
Down Hole: the Log calculated that fluid has filled the bottle, but after review of the station with the Schlumberger log anaylist, unsure if the bottle was filled. Addressed the concern to the client but,the client did not want to reattempt the sample at this point and proceed with the logging program to save the bottles for the primary zone of intrest.

On Surface: there was visual confirmation that the bottle had fired both open and closed on the zone.

Fluid Analyzer Shows: Water

Sample Point 2

Measured Depth: 5061.0 ft
True Vertical Depth: 4557.7 ft

File No.: 74
Formation Temperature: 150.0 F

Hydrostatic Pressure: 2475.0 psia
Formation Pressure: 1115.0 psia

Sample #1: MRMS 352 MPSR 1675 420 cc

Slot # 2

Sample Pump Time: 80 mins

Pump Volume 11235 cc

Remarks: mostly water with traces of gas
Fluid Analyzer Shows: Water

Sample Point 3

Measured Depth: 5312.7 ft
True Vertical Depth: 4808.0 ft

File No.: 75
Formation Temperature: 157.0 F

Hydrostatic Pressure: 2612.0 psia
Formation Pressure: 1325.0 psia

Sample #1: MRMS 352 MPSR 3225 420 cc

Slot # 3

Sample Pump Time: 80 mins
Pump Volume 12800 cc

Remarks: almost all water
Fluid Analyzer Shows: Water

Sample Point 4

Measured Depth: 5620.0 ft
True Vertical Depth: 5113.8 ft

File No.: 78
Formation Temperature: 162.0 F

Hydrostatic Pressure: 2775.0 psia
Formation Pressure: 1417.0 psia

Sample #1: MRMS 352 MPSR 455 420 cc

Slot # 4

Sample Pump Time: 70 mins
Pump Volume 12800 cc

Remarks: mostly water with traces of gas
Fluid Analyzer Shows: Water

Sample Point 5

Measured Depth:	3148.0	ft
True Vertical Depth:	2874.2	ft
File No.:	86	
Formation Temperature:	137.0	F
Hydrostatic Pressure:	1544.0	psia
Formation Pressure:	1098.0	psia

Sample #1:	MRMS	352	MPSR	3230	420	cc

Slot # 5

Sample Pump Time:	45	mins
Pump Volume	14278	cc

Sample #2:	MRMS	352	MPSR	2441	420	cc

Slot # 6

Sample Pump Time:	49	mins
Pump Volume	14278	cc

Remarks: water 0.054 ohms
Fluid Analyzer Shows: Water

Sample Point 6

Measured Depth:	3330.0	ft
True Vertical Depth:	3020.6	ft
File No.:	87	
Formation Temperature:	138.0	F
Hydrostatic Pressure:	1633.0	psia
Formation Pressure:	1135.0	psia

Sample #1:	MRMS	308	MPSR	3209	420	cc

Slot # 3

Sample Pump Time: 62 mins
Pump Volume 15969 cc

Remarks: water 0.054 ohms, bottles 1 & 2 were fired here on the upper MRMS but the software indicated that the bottles did not fire the piston to sample at these bottles, sampled with bottle number 3 on the upper MRMS which indicated sucessful open and close, bottle 2 was reattempted a sample at point 7.

MPSR bottle 3207 although indicated during the log it did not fire open there was visual conformation at surface that indicated it did. The engineer did not fire it closed incase it did not fire open there would be an attempt to refire it on another zone if needed and fill. There could be trace amounts of water in this bottle although more than likely contaminated it will be sent to the lab for anaylsis if Oxy wishes to analyze it.

Fluid Analyzer Shows: Water

Sample Point 7

Measured Depth: 3756.0 ft
True Vertical Depth: 3365.2 ft

File No.: 88
Formation Temperature: 140.0 F

Hydrostatic Pressure: 1821.0 psia
Formation Pressure: 1231.0 psia

Sample #1: MRMS 308 MPSR 2445 420 cc

Slot # 4

Sample Pump Time: 65 mins
Pump Volume 23900 cc

Sample #2: MRMS 308 MPSR 2269 420 cc

Slot # 2

Sample Pump Time: 68 mins
Pump Volume 23900 cc

Remarks: water 0.054 ohms, Bottle Number Two, 2269 on this station was having trouble opening on previous station, tried to see if
bottle would reopen on this stataion and fill.

Client was not charged for this bottle.

MPSR bottle 2269 might have cross contamination with zone 6 & 7, sending bottle to lab anyway for analysis, no charge added to the client for this bottle.

Fluid Analyzer Shows: Water

Sample Point 8

Measured Depth: 4244.0 ft
True Vertical Depth: 3778.5 ft

File No.: 91
Formation Temperature: 146.0 F

Hydrostatic Pressure: 2045.0 psia
Formation Pressure: 1288.0 psia

Sample #1: MRMS 308 MPSR 3210 420 cc

Slot # 5

Sample Pump Time: 52 mins
Pump Volume 17849 cc

Remarks: Oil Sample
Fluid Analyzer Shows: Oil

Sample Point 9

Measured Depth: 4374.0 ft
True Vertical Depth: 3894.7 ft

File No.: 92
Formation Temperature: 144.0 F

Hydrostatic Pressure: 2108.0 psia
Formation Pressure: 1199.0 psia

Sample #1: MRMS 308 MPSR 690 420 cc

Slot # 6

Sample Pump Time: 67 mins
Pump Volume 15419 cc

Remarks: Water Sample

Remarks: Water Sample
Fluid Analyzer Shows: Water

Schlumberger

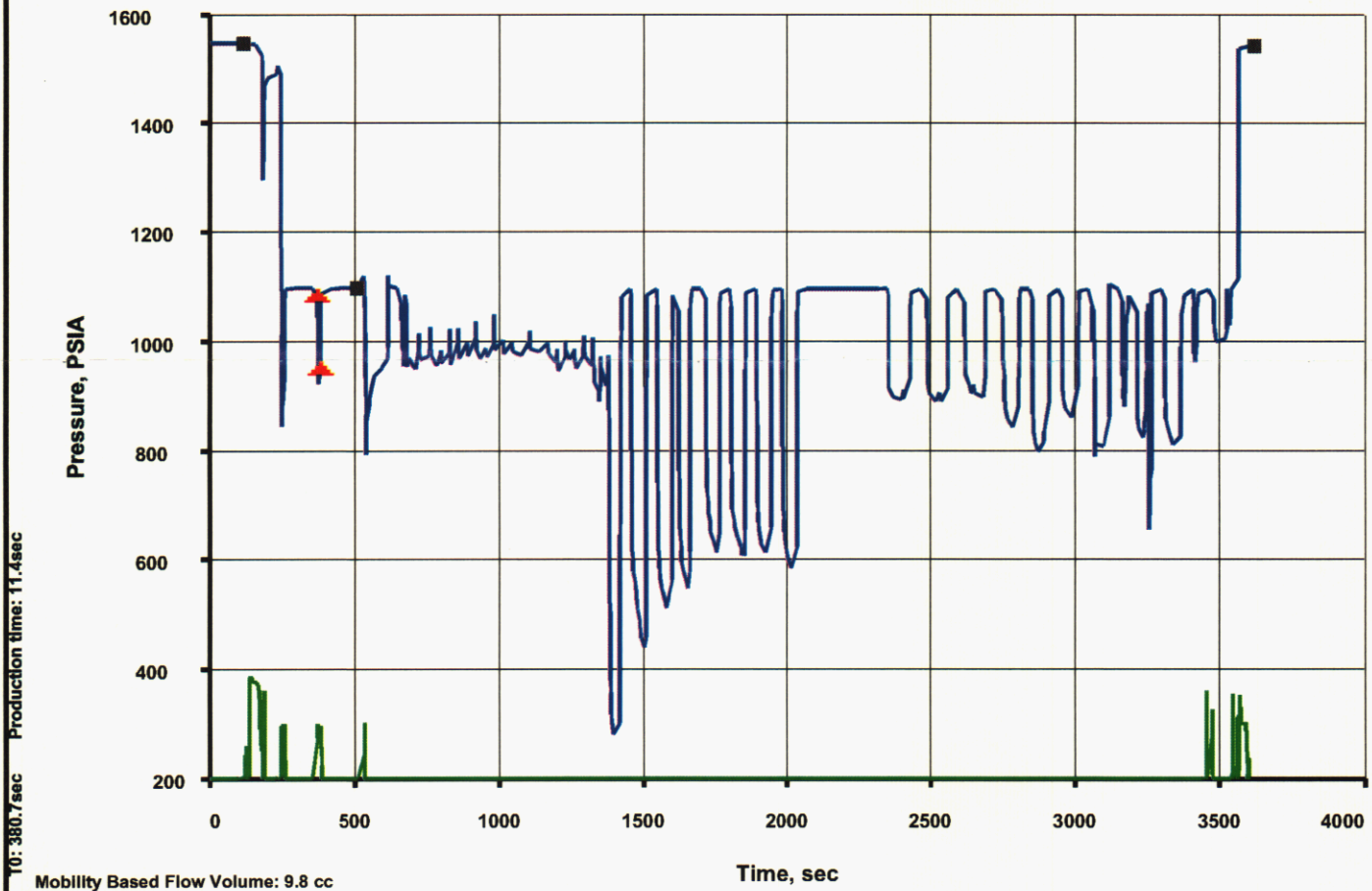
Station Taken @ 3148 ft
File # 86, 102

File 86
5-Mar-2011

Depth, FT: 3147.82
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	1547.23
Mud Pressure after test, PSIA:	1543.81
Last build-up pressure, PSIA:	1097.69
Draw-down mobility, md/cp:	12.3



Mobility Based Flow Volume: 9.8 cc

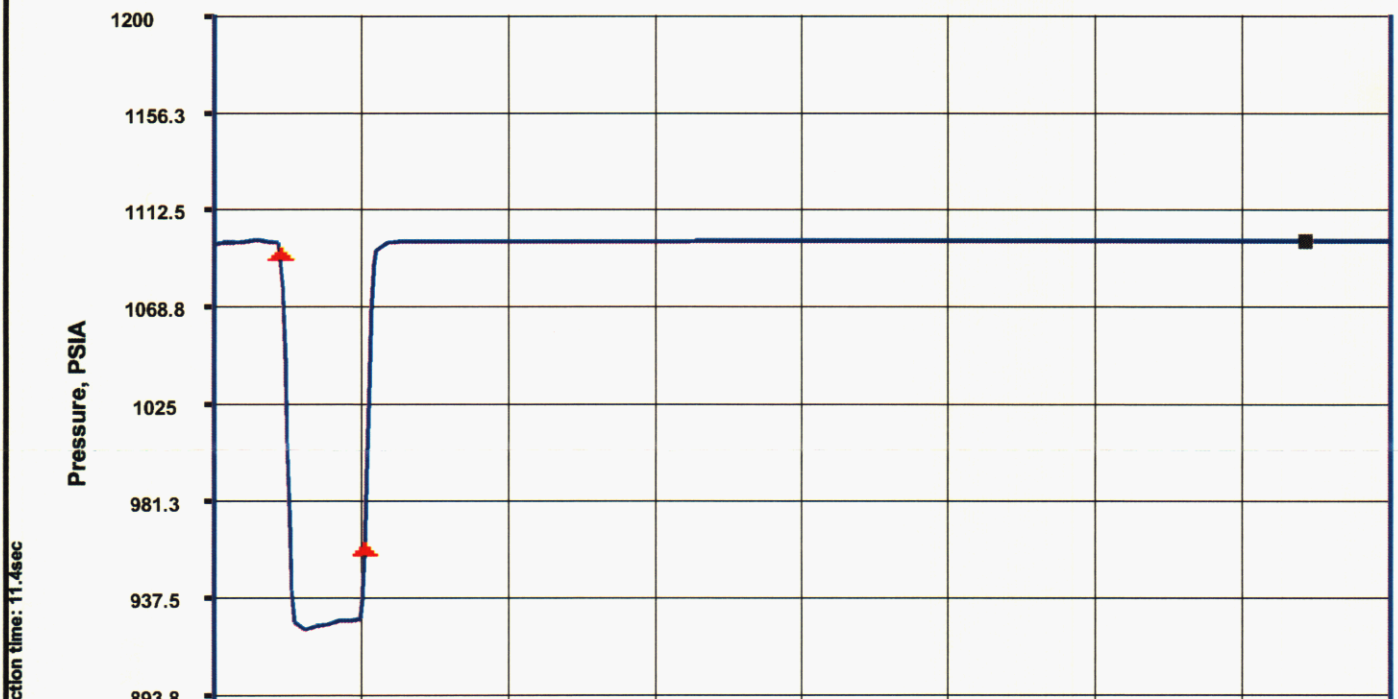
Total Pretest Volume: 10.0cc - MRPS_1- BQP1 Resolution: 0.010psi

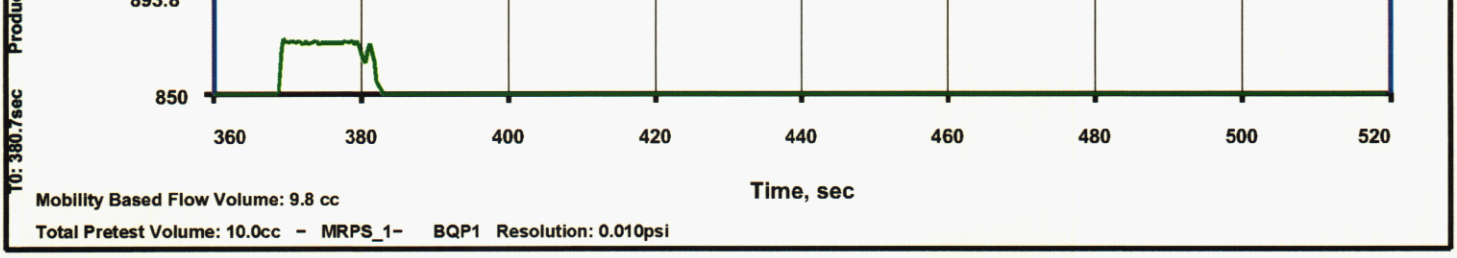
File 86
5-Mar-2011

Depth, FT: 3147.82
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	1547.23
Mud Pressure after test, PSIA:	1543.81
Last build-up pressure, PSIA:	1097.69
Draw-down mobility, md/cp:	12.3

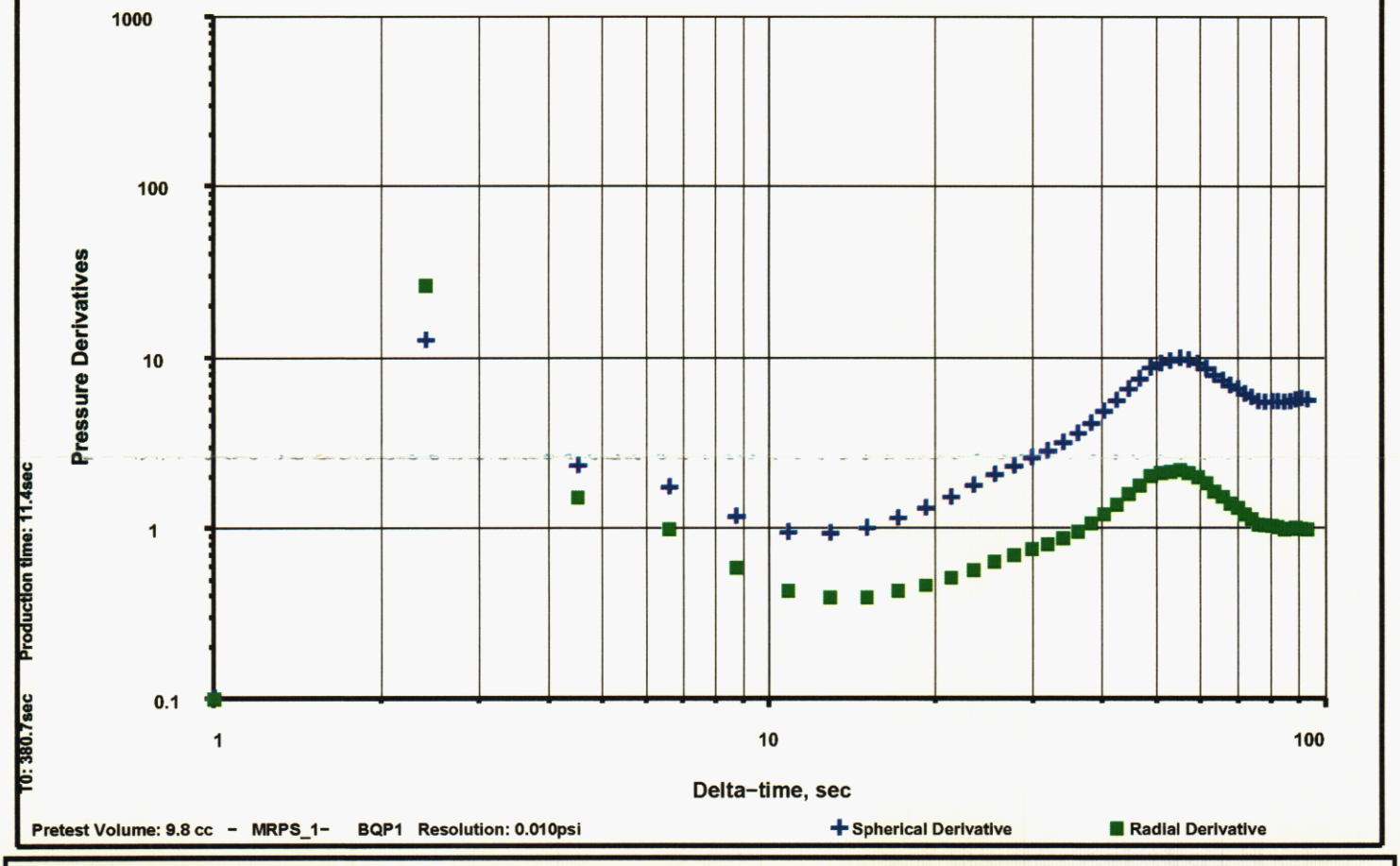




File 86
5-Mar-2011

Depth, FT: 3147.82
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe



Schlumberger

Station Taken @ 3330 ft
File # 87, 103

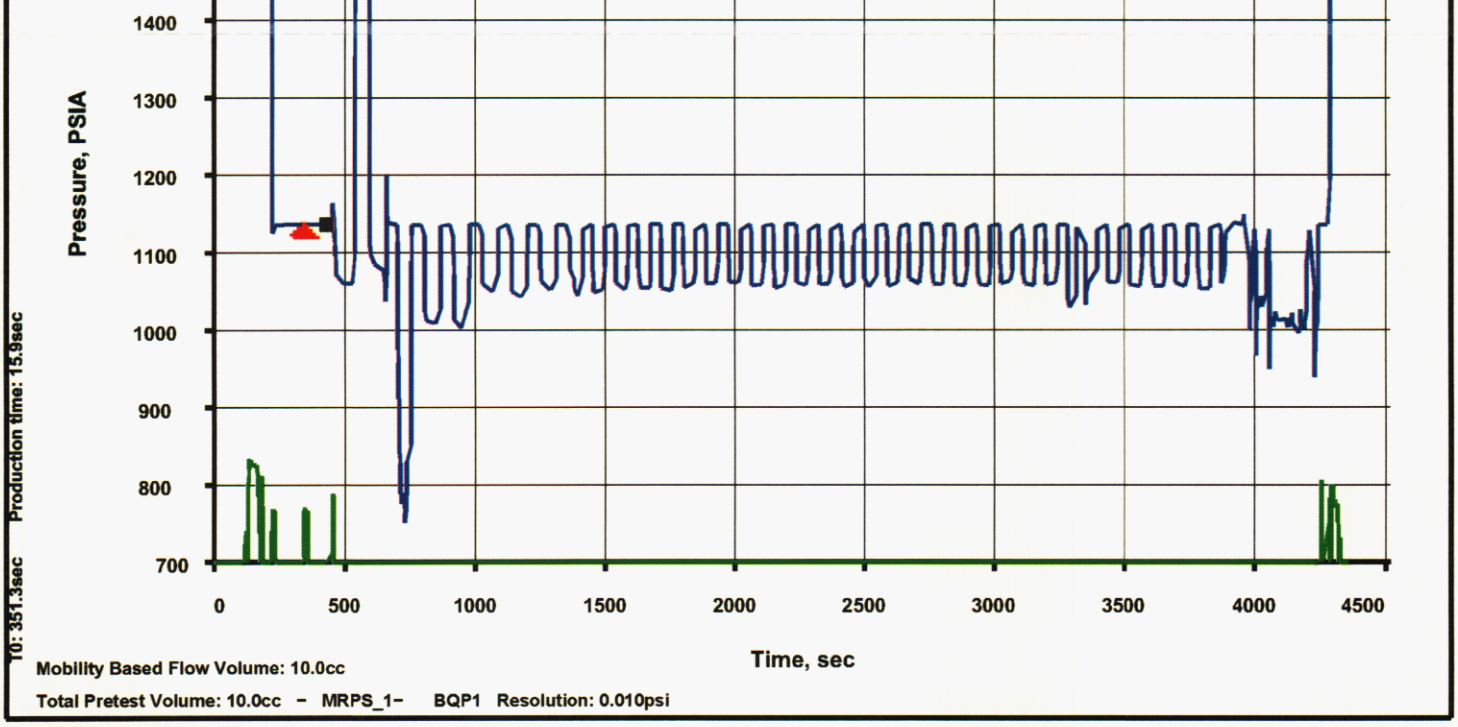
MAXIS Field Log

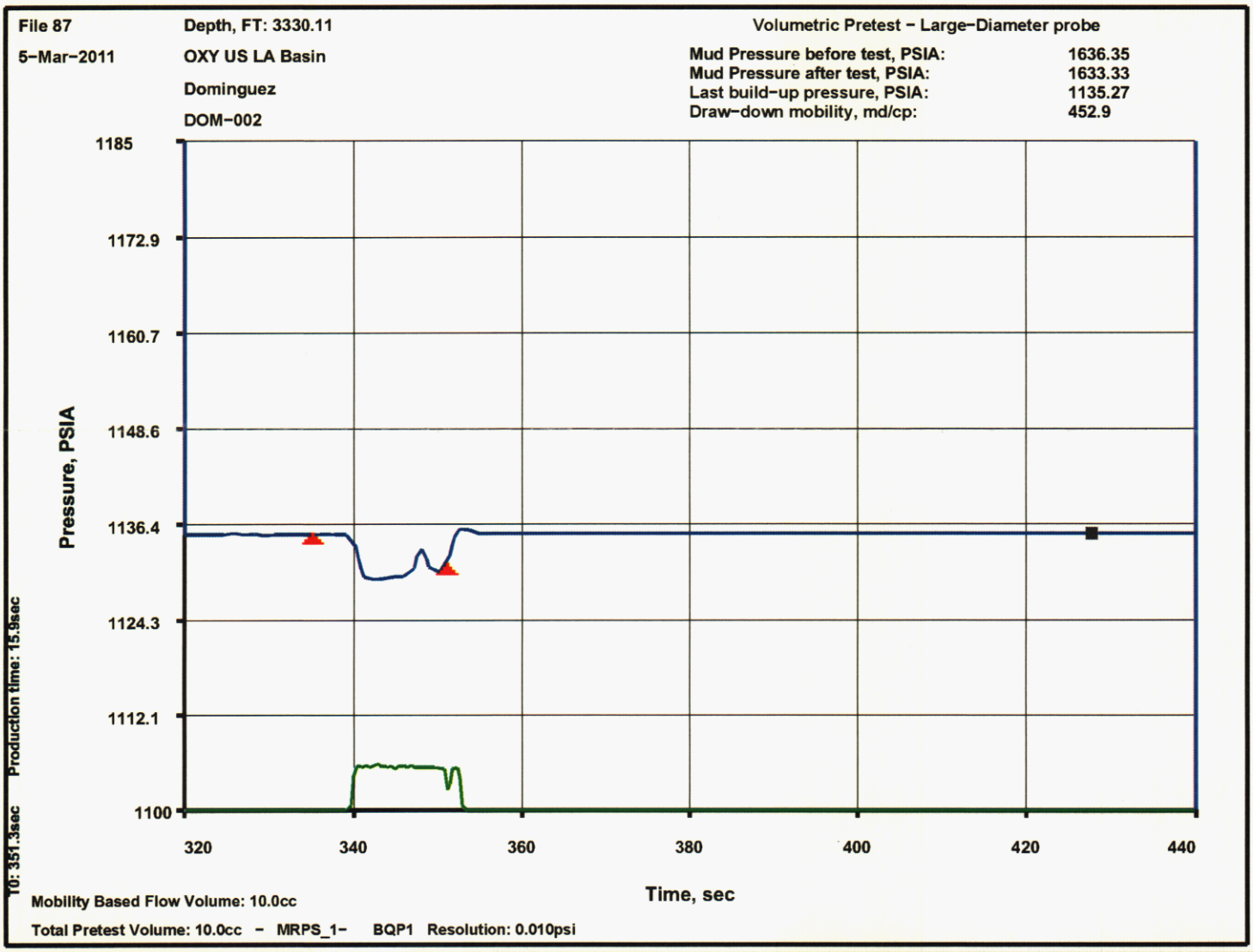
File 87
5-Mar-2011

Depth, FT: 3330.11
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	1636.35
Mud Pressure after test, PSIA:	1633.33
Last build-up pressure, PSIA:	1135.27
Draw-down mobility, md/cp:	452.9





Schlumberger

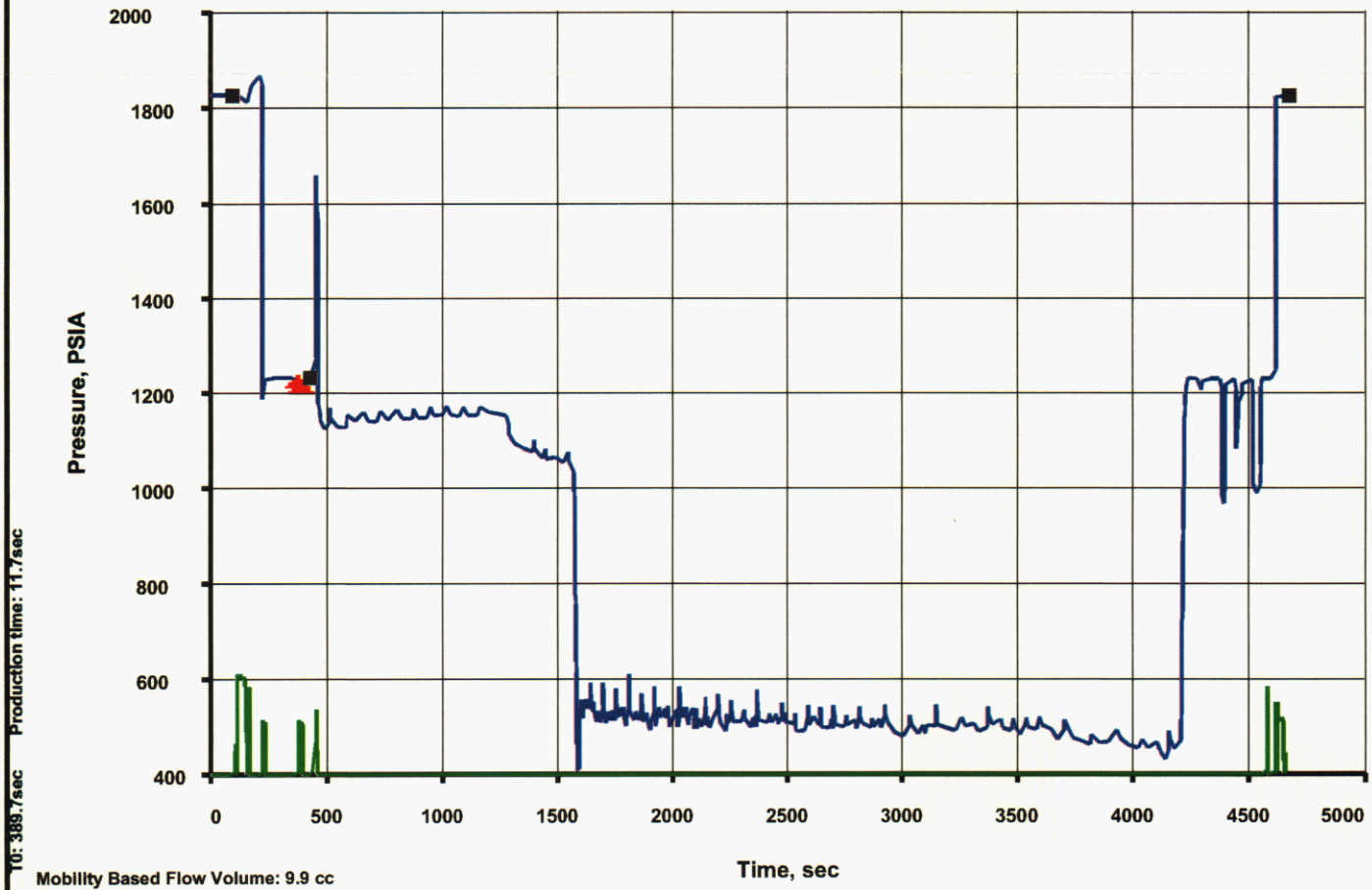
Station Taken @ 3765 ft
File # 88, 104

File 88
5-Mar-2011

Depth, FT: 3756.47
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	1824.13
Mud Pressure after test, PSIA:	1821.18
Last build-up pressure, PSIA:	1231.28
Draw-down mobility, md/cp:	240.9



Mobility Based Flow Volume: 9.9 cc

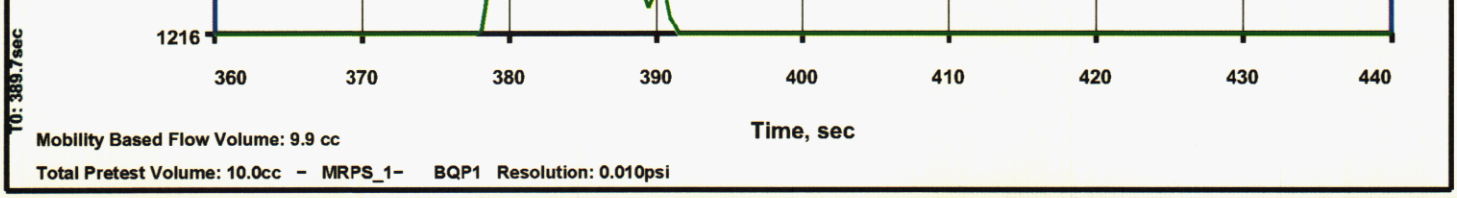
Total Pretest Volume: 10.0cc - MRPS_1- BQP1 Resolution: 0.010psi

File 88
5-Mar-2011

Depth, FT: 3756.47
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	1824.13
Mud Pressure after test, PSIA:	1821.18
Last build-up pressure, PSIA:	1231.28
Draw-down mobility, md/cp:	240.9



Mobility Based Flow Volume: 9.9 cc

Total Pretest Volume: 10.0cc - MRPS_1- BQP1 Resolution: 0.010psi

Schlumberger

Station Taken @ 4244 ft
File # 91, 107

MAXIS Field Log

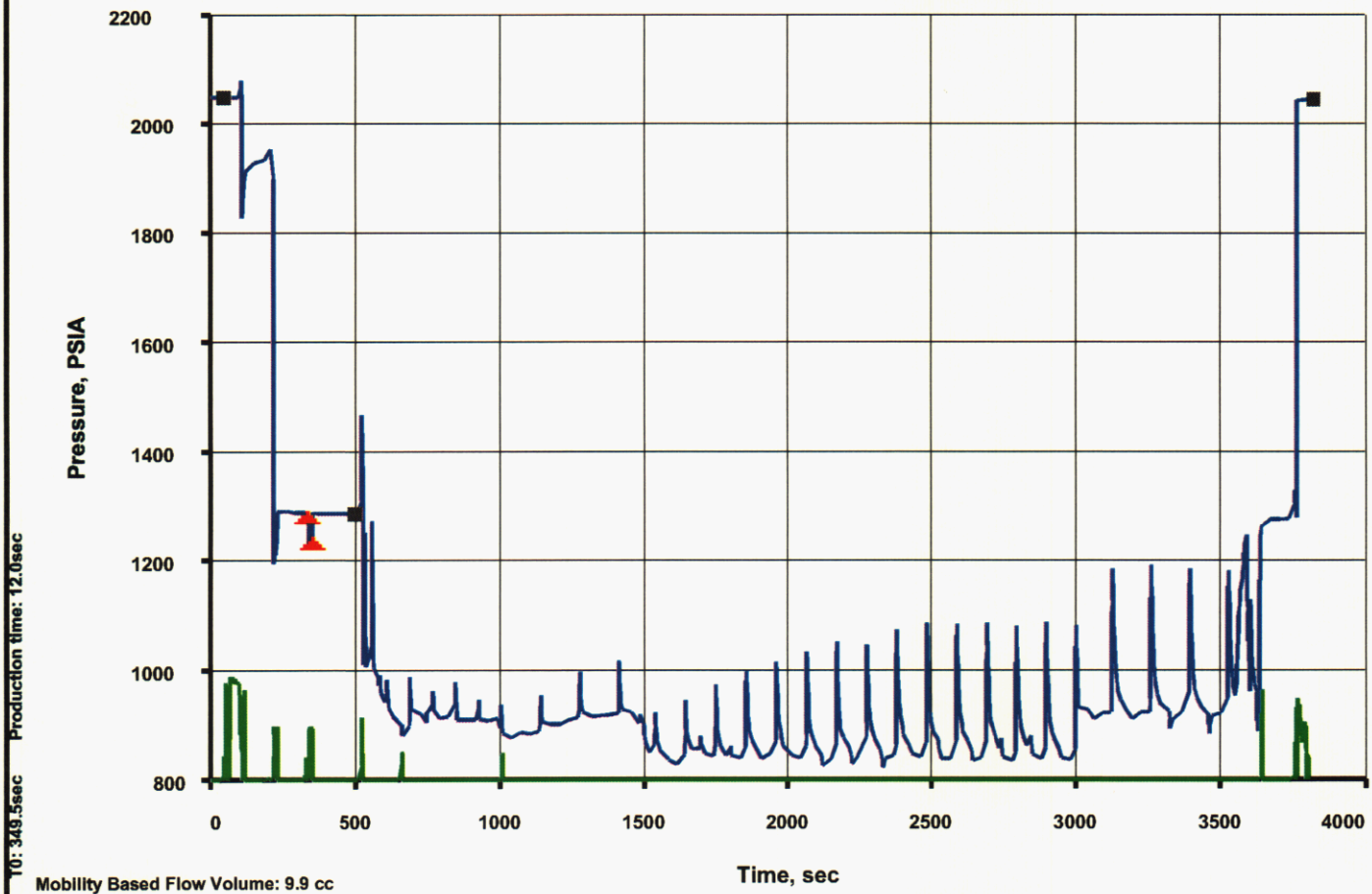
File 91 | Depth, FT: 4244.27 | Volumetric Pretest - Large-Diameter probe

5-Mar-2011 | OXY US LA Basin

Dominguez

DOM-002

Mud Pressure before test, PSIA:	2048.32
Mud Pressure after test, PSIA:	2045.18
Last build-up pressure, PSIA:	1287.5
Draw-down mobility, md/cp:	39.7



Mobility Based Flow Volume: 9.9 cc

Total Pretest Volume: 10.0cc - MRPS_1- BQP1 Resolution: 0.010psi

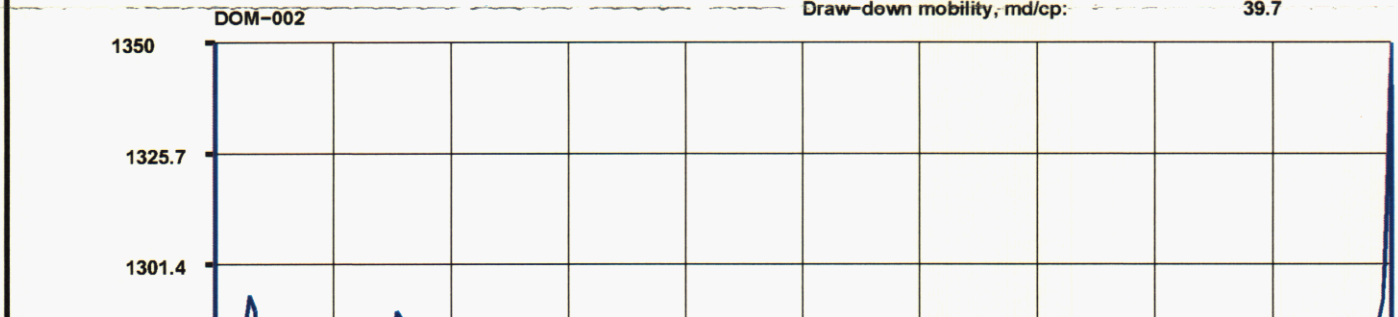
File 91 | Depth, FT: 4244.27 | Volumetric Pretest - Large-Diameter probe

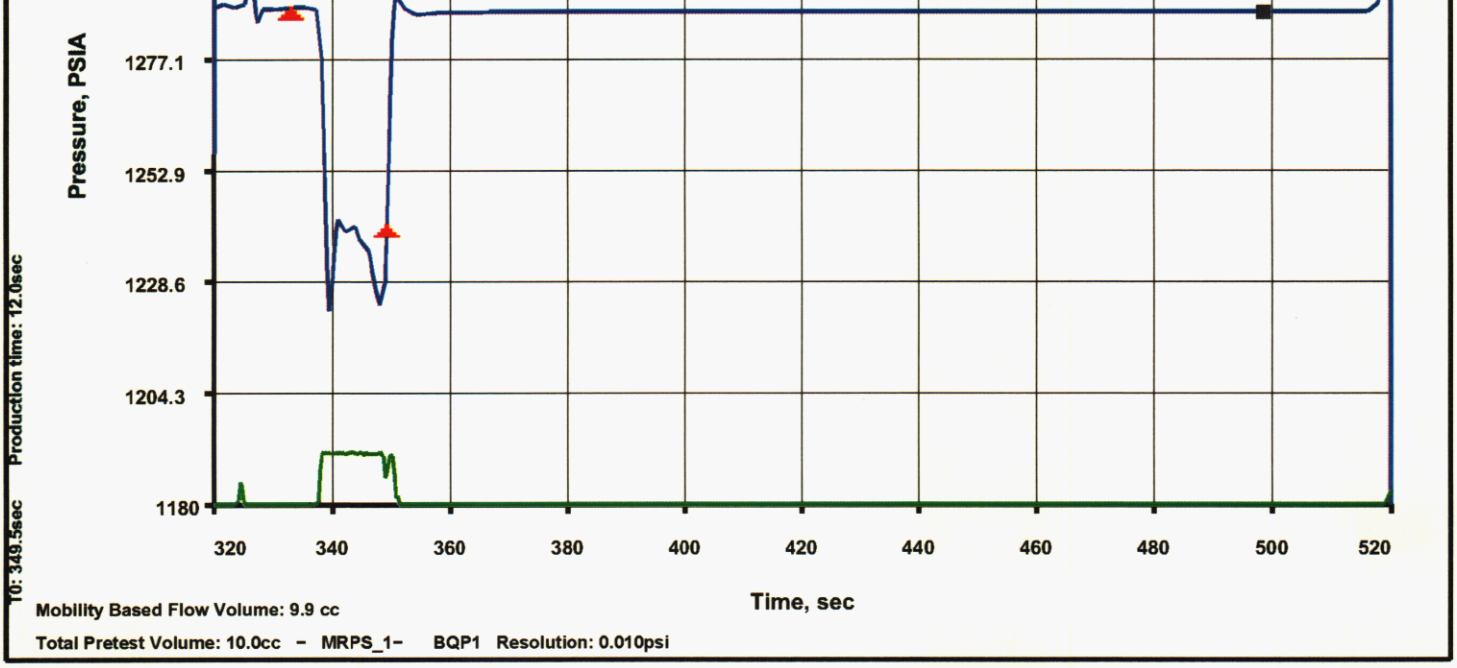
5-Mar-2011 | OXY US LA Basin

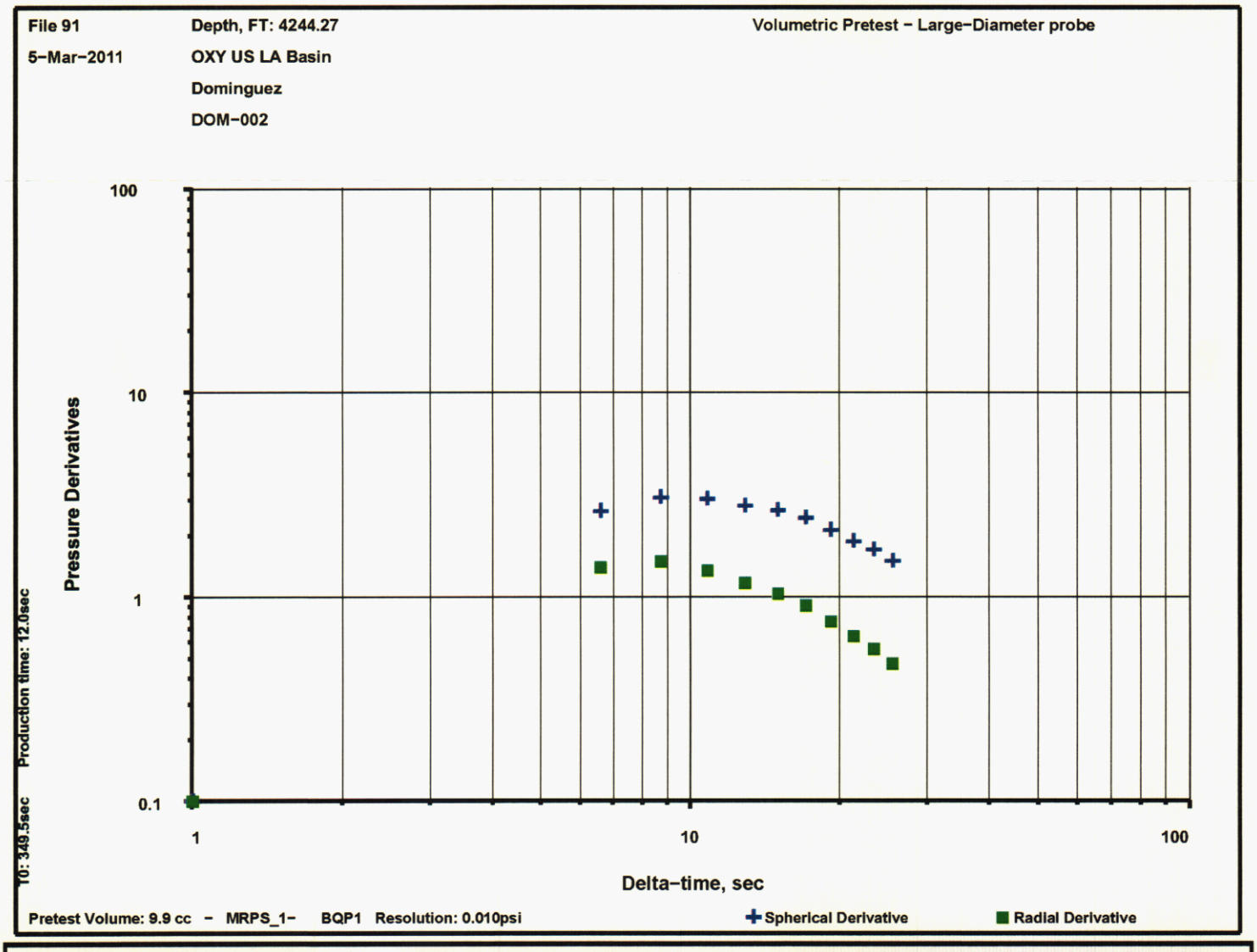
Dominguez

DOM-002

Mud Pressure before test, PSIA:	2048.32
Mud Pressure after test, PSIA:	2045.18
Last build-up pressure, PSIA:	1287.5
Draw-down mobility, md/cp:	39.7







Schlumberger

Station Taken @ 4245 ft
File # 90, 106

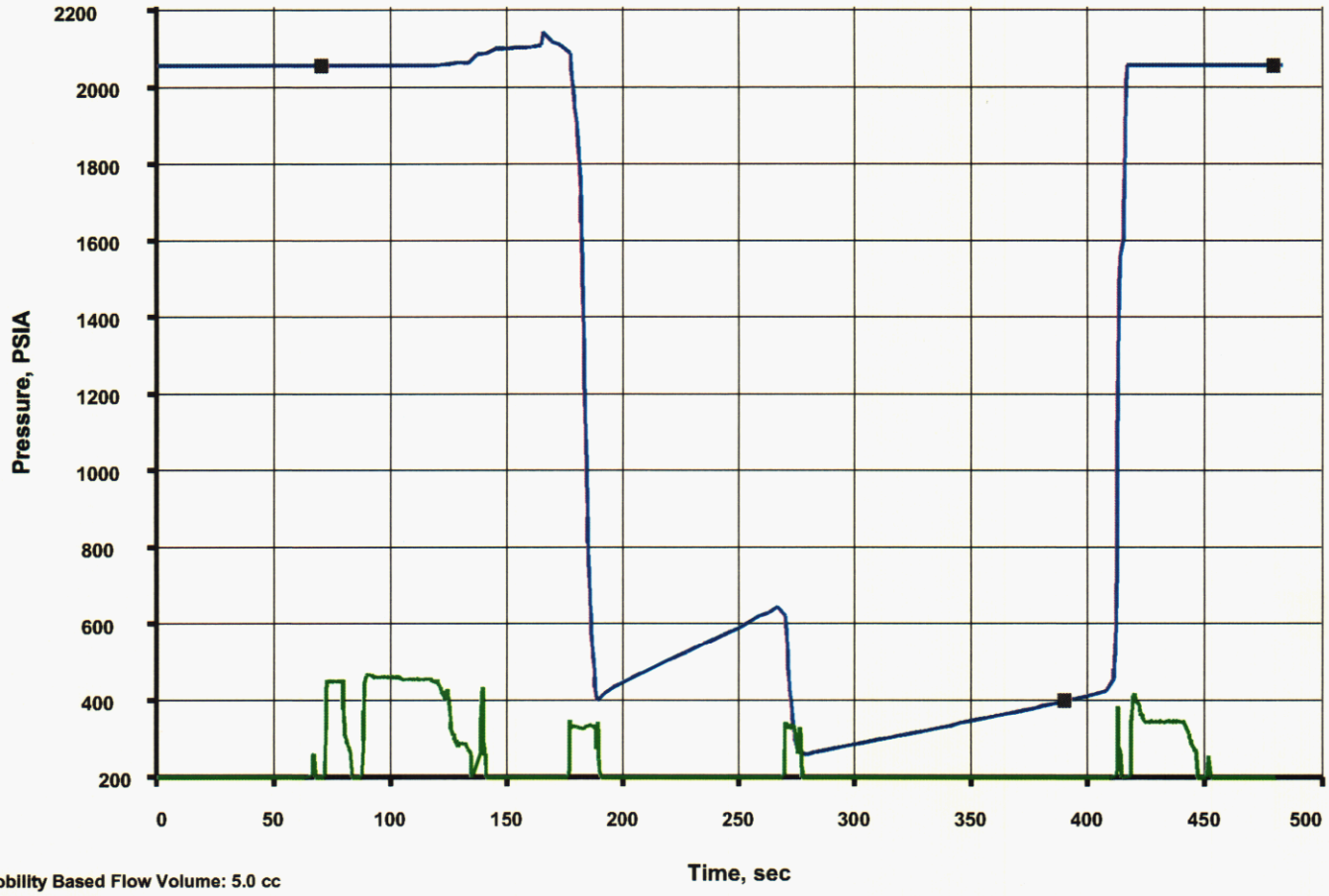
MAXIS Field Log

File 90
5-Mar-2011

Depth, FT: 4245.05
OXY US LA Basin
Dominguez
DOM-002

Dry Test - Large-Diameter probe

Mud Pressure before test, PSIA:	2048.6
Mud Pressure after test, PSIA:	2048.25
Last build-up pressure, PSIA:	400.34



Mobility Based Flow Volume: 5.0 cc

Total Pretest Volume: 5.0 cc - MRPS_1- BQP1 Resolution: 0.010psi

Schlumberger

Station Taken @ 4246 ft
File # 89, 105

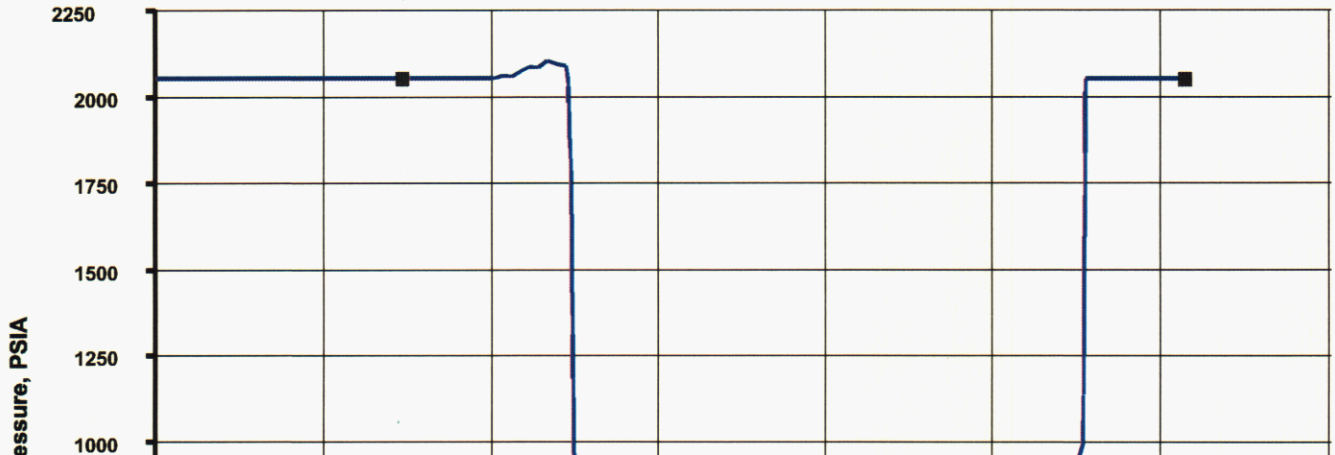
MAXIS Field Log

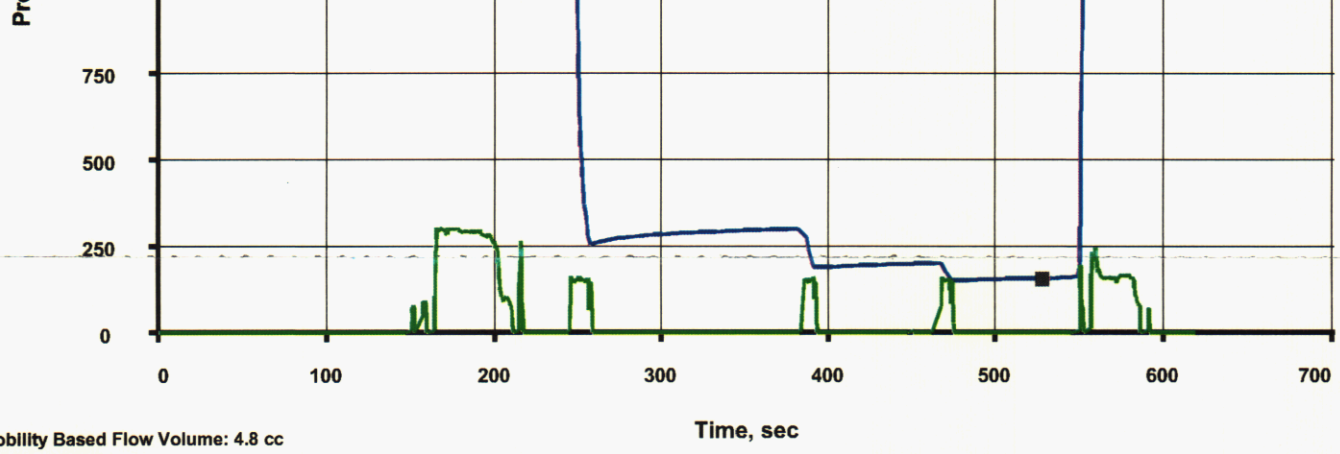
File 89
5-Mar-2011

Depth, FT: 4246.30
OXY US LA Basin
Dominguez
DOM-002

Dry Test - Large-Diameter probe

Mud Pressure before test, PSIA:	2049.75
Mud Pressure after test, PSIA:	2049.16
Last build-up pressure, PSIA:	156.47





Mobility Based Flow Volume: 4.8 cc

Total Pretest Volume: 4.8 cc - MRPS_1- BQP1 Resolution: 0.010psi

Schlumberger

Station Taken @ 4374 ft
File # 92, 108

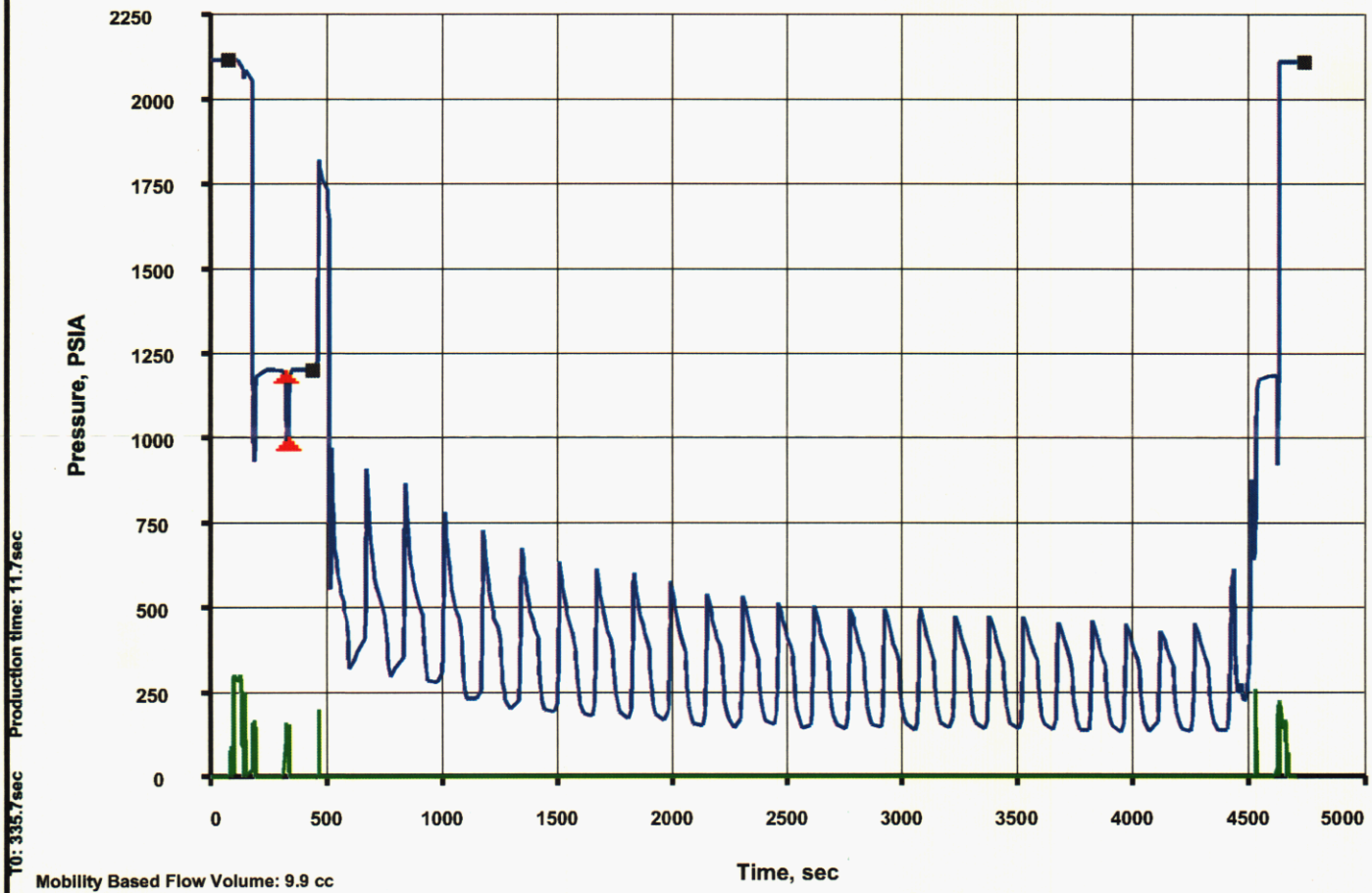
MAXIS Field Log

File 92
5-Mar-2011

Depth, FT: 4373.68
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	2111.74
Mud Pressure after test, PSIA:	2108.25
Last build-up pressure, PSIA:	1199.32
Draw-down mobility, md/cp:	8.8



Mobility Based Flow Volume: 9.9 cc

Total Pretest Volume: 10.1cc - MRPS_1- BQP1 Resolution: 0.010psi

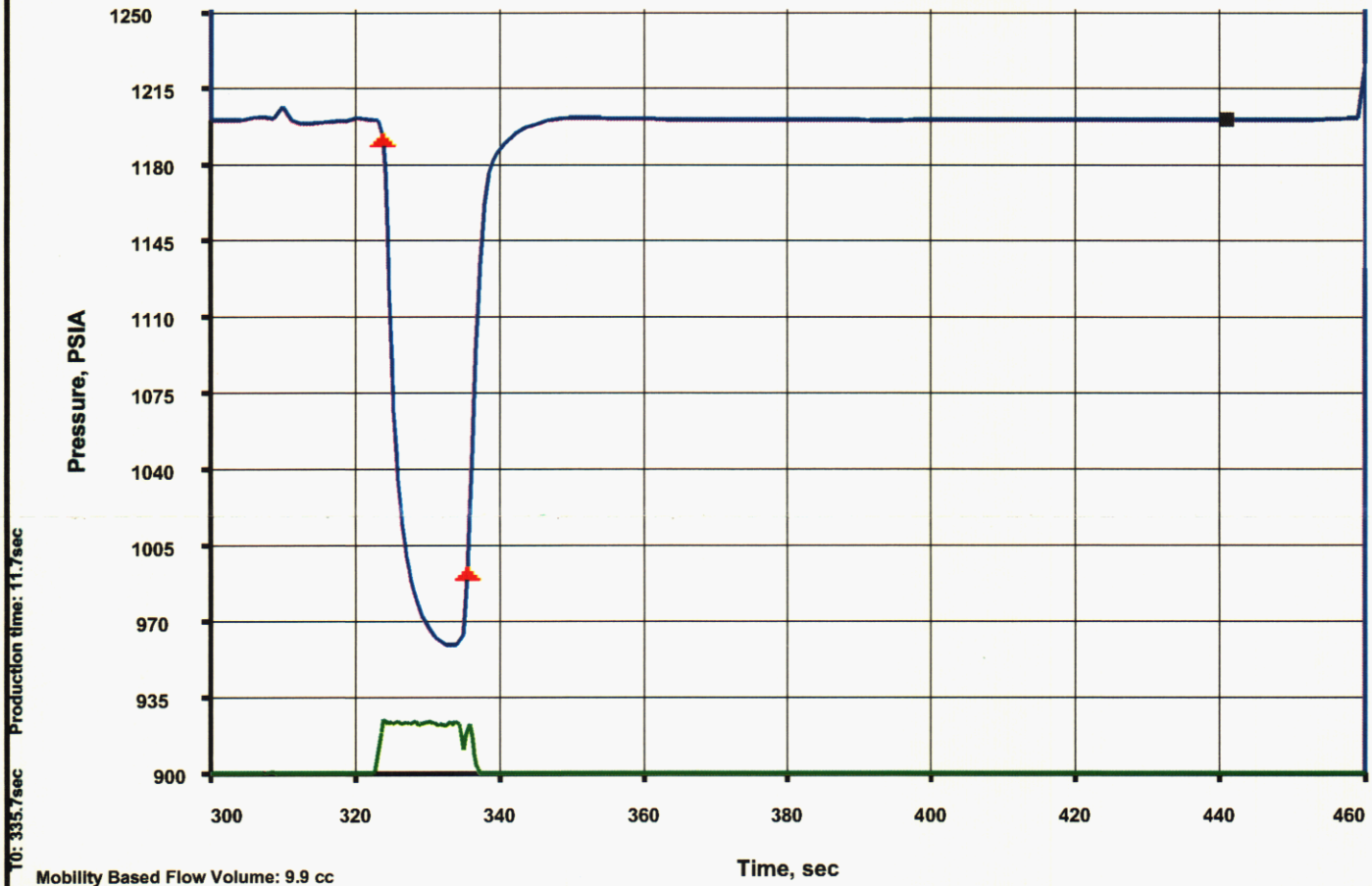
File 92
5-Mar-2011

Depth, FT: 4373.68
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	2111.74
Mud Pressure after test, PSIA:	2108.25
Last build-up pressure, PSIA:	1199.32
Draw-down mobility, md/cp:	8.8

DOM-002



Mobility Based Flow Volume: 9.9 cc

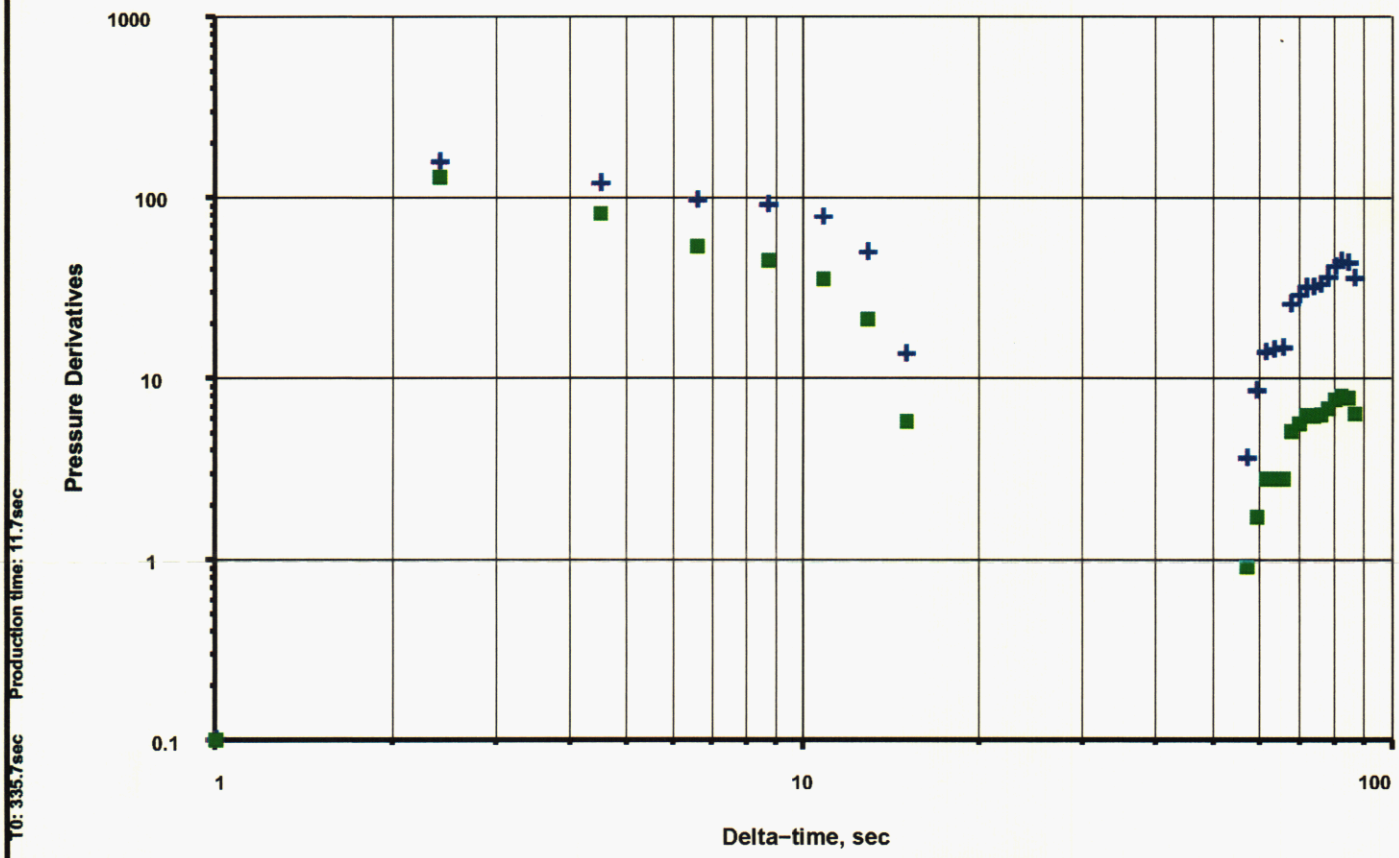
Total Pretest Volume: 10.1cc - MRPS_1- BQP1 Resolution: 0.010psi

File 92 Depth, FT: 4373.68 Volumetric Pretest - Large-Diameter probe

5-Mar-2011 OXY US LA Basin

Dominguez

DOM-002



Pretest Volume: 9.9 cc - MRPS_1- BQP1 Resolution: 0.010psi

+ Spherical Derivative ■ Radial Derivative

Schlumberger

Station Taken @ 4766.5 ft
File # 71, 95

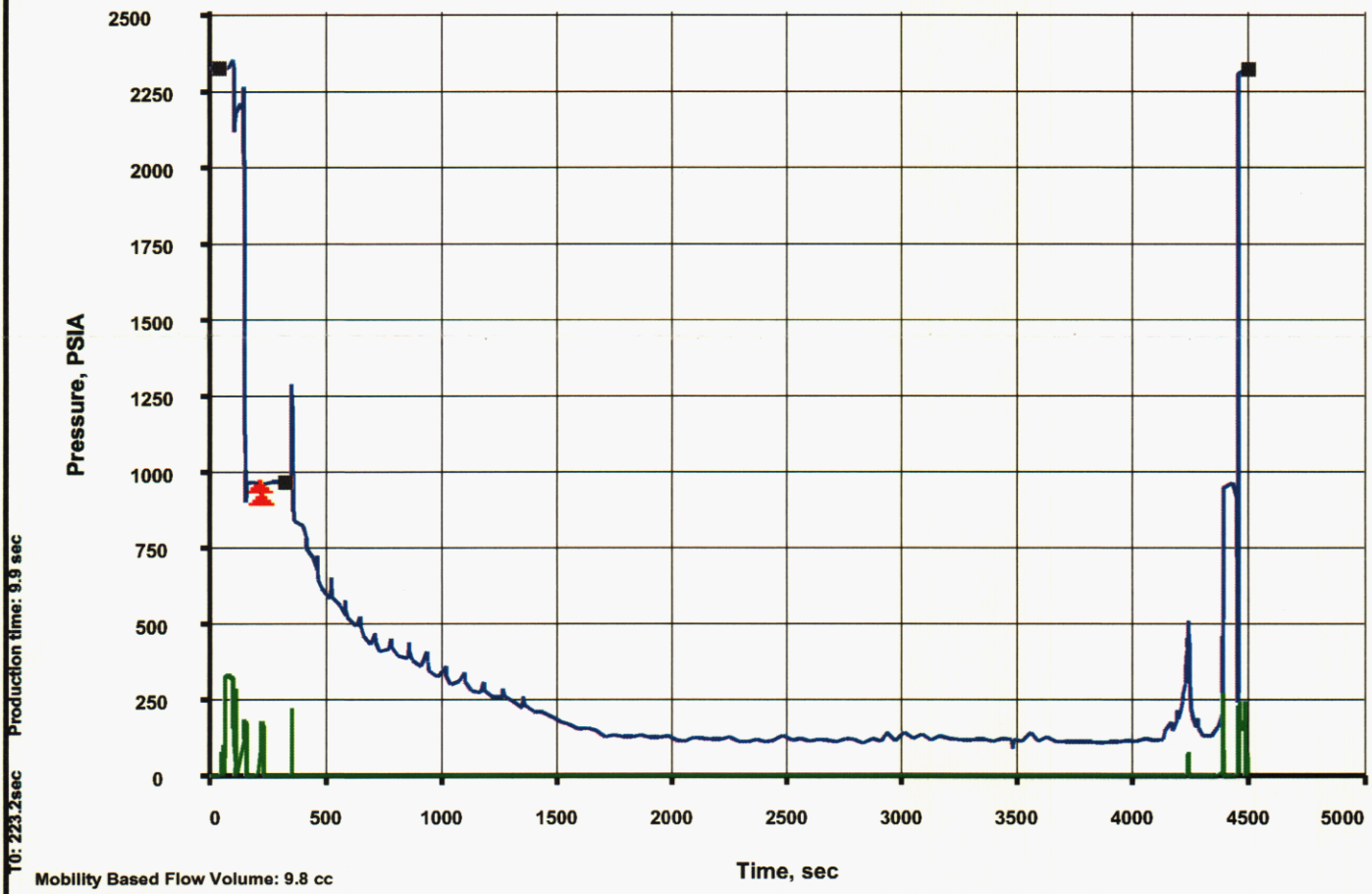
MAXIS Field Log

File 71
5-Mar-2011

Depth, FT: 4766.50
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	2314.73
Mud Pressure after test, PSIA:	2311.52
Last build-up pressure, PSIA:	964.52
Draw-down mobility, md/cp:	66.7



Mobility Based Flow Volume: 9.8 cc

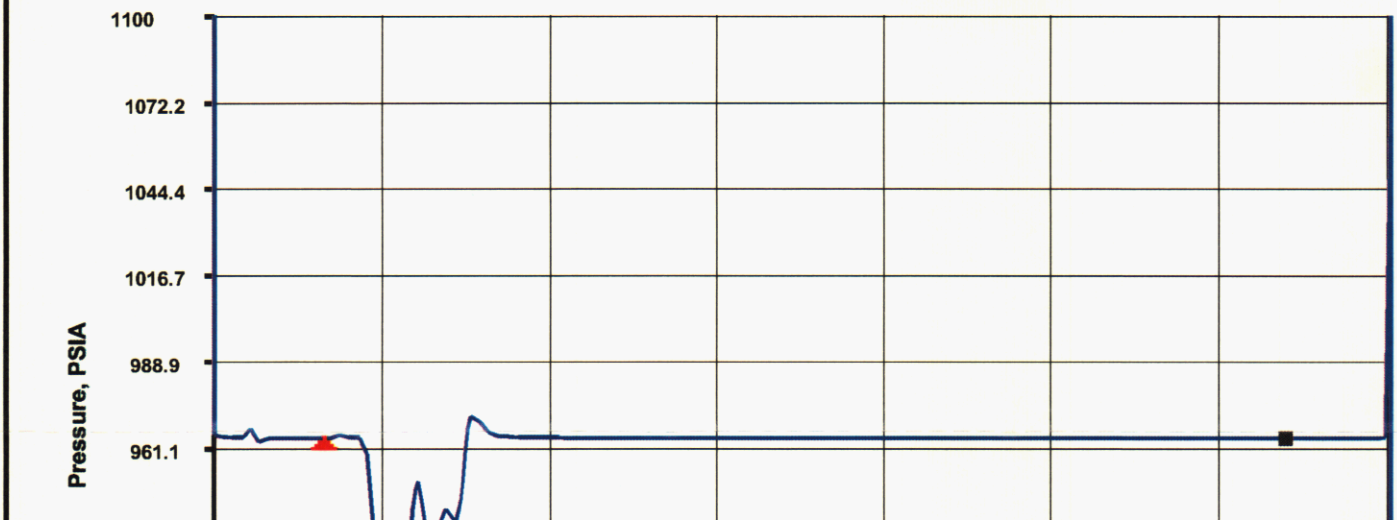
Total Pretest Volume: 9.8 cc - MRPS_1- BQP1 Resolution: 0.010psi

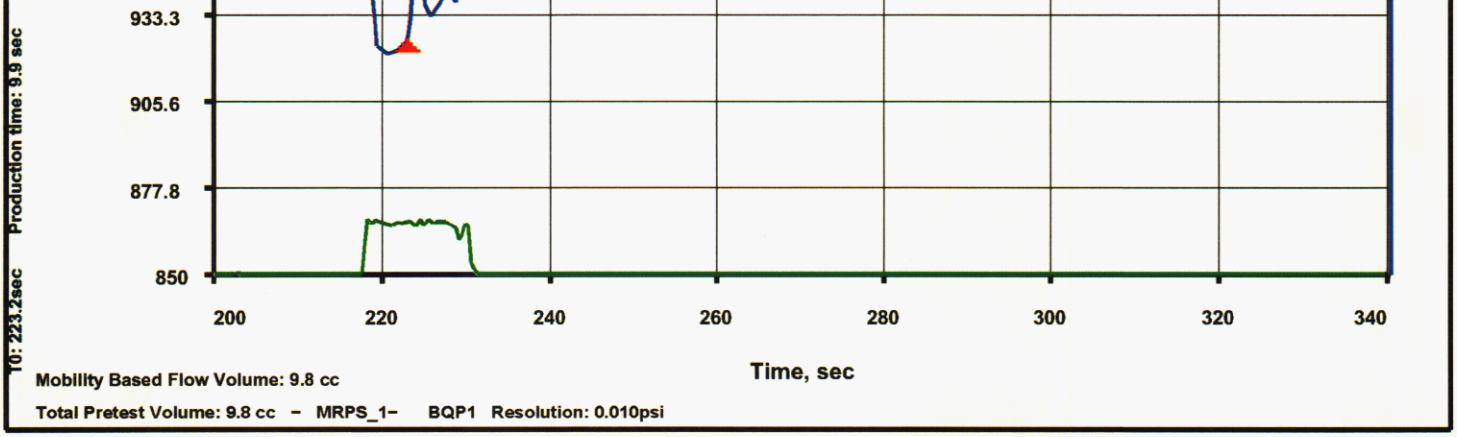
File 71
5-Mar-2011

Depth, FT: 4766.50
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	2314.73
Mud Pressure after test, PSIA:	2311.52
Last build-up pressure, PSIA:	964.52
Draw-down mobility, md/cp:	66.7

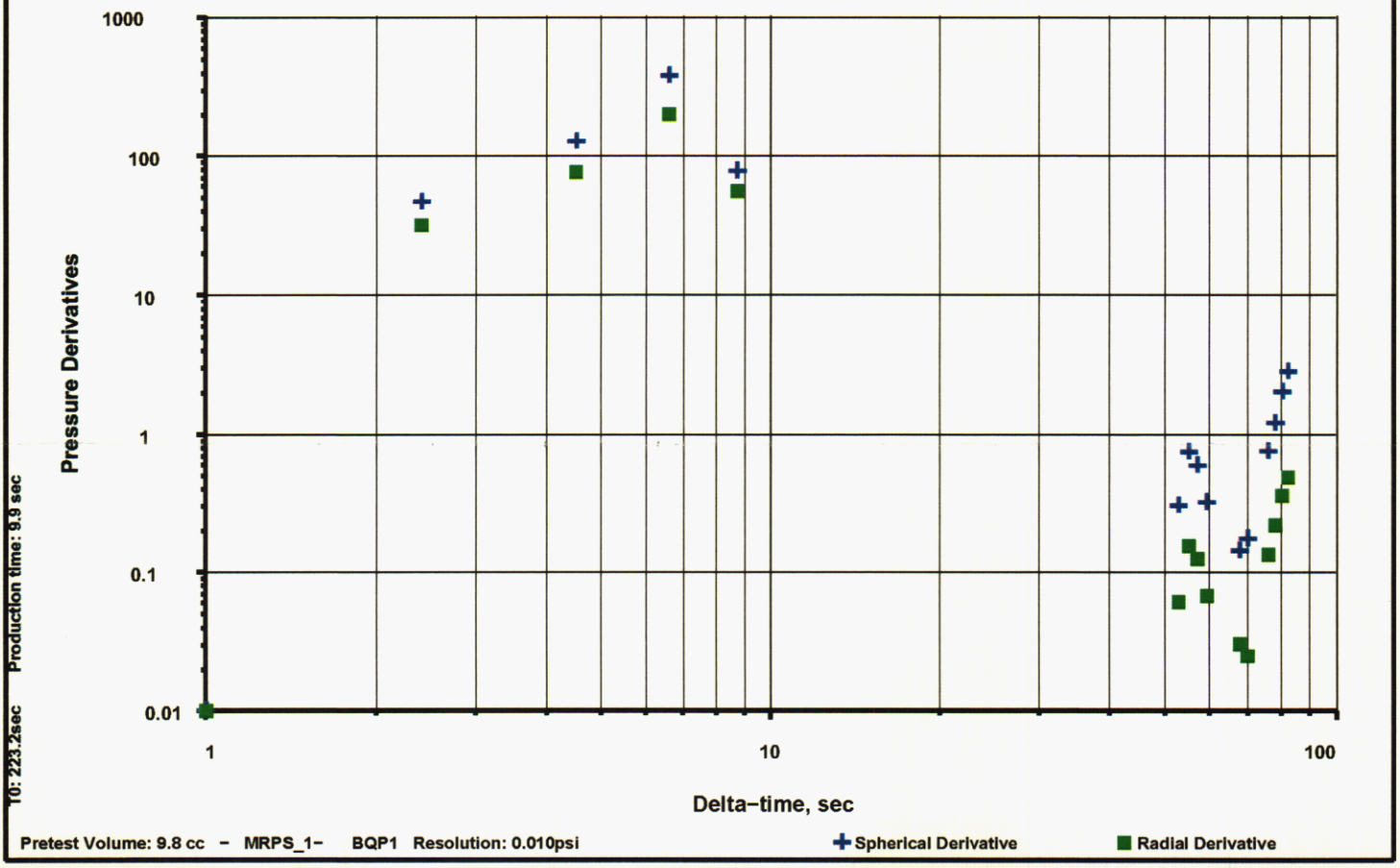




File 71
5-Mar-2011

Depth, FT: 4766.50
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe



Schlumberger

Station Taken @ 5059 ft
File # 72, 96

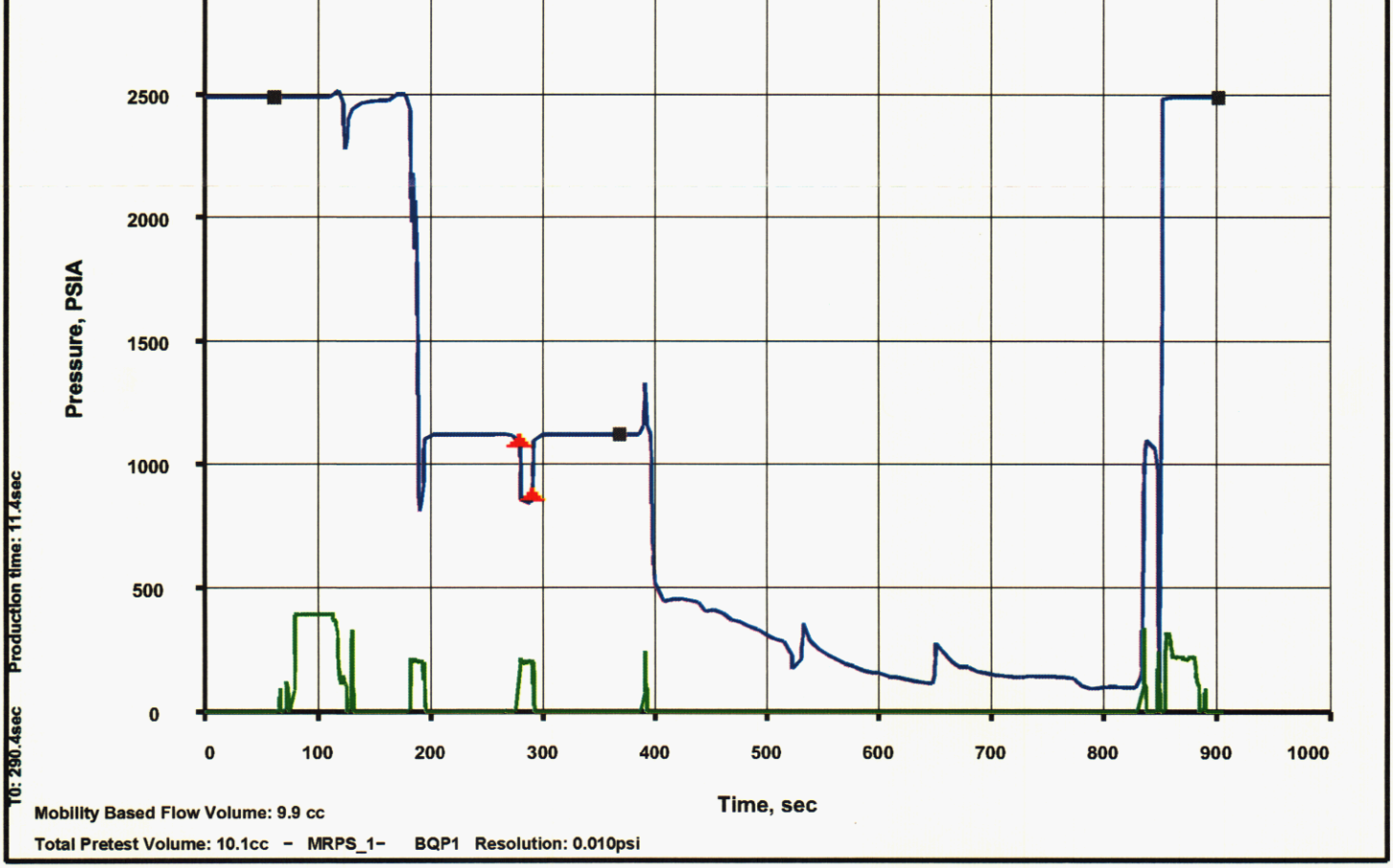
MAXIS Field Log

File 72
5-Mar-2011

Depth, FT: 5059.27
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	2476.65
Mud Pressure after test, PSIA:	2475.96
Last build-up pressure, PSIA:	1115.08
Draw-down mobility, md/cp:	7.8



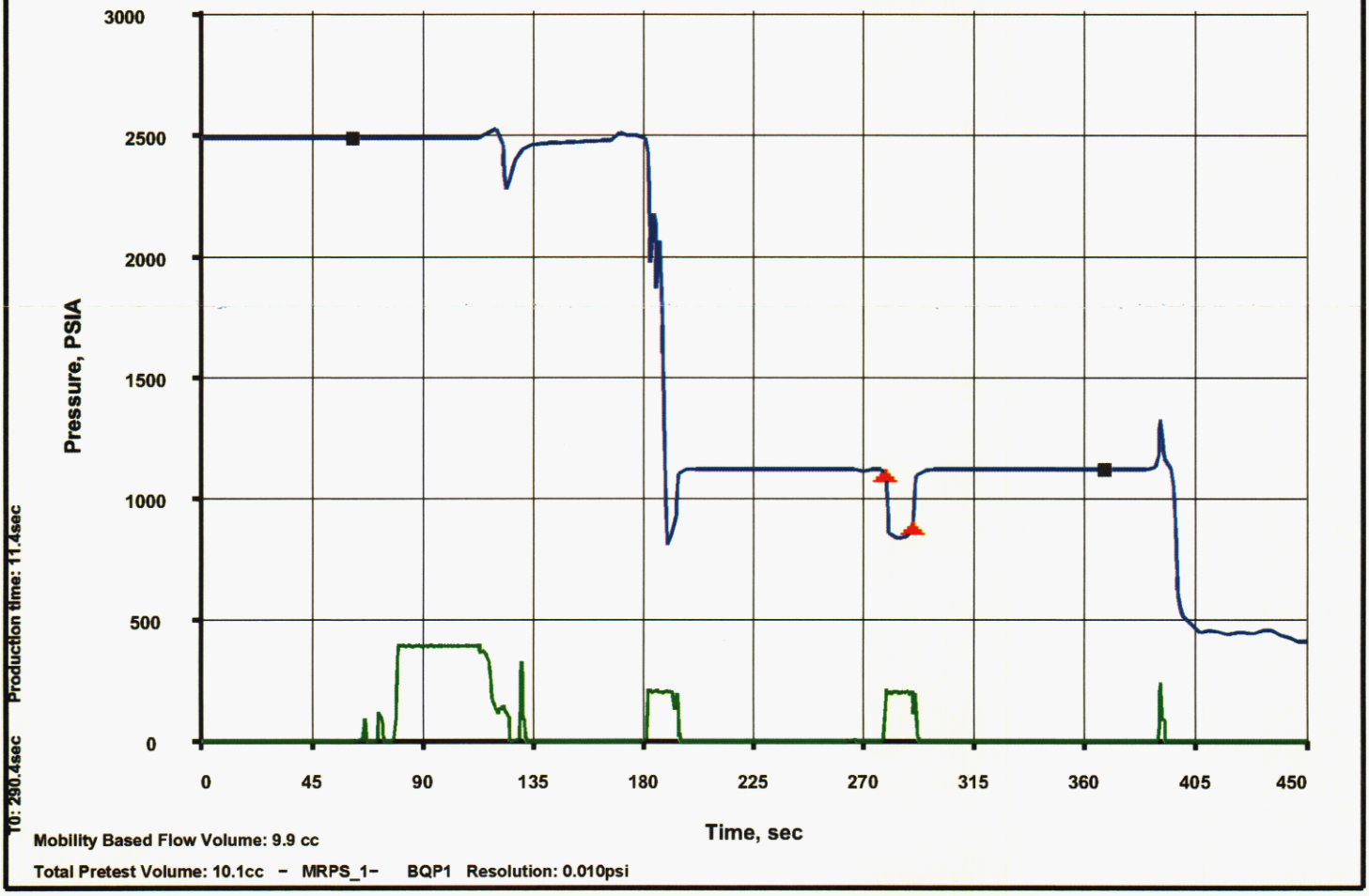
File 72 Depth, FT: 5059.27 Volumetric Pretest - Large-Diameter probe

5-Mar-2011 OXY US LA Basin

Dominguez

DOM-002

Mud Pressure before test, PSIA:	2476.65
Mud Pressure after test, PSIA:	2475.96
Last build-up pressure, PSIA:	1115.08
Draw-down mobility, md/cp:	7.8

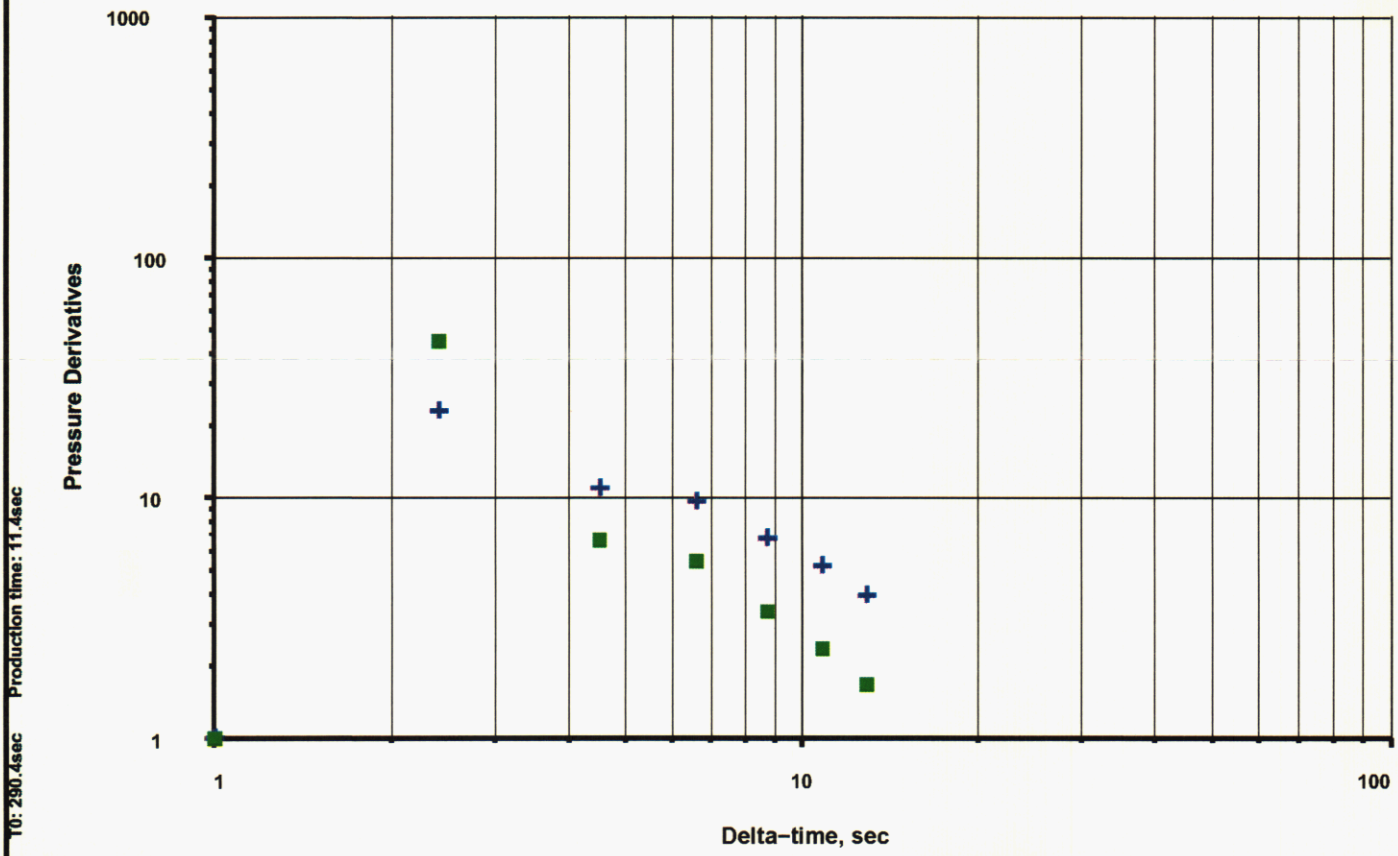


File 72 Depth, FT: 5059.27 Volumetric Pretest - Large-Diameter probe

5-Mar-2011 OXY US LA Basin

Dominguez

DOM-002



Pretest Volume: 9.9 cc - MRPS_1- BQP1 Resolution: 0.010psi

✚ Spherical Derivative ■ Radial Derivative

Schlumberger

Station Taken @ 5061 ft
File # 74, 97

MAXIS Field Log

File 74

5-Mar-2011

Depth, FT: 5061.23

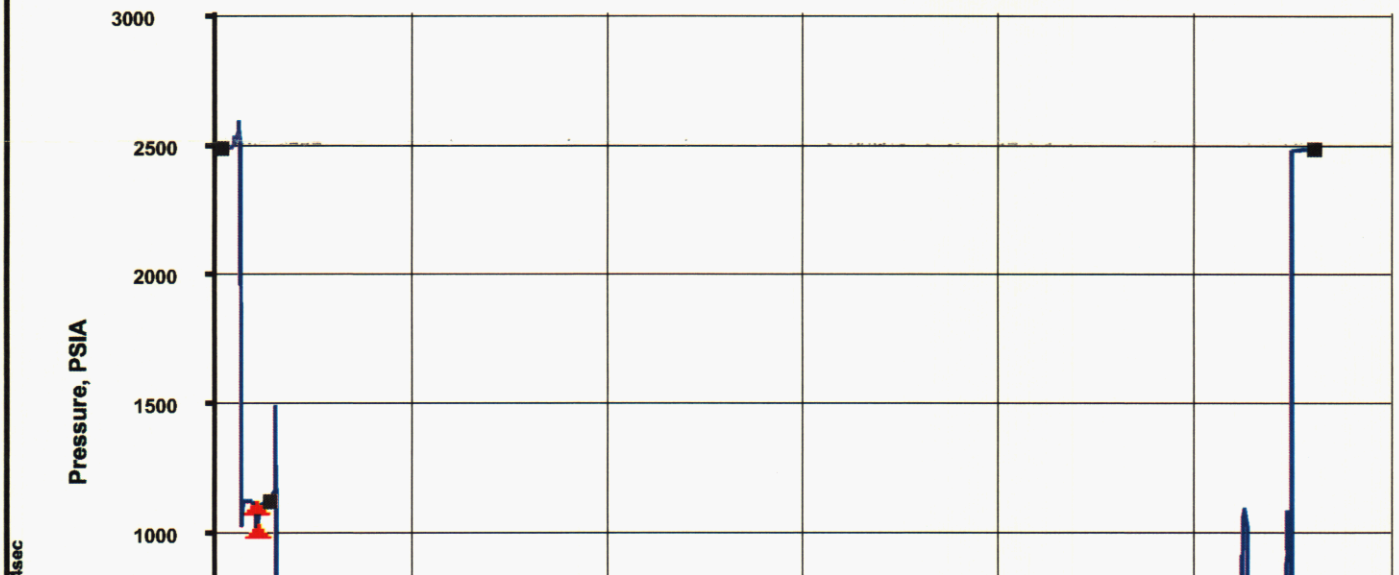
OXY US LA Basin

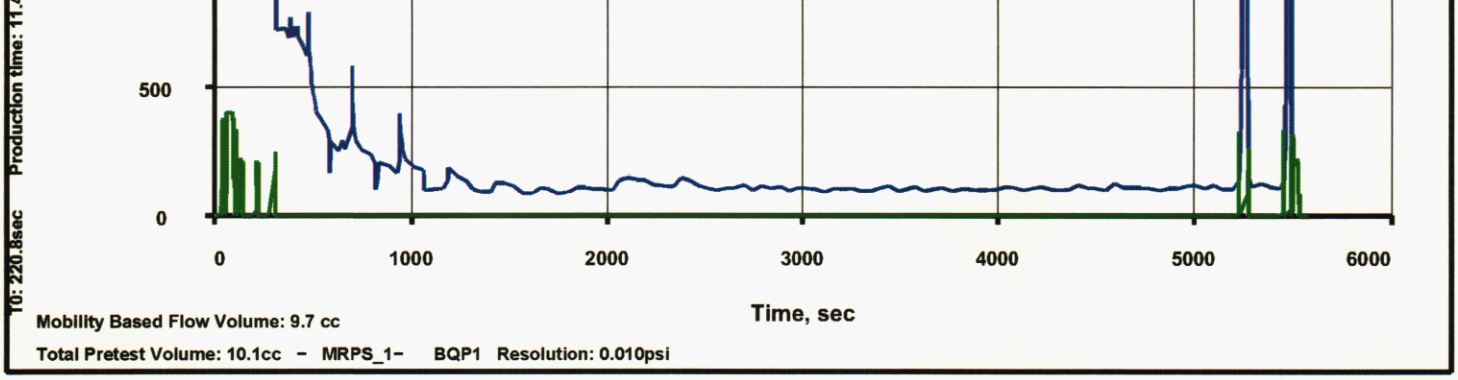
Dominguez

DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	2476.86
Mud Pressure after test, PSIA:	2472.71
Last build-up pressure, PSIA:	1115.23
Draw-down mobility, md/cp:	17.2



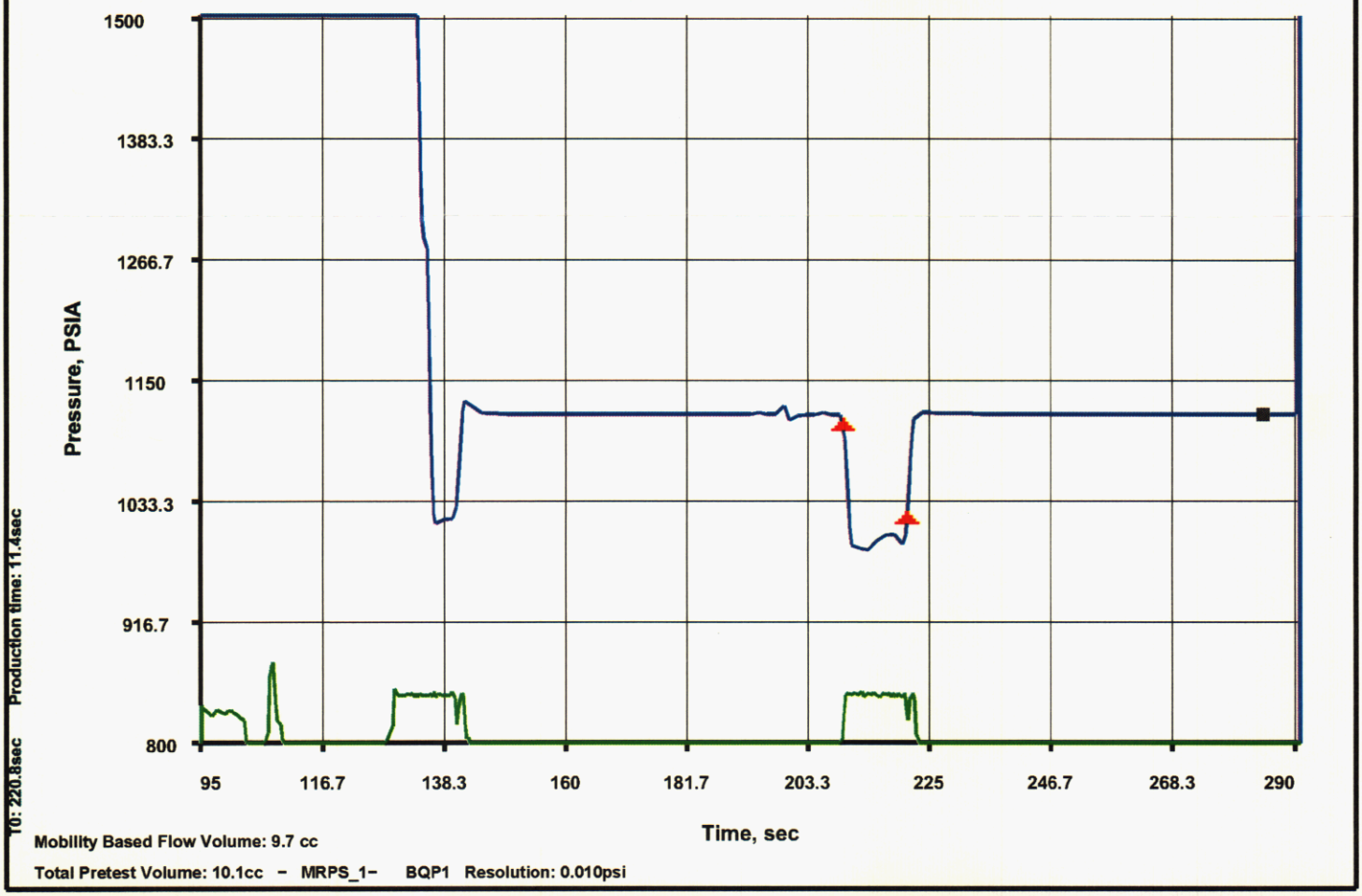


File 74
5-Mar-2011

Depth, FT: 5061.23
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	2476.86
Mud Pressure after test, PSIA:	2472.71
Last build-up pressure, PSIA:	1115.23
Draw-down mobility, md/cp:	17.2



Schlumberger

Station Taken @ 5313 ft
File # 75, 98

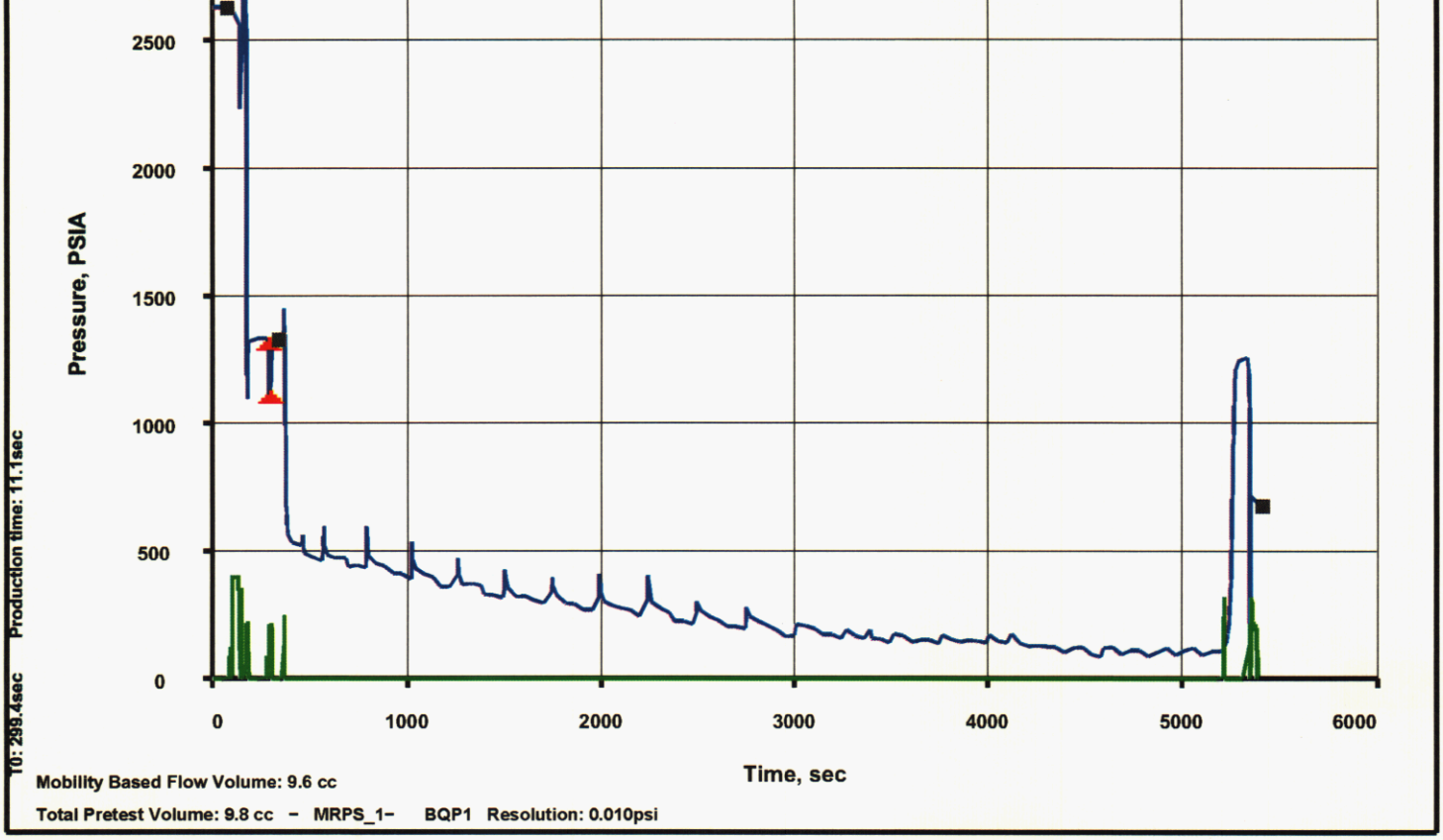
MAXIS Field Log

File 75
5-Mar-2011

Depth, FT: 5312.71
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	2615.31
Mud Pressure after test, PSIA:	676.21
Last build-up pressure, PSIA:	1325.98
Draw-down mobility, md/cp:	8.3

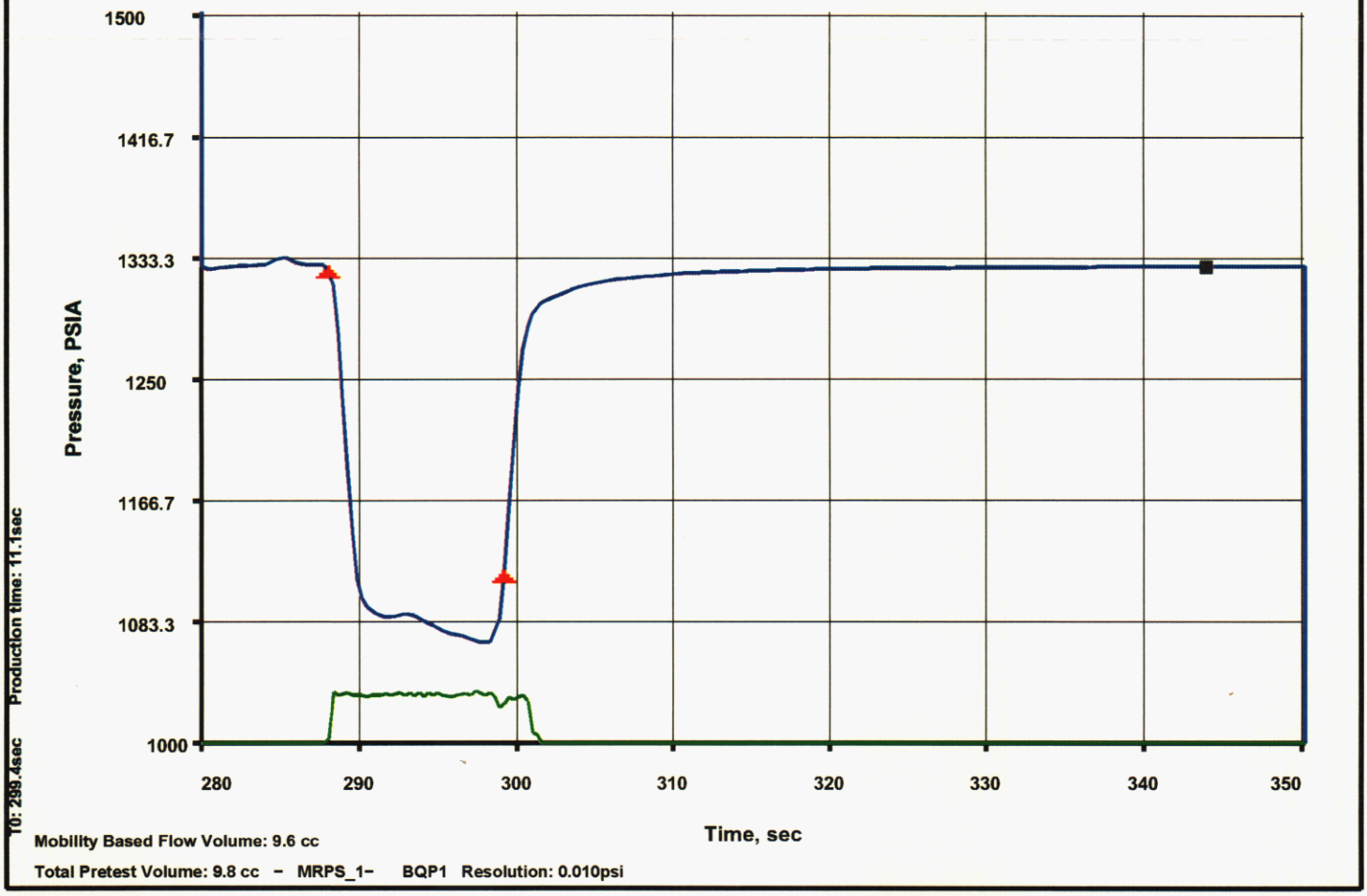


File 75
5-Mar-2011

Depth, FT: 5312.71
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIA:	2615.31
Mud Pressure after test, PSIA:	676.21
Last build-up pressure, PSIA:	1325.98
Draw-down mobility, md/cp:	8.3



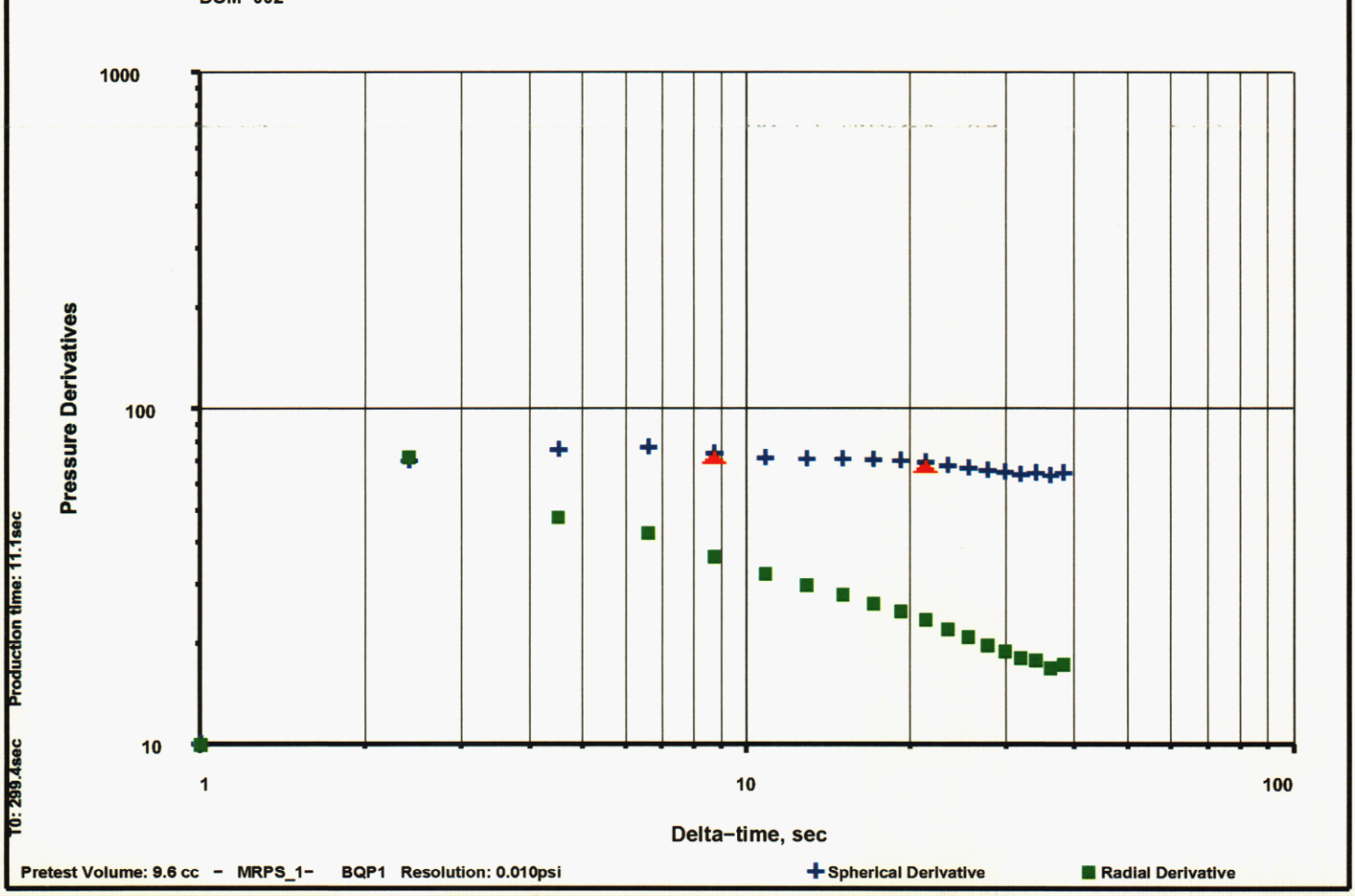
File 75
5-Mar-2011

Depth, FT: 5312.71
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

From picks on Spherical derivative:

Slope on Spherical:	-0.053
Slope on Radial:	-0.47



Schlumberger

Station Taken @ 5615 ft
File # 76, 99

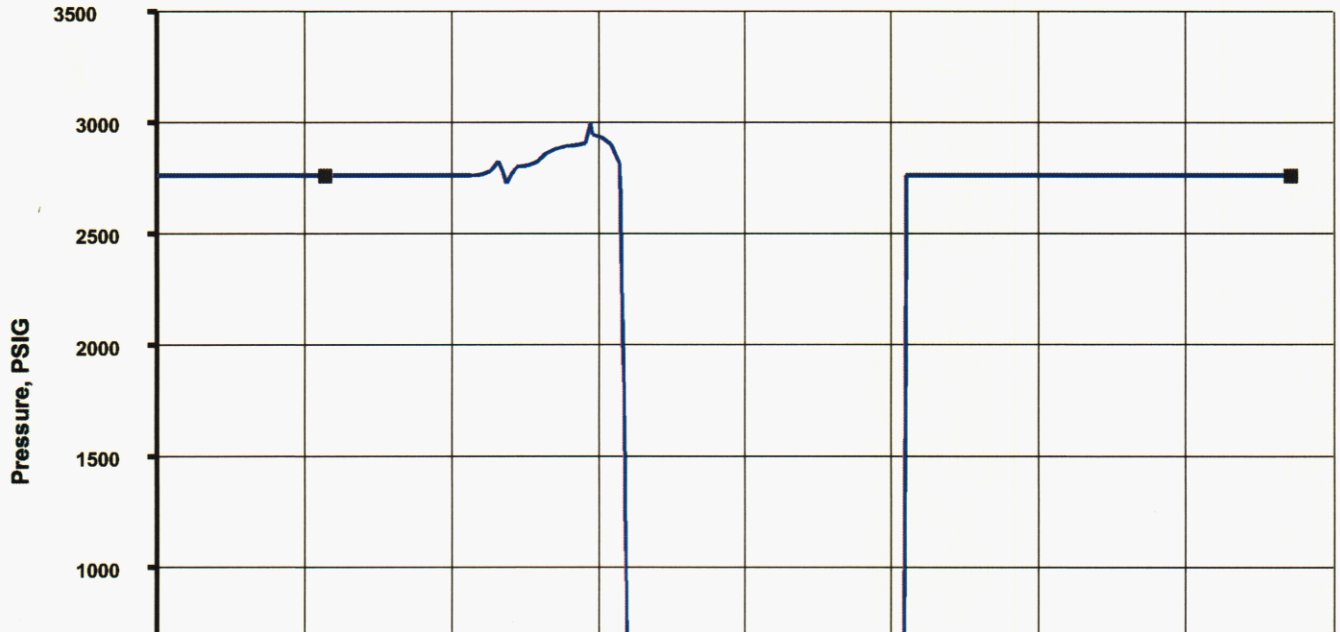
MAXIS Field Log

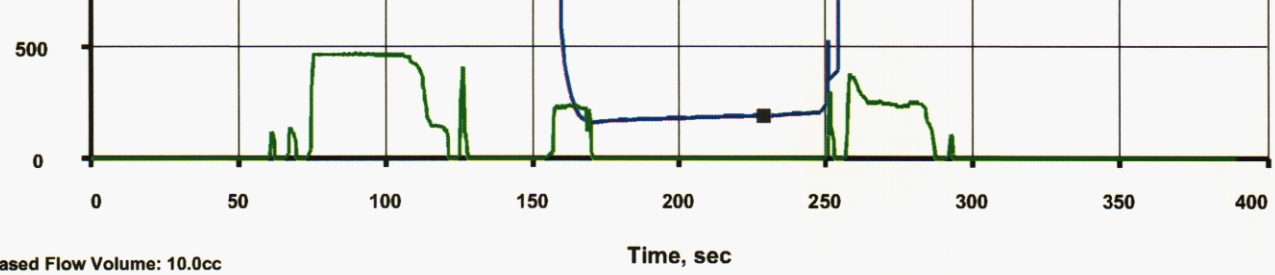
File 76
5-Mar-2011

Depth, FT: 5614.93
OXY US LA Basin
Dominguez
DOM-002

Dry Test - Large-Diameter probe

Mud Pressure before test, PSIG:	2767.51
Mud Pressure after test, PSIG:	2767.23
Last build-up pressure, PSIG:	194.71





Mobility Based Flow Volume: 10.0cc

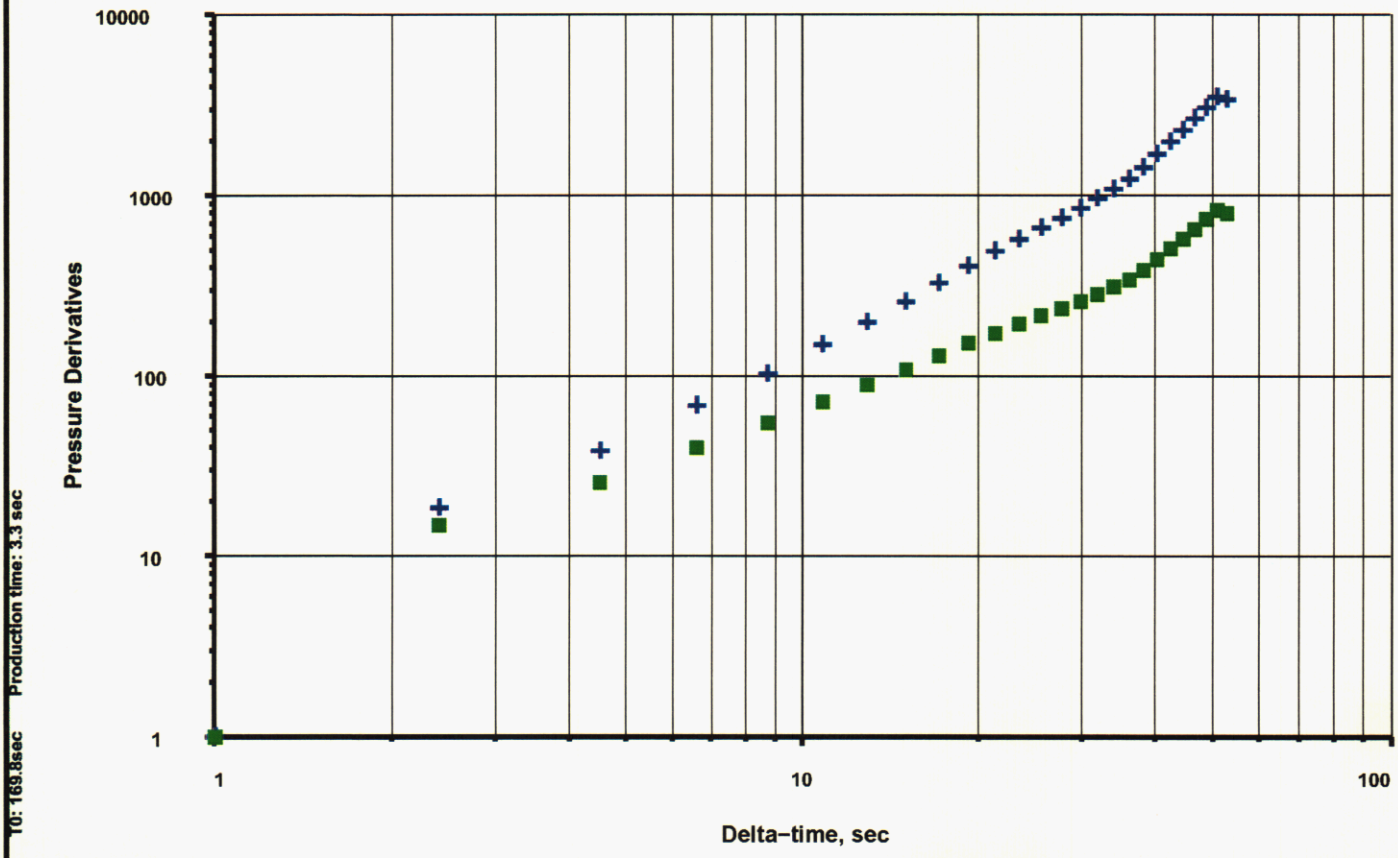
Total Pretest Volume: 10.0cc - MRPS_1- BSG1 Resolution: 0.040psi

File 76 Depth, FT: 5614.93 Volumetric Pretest - Large-Diameter probe

5-Mar-2011 OXY US LA Basin

Dominguez

DOM-002



Pretest Volume: 0.9 cc - MRPS_1- BQP1 Resolution: 0.010psi

+ Spherical Derivative ■ Radial Derivative

Schlumberger

Station Taken @ 5620 ft
File # 78, 101

MAXIS Field Log

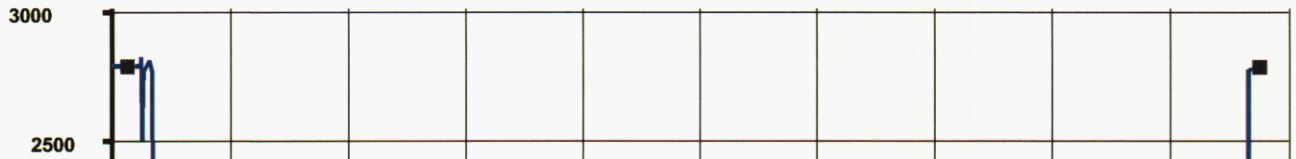
File 78 Depth, FT: 5619.82 Volumetric Pretest - Large-Diameter probe

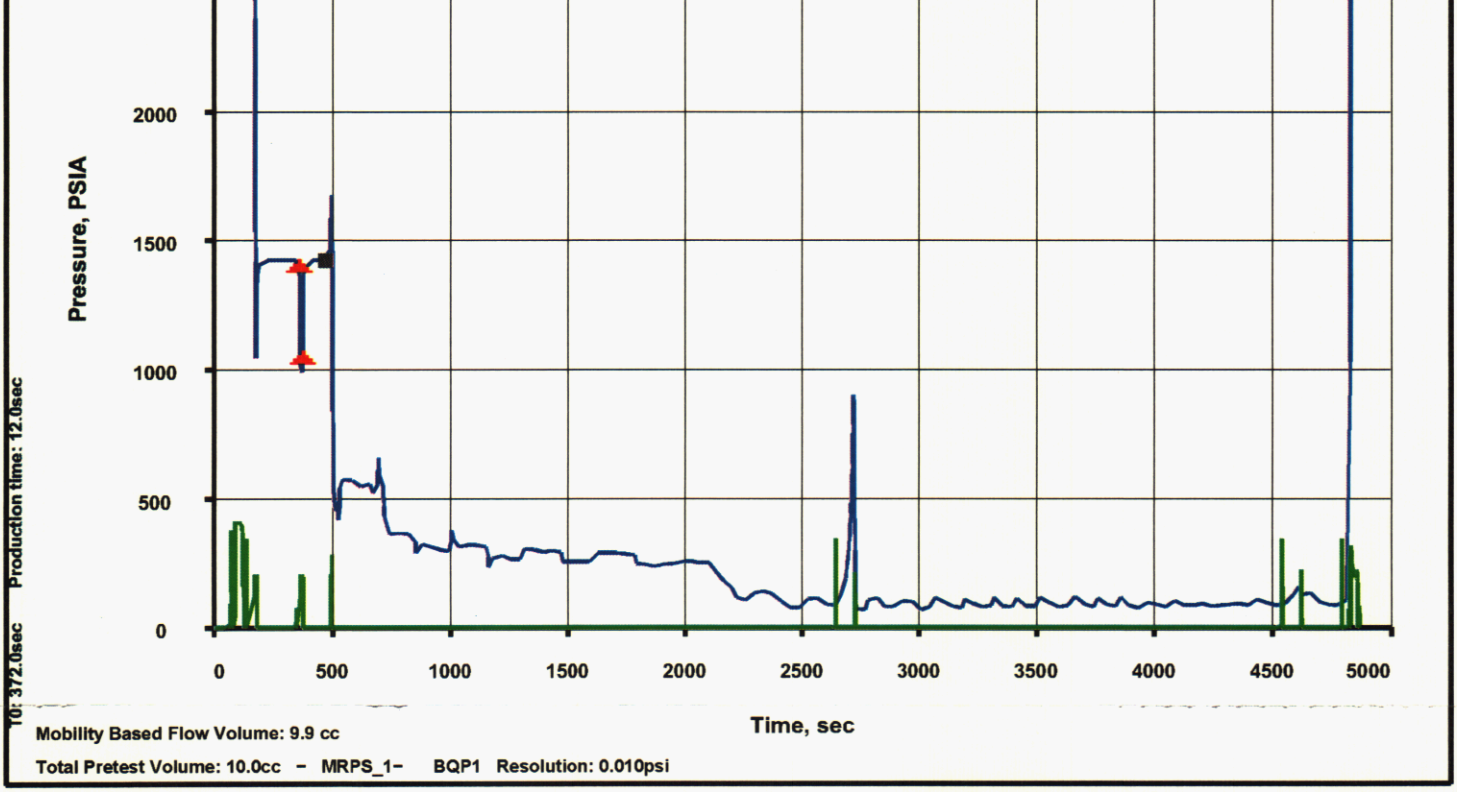
5-Mar-2011 OXY US LA Basin

Dominguez

DOM-002

Mud Pressure before test, PSIA:	2779.46
Mud Pressure after test, PSIA:	2774.85
Last build-up pressure, PSIA:	1417.2
Draw-down mobility, md/cp:	4.5



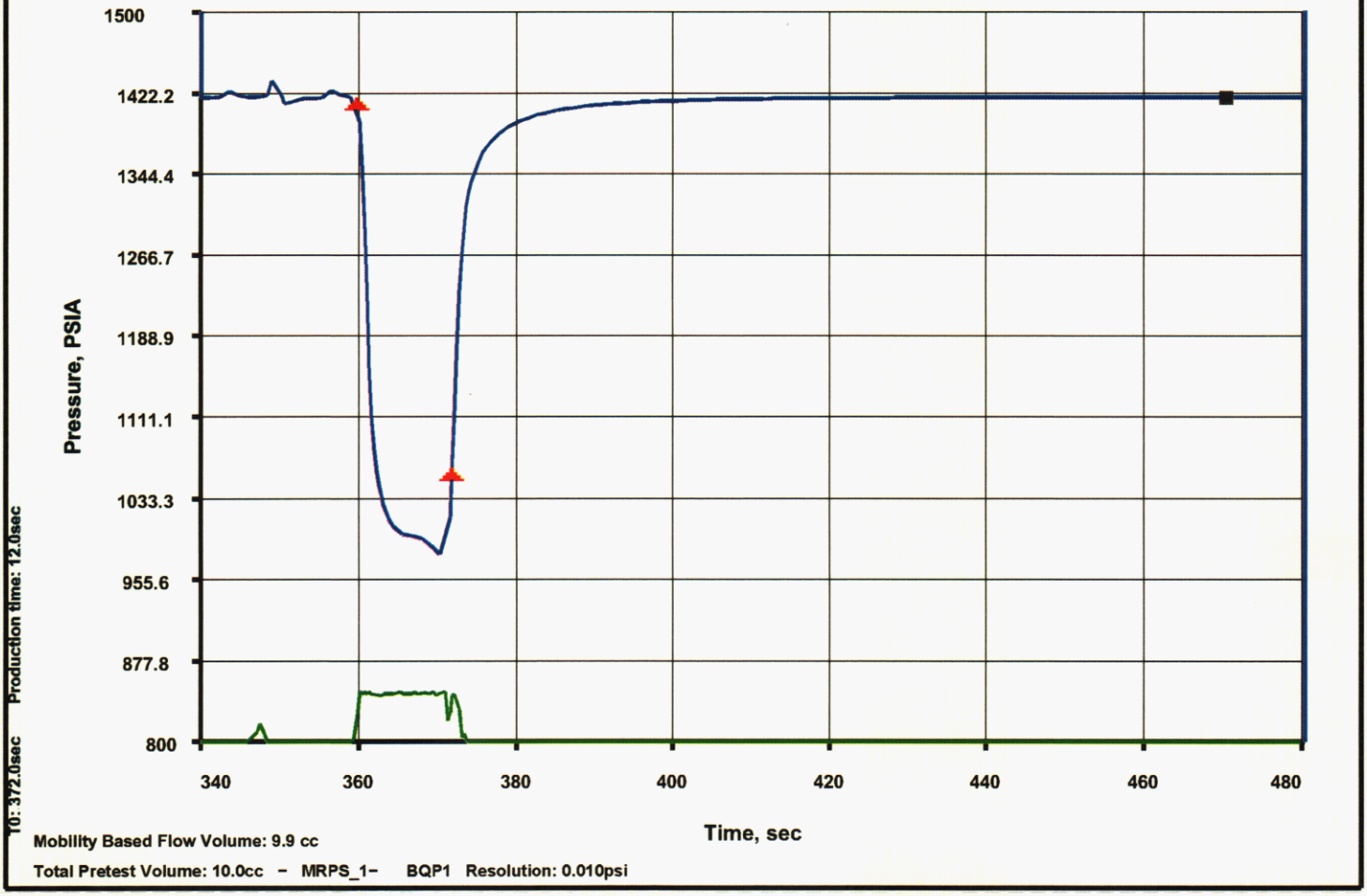


File 78
5-Mar-2011

Depth, FT: 5619.82
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

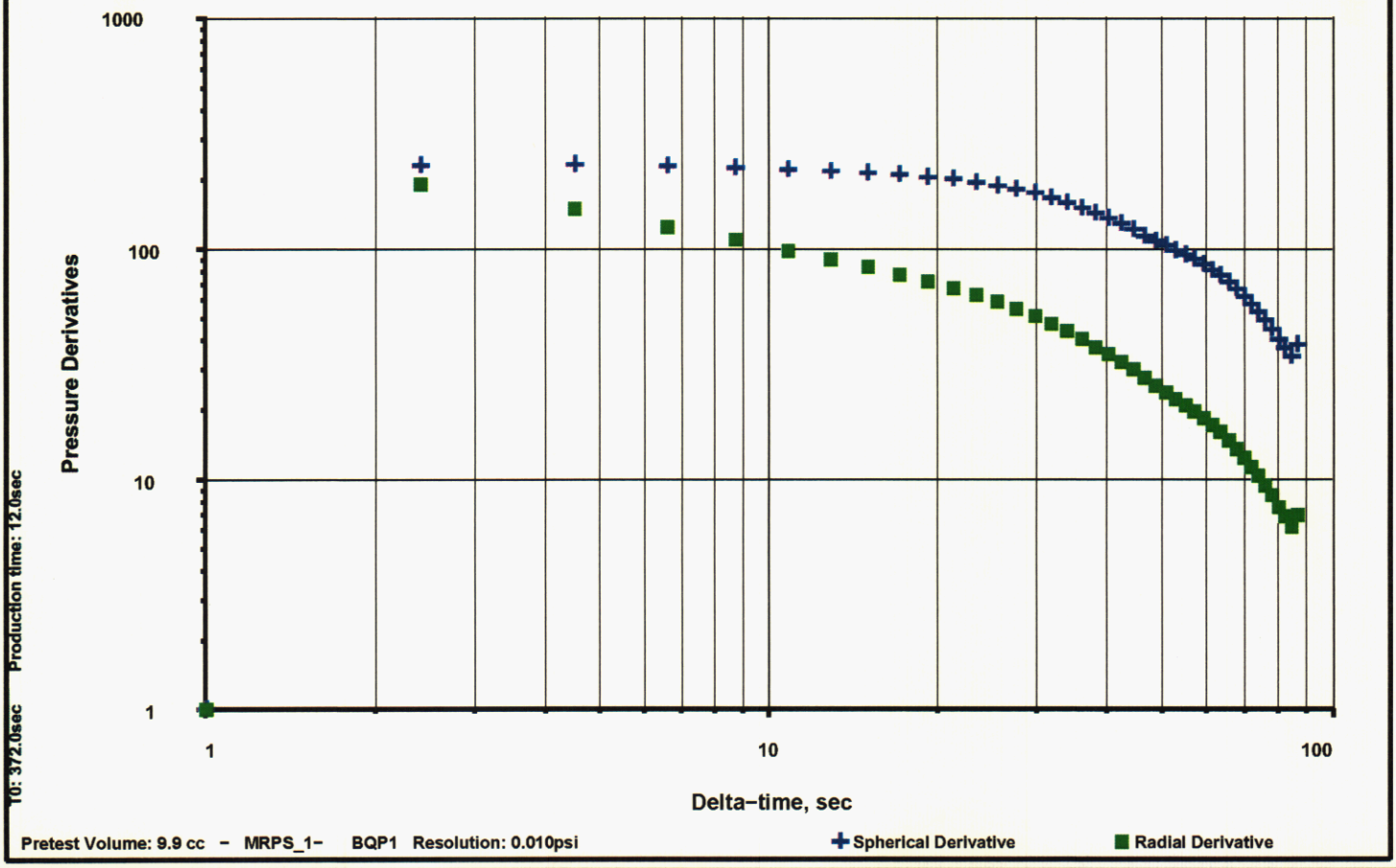
Mud Pressure before test, PSIA:	2779.46
Mud Pressure after test, PSIA:	2774.85
Last build-up pressure, PSIA:	1417.2
Draw-down mobility, md/cp:	4.5



File 78
5-Mar-2011

Depth, FT: 5619.82
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe



Schlumberger

Station Taken @ 5624 ft
File # 77, 100

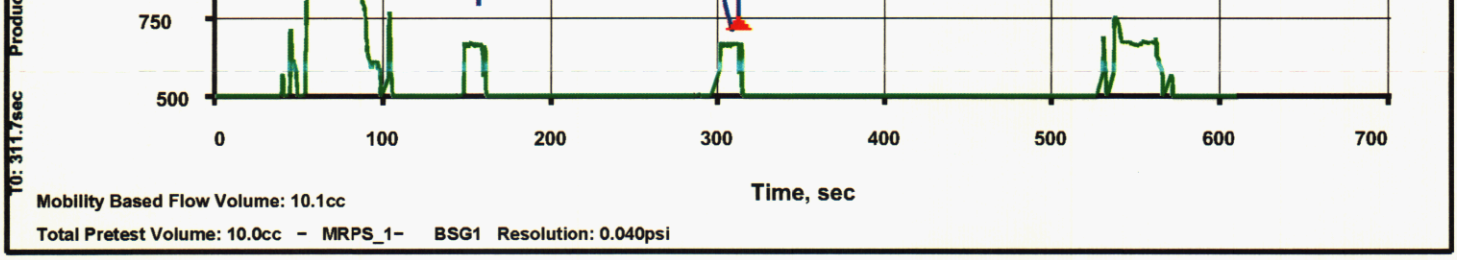
MAXIS Field Log

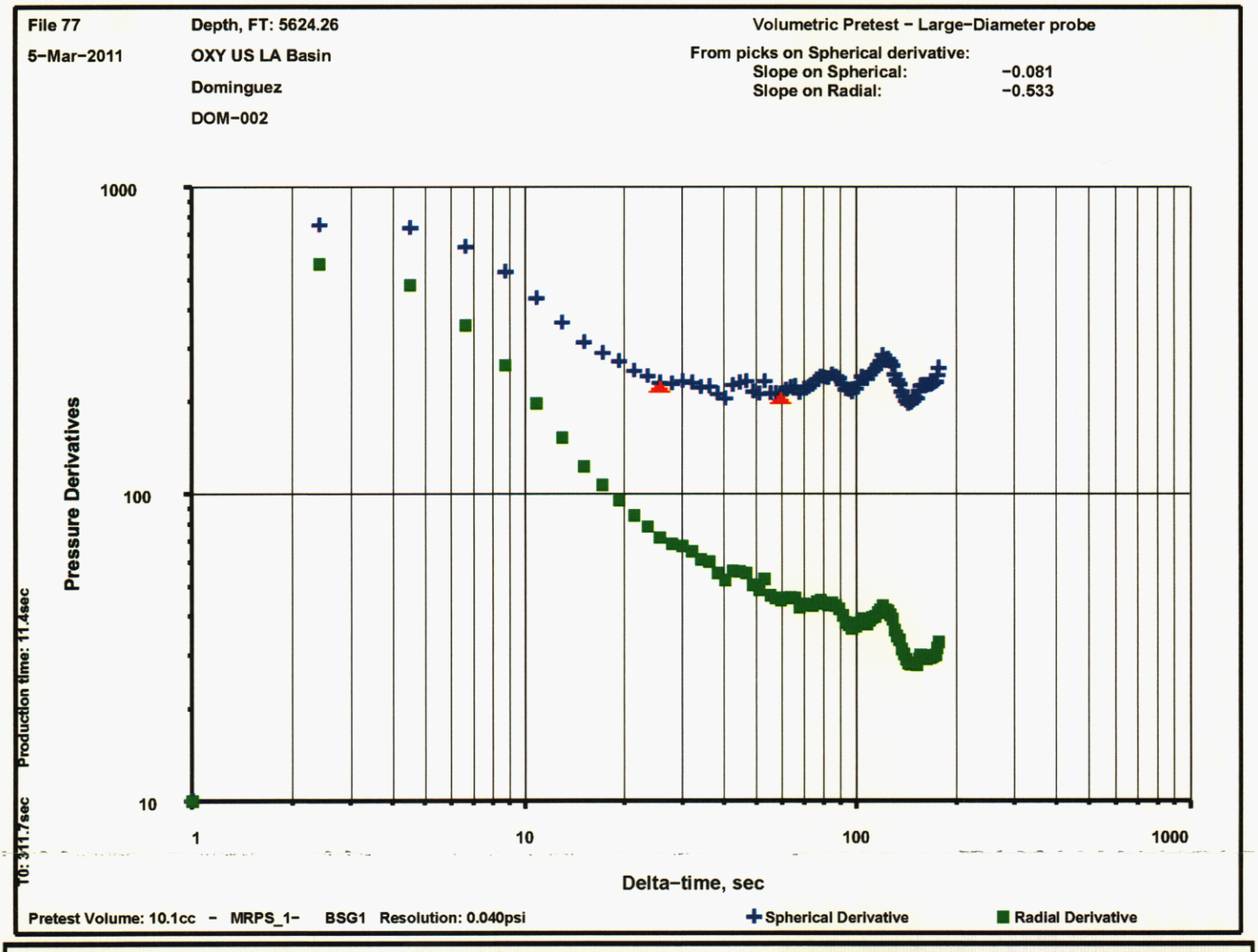
File 77
5-Mar-2011

Depth, FT: 5624.26
OXY US LA Basin
Dominguez
DOM-002

Volumetric Pretest - Large-Diameter probe

Mud Pressure before test, PSIG:	2772.83
Mud Pressure after test, PSIG:	2772.35
Last build-up pressure, PSIG:	1408
Draw-down mobility, md/cp:	2.6





Schlumberger

Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Live Fluid Analyzer Wellsite Calibration - Spectrometer Channels							
Before: 5-Mar-2011 8:29							
Dark Mode - 0	0.02500	N/A	0.02938	N/A	N/A	N/A	V
Dark Mode - 1	0.02500	N/A	0.02886	N/A	N/A	N/A	V
Dark Mode - 2	0.02500	N/A	0.02929	N/A	N/A	N/A	V
Dark Mode - 3	0.02500	N/A	0.02940	N/A	N/A	N/A	V
Dark Mode - 4	0.02500	N/A	0.02914	N/A	N/A	N/A	V

Dark Mode - 5	0.02500	N/A	0.02913	N/A	N/A	N/A	V
Dark Mode - 6	0.02500	N/A	0.02916	N/A	N/A	N/A	V
Dark Mode - 7	0.02500	N/A	0.02914	N/A	N/A	N/A	V
Dark Mode - 8	0.02500	N/A	0.02890	N/A	N/A	N/A	V
Dark Mode - 9	0.02500	N/A	0.02917	N/A	N/A	N/A	V
Source Mode - 0	1.700	N/A	0.9769	N/A	N/A	N/A	V
Source Mode - 1	1.700	N/A	1.203	N/A	N/A	N/A	V
Source Mode - 2	1.700	N/A	1.081	N/A	N/A	N/A	V
Source Mode - 3	1.700	N/A	0.9771	N/A	N/A	N/A	V
Source Mode - 4	1.700	N/A	0.9894	N/A	N/A	N/A	V
Source Mode - 5	1.700	N/A	0.9774	N/A	N/A	N/A	V
Source Mode - 6	1.700	N/A	0.9026	N/A	N/A	N/A	V
Source Mode - 7	1.700	N/A	1.002	N/A	N/A	N/A	V
Source Mode - 8	1.700	N/A	0.7802	N/A	N/A	N/A	V
Source Mode - 9	1.700	N/A	1.818	N/A	N/A	N/A	V

Live Fluid Analyzer Wellsite Calibration - Gas Detector Channels
Before: 5-Mar-2011 8:29

Dark Mode - 0	0.02500	N/A	0.02931	N/A	N/A	N/A	V
Dark Mode - 1	0.02500	N/A	0.02905	N/A	N/A	N/A	V
Dark Mode - 2	0.02500	N/A	0.02925	N/A	N/A	N/A	V
Dark Mode - 3	0.02500	N/A	0.02901	N/A	N/A	N/A	V
Dark Mode - 4	0.02500	N/A	0.02929	N/A	N/A	N/A	V
Dark Mode - 5	0.02500	N/A	0.02928	N/A	N/A	N/A	V

Live Fluid Analyzer Wellsite Calibration - Gas Detector Source Intensity
Before: 5-Mar-2011 8:29

Source Intensity Dark Mode	0.02600	N/A	0.02969	N/A	N/A	N/A	V
Source Intensity Source Mode	0.2500	N/A	0.2608	N/A	N/A	N/A	V

Live Fluid Analyzer / Equipment Identification

Primary Equipment:
Live Fluid Analyzer (TW) MRFA - EA 8296

Auxiliary Equipment:

Live Fluid Analyzer Wellsite Calibration
Spectrometer Channels

Idx	Phase	Dark Mode V	Value	Idx	Phase	Source Mode V	Value
0	Before		0.02938	0	Before		0.9769
1	Before		0.02886	1	Before		1.203
2	Before		0.02929	2	Before		1.081
3	Before		0.02940	3	Before		0.9771
4	Before		0.02914	4	Before		0.9894
5	Before		0.02913	5	Before		0.9774
6	Before		0.02916	6	Before		0.9026
7	Before		0.02914	7	Before		1.002
8	Before		0.02890	8	Before		0.7802
9	Before		0.02917	9	Before		1.818
		0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)				0.2000 (Minimum) 1.700 (Nominal) 3.200 (Maximum)	

Before: 5-Mar-2011 8:29

Live Fluid Analyzer Wellsite Calibration
Gas Detector Channels

Idx	Phase	Dark Mode V	Value
0	Before		0.02931
1	Before		0.02905
2	Before		0.02925
3	Before		0.02901
4	Before		0.02929
5	Before		0.02928
		0.01700 (Minimum) 0.02500 (Nominal) 0.03300 (Maximum)	

Before: 5-Mar-2011 8:29

Live Fluid Analyzer Wellsite Calibration

Gas Detector Source Intensity

Phase	Source Intensity Dark Mode V	Value	Phase	Source Intensity Source Mode V	Value
Before		0.02969	Before		0.2608
	0.01700 (Minimum) 0.02600 (Nominal) 0.03500 (Maximum)			0.1900 (Minimum) 0.2500 (Nominal) 0.3100 (Maximum)	

Before: 5-Mar-2011 8:29

MASTER CALIBRATION SUMMARY: Quartz Gauge (Single Probe Module 1)

Calibration Pressure Unit:	PSIA
Calibration Temperature Unit:	DEGC
Sensor Comment:	:
Sensor Serial Number:	3591
Sensor Calibration Date (DDMMYY):	250610
Pressure Model:	P=F(Fc,Fb)
Pressure Matrix:	66
Pressure CRC:	F3CA
Temperature Model:	T=F(Fb,Fc)
Temperature Matrix:	66
Temperature CRC:	B52E
Clock Comment:	:
Clock Serial Number:	824
Clock Calibration Date (DDMMYY):	140610
Clock Model:	Fclk=F(Fb'-Fc')
Clock Matrix:	16
Clock CRC:	3756
Fc Offset:	+.514400000000E+07 Hz
Fb Offset:	+.558800000000E+07 Hz
R Offset:	+.470000000000E+06 Hz

Pressure Coefficients

	Fb**0	Fb**1	Fb**2	Fb**3
Fc**0	+.790595321326E+0	+.425858999414E-0	+.201801186171E-0	-.714435230352E-1
Fc**1	-.101011468470E+0	-.120902102397E-0	-.960314861247E-1	-.367969799818E-1
Fc**2	+.793063313352E-0	+.343256291625E-1	+.501870771600E-1	+.699096502621E-1
Fc**3	+.393254704613E-1	+.545114613337E-1	-.114830976820E-1	-.163814020159E-2
Fc**4	+.179555315608E-1	+.371617070142E-1	+.160883584974E-2	-.168986723146E-2
Fc**5	-.710771647510E-2	-.942257070789E-2	+.127497185889E-2	+.392544460348E-3

	Fb**4	Fb**5
Fc**0	-.133252093094E-1	-.216945649710E-1
Fc**1	-.262741285808E-1	+.143100419136E-2
Fc**2	+.314118265315E-2	-.485160790750E-2
Fc**3	+.898289652109E-2	+.928363627133E-3
Fc**4	-.400437813439E-3	+.133870139512E-3

Fc**5	−.851906031526E−3	−.252782756358E−3

Temperature Coefficients

	Fc**0	Fc**1	Fc**2	Fc**3
Fb**0	+.117959438477E+0	−.515242011149E−0	+.571069440568E−0	+.576022908348E−1
Fb**1	−.597470730823E−0	+.133812499745E−0	+.118658962205E−1	+.637349128387E−1
Fb**2	−.317804943946E−0	+.291255489045E−1	+.435835734925E−1	−.971200819981E−2
Fb**3	−.263330398108E−1	+.377054885323E−1	+.103412413379E−2	−.148273464880E−2
Fb**4	−.288855722519E−1	−.464202310042E−2	−.636960823767E−2	+.424752358739E−2
Fb**5	−.226285766400E−2	+.154589444286E−2	−.543753237001E−2	+.680653594220E−3

	Fc**4	Fc**5
Fb**0	+.193479748281E−1	−.303690684733E−2
Fb**1	+.773880012114E−2	−.796133156124E−2
Fb**2	−.552184661840E−2	+.118777780471E−2
Fb**3	−.237710000693E−2	+.252415399206E−3
Fb**4	+.176626091402E−3	−.402918782001E−3
Fb**5	+.128821220383E−3	−.118338787398E−4

Clock Coefficients

F'b/F'c**0	+.517495833081E+0
F'b/F'c**1	+.466181090307E−0
F'b/F'c**2	+.761361828487E−0
F'b/F'c**3	−.650881960823E−1
F'b/F'c**4	−.499193603257E−1
F'b/F'c**5	+.504789551342E−2

Vert Strain Gauge (Single Probe Module 1)

Serial Number:	214515
Range:	20K
Calibration Date:	01−OCT−2010
Mean Quadratic Deviation:	0.4012
Offset:	0.0000 PSI
Calibration Pressure Unit:	PSIG
Calibration Temperature Unit:	DEGF

	G	H	I	J
0	−9.471886e+002	1.010668e+000	−9.748872e−008	−3.543746e−012
1	4.133967e−003	−4.010455e−005	−4.332006e−010	−1.288530e−014
2	1.158709e−003	−8.872686e−008	3.108154e−012	3.935191e−017
3	−1.467033e−006	1.074688e−010	−7.339363e−015	0.000000e+000

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Correlations

MAXIS Field Log

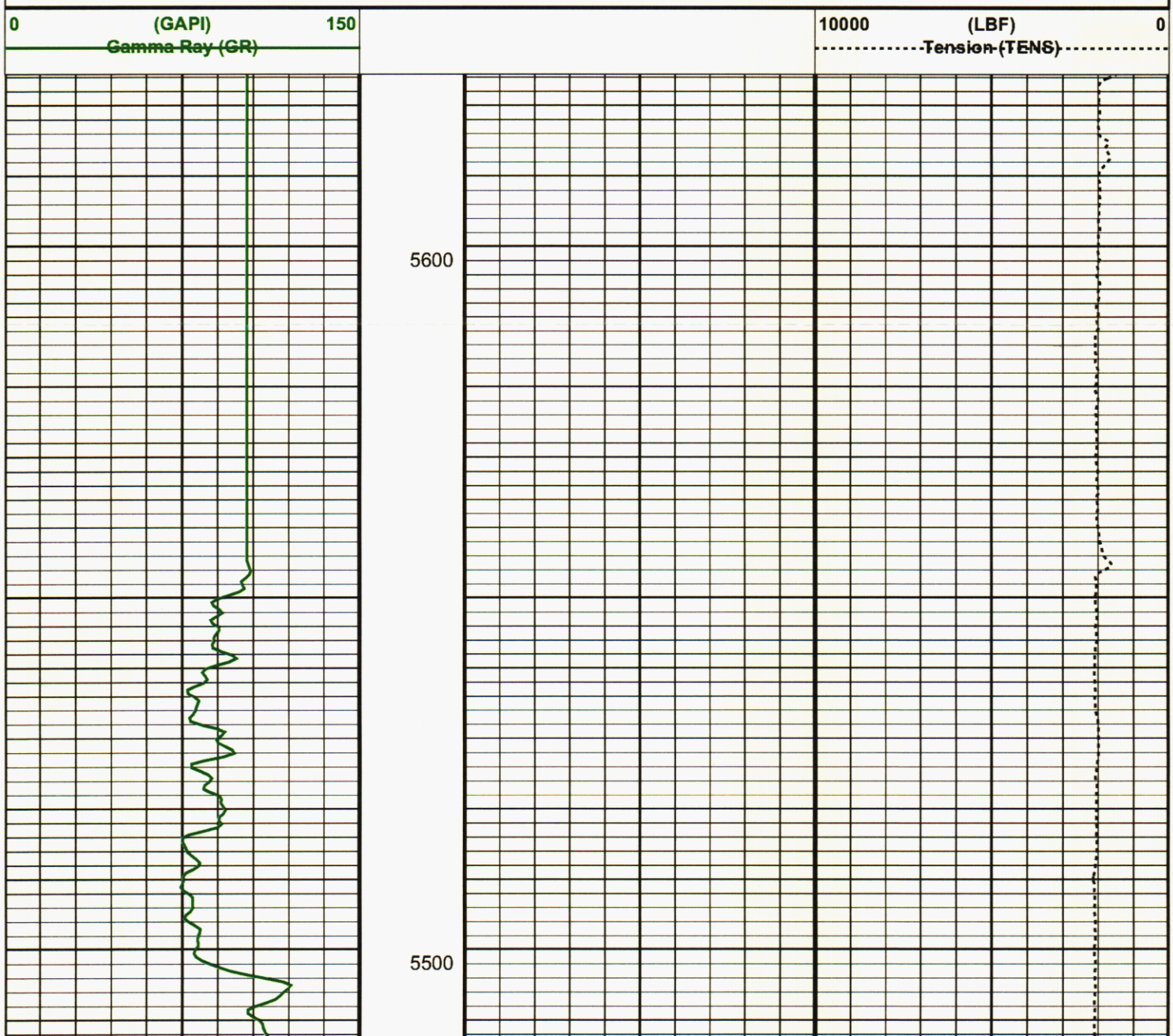
Company: OXY US LA Basin | Well: DOM-002

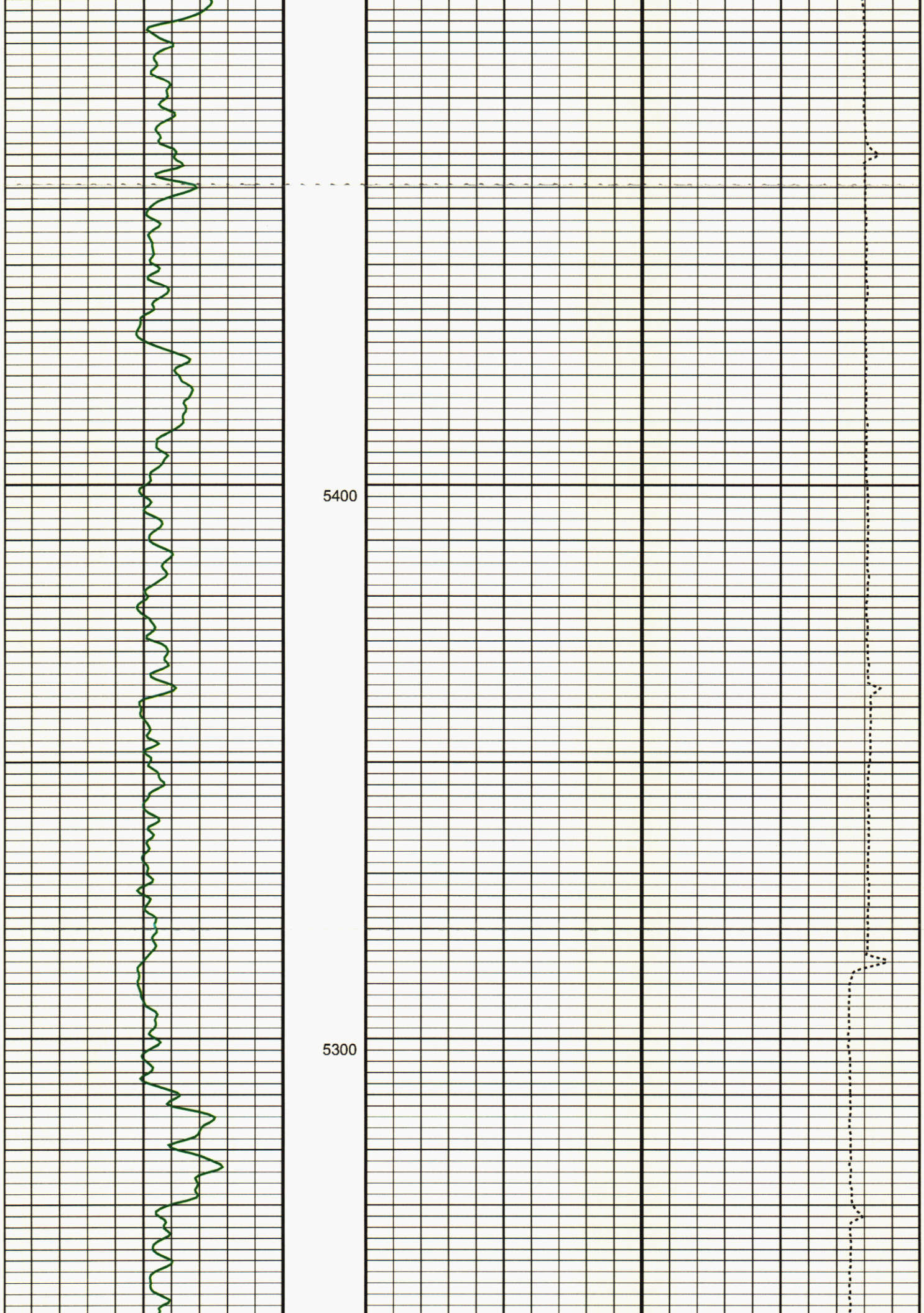
BACKUP	MDT_OFA_070LDP	FN:103	PRODUCER	05-Feb-2011 14:44	4621.0 FT	5624.5 FT
DEFAULT	MDT_OFA_070LDP	FN:102	PRODUCER	05-Feb-2011 14:44	4621.0 FT	5624.5 FT

Output DLIS Files

TCC-BF	19C0-187	ACTS-B1	19C0-187
MRPC	19C0-187	SGT-L	19C0-187
MRMS_1	19C0-187	MRMS_2	19C0-187
MRPO	19C0-187	LFA	HPS-5005-MDT_b
MRPS_1	19C0-187	MRHY_1	19C0-187

OP System Version: 19C0-187

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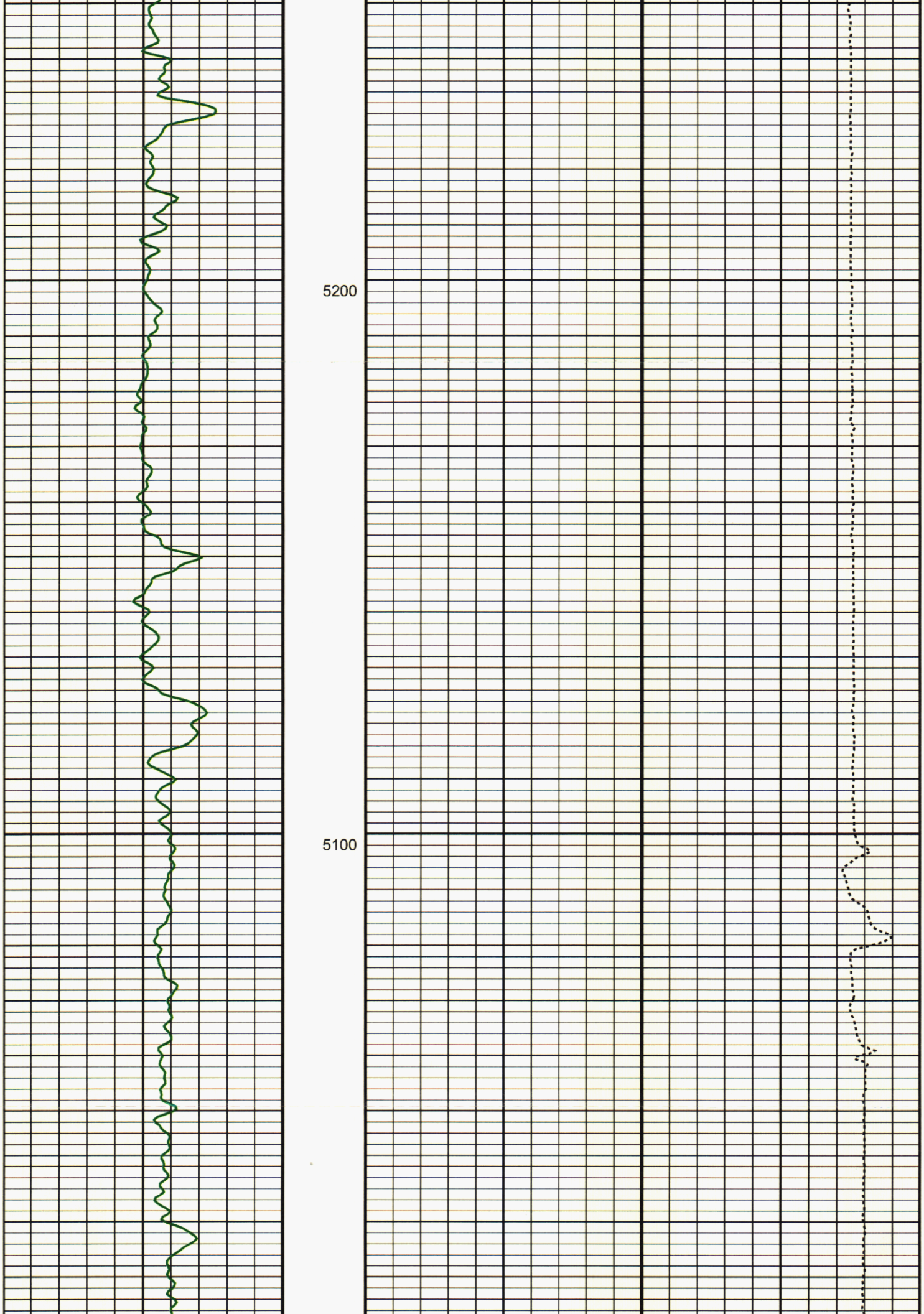
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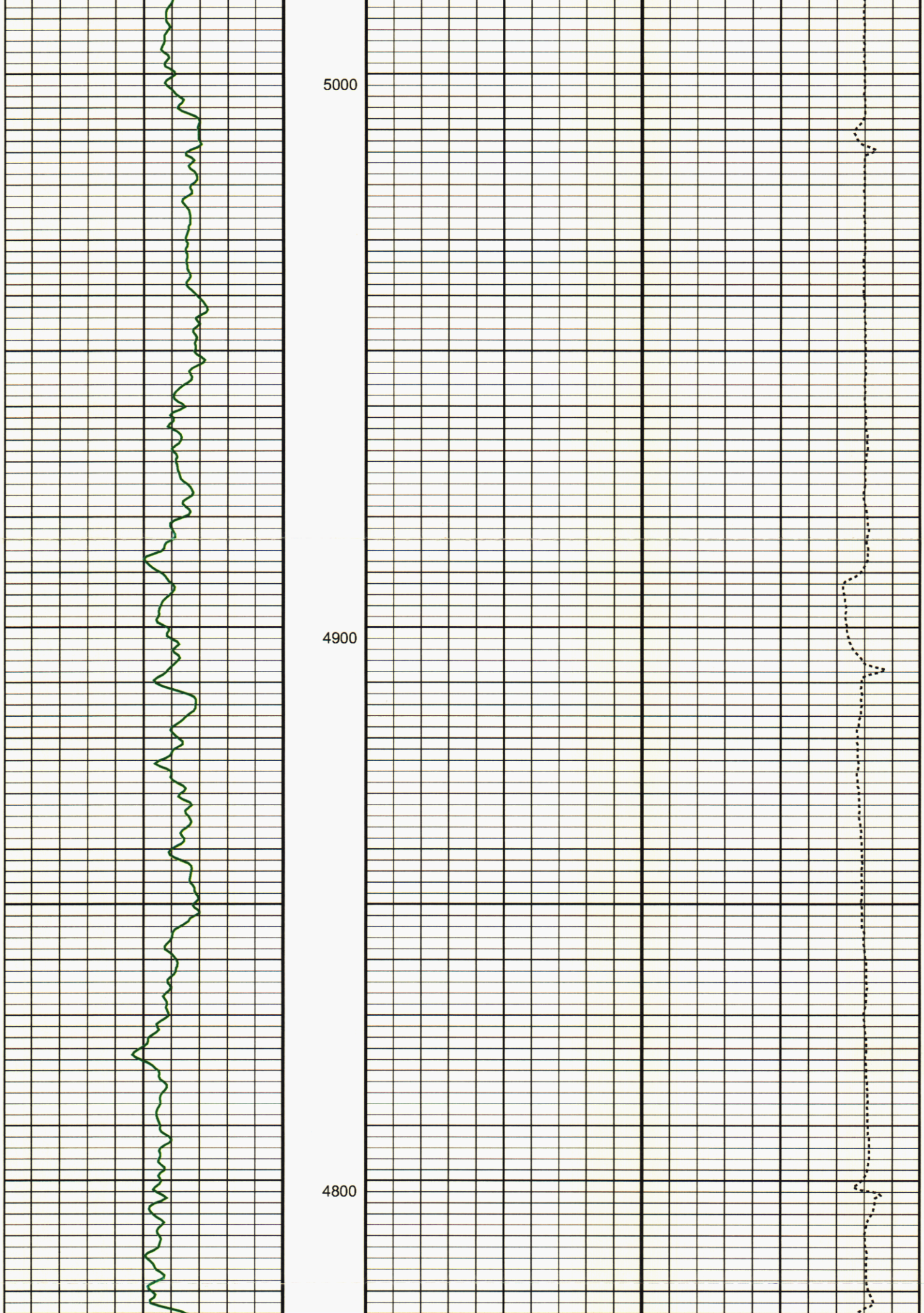
5100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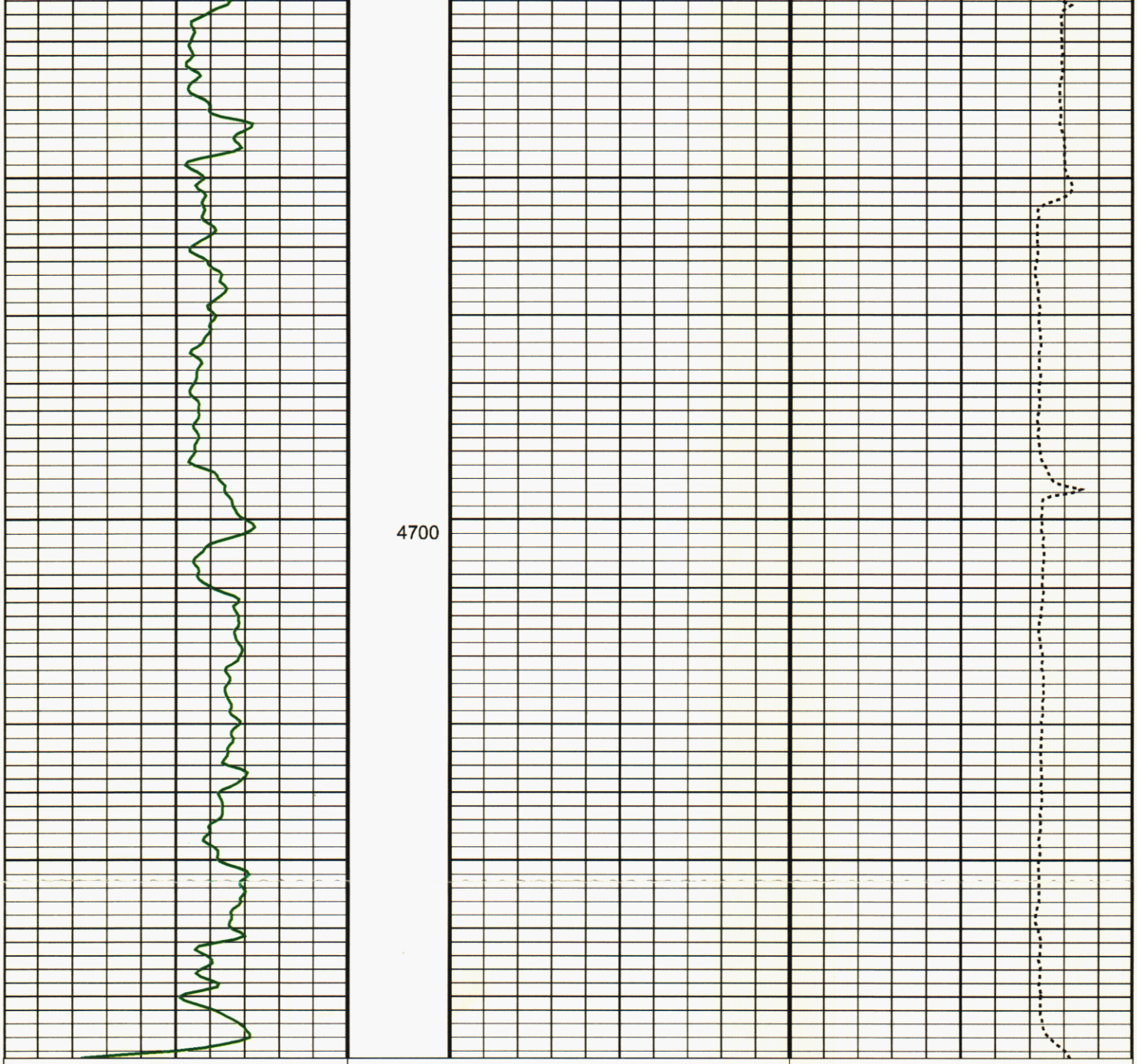
4800



PDCO	MRPC: Power Cartridge Probe Depth Correction Offset	0	FT
PDCO	MRMS_2: MDT Multi-Sample (MRMS) 2 Probe Depth Correction Offset	0	FT
PDCO	MRMS_1: MDT Multi-Sample (MRMS) 1 Probe Depth Correction Offset	0	FT
PDCO	LFA: Live Fluid Analyzer Probe Depth Correction Offset	0	FT
PDCO	MRPO: Dual Pumpout Module (MRPO) Probe Depth Correction Offset	0	FT
PDCO	MRHY_1: Hydraulic Module (MRHY) 1 Probe Depth Correction Offset	0	FT
	MRPS_1: Single Probe Module (MRPS) 1		

DLIS Name	Description	Value

Parameters

Format: CORRELATION Vertical Scale: 5" per 100' Graphics File Created: 05-Feb-2011 14:44

TCC-BF	19C0-187	ACTS-B1	19C0-187
MRPC	19C0-187	SGT-L	19C0-187
MRMS_1	19C0-187	MRMS_2	19C0-187
MRPO	19C0-187	LFA	HPS-5005-MDT_b
MRPS_1	19C0-187	MRHY_1	19C0-187

OP System Version: 19C0-187

BACKUP	MDT_OFA_070LDP	FN:103	PRODUCER	05-Feb-2011 14:44
DEFAULT	MDT_OFA_070LDP	FN:102	PRODUCER	05-Feb-2011 14:44

Output DLIS Files

Company: **OXY US LA Basin**

Schlumberger

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

Modular Formation Dynamic Tester
Low Shock Sampling, LFA
Gamma Ray, Short Print