Final Report Prepared For
3D Oil Limited

Well: West Seahorse - 3

Validity Checks and Analyses
Of MDT Samples

6th May 2008

Ref: 57016

WELL FLOW MANAGEMENT™

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WELL: WEST SEAHORSE-3

VALIDITY CHECKS AND ANALYSES OF MDT SAMPLES

REPORT TYPE: Final

Client	:	3D Oil Limited
Well	:	West Seahorse-3
Permit	:	Vic-P/57
Date	:	6th May 2008
Client Representative	:	Robyn Tamke
Date of reporting	:	July 2008
Project number	:	57016
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SUMMARY

To validate the quality of samples taken by the Schlumberger MDT Wireline Formation Sampling tool, Petrotech performed a programme of validity checks and analysis on the retrieved samples.

The contents of the successfully retrieved chambers were transferred to Petrotech PVT sampling bottles and sent onshore to Core Laboratories for further analysis.

TABLE OF CONTENTS

Page

1. INTRODUCTION

In this report, Petrotech presents the validity checks and basic on-site analysis for samples retrieved from the MDT tool during logging for the West Seahorse-3 well. The analyses were carried out on the 6th and 18th of May 2008.

In order to obtain the highest quality of well-site data from the MDT tool, Petrotech confirmed the quality of MDT samples retrieved by carrying out opening pressure measurements. Pressurised single-phase transfers of samples to Petrotech shipping bottles were performed to provide PVT samples for onshore analysis.

A total of four segregated samples were collected from a depth of 1567mMDRT (1406.1m TDVSS) using the Schlumberger MDT tool.
Single-phase transfers were performed on three samples and the fourth sample was flashed for offshore analysis.

2. OFFSHORE ANALYSIS PROGRAMME

Wire line Fluid Sampling

Following collection of the Wireline Fluid Samples, the tools were brought back to the surface. The chambers were prepared for transfer by pressurising them to 1450psi above the reservoir pressure supplied from the Schlumberger logging data. The buffer fluid volume added to the chamber was recorded at all significant points with sample validity verified by non-invasive opening pressure measurement of the sample from the buffer side of the chamber (see Table 1).

Once the required pressure was reached, the sample was maintained in this condition for one hour with regular agitation to promote sample homogeneity, whilst constant pressure monitoring ensured sample stability and confirmed the absence of leaks. At the end of this period, sample transfer commenced at a minimum of 1450psi above reservoir pressure with the sample introduced into the Petrotech shipping bottle at a slow, constant rate (around 20cc per minute) so as to minimise disruption to the pressure equilibrium.

3. RESULTS

Table 1: WFS Sample Data

Client	3D Oil Limited
Well	West Seahorse-3
Project No.	57016

Sampling Depth (mMDRT)	WFS Chamber No.	WFS Chamber Vol (cc)	Downhole Sampling Date	Downhole Sampling Time	Opening Pressure (psig)	Opening Temperature (°C)
1567	3452	450	6/05/08	02:12 hrs	1624	16.0
1567	3353	450	6/05/08	02:22 hrs	1088	18.0
1567	3358	450	6/05/08	02:26 hrs	1595	18.0
1567	3453	450	6/05/08	02:16 hrs	1555	17.0

Table 2: PVT Transfer Data

Client	3D Oil Limited
Well	West Seahorse-3
Project No.	57016

Petrotech Sample No.	Sample Depth (mMDRT)	WFS Chamber No.	Transfer Date	Transfer Time	Petrotech Cylinder No.	Transfer Volume (mL)	Transfer Pressure (psig)	Transfer Temp. (°C)	Comments
T.01	1567	3452	06.05.08	11:00	PT-3001	380	4000	65.0	-
T.02	1567	3353	06.05.08	12:20	PT-3153	375	4000	65.0	-
T.03	1567	3358	06.05.08	14:15	PT-3184	390	4000	65.0	-
T.04	1567	3453	18.05.08	-	Flashed	-	-	18.0	-

Table 3: Non-Pressurised Sample List

Client	3D Oil Limited
Well	West Seahorse-3
Project No.	57016

Petrotech Sample No.	Sample Depth (mMDRT)	WFS Chamber No.	Sample Nature	Sample Volume (mL)	Comments
A.01	1567	3452.0	Oil	40	Sent to Petrotech, Perth
A.02	1567	3353.0	Oil	40	Sent to Petrotech, Perth
A.03	1567	3358.0	Oil	40	Sent to Petrotech, Perth
A.04	1567	3453.0	Oil	395	Flashed for Analysis. 18/5/08

Table 4: Pressurised Sample List

Client	3D Oil
Well	West Seahorse-3
Project No.	57016

Transferred Samples

Petrotech Sample No.	Sample Depth (mMDRT)	WFS Chamber No.	Sample Nature	Petrotech Cylinder No.	Shipping Volume (cc)	Shipping Pressure (psig)
T.01	1567	3452	Oil	PT-3001	380	1500
T.02	1567	3353	Oil	PT-3153	375	2000
T.03	1567	3358	Oil	PT-3184	390	2000

Table 5: WFS Flash Data

Client	3D Oil Limited
Well	West Seahorse-3
Project No.	57016

Petrotech Sample No.	Sample Depth (mRT)	MDT Chamber No.	Stabilised Oil Volume (mL)	Measured Gas Volume (L)	Measured Water Vol. (L)	Barometric Pressure (mBar)	Ambient Temperature (^{0}C)	Gas-Oil Ratio (scf/bbl)
Not Transferred	1567	3453	395	20.0	-	1073	17.0	286.28

Table 6: Sample Analysis Data

Client	3D Oil
Well	West Seahorse-3
Project No.	57016

Petrotech Sample No.	Sample Depth (mRT)	WFS Chamber No.	Oil Density (g/cm^3 @ 15°C)	Oil Gravity (°API @ 60°F)	Draeger Tube		Viscosity		
					CO_2 (%vol)	H_2S (ppm)	Kinematic (mm2/sec)	Dynamic (cp)	Temperature (°C)
PT-3001	1567	3452	-	-	-	240	-	-	-
PT-3153	1567	3353	-	-	-	280	-	-	-
PT-3184	1567	3358	-	-	-	280	-	-	-
Flashed	1567	3453	0.799	45.6	2	280	-	-	17.0

4. DISCUSSION

The logging run was performed on the 5th and 6th May 2008. The Schlumberger MDT tool successfully recovered a total of four segregated samples from a depth of 1567mMDRT.

The opening pressure measurements suggested that all four samples were of acceptable quality. The opening pressures showed generally good consistency and the chambers remained intact until transfer.

Three MPSRs were transferred to Petrotech shipping bottles and the fourth was flashed to atmosphere on the 18th May. During all transfers, the MPSR chambers were oriented such that sample was removed from the highest point. On completion of the transfers and analysis, the pressurised and dead samples were dispatched to Petrotech for onward shipment to Core Laboratories (Perth) as instructed by 3D Oil personnel.

The MPSRs were rinsed with Toluene to extract any residual ashphaltenes.

The density of the oil from the flashed MPSR was measured and appears in this report in Table 6. The GOR was also determined and is reported in Table 5.

5. APPENDICES: PVT SHEETS

WIRELINE FLUID SAMPLE TRANSFER SHEET

Client	3D Oil Limited
Well	West Seahorse-3
Rig	West Triton
Sampling Tool	MDT

SAMPLING DATA		
Sample number	T.01	
Chamber number	3452	
Sampled by	Schlumberger	
Sample depth	1567.0	mMDRT
Sample nature	Oil	
Date	06.05.08	
Transferred by	Daniel/Andrew	
Transfer commenced	11:00	
Transfer completed	11:32	
Cylinder number	PT-3001	
Cylinder coupled with	-	

TRANSFER CONDITIONS		
Transfer fluid	Glycol	
Cylinder volume	700	cc
Sample volume	380	cc
Transfer fluid remaining	320	cc
Transfer pressure	4000.0	psig
Shipping pressure	1500.0	psig
Ambient temperature	18.0	°C

BOTTOM HOLE CONDITIONS		
Reservoir pressure	1968.0	psig
Reservoir temperature	65.0	°C

COMMENTS

WIRELINE FLUID SAMPLE TRANSFER SHEET

Client	3D Oil Limited
Well	West Seahorse-3
Rig	West Triton
Sampling Tool	MDT

SAMPLING DATA		
Sample number	T.02	
Chamber number	3353	
Sampled by	Schlumberger	
Sample depth	1567.0	mMDRT
Sample nature	Oil	
Date	06.05.08	
Transferred by	Daniel/Andrew	
Transfer commenced	12:20	
Transfer completed	13:04	
Cylinder number	PT-3153	
Cylinder coupled with	-	

TRANSFER CONDITIONS		
Transfer fluid	Glycol	
Cylinder volume	700	cc
Sample volume	375	cc
Transfer fluid remaining	325	cc
Transfer pressure	4000.0	psig
Shipping pressure	2000.0	psig
Ambient temperature	18.0	°C

BOTTOM HOLE CONDITIONS		
Reservoir pressure	1968.0	psig
Reservoir temperature	65.0	°C

COMMENTS

WIRELINE FLUID SAMPLE TRANSFER SHEET

Client	3D Oil Limited
Well	West Seahorse-3
Rig	West Triton
Sampling Tool	MDT

SAMPLING DATA		
Sample number	T.03	
Chamber number	3358	
Sampled by	Schlumberger	
Sample depth	1567.0	mMDRT
Sample nature	Oil	
Date	06.05.08	
Transferred by	Daniel/Andrew	
Transfer commenced	14:15	
Transfer completed	14:50	
Cylinder number	PT-3184	
Cylinder coupled with	-	

TRANSFER CONDITIONS		
Transfer fluid	Glycol	
Cylinder volume	700	cc
Sample volume	390	cc
Transfer fluid remaining	310	cc
Transfer pressure	4000.0	psig
Shipping pressure	2000.0	psig
Ambient temperature	18.0	°C

BOTTOM HOLE CONDITIONS		
Reservoir pressure	1968.0	psig
Reservoir temperature	65.0	°C

COMMENTS