



EXPRO

Final Report Prepared For 3D Oil Limited

Well: Wardie-1

Validity Checks and Analyses Of MDT Samples

21st May 2008

Ref: 57025

WELL FLOW MANAGEMENT™

Expro Group Australia Pty Ltd

Petrotech

42-44 Wittenberg Dve

Canning Vale

Western Australia 6970

Australia

Telephone +61 8 9456 7600

Fax +61 8 9456 7690

www.exprogroup.com



WELL: WARDIE-1

VALIDITY CHECKS AND ANALYSES OF MDT SAMPLES

REPORT TYPE: Final

Client	:	3D Oil Limited
Well	:	Wardie-1
Permit	:	Vic-P/57
Date	:	21 st May 2008
Client Representative	:	Robyn Tamke
Date of reporting	:	July 2008
Project number	:	57025
Project co-ordinator	:	Brian Toole
Participants	:	Andrew O'Donnell Hadi Zakri Bin Zakaria
Report prepared by	:	Andrew O'Donnell
Report reviewed by	:	Jude Louis
Number of issues	:	5
Distribution Expro	:	1
Distribution 3D Oil Ltd	:	4

Expro Group Australia Pty Ltd.
PO Box 1522
CANNING VALE WA
AUSTRALIA 6970
Phone: +61 8 9456 7600
Fax: +61 8 9456 7699

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

	<i>Page</i>
1. INTRODUCTION	4
2. OFFSHORE ANALYSIS PROGRAMME	4
3. RESULTS.....	5
Table 1: WFS Sample Data	5
Table 2: PVT Transfer Data	6
Table 3: Non-Pressurised Sample List	7
Table 4: Pressurised Sample List	8
Table 5: WFS Flash Data.....	9
4. DISCUSSION.....	10
5. APPENDICES: PVT SHEETS.....	11

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 Wardie-1 well. The analyses were carried out on the 21st 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 three samples were collected using the Schlumberger MDT tool. Two samples were collected from 1582.4mMDRT (1398.8m TVDSS) and one from 1593.7mMDRT (1409.9m TVDSS). Single-phase transfers were performed on all three samples.

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	Wardie-1
Project No.	57025

Sample	WFS	WFS	Downhole	Downhole	Opening	Opening
Depth	Chambe	Chamber	Sampling	Sampling	Pressure	Temp
(mMDRT)	r	Vol	Date	Time	(psig)	(°C)
	No.	(cc)				

1582.4	3349	450	20/5/08	11:49 hrs	3850	14.0
1593.7	3454	450	20/5/08	18:07 hrs	Undetectable	13.0
1582.4	3300	450	20/5/08	12:06 hrs	1100	13.0

Table 2: PVT Transfer Data

Client	3D Oil Limited
Well	Wardie-1
Project No.	57025

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	1582	3349	21.05.08	2:00	PT-2162	300	5000	65.0	-
T.02	1594	3454	21.05.08	3:30	PT-1147	380	5000	65.0	-
T.03	1582	3300	21.05.08	5:10	PT-2173	380	5000	65.0	-

Table 3: Non-Pressurised Sample List

Client	3D Oil Limited
Well	Wardie-1
Project No.	57025

Petrotech Sample No.	Sample Depth (mMDRT)	WFS Chamber No.	Sample Nature	Sample Volume (mL)	Comments
A.01	1582	3349	Oil	90	Sent to Petrotech, Perth
A.02	1582	3349	Toluene	15	Sent to Petrotech, Perth
A.03	1582	3300	Toluene	30	Sent to Petrotech, Perth

Table 4: Pressurised Sample List

Client	3D Oil Limited
Well	Wardie-1
Project No.	57025

Transferred Samples

Petrotech Sample No.	Sample Depth (mMDRT)	WFS Chamber No	Sample Nature	Petrotech Cylinder No.	Shipping Volume (cc)	Shipping Pressure (psig)
T.01	1582	3349	Oil	PT-2162	300	800
T.02	1594	3454	Water	PT-1147	380	1100
T.03	1582	3300	Oil	PT-2173	380	800

Table 5: WFS Flash Data

Client	3D Oil Limited Wardie-1 57025
Well	
Project No.	

Petrotech Sample No.	Sample Depth (mMDRT)	MDT Chamber No.	Stabilised Oil Volume (mL)	Measured Gas Volume	Measured Water Vol.	Barometric Pressure(mBar)	Ambient Temperature (°C)	Gas-Oil Ratio (scf/bbl)
PT-2162	1582	3349	90	22.5L	-	1093	13.0	1437.71

4. DISCUSSION

The logging run was performed on the 20th May 2008. The Schlumberger MDT tool successfully recovered a total of three samples, two from a depth of 1582.4mMDRT and one from a depth of 1593.7mMDRT.

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

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.

5.

APPENDICES: PVT SHEETS



WIRELINE FLUID SAMPLE TRANSFER SHEET

Client	3D Oil Limited
Well	Wardie-1
Rig	West Triton
Sampling Tool	MDT

SAMPLING DATA		
Sample number	T.01	mMDRT
Chamber number	3349	
Sampled by	Schlumberger	
Sample depth	1582.4	
Sample nature	Oil	
Date	20.05.08	
Transferred by	Andrew/Hadi	
Transfer commenced	2:00	
Transfer completed	02:35	
Cylinder number	PT-2162	
Cylinder coupled with	-	

TRANSFER CONDITIONS		
Transfer fluid	Glycol	cc
Cylinder volume	700	
Sample volume	300	cc
Transfer fluid remaining	0	cc
Transfer pressure	5000.0	psi
Shipping pressure	800.0	psi
Ambient temperature	14.0	°C
BOTTOM HOLE CONDITIONS		
Reservoir pressure	1983.3	psi
Reservoir temperature	54.7	°C

COMMENTS



WIRELINE FLUID SAMPLE TRANSFER SHEET

Client	3D Oil Limited
Well	Wardie-1
Rig	West Triton
Sampling Tool	MDT

SAMPLING DATA		
Sample number	T.02	mMDRT
Chamber number	3454	
Sampled by	Schlumberger	
Sample depth	1593.7	
Sample nature	Water	
Date	20.05.08	
Transferred by	Andrew/Hadi	
Transfer commenced	3:30	
Transfer completed	04:00	
Cylinder number	PT-1147	
Cylinder coupled with	-	

TRANSFER CONDITIONS		
Transfer fluid	Glycol	
Cylinder volume	700	cc
Sample volume	380	cc
Transfer fluid remaining	0	cc
Transfer pressure	5000.0	psi g
Shipping pressure	1100.0	psi g
Ambient temperature	13.0	°C
BOTTOM HOLE CONDITIONS		
Reservoir pressure	1981.9	psi g
Reservoir temperature	56	°C

COMMENTS



WIRELINE FLUID SAMPLE TRANSFER SHEET

Client	3D Oil Limited
Well	Wardie-1
Rig	West Triton
Sampling Tool	MDT

SAMPLING DATA		
Sample number	T.03	mMDRT
Chamber number	3300	
Sampled by	Schlumberger	
Sample depth	1582.4	
Sample nature	Oil	
Date	20.05.08	
Transferred by	Andrew/Hadi	
Transfer commenced	5:10	
Transfer completed	05:35	
Cylinder number	PT-2173	
Cylinder coupled with	-	-

TRANSFER CONDITIONS		
Transfer fluid	Glycol	
Cylinder volume	700	cc
Sample volume	380	cc
Transfer fluid remaining	0	cc
Transfer pressure	5000.0	psi g
Shipping pressure	800.0	psi g
Ambient temperature	13.0	°C
BOTTOM HOLE CONDITIONS		
Reservoir pressure	1983.3	psi g
Reservoir temperature	54.7	°C

COMMENTS
