OPERATOR:	**STATOILHYDRO ASA**
WELL:	**15/9-F-9**
WELLBORE:	**15/9-F-9 A**
FIELD:	**VOLVE**
PLATFORM:	**MAERSK INSPIRER**
COUNTRY:	**NORWAY**
DRILL PERMIT#:	**3121-P**

Report

WLC_PETROPHYSICAL_COMPOSITE_1.DLIS

Prepared by: **LOGTEK AS**
Date: **28-OCT-2009**

The WLC_PETROPHYSICAL_COMPOSITE_1.DLIS has been created in accordance with the NPD "**Guidelines to the Petroleum Regulations/REPORTING REQUIREMENTS FOR DIGITAL WELL DATA (Drilling Regulations, Section 12)**".
http://www.npd.no/Global/Norsk/5%20-%20Regelverk/Tematiske%20veiledninger/B_og_b_digital_rapportering_e.pdf

Purpose

To preserve 'specialist' composited data curves that may be created for a well but which do not fall into the 'standard' Composite (Section 3.1) or the 'Interpreted Data Input' data sets (described in Section 4.1). These data may have additional work done such as environmental or bed thickness corrections. This data set would normally be used by Petrophysicists. Operators are strongly recommended to report this data set in order to preserve value-added work.

Quality

Similar quality guidelines apply to the compositing work as described in Section 3.1.3 above. All work that is carried out must also be documented in an Information File.

Operationally, it is expected that both the 'standard' Composite Log and this 'specialized' Composite Log would normally be created in the same process but split into 2 data sets for reporting purposes. This ensures that the same depth shifting is applied to both data sets – an important quality requirement.

Content

Data that are not part of the 'Composited' or 'Interpretation Input' data sets. This may include:

- additional composited resistivity, NMR or other specialized curve data.
- composited data at high sampling rates for thin-bed analysis.
- a good guide is to include all 'presentation curves' from log prints (apart from those already included in the 'standard' composite). If quality curves such as Tension or Cable Speed are included (not a requirement), information must be included in the Information Files to show which data curves they refer to.

OPERATOR: **STATOILHYDRO ASA**
WELL: **15/9-F-9**
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COUNTRY: **NORWAY**
DRILL PERMIT#: **3121-P**

MWD data plotted and verified to prints.
MWD TeleScope, run 1:
Gaps in MWD_GR_BHC has been interpolated on the field print.

Depth units are meters.

Quality comments:
MWD TeleScope, run 1:
Casing window, top of window: 421.5m, bottom of window 428.2m (from log heading).
Log Remarks:
All depths are referenced to driller's depth and are checked at least every stand.
All data from tool memory.
All data aquired while drilling.
Gamma Ray measurement is environmentally corrected for mud weight, bit size and collar thickness.
This well is a sidetrack of 15/9-F-9 from a window milled in the 13 ⅜" casing. Top of window 421.5m; bottom of window 428.2m; rathole drilled to 436.0m.
12 ¼" section TD at 996.0m.

MWD ARC, run 2:
9 ⅝" casing shoe at 996.0m (from log heading).
Log Remarks:
All depths are referenced to driller's depth and are checked at least every stand.
All data from tool memory.
All data aquired while drilling.
Gamma Ray measurement is environmentally corrected for mud weight, bit size and collar thickness.
Resistivity measurements are borehole compensated and environmentally corrected for bit size, mud resistivity and temperature.
8 ½" section TD at 1206.0m.

Editing on WLC_PETROPHYSICAL_COMPOSITE_1.DLIS:
MWD TeleScope, run 1:
Gaps in MWD_GR_BHC has been interpolated in order to match field print.

MWD ARC, run 2:
Constant values have been removed in the bottom of the logged interval.

Depth shifts:
No depth shifts performed.

CURVE SUMMARY, file WLC_PETROPHYSICAL_COMPOSITE_1.DLIS:

File #1. Incr.: 0.1524 m

Main Services	Input Curve	Run no.	Date (start)	Interval (meters)	Merge depth (meters)	Depth shifted	Edited
MWD ARC	A28H	2	04-JUL-09	985.3-1205.8		No	No
MWD ARC	A34H	2	04-JUL-09	985.3-1205.8		No	No
MWD ARC	A40H	2	04-JUL-09	985.3-1205.8		No	No
MWD ARC	ARTM	2	04-JUL-09	985.3-1205.8		No	No
MWD ARC	GR_ARC	2	04-JUL-09	985.3-1192.4		No	No
MWD TeleScope	MWD_GR_BHC	1	03-JUL-09	415.4-968.8		No	Yes
MWD ARC	P16H	2	04-JUL-09	985.3-1192.4		No	No
MWD ARC	P16L	2	04-JUL-09	985.3-1192.4		No	No
MWD ARC	P22H	2	04-JUL-09	985.3-1192.4		No	No
MWD ARC	P22L	2	04-JUL-09	985.3-1192.4		No	No
MWD ARC	P28H	2	04-JUL-09	985.3-1192.4		No	No
MWD ARC	P28L	2	04-JUL-09	985.3-1192.4		No	No
MWD ARC	P34H	2	04-JUL-09	985.3-1192.4		No	No
MWD ARC	P34L	2	04-JUL-09	985.3-1192.4		No	No
MWD ARC	P40H	2	04-JUL-09	985.3-1192.4		No	No
MWD ARC	P40L	2	04-JUL-09	985.3-1192.4		No	No
MWD TeleScope	ROP5	1	03-JUL-09	415.3-985.1	985.3	No	No
MWD ARC	ROP5	2	04-JUL-09	985.3-1205.8		No	No

Definitions:

Dynamic depth shift *– variable depth shifting (stretch and pull) as opposed to linear depth shifting.*
Linear depth shift *– Constant depth shift through a certain depth interval.*
Reference curve *– Curve that will be used as the depth* ***Reference*** *for a set of logging curves.*
Offset Curve *– Curve that will be compared to the* ***Reference*** *curve in order to find required depth pairs.*
Curves shifted *– Curves that will be shifted with depth pairs found by comparing* ***Reference*** *to* ***Offset*** *curve.*
Observed *–* ***Observed*** *depth is the depth of a point before depth shifting.*
Actual *–* ***Actual*** *depth is the depth of the point after depth shifting.*

WLC_PETROPHYSICAL_COMPOSITE_1.DLIS completed: 28-OCT-2009
WLC_PETROPHYSICAL_COMPOSITE_1_INF_1.PDF completed: 28-OCT-2009