

Level One

SonicVision* Processing

Company:	<ul style="list-style-type: none">• Esso Australia
Well(s):	<ul style="list-style-type: none">• BMB_B16
Country:	<ul style="list-style-type: none">• Australia
Survey:	<ul style="list-style-type: none">• SonicVision*
Logging Date:	<ul style="list-style-type: none">• 09-Aug-2005
Interval:	<ul style="list-style-type: none">• Run-4: 1862.17m to 2634.95mMD (Revised to include Shear processing also)
Products:	<ul style="list-style-type: none">• Compressional Slowness• Shear Slowness
Analysis Date:	<ul style="list-style-type: none">• 11 Aug 2005 (For Compressional proc)• 18 Aug 2005 (For Shear processing)
Analyst(s):	<ul style="list-style-type: none">• Zachariah John Snr Petrophysicist (zach@perth.oilfield.slb.com)

Prepared by:
Schlumberger Oilfield Australia Pty Ltd
Data & Consulting Services
Level 5, 256 St Georges Terrace
Perth WA 6000
Telephone: +61-8-9420-4800
Facsimile: +61-8-9322-3080

*Mark of Schlumberger

Quick Look Summary

SonicVision logs were acquired by Esso Australia Pty Ltd in well BMB-B16, Australia logged on Aug 06 2005. This report comments on the field logs and presents the results of a Quick Look processing for compressional slowness.

The SonicVision data was acquired in the following runs so far:

Run-1: No SonicVision logged

Run-2: SonicVision processed from 790.3m to 1231.2396mMD

Run-3: SonicVision processed from 1225m to 1881.0732mMD

Run-4: Sonic Vision processed from 1862.17m to 2634.95mMD

Run-2 and 3 were covered in a previous document .

This document covers processing of Run-4 (Compressional processing and Shear processing)

The data for each run was loaded into Geoframe* and processed using BestDT3. BestDT3 software is able to process all Schlumberger sonic logs, both Wireline and LWD.

Observations:

The sonic in this run had in places a strong collar arrival at around 200us/m (800us on STplane). This strong collar arrival was masking the DTcompressional in certain intervals.

The following processing was performed in BestDT3 for Compressional Processing:

1. Band pass filter : 10Khz-16Khz. This filter although reduced the collar arrival that was apparent at around 9Khz, but did not improve the coherence of the DTcompressional.
2. F-K filter : This filter was successful in removing the collar arrivals
3. Median residual filter: This filter was also successful in removing the collar arrivals.
4. KL-Collar filter : This filter was NOT successful in removing the collar arrivals.

The processing was performed using the DDBHC mode and for Wideband using F-K filter.

Editing was required to be performed on the labelling to ensure that at some places, the labelled DTCTO was on the highest coherence peak.

Shear Slowness processing.

For the shear, the data was analysed in the frequency spectrum and preliminary processing was performed with no filters. The data was compared with the processed

results with bandpass filters and depth filters. The results from the use of no filters was the most superior.

For labelling, the DTCO, Density, RING-Resistivity and GR curves were also used for assisting in DTSM labelling. The VPVS curve was generated for QCing purposes. There were intervals where the DTSM was not available due to very weak signal or the DTSM arrival time is greater than the fluid arrival.

The mud velocity was approximately 615.941 us/m (190 us/ft) and the mud is water based mud.

Comment on Graphics of file : bmb-b16sonicvisionrun4-processedresults_dtco_dt-sm-graphicsfile.pds:

The DTCO presented in this graphics is the curve from the processing that had a depth filter and band pass filtering. The graphics presented are for the shear processing (without any filter) that optimizes the shear processing and the DTCO has been presented in the QC plot for viewing the DTSM in relation to the DTCO.

Deliverables:

The following deliverables are provided with this Quick Look processing:

Report		bmb-b16sonicvisionrun4_processing_report_dtco_and_dtsm.pdf
Run4	Las file	bmb-b16sonicvisionrun4-processedresults-dtco_dtsm_lasfilepc.las
Run4	DLIS file	bmb-b16sonicvisionrun4-processedresults-dtco_dtsm_dlis.dlis
Run4	Graphics file	bmb-b16sonicvisionrun4-processedresults_dtco_dtsm-graphicsfile.pds