Technical Memo

bp	**MC252 #2** **USIT / MSIP (Cement Scanner)** **11 7/8", 71.8#Liner Cement Evaluation**			
Version: 1	**DDII Relief Wells Team**	**Author**: **Ray Wydrinski** (BP, GOMX)	**Date**: 7/19/2010	**Page**: 1 of 4

Overview:

On July 17, 2010, Schlumberger logged the USIT / MSIP (Cement Scanner) in the 11 7/8" liner from 13,474' to 15,270' for the purpose of cement evaluation. The USIT first reading is at 15,288' and the expected 11 7/8" shoe is at 15,593'. The 13 5/8" casing shoe is at 13,778'. The maximum well bore deviation is 35 degrees.

The well was cemented on July 11, 2010. The 12 hour un-contaminated cement compressive strength was 2,562 psi for the tail and 467 psi after 24 hours for the lead cement.

All depths are tied to the LWD and are measured depths from the RKB. The LWD depths are (-20) from the wireline measured depths.

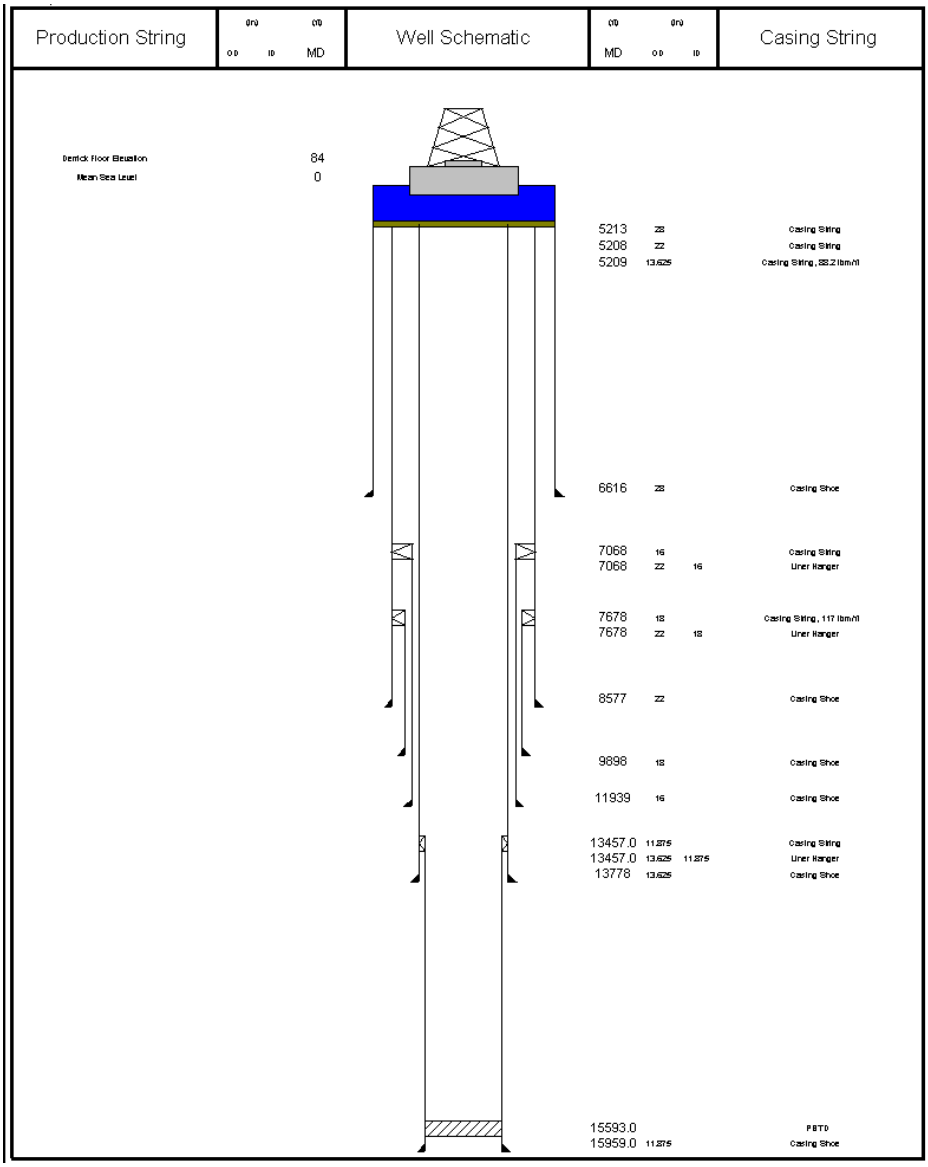
The three thermometers from this logging run read 200 F.

Interpretation

11 7/8" casing cement evaluation

a. The top of cement for zonal isolation is at 13,810'.
b. From 13,777' to 13810' there is a potential channel.
c. The cement in the liner over-lap with the 13 5/8" casing (13,474' to 13,777') gets weaker and has channels due to the small clearance between the 11 7/8" OD and 13 5/8" casing ID.
d. Through most of the well, the cement is contaminated on the low side of the casing due to the well bore deviation causing the casing to leaning closer to the formation.
e. Top centralizer appears to be at 14,470'.

Well bore Schematic



Top of Cement for zonal isolation in 11 7/8” liner

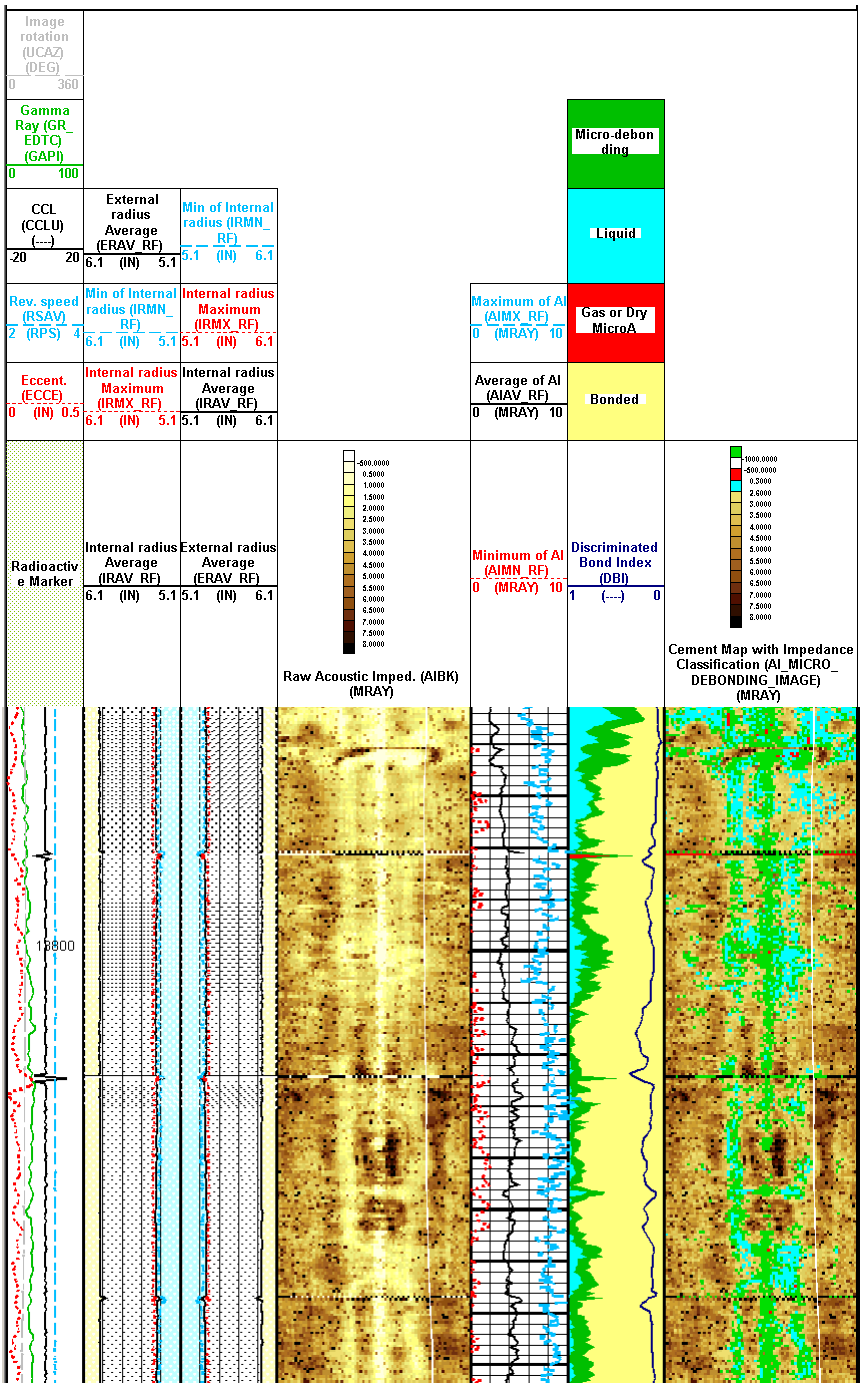


Figure #1: Top of cement for zonal isolation is at 13,810’. Above this point the cement begins to channel and at the 13 5/8” shoe the cement gets weaker in strength and has channels to the liner top packer. The cause of the weaker cement appearance is due to the small clearance between the 11 7/8” OD and 13 5/8” casing ID.

Cement Evaluation at the bottom of the 11 7/8” liner

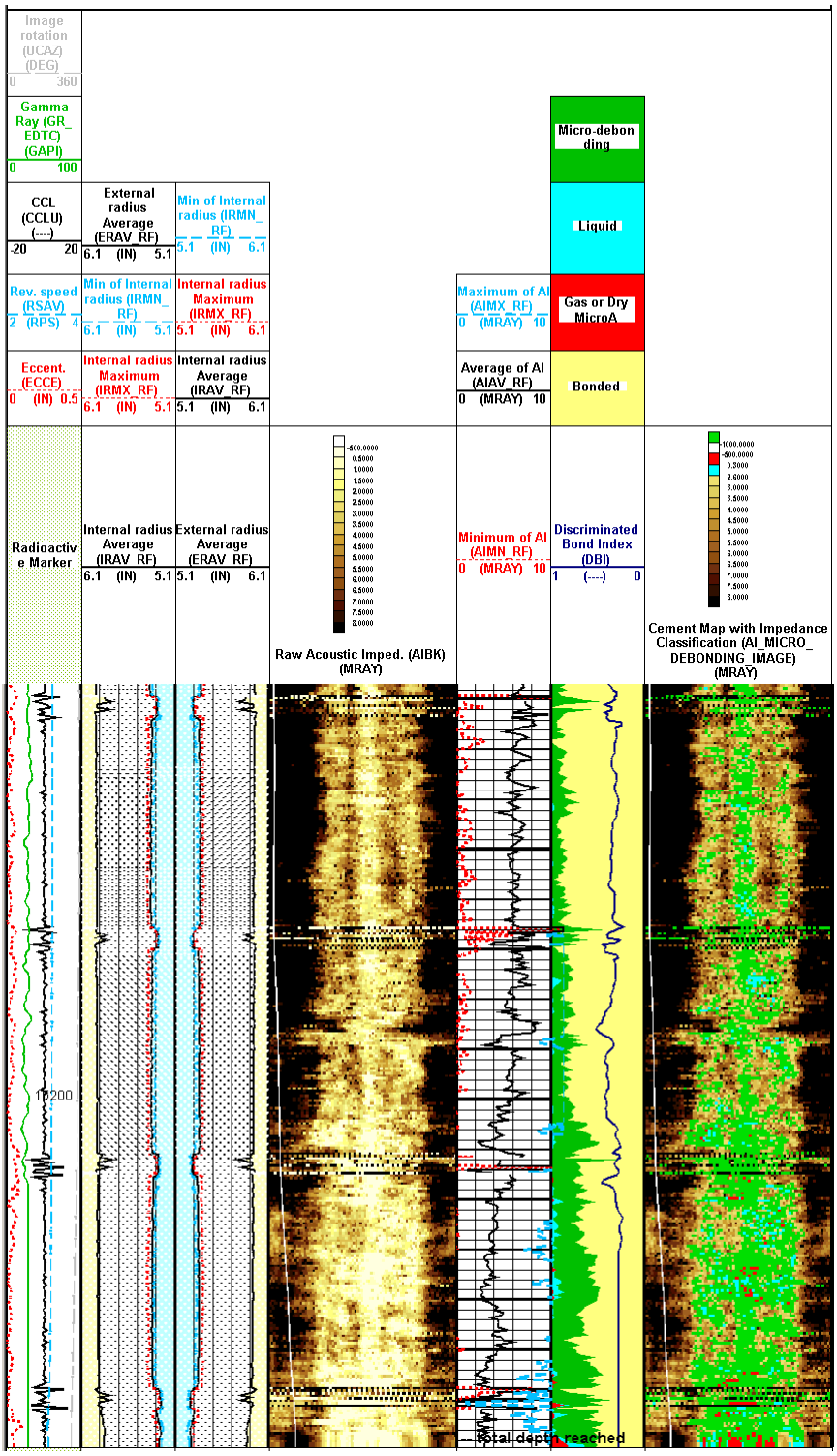


Figure #2: The cement in the 11 7/8” liner is contaminated on the low side of the well bore. This low side contamination is due to the high well bore deviation which causes the casing to lean closer to the formation.