

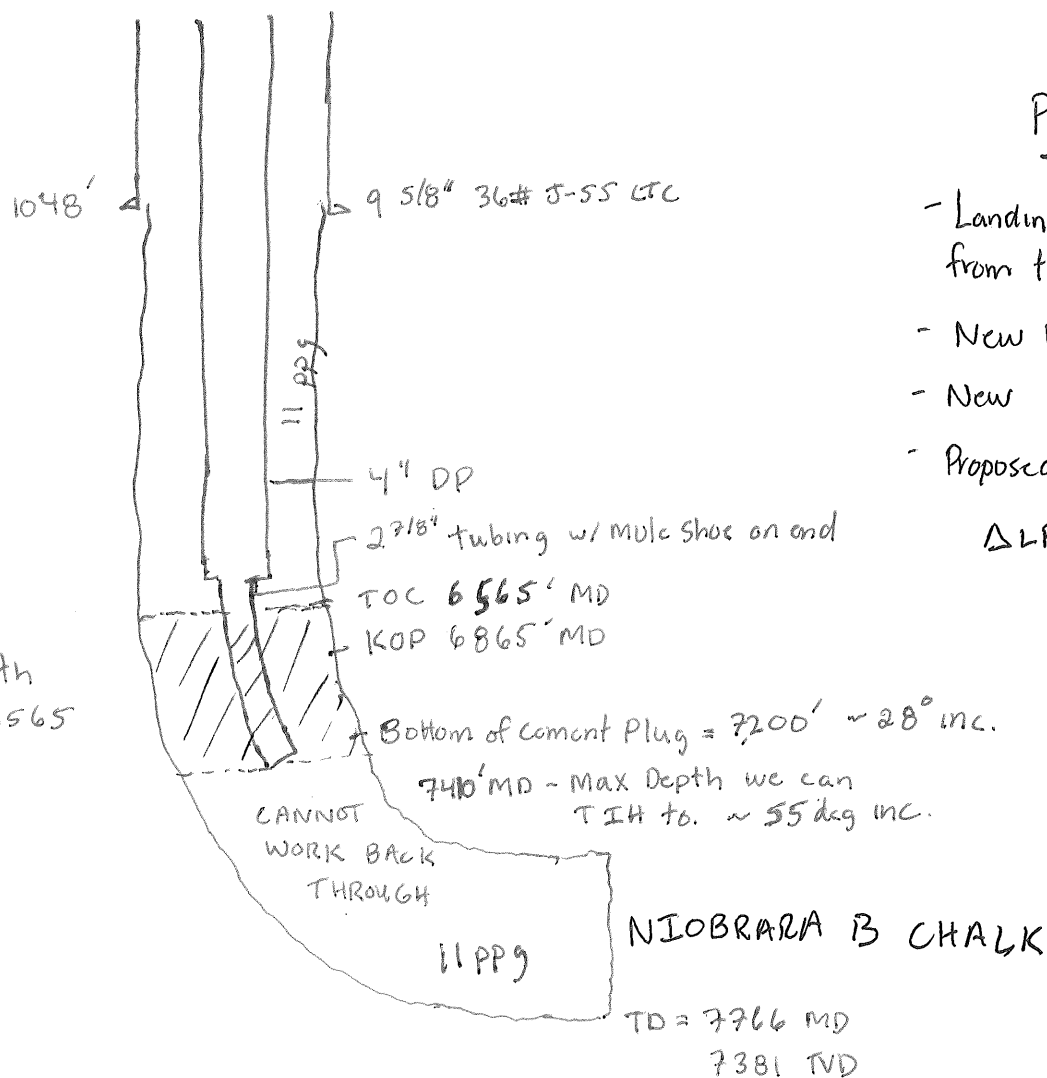
Well: Butterball 4N-10H2

API: 0512337865

Rig: Xtreme 8

Date: 10/25/13 7:30

Contact: Brian Peterson - APC Engineer 303-618-9689



Proposed Sidetrack

- Landing point will be shifted from the Nio B to Nio C.
 - New KOP = 6970' MD
 - New LP = ~~7446'~~ 7446' TVD
 - Proposed TD of lateral = 12,051' MD
- $\Delta LP = 112' \cdot 65'$

Plug Length
= 7200 - 6565
= 635'

$$\text{Cement Plug Volume} = \left(\frac{8.75^2}{1029.4} \right) (635') = 47 \text{ bbls} \times 20\% \text{ excess} \approx 60 \text{ bbl plug}$$

$$\frac{(60 \text{ bbl} \times 5.615 \frac{\text{cu ft}}{\text{bbl}})}{0.94 \frac{\text{cu ft}}{\text{sx}}} = 358 \text{ sacks 17.5 class 6}$$

~ 35 bbls of 13.5 pp9 spacer will be pumped ahead of pill
5 bbls of 13.5 pp9 spacer will be pumped behind of pill