

Light, Cheryl

From: Diana Burn - DNR <diana.burn@state.co.us>
Sent: Friday, October 25, 2013 4:24 PM
To: Peterson, Brian
Cc: Light, Cheryl; Cocciolone, Ashley; Kucera, Lauren; Penny Garrison - DNR; Jane Stanczyk - DNR
Subject: RE: Anadarko - Butterball 4N-10HZ - Sidetrack

Please proceed as proposed.

Thanks,
Diana

From: Peterson, Brian [mailto:Brian.Peterson@anadarko.com]
Sent: Friday, October 25, 2013 3:00 PM
To: 'Diana.burn@state.co.us'
Cc: Light, Cheryl; Cocciolone, Ashley; Kucera, Lauren
Subject: Anadarko - Butterball 4N-10HZ - Sidetrack

Butterball 4N-10HZ – Plug back & Sidetrack

Diana,

As we discussed:

After TD'ing the 8.75" intermediate section of the aforementioned well, a wiper trip to the KOP was performed. After pulling through the Sharon Springs was very tight, it was decided to go back to bottom and circulate and condition the hole for 7" casing. We attempted to get back to bottom but were unsuccessful. The decision was made to come out and adjust the BHA to a smaller degree of motor so we could rotate faster to ream back to bottom. After adjusting our BHA we still couldn't get past 7410' MD. This is ~55 deg in the curve right in the middle of the Sharon Springs. After getting stuck and free multiple times it was decided to plug this curve back 300' above KOP and attempt to kick off a sidetrack curve section.

The plan forward will be to plug the curve section back 635' from 7,200' MD to 6,565' MD bringing the TOC 300' above the original KOP. We will re-drill the curve as planned with a different azimuth to drill parallel to the old curve section. There is no fish in the hole, we will be setting a cement plug in 8.75" open hole using 700' of 2 7/8" tubing ran on 4" drill pipe.

The updated well plan with the BHL is attached. We will be moving the well 100' to the east due to anti-collision and 65' lower in TVD depth. The target objective will change from a Niobrara B to a Niobrara C. This was done to minimize our angle we are cutting the Sharon Springs at, thereby reducing our chance at having to sidetrack another curve. Let me know if you have any additional questions.

Well Information:

API#: 0512337865
Hole Size: 8.75"
Depth: 7,766' MD
7,381' TVD (Projected from last survey)

Casing: 9-5/8" 36#, J-55, LTC @ 1,048' MD

Plug #1 635' plug set @ 7,200' – 6,565' MD
17.5 ppg Class G, 0.94 cuft/sk
25% Excess
60 Bbls / 358 sacks of cement

Sidetrack KOP: 6,970'

Verbal approval from the COGCC was granted by Diana Burn @ 2:14

Please contact me if you have and questions or require any additional information. [Attached are the directional plans with the new BHL's.](#)

Thank you.

Brian Peterson

Anadarko Petroleum – Rockies Drilling

Drilling Engineer I – Wattenberg

w. 720-929-6812

c. 303-618-9059

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