

From: Diana Burn - DNR [<mailto:diana.burn@state.co.us>]
Sent: Monday, February 13, 2017 10:14 AM
To: Todd Wolff <Todd.Wolff@nblenergy.com>
Cc: Dirk Sutphin - DNR <dirk.sutphin@state.co.us>; Penny Garrison - DNR <penny.garrison@state.co.us>; Barbara Westerdale - DNR <barbara.westerdale@state.co.us>
Subject: EXTERNAL: RE: Request to sidetrack Dukes Federal LC10-745 well - API #05-123-42981

Please proceed as proposed.

Thanks,
Diana

From: Todd Wolff [<mailto:Todd.Wolff@nblenergy.com>]
Sent: Monday, February 13, 2017 9:38 AM
To: Diana.burn@state.co.us
Subject: Request to sidetrack Dukes Federal LC10-745 well - API #05-123-42981

Diana,

We currently have stuck 5.5" production casing @ 14,029' on the Dukes Federal LC10-745 well (API# 05-123-42981).

We drilled to a TD of 17,025 ft MD in the Niobrara A Marl formation using OBM and Baker directional. Hole problems were not encountered while drilling or circulating at TD. While POOH with drilling BHA, a tight spot was noted from 8580' to 8466', which was reamed and cleaned up prior to pulling clean the rest of the way.

5.5" 20# P-110IC TXP-BTC casing was run with a 7.75" reamer shoe; washing was required from 7910' to 8125'. At 14,010' the casing string took weight and started to pack off; casing was pulled up to 13,997' and returns were reestablished. After cleaning up the hole, casing was washed to 14,195' when the hole became tight and began packing off again. We back reamed to 14,039' and could not pull up any farther and were never able to restore circulation.

We are currently stuck at 14,029' and are unable to rotate or circulate. we would like to request approval to cut and pull casing and sidetrack the well to redrill the curve and lateral. Below is our proposed plan forward:

1. Cut casing: Run casing cutting tools and allow to fall as low as possible into the curve (we are not going to pump the tools down). Ideally we would cut the casing at 70 deg Inc (~6200' MD at the deepest), if we are not able to get the casing cutting tools to this depth then cut casing as deep as possible.
2. We will then pull casing and lay down all old / used casing (none of this casing will be re-run on current well)
3. Using Halliburton cement services and a 2-7/8" stinger, we will set a minimum of 45bbls of 17.5 ppg cement plug (class G) (yield 0.94cu ft/sk)
4. WOC on cement to get a minimum of 3,000 psi UCS based on lab tests
5. Using Baker Autotrak curve, we will dress the cement until we have good quality sidetrack cement (if good cement isn't found at 150' from TOC, then we will wait an additional 2 hours before drilling

another 30-50 ft, this will be repeated until good cement is found and we will not drill into the bottom 200 ft of the cement plug before setting another cement plug)

6. We will re-drill the curve and lateral using the Baker AutoTrak curve BHA, placing the well in the Nio B Marl, which is ~100 ft below the current lateral, which is in the Nio A Marl.
7. At this point we will resume normal operations where we POOH, run casing (new string of 5.5" 20# P-110IC TXP-BTC casing with a 7.75" reamer shoe), cement the well from TD to 2500' MD, N/D BOPE and prepare to release the rig.

Please respond with your approval. Our regulatory group will submit all the necessary paperwork / sundries after your verbal approval has been given. Once casing is cut, we will make a new directional plan for the sidetrack and that will be submitted with the paperwork from regulatory as well. If you have additional questions then please do not hesitate to ask.

Thanks and regards,

Well / Sidetrack Summary:

Rig:	H&P 524						
Well:	DUKES FEDERAL LC10-745						
API:	05-123-42981						
Pad Well Count:	1 of 5						
Sec:	22	Twship:	9N	Range:	59W	QtrQtr:	NWNE
Lat:	40.74237000						
Long:	-103.96201000						

Spud Feb 3, 2016 at 19:30

Casing: 9-5/8" 36# J-55 LTC set at 1927 ft, cemented to surface, 5.5" 20# P110-IC TXP-BTC casing ran to 14,029' (stuck, with no cement in wellbore)

Fish in hole: TBD, it will be the casing that cannot be retrieved from cutting casing... probably it will be 5.5" 20# P110-IC TXP-BTC casing from ~6200 to 14,029'

Proposed plug: 45 BBLs of 17.5ppg, 0.94 cu ft/sk, class G cement from 6150' to 5550' MD (cover ~600 ft MD)

Sidetrack: Estimated sidetrack depth is 5650' MD (depends on where casing is cut and cement quality)

Target formation: Niobrara B Marl (~100 ft lower TVD than original wellbore, which was a Niobrara A Marl)

BHL target for sidetrack well: Same as for original wellbore, though it will be ~100 ft lower in TVD

Todd Wolff

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