

From: Hickey - DNR, Mike [mailto:michael.hickey@state.co.us]
Sent: Saturday, July 02, 2016 8:27 AM
To: Ty Entenmann
Cc: Mike Hickey - DNR; Diana Burn - DNR
Subject: Re: Sidetrack Breniman #5

Please proceed as proposed.

On Saturday, July 2, 2016, Ty Entenmann <tenenmann@extractionog.com> wrote:

Mike,

Normally I wouldn't bring you in so quickly on this however I am sure most in the office are on vacation at the moment, and trying to get this done and over with so people can go back to celebrating the Fourth. Looking for an approval on a sidetrack on Breniman 5. Initially we were trying to get approval for one and it was to be preventative, however with recent events now we have to side track and it is the most recent proposal listed below to Diana. I just recently sent the newest request to Diana. Both proposals are below and if you have any questions or concerns please call.

Thanks,



Ty Entenmann

Drilling Engineer

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Diana,

We are having trouble on the Breniman #5 (as discussed in previous email), we landed curve and have seen much more Shannon Springs exposure than anticipated. However after attempting to continue to drill this lateral we have encountered some integrity issues due to the Shannon Springs exposure. Given that our issues are above where an open hole sidetrack looks feasible, our plan now is to open hole sidetrack but using a cement plug to kick off, this will allow us to land lower and minimize our exposure greatly. This sidetrack will now have to be executed where the sidetrack email before was tentatively a plan.

With your permission we would like to place a 500' cement from 6900'-7400', we will allow this to setup and then dress the plug to 7000' and kick off. This will allow us to lower our landing targets and get in the Niobrara at landing as opposed to the Shannon Springs.

Please call if any of this doesn't make sense or if you would like to see/try something else. Also previous email is copied below to ease distinguishing between the two proposals.

API Number - 0512340428

Total MD drilled to: 8000'

Surface casing – 9 5/8" 36# set at 1596'.

Proposed fish: None

The plan would be to open hole sidetrack with the use of 500' cement plug (6900-7400')

Proposed sidetrack point – 7000'

Objective formation of sidetrack: Niobrara

Proposed BHL: 858 FNL 460 FWL Sec 18, T6N, R67W (Same as original APD).

From: Ty Entenmann

Sent: Friday, July 1, 2016 8:17 PM

To: 'Diana Burn - DNR' <diana.burn@state.co.us>

Cc: Kamrin Ruder <kruder@extractionog.com>; Dustin Dyk <DDyk@ExtractionOG.com>

Subject: Preventative (Possible) Sidetrack - Breniman 5

Diana,

We are having trouble on the Breniman #5, we landed curve and have seen much more Shannon Springs exposure than anticipated. We drilled this based off of the previous 4 wells on the pad however the formation dips down here more aggressively than we had seen on this pad to date. This has caused us to expose the Shannon springs in the heel and start of the lateral on this well. We believe we have it handled, however at first sign of failed inhibition we will most likely sidetrack this well.

With your permission and if needed we would like to proceed as follows. Open hole sidetrack at 7437' which is right at 85 degrees this would allow us to move our targets down and limit exposure through the rest of the lateral. Then proceed on to the original BHL once drilling resumes.

Please call if any of this doesn't make sense or if you would like to see something else.

API Number - 0512340428

Total MD drilled to: 8000'

Surface casing – 9 5/8" 36# set at 1596'.

Proposed fish: None

The plan would be to open hole sidetrack

Proposed sidetrack point – 7437'

Objective formation of sidetrack: Niobrara

Proposed BHL: 858 FNL 460 FWL Sec 18, T6N, R67W (Same as original APD).