

Kris Lee

From: Andrews - DNR, David <david.andrews@state.co.us>
Sent: Thursday, September 8, 2016 6:09 PM
To: Marty Williams
Cc: Mike Griffis; Kris Lee; Christopher Rudolph; Jane Stanczyk - DNR; Barbara Westerdale - DNR; Shaun Kellerby - DNR; Emily Waldron - DNR; Sarah Freeman - DNR; Stuart Ellsworth - DNR
Subject: Re: FW: Peter McCue 30-3 inadvertent side track API 05-081-07829-00
Attachments: 12 PVA Peter McCue 30-3 09082016.pdf; 401045777_approved.pdf; Northwest Area Notification Procedures Rev3_05-10-2012.pdf; Statewide UNPLANNED Sidetrack Approval Reporting_10-7-2015.pdf

Marty,

As stated on the attached guidance, COGCC approval is required prior to sidetracking a well. GRMR had knowledge of this sidetrack on 9/4/2016, but COGCC Engineering Staff was not notified of the sidetrack until 9/7/2016. I have discussed this violation of Rule 303.a. (and Condition of Approval #1 on Form 2 #401045777, compliance with the Northwest Notification Policy) with COGCC's Permitting Manager, and considering GRMR's temporary staff change on the rig in the field, we have decided not to pursue enforcement. GRMR is advised to keep all field staff informed of COGCC's field notification and approval procedures while drilling new wells.

The Form 2 for this well, COGCC's Northwest Notification Policy, and our Sidetrack Guidance are all attached to this email.

This email is an after-the-fact approval of the sidetrack for this well, as described in your email below.

Please coordinate timely submission of the forms shown on the attached guidance with COGCC's Permitting staff in our Denver office (Sarah Freeman). While the sidetrack targeted the same approximate BHL, the actual BHL shown on the attached directional survey differed somewhat from the planned BHL. Therefore, this verbal approval is contingent upon the assumption that the BHL and wellbore path remain at a legal location for completion (COGCC permitting staff will evaluate prior to formal approval of the forthcoming Application for Permit to Drill a Sidetrack Wellbore, Form 2). If the BHL or the productive portion of the sidetrack wellbore extends into locations that are not legal, then GRMR may have to plug back portion(s) of the well that are not legal or obtain waivers from offset mineral interests. Please consult with our Permitting staff as necessary.

Sarah: a RemindmE has been added to the well file to document this approval.

Thanks,

Dave

David D. Andrews, P.E., P.G.
Engineering Supervisor - Western Region

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On Thu, Sep 8, 2016 at 2:59 PM, Marty Williams <Marty.Williams@grmroilandgas.com> wrote:

David,

I added one clarification in bold. I will be working on the form 2.

David

Per Rules 303a.(1) and 303a.(4) and your request for an unplanned sidetrack:

Peter McCue 30-3 API 05-081-07829-00 Moffat County, Colorado

i. After having drilled on plan at 4487 feet on target for a TD of 5609, the wellbore started caving. With difficulty the wellbore was back-reamed into the intermediate casing shoe set in the Niobrara at 3548 feet. The plan was to clean out the hole to current hole depth. In the process of getting the drill string to intermediate, the directional equipment was also damaged unknown to the directional team. When going back into the hole for cleanout, the drill-string side-tracked at 3670 feet. Normally direction readings are not taken during hole cleanout and reaming operations, but the MWD gamma started giving erroneous readings at 3740 feet, which led to taking a survey. That survey failed. The drill string was tripped for new directional equipment and when back in the hole at 3740 feet a survey was taken that showed the drill string was not in the original wellbore. The inadvertent sidetrack was discovered on Sunday evening, the 4th of September at ~1800 mt, the day before Labor day Monday. The new wellbore was in the same azimuth but it was high to the original by a few tens of feet. I made the decision to drill back to plan having not been fully aware of COCGG requirements. On resuming drilling, the new wellbore, which was high, never intersected the original wellbore, the new wellbore having angled slightly below the original wellbore. The well proceeded on the original plan to the extent the azimuth and inclination could be controlled in the faulted and rubleized Niobrara. Toward the end of the wellbore, angle was not maintained and the

wellbore traversed from the Upper Niobrara to the middle of the Niobrara **rather than deeper in the Niobrara as was planned**. A directional report is attached demonstrating plan versus original well-bore versus sidetrack.

- ii. Total measured depth in the original wellbore 4487 on the way to 5609
- iii. Casing depths: Surface at 758 protecting the Morapos aquifer between 479 feet and 670 feet (size 13.375), Final casing string into the Niobrara member of the Mancos at 3548 feet (size 9.625)
- iv. No fish in the hole but hole caved, could not find original well-bore
- v. No proposed plugs
- vi. No proposed plugs
- vii. Well side-tracked at 3670 as best can be determined
- viii. Side track formation Niobrara (original targeted section)
- ix. Side track targeted the same approximate bottom hole location

If there is any other information or clarification needed please contact me.

Respectfully Marty Williams (GRMR geologist)

Marty Williams

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