

Fred Miller

From: Sutphin - DNR, Dirk <dirk.sutphin@state.co.us>
Sent: Thursday, July 11, 2013 5:20 PM
To: Fred Miller
Subject: Re: FW: Upcoming Re-entry and P&A

Fred,
Looks good to me. Whatever size bit is fine with us. Won't a smaller bit follow the old hole better to avoid unintentional sidetracking?

We'll look forward to receiving your permits applications.
Thanks for contacting me,

Dirk Sutphin, P.E.
COGCC, SE Area Engineer
(303) 894-2100 x 5107

On Thu, Jul 11, 2013 at 3:41 PM, Fred Miller <Fred.Miller@crzo.net> wrote:

Dirk,

I have addressed your comments below please let me know if this meets the State's needs.

1. I'm not sure about the Cement Plug Tables. Please review if they are what you intended. The State 14-36 has 2 tables the 2nd one seems to indicate a plug from 3500' to surface. The State 1-36 has 1 table and there is no similar plug. **I meant to delete the 3,500' to surface plug. I have attached updated procedures showing correct plugging depths.**
2. We will only require a single cement plug (minimum 40 sacks and 100' in length) set above the Niobrara. It should be set with the bottom at about 50' above the Niobrara, or it can be set higher up in the middle of the Pierre shale as shallow as 3000' (as a round number) if needed due to hole conditions. **I will change the lower plug depth to reflect your guidance.**
3. The proposed depths of the aquifer plugs at 550' and 600' are fine. According to the map titled CHEYENNE BASIN STRUCTURE CONTOUR MAP OF THE BASE OF THE LARAMIE—FOX HILLS AQUIFER (attached) the base of the Fox Hills is approx. 4425' elev., so at depths of 413' and 482' at these locations. These plugs could be set as shallow as 50' below the Fox Hills but 100' is better. Your depths are a little more than that which is fine. **Just wanted to go the extra mile.**

4. The procedures say you will use a 6" rock bit while the Re-entry Hole Data tables indicate 8.5" for planned hole size. **We use a larger hole size to make sure the cement plugs have extra volume to account possible hole irregularities.**

Best regards,



Fred Miller

Niobrara District Engineer

Production & Completions

Carrizo Oil & Gas, Inc.

500 Dallas Street

Suite 2300

Houston, TX 77002

Office Phone: [713-358-6208](tel:713-358-6208)

Cell Phone: [713-417-9527](tel:713-417-9527)

E-Mail: Fred.Miller@crzo.net

From: Sutphin - DNR, Dirk [<mailto:dirk.sutphin@state.co.us>]

Sent: Thursday, July 11, 2013 3:59 PM

To: Fred Miller

Cc: Diana Burn - DNR

Subject: Re: FW: Upcoming Re-entry and P&A

Fred,

Diana asked me to look at these plugging plans you sent her. Here are my comments.

1. I'm not sure about the Cement Plug Tables. Please review if they are what you intended. The State 14-36 has 2 tables the 2nd one seems to indicate a plug from 3500' to surface. The State 1-36 has 1 table and there is no similar plug.
2. We will only require a single cement plug (minimum 40 sacks and 100' in length) set above the Niobrara. It should be set with the bottom at about 50' above the Niobrara, or it can be set higher up in the middle of the Pierre shale as shallow as 3000' (as a round number) if needed due to hole conditions.
3. The proposed depths of the aquifer plugs at 550' and 600' are fine. According to the map titled CHEYENNE BASIN STRUCTURE CONTOUR MAP OF THE BASE OF THE LARAMIE—FOX HILLS AQUIFER (attached) the base of the Fox Hills is approx. 4425' elev., so at depths of 413' and 482' at these locations. These plugs could be set as shallow as 50' below the Fox Hills but 100' is better. Your depths are a little more than that which is fine.
4. The procedures say you will use a 6" rock bit while the Re-entry Hole Data tables indicate 8.5" for planned hole size.

Best Regards,

Dirk Sutphin, P.E.
COGCC, SE Area Engineer
[303\) 894-2100 x 5107](tel:3038942100)

From: Diana Burn - DNR [<mailto:diana.burn@state.co.us>]
Sent: Wednesday, July 03, 2013 10:56 AM
To: Dirk Sutphin - DNR
Subject: FW: Upcoming Re-entry and P&A
Importance: High

Could you please look at these and respond – I glanced and they look fine to me but I didn't delve.

Thanks,

Diana

From: Fred Miller [<mailto:Fred.Miller@crzo.net>]
Sent: Wednesday, July 03, 2013 9:30 AM
To: diana.burn@state.co.us
Subject: Upcoming Re-entry and P&A

Diana,

I am looking to re-enter a couple of wells offset to a couple of our horizontal wells. I have attached the procedures for re-entering the wells and was hoping to get your approval soon so I can proceed with submitting the permit. Please let me know if you want a change made or if you have questions. I am available by e-mail or phone, feel free to call my cell.

Best regards,



Fred Miller

Niobrara District Engineer

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500 Dallas Street

Suite 2300

Houston, TX 77002

Office Phone: [713-358-6208](tel:713-358-6208)

Cell Phone: [713-417-9527](tel:713-417-9527)

E-Mail: Fred.Miller@crzo.net