

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Tuesday, July 31, 2012 5:30 PM
To: 'Mark Fairchild'
Cc: Ramon Reyes
Subject: RE: SWD Permit Depth Change

Hello Mark and Ramon,
I looked this over today and compared your encountered Reef depths to the permitted depths.
The permitted depths are 8500 feet to 9250 feet. You say the Reef actually is from 8538 to
The main difference is you are permitted down to 9250 feet and the Reef porosity stops at 8909 feet.

In other words, I don't think we need any change in your permit.

Let me know if you disagree?
I can scan this paperwork into the original permit file.

Will Jones
New Mexico
Oil Conservation Division
[Images](#) [Contacts](#)

From: Mark Fairchild [mailto:MFairchild@concho.com]
Sent: Tuesday, January 17, 2012 5:26 PM
To: Jones, William V., EMNRD
Cc: Ramon Reyes
Subject: RE: SWD Permit Depth Change

1. Anytime, we always wanna help the NMOCD guys.
2. What about the status of this well change?

Mark A. Fairchild

From: Jones, William V., EMNRD [William.V.Jones@state.nm.us]
Sent: Tuesday, January 17, 2012 5:00 PM
To: Mark Fairchild; Ramon Reyes
Subject: RE: SWD Permit Depth Change

Thanks,

Also thanks for the nice Excel wellbore diagram – I collected that one.

Working on the Burch Keely and Dodd Federal issues last week and this week.

From: Mark Fairchild [<mailto:MFairchild@concho.com>]

Sent: Tuesday, January 17, 2012 1:30 PM

To: Jones, William V., EMNRD; Ramon Reyes

Subject: RE: SWD Permit Depth Change

Will thanks for the reply, here are the answers to the questions:

Note: Depth applied for and granted by SWD-1285 is 8,550 to 8,850

1. The main porosity intervals in the Wolfcamp reef exist from 8,538 to 8,909. The small interval above our applied for depths is probably not significant, but the lower porosity is.
2. Formation is the Wolfcamp Reef, same as applied for.
3. SWD 1285
4. There was no approximately in the original permit application.
5. Wellbore diagram with tops attached.
6. There were no oil and or gas shows encountered.
7. Area of review does not change.
8. The wells was not moved in any way from that permitted.

If possible, the interval from 8,538 to 8,909 would be our objective to get permitted.

Additional comments by Mr. Ramon Reyes our Lead Geologist:

Mr. Jones,

We are asking for a slight change to our SWD plans due to structural change of the Wolfcamp "Reef" in which we plan to dispose produced waters. We used another recently drilled SWD well (Loco Hills SWD "33" #4) for reference to our tops and interval to dispose. We were surprised to see that the reef came in 178' high. The overall thickness of the reef was similar (709' to 750'), but not structurally. Going into this, our objective is to drill in the thickest part of the reef to increase our chances of encountering high porosity zones within.

M.A. Fairchild

Please note, my new email is MFairchild@concho.com

COG OPERATING LLC
Office: 432-686-3021
Cell: 432-230-7170



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From: Jones, William V., EMNRD [<mailto:William.V.Jones@state.nm.us>]
Sent: Tuesday, January 17, 2012 12:16 PM
To: Mark Fairchild; Ramon Reyes
Subject: RE: SWD Permit Depth Change

Hello Mark,

Ask one of your engineers or geologists to send a brief letter with the particulars of the change...

- a. Why ask for 100 feet when it really is 150?
- b. Is it the same formation(s)?
- c. What is the permit SWD number?
- d. Did the original permit say "approximately" for the depths of disposal?
- e. Send a new wellbore diagram.
- f. If it came in high – does that mean it was oil/gas productive?
- g. How does this change the Area of Review – any wells to be concerned about?
- h. Was the well site moved laterally from the original permit?

We can issue a corrected permit or amended permit depending on the extent of the deviation from what is stated in the existing permit.

Will Jones
New Mexico
Oil Conservation Division
[Images](#) [Contacts](#)

From: Mark Fairchild [<mailto:MFairchild@concho.com>]
Sent: Tuesday, January 17, 2012 10:54 AM
To: Jones, William V., EMNRD; Ramon Reyes
Subject: SWD Permit Depth Change

Will, we have drilled our Loco Hills SWD 33 #6, 30-015-39478. This well came in approx. 150' high to our projections. This therefore puts our applied for and approved injection interval outside of some of the porosity that we wanted to have in the disposal interval. What steps would be required to add 100' to our original C108 permitted depths? Thanks for your time!

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To: Jones, William V., EMNRD; Ramon Reyes
Subject: RE: SWD Permit Depth Change
Attachments: COG SENM SWD WBD Loco Hills 33 #6.xlsx

30-015-39478

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New Mexico

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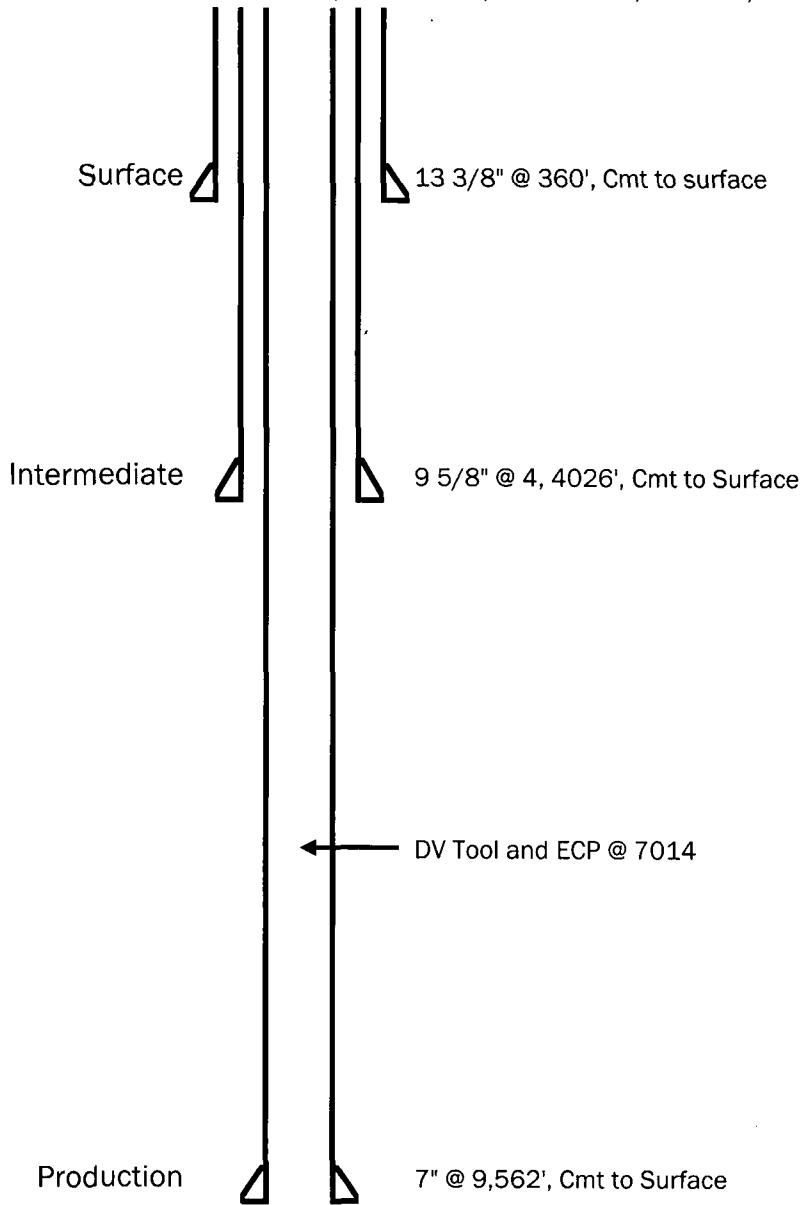


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Well: Loco Hills SWD 33 #6
API: 30-015-39478 SWD Permit: 1285
Elev: 3,621.5 KB; 3,603 GL
Location: 2210 FNL; 2145 FEL, Unit Ltr. G, Sec 33, T17S; R30E, Eddy Co., NM



Frmt'n	Depth, KB
Yates	1,496
7 Rivers	1,886
Queen	2,535
Grayburg	2,930
San Andres	3,366
Glorieta	6,316
Paddock	6,350
Blinberry	7,617
Tubb	8,126
Wolfcamp	8,230
Wolfcamp Reef	8,367
Wolfcamp Reef Base	9,076
Cisco	9,330
Cisco Reef	9,427