



MCBU  
P. O. Box 51810  
Midland, TX 79710-1810

RECEIVED OCD

2012 JUL 19 P 12:44

July 16, 2012

Mr. Will Jones  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

RE: Amendment of Administrative Order SWD-1316

Will:

As per the discussions related to the proposed amendment of the above Order, ConocoPhillips Company respectfully request the following:

1. Amend the language in the Order to reference the Cherry Canyon member of the Delaware Mountain Group instead of the current language indicating the "Delaware Mountain Group (Bell Canyon member).
2. Amend the proposed perforations for disposal from 5745-5905 to include 5686 to 5932.

As part of this request, please find attached portion of the email discussion with the OCD District Geologist, COP presentation, and a current and proposed wellbore diagram.

Should you have any questions, or need additional information, please do not hesitate to contact me at 432-688-6943.

Sincerely,

Donna Williams  
Sr. Regulatory Advisor

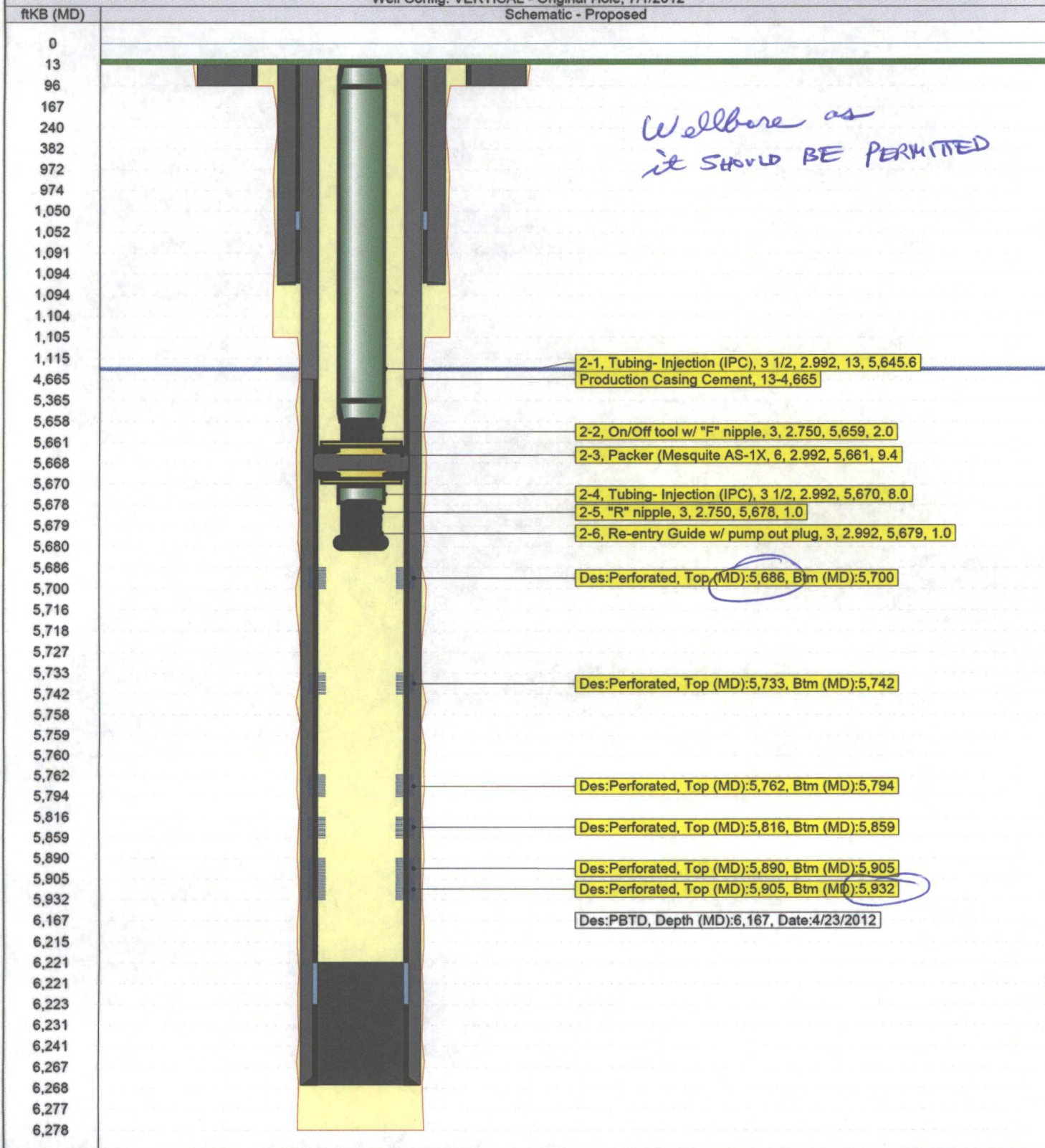
PLANNED



Schematic - ~~Current~~  
BUCK FEDERAL 17 1SWD

District PERMIAN	Field Name RED HILLS WEST	API / UWI 3002540482	County LEA	State/Province NEW MEXICO	
Original Spud Date 4/7/2012	Surface Legal Location Section 17, Township 26S, Range 32E	East/West Distance (ft) 1,940.00	East/West Reference FWL	North/South Distance (ft) 2,284.00	North/South Reference FNL

Well Config: VERTICAL - Original Hole, 7/1/2012  
Schematic - Proposed



API#	WELL_NAME	WELL #	Status	CURR_OPERA	Type	SPUD	Depth	PLUGBACK	DIREC	LEASE_NAME	Location	Footage
300252771600	RUSSELL '17' FEDERAL	12	✓ Active	SAHARA OPERATING COMPANY	OIL	2/25/1982	4502	4430	VERTICAL	RUSSELL '17' FEDERAL	17 26S 32E	1980 FSL 1980 FWL
300252793700	RUSSELL '17' FEDERAL	13	✓ PA	SAHARA OPERATING COMPANY	OIL	10/20/1982	4550	4500	VERTICAL	RUSSELL '17' FEDERAL	17 26S 32E	1980 FSL 660 FWL
300252737500	RUSSELL '17' FEDERAL	10	✓ Active	SAHARA OPERATING COMPANY	OIL	9/15/1981	4500	4460	VERTICAL	RUSSELL '17' FEDERAL	17 26S 32E	660 FSL 1720 FWL
300252793000	THOMPSON '18' FEDERAL	5	✓ Active	SAHARA OPERATING COMPANY	OIL	11/5/1982	4600	4568	VERTICAL	THOMPSON '18' FEDERAL	18 26S 32E	1980 FNL 660 FEL
300252890900	RUSSELL FEDERAL	11	✓ Active	SAHARA OPERATING COMPANY	OIL	9/17/1984	4363	0	VERTICAL	RUSSELL FEDERAL	17 26S 32E	1980 FSL 2310 FEL

*Handwritten signature/initials*

# PLUGGED WELLBORE SKETCH

Sahara Operating Company

Date February 8, 2008

RKB @  
DF @  
GL @

Subarea  
Lease & Well No  
Legal Description  
County  
Field  
Date Spudded  
API Number  
Status

Russell Federal "17" #13  
1980 FSL 660 FWL S17, T26S, R32E  
Lea State New Mexico  
Rig Released  
30-025-27937  
Plugged 02/08/08 State Lease LC-068281B

15 sx C cmt 63' to surface

Perf/sqz'd 40 sx C cmt 400 - 293' Tagged

8-5/8" csg @ 1,110' cmt'd to surface

Perf/sqz'd 40 sx C cmt 1,170 - 1,045' Tagged

Perf/sqz'd 40 sx C cmt 1,700 - 1,575' Tagged

25 sx C cmt 2,511 - 2,258'

25 sx C cmt 4,327 - 4,127' Tagged  
Circulated 85 bbls plugging mud  
RBP @ 4,330', set in 1985

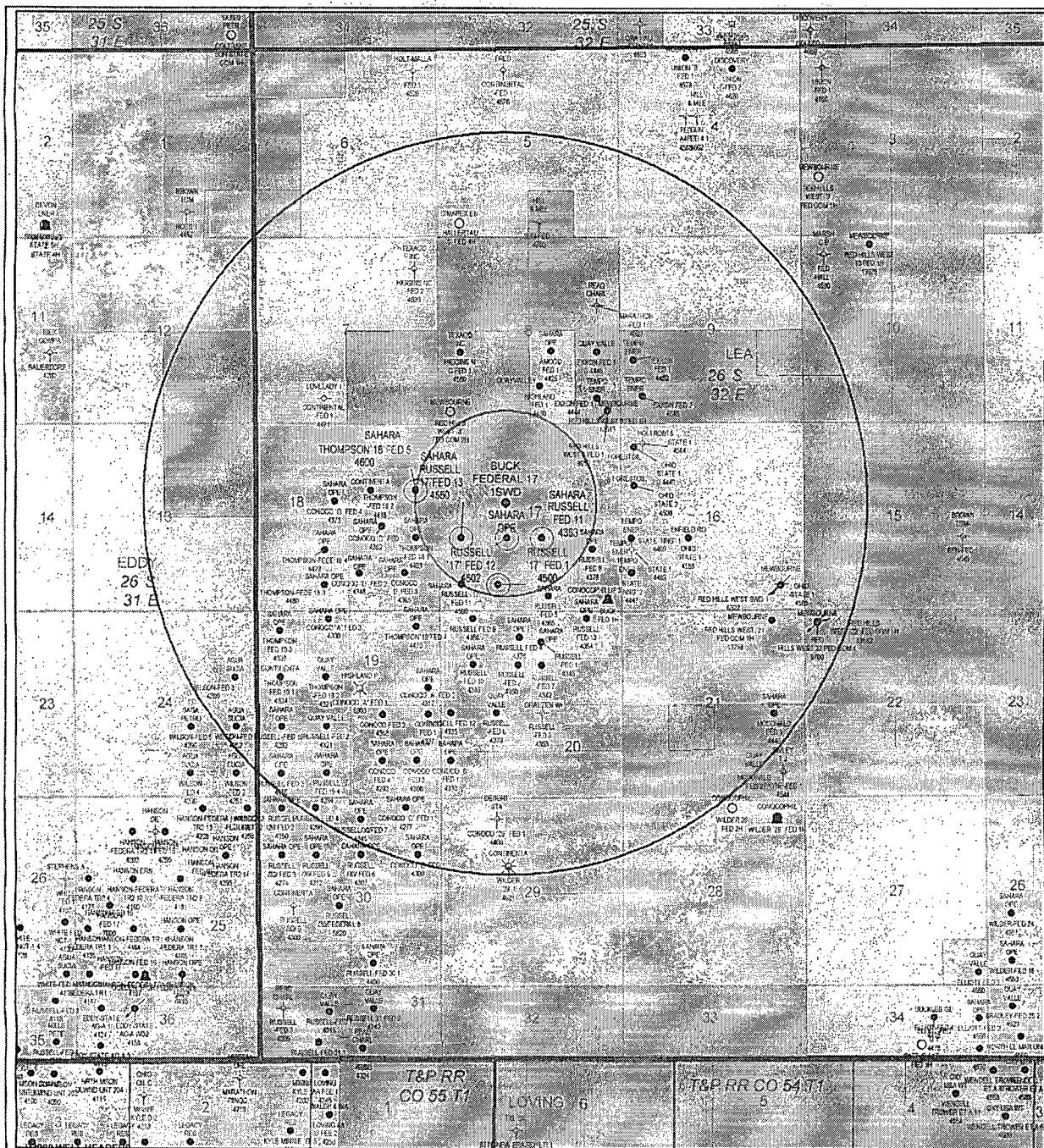
5-1/2" csg @ 4,538', TOC @ 2,000' (T S)

PBTD @  
TD @



## PLUGS SET 02/07 - 02/08/08

- 1) circulated 85 bbls plugging mud
- 2) 25 sx C cmt 4,327 - 4,127' Tagged
- 3) 25 sx C cmt 2,511 - 2,258' Balanced
- 4) Perf/sqz'd 40 sx C cmt 1,700 - 1,575' Tagged
- 5) Perf/sqz'd 40 sx C cmt 1,170 - 1,045' Tagged
- 6) Perf/sqz'd 40 sx C cmt 400 - 293' Tagged
- 7) 15 sx C cmt 63 - surface



- STATUS**
- OIL
  - ★ GAS
  - ✱ OIL & GAS
  - ✱ DABAND
  - ⊙ START
  - LOC
  - ✱ INJ & SERVICE
  - ✱ JA
  - ✱ SUS
  - Xibly inside Area of Review

- PROPOSED BUCK FEDERAL 17 40000
- ONE-HALF MILE RADIUS CIRCLE
- TWO MILE RADIUS CIRCLE
- JCD, PH, Tabin, Leasat



0 2,500 5,000  
Feet

HAD27  
New Mexico East(3001)

**ConocoPhillips**

**Permian Basin**

New Mexico

COP Buck Federal 17 #1 SWD  
Application  
Lea county

Author: [blank] Date: 12/14/2011  
Compiled by: [blank] Scale: [blank]  
Project File: [blank]

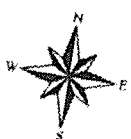
\\hoice15\p148esm\pwork\jcd\DAVIS\CD\_Permian\_RH\_SWDwells\_3001A.mxd





P2000 WELL HEADERS  
STATUS  
OIL  
GAS  
OIL & GAS  
OIL & GAS  
START  
LOC  
OIL & SERVICE  
JA  
SUN  
Wells within Area of Review  
UNCLASSIFIED BUCK FEDERAL 17 #1 SWD

ONE HALF MILE RADIUS CIRCLE  
TWO MILE RADIUS CIRCLE  
COPC Lease Tracts - 100%  
Minnow Lease Tracts - 100%



0 2,500 5,000 Feet

NAD27  
New Mexico Eas(3001)

ConocoPhillips  
Permian Basin

New Mexico  
COP Buck Federal 17 #1 SWD  
Application  
Lea county

Author:  
Compiled by: J. Davis  
Project File:  
Date: 12/16/2011  
Scale:

**Williams, Donna J**

---

**From:** Williams, Donna J  
**Sent:** Wednesday, June 27, 2012 5:45 AM  
**To:** 'Kautz, Paul, EMNRD'; Jones, William V., EMNRD  
**Subject:** RE: ConocoPhillips, Buck Federal 17 1SWD

Paul, thank you for discussing this matter with Harvey. Will, what is the next step if any, to amend the actual disposal formation name to Cherry Canyon as well as amend the permit to include the additional perforations. Please let me know. Thanks.

---

**From:** Kautz, Paul, EMNRD [mailto:paul.kautz@state.nm.us]  
**Sent:** Tuesday, June 26, 2012 3:03 PM  
**To:** Jones, William V., EMNRD  
**Cc:** Williams, Donna J  
**Subject:** [EXTERNAL]FW: ConocoPhillips, Buck Federal 17 1SWD

Hi Will

Harvey Vick a geologist with ConocoPhillips sent me the attached power point cross section. I agree Conoco's pick for the Cherry Canyon it's the equivalent to the same pick I use for the Cherry Canyon formation. We have not received the logs for this SWD well and from the cross-section that the original zone and the proposed additional perforations are Cherry Canyon. I told Harvey that I would leave it to you what if anything else you may want ConocoPhillips to submit in order to correct their original SWD permit.

Paul

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**From:** Vick, Harvey [mailto:Harvey.O.Vick@conocophillips.com]  
**Sent:** Tuesday, June 26, 2012 7:55 AM  
**To:** Kautz, Paul, EMNRD  
**Subject:** ConocoPhillips, Buck Federal 17 1SWD

Hello Mr. Kautz:

Attached are a few Power Point slides addressing the ConocoPhillips, Buck Federal 17 1SWD well. As we agreed, I'll call you at 1:30pm your time today to discuss.

**Harvey O. Vick III, P.G.**  
**Staff Geologist**  
ConocoPhillips Company  
580 Westlake II, Room WL2 13010  
Houston, TX 77252-2197  
832-486-2797 office  
281-728-8566 cell  
832-330-0392 BlackBerry  
281-251-1910 home  
[harvey.o.vick@conocophillips.com](mailto:harvey.o.vick@conocophillips.com)

6/27/2012

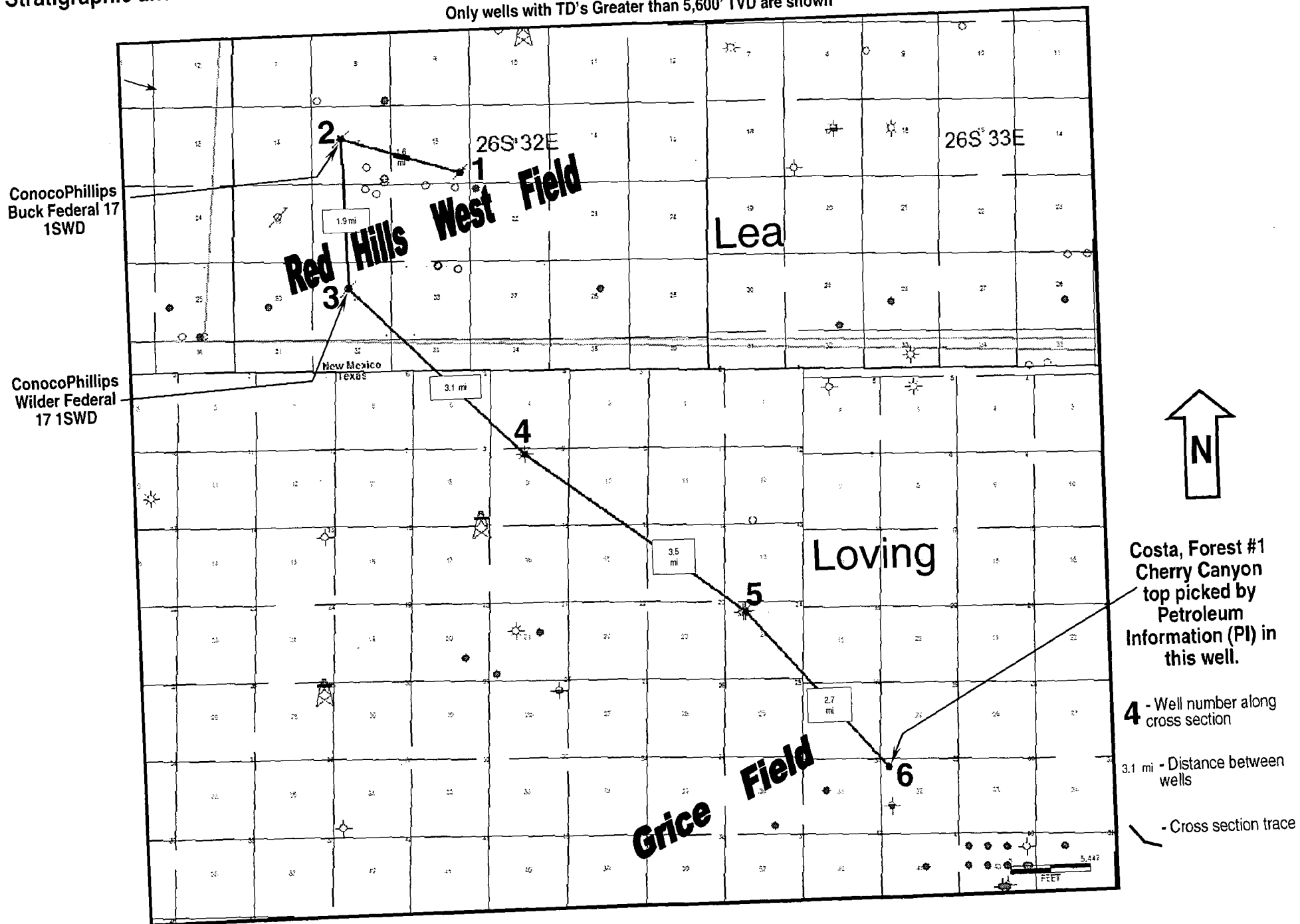
# Responses to Mr. Paul Kautz's Questions

- The top of the Bell Canyon is recognized as the top of the Delaware Mtn. Group.
- The Cherry Canyon top is correlated across this cross section as identified by Petroleum Information (PI) in the Costa, Forest #1 well (well #6 on the cross section).
- ConocoPhillips now recognizes that most operators in the area of the Buck Federal 17 1 SWD well identify the proposed injection zones for this well as the Cherry Canyon Sandstone rather than the Bell Canyon Sandstone. Therefore, ConocoPhillips is designating the proposed injection zones as Cherry Canyon Sandstone.
- The Cherry Canyon proposed injection zones in the Buck Federal 17 1SWD came in structurally as follows as compared to the initial formation top prognosis:
  - Cherry Canyon SWDZ 1 Top \_ 76' above prognosis.
  - Cherry Canyon SWDZ 2 Top \_ 53' above prognosis.
  - Cherry Canyon SWDZ 3 Top \_ 23' above prognosis.
  - Cherry Canyon SWDZ 4 Top \_ 40' above prognosis.
- No shows of oil or gas were noted during the drilling of this well.
- ConocoPhillips was calling these proposed injection zones for this well Bell Canyon at the time the formation top prognosis was initially submitted.



# Stratigraphic and Structural Cross Section Trace from Red Hills West Field in S.W. NM to the Grice Field in Central Loving Co TX.

Only wells with TD's Greater than 5,600' TVD are shown

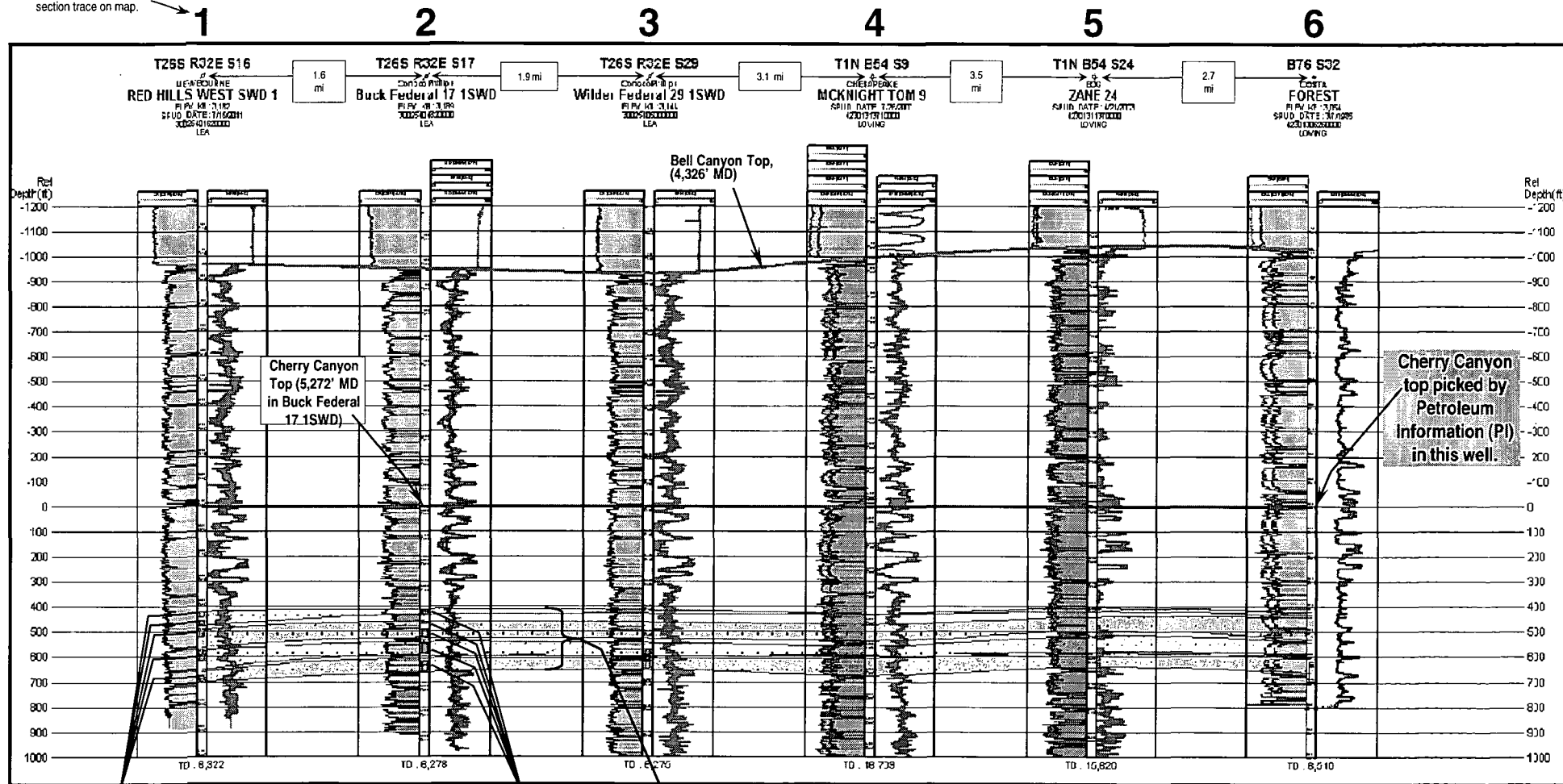


# Stratigraphic Cross Section Flattened on the Cherry Canyon Top

## Showing Preferred Perforations in the Buck Federal 17 1SWD Well

Cross Section from Red Hills West Field in S.W. NM to Grice Field in Central Loving Co TX.

Well number along cross section trace on map.



Existing Injection Perforations

Preferred Cherry Canyon perforations expanded from those in the Buck Federal 17 1SWD permit.  
5,686' to 5,700', 5,733' to 5,742',  
5,762' to 5,794', 5,816' to 5,859' and  
5,890' to 5,932'.

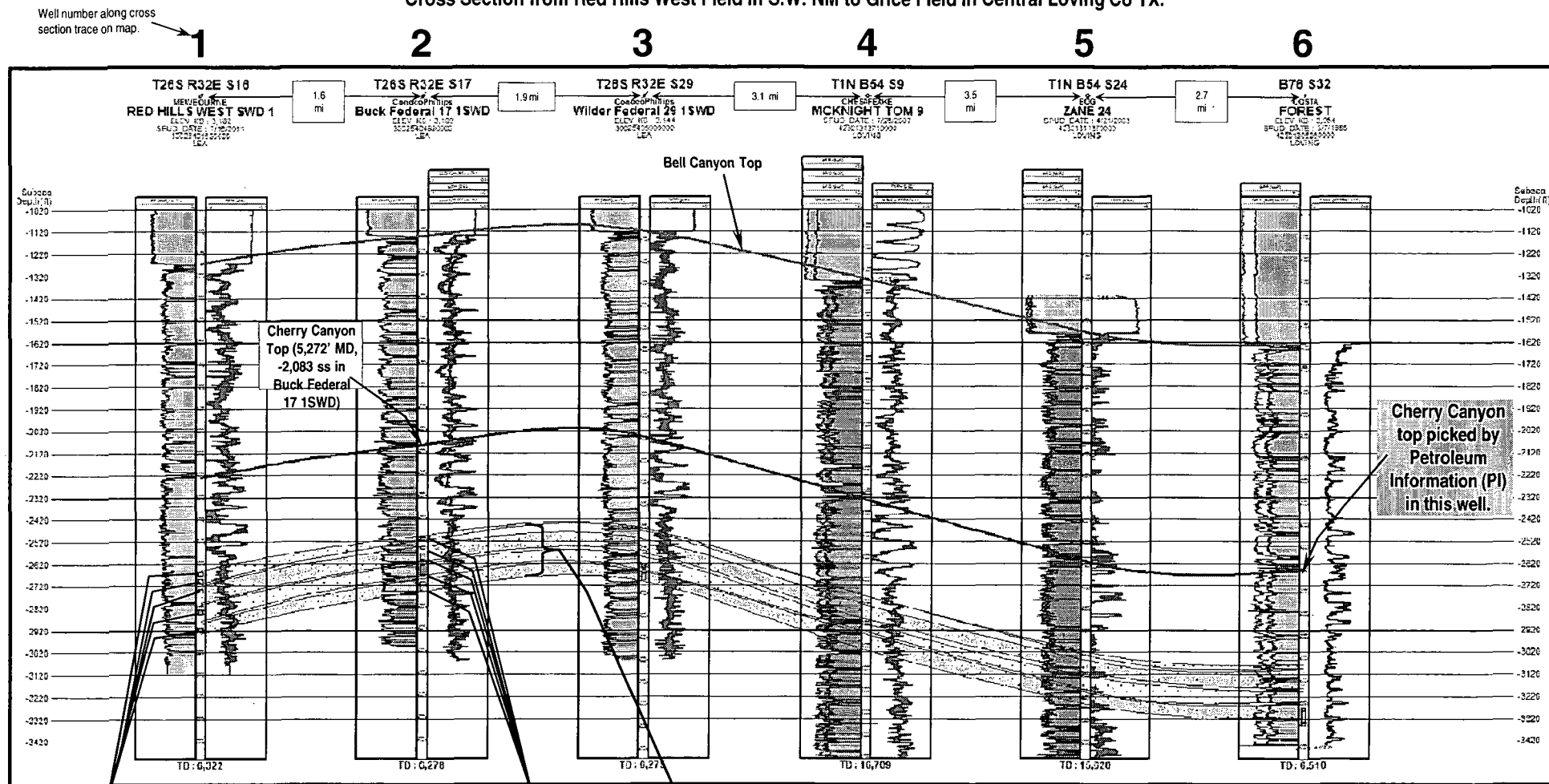
Cherry Canyon Sandstone Injection Intervals

### Notes:

- The top of the Bell Canyon is recognized as the top of the Delaware Mtn Group.
- ConocoPhillips now recognizes that most operators in the area of the Buck Federal 17 1 SWD well identify the proposed injection zones for this well as the Cherry Canyon Sandstone rather than the Bell Canyon Sandstone. Therefore, ConocoPhillips is designating the proposed injection zones as Cherry Canyon Sandstone.
- The Cherry Canyon top is correlated across this cross section as identified by Petroleum Information (PI) in the Costa, Forest #1 well (well #6 on the cross section).
- ConocoPhillips would like to increase the perforation interval from 5,745' to 5,905' (as stated in the permit) to an interval which would include 5,686' to 5,932'.

# Structural Cross Section Showing Bell Canyon Top, Cherry Canyon Top and Cherry Canyon Sandstone Injection Intervals With Preferred Perforations in the Buck Federal 17 1SWD Well

Cross Section from Red Hills West Field in S.W. NM to Grice Field in Central Loving Co TX.



Existing Injection Perforations

Preferred Cherry Canyon perforations expanded from those in the Buck Federal 17 1SWD permit.  
5,686' to 5,700', 5,733' to 5,742',  
5,762' to 5,794', 5,816' to 5,859' and  
5,890' to 5,932'.

Cherry Canyon Sandstone Injection Intervals

## Notes:

- The top of the Bell Canyon is recognized as the top of the Delaware Mtn Group.
- ConocoPhillips now recognizes that most operators in the area of the Buck Federal 17 1 SWD well identify the proposed injection zones for this well as the Cherry Canyon Sandstone rather than the Bell Canyon Sandstone. Therefore, ConocoPhillips is designating the proposed injection zones as Cherry Canyon Sandstone.
- The Cherry Canyon top is correlated across this cross section as identified by Petroleum Information (PI) in the Costa, Forest #1 well (well #6 on the cross section).
- ConocoPhillips would like to increase the perforation interval from 5,745' to 5,905' (as stated in the permit) to an interval which would include 5,686' to 5,932'.

## Jones, William V., EMNRD

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**From:** Williams, Donna J [Donna.J.Williams@conocophillips.com]  
**Sent:** Tuesday, July 31, 2012 2:27 PM  
**To:** Jones, William V., EMNRD  
**Subject:** RE: Request to Amend SWD Order 1316- Buck 17 Federal SWD # 1

it was mailed out on Monday 7/30. They are here in Midland so should receive the green card by Friday..

---

**From:** Jones, William V., EMNRD [<mailto:William.V.Jones@state.nm.us>]  
**Sent:** Tuesday, July 31, 2012 3:26 PM  
**To:** Williams, Donna J  
**Subject:** [EXTERNAL]RE: Request to Amend SWD Order 1316- Buck 17 Federal SWD # 1

Donna – just send me the proof of mailing.  
What day was it mailed?

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

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**From:** Williams, Donna J [<mailto:Donna.J.Williams@conocophillips.com>]  
**Sent:** Tuesday, July 31, 2012 2:23 PM  
**To:** Jones, William V., EMNRD; Maiorino, Brian D  
**Cc:** Ezeanyim, Richard, EMNRD  
**Subject:** RE: Request to Amend SWD Order 1316- Buck 17 Federal SWD # 1

no i haven't. I will as soon as I receive it back from them... Thanks.

---

**From:** Jones, William V., EMNRD [<mailto:William.V.Jones@state.nm.us>]  
**Sent:** Tuesday, July 31, 2012 3:20 PM  
**To:** Williams, Donna J; Maiorino, Brian D  
**Cc:** Ezeanyim, Richard, EMNRD  
**Subject:** [EXTERNAL]RE: Request to Amend SWD Order 1316- Buck 17 Federal SWD # 1

Hello Donna and Brian,  
Looks like all we are missing is item "a." below.  
If you have already sent this proof of notice or waiver from Sahara, please forgive me – I can't find it.

**Jones, William V., EMNRD**

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**From:** Jones, William V., EMNRD  
**Sent:** Monday, July 16, 2012 9:16 AM  
**To:** 'Williams, Donna J'  
**Cc:** 'Maiorino, Brian D'; Ezeanyim, Richard, EMNRD  
**Subject:** RE: Request to Amend SWD Order 1316- Buck 17 Federal SWD # 1

Hi Donna,  
Hope your week is starting well.

For this amendment,

- a. Send a notice (copy of this proposed change) to Sahara Operating Company and copy of the mailer to me. If they will sign a waiver, you could send that.
- b. The original application has a one page "Geologic Summary". Please ask Harvey Vick to look it over, revise it with the new information and send me a copy.
- c. The email sent to me from Brian on Febr 6<sup>th</sup> has listed tops of the Delaware members which may now be considered incorrect – how should that information be corrected?

Thanks for this,

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

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**From:** Williams, Donna J [<mailto:Donna.J.Williams@conocophillips.com>]  
**Sent:** Sunday, July 15, 2012 11:05 AM  
**To:** Jones, William V., EMNRD; Kautz, Paul, EMNRD  
**Subject:** FW: Request to Amend SWD Order 1316- Buck 17 Federal SWD # 1

Please find attached a copy of the request that is being sent to your office related to the amendment of the existing Order. If you have any questions, please let me know. Thanks.

---

ns, Donna J  
, July 15, 2012 12:03 PM  
, Donna J



**Jones, William V., EMNRD**

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**From:** Jones, William V., EMNRD  
**Sent:** Monday, June 11, 2012 2:27 PM  
**To:** 'Williams, Donna J'  
**Cc:** Kautz, Paul, EMNRD  
**Subject:** RE: Administrative Order SWD 1316 30-025-40482 F/17/26S/32E Lea County

Hi Donna,  
The issue of whether this is the Bell Canyon or Cherry Canyon at these depths....  
I have an email from your geologist earlier that these depths are definitely contained within the Bell Canyon and Paul Kautz (the OCD Hobbs Geologist) has put this into the SWD; Bell Canyon Pool.  
Would you ask your geologist to work with Paul Kautz on that? .... And again **send actual tops for the Bell Canyon and Cherry Canyon as they are approved by Paul.**

If the tops actually came in higher than expected, **did this result in any shows of oil or gas?**

Also, send another "Post Conversion" wellbore diagram showing the well as it exists with the final perf depths.

Otherwise, it appears this modification of your permit SWD-1316 should be approved.

Thank You,

Will Jones  
New Mexico  
Oil Conservation Division  
Images Contacts

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**From:** Williams, Donna J [<mailto:Donna.J.Williams@conocophillips.com>]  
**Sent:** Thursday, June 07, 2012 9:05 AM  
**To:** Jones, William V., EMNRD  
**Subject:** RE: Administrative Order SWD 1316

Thank you very much.

---

**From:** Jones, William V., EMNRD [<mailto:William.V.Jones@state.nm.us>]  
**Sent:** Thursday, June 07, 2012 9:01 AM  
**To:** Williams, Donna J  
**Subject:** [EXTERNAL]RE: Administrative Order SWD 1316

**Jones, William V., EMNRD**

**From:** Williams, Donna J [Donna.J.Williams@conocophillips.com]  
**Sent:** Thursday, June 07, 2012 9:05 AM  
**To:** Jones, William V., EMNRD  
**Subject:** RE: Administrative Order SWD 1316

Thank you very much.

---

**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Thursday, June 07, 2012 9:01 AM  
**To:** Williams, Donna J  
**Subject:** [EXTERNAL]RE: Administrative Order SWD 1316

Hi Donna,  
Will let you know soon.

Will

Will Jones  
New Mexico  
Oil Conservation Division  
Images Contacts

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**From:** Williams, Donna J [mailto:Donna.J.Williams@conocophillips.com]  
**Sent:** Thursday, June 07, 2012 6:28 AM  
**To:** Williams, Donna J; Kautz, Paul, EMNRD; Jones, William V., EMNRD  
**Subject:** RE: Administrative Order SWD 1316

Good morning. Have you'll had a chance to review this request below.. Please advise and thanks.

---

ns, Donna J  
ay, May 31, 2012 8:34 AM  
aul, EMNRD; 'william.v.jones@state.nm.us'  
. Donna J  
W: Administrative Order SWD 1316

Good morning Paul and Will. In regards to the above order for the Buck 17 Federal # 1 (30-025-40482), I am inquiring as to how to amend this order as it pertains to what we call the disposal member. The permit indicates it to be the Delaware Mountain Group (Bell Canyon member); however, in staying consistent with other disposal wells in this area, the geologist is indicating the true disposal member is the Cherry Canyon. As this permit was done prior to the well being drilled, we are also asking how to amend the perforations stated in the permit. Originally it was 5745 to 5905. We now would like to state our disposal interval to be 5686 to 5932.

30-025-40482

F/17/26S/32E ~~2284~~ Lea  
2284 FNL/1950 FwL

need W.B.P.

Bell/Cherry Tops

No AOK wells @ DEPTH  
SWD; Bell C. approved BY Paul?

Hi Donna,  
Will let you know soon.

Will

Will Jones  
New Mexico  
Oil Conservation Division  
Images Contacts

---

**From:** Williams, Donna J [mailto:Donna.J.Williams@conocophillips.com]  
**Sent:** Thursday, June 07, 2012 6:28 AM  
**To:** Williams, Donna J; Kautz, Paul, EMNRD; Jones, William V., EMNRD  
**Subject:** RE: Administrative Order SWD 1316

Good morning. Have you'll had a chance to review this request below.. Please advise and thanks.

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ns, Donna J  
ay, May 31, 2012 8:34 AM  
aul, EMNRD; 'william.v.jones@state.nm.us'  
. Donna J  
W: Administrative Order SWD 1316

Good morning Paul and Will. In regards to the above order for the Buck 17 Federal # 1 (30-025-40482), I am inquiring as to how to amend this order as it pertains to what we call the disposal member. The permit indicates it to be the Delaware Mountain Group (Bell Canyon member); however, in staying consistent with other disposal wells in this area, the geologist is indicating the true disposal member is the Cherry Canyon. As this permit was done prior to the well being drilled, we are also asking how to amend the perforations stated in the permit. Originally it was 5745 to 5905. We now would like to state our disposal interval to be 5686 to 5932. I have attached the formation tops for this well for your review. The well is drilled but has not been completed as of this date. Please let me know what measure need to be done to accommodate the statements above. Thanks and have a great day.

---

ns, Donna J  
ay, May 31, 2012 8:21 AM  
, Donna J

<< File: 2012053108203511.pdf >>

Proof of Notice

I hereby certify that a complete copy of this application was sent by certified mail to the listed persons below on December 19, 2011

Offset Operator

Sahara Operating Company  
306 W. Wall Street #1025  
Midland, TX 79701-5101

Surface Owner

Bureau of Land Management  
620 E. Greene St.  
Carlsbad, NM 88220

*B. Maiorino 12/19/11*  
Brian Maiorino  
ConocoPhillips Company  
Regulatory Specialist

7010 3090 0001 8447 4451

U.S. Postal Service	
CERTIFIED MAIL RECEIPT	
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OFFICIAL USE	
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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total	
Sent To	Sahara Operating Company
Street or PO	306 W. Wall Street #1025
City, S	Midland, TX. 79701-5101
PS Form 3800, August 2006 See Reverse for Instructions	

7010 3090 0001 8447 4458

U.S. Postal Service	
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For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a>	
OFFICIAL USE	
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Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total	
Sent To	Bureau of Land Management
Street or PO	620 E. Greene St.
City, S	Carlsbad, NM 88220
PS Form 3800, August 2006 See Reverse for Instructions	

**Maiorino, Brian D**

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**From:** bookkeeping [bookkeeping@hobbsnews.com]  
**Sent:** Monday, December 19, 2011 1:41 PM  
**To:** Maiorino, Brian D  
**Subject:** [EXTERNAL]Re: Legal notice and Affidavit

Your legal ad has been placed to publish on the 22nd of December.

Thank you,

Yessenia

On Dec 16, 2011, at 9:05 AM, classifieds wrote:

Begin forwarded message:

**From:** "Maiorino, Brian D" <[Brian.D.Maiorino@conocophillips.com](mailto:Brian.D.Maiorino@conocophillips.com)>  
**Date:** December 16, 2011 9:56:45 AM MST  
**To:** "classifieds@hobbsnews.com" <[classifieds@hobbsnews.com](mailto:classifieds@hobbsnews.com)> --  
**Subject:** Legal notice and Affidavit

ConocoPhillips Company PO Box 51810, Midland, TX 79710-1810, Contact: Brian Maiorino (432) 688-6913, is seeking administrative approval from the New Mexico Oil Conservation Division to dispose of salt water into one well on the Buck lease, in the Bell Canyon pool.

Buck Federal 17 #1SWD, 2284 FNL 1950 FWL Sec 17 Township 26S Range 32E, Lea County, NM. Injection Interval 5745'-5905'

The maximum injection rate will be 10,000 barrels of water per day and the maximum injection pressure will be 1,149 psi. Interested parties must file objections or request for hearing with the New Mexico Oil conservation Division, 1220 South Saint Francis Drive, Santa Fe NM 87504 within 15 days of this notice.

**Brian D Maiorino**  
**Regulatory Specialist**  
**ConocoPhillips Company**  
**432.688.6913**  
**[brian.d.maiorino@conocophillips.com](mailto:brian.d.maiorino@conocophillips.com)**

Jenna Arther  
Classifieds

12/19/2011





MCBU  
P. O. Box 51810  
Midland, TX 79710-1810

July 30, 2012

Mr. Will Jones  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

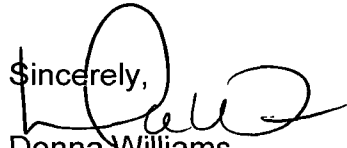
RE: Amendment of Administrative Order SWD-1316

Will:

As per our correspondence related to the amendment of the above Order, ConocoPhillips Company respectfully submits the following:

1. Notice has been sent to Sahara Operating Company this date related to the proposed amendment of the above Order. Appropriate documentation will be sent to you upon receipt.
2. The revised Geologic Summary
3. The revised formation tops from the drilling of the well.

Should you have any questions, or need additional information, please do not hesitate to contact me at 432-688-6943.

Sincerely,  
  
Donna Williams  
Sr. Regulatory Advisor

2012 AUG - 3 P 12:13  
RECEIVED OGC

# **Red Hills West SWD Well**

**ConocoPhillips, Buck Federal 17 1SWD**

**Sect 17-T26S-R32E**

**2284' FNL & 1950'FWL**

**Lea Co. NM**

## **Geologic Summary:**

The subject SWD well (ConocoPhillips, Buck Federal 17 1SWD) is located in section 17, T26S-R32E in Lea County, New Mexico. This geologic evaluation includes all of T26S-R32E over at least a 1,865' interval from the top of the Delaware Bell Canyon to the top portion of the Lower Cherry Canyon. The Upper Delaware Bell Canyon Sandstone members known as the Ramsey and Olds' Sandstones, are the only zones that have been found to be hydrocarbon productive in or in the immediate area around this township. These Sandstones occur within the top 200' of the Delaware Bell Canyon Formation at a depth from 4,350' to 4,495' in the Buck Federal 17 1SWD.

The interval indentified for salt water disposal in the Buck Federal 17 1SWD are Cherry Canyon Sandstones which occur between the depths of 5,684' to 5,932'. This interval is composed of non-hydrocarbon bearing sandstones that have good porosity and permeability interbedded with numerous thin shales and carbonates and that are very continuous across the area. This interval had no mudlog shows of significance when penetrated in the ConocoPhillips, Buck Federal 17 1H which is located 4,025' southeast of the Buck Federal 17 1SWD. Water saturation calculations from open hole logs in the Buck Federal 17 1SWD well indicate that the interval is wet and non-hydrocarbon productive.

The interval thickness between the base of the Ramsey and Olds Sandstone and the top of the proposed water disposal zone is 1,184' in the Buck Federal 17 1SWD. This interval contains approximately nine relatively thin shales that are continuous across the area. The gross thickness along with interbedded shales throughout the area should act as a low permeability barrier between the disposal interval and the Upper Delaware Bell Canyon Sandstones.

For the reasons mentioned above, this interval has no potential for oil or gas production from the Buck Federal 17 1SWD and will be a good interval for salt water disposal. A review of geologic and engineering data in the immediate area of this SWD well, finds that there is no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

Harvey O. Vick III  
Geologist, ConocoPhillips  
July 18, 2012

# Buck Federal 17 1SWD Final Tops

**KB**

(via survey plat)

**3,189**

**Notes:** This is a vertical salt water disposal well (SWD)...

**Surface Location**

Sec 17

T26S

R32E

Lea Co. NM, Surface  
Location: 1950' FWL &  
2284' FNL

**Formation  
Name**

**Formation  
Top  
(TYD)**

**Subsea  
Depth**

**Gross  
Thickness**

**Gross  
Thickness**

**Gross  
Thickness**

**Comments**

Quaternary

Surface

Rustler

1,028

2,161

Castile

2,577

612

Delaware Top

4,326

-1,137

Ramsey

4,360

-1,171

Ford Sh

4,419

-1,230

Olds

4,432

-1,243

Cherry Canyon SWDZ 1 Top

5,684

-2,495

Disposal zone

Cherry Canyon SWDZ 2 Top

5,733

-2,544

Disposal zone

Cherry Canyon SWDZ 3 Top

5,812

-2,623

Disposal zone

Cherry Canyon SWDZ 4 Top

5,877

-2,688

Disposal zone

**TD**

**6,278**

**-3,089**

## Jones, William V., EMNRD

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**From:** Williams, Donna J <Donna.J.Williams@conocophillips.com>  
**Sent:** Tuesday, August 07, 2012 11:35 AM  
**To:** Jones, William V., EMNRD  
**Subject:** FW: Order 1316  
**Attachments:** 2012080712270333.pdf

Please find attached a copy of the return receipt whereby notice was provided to Sahara Operating as it pertains to our request to amend the above referenced Order. If you have any questions, or need additional information, please let me know. Thanks.

---

ns, Donna J  
y, August 07, 2012 12:27 PM  
, Donna J

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Sahara Operating Company  
306 W. Wall St. #1025  
Midland, TX. 79701-5101

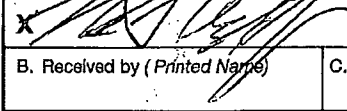
2. Article Number

(Transfer from service label)

7011 0470 0001 5356 2622

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

8-1

D. Is delivery address different from item 1? ☐ Yes  
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☐ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-15



## Injection Permit Checklist (11/15/2010)

WFX \_\_\_\_\_ PMX \_\_\_\_\_ SWD 1316-A Permit Date 8/15/12 UIC Qtr (JTA)S# Wells 1 Well Name(s): Bucard Federal SWD # 1API Num: 30-025-12237 Spud Date: Not Yet New/Old: N (UIC primacy March 7, 1982).Footages 2284 FNL / 1950 Full F Unit F Sec 17 Tsp 26S Rge 32E County LEAGeneral Location: JUST N. of TEXAS, NE of Red LakeOperator: Corroco Holdings Company Contact BRIAN MAIORINOOGRID: 217817 RULE 5.9 Compliance (Wells) \_\_\_\_\_ (Finan Assur) \_\_\_\_\_ IS 5.9 OK? OKWell File Reviewed \_\_\_\_\_ Current Status: None Yet

Planned Work to Well: \_\_\_\_\_

Diagrams: Before Conversion \_\_\_\_\_ After Conversion ✓ Elogs in Imaging File: Not Drilled

Well Details:	Sizes		Setting Depths	Stage Tool	Cement Sx or Cf	Determination Method
	Hole	Pipe				
New ___ Existing ___ Surface	12 1/4	9 5/8			280	Surf
New ___ Existing ___ Interm						
New ___ Existing ___ LongSt	8 3/4	7	6300'		540	Surf
New ___ Existing ___ Liner						
New ___ Existing ___ OpenHole						

Depths/Formations: Depths, Ft. Formation Tops?

Formation(s) Above	4937	Del	✓
5686 Injection TOP:	5715	BS	1157
5932 Injection BOTTOM:	5905	BS	1157
Formation(s) Below	6139	BS	✓
	8254	BS	✓

Capitan Rest? (Prest?) Noticed? (WHP?) Noticed? Salado Top/Bot 765 Oil House?Fresh Water: \_\_\_\_\_ Formation BS Wells? ✓ Analysis? ✓ Affirmative Statement ✓Disposal Fluid Analysis? ✓ Sources: Avalon, BS, etcDisposal Interval: Analysis? ✓ Production Potential/Testing: Well - Below any Prod.Notice: Newspaper Date 12/22/11 Surface Owner BE M (12/19) Mineral Owner(s) BE MRULE 26.7(A) Affected Persons: Sahara O.P. CO. (12/19)AOR: Maps? ✓ Well List? ✓ Producing in Interval? NO Wellbore Diagrams? ✓

Active Wells \_\_\_\_\_ Repairs? \_\_\_\_\_ Which Wells? \_\_\_\_\_

P&amp;A Wells \_\_\_\_\_ Repairs? \_\_\_\_\_ Which Wells? \_\_\_\_\_

Issues: \_\_\_\_\_ Request Sent \_\_\_\_\_ Reply: \_\_\_\_\_