Form 3160-5 (March 2012)

Notice of Intent

Subsequent Report

Final Abandonment Notice

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

Acıdıze

Alter Casing

Casing Repair

11 Change Plans

Convert to Injection

SUNDRY NOTICES AND REPORTS ON WELLS UN 1 3 2012



FORM APPROVED OMB No. 1004-0137

Water Shut-Off

Well Integrity

OMB No. 1004-0137 Expires: October 31, 2014 Serial No.

5. Lease Serial No. NMLC068281B

Production (Start/Resume)

Reclamation

Recomplete.

Water Disposal

Temporarily Abandon

6. If Indian, Allottee or Tribe'Name

s to drill or to re-enter an (APD) for such proposals	N/A
ner instructions on page 2.	7. If Unit of CA/Agreement, Name and/or No.
	N/A
SWD /	8. Well Name and No. Buck SWD Federal 17 # 1
	9: API Well No. 30-025-40482
3b. Phone No. (include area code)	10. Field and Pool or Exploratory Area
432-688-6943	SWD; Bell Canyon
ion)	11. County or Parish, State
·.	Lea County, NM
BOX(ES) TO INDICATE NATURE OF NO	TICE, REPORT OR OTHER DATA
TYPE OF A	CTION ' ·
	(APD) for such proposals ner instructions on page 2.  Suppose    3b. Phone No. (include area code) 432-688-6943  on)  BOX(ES) TO INDICATE NATURE OF NO.

Describe Proposed of Completed Operation. Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Deepen

Plug Back

Fracture Treat

Plug and Abandon

New Construction

As per the Conditions of Approval, ConocoPhillips Company respectfully submits the attached information related to confirmation that the proposed disposal interval is not capable of producing hydrocarbons in paying quantities.

Conditions of Approval

### Subject to like approve by the State

Operated will be required *To Amend the* current Administrative Order SWD-1316 to include the proposed injection interval from 5686' to 5932'

fictitious or fraudulent statements or representations as to any matter within its jurisdiction



14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  Donna Williams	itle Sr. Regulatory Advisor		
Signature	ate 05/31/2012		
THIS SPACE FOR FEDERAL OR STATE OFFICE USE			
Approved by	PETROLEUM ENGINEER Date		
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certified the applicant holds legal or equitable title to the savings of the subject lease which would entitle the applicant to conduct operations thereon.	Office Office		
Title 18 U S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person	n knowingly and willfully to make to any department or agency of the United States any false,		

(Instructions on page 2)

### Williams, Donna J

From:

Vick, Harvey

Sent:

Tuesday, May 22, 2012 10:00 PM

To:

Williams, Donna J

Cc:

Ruddick, Barry A; Reno, J R; Moore, Steven O.

Subject:

RE: Tops Picks (Buck Federal 17 1SWD)

Hello Donna:

Below are the corrected tops.

Well Name.....: Buck Federal 17 1SWD

UWI (API No)....: 30025404820000 Operator.....: ConocoPhillips

Symbol Code.....: INJ (Injection Well)
Datum Elevation..: 3189.0 (Kelly Bushing Elevation) FT

Total Depth.....: 6278.0 FT

LOCATION

Location:

TWN: 26 S RGE: 32 E SEC: 17 Surface Longitude: -103.699046 Latitude: 32.043812

Lea, NM

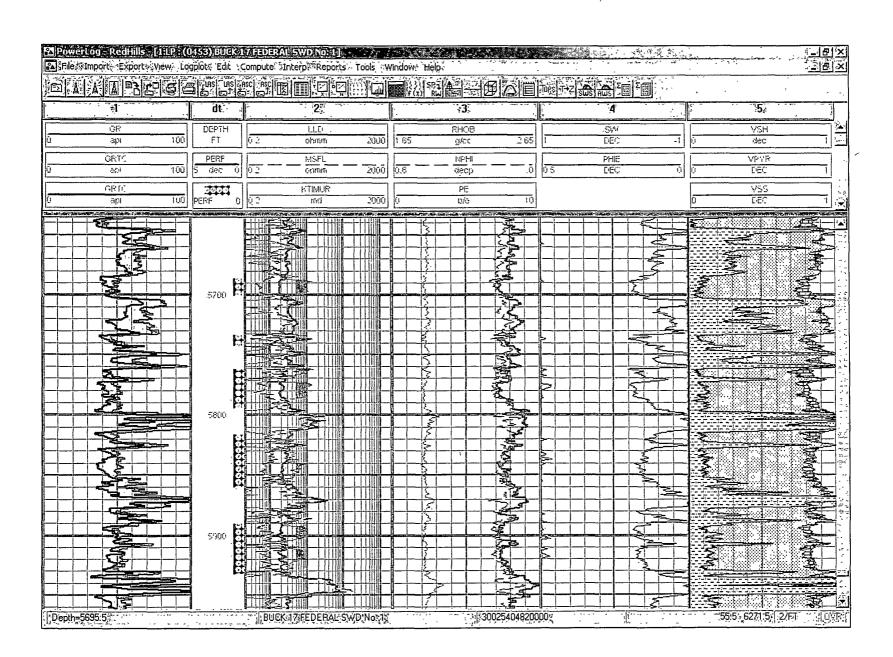
FORMATION TORO

FORMATION TOPS	MD
RUSTLER	1028
SALADO TOP	1412
SALADO BASE	2385
CASTILE TOP	2385
DELAWARE	4326
BELL CANYON	4326
RAMSEY	4360 Oil & Gas
FORD_SH	4420
OLDS_TOP	4432 Oil & Gas
OLDS_BASE	4495
CHERRY_CANYON TOP	5272
CHERRY_CANYON_SWDZ_1_TOP	
CHERRY_CANYON_SWDZ_1_BASE	
CHERRY_CANYON_SWDZ_2_TOP	
CHERRY_CANYON_SWDZ_2_BASE	
CHERRY_CANYON_SWDZ_3_TOP	
CHERRY_CANYON_SWDZ_3_BASE	
CHERRY_CANYON_SWDZ_4_TOP	
CHERRY_CANYON_SWDZ_4_BASE	
CHERRY_CANYON_LOWER	6142 Oil & Gas

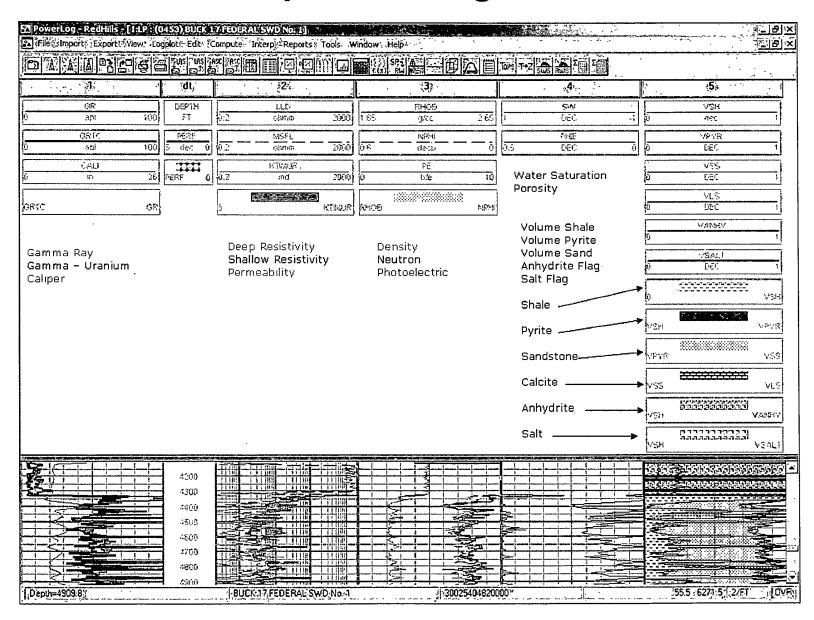
### Harvey O. Vick III, P.G. Staff Geologist

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

# **Buck Federal 17 1SWD Open Hole Logs**

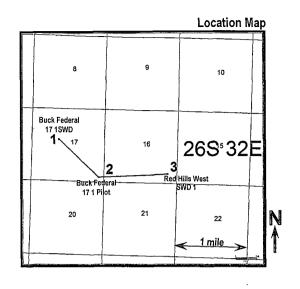


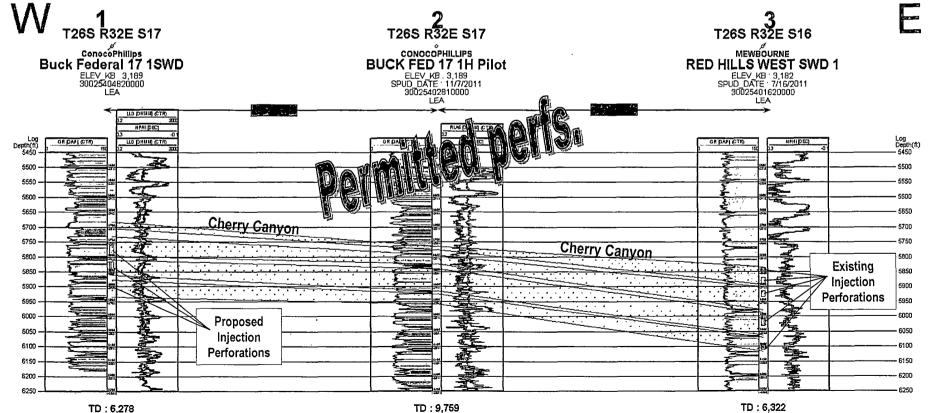
### **Description of Log Curves**



# West to East Structural Cross Section through the Delaware, Cherry Canyon Sandstone Showing Proposed Injection Perforations in ConocoPhillips, Buck Federal 17 1 SWD

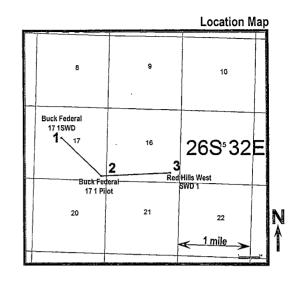
From ConocoPhillips, Buck Federal 17 Well to Mewbourne, Red Hills West SWD 1 Well T26S – R32E, Lea Co. New Mexico

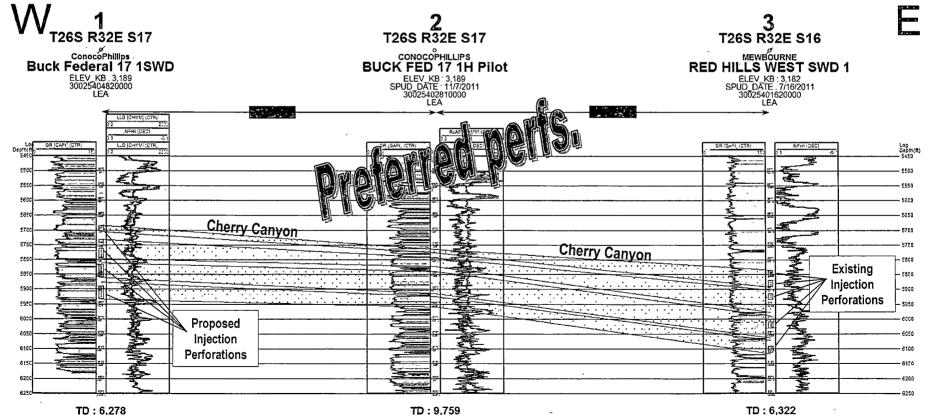




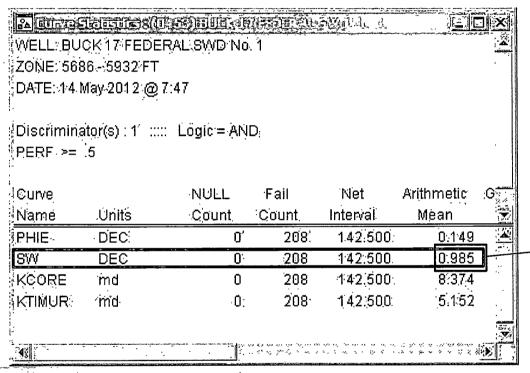
# West to East Structural Cross Section through the Delaware, Cherry Canyon Sandstone Showing Proposed Injection Perforations in ConocoPhillips, Buck Federal 17 1 SWD

From ConocoPhillips, Buck Federal 17 Well to Mewbourne, Red Hills West SWD 1 Well T26S – R32E, Lea Co. New Mexico





# Averages for Perf'd Intervals



Average water saturation (Sw) of 98.5% over the proposed perf intervals.

KCORE from a core transform KTIMUR from modified Timur Equation

# Petrophysical Methodology

- Calculate volume shale from gamma ray (based on x-ray from area DMG cores).
- Calculate porosity and lithology from shale-corrected, Neutron-Density-PE algorithms.
- Calculate water saturation using Modified Simandoux equation with RW of 0.07 from RWA.
- Calculate permeability from poroperm plots from area DMG cores (KCORE).
- Calculate permeability using modified Timur equation (KTIMUR)
- Sum averages over proposed perf intervals.

# Conclusions and Recommendations

- ConocoPhillips now recognizes that most operators in the area
  of the Buck Federal 17 1 SWD 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.
- ConocoPhillips would like to increase the perf interval from 5745 to 5905 (as stated in the permit) to an interval which would include 5686 to 5932.
- Petrophysical calculations show that the proposed injection zones with perfs from (5686 to 5932) in the Buck Federal 17 1 SWD are water wet with an average water saturation (Sw) of 98.5%. These zones will not produce economic quantities of hydrocarbon. Therefore swab testing these zones will not be necessary.
- There are no Cherry Canyon Producing wells within a 2 mile radius of the Buck Federal 17 1 SWD.

### Susana Martinez Governor

John H. Bemis Cabinet Secretary-Designate

Brett F. Woods, Ph.D. Deputy Cabinet Secretary Jami Bailey
Division Director
Oil Conservation Division



Administrative Order SWD-1316 February 8, 2012

### ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of 19.15.26.8B NMAC, ConocoPhillips Company seeks an administrative order to utilize its proposed Buck 17 Federal Well No. 1 (API 30-025-NA) to be located 2284 feet from the North line and 1950 feet from the West line, Unit letter F of Section 17, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico, for produced water disposal purposes.

#### THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of 19.15.26.8B NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

#### IT IS THEREFORE ORDERED THAT:

The applicant, ConocoPhillips Company, is hereby authorized to utilize its proposed Buck 17 Federal Well No. 1 (API 30-025-NA) to be located 2284 feet from the North line and 1950 feet from the West line, Unit letter F of Section 17, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico, for disposal of oil field produced water (UIC Class II only) into the Delaware Mountain Group (Bell Canyon member) through perforations from 5745 to 5905 feet through lined tubing and a packer set less than 100 feet above the permitted disposal interval.

#### IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the proposed disposal interval and is not permitted to escape to other formations or onto the surface.



After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC.

The wellhead injection pressure on the well shall be limited to **no more than 1149 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

JAMI BAILEY

Director

JB/wvjj

cc: Oil Conservation Division - Hobbs

Bureau of Land Management - Carlsbad