DATE IN 12.23.11	SUSPENSE	ENGINEER WVJ	LOGGED IN 1223.11	TYPE SWD 1316	APP NO. pTGW 1135736939

ABOVE THIS LINE FOR DIVISION USE ONLY

ConocoPhillips 217817

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505

Buck Fed 17 #1

ADMINISTRATIVE APPLICATION CHECKLIST 30-025-~~40881~~

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

RECEIVED OCD
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17-26S-32E
Lea

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☒ Offset Operators, Leaseholders or Surface Owner

[C] ☒ Application is One Which Requires Published Legal Notice

5745'-5905'
1149PSI

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Brian Maiorino		Regulatory Specialist	12/15/11
Print or Type Name	Signature	Title	Date

432-688-6913

brian.d.maiorino@conocophillips.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance __X__Disposal _____Storage
Application qualifies for administrative approval? _____Yes _____No

II. OPERATOR: ConocoPhillips Company

ADDRESS: 3300 N "A" St., Building #6, Midland, TX 79705

CONTACT PARTY: Brian Maiorino w/ ConocoPhillips Regulatory PHONE: 432-688-6913

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes __X__No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Brian Maiorino TITLE: Regulatory Specialist

SIGNATURE: [signature] DATE: 12/15/11

E-MAIL ADDRESS: brian.d.maiorino@conocophillips.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

VII.

1.Average 4,000 bbl/day maximum 10,000 bbl/day

2. Closed system

3. Maximum injection pressure 1,149 psi

4. See attached

5. See attached

VIII. Geologic Name: Bell Canyon, Thickness: 160', Projected injection depths: 5745'-5905' TVD, Lithologic Detail: Sandstone with some interbedded shale, very fine to fine grain, brittle, poorly consolidated, well sorted, light gray to light tan, some shale lenses present, calcareous cement.

IX. Well will be acidized in the Bell Canyon with 10,000 bbls as part of the initial completion.

X. Logs will be submitted with completion report after well is drilled.

XI. See attached

XII. See attached.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: ConocoPhillips Company

WELL NAME & NUMBER: Buck Federal 17 #1SWD

WELL LOCATION: 2284' FNL 1950' FWL "F" 17 26S 32E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12 1/4" Casing Size: 9 5/8"

Cemented with: 280 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: _____

Intermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. *or* _____ ft³

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: 8 3/4" Casing Size: 7.0"

Cemented with: 540 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: _____

Total Depth: 6,300'

Injection Interval

5,745' TVD feet to 5905' TVD

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 3.5" Lining Material: TK-99-IPC

Type of Packer: nickel plated

Packer Setting Depth: 5,700'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? X Yes _____ No

   If no, for what purpose was the well originally drilled? _____

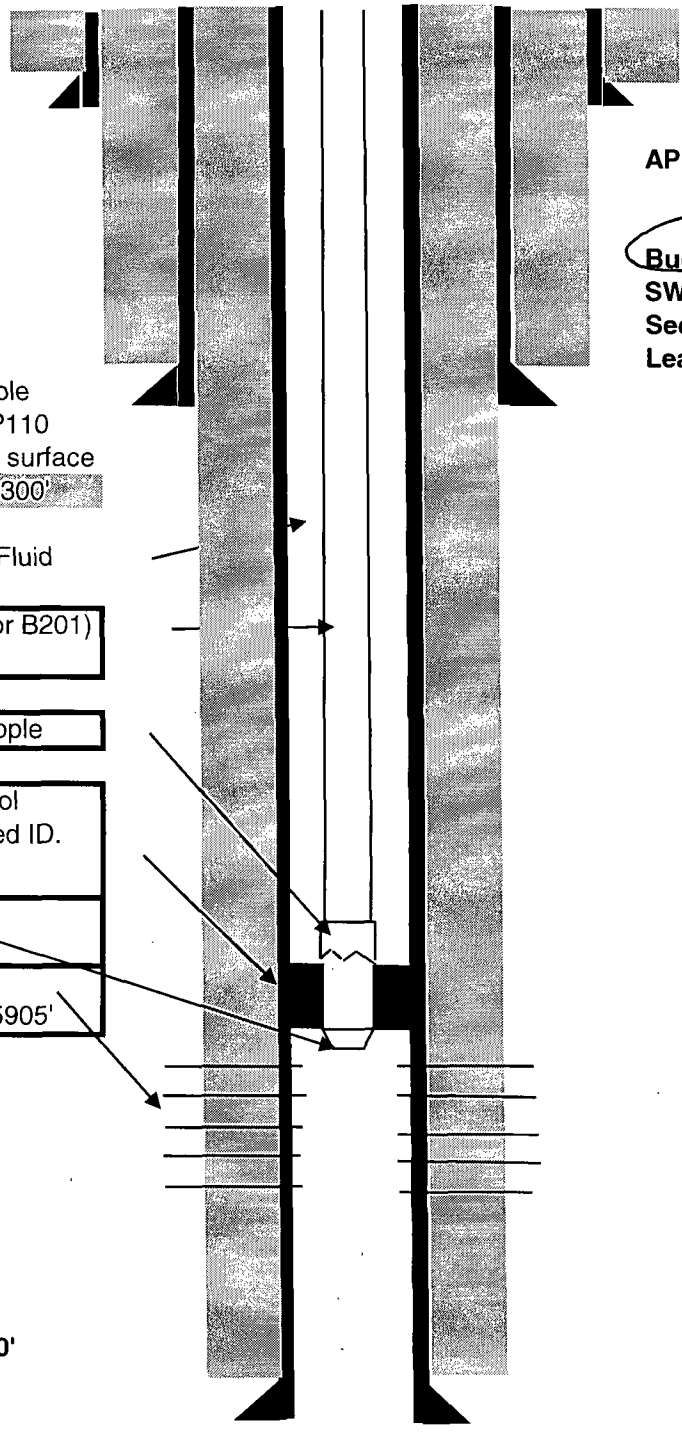
2. Name of the Injection Formation: Bell Canyon

3. Name of Field or Pool (if applicable): _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____

Proposed



20"
Cmt. To surface
Set @ 40'

12 1/4" hole
9 5/8" 36# J-55
Cmt. To Surface
Set @ 950'

API# TBD

Buck Federal 17 # 1
SWD
Sec. 17, T26S, R32E
Lea NM

8 3/4" hole
7" 26# P110
Cmt. To surface
Set @ 6300'

Packer Fluid

IPC Tubing (TK99 or B201)
3 1/2" 9.3# L-80

On/Off tool W/ F nipple

W/ Mesquite Oil Tool
AS1X, has ni-coated ID.
Set @ 5700'

Wire Line guide
re-entrance Tool

Delaware
Perforations 5745-5905'

Proposed TD 6300'

Red Hills West SWD Well Proposal

ConocoPhillips, Buck Federal 17 1SWD
Sect 17-T26S-R32E
2284' FNL & 1950'FWL
Lea Co. NM

Geologic Summary:

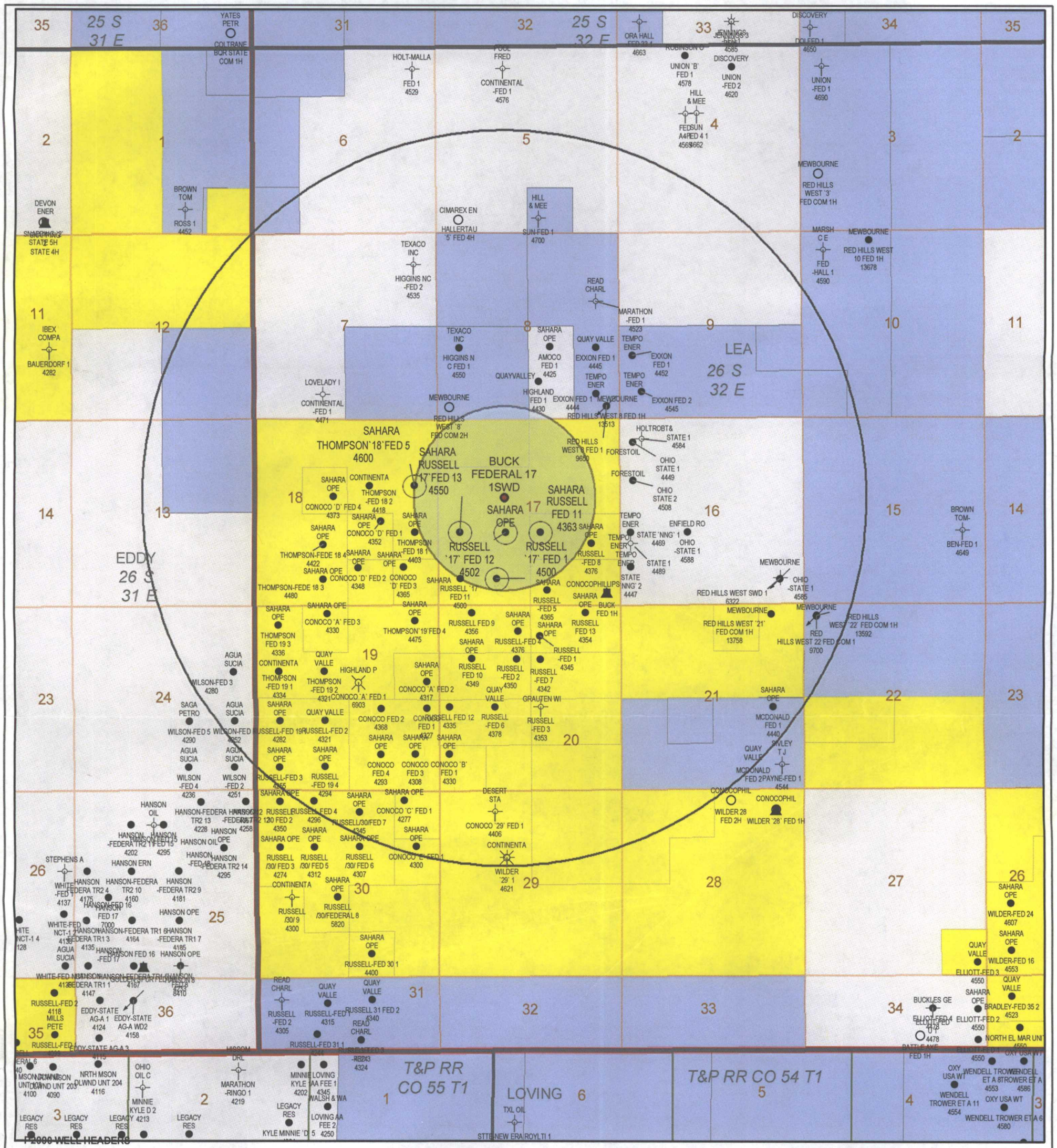
The proposed subject SWD well (ConocoPhillips, Buck Federal 17 1SWD) will be located in section 17, T26S-R32E in Lea County, New Mexico. This geologic evaluation includes all of T26S-R32E in the interval from the top of the Delaware Bell Canyon to the top of the Lower Cherry Canyon. The Upper Delaware Bell Canyon sand members known as the Ramsey and Olds' sands are the only zones that have been found productive in or in the immediate area around this township. These Sands occur within the top 200' of the Delaware Bell Canyon Formation at a depth from 4,360' to 4,530' in the ConocoPhillips, Buck Federal 17 1H, located 4,075' southeast of the proposed Buck Federal 17 1SWD location

The interval indentified for salt water disposal in the Buck Federal 17 1SWD is the Lower Bell Canyon Sand, from 5,760' to 5,960' in the ConocoPhillips, Buck Federal 17 1H. This well is the most recent penetration of the proposed SWD interval. This interval is composed of non-productive sandstones that have good porosity and permeability with numerous thin shales and carbonates that are very continuous across the area. This interval had no mudlog shows of significance when penetrated in the ConocoPhillips, Buck Federal 17 1H. Water saturation calculations from open hole logs in this well indicate that the interval is wet and non-productive.

The interval thickness between the base of the Ramsey and Olds Sands and the top of the proposed water disposal zone is 1,235' in the ConocoPhillips, Buck Federal 17 1H. The interval contains nine relatively thin shales that are continuous across the area. At the location of the proposed ConocoPhillips Buck Federal 17 1SWD well, the interval thickness between the base of the Ramsey and Olds Sands and the top of the proposed water disposal zone is projected to be 1,221'. 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 Sands. Also, the proposed location for SWD is more than a 1,445' from any Delaware production.

For the reasons mentioned above, this interval appears to have no potential for oil or gas production at the proposed location of 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, 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



P2000 WELL HEADERS

STATUS

- OIL
- GAS
- OIL & GAS
- DA:ABAND
- START
- LOC
- INJ & SERVICE
- JA
- SUS
- Wells inside Area of Review
- PROPOSED BUCK FEDERAL 17 #1SWD
- ONE-HALF MILE RADIUS CIRCLE
- TWO MILE RADIUS CIRCLE
- JCD_RH_Tobin_leases

NAD27
New Mexico East(3001)

N W E S

0 2,500 5,000 Feet

ConocoPhillips

Permian Basin

New Mexico

COP Buck Federal 17 #1 SWD
Application
Lea county

Author:	Date: 12/14/ 2011
Compiled by: jcdavis	Scale:
Project File:	

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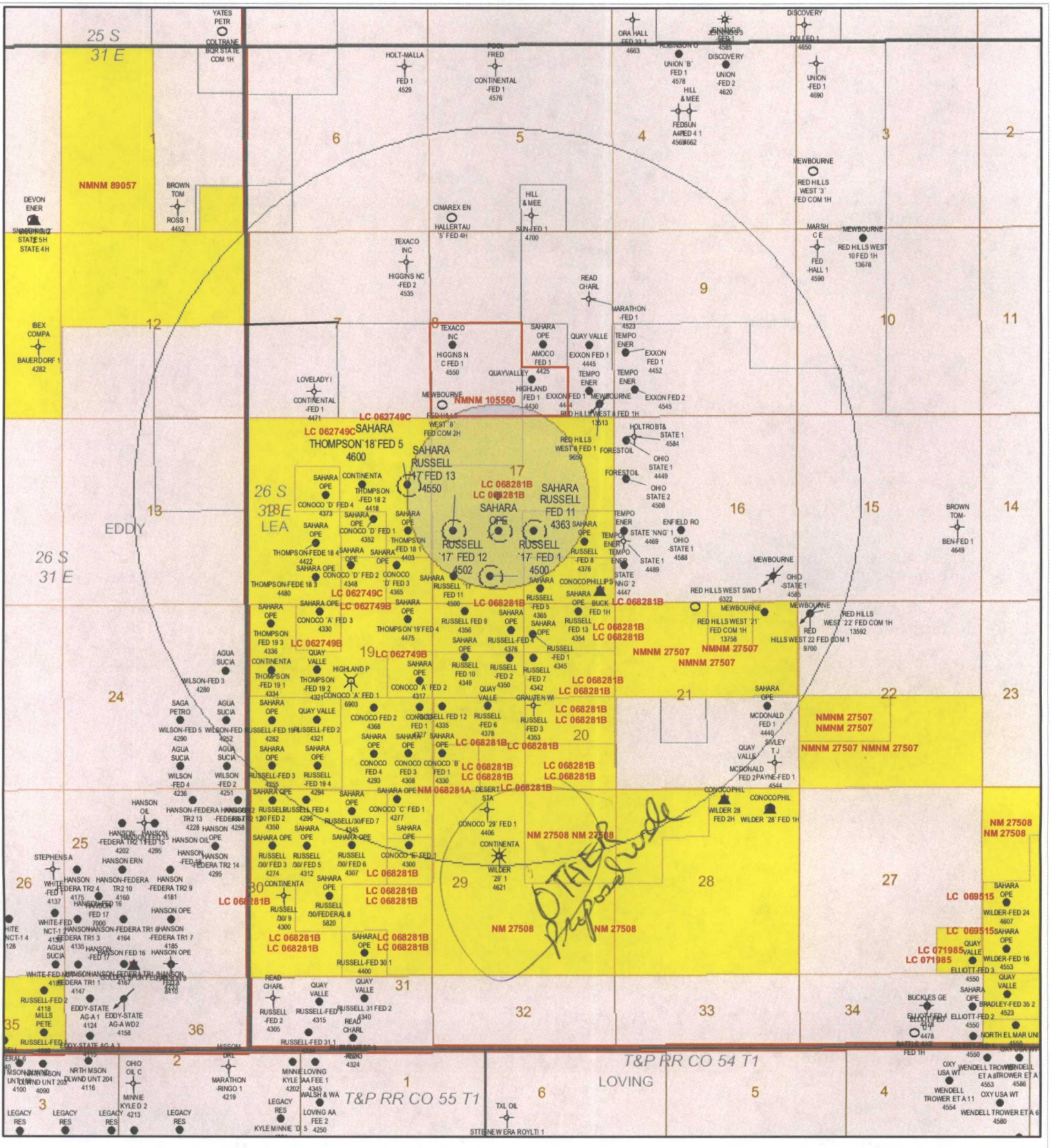

P2000 WELL HEADERS

STATUS

- OIL
- GAS
- OIL & GAS
- DA ABAND
- START
- LOC
- INJ & SERVICE
- JA
- SUS
- Wells inside Area of Review
- PROPOSED BUCK FEDERAL 17 #1SWD

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

NAD27
New Mexico East(3001)

ConocoPhillips

Permian Basin

New Mexico

COP Buck Federal 17 #1 SWD
Application
Lea county

Author:	Date: 12/16/ 2011
Compiled by: jcdavis	Scale:
Project File:	

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API #	WELL_NAME	WELL #	Status	CURR_OPERA	Type	SPUD	Depth	PLUGBACK	DIREC	LEASE_NAME	Location	Footage
300252771600	RUSSELL `17` FEDERL	12	Active	SAHARA OPERATING COMPANY	OIL	2/25/1982	4502	4430	VERTICAL	RUSSELL `17` FEDERL	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

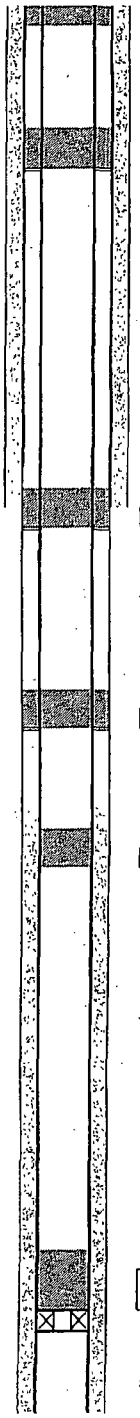
PLUGGED WELLBORE SKETCH

Sahara Operating Company

Date February 8, 2008

RKB @ _____
DF @ _____
GL @ _____

Subarea	
Lease & Well No	Russell Federal "17" #13
Legal Description	1980 FSL 660 FWL S17, T26S, R32E
County	Lea State New Mexico
Field	
Date Spudded	Rig Released
API Number	30-025-27937
Status	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 @

TRIPLE N SERVICES, INC. HOBBS, NM

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

Prepared by
Triple N Services

02/08/08]

Combined

DownHole SAT(tm)

CHEMISTRY OF WATER SOURCES MIXED

1) MEWBOURNE OIL COMPA 2) MEWBOURNE OIL COMPA
3) MEWBOURNE OIL COMPA

Report Date: 05-05-2011

	1	2	3
	% BY WEIGHT		
CATIONS	**33.33**	**33.33**	**33.33**
Calcium(as Ca)	2490	689.00	2347
Magnesium(as Mg)	730.00	117.00	3546
Barium(as Ba)	0.900	1.66	1.70
Strontium(as Sr)	205.00	238.00	900.00
Sodium(as Na)	61500	68000	81390
Potassium(as K)	1438	1290	1323
Lithium(as Li)	0.00	0.00	0.00
Iron(as Fe)	110.00	65.00	6.87
Ammonia(as NH_3)	0.00	0.00	0.00
Aluminum(as Al)	0.00	0.00	0.00
Boron(as B)	0.00	0.00	0.00
Manganese (as Mn)	1.08	0.960	28.00
Zinc (as Zn)	0.00	0.00	0.00
Lead (as Pb)	0.00	0.00	0.00
ANIONS			
Chloride(as Cl)	104000	106000	145300
Sulfate(as SO_4)	1750	1200	500.00
Bromine (as Br)	0.00	0.00	0.00
Dissolved CO_2	0.3	0.3	22.6
Bicarbonate	2416.0	2135.0	85.0
Carbonate	0.0	0.0	0.0
Silica(as SiO_2)	0.00	0.00	0.00
Phosphate(as PO_4)	0.00	0.00	0.00
H_2S(as H_2S)	3.06	3.04	2.88
Fluoride(as F)	0.00	0.00	0.00
Nitrate(as NO_3)	0.00	0.00	0.00
PARAMETERS			
pH	6.70	6.50	5.00
Temperature(°F)	100.00	100.00	100.00
Pressure(atm)	14.70	14.70	14.70
Density(g/mL)	1.11	1.12	1.14
Calculated TDS	174372	179504	235410

1. Red Hills 8 #1H (Avalon)
2. Red Hills 22 #1H (Avalon)
3. Russell Fed 17 (Delaware)

BJ Chemical Services - Midland Analytical Laboratory
P.O. Box 61427, Midland, Texas 79711

Combined

DownHole SAT(tm)

DEPOSITION INDICATORS OF SOURCE WATERS MIXED

1) MEWBOURNE OIL COMPA 2) MEWBOURNE OIL COMPA
3) MEWBOURNE OIL COMPA

Report Date: 05-05-2011

	1	2	3
	% BY WEIGHT		
SATURATION LEVEL	**33.33**	**33.33**	**33.33**
Calcite	14.24	2.80	0.00756
Aragonite	12.07	2.37	0.00640
Witherite	< 0.001	< 0.001	< 0.001
Strontianite	1.04	0.848	0.00129
Magnesite	5.63	0.645	0.0179
Anhydrite	0.374	0.0881	0.0753
Gypsum	0.432	0.101	0.0792
Barite	2.06	3.22	0.419
Celestite	0.457	0.448	0.216
Calcium phosphate	0.00	0.00	0.00
Hydroxyapatite	0.00	0.00	0.00
Fluorite	0.00	0.00	0.00
Silica	0.00	0.00	0.00
Brucite	< 0.001	< 0.001	< 0.001
Mag. silicate	0.00	0.00	0.00
Ferric hydroxide	< 0.001	< 0.001	< 0.001
Siderite	597.55	249.88	0.0110
Strengite	0.00	0.00	0.00
Halite	0.0998	0.113	0.234
Thenardite	< 0.001	< 0.001	< 0.001
Iron sulfide	28.64	8.67	0.00154
SIMPLE INDICES			
Langelier	1.67	0.865	-1.32
Ryznar	3.36	4.77	7.64
Oddo-Tomson	0.594	-0.213	-2.34
Stiff-Davis	1.39	0.600	-1.09
Puckorius	0.822	2.12	5.58
Larson-Skold	83.11	95.79	3375

1 RH 8#1H (Avalon)
2 RH 22#1H (Avalon)
3 Rossell Fed 17 (Delaware)

BJ Chemical Services - Midland Analytical Laboratory
P.O. Box 61427, Midland, Texas 79711

Combined

DownHole SAT(tm)

MIXED WATER CHEMISTRY

1) MEWBOURNE OIL COMPA 2) MEWBOURNE OIL COMPA
3) MEWBOURNE OIL COMPA

Report Date: 05-05-2011

CATIONS		ANIONS	
Calcium (as Ca)	1842	Chloride (as Cl)	118433
Magnesium (as Mg)	1464	Sulfate (as SO_4)	1150
Barium (as Ba)	1.42	Bromine (as Br)	0.00
Strontium (as Sr)	447.67	Dissolved CO_2 (as CO_2)	7.73
Sodium (as Na)	70297	Bicarbonate (as HCO_3)	1361
Potassium (as K)	1350	Carbonate (as CO_3)	11.76
Lithium (as Mg)	0.00	Silica (as SiO_2)	0.00
Ammonia (as NH_3)	0.00	H_2S (as H_2S)	2.99
Aluminum (as Al)	0.00	Phosphate (as PO_4)	0.00
Iron (as Fe)	60.62	Nitrate (as NO_3)	0.00
Boron (as B)	0.00	Fluoride (as F)	0.00
Manganese (as Mn)	10.01		
Zinc (as Zn)	0.00		
Lead (as Pb)	0.00		

PARAMETERS

Calculated T.D.S.	196567
Temperature (^{0}F)	100.00
Density(g/mL)	1.12
Pressure(atm)	14.70
Calculated T.D.S.	196567
Molar Conductivity	17385

CORROSION RATE PREDICTION

CO_2 - H_2S Rate(mpy)	0.00

BJ Chemical Services - Midland Analytical Laboratory
P.O. Box 61427, Midland, Texas 79711

Combined

DownHole SAT(tm)

MIXED WATER DEPOSITION POTENTIAL INDICATORS

1) MEWBOURNE OIL COMPA 2) MEWBOURNE OIL COMPA
3) MEWBOURNE OIL COMPA

Report Date: 05-05-2011

SATURATION LEVEL		MOMENTARY EXCESS (Lbs/1000 Barrels)	
Calcite ($CaCO_3$)	3.16	Calcite ($CaCO_3$)	0.105
Aragonite ($CaCO_3$)	2.68	Aragonite ($CaCO_3$)	0.0958
Witherite ($BaCO_3$)	< 0.001	Witherite ($BaCO_3$)	-28.09
Strontianite ($SrCO_3$)	0.533	Strontianite ($SrCO_3$)	-0.197
Magnesite ($MgCO_3$)	3.56	Magnesite ($MgCO_3$)	0.0926
Anhydrite ($CaSO_4$)	0.178	Anhydrite ($CaSO_4$)	-633.16
Gypsum ($CaSO_4*2H_2O$)	0.199	Gypsum ($CaSO_4*2H_2O$)	-641.13
Barite ($BaSO_4$)	1.64	Barite ($BaSO_4$)	0.328
Celestite ($SrSO_4$)	0.503	Celestite ($SrSO_4$)	-119.65
Fluorite (CaF_2)	0.00	Fluorite (CaF_2)	-5.92
Calcium phosphate	0.00	Calcium phosphate	>-0.001
Hydroxyapatite	0.00	Hydroxyapatite	-334.88
Silica (SiO_2)	0.00	Silica (SiO_2)	-41.28
Brucite ($Mg(OH)_2$)	< 0.001	Brucite ($Mg(OH)_2$)	-0.256
Magnesium silicate	0.00	Magnesium silicate	-107.46
Iron hydroxide ($Fe(OH)_3$)	< 0.001	Iron hydroxide ($Fe(OH)_3$)	< 0.001
Strengite ($FePO_4*2H_2O$)	0.00	Strengite ($FePO_4*2H_2O$)	>-0.001
Siderite ($FeCO_3$)	79.02	Siderite ($FeCO_3$)	0.175
Halite (NaCl)	0.140	Halite (NaCl)	-103740
Thenardite ($Na2SO_4$)	< 0.001	Thenardite ($Na2SO_4$)	-85816
Iron sulfide (FeS)	4.62	Iron sulfide (FeS)	0.430

SIMPLE INDICES		BOUND IONS	TOTAL	FREE
Langelier	1.07	Calcium	1842	1643
Ryznar	4.22	Barium	1.42	1.42
Puckorius	1.64	Carbonate	11.76	0.263
Larson-Skold Index	148.23	Phosphate	0.00	0.00
Stiff Davis Index	0.957	Sulfate	1150	395.19
Oddo-Tomson	-0.00539			

OPERATING CONDITIONS

Temperature (°F)	100.00
Time(secs)	1.00

BJ Chemical Services - Midland Analytical Laboratory
P.O. Box 61427, Midland, Texas 79711

Analytical Laboratory Report for:
MEWBOURNE OIL COMPANY
Account Representative:
Mossman, Willis

BAKER HUGHES

Production Water Analysis

Listed below please find water analysis report from: [redacted] Russell Fed 17

Lab Test Number	Sample Date
2011111305	05/03/2011

[
]

Specific Gravity: 1.142

TDS: 218188
pH: 5.00

Delaware

Cations:	mg/L	as:
Calcium	2347	(Ca^{++})
Magnesium	3546	(Mg^{++})
Sodium	64150	(Na^{+})
Iron	6.87	(Fe^{++})
Potassium	1323.0	(K^{+})
Barium	1.70	(Ba^{++})
Strontium	900.00	(Sr^{++})
Manganese	28.00	(Mn^{++})
Anions:	**mg/L**	**as:**
Bicarbonate	85	(HCO_3^{-})
Sulfate	500	($SO_4^{=}$)
Chloride	145300	(Cl^{-})
Gases:		
Carbon Dioxide	150	(CO_2)
Hydrogen Sulfide	0.0	(H_2S)

Russel fed 17
Delaware

Analytical Laboratory Report for:
MEWBOURNE OIL COMPANY
Account Representative:
Mossman, Willis

BAKER HUGHES

DownHole SAT™ Scale Prediction @ 100 deg. F

[
]

Lab Test Number	Sample Date	Location
2011111305	05/03/2011	Russell Fed 17

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	0.01	-
Strontianite (SrCO3)	0.00	-0.07
Anhydrite (CaSO4)	0.08	-0.64
Gypsum (CaSO4*2H2O)	0.08	-1427.49
Barite (BaSO4)	0.42	-1541.08
Celestite (SrSO4)	0.22	-3.90
Siderite (FeCO3)	0.01	-501.39
Halite (NaCl)	0.23	-0.06
Iron sulfide (FeS)	0.00	-223502.44
Calcite (CaCO3)	0.01	-9.96
Strontianite (SrCO3)	0.00	-0.07
Anhydrite (CaSO4)	0.08	-0.64
Gypsum (CaSO4*2H2O)	0.08	-1427.49
Barite (BaSO4)	0.42	-1541.08
Celestite (SrSO4)	0.22	-3.90
Siderite (FeCO3)	0.01	-501.39
Halite (NaCl)	0.23	-0.06
Iron sulfide (FeS)	0.00	-223502.44
		-9.96

Interpretation of DHSat Results:
The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) to positive (precipitating) values. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

Analytical Laboratory Report for:
MEWBOURNE OIL COMPANY
Account Representative:
Mossman, Willis

BAKER HUGHES

Production Water Analysis

Listed below please find water analysis report from: Red Hills 22 Federal, 1

Lab Test Number	Sample Date
2011111304 [ ]	05/03/2011

Specific Gravity:	1.117
TDS:	179737
pH:	6.50

Cations:	mg/L	as:
Calcium	689	(Ca^{++})
Magnesium	117	(Mg^{++})
Sodium	68000	(Na^{+})
Iron	65.00	(Fe^{++})
Potassium	1290.0	(K^{+})
Barium	1.66	(Ba^{++})
Strontium	238.00	(Sr^{++})
Manganese	0.96	(Mn^{++})
Anions:	**mg/L**	**as:**
Bicarbonate	2135	(HCO_3^{-})
Sulfate	1200	($SO_4^{=}$)
Chloride	106000	(Cl^{-})
Gases:		
Carbon Dioxide	250	(CO_2)
Hydrogen Sulfide	0.0	(H_2S)

Red Hills 22#1H

Analytical Laboratory Report for:
MEWBOURNE OIL COMPANY
Account Representative:
Mossman, Willis

BAKER HUGHES

DownHole SAT™ Scale Prediction @ 100 deg. F

[
]

Lab Test Number	Sample Date	Location
2011111304	05/03/2011	1

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	2.80	0.81
Strontianite (SrCO3)	0.85	-0.33
Anhydrite (CaSO4)	0.09	-2984.15
Gypsum (CaSO4*2H2O)	0.10	-3062.40
Barite (BaSO4)	3.22	1.94
Celestite (SrSO4)	0.45	-354.38
Siderite (FeCO3)	250.14	1.45
Halite (NaCl)	0.11	-329277.63
Iron sulfide (FeS)	0.00	-0.22

Interpretation of DHSat Results:
The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) to positive (precipitating) values. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

Analytical Laboratory Report for:
MEWBOURNE OIL COMPANY
Account Representative:
Mossman, Willis

BAKER HUGHES

Production Water Analysis

Listed below please find water analysis report from: Red Hills 8 Federal, 1H

Lab Test Number	Sample Date
2011111303 [ ]	05/03/2011

Specific Gravity:	1.114
TDS:	174641
pH:	6.70

Cations:	mg/L	as:
Calcium	2490	(Ca^{++})
Magnesium	730	(Mg^{++})
Sodium	61500	(Na^{+})
Iron	110.00	(Fe^{++})
Potassium	1438.0	(K^{+})
Barium	0.90	(Ba^{++})
Strontium	205.00	(Sr^{++})
Manganese	1.08	(Mn^{++})
Anions:	**mg/L**	**as:**
Bicarbonate	2416	(HCO_3^{-})
Sulfate	1750	($SO_4^{=}$)
Chloride	104000	(Cl^{-})
Gases:		
Carbon Dioxide	270	(CO_2)
Hydrogen Sulfide	0.0	(H_2S)

Red Hills 8#1H

Analytical Laboratory Report for:
MEWBOURNE OIL COMPANY
Account Representative:
Mossman, Willis

BAKER HUGHES

DownHole SAT™ Scale Prediction @ 100 deg. F

[
]

Lab Test Number	Sample Date	Location
2011111303	05/03/2011	1H

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	14.26	1.66
Strontianite (SrCO3)	1.04	0.09
Anhydrite (CaSO4)	0.37	-1280.31
Gypsum (CaSO4*2H2O)	0.43	-1168.76
Barite (BaSO4)	2.06	0.79
Celestite (SrSO4)	0.46	-328.97
Siderite (FeCO3)	598.24	2.06
Halite (NaCl)	0.10	-341007.44
Iron sulfide (FeS)	0 00	-0.08

Interpretation of DHSat Results:
The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) to positive (precipitating) values. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

BAKER HUGHES

Water Analysis

Date: 13-May-11

2708 West County Road, Hobbs NM 88240
Phone (575) 392-5556 Fax (575) 392-7307

Freshwater well #1
21K-26S-32E

Analyzed For

Company	Well Name	County	State
Mewbourne	[redacted]	Lea	New Mexico

Sample Source	**Source**	***Sample #***	**House**
Formation		***Depth***	

Specific Gravity	**1.000**	*SG @ 60 °F*	**1.002**
pH	**7.09**	*Sulfides*	**Absent**
Temperature (°F)	**70**	*Reducing Agents*	

Cations

Sodium (Calc)	*in Mg/L*	**606**	*in PPM*	**605**
Calcium	*in Mg/L*	**156**	*in PPM*	**156**
Magnesium	*in Mg/L*	**29**	*in PPM*	**29**
Soluable Iron (FE2)	*in Mg/L*	**0.0**	*in PPM*	**0**

Anions

Chlorides	*in Mg/L*	**600**	*in PPM*	**599**
Sulfates	*in Mg/L*	**850**	*in PPM*	**848**
Bicarbonates	*in Mg/L*	**112**	*in PPM*	**112**
Total Hardness (as CaCO3)	*in Mg/L*	**510**	*in PPM*	**509**
Total Dissolved Solids (Calc)	*in Mg/L*	**2,353**	*in PPM*	**2,348**
Equivalent NaCl Concentration	*in Mg/L*	**1,863**	*in PPM*	**1,860**

Scaling Tendencies

Calcium Carbonate Index* **17,509

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

Calcium Sulfate (Gyp) Index* **132,600

Below 500,000 Remote / 500,000 - 10,000,00 Possible / Above 10,000,000 Probable

****This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.***

Remarks

Report # 3161

BAKER HUGHES

Water Analysis

Date: 13-May-11

2708 West County Road, Hobbs NM 88240
Phone (575) 392-5556 Fax (575) 392-7307

Freshwater Well #2
21K-26S-32E

Analyzed For

Company	Well Name	County	State
Mewbourne	[redacted]	Lea	New Mexico

Sample Source	**Source**	***Sample #***	**Stock**
Formation		***Depth***	

Specific Gravity	**1.000**	*SG @ 60 °F*	**1.002**
pH	**7.47**	*Sulfides*	**Absent**
Temperature (°F)	**70**	*Reducing Agents*	

Cations

Sodium (Calc)	*in Mg/L*	**478**	*in PPM*	**477**
Calcium	*in Mg/L*	**92**	*in PPM*	**92**
Magnesium	*in Mg/L*	**14**	*in PPM*	**14**
Soluable Iron (FE2)	*in Mg/L*	**0.0**	*in PPM*	**0**

Anions

Chlorides	*in Mg/L*	**400**	*in PPM*	**399**
Sulfates	*in Mg/L*	**670**	*in PPM*	**669**
Bicarbonates	*in Mg/L*	**78**	*in PPM*	**78**
Total Hardness (as CaCO3)	*in Mg/L*	**290**	*in PPM*	**289**
Total Dissolved Solids (Calc)	*in Mg/L*	**1,732**	*in PPM*	**1,729**
Equivalent NaCl Concentration	*in Mg/L*	**1,347**	*in PPM*	**1,345**

Scaling Tendencies

Calcium Carbonate Index* **7,183

Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable

Calcium Sulfate (Gyp) Index* **61,640

Below 500,000 Remote / 500,000 - 10,000,00 Possible / Above 10,000,000 Probable

****This Calculation is only an approximation and is only valid before treatment of a well or several weeks after treatment.***

Remarks

Report # 3162

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

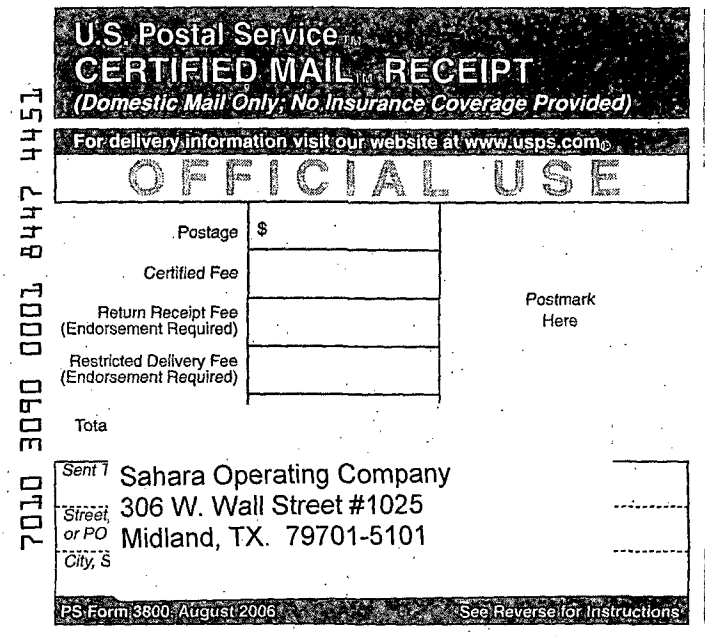
Sahara Operating Company
306 W. Wall Street #1025
Midland, TX 79701-5101

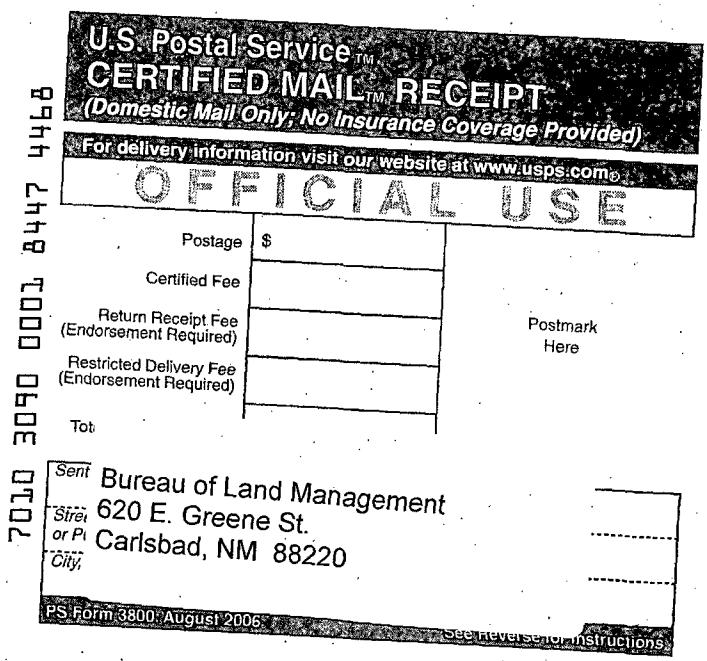
Surface Owner

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

B. Mai 12/19/11

Brian Maiorino
ConocoPhillips Company
Regulatory Specialist





Maiorino, Brian D

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,

Yesenia

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

Begin forwarded message:

From: "Maiorino, Brian D" <Brian.D.Maiorino@conocophillips.com>
Date: December 16, 2011 9:56:45 AM MST
To: "classifieds@hobbsnews.com" <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

Jenna Arther
Classifieds

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Tuesday, December 27, 2011 4:03 PM
To: 'brian.d.maiorino@conocophillips.com'
Cc: Brooks, David K., EMNRD
Subject: Disposal applications from ConocoPhillips Company: Sections 29 and 17 of T26S, R32E, Lea County
Attachments: EddyNM_NASH_53_SWD.pdf

Hello Brian,
Just glanced over these applications and see that we need a description of each separately owned tract of land within or partially within the ½ mile Area's of Review.
I am attaching one example of how to do this. In this example, the tracts are shown on a map and the owners (lessees of each tract are identified).
The notifications should go out to whomever controls any separately owned tract of land – this is normally the Lessees. If any tract is not leased in the depths you intend to dispose of water, then provide notice to the mineral/royalty owner or owners of that tract.

You should pass this request to your landman?

Hope your holidays are going well.
Regards,

William V Jones, P.E.
Engineering. Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505
Tel 505.476.3448 – Fax 505.476.3462

To: Jones, William V., EMNRD
Subject: RE: Disposal applications from ConocoPhillips Company: Sections 29 and 17 of T26S, R32E, Lea County

Hi William, here is the needed lease map for the Wilder Federal 29 #1SWD. I am working on getting one for the Buck 17 #1SWD. Please let me know if anything else is needed.

Thanks for your help!

Brian D Maiorino
Regulatory Specialist
ConocoPhillips Company
432.688.6913
brian.d.maiorino@conocophillips.com

From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Tuesday, December 27, 2011 5:03 PM
To: Maiorino, Brian D
Cc: Brooks, David K., EMNRD
Subject: [EXTERNAL]Disposal applications from ConocoPhillips Company: Sections 29 and 17 of T26S, R32E, Lea County

Hello Brian,
Just glanced over these applications and see that we need a description of each separately owned tract of land within or partially within the ½ mile Area's of Review.
I am attaching one example of how to do this. In this example, the tracts are shown on a map and the owners (lessees of each tract are identified).
The notifications should go out to whomever controls any separately owned tract of land – this is normally the Lessees. If any tract is not leased in the depths you intend to dispose of water, then provide notice to the mineral/royalty owner or owners of that tract.

You should pass this request to your landman?

Hope your holidays are going well.
Regards,

William V Jones, P.E.
Engineering, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505
Tel 505.476.3448 ~ Fax 505.476.3462

Jones, William V., EMNRD

From: Maiorino, Brian D [Brian.D.Maiorino@conocophillips.com]
Sent: Monday, January 09, 2012 2:11 PM
To: Jones, William V., EMNRD
Subject: RE: Disposal applications from ConocoPhillips Company: Sections 29 and 17 of T26S, R32E, Lea County

Yes, ConocoPhillips has 100% working interest in the yellow acreage from the base of the Delaware to basement.

Brian D Maiorino
Regulatory Specialist
ConocoPhillips Company
432.688.6913
brian.d.maiorino@conocophillips.com

From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Monday, January 09, 2012 10:12 AM
To: Maiorino, Brian D
Subject: [EXTERNAL]RE: Disposal applications from ConocoPhillips Company: Sections 29 and 17 of T26S, R32E, Lea County

Hello Brian,
Thanks for this.
The map shows COP lease coverage – does that mean COP has 100% Working Interest in that yellow acreage?
Also, let me know if these leases within the ½ mile Area of Review are "all depths" or not.

Thank You,

Will Jones
New Mexico
Oil Conservation Division
Images Contacts

From: Maiorino, Brian D [mailto:Brian.D.Maiorino@conocophillips.com]
Sent: Monday, January 09, 2012 7:34 AM

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Thursday, January 26, 2012 2:52 PM
To: 'Maiorino, Brian D'
Cc: 'Wesley_Ingram@blm.gov'; Kautz, Paul, EMNRD
Subject: Disposal application from ConocoPhillips Company: Buck Federal 17 #1 30-025-NA Delaware from 5745 to 5905 feet, Lea County

Hello Brian,
Just reviewed the application on this proposed well,

a. Please send a wellbore diagram showing the well as it will be equipped for disposal.
b. Would you please ask your geologist to pick (or estimate) some tops for me?
    a. Top of Delaware
    b. Top of Bell Canyon, Cherry Canyon and Brushy Canyon if possible.
c. For fresh water in this area, what is the name of the formation and depth to top and bottom of fresh water?
d. We have no well file on this proposed well yet – and no API number because you guys are likely applying to the BLM. The disposal permits are specific to one location, and if you move the location we have to relook at everything. How sure are you the footages sent with this application will be the final ones? If not sure, when will you know?
e. Identify separately owned tracts – as the previous email sent today...

Thanks for this,

Will Jones
New Mexico
Oil Conservation Division
Images Contacts

Jones, William V., EMNRD

From: Maiorino, Brian D [Brian.D.Maiorino@conocophillips.com]
Sent: Thursday, February 02, 2012 4:38 PM
To: Jones, William V., EMNRD
Subject: RE: Disposal application from ConocoPhillips Company: ~~Wilder Federal 29 #1 30-025-NA Delaware from 5765 to 5920 feet~~, Lea County

Sorry, I outlined the separate leases darker but must not have come out as clearly as I thought.

Yes, there are two leases the Wilder SWD that fall within the AOR. NM27508 and NMLC068281B.

The Buck has three leases that fall within the AOR. NMLC062749C, NMNM105560, and NMLC068281B

Brian D Maiorino
Regulatory Specialist
ConocoPhillips Company
432.688.6913
brian.d.maiorino@conocophillips.com

From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Thursday, February 02, 2012 1:23 PM
To: Maiorino, Brian D
Subject: [EXTERNAL]RE: Disposal application from ConocoPhillips Company: Wilder Federal 29 #1 30-025-NA Delaware from 5765 to 5920 feet, Lea County

Hello Brian,
The separate tracts of land seem to all be colored "yellow" so it is hard to distinguish the separate leases.

To ensure I am reading these maps correctly,
For the Wilder application, are there only two leases (tracts) involved within ½ mile of that well?
How many separate leases (or tracts) are in or partially in the AOR surrounding the well for the other disposal application?

Will Jones
New Mexico
Oil Conservation Division

Jones, William V., EMNRD

From: Maiorino, Brian D [Brian.D.Maiorino@conocophillips.com]
Sent: Monday, February 06, 2012 11:58 AM
To: Jones, William V., EMNRD
Cc: Wesley_Ingram@blm.gov; Kautz, Paul, EMNRD
Subject: RE: Disposal application from ConocoPhillips Company: Buck Federal 17 #1 30-025-NA Delaware from 5745 to 5905 feet, Lea County
Attachments: Buck Federal 17 #1SWD wellbore diagram.xls; Wilder Federal 29 #1SWD wellbore diagram.xls

Will, I received this from geology today. Please let me know if there is anything else needed or if there are any other questions that need answered. I've also attached wellbore diagrams for each well as requested.

Please keep in mind that the Bell Canyon is consider the top of the Delaware in this area. Below are estimated tops in measured depth (MD) for the proposed SWD's.

- **Buck Federal 17 1SWD**:
  - Rustler _ 1025'
  - Delaware _ 4337'
  - Bell Canyon _ 4337'
  - Cherry Canyon _ 6139'
  - Brushy Canyon _ 7061'

- **Wilder Federal 29 1SWD**:
  - Rustler _ 935'
  - Delaware _ 4290'
  - Bell Canyon _ 4290'
  - Cherry Canyon _ 6022'
  - Brushy Canyon _ 6978'

The sediments above the the Rustler Formation (the Quaternary age sediments) are consider to contain freshwater. Therefore the range in depth of freshwater would generally be from surface to the top of the Rustler. The estimated MD of the Rustler top in each of the proposed SWD wells is shown above.

Thanks!

Injection Permit Checklist (11/15/2010)

WFX_____ PMX_____ SWD 1316 Permit Date 2/8/12 UIC Qtr (J/F/M)

Wells 1 Well Name(s): Buck Federal 17 # 1H

API Num: 30-025-[redacted] Spud Date: Not Yet New/Old: N (UIC primacy March 7, 1982)

Footages 2284 FNL / 1950 FWL Unit F Sec 17 Tsp 26S Rge 32E County LEA

General Location: Just N. of Texas, NE of Red Lake

Operator: Conoco Phillips Company Contact Brian Maiorino

OGRID: 217817 RULE 5.9 Compliance (Wells) _____ (Finan Assur) _____ IS 5.9 OK? OK

Well File Reviewed __ Current Status: None Yet

Planned Work to Well:

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

Well Details:	Sizes Hole.....Pipe	Setting Depths	Stage Tool	Cement Sx or Cf	Determination Method
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	✓
Injection TOP:	5745	Bell C.	Max. PSI 1149 OpenHole___ Perfs ✓
Injection BOTTOM:	5905	Bell C.	Tubing Size 3 1/2 Packer Depth 5700'
Formation(s) Below	6139	Cherry C.	✓
	8254	BS	✓

Capitan Reef? ~~(Potash? Noticed?)~~ [WIPP? ~~Noticed?~~] Salado Top/Bot 765 ~~Cliff House?~~

Fresh Water: ~~Depths:~~ 1025 Formation above Rustler Wells? ✓ Analysis? ✓ Affirmative Statement ✓

Disposal Fluid Analysis? ✓ Sources: Avalon, BS, etc

Disposal Interval: Analysis? ✓ Production Potential/Testing: Wet — Below any Prod.

Notice: Newspaper Date 12/22/11 Surface Owner BLM (12/19) Mineral Owner(s) BLM

RULE 26.7(A) Affected Persons: Sahara Op. Co (12/19)

AOR: Maps? ✓ Well List? ✓ Producing in Interval? No Wellbore Diagrams? —

.....Active Wells 0 Repairs? — WhichWells? —

.....P&A Wells 0 Repairs? — Which Wells? —

Issues: Request Sent _____ Reply: _____