

Submit 3 Copies To Appropriate District Office  
 District I  
 1625 N. French Dr., Hobbs, NM 88240  
 District II  
 1301 W. Grand Ave., Artesia, NM 88210  
 District III  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

Form C-103  
 May 27, 2004

OIL CONSERVATION DIVISION  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

|   |              |
|---|--------------|
| WELL API NO.  | 30-025-03041 |
| 5. Indicate Type of Lease<br>STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/> |              |
| 6. State Oil & Gas Lease No.<br>B-2131  |              |
| 7. Lease Name or Unit Agreement Name<br>Vacuum GB/SA Unit East<br>Tract 0449                        |              |
| 8. Well Number  | 039          |
| 9. OGRID Number   | 217817       |
| 10. Pool name or Wildcat<br>Vacuum Grayburg/San Andres  |              |

**SUNDRY NOTICES AND REPORTS ON WELLS**  
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well  Gas Well  Other

2. Name of Operator  
ConocoPhillips Company

3. Address of Operator 4001 Penbrook Street  
Odessa, TX 79762

4. Well Location  
 Unit Letter D : 660 feet from the North line and 660 feet from the West line  
 Section 4 Township 18S Range 35E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
3947' GL & 3958' RKB

Pit or Below-grade Tank Application  or Closure

Pit type \_\_\_\_\_ Depth to Groundwater \_\_\_\_\_ Distance from nearest fresh water well \_\_\_\_\_ Distance from nearest surface water \_\_\_\_\_

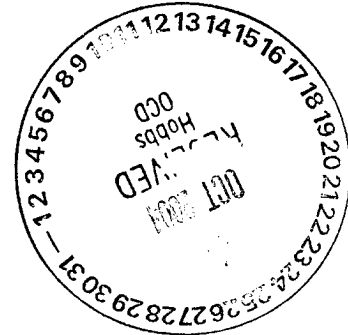
Pit Liner Thickness: \_\_\_\_\_ mil Below-Grade Tank: Volume \_\_\_\_\_ bbls; Construction Material \_\_\_\_\_

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

|  |   |  |  |
|--|---|--|--|
| <b>NOTICE OF INTENTION TO:</b>                                       |   | <b>SUBSEQUENT REPORT OF:</b>                     |  |
| PERFORM REMEDIAL WORK <input type="checkbox"/>                       | PLUG AND ABANDON <input type="checkbox"/> | REMEDIAL WORK <input type="checkbox"/>           | ALTERING CASING <input type="checkbox"/> |
| TEMPORARILY ABANDON <input type="checkbox"/>                         | CHANGE PLANS <input type="checkbox"/>     | COMMENCE DRILLING OPNS. <input type="checkbox"/> | P AND A <input type="checkbox"/>         |
| PULL OR ALTER CASING <input type="checkbox"/>                        | MULTIPLE COMPL <input type="checkbox"/>   | CASING/CEMENT JOB <input type="checkbox"/>       |  |
| OTHER: Polymer Squeeze Treatment <input checked="" type="checkbox"/> |   | OTHER: <input type="checkbox"/>                  |  |

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Procedure and wellbore diagram attached.



I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines , a general permit  or an (attached) alternative OCD-approved plan .

SIGNATURE Stacey D. Linder TITLE Regulatory Representative DATE 10/21/2004

Type or print name Stacey D. Linder E-mail address: stacey.d.linder@conocophillips.com Telephone No. (432)368-1506

**For State Use Only**

APPROVED BY: [Signature] TITLE PETROLEUM ENGINEER DATE OCT 26 2004

Conditions of Approval (if any):

## **HISTORY / JUSTIFICATION**

The EVGSAU #0449-039 was drilled and completed in 1940, producing from open hole interval from 4119'- 4634'. In order to increase sweep efficiency and overall production in the area, a 2,500', 6-1/8" lateral was drilled from the well in 2002. After being returned to production, the well made all water and was subsequently TA'd. During drilling of the lateral, lost circulation was encountered in the heel of the lateral and it is believed this is the source of the water production.

**NOTE:** At least 1 week prior to beginning this procedure, a meeting will be held in the COP Vacuum Offices with personnel from Cardinal, Schlumberger Coil Tubing Services, Halliburton Energy Services, COP Odessa Engineering, and COP Buckeye Operations to go over this proposed procedure to insure that nothing has been overlooked. Because there is no surface readout of logging data during the coiled tubing/logging portion of this procedure, pre-job planning is imperative for a successful application of memory logging tools.

## **RECOMMENDED POLYMER SQUEEZE TREATMENT PROCEDURE:**

1. Test anchors as required. MIRU WSU.
2. MI and PU approx. 4100' of 2-7/8" tubing workstring.
3. Insure well is dead. ND wellhead. NU BOPE
4. RIH with RBP retrieving tool and retrieve RBP set at 4035'. POOH
5. GIH with 7" full bore packer on 2-7/8" workstring. Set packer at +/- 4050'. RDMO Well Service Unit.
6. MIRU Cardinal Surveys and Schlumberger Coil Tubing Services the day before actual logging is to be conducted. RIH with a representative string of gauge and dummy bars on 1-1/2" coil tubing to simulate the memory logging system and insure that the actual memory logging tools can reach TD. Cardinal Surveys is to provide downhole tools required for the dummy run. Shut down for the night.
7. MI and set one frac tank filled with clean fresh water. Have water transport on standby to deliver additional fresh water if required during logging job.
8. RIH with Cardinal memory logging tools on Schlumberger 1-1/2" coil tubing. Cardinal Surveys to provide the Madden System's Slicklogger memory logging system, consisting of a CCL, external temperature, internal temperature, gamma ray probe, continuous flow meter, and quartz pressure sensor.

All logging passes will be run from a depth of 3800' to within 25' of T.D. to prevent damage to the logging stack.

9. Perform logging pass number one. This will be a static base log prior to pumping into the well.
10. Begin water injection down the 1-1/2" coil tubing at a rate of 1/2 BPM and continue for a minimum of 1 hour before starting logging pass no. 2 to insure adequate fluid movement downhole to change the wellbore temperature. Just prior to conducting logging pass, Cardinal Surveys will use the "Tagmaster" for injecting radioactive material into the injection water. While logging the temperature passes, Cardinal will also obtain gamma ray information to further help confirm the zones of loss.
11. Increase water injection rate to 1 BPM. Perform logging pass no. 3.
12. Increase water injection rate to 1-1/2 BPM. Perform logging pass no. 4.
13. Shut down water injection. Take a 1 hour decay temperature log before COOH with logging tools.

14. Prior to coming out the hole with coil tubing and logging tools, Cardinal is to insure that adequate fresh water is pumped to insure that there is no contamination of R/A material to the coil tubing. POOH with coil tubing and logging tools.
15. Post logging job radiation survey – The wellhead, location, and all equipment will be checked by Cardinal Surveys for radioactive contamination before any equipment is permitted to depart. RDMO Cardinal Surveys and Schlumberger Coil Tubing Services. Secure well.
16. Results of logging runs will be forwarded to Halliburton Energy Services for use in re-designing their proposed "ZoneSqueeze" conformance procedure if required.
17. MIRU WSU. POOH with 2-7/8" tubing workstring and packer. Lay down packer. PU an additional 1700' of 2-7/8" tubing.
18. GIH with 2-7/8" workstring open ended to +/- 5800'.
19. MIRU Halliburton Energy Services. Pump and spot a 1,500 gallon TemBlok-100 plug in the open hole. (Coverage = 1,000' in 6-1/8" open hole). TemBlock recipe to be provided by T.O. Ryan with Halliburton.
20. Pull up to 4,790' and attempt to break circulation with fresh water. If circulation is not possible, pump down the annulus with 50 bbls of fresh water in order to clear any gel plug above the loss zone. POOH.
21. GIH with 7" EZSV cement retainer on 2-7/8" tubing to +/- 4100' just above the shoe of the 7" production casing. Inject one tubing volume (24 bbls) of fresh water down the 2-7/8" tubing prior to setting retainer.
22. Load backside and pressure to 250 psi and hold during pumping of conformance squeeze.
23. Pump ZoneSqueeze conformance job as follows:
  - a.) Establish injection down tubing at 2 BPM with a 10 bbl fresh water spacer. (Note: Rate may be modified based on the observed injection pressure.)
  - b.) Mix and pump 400 sks. of Premium Plus cement – foamed to a density of 9.5 ppg.  
**Maximum surface injection pressure will be 3000 psig.**  
  
 Premium Plus cement to contain the following:  
 2.0% CaCl<sub>2</sub>  
 2.0% ZoneSealant – 2000 (by mixing water)  
 Nitrogen injected at rate of 99 bbls cement @ 230 scf N<sub>2</sub>/bbl cement
  - c.) Displace foam slurry to the retainer with 24 bbls fresh water. If the well begins treating on a vacuum, do not over-displace the cement. If the WHTP begins to exceed the designed maximum squeeze pressure, stop injecting cement and unstring from the retainer, spotting 10' of cement on top, and reverse circulate any excess cement to the pit through staked lines at the surface.

Foam Cement Specifications:

|               | Liquid      | Foam                     |
|---------------|-------------|--------------------------|
| Slurry Weight | 14.5 lb/gal | 9.5 lb/gal               |
| Slurry Volume | 1.39 cf/sk  | 2.18 cf/sk (@ 1,100 psi) |
| Water Ratio   | 6.81 gal/sk | 6.81 gal/sk              |

Laboratory Analysis: A laboratory analysis will be run to determine the final pump times and additives Required for proper cement mixtures.

24. Shut in well for a minimum of 24-36 hours to allow the foam cement to gain strength prior to drilling out.
25. RIH with 2-7/8 tubing and drill out EZSV retainer. Drill out foam cement through the curved open hole section, down to the bottom of the original loss circulation interval at 4790' MD. Continue downhole, cleaning out the remainder of the open hole horizontal section to TD, washing out the TemBlok gel plug. Circulate hole clean. POOH with tubing.
26. GIH with packer on 2-7/8" tubing string. Set packer at +/- 4050'. Swab test well. Decision on permanent artificial lift equipment will be made pending results of swab tests.
27. POOH and lay down tubing workstring and packer. PU and GIH with kill string. Ensure well is dead. ND BOPE. NU wellhead. RDMO WSU.

**Wellbore Diagram - ConocoPhillips Co.**  
**EVGSAU #0449-039**

RKB: 3958'

GL: 3947'

Lease and Well No.: EVGSAU 0449-039

Date: January 14, 2004

Location: 660' FNL & 660' FWL

Lateral Toe Location: 1568 FNI & 924 FWL

Sec. 4, T17S-R35E

Sec. 32, T17S, R35E

County/State: Lea County, New Mexico

Field: East Vacuum Unit

Producing Formations: San Andres/Grayburg

Spud Date: 3/20/40

Lateral Spudded: May 9, 2002

Completion Date: 6/25/40

Lateral Completed: June 5, 2002

API Number: 30-025-03041

Status: Shut In

1602'

12-1/4" Hole  
 9-5/8", 25# Armco Spiral Weld  
 Set @ 1602'. Cmt'd w/ 675 sx  
 T.O.C. @ surface.

| CASING DETAIL |       |     |       |       |          |             |                |         |
|---------------|-------|-----|-------|-------|----------|-------------|----------------|---------|
| Size          | Depth | Wt. | Grade | Conn. | Drift ID | Burst (psi) | Collapse (psi) | Tension |
|               |       |     |       |       |          |             |                |         |
|               |       |     |       |       |          |             |                |         |
|               |       |     |       |       |          |             |                |         |

| TUBING AND RODS |  |
|-----------------|--|
| <b>Tubing:</b>  |  |
| <b>Rods:</b>    |  |

| STIMULATION HISTORY |      |      |      |                       |      |       |      |      |
|---------------------|------|------|------|-----------------------|------|-------|------|------|
| Interval            | Date | Type | Gals | Diverter/<br>Proppant | MaxP | Avg P | ISIP | Down |
|                     |      |      |      |                       |      |       |      |      |
|                     |      |      |      |                       |      |       |      |      |
|                     |      |      |      |                       |      |       |      |      |
|                     |      |      |      |                       |      |       |      |      |
|                     |      |      |      |                       |      |       |      |      |
|                     |      |      |      |                       |      |       |      |      |
|                     |      |      |      |                       |      |       |      |      |
|                     |      |      |      |                       |      |       |      |      |

| WELL HISTORY |       |
|--------------|-------|
| Date         | Event |
|              |       |
|              |       |
|              |       |
|              |       |
|              |       |
|              |       |
|              |       |
|              |       |
|              |       |

4120'

**Production Hole:** 8-3/4"  
**Production Casing:** 7", 24#, H-40 @ 4120'. Cmt'd w/ 400 sx Cmt. TOC estimated @ 1340'.

} KOP. 4438' 6-1/8" 2500' Lateral

} Plug back w/ Cmt to 4438'  
 } Open Hole: 6-1/4" from 4120'-4634'

4634'

MD: 6994'  
 TVD: 4586'

PBTD 4438'

T.D 4634'