

## District I

1625 N. French Dr., Hobbs, NM 88240

## District II

1301 W. Grand Avenue, Artesia, NM 88210

## District III

1000 Rio Brazos Road, Aztec, NM 87410

## District IV

1220 S. St. Francis Dr., Santa Fe, NM 87502

## State of New Mexico

Energy Minerals and Natural Resources

Form C-101

May 27, 2004

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JAN 22 2010

HOBBSOCD

## Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

## APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

|                                                                                                                |                                                                    |                                                                              |
|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------|
| <sup>1</sup> Operator Name and Address<br>ConocoPhillips Company<br>3300 N. "A" St., Bldg. 6 Midland, TX 79705 |                                                                    | <sup>2</sup> OGRID Number<br>217817                                          |
| <sup>3</sup> Property Code<br>31172                                                                            | <sup>5</sup> Property Name<br>East Vacuum GB-SA Unit, T Ract 3315W | <sup>4</sup> API Number<br>30-025-39657<br><sup>6</sup> Well No.<br>500Z 5D3 |
| <sup>9</sup> Proposed Pool 1<br>Vacuum; Grayburg-San Andres                                                    |                                                                    | <sup>10</sup> Proposed Pool 2                                                |

<sup>7</sup> Surface Location

| UL or lot no | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/Westline | County |
|--------------|---------|----------|-------|---------|---------------|------------------|---------------|---------------|--------|
| J            | 33      | 17S      | 35E   |         | 1840'         | SOUTH            | 2248'         | EAST          | LEA    |

<sup>8</sup> Proposed Bottom Hole Location If Different From Surface

| UL or lot no | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/Westline | County |
|--------------|---------|----------|-------|---------|---------------|------------------|---------------|---------------|--------|
| J            | 33      | 17S      | 35E   |         | 1690'         | SOUTH            | 2328'         | EAST          | LEA    |

## Additional Well Information

|                                                                                                                                                                                                                                                                                                                                    |                                       |                                                |                                            |                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------|--------------------------------------------|--------------------------------------------------|
| <sup>11</sup> Work Type Code<br>N                                                                                                                                                                                                                                                                                                  | <sup>12</sup> Well Type Code<br>O     | <sup>13</sup> Cable/Rotary<br>R                | <sup>14</sup> Lease Type Code<br>S         | <sup>15</sup> Ground Level Elevation<br>3942' GR |
| <sup>16</sup> Multiple                                                                                                                                                                                                                                                                                                             | <sup>17</sup> Proposed Depth<br>4900' | <sup>18</sup> Formation<br>Grayburg-San Andres | <sup>19</sup> Contractor<br>Precision #194 | <sup>20</sup> Spud Date<br>04/29/2010            |
| Depth to Groundwater                                                                                                                                                                                                                                                                                                               |                                       | Distance from nearest fresh water well         |                                            | Distance from nearest surface water              |
| Pit: Liner Synthetic <input type="checkbox"/> milst thick Clay <input type="checkbox"/> Pit Volume _____ bbls Drilling Method: _____<br>Closed-Loop System <input type="checkbox"/> Fresh Water <input type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/> |                                       |                                                |                                            |                                                  |

<sup>21</sup> Proposed Casing and Cement Program

| Hole Size | Casing Size | Casing weight/foot | Setting Depth | Sacks of Cement | Estimated TOC |
|-----------|-------------|--------------------|---------------|-----------------|---------------|
| 12.25"    | 8.625"      | 24#                | 1560'         | 650 sx C        | Surface       |
| 7.875"    | 5.5"        | 17#                | 4898'         | 700 sx C        | Surface       |
|           |             |                    |               |                 |               |
|           |             |                    |               |                 |               |

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

See attached drilling program for Drilling Mud / BOP Program and the Directional Drilling Procedure.

**Permit Expires 2 Years From Approval  
Date Unless Drilling Underway**

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐ a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

Printed name Jalyn N. Fiske

Title: Regulatory Specialist

E-mail Address: Jalyn.Fiske@conocophillips.com

Date: 01/20/2010

Phone: (432)688-6813

## OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

JAN 27 2010

Conditions of Approval Attached ☐

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised August 15, 2000  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

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DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                   |                                               |                                                    |
|-----------------------------------|-----------------------------------------------|----------------------------------------------------|
| API Number<br><b>30-025-39657</b> | Pool Code<br><b>62180</b>                     | Pool Name<br><b>VACUUM, GRABURG - SAN ANDRES</b>   |
| Property Code<br><b>31172</b>     | Property Name<br><b>EAST VACUUM GBSA UNIT</b> | Well Number<br><b>503</b><br><del>3315W-5008</del> |
| OGRID No.<br><b>21817217817</b>   | Operator Name<br><b>CONOCOPHILLIPS</b>        | Elevation<br><b>3942'</b>                          |

Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| J             | 33      | 17-S     | 35-E  |         | 1840          | SOUTH            | 2248          | EAST           | LEA    |

Bottom Hole Location If Different From Surface

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| J             | 33      | 17-S     | 35-E  |         | 1690          | SOUTH            | 2328          | EAST           | LEA    |

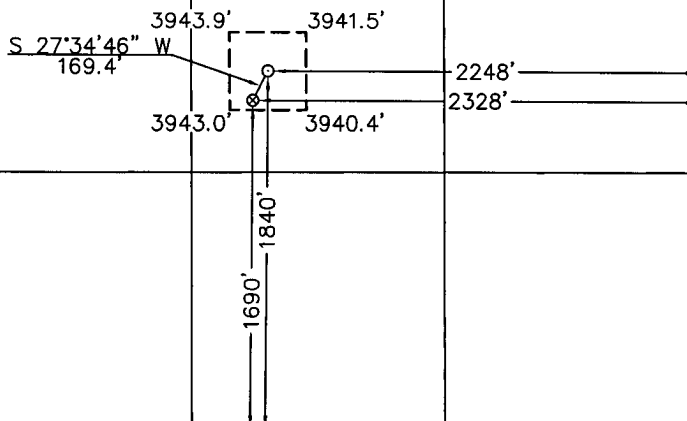
|                              |                 |                    |           |
|------------------------------|-----------------|--------------------|-----------|
| Dedicated Acres<br><b>40</b> | Joint or Infill | Consolidation Code | Order No. |
|------------------------------|-----------------|--------------------|-----------|

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NOTE:

- 1) Plane Coordinates shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1927. Distances shown hereon are mean horizontal surface values.

| COORDINATE TABLE                 |                  |
|----------------------------------|------------------|
| DESCRIPTION                      | PLANE COORDINATE |
| EAST VACUUM GBSA UNIT #3315-502Z | X = 768,132.8    |
| SURFACE LOCATION                 | Y = 651,854.6    |
| EAST VACUUM GBSA UNIT #3315-502Z | X = 768,054.3    |
| BOTTOM HOLE LOCATION             | Y = 651,704.4    |



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief

*Jalyn N. Fiske*  
Signature  
**JALYN N. FISKE**  
Printed Name  
**REGULATORY SPECIALIST**  
Title  
**1-20-2010**  
Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.

November 3, 2009

Date Surveyed  
Signature & Seal of Professional Surveyor  
*W.O. Hum*  
W.O. Hum, 2009-0747  
Certificate No. **12185**

|                                    |
|------------------------------------|
| East Vac Unit 3315W5002 <b>503</b> |
|------------------------------------|

|                                                |
|------------------------------------------------|
| 15. Proposed Depth = 4,908' MD/ 4,900' TVD RKB |
|------------------------------------------------|

| 19. Proposed Casing and Cement Program |                    |                    |                   |                      |                 |                      |
|----------------------------------------|--------------------|--------------------|-------------------|----------------------|-----------------|----------------------|
| Type                                   | Hole Size (inches) | Casing OD (inches) | Casing Wt (lb/ft) | Setting Depth (feet) | Sacks of Cement | Estimated TOC (feet) |
| Surface                                | 12.25              | 8.625              | 24                | 1560                 | 650             | 0                    |
| Prod                                   | 7.875              | 5.5                | 17                | 4898                 | 700             | 0                    |

| Casing and Cement Program: Additional Comments                              |
|-----------------------------------------------------------------------------|
| Fresh Water and Fresh Water Mud will be used for drilling the surface hole. |
| Brine and Brine Based Mud will be used for drilling the production hole.    |

| Proposed Blowout Prevention Program |                  |               |              |
|-------------------------------------|------------------|---------------|--------------|
| Type                                | Working Pressure | Test Pressure | Manufacturer |
| Annular                             | 2000             | 1000          |              |
| Blind Ram                           | 2000             | 2000          |              |
| Pipe Ram                            | 2000             | 2000          |              |

**East Vacuum GBSA Unit 3315W500-~~2~~ 503**

**Formation Tops and Planned Total Depth**

| Formation Call Points | Top (ft TVD) | Top (ft MD) |
|-----------------------|--------------|-------------|
| Rustler               | 1530         | 1530        |
| Salado                | 1660         | 1660        |
| Tansill               | 2700         | 2700        |
| Yates                 | 2870         | 2870        |
| Seven Rivers          | 3170         | 3170        |
| Queen                 | 3740         | 3743        |
| Grayburg              | 4100         | 4104        |
| San Andres            | 4410         | 4416        |
| Total Depth (minimum) | 4855         | 4863        |
| Total Depth (maximum) | 4900         | 4908        |

**Casing Depths**

| String            | Minimum Depth | Maximum Depth |
|-------------------|---------------|---------------|
| Surface Casing    | 1555          | 1600          |
| Production Casing | 4853          | 4898          |

Note: The Surface Casing and the Production Casing programs reflect an uncertainty of 45' in the setting depth for the shoe because that is the approximate length of a full joint of Range 3 casing. This range for the setting depth will allow us to drill the hole to fit the casing string based on how the tally comes out and will provide for the cementing head to be positioned at the rig floor for safety and efficiency in cementing operations. The casing will be set approximately 10 ft off bottom.



**Scientific Drilling**  
Directional Drilling Operations

Project: Lea County, NM (NAD27 NME)

Site: EAST VACUUM UNIT

Well: 3315W-500Z ~~500Z~~ 503

Wellbore: Wellbore #1

Plan: Build hold plan (3315W-500Z/Wellbore #1)

**ConocoPhillips**

### SECTION DETAILS

| MD     | Inc  | Azi    | TVD    | +N/-S  | +E/-W | Dleg | TFace  | Vsect | Target    |
|--------|------|--------|--------|--------|-------|------|--------|-------|-----------|
| 0.0    | 0.00 | 0.00   | 0.0    | 0.0    | 0.0   | 0.00 | 0.00   | 0.0   |           |
| 3000.0 | 0.00 | 0.00   | 3000.0 | 0.0    | 0.0   | 0.00 | 0.00   | 0.0   |           |
| 3274.5 | 5.49 | 207.58 | 3274.1 | -11.6  | -6.1  | 2.00 | 207.58 | 13.1  |           |
| 4907.9 | 5.49 | 207.58 | 4900.0 | -150.2 | -78.4 | 0.00 | 0.00   | 169.4 | PBHL 500Z |

### WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

| Name      | TVD    | +N/-S  | +E/-W | Northing  | Easting   | Latitude         | Longitude         | Shape                 |
|-----------|--------|--------|-------|-----------|-----------|------------------|-------------------|-----------------------|
| PBHL 500Z | 4900.0 | -150.2 | -78.4 | 651704.45 | 768054.37 | 32° 47' 18.918 N | 103° 27' 39.936 W | Circle (Radius: 50.0) |

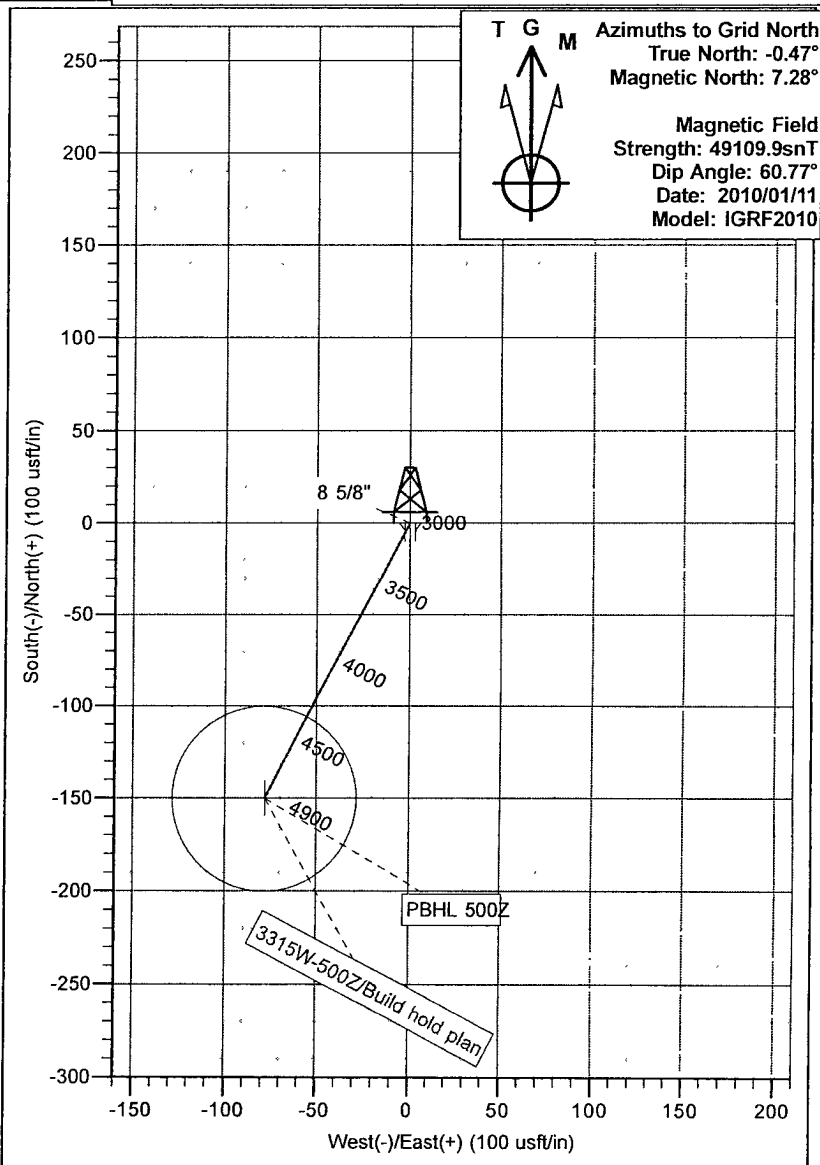
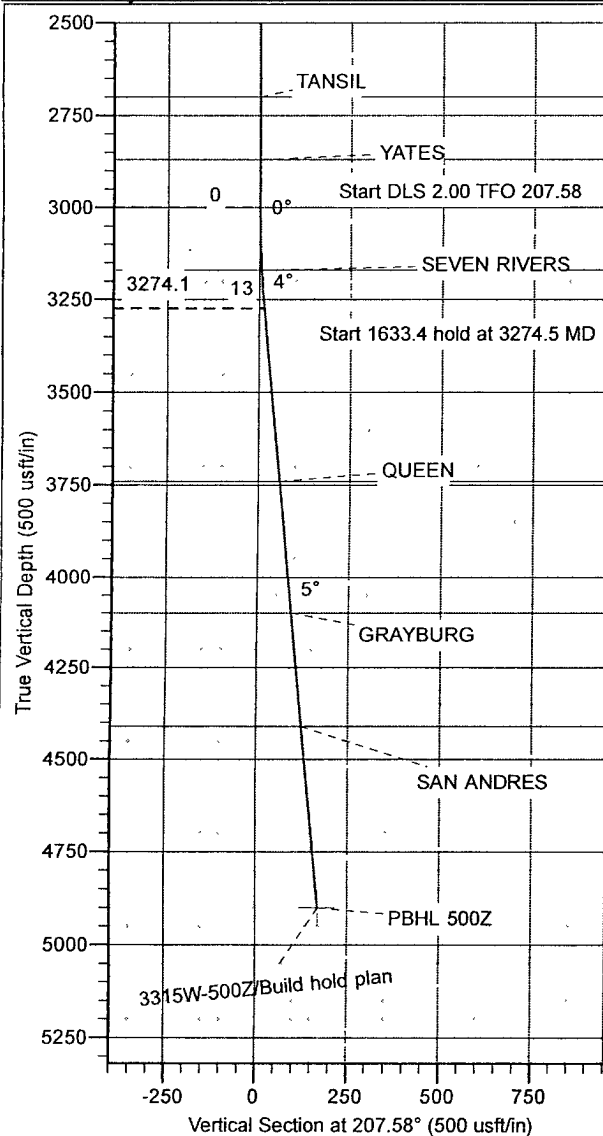
### PROJECT DETAILS: Lea County, NM (NAD27 NME)

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico East 3001

System Datum: Mean Sea Level

### WELL DETAILS: 3315W-500Z

|           |               |                  |                   |
|-----------|---------------|------------------|-------------------|
|           | Ground Level: | 3942.0           |                   |
| Northing  | Easting       | Latitude         | Longitude         |
| 651854.60 | 768132.80     | 32° 47' 20.398 N | 103° 27' 39.003 W |



# CONOCOPHILLIPS

Lea County, NM (NAD27 NME)

EAST VACUUM UNIT

3315W-500Z *503*

Wellbore #1

Plan: Build hold plan

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## Standard Planning Report

11 January, 2010

# Scientific Drilling International

## Planning Report

|                  |                            |                                     |                                        |
|------------------|----------------------------|-------------------------------------|----------------------------------------|
| <b>Database:</b> | EDM 5000.1 Single User Db  | <b>Local Co-ordinate Reference:</b> | Site EAST VACUUM UNIT                  |
| <b>Company:</b>  | CONOCOPHILLIPS             | <b>TVD Reference:</b>               | WELL @ 3960.0usft (Original Well Elev) |
| <b>Project:</b>  | Lea County, NM (NAD27 NME) | <b>MD Reference:</b>                | WELL @ 3960.0usft (Original Well Elev) |
| <b>Site:</b>     | EAST VACUUM UNIT           | <b>North Reference:</b>             | Grid                                   |
| <b>Well:</b>     | 3315W-500Z                 | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Wellbore:</b> | Wellbore #1                |                                     |                                        |
| <b>Design:</b>   | Build hold plan            |                                     |                                        |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM (NAD27 NME)           |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|                              |                  |                     |                 |                                     |
|------------------------------|------------------|---------------------|-----------------|-------------------------------------|
| <b>Site</b>                  | EAST VACUUM UNIT |                     |                 |                                     |
| <b>Site Position:</b>        |                  | <b>Northing:</b>    | 651,854 60 usft | <b>Latitude:</b> 32° 47' 20.398 N   |
| <b>From:</b>                 | Map              | <b>Easting:</b>     | 768,132 80 usft | <b>Longitude:</b> 103° 27' 39.003 W |
| <b>Position Uncertainty:</b> | 0.0 usft         | <b>Slot Radius:</b> | 13-3/16 "       | <b>Grid Convergence:</b> 0.47 °     |

|                             |            |          |                            |                 |
|-----------------------------|------------|----------|----------------------------|-----------------|
| <b>Well</b>                 | 3315W-500Z |          |                            |                 |
| <b>Well Position</b>        | +N/-S      | 0.0 usft | <b>Northing:</b>           | 651,854 60 usft |
|                             | +E/-W      | 0.0 usft | <b>Easting:</b>            | 768,132 80 usft |
| <b>Position Uncertainty</b> | 0.0 usft   |          | <b>Wellhead Elevation:</b> | 3,942 0 usft    |

|                  |                   |                    |                    |                                   |
|------------------|-------------------|--------------------|--------------------|-----------------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                    |                                   |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b>                  |
|                  | IGRF2010          | 2010/01/11         | (°) 7 75           | (°) 60 77                         |
|                  |                   |                    |                    | <b>Field Strength</b> (nT) 49,110 |

|                          |                         |              |                      |                  |
|--------------------------|-------------------------|--------------|----------------------|------------------|
| <b>Design</b>            | Build hold plan         |              |                      |                  |
| <b>Audit Notes:</b>      |                         |              |                      |                  |
| <b>Version:</b>          | <b>Phase:</b>           | PLAN         | <b>Tie On Depth:</b> | 0 0              |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b> | <b>+E/-W</b>         | <b>Direction</b> |
|                          | (usft)                  | (usft)       | (usft)               | (°)              |
|                          | 0.0                     | 0 0          | 0 0                  | 207.58           |

| <b>Plan Sections</b>  |                 |             |                       |              |              |                       |                      |                     |         |           |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-----------------------|----------------------|---------------------|---------|-----------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target    |
| 0.0                   | 0.00            | 0 00        | 0.0                   | 0.0          | 0 0          | 0.00                  | 0 00                 | 0.00                | 0.00    |           |
| 3,000.0               | 0.00            | 0.00        | 3,000 0               | 0.0          | 0 0          | 0 00                  | 0.00                 | 0.00                | 0.00    |           |
| 3,274.5               | 5.49            | 207.58      | 3,274.1               | -11.6        | -6.1         | 2.00                  | 2.00                 | -55.53              | 207.58  |           |
| 4,907.9               | 5.49            | 207.58      | 4,900 0               | -150.2       | -78.4        | 0.00                  | 0.00                 | 0.00                | 0 00    | PBHL 500Z |

# Scientific Drilling International

## Planning Report

|           |                            |                              |                                        |
|-----------|----------------------------|------------------------------|----------------------------------------|
| Database: | EDM 5000.1 Single User Db  | Local Co-ordinate Reference: | Site EAST VACUUM UNIT                  |
| Company:  | CONOCOPHILLIPS             | TVD Reference:               | WELL @ 3960.0usft (Original Well Elev) |
| Project:  | Lea County, NM (NAD27 NME) | MD Reference:                | WELL @ 3960.0usft (Original Well Elev) |
| Site:     | EAST VACUUM UNIT           | North Reference:             | Grid                                   |
| Well:     | 3315W-500Z                 | Survey Calculation Method:   | Minimum Curvature                      |
| Wellbore: | Wellbore #1                |                              |                                        |
| Design:   | Build hold plan            |                              |                                        |

| Planned Survey                 |                 |             |                       |              |              |                         |                       |                      |                     |
|--------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| Measured Depth (usft)          | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 0.0                            | 0.00            | 0.00        | 0.0                   | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 100.0                          | 0.00            | 0.00        | 100.0                 | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 200.0                          | 0.00            | 0.00        | 200.0                 | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 240.0                          | 0.00            | 0.00        | 240.0                 | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| RED BEDS                       |                 |             |                       |              |              |                         |                       |                      |                     |
| 300.0                          | 0.00            | 0.00        | 300.0                 | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 400.0                          | 0.00            | 0.00        | 400.0                 | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 500.0                          | 0.00            | 0.00        | 500.0                 | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 600.0                          | 0.00            | 0.00        | 600.0                 | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 700.0                          | 0.00            | 0.00        | 700.0                 | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 800.0                          | 0.00            | 0.00        | 800.0                 | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 900.0                          | 0.00            | 0.00        | 900.0                 | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 1,000.0                        | 0.00            | 0.00        | 1,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 1,100.0                        | 0.00            | 0.00        | 1,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 1,200.0                        | 0.00            | 0.00        | 1,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 1,300.0                        | 0.00            | 0.00        | 1,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 1,400.0                        | 0.00            | 0.00        | 1,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 1,500.0                        | 0.00            | 0.00        | 1,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 1,530.0                        | 0.00            | 0.00        | 1,530.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| RUSTLER                        |                 |             |                       |              |              |                         |                       |                      |                     |
| 1,550.0                        | 0.00            | 0.00        | 1,550.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 8 5/8"                         |                 |             |                       |              |              |                         |                       |                      |                     |
| 1,600.0                        | 0.00            | 0.00        | 1,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 1,660.0                        | 0.00            | 0.00        | 1,660.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| SALADO                         |                 |             |                       |              |              |                         |                       |                      |                     |
| 1,700.0                        | 0.00            | 0.00        | 1,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 1,800.0                        | 0.00            | 0.00        | 1,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 1,900.0                        | 0.00            | 0.00        | 1,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 2,000.0                        | 0.00            | 0.00        | 2,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 2,100.0                        | 0.00            | 0.00        | 2,100.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 2,200.0                        | 0.00            | 0.00        | 2,200.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 2,300.0                        | 0.00            | 0.00        | 2,300.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 2,400.0                        | 0.00            | 0.00        | 2,400.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 2,500.0                        | 0.00            | 0.00        | 2,500.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 2,600.0                        | 0.00            | 0.00        | 2,600.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 2,700.0                        | 0.00            | 0.00        | 2,700.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| TANSIL                         |                 |             |                       |              |              |                         |                       |                      |                     |
| 2,800.0                        | 0.00            | 0.00        | 2,800.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 2,870.0                        | 0.00            | 0.00        | 2,870.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| YATES                          |                 |             |                       |              |              |                         |                       |                      |                     |
| 2,900.0                        | 0.00            | 0.00        | 2,900.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| 3,000.0                        | 0.00            | 0.00        | 3,000.0               | 0.0          | 0.0          | 0.0                     | 0.00                  | 0.00                 | 0.00                |
| Start DLS 2.00 TFO 207.58      |                 |             |                       |              |              |                         |                       |                      |                     |
| 3,100.0                        | 2.00            | 207.58      | 3,100.0               | -1.5         | -0.8         | 1.7                     | 2.00                  | 2.00                 | 0.00                |
| 3,170.1                        | 3.40            | 207.58      | 3,170.0               | -4.5         | -2.3         | 5.0                     | 2.00                  | 2.00                 | 0.00                |
| SEVEN RIVERS                   |                 |             |                       |              |              |                         |                       |                      |                     |
| 3,200.0                        | 4.00            | 207.58      | 3,199.8               | -6.2         | -3.2         | 7.0                     | 2.00                  | 2.00                 | 0.00                |
| 3,274.5                        | 5.49            | 207.58      | 3,274.1               | -11.6        | -6.1         | 13.1                    | 2.00                  | 2.00                 | 0.00                |
| Start 1633.4 hold at 3274.5 MD |                 |             |                       |              |              |                         |                       |                      |                     |
| 3,300.0                        | 5.49            | 207.58      | 3,299.5               | -13.8        | -7.2         | 15.6                    | 0.00                  | 0.00                 | 0.00                |
| 3,400.0                        | 5.49            | 207.58      | 3,399.0               | -22.3        | -11.6        | 25.1                    | 0.00                  | 0.00                 | 0.00                |
| 3,500.0                        | 5.49            | 207.58      | 3,498.5               | -30.8        | -16.1        | 34.7                    | 0.00                  | 0.00                 | 0.00                |
| 3,600.0                        | 5.49            | 207.58      | 3,598.1               | -39.2        | -20.5        | 44.3                    | 0.00                  | 0.00                 | 0.00                |



# Scientific Drilling International

## Planning Report

|           |                            |                              |                                        |
|-----------|----------------------------|------------------------------|----------------------------------------|
| Database: | EDM 5000.1 Single User Db  | Local Co-ordinate Reference: | Site EAST VACUUM UNIT                  |
| Company:  | CONOCOPHILLIPS             | TVD Reference:               | WELL @ 3960.0usft (Original Well Elev) |
| Project:  | Lea County, NM (NAD27 NME) | MD Reference:                | WELL @ 3960.0usft (Original Well Elev) |
| Site:     | EAST VACUUM UNIT           | North Reference:             | Grid                                   |
| Well:     | 3315W-500Z                 | Survey Calculation Method:   | Minimum Curvature                      |
| Wellbore: | Wellbore #1                |                              |                                        |
| Design:   | Build hold plan            |                              |                                        |

| Planned Survey        |                 |             |                       |              |              |                         |                       |                      |                     |  |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |  |
| 3,700.0               | 5.49            | 207.58      | 3,697.6               | -47.7        | -24.9        | 53.8                    | 0.00                  | 0.00                 | 0.00                |  |
| 3,742.6               | 5.49            | 207.58      | 3,740.0               | -51.3        | -26.8        | 57.9                    | 0.00                  | 0.00                 | 0.00                |  |
| QUEEN                 |                 |             |                       |              |              |                         |                       |                      |                     |  |
| 3,800.0               | 5.49            | 207.58      | 3,797.2               | -56.2        | -29.4        | 63.4                    | 0.00                  | 0.00                 | 0.00                |  |
| 3,900.0               | 5.49            | 207.58      | 3,896.7               | -64.7        | -33.8        | 73.0                    | 0.00                  | 0.00                 | 0.00                |  |
| 4,000.0               | 5.49            | 207.58      | 3,996.3               | -73.2        | -38.2        | 82.5                    | 0.00                  | 0.00                 | 0.00                |  |
| 4,100.0               | 5.49            | 207.58      | 4,095.8               | -81.6        | -42.6        | 92.1                    | 0.00                  | 0.00                 | 0.00                |  |
| 4,104.2               | 5.49            | 207.58      | 4,100.0               | -82.0        | -42.8        | 92.5                    | 0.00                  | 0.00                 | 0.00                |  |
| GRAYBURG              |                 |             |                       |              |              |                         |                       |                      |                     |  |
| 4,200.0               | 5.49            | 207.58      | 4,195.3               | -90.1        | -47.1        | 101.7                   | 0.00                  | 0.00                 | 0.00                |  |
| 4,300.0               | 5.49            | 207.58      | 4,294.9               | -98.6        | -51.5        | 111.2                   | 0.00                  | 0.00                 | 0.00                |  |
| 4,400.0               | 5.49            | 207.58      | 4,394.4               | -107.1       | -55.9        | 120.8                   | 0.00                  | 0.00                 | 0.00                |  |
| 4,415.7               | 5.49            | 207.58      | 4,410.0               | -108.4       | -56.6        | 122.3                   | 0.00                  | 0.00                 | 0.00                |  |
| SAN ANDRES            |                 |             |                       |              |              |                         |                       |                      |                     |  |
| 4,500.0               | 5.49            | 207.58      | 4,494.0               | -115.6       | -60.4        | 130.4                   | 0.00                  | 0.00                 | 0.00                |  |
| 4,600.0               | 5.49            | 207.58      | 4,593.5               | -124.0       | -64.8        | 139.9                   | 0.00                  | 0.00                 | 0.00                |  |
| 4,700.0               | 5.49            | 207.58      | 4,693.0               | -132.5       | -69.2        | 149.5                   | 0.00                  | 0.00                 | 0.00                |  |
| 4,800.0               | 5.49            | 207.58      | 4,792.6               | -141.0       | -73.6        | 159.1                   | 0.00                  | 0.00                 | 0.00                |  |
| 4,900.0               | 5.49            | 207.58      | 4,892.1               | -149.5       | -78.1        | 168.6                   | 0.00                  | 0.00                 | 0.00                |  |
| 4,907.9               | 5.49            | 207.58      | 4,900.0               | -150.2       | -78.4        | 169.4                   | 0.00                  | 0.00                 | 0.00                |  |
| PBHL 500Z             |                 |             |                       |              |              |                         |                       |                      |                     |  |

| Design Targets            |               |              |            |              |              |                 |                |                  |                   |  |
|---------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|--|
| Target Name               | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude         | Longitude         |  |
| - hit/miss target         |               |              |            |              |              |                 |                |                  |                   |  |
| - Shape                   |               |              |            |              |              |                 |                |                  |                   |  |
| PBHL 500Z                 | 0.00          | 0.00         | 4,900.0    | -150.2       | -78.4        | 651,704.45      | 768,054.37     | 32° 47' 18.918 N | 103° 27' 39.936 W |  |
| - plan hits target center |               |              |            |              |              |                 |                |                  |                   |  |
| - Circle (radius 50.0)    |               |              |            |              |              |                 |                |                  |                   |  |

| Casing Points         |                       |        |                     |                   |  |  |
|-----------------------|-----------------------|--------|---------------------|-------------------|--|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name   | Casing Diameter (") | Hole Diameter (") |  |  |
| 1,550.0               | 1,550.0               | 8 5/8" | 8-5/8               | 12-1/4            |  |  |

# Scientific Drilling International

## Planning Report

|           |                            |                              |                                        |
|-----------|----------------------------|------------------------------|----------------------------------------|
| Database: | EDM 5000.1 Single User Db  | Local Co-ordinate Reference: | Site EAST VACUUM UNIT                  |
| Company:  | CONOCOPHILLIPS             | TVD Reference:               | WELL @ 3960.0usft (Original Well Elev) |
| Project:  | Lea County, NM (NAD27 NME) | MD Reference:                | WELL @ 3960.0usft (Original Well Elev) |
| Site:     | EAST VACUUM UNIT           | North Reference:             | Grid                                   |
| Well:     | 3315W-500Z                 | Survey Calculation Method:   | Minimum Curvature                      |
| Wellbore: | Wellbore #1                |                              |                                        |
| Design:   | Build hold plan            |                              |                                        |

| Formations            |                       |              |           |         |                   |  |
|-----------------------|-----------------------|--------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name         | Lithology | Dip (°) | Dip Direction (°) |  |
| 240.0                 | 240.0                 | RED BEDS     |           | 0.00    |                   |  |
| 1,530.0               | 1,530.0               | RUSTLER      |           | 0.00    |                   |  |
| 1,660.0               | 1,660.0               | SALADO       |           | 0.00    |                   |  |
| 2,700.0               | 2,700.0               | TANSIL       |           | 0.00    |                   |  |
| 2,870.0               | 2,870.0               | YATES        |           | 0.00    |                   |  |
| 3,170.1               | 3,170.0               | SEVEN RIVERS |           | 0.00    |                   |  |
| 3,742.6               | 3,740.0               | QUEEN        |           | 0.00    |                   |  |
| 4,104.2               | 4,100.0               | GRAYBURG     |           | 0.00    |                   |  |
| 4,415.7               | 4,410.0               | SAN ANDRES   |           | 0.00    |                   |  |

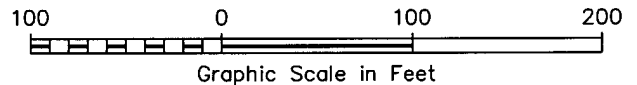
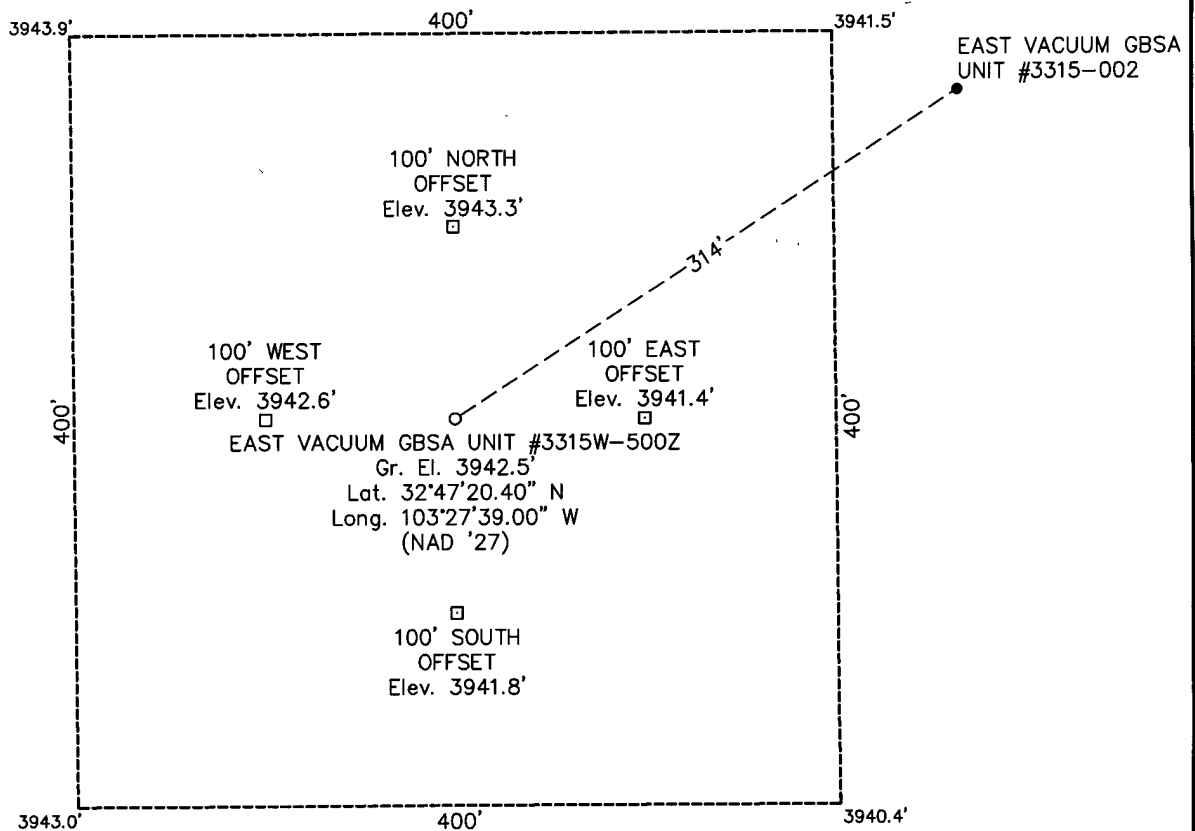
| Plan Annotations      |                       |                   |              |                                |  |
|-----------------------|-----------------------|-------------------|--------------|--------------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              |                                |  |
|                       |                       | +N/-S (usft)      | +E/-W (usft) | Comment                        |  |
| 3,000.0               | 3,000.0               | 0.0               | 0.0          | Start DLS 2.00 TFO 207.58      |  |
| 3,274.5               | 3,274.1               | -11.6             | -6.1         | Start 1633.4 hold at 3274.5 MD |  |
| 4,907.9               | 4,900.0               | -150.2            | -78.4        | TD at 4907.9                   |  |

# SECTION 33, TOWNSHIP 17 SOUTH, RANGE 35 EAST, N.M.P.M.

LEA COUNTY

NEW MEXICO

L-2009-0747-A



## DRIVING DIRECTIONS

FROM THE INTERSECTION OF STATE HIGHWAY 8 AND COUNTY ROAD 50 IN BUCKEYE, NEW MEXICO GO EAST ON SAID COUNTY ROAD 50 1.2 MILES TO A LEASE ROAD ON SOUTH (RIGHT) SIDE OF ROAD, THEN GO SOUTH 0.4 MILE THEN TURN SOUTHEAST (LEFT) FOR 1.0 MILE TO ANOTHER LEASE ROAD ON EAST (LEFT) SIDE OF ROAD, THEN GO EAST 0.5 MILE, THEN GO NORTH (LEFT) 0.2 MILE THEN GO EAST (RIGHT) 0.4 MILE, THEN GO NORTHWEST (HARD LEFT) 0.2 MILE TO A POINT BEING APPROXIMATELY 300 FEET NORTHEAST OF THE PROPOSED LOCATION.

## CONOCOPHILLIPS

**EAST VACUUM GBSA UNIT #3315W-500Z** <sup>503</sup>

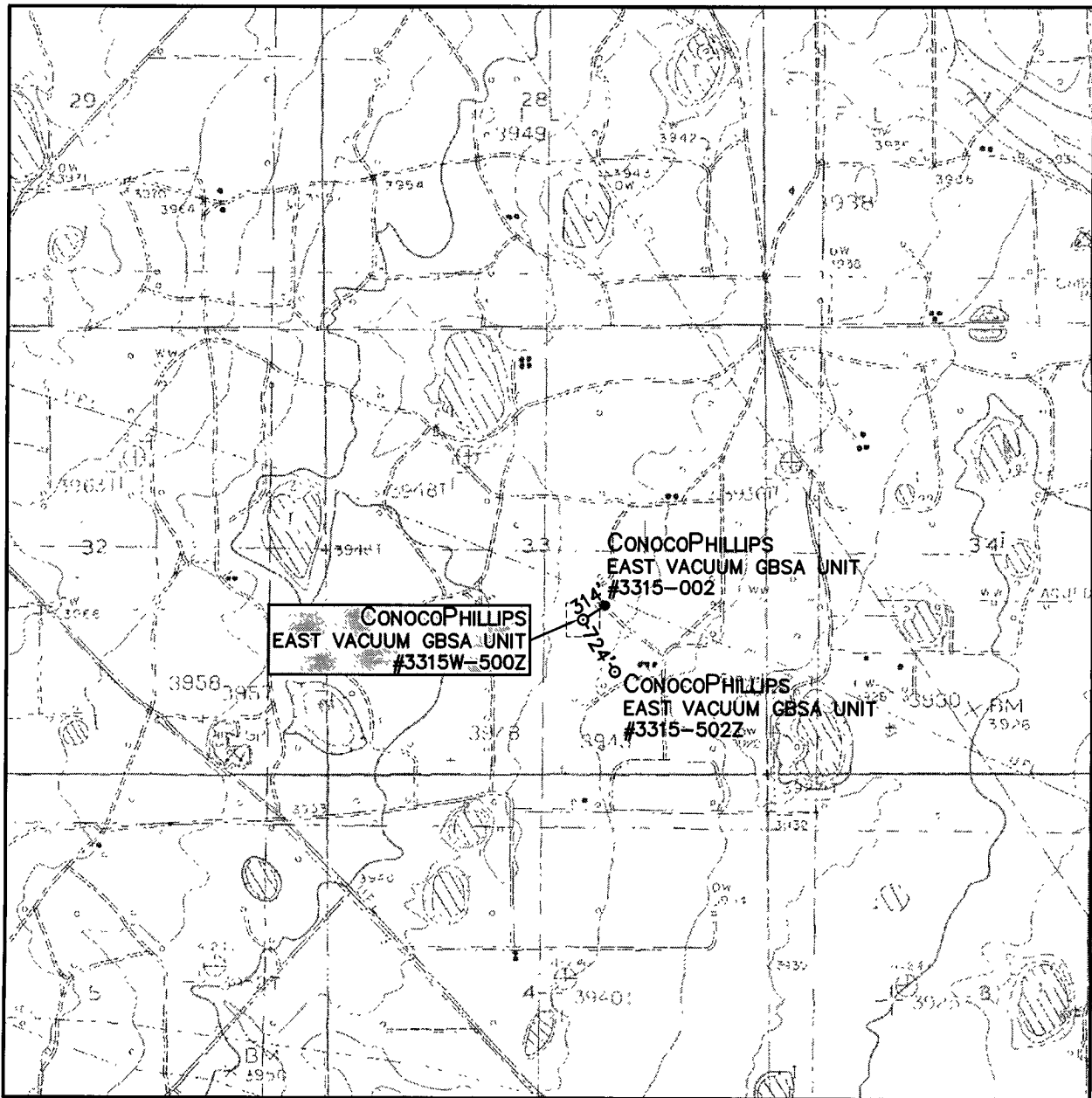
Located 1840' FSL & 2248' FEL, Section 33  
Township 17 South, Range 35 East, N.M.P.M.  
Lea County, New Mexico

|                    |                          |
|--------------------|--------------------------|
| Drawn By: LVA      | Date: November 11, 2009  |
| Scale: 1" = 100'   | Field Book: 376 / 48-55  |
| Revision Date:     | Quadrangle: Lovington SW |
| W.O. No: 2009-0747 | Dwg. No.: L-2009-0747-A  |



110 W. LOUISIANA, STE. 110  
MIDLAND TEXAS, 79701  
(432) 687-0865 - (432) 687-0868 FAX

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
LOVINGTON SW - 5'

SEC. 33 TWP. 17-S RGE. 35-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1840' FSL & 2248' FEL

ELEVATION 3942'

OPERATOR CONOCOPhillips

LEASE EAST VACUUM GBSA UNIT

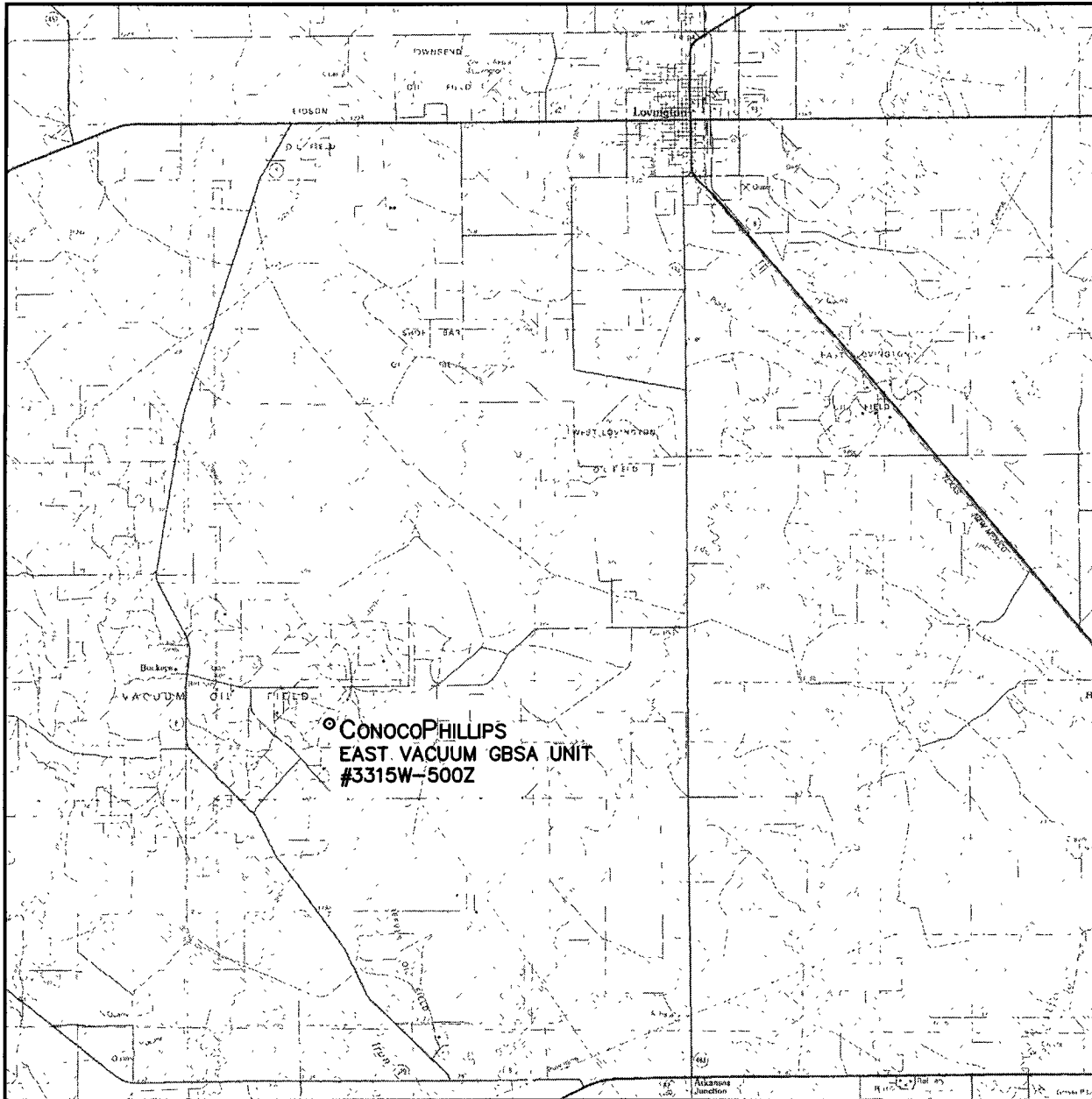
U.S.G.S. TOPOGRAPHIC MAP  
LOVINGTON SW, N.M.



**WEST  
COMPANY**  
of Midland, Inc.

110 W. LOUISIANA, STE. 110  
MIDLAND TEXAS, 79701  
(432) 687-0865 - (432) 687-0868 FAX

# VICINITY MAP



SCALE: 1" = 3 MILES

SEC. 33 TWP. 17-S RGE. 35-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1840' FSL & 2248' FEL

ELEVATION 3942'

OPERATOR CONOCOPHILLIPS

LEASE EAST VACUUM GBSA UNIT



110 W. LOUISIANA, STE. 110  
MIDLAND TEXAS, 79701  
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