

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised July 16, 2010

DISTRICT II  
1301 West Grand Avenue, Artesia, N.M. 88210

OIL CONSERVATION DIVISION

Submit one copy to Appropriate

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410

1220 South St. Francis Dr.  
Santa Fe, NM 87505

RCVD FEB 1 11

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

## "AS DRILLED PLAT"

OIL CONS. DIV.  
☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

DIST. 3

|                                                |                                                             |                                        |                                                       |
|------------------------------------------------|-------------------------------------------------------------|----------------------------------------|-------------------------------------------------------|
| <sup>1</sup> API Number<br><b>30-045-35095</b> |                                                             | <sup>2</sup> Pool Code<br><b>71629</b> | <sup>3</sup> Pool Name<br><b>BASIN FRUITLAND COAL</b> |
| <sup>4</sup> Property Code<br><b>31821</b>     | <sup>5</sup> Property Name<br><b>LODEWICK</b>               |                                        | <sup>6</sup> Well Number<br><b>100</b>                |
| <sup>7</sup> GRID No.<br><b>217817</b>         | <sup>8</sup> Operator Name<br><b>CONOCOPHILLIPS COMPANY</b> |                                        | <sup>9</sup> Elevation<br><b>6505'</b>                |

## <sup>10</sup> 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             | 18      | 27-N     | 9-W   |         | 1350          | SOUTH            | 1655          | EAST           | SAN JUAN |

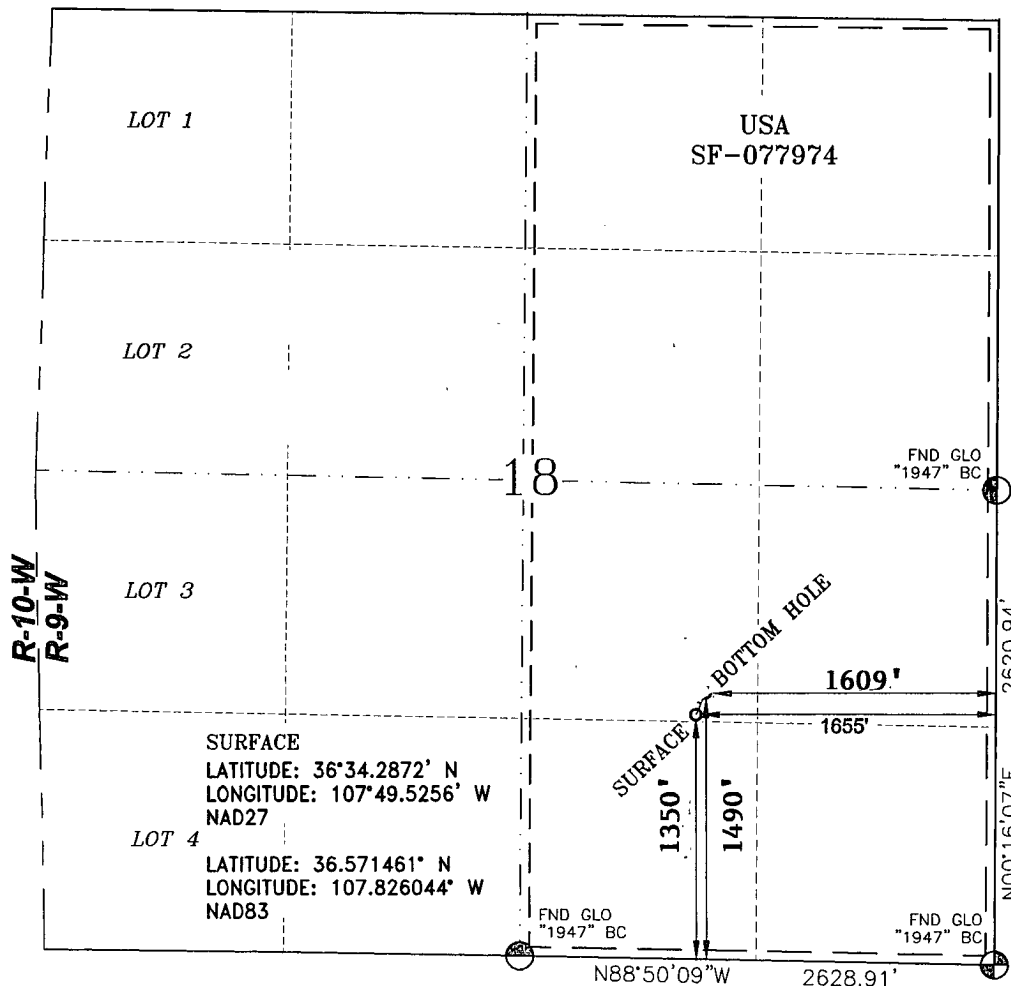
<sup>11</sup> Bottom Hole Location If Different From Surface

|               |         |          |       |         |               |                  |               |                |          |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County   |
| J             | 18      | 27N      | 9W    |         | 1490          | SOUTH            | 1609          | EAST           | SAN JUAN |

|                                                     |                               |                                  |                         |
|-----------------------------------------------------|-------------------------------|----------------------------------|-------------------------|
| <sup>12</sup> Dedicated Acres<br>FC 320.0 ACRES E/2 | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> 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

16



## 17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or mineral interest or is to be unitized pursuant to a compulsory pooling order heretofore entered by the division.

Signature Crystal Tafoya Date 1/31/11  
Printed Name Crystal Tafoya 1/31/11

E-mail Address

## 18 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.

October 13, 2010  
Date of Survey

Signature and Seal of \_\_\_\_\_



GLEN W. RUSSELL  
Certificate Number

15703

RCVD FEB 1 11  
OIL CONS. DIV.  
DIST. 3

|                                         |                                      |
|-----------------------------------------|--------------------------------------|
| <b>Legal WellName :</b> LODEWICK #100   | <b>API / UWI:</b> 3004535095         |
| <b>Operator:</b> CONOCOPHILLIPS COMPANY | <b>Surf Loc:</b> 018-027N-009W-J     |
| <b>St/Prov:</b> NEW MEXICO              | <b>N/S Dist (ft):</b> 1,350.00 - FSL |
| <b>County:</b> SAN JUAN                 | <b>E/W Dist (ft):</b> 1,655.00 - FEL |

| Wellbore Name : Original Hole |            |                |                        |                    |                     |
|-------------------------------|------------|----------------|------------------------|--------------------|---------------------|
| Description                   | Date       | MD Tie In (ft) | Inclination Tie In (°) | Azimuth Tie In (°) |                     |
| INCLINATION SURVEY            | 10/18/2010 | .00            | .00                    | .00                |                     |
| Date                          | MD (ft)    | Incl (°)       | Azm (°)                | Method             | Survey Company      |
| 10/18/2010                    | 133.00     | .50            | .00                    | Inc-Drop           | MO-TE DRILLING INC  |
| 10/18/2010                    | 232.00     | .50            | .00                    | Inc-Drop           | MO-TE DRILLING INC  |
| Description                   | Date       | MD Tie In (ft) | Inclination Tie In (°) | Azimuth Tie In (°) |                     |
| MWD SURVEY                    | 10/27/2010 | .00            | .00                    | .00                |                     |
| Date                          | MD (ft)    | Incl (°)       | Azm (°)                | Method             | Survey Company      |
| 10/27/2010                    | 269.00     | .90            | 150.37                 | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 331.00     | .98            | 151.37                 | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 458.00     | 2.81           | 42.23                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 519.00     | 3.30           | 36.78                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 579.00     | 3.64           | 37.54                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 670.00     | 3.67           | 38.82                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 760.00     | 3.70           | 41.20                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 850.00     | 4.36           | 20.48                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 940.00     | 4.70           | 2.30                   | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 1,030.00   | 4.46           | 6.63                   | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 1,120.00   | 4.23           | 4.10                   | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 1,210.00   | 3.94           | 2.69                   | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 1,299.00   | 3.71           | .53                    | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 1,479.00   | 3.58           | 14.28                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 1,569.00   | 4.68           | 23.17                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 1,659.00   | 6.19           | 23.00                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 1,749.00   | 8.17           | 26.08                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 1,839.00   | 7.78           | 24.58                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 1,930.00   | 7.79           | 23.55                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 2,020.00   | 6.06           | 20.13                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 2,110.00   | 4.74           | 11.25                  | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 2,200.00   | 3.53           | 8.05                   | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 2,290.00   | 2.38           | 354.97                 | Inc-MWD            | Scientific Drilling |
| 10/27/2010                    | 2,380.00   | 1.02           | 317.53                 | Inc-MWD            | Scientific Drilling |
| 10/28/2010                    | 2,470.00   | 1.50           | 248.31                 | Inc-MWD            | Scientific Drilling |
| 10/28/2010                    | 2,560.00   | 1.48           | 246.21                 | Inc-MWD            | Scientific Drilling |
| 10/28/2010                    | 2,614.00   | 1.45           | 251.23                 | Inc-MWD            | Scientific Drilling |

I, the undersigned, certify that I, acting in my capacity as Drilling Engineer for ConocoPhillips Company am authorized by said Company to make this report; and that said report was prepared under my supervision and directions, and that the facts stated herein are true to the best of my knowledge and belief.

Ben To-raw

Subscribed and sworn to me this January 31, 2011

Crystal L. Tafaya

Notary Public in and for San Juan County, New Mexico

My Commission expires 10/12/2014

RCVD FEB 1 '11  
OIL CONS. DIV.  
DIST. 3

# ConocoPhillips

SJB (NM West)  
SEC 18-T27N-R9W  
Lodewick #100  
API# 30-045-35095  
Original Hole

Survey: Actual

## Standard Survey Report

04 November, 2010

This survey is correct to the best of my knowledge and is supported by actual field data.

L. Harton

Notorized this date 4th of November, 2010.

Carrin Reed

Notary Signature  
County of Midland  
State of Texas



# Scientific Drilling International, Inc.

## Survey Report

|                  |                 |                                     |                                        |
|------------------|-----------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | ConocoPhillips  | <b>Local Co-ordinate Reference:</b> | Site SEC 18-T27N-R9W                   |
| <b>Project:</b>  | SJB (NM West)   | <b>TVD Reference:</b>               | H&P 283 @ 6521.0ft (16' DF + 6505' GL) |
| <b>Site:</b>     | SEC 18-T27N-R9W | <b>MD Reference:</b>                | H&P 283 @ 6521.0ft (16' DF + 6505' GL) |
| <b>Well:</b>     | Lodewick #100   | <b>North Reference:</b>             | True                                   |
| <b>Wellbore:</b> | Original Hole   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole   | <b>Database:</b>                    | edmCOP                                 |

|                    |                                               |                      |                             |
|--------------------|-----------------------------------------------|----------------------|-----------------------------|
| <b>Project</b>     | SJB (NM West), New Mexico, S-Type MV/DK Wells |                      |                             |
| <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)                       |                      | Using Well Reference Point  |
| <b>Map Zone:</b>   | New Mexico West 3003                          |                      | Using geodetic scale factor |

|                              |                 |                          |                   |
|------------------------------|-----------------|--------------------------|-------------------|
| <b>Site</b>                  | SEC 18-T27N-R9W |                          |                   |
| <b>Site Position:</b>        |                 | <b>Northing:</b>         | 2,027,258.65 ft   |
| <b>From:</b>                 | Lat/Long        | <b>Easting:</b>          | 502,321.76 ft     |
| <b>Position Uncertainty:</b> | 15.0 ft         | <b>Slot Radius:</b>      | 6-1/8"            |
|                              |                 | <b>Latitude:</b>         | 36° 34' 17.232 N  |
|                              |                 | <b>Longitude:</b>        | 107° 49' 31.536 W |
|                              |                 | <b>Grid Convergence:</b> | 0.00 °            |

|                             |                                 |                            |                                  |
|-----------------------------|---------------------------------|----------------------------|----------------------------------|
| <b>Well</b>                 | Lodewick #100, Vertical FC Well |                            |                                  |
| <b>Well Position</b>        | <b>+N/-S</b>                    | 0.0 ft                     | <b>Northing:</b> 2,027,258.65 ft |
|                             | <b>+E/-W</b>                    | 0.0 ft                     | <b>Easting:</b> 502,321.76 ft    |
| <b>Position Uncertainty</b> | 0.0 ft                          | <b>Wellhead Elevation:</b> | ft                               |
|                             |                                 | <b>Latitude:</b>           | 36° 34' 17.232 N                 |
|                             |                                 | <b>Longitude:</b>          | 107° 49' 31.536 W                |
|                             |                                 | <b>Ground Level:</b>       | 6,505.0 ft                       |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Original Hole     |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | BGGM2010          | 10/12/2010         | 9.97                   | 63.36                | 50,700                     |

|                          |                         |               |              |                          |
|--------------------------|-------------------------|---------------|--------------|--------------------------|
| <b>Design</b>            | Original Hole           |               |              |                          |
| <b>Audit Notes:</b>      |                         |               |              |                          |
| <b>Version:</b>          | 1.0                     | <b>Phase:</b> | ACTUAL       | <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>         |
|                          | (ft)                    | (ft)          | (ft)         | (°)                      |
|                          | 0.0                     | 0.0           | 0.0          | 18.16                    |

|                       |                |                          |                  |                          |
|-----------------------|----------------|--------------------------|------------------|--------------------------|
| <b>Survey Program</b> | Date 11/4/2010 |                          |                  |                          |
| <b>From (ft)</b>      | <b>To (ft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b>       |
| 269.0                 | 2,614.0        | Actual (Original Hole)   | MWD SDI          | MWD - Standard ver 1.0.1 |

|                            |                        |                    |                            |                   |                   |                              |                              |                             |                            |
|----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|------------------------------|-----------------------------|----------------------------|
| <b>Survey</b>              |                        |                    |                            |                   |                   |                              |                              |                             |                            |
| <b>Measured Depth (ft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Vertical Section (ft)</b> | <b>Dogleg Rate (°/100ft)</b> | <b>Build Rate (°/100ft)</b> | <b>Turn Rate (°/100ft)</b> |
| 0.0                        | 0.00                   | 0.00               | 0.0                        | 0.0               | 0.0               | 0.0                          | 0.00                         | 0.00                        | 0.00                       |
| 269.0                      | 0.90                   | 150.37             | 269.0                      | -1.8              | 1.0               | -1.4                         | 0.33                         | 0.33                        | 0.00                       |
| 331.0                      | 0.98                   | 151.37             | 331.0                      | -2.7              | 1.5               | -2.1                         | 0.13                         | 0.13                        | 1.61                       |
| 458.0                      | 2.81                   | 42.23              | 457.9                      | -1.4              | 4.2               | 0.0                          | 2.57                         | 1.44                        | -85.94                     |
| 519.0                      | 3.30                   | 36.78              | 518.8                      | 1.1               | 6.2               | 3.0                          | 0.93                         | 0.80                        | -8.93                      |
| 579.0                      | 3.64                   | 37.54              | 578.7                      | 4.0               | 8.4               | 6.5                          | 0.57                         | 0.57                        | 1.27                       |
| 670.0                      | 3.67                   | 38.82              | 669.5                      | 8.6               | 12.0              | 11.9                         | 0.10                         | 0.03                        | 1.41                       |
| 760.0                      | 3.70                   | 41.20              | 759.4                      | 13.0              | 15.7              | 17.3                         | 0.17                         | 0.03                        | 2.64                       |
| 850.0                      | 4.36                   | 20.48              | 849.1                      | 18.4              | 18.8              | 23.4                         | 1.76                         | 0.73                        | -23.02                     |
| 940.0                      | 4.70                   | 2.30               | 938.9                      | 25.3              | 20.2              | 30.3                         | 1.63                         | 0.38                        | -20.20                     |
| 1,030.0                    | 4.46                   | 6.63               | 1,028.6                    | 32.5              | 20.7              | 37.3                         | 0.47                         | -0.27                       | 4.81                       |
| 1,120.0                    | 4.23                   | 4.10               | 1,118.3                    | 39.2              | 21.4              | 44.0                         | 0.33                         | -0.26                       | -2.81                      |
| 1,210.0                    | 3.94                   | 2.69               | 1,208.1                    | 45.6              | 21.7              | 50.2                         | 0.34                         | -0.32                       | -1.57                      |

# Scientific Drilling International, Inc.

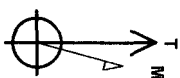
## Survey Report

|                  |                 |                                     |                                        |
|------------------|-----------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | ConocoPhillips  | <b>Local Co-ordinate Reference:</b> | Site SEC 18-T27N-R9W                   |
| <b>Project:</b>  | SJB (NM West)   | <b>TVD Reference:</b>               | H&P 283 @ 6521.0ft (16' DF + 6505' GL) |
| <b>Site:</b>     | SEC 18-T27N-R9W | <b>MD Reference:</b>                | H&P 283 @ 6521.0ft (16' DF + 6505' GL) |
| <b>Well:</b>     | Lodewick #100   | <b>North Reference:</b>             | True                                   |
| <b>Wellbore:</b> | Original Hole   | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole   | <b>Database:</b>                    | edmCOP                                 |

### Survey

| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Vertical<br>Section<br>(ft) | Dogleg<br>Rate<br>(°/100ft) | Build<br>Rate<br>(°/100ft) | Turn<br>Rate<br>(°/100ft) |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-----------------------------|----------------------------|---------------------------|
| 1,299.0                   | 3.71               | 0.53           | 1,296.9                   | 51.6          | 21.9          | 55.8                        | 0.30                        | -0.26                      | -2.43                     |
| 1,479.0                   | 3.58               | 14.28          | 1,476.5                   | 62.9          | 23.3          | 67.0                        | 0.49                        | -0.07                      | 7.64                      |
| 1,569.0                   | 4.68               | 23.17          | 1,566.3                   | 69.0          | 25.5          | 73.5                        | 1.41                        | 1.22                       | 9.88                      |
| 1,659.0                   | 6.19               | 23.00          | 1,655.9                   | 76.8          | 28.8          | 82.0                        | 1.68                        | 1.68                       | -0.19                     |
| 1,749.0                   | 8.17               | 26.08          | 1,745.2                   | 87.0          | 33.5          | 93.1                        | 2.24                        | 2.20                       | 3.42                      |
| 1,839.0                   | 7.78               | 24.58          | 1,834.3                   | 98.3          | 38.9          | 105.5                       | 0.49                        | -0.43                      | -1.67                     |
| 1,930.0                   | 7.79               | 23.55          | 1,924.5                   | 109.5         | 43.9          | 117.8                       | 0.15                        | 0.01                       | -1.13                     |
| 2,020.0                   | 6.06               | 20.13          | 2,013.8                   | 119.6         | 48.0          | 128.6                       | 1.98                        | -1.92                      | -3.80                     |
| 2,110.0                   | 4.74               | 11.25          | 2,103.4                   | 127.7         | 50.3          | 137.0                       | 1.73                        | -1.47                      | -9.87                     |
| 2,200.0                   | 3.53               | 8.05           | 2,193.2                   | 134.1         | 51.5          | 143.5                       | 1.37                        | -1.34                      | -3.56                     |
| 2,290.0                   | 2.38               | 354.97         | 2,283.1                   | 138.7         | 51.7          | 147.9                       | 1.47                        | -1.28                      | -14.53                    |
| 2,380.0                   | 1.02               | 317.53         | 2,373.0                   | 141.2         | 51.0          | 150.0                       | 1.88                        | -1.51                      | -41.60                    |
| 2,470.0                   | 1.50               | 248.31         | 2,463.0                   | 141.3         | 49.3          | 149.6                       | 1.65                        | 0.53                       | -76.91                    |
| 2,560.0                   | 1.48               | 246.21         | 2,553.0                   | 140.4         | 47.2          | 148.1                       | 0.06                        | -0.02                      | -2.33                     |
| 2,614.0                   | 1.45               | 251.23         | 2,607.0                   | 139.9         | 45.9          | 147.2                       | 0.24                        | -0.06                      | 9.30                      |

Project: SJB (NM West)  
Site: SEC 18-T27N-R9W  
Well: Lodewick #100  
Wellbore: Original Hole  
Design: Plan #1

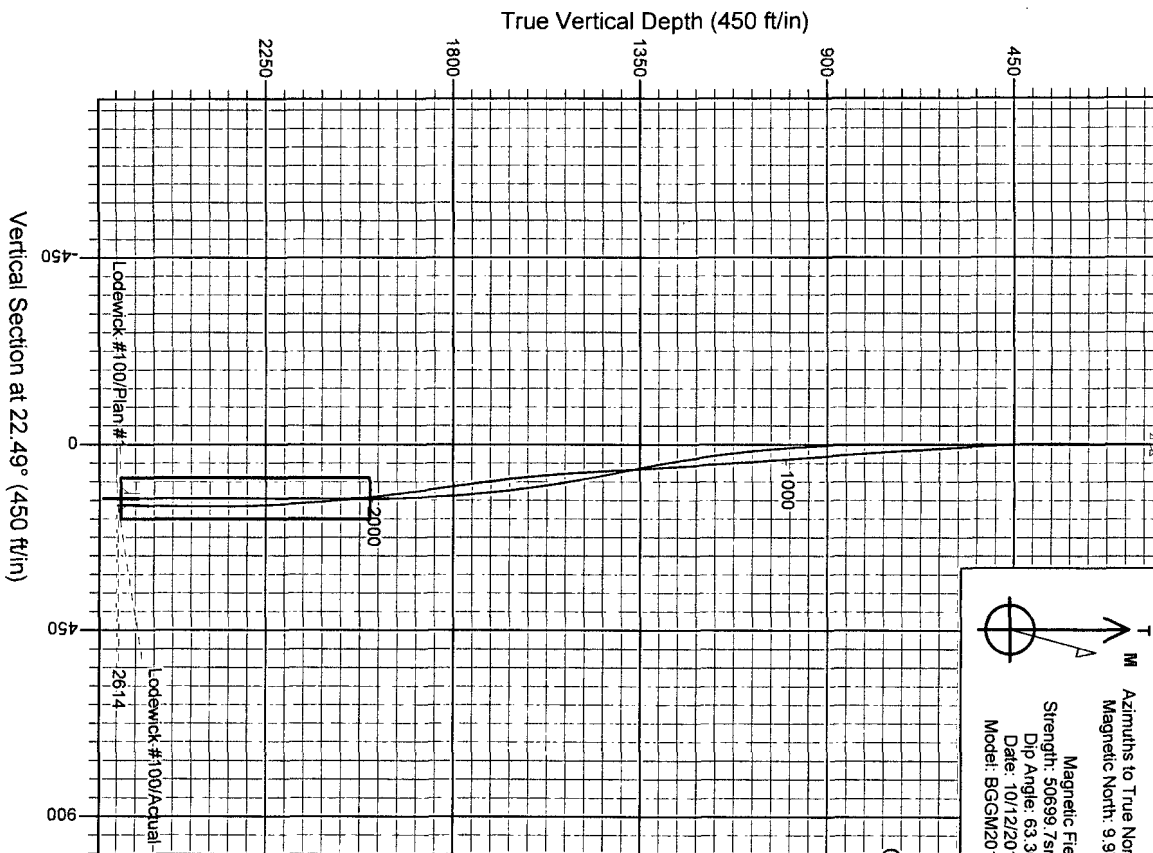


Azimuths to True North  
Magnetic North: 9.97°  
Magnetic Field  
Strength: 50699.7 nT  
Dip Angle: 63.36°  
Date: 10/12/2010  
Model: BGSMD2010

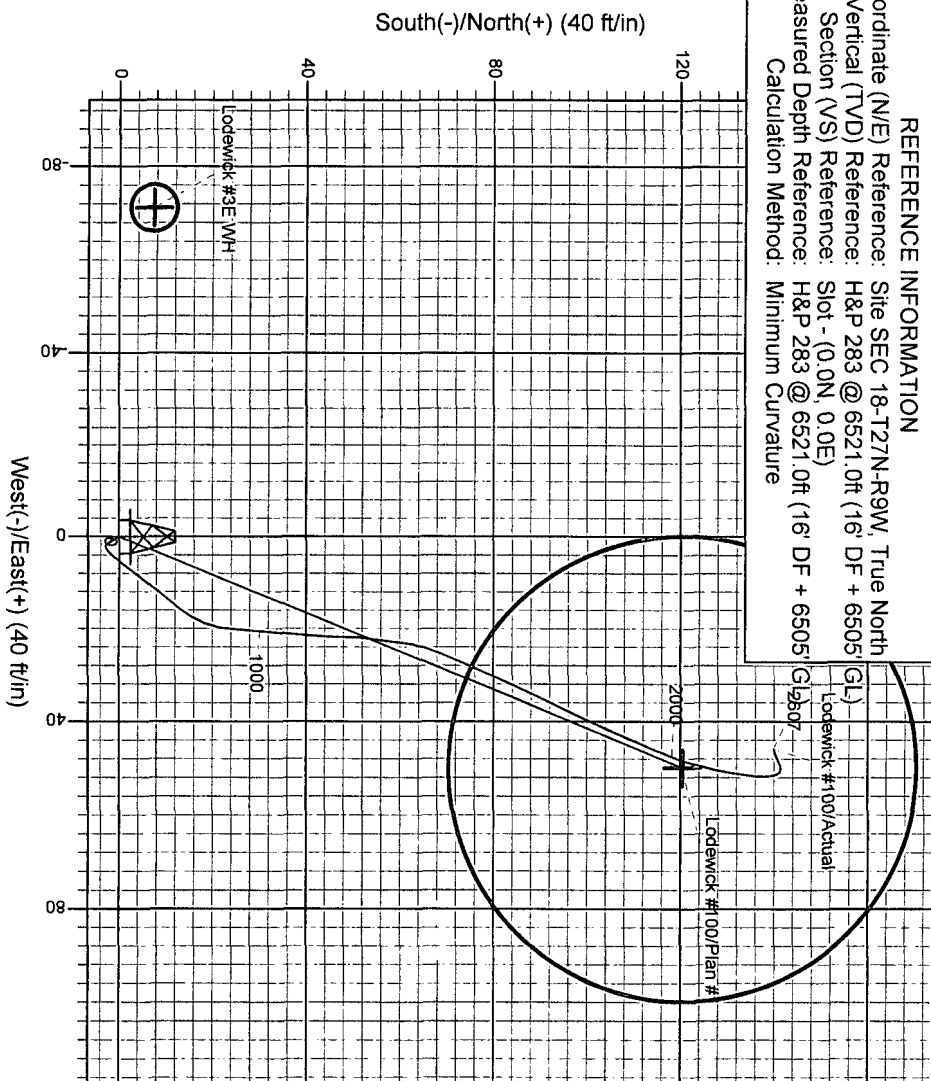
+N/-S 0.0  
+E/-W 0.0  
Northing 2027258.65

WELL DETAILS: Lodewick #100  
H&P 283 @ 6521.0ft (16' DF + 6505' GL)  
Ground Level: 6505.0  
Easting 502321.76  
Latitude 36° 34' 17.232 N  
Longitude 107° 49' 31.536 W

Site



REFERENCE INFORMATION  
Coordinate (N/E) Reference: Site SEC 18-T27N-R9W, True North  
Vertical (TVD) Reference: H&P 283 @ 6521.0ft (16' DF + 6505' GL)  
Section (VS) Reference: Slot - (0.0N, 0.0E)  
Measured Depth Reference: H&P 283 @ 6521.0ft (16' DF + 6505' GL) 2500'  
Calculation Method: Minimum Curvature



COMPANY DETAILS: ConocoPhillips  
Calculation Method: Minimum Curvature  
Error System: ISCWSA  
Scan Method: Closest Approach 3D  
Error Surface: Combined Covariances  
Warning Method: Risk Ratio

PROJECT DETAILS: SJB (NM West)  
Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico West 3003  
System Datum: Mean Sea Level

SITE DETAILS: SEC 18-T27N-R9W  
San Juan County NM  
Site Centre Latitude: 36° 34' 17.232 N  
Longitude: 107° 49' 31.536 W  
Positional Uncertainty: 7.5  
Convergence: 0.00  
Local North: True